



**STUDY ON THE AVAILABILITY OF SUITABLE REST  
FACILITIES FOR PROFESSIONAL DRIVERS AND OF  
SECURED PARKING FACILITIES, AS WELL AS ON  
THE DEVELOPMENT OF SAFE AND SECURE  
PARKING FACILITIES IN THE EU**

Final Report

MOVE/C1/SER/2023-138



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## List of abbreviations

AFIR	Alternative Fuels Infrastructure Regulation
ATM	Automated Teller Machine (Payment System)
CAV	Connected and Automated Vehicles
CEF	Connecting Europe Facility
CNC	Core Network Corridor
DTLF	Digital Transport and Logistics Forum
EGUM	European Group for Urban Mobility
EMPACT	European Multidisciplinary Platform Against Criminal Threats
ESPORG	European Secure Parking Organisation
EU	European Union
Europol	European Union Agency for Law Enforcement Cooperation
FRONTEX	European Border and Coast Guard Agency (Frontières extérieures)
GDP	Gross Domestic Product
GVA	Gross Value Added
ICMPD	International Centre for Migration Policy Development
ICT	Information and Communication Technology
IRU	International Road Transport Union
ITS	Intelligent Transport Systems
LCV	Light Commercial Vehicle
LGBTIQ	Lesbian, Gay, Bisexual, Transgender, Intersex, Queer
MFF	Multiannual Financial Framework
MPF	Migration Pact Facility
NAP	National Action Plan
NAPCORE	National Access Point Coordination Organisation for Europe
OEM	Original Equipment Manufacturer
OSM	OpenStreetMap
RORO	roll-on/roll-off
SSPA	Safe and Secure Parking Area
TAPA	Transported Asset Protection Association
TEN-T	Trans-European Transport Network
TIR	Transports Internationaux Routiers (International Road Transports)
TKM	Tonne Kilometre
UK	United Kingdom
VEDA	Vereinigung Deutscher Autohöfe (Associations of German Truckstops)
ZEV	Zero Emission Vehicle

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## Abstract

This study addresses the critical need for Safe and Secure Parking Areas (SSPAs) for professional drivers across the European Union, focusing on their availability, security standards, and development potential.

The research highlights persistent challenges in the road transport sector, including driver shortages, inadequate parking infrastructure, and security concerns, which hinder the sector's operational efficiency and driver well-being. The EU road transport sector is essential for economic integration but faces mounting pressures from regulatory, social, and technological changes. Key drivers include the European Green Deal, technological advancements like digital tachographs, and evolving labour dynamics. Current gaps in secure parking infrastructure pose risks to drivers' safety, cargo security, and compliance with mandated rest periods. Consultations with industry stakeholders underscored the need for standardized security certification, better parking management, and increased funding for facility upgrades. However, while safety and security are widely recognised as essential across EU parking areas, this study does not determine whether need directly translates into utilisation. Further examination is required to distinguish perceived necessity from the willingness to use certified parking areas.

A mapping exercise was conducted to assess the demand for and supply of truck parking capacity across the EU. It revealed that SSPAs are both limited and unevenly distributed, with a significant shortfall of 390,057 parking spaces or 3,250 parking areas. By 2040, this gap is projected to grow to an estimated 483,000 parking spaces or 4,025 parking areas. The largest gaps are identified in France, Germany, the Benelux, Central European Member States, Spain, and Italy. Despite continued investments in upgrading existing facilities and developing new ones, the demand-supply gap is unlikely to be substantially reduced by 2040. However, incorporating the certification of currently non-certified parking areas with security elements could help narrow the gap. Many of these parking areas already include security features that may qualify them for bronze or silver certification with minimal additional effort.

The mapping analysis also points out that currently, there are not enough overnight sleeping facilities near secure parking areas for truck drivers. In cases where such options are available, they often fail to align with the budget or specific needs of truck drivers. Further, existing data on transport-related crime and incidents is limited due to the voluntary nature of reporting and concerns about negative publicity among stakeholders. More comprehensive data is essential to make well-informed decisions about the most appropriate security level for specific locations.

The report outlines strategic actions for stakeholders to support the development of SSPAs in the EU, including:

- Expanding the SSPA network with public and private investments.
- Implementing standardised security certifications across all Member States.
- Developing new parking areas while certifying currently uncertified facilities that possess some security features.
- Promoting public-private partnerships for facility development.
- Enhancing data-sharing platforms for real-time parking availability.

Looking ahead to 2040, the study envisions a fully integrated, safe, and sustainable parking network supported by robust regulatory frameworks, technological innovations, and a cooperative approach among stakeholders. Adopting these measures will greatly improve driver welfare, supply chain security, and the long-term sustainability of the transport sector.

# 1. General Introduction

This section provides an overview of the study's purpose and scope, shedding light on the main problems and drivers. It also includes the general and specific objectives of the study and outlines the report structure.

## 1.1 Purpose and scope of the study

### 1.1.1 Description of the road transport sector in the EU

The road transport sector constitutes a cornerstone for the EU's single market integration, boasting a complex, dynamic and multifaceted landscape. Beyond its facilitation of trade, it plays a crucial role in fostering economic growth, contributing to employment and facilitating mobility of goods and people. The sector bolsters the interconnectedness of different industries across Europe, serving as a channel for the creation and generation of opportunities. In the aftermath of the financial and economic crisis of 2008-2009, the sector has continued to recover, but with longer lasting impact.<sup>1</sup> The COVID-19 pandemic caused a more sudden and widespread disruption, particularly due to lockdowns, travel restrictions and supply chain disruptions that affected freight transport. In post-COVID recovery, the industry rebounded quickly in 2021<sup>2</sup>.

In the broad context of the EU-27, the transport sector is vital; in 2021 it employed 10 million people, contributing to **5.3% of the total workforce**.<sup>3</sup> Transport accounted for 12.1% of households' final consumption in 2021, amounting to €880 billion. Road transport in particular dominated the freight market, representing approximately 50% of total freight and over three-quarters (77.4%) of total inland freight transport in tonne-kilometres (2021).<sup>4</sup> Moreover, two-thirds of EU road freight is national, and one-third is transnational, with variations between EU-14 and EU-13<sup>5</sup>. In passenger transport, buses and coaches transported over 7.4% of total passenger kilometres across the EU.<sup>6</sup> This dual significance underscores the economic and societal impact of the sector. However, despite its strong performance in volume, the sector continues to face several pressing issues.

The road **transport industry faces challenges** related to fragmentation in terms of company size and range of services<sup>7</sup>, deteriorating working conditions such as long working hours and extended time away from home, low levels of investment in the transport infrastructure, issues in enforcement and effectiveness of regulatory framework regarding accessibility to facilities and services in the course of

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<sup>1</sup> European Commission, An Overview of the EU Road Transport Market in 2015 [2017].

<sup>2</sup> European Commission: Directorate-General for Mobility and Transport, Transport in the European Union – Current trends and issues, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2832/131741>

<sup>3</sup> European Commission, Directorate-General for Mobility and Transport, EU transport in figures – Statistical pocketbook 2023, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2832/319371>

<sup>4</sup> European Commission, Key figures on European transport – 2022 edition. [2023] <https://ec.europa.eu/eurostat/en/web/products-key-figures/w/ks-07-22-523>

<sup>5</sup> The EU-14 refer to the Member States before the EU 2004 enlargement, the EU-13 to the Member States that joined the EU during or after the 2004 enlargement.

<sup>6</sup> European Parliamentary Research Service, Access to the occupation of road transport operator and to the international road haulage market [2020].

<sup>7</sup> Ibid.

work.<sup>8</sup> Cabotage, or domestic transport performed by foreign hauliers, is subject to restrictions, leading to operational difficulties and a high percentage of empty road journeys.

Despite the substantial employment figures within the road freight traffic sector, **women's representation remains minimal**, accounting for approximately 4% of the workforce (even lower in international transport)<sup>9</sup>. This underrepresentation is attributed to factors such as inadequate work-life balance, unsuitable workplaces, and insufficient targeted recruitment strategies tailored for diversity. Further **shifts in the employment landscape** were observed, in international road transport practices, and substitution of drivers from EU-14 by drivers from EU-13 countries. The emergence of e-mobility and the sharing economy adds complexity and opportunities to the sector. The rising trend of employing drivers from non-EU countries in the EU is a direct response to the **growing shortage** of professional drivers in the EU. The absence of adequate facilities exposes drivers to the risk of theft, vandalism and other security threats, such as those emphasised in the 2019 study on *Safe and Secure Parking Places for Trucks*.

Competition in the road transport sector is predominantly driven by cost consideration, leading to intense price competition. The susceptibility of the sector to price changes, coupled with its labour-intensive nature, has given rise to unfavourable consequences, notably cross-border social fraud.<sup>10</sup> The sector finds itself in a problematic loop, where the consistent demand for low-cost goods has led to a reduction in prices. This, in turn, exerts continuous pressure on wages, diminishes the attractiveness of the job, prompts company relocations, and fosters fraudulent and illegal practices. Consequently, these dynamics have resulted in heightened tensions among employer and worker organisations, exacerbating existing differences between EU13 and EU14 countries.<sup>11</sup>

Amid all these complexities, the **availability of safe and secure parking areas (SSPAs)** emerges as another pressing issue impacting driver safety, well-being and overall road safety. Parking facilities are an essential component of transportation infrastructure. The efficient and safe functioning of the road transport sector relies heavily on drivers' well-being and working conditions, as do the associated businesses and logistics chains, which aim to guarantee that their cargo is secured. Professional drivers encounter difficulties in finding adequate resting areas resulting in fatigue and stress. This can lead to compromised road safety, a heightened risk of accidents and compromises attracting young recruits to the sector which is already dealing with an ageing force.

### 1.1.2 The EU standards on safe and secure parking areas

Article 8a of Regulation 2020/1054 amending Regulation 561/2006 on driving, breaks and rest times, defines that, by the 31<sup>st</sup> of December, the Commission shall present a report on the availability of suitable rest facilities for drivers and of secured parking facilities, as well as on the development of safe and secure parking areas certified. This report could list measures to increase the number and quality of SSPAs<sup>12</sup>. Moreover, this was an essential step in empowering the European Commission towards defining standards and procedures for SSPAs in an Implementing Act.

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<sup>8</sup> European Commission, Report on the State of the Union Road Transport Market [2014].

<sup>9</sup> IRU, Half of European truck operators can't expand due to driver shortages. See <https://www.iru.org/news-resources/newsroom/half-european-truck-operators-cant-expand-due-driver-shortages> [2024]

<sup>10</sup> De Smedt L., De Wispelaere F., "Road freight transport in the European Union – In search of a balance between the economic and social dimension of the internal market. A quantitative sectoral analysis" [2020] Transfair Project.

<sup>11</sup> Ibid.

<sup>12</sup> Regulation (EU) 2020/1054 of the European Parliament and of the Council of 15 July 2020 amending Regulation (EC) No 561/2006 as regards minimum requirements on maximum daily and weekly driving times,

To such end, the Commission adopted Delegated Regulation 2022/1012 which establishes comprehensive standards on the level of services and security for parking facilities, also outlining the procedures for obtaining such certification. In a nutshell, it establishes four levels of security (Bronze, Silver, Gold, Platinum) and specifies the criteria for each level, including aspects such as perimeter security, security measures on the grounds of the parking area, security at entry/exit points and staff procedures<sup>13</sup>. It also provides for a minimum level of service common to all levels of security, covering aspects such as gender-friendly sanitary facilities, food and beverage options, communication connections, power supply, emergency contact points, etc. In summary, aiming to improve the working conditions of road transport drivers by ensuring consistent, high-quality, and secure parking areas across the EU, this regulation supplements Regulation (EC) No 561/2006 by introducing:

1. Service standards, with the requirements for parking areas to provide essential facilities such as clean sanitary facilities, daily food and drink availability, internet, and electric power for refrigerated vehicles.
2. Security standards, establishing security levels with guidelines for perimeter security, surveillance, entrance/exit controls, and staff protocols to ensure driver safety.
3. Certification procedures, setting certification validity, mandating audits and defining criteria for certification bodies and auditors to ensure compliance with the standards.

### 1.1.3 The 2019 Commission Study on safe and secure parking areas

The 2019 study on *Safe and Secure Parking Places for Trucks* highlighted the lack of adequate facilities, the need for upgrading existent facilities, and the lack of harmonisation of standards for security and services. It further indicated the lack of 100,000 overnight parking spaces for heavy-duty vehicles and a critical shortage of certified secure parking, with merely 7,000 spaces accessible.<sup>14</sup> Addressing this shortage requires investment in new locations and the expansion of existing sites to meet growing demands. Many of the existing facilities do not meet the security and service standards, meaning they cannot be certified as a safe and secure parking area according to EU standards.<sup>15</sup> The lack of designated and secure parking areas not only jeopardises the safety of drivers and the security of transported goods but also undermines compliance with mandated resting periods and breaks.

Consequently, addressing issues within this sector is of paramount importance for overall sustainability and efficiency. **Recognising the challenges** faced by the sector impacting professional drivers, operational efficiency and the overall safety and security of transported goods, the European Commission has undertaken initiatives for a fair transition towards clean, competitive, and connected mobility, as outlined in the "Europe on the Move" Communication of May 31, 2017.<sup>16</sup> This communication introduced legislative proposals, collectively known as "Mobility Package I",

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minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 as regards positioning by means of tachographs, <https://eur-lex.europa.eu/eli/reg/2020/1054/oj>

<sup>13</sup> Commission Delegated Regulation (EU) 2022/1012 of 7 April 2022 supplementing Regulation (EC) No 561/2006 of the European Parliament and of the Council with regard to the establishment of standards detailing the level of service and security of safe and secure parking areas and to the procedures for their certification; OJ L 170, 28.6.2022, p.2

<sup>14</sup> European Commission, Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019, <https://data.europa.eu/doi/10.2832/067535>

<sup>15</sup> Ibid.

<sup>16</sup> European Commission, Transport in the European Union – current trends and issues [2018].

encompassing revisions to road haulage market access rules, enhanced social legislation for road transport, updates to road charging regulations, addressing the shortcomings and with the aim of enhancing competitiveness and contributing to a safer and more supportive environment for drivers. In July 2020, the social and internal market pillars of Mobility Package I were adopted. The new rules on driving and rest times stemming from Regulation 2020/1054 started applying in August 2021.<sup>17</sup> Moving forward, in February of 2022, the new rules on the posting of drivers in road transport went into effect. Additionally, in the same months, the new rules governing access to the profession of road transport operators and cabotage operations were implemented, bringing further clarity and structure to cross-border transport activities. Despite the emphasis on regulatory reforms addressing the challenges of the road freight transportation, the effectiveness and enforcement of these measures vary across Member States. Therefore, enforcement efforts are necessary for maintaining a level playing field in the sector.

With the expected increase of transport to 43% in 2050 compared to 2010 as stated in the EU Reference Scenario 2020<sup>18</sup>, naturally followed by an increase in the number of trucks in road infrastructure, it is imperative to develop both increased road transport capacity and parking infrastructure for vehicles, for safety and for sustainable transportation.<sup>19</sup> As the road freight sector grapples with these complexities and transformations, in addition to the increased demand for safe and secure parking revealed in various stakeholders discussions and studies, the proposed study seeks to provide valuable insights into the availability and status of rest and parking facilities, shedding light on critical aspects that contribute to the sector's resilience, efficiency, and the well-being of its workforce, in order to recommend potential solutions.

#### 1.1.4 Scope of the Study

This study is focused on specific aspects within the EU transport sector, with its scope clearly outlined in the following ways:

- Geographically: It covers the EU territory, with a particular focus on the areas within the TEN-T land corridors, which include critical transport hubs and logistical hotspots.
- Professional Drivers: The scope is limited to professional drivers, such as long-haul truck drivers, coach drivers, and commercial vehicle operators, who require safe and secure rest facilities for overnight stays and longer rest periods.
- EU Standards on SSPAs: The study adheres to relevant EU standards<sup>20</sup> and regulations, particularly those concerning rest, service, and security requirements. These standards aim to improve driver well-being, promote gender equality, and ensure the protection of both vehicles and cargo.
- Sector: According to Regulation 561/2006, SSPAs apply to all drivers engaged in both freight and passenger transport. However, the research carried out as part of this study highlighted

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<sup>17</sup> European Commission, directive 2020/1057 the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012

<sup>18</sup> EU Reference Scenario 2020, see [https://energy.ec.europa.eu/data-and-analysis/energy-modelling/eu-reference-scenario-2020\\_en](https://energy.ec.europa.eu/data-and-analysis/energy-modelling/eu-reference-scenario-2020_en)

<sup>19</sup> Hernandes, S., Poliak, M. and Poliaková, A., 2019. Draft of freight transport car parks facilities. *Archiwum Motoryzacji*, 85(3).

<sup>20</sup> Commission Delegated Regulation (EU) 2022/1012 of 7 April 2022 supplementing Regulation (EC) No 561/2006 of the European Parliament and of the Council with regard to the establishment of standards detailing the level of service and security of safe and secure parking areas and to the procedures for their certification, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32022R1012>

differences concerning the working and driving schedules in those sectors. These differences indicated that drivers involved in passenger transport or drivers of LCVs do not face the same challenges when it comes to finding suitable accommodation and needing SSPAs.

## 1.2 General and specific objectives

The main objectives of the study are:

- To assess the status, **availability and suitability of rest facilities** for professional drivers in the EU and identify the demand-supply gap and deficiencies in the provision of rest facilities, considering also **gender equality issues**. In this study, rest facilities mean hotels or motels, accessible to truck drivers.
- To evaluate the **availability and adequacy of secure parking facilities** for professional drivers across the EU, **considering gender equality**, and analyse their potential for upgrade and certification under the EU standards set out in the Commission Delegated Regulation (EU) 2022/1012.
- To investigate the **development and implementation of safe and secure parking areas** certified in accordance with the Commission Delegated Regulation (EU) 2022/1012. Nevertheless, the need to ensure SSPA use for carrying out roadside control and inspection activities is not within the scope of this study.
- To analyse the **demand-supply gaps** in terms of the need for safe and secure parking areas and map the desired locations of new parking areas across the EU, on the TEN-T road network.
- To **identify measures and recommend strategies** to address the identified gaps and deficiencies and increase the number and quality of rest facilities and safe and secure parking areas for professional drivers.

## 1.3 Report structure

This report is organized as follows:

- Chapter 1: **Introduction** – This chapter introduces the scope and main objectives of the study. It outlines the key challenges faced by professional drivers regarding rest and parking facilities, emphasising the need for safe and secure parking across Europe.
- Chapter 2: **Background and context** – This chapter provides an in-depth look at the trends and policies influencing the availability of SSPAs. Based on desk research findings, it discusses regulatory developments, the political landscape, and the economic factors that shape the current and future demand for these facilities.
- Chapter 3: **Current status of SSPAs** – This chapter offers a detailed analysis of the current state of SSPAs across the EU. It includes data on parking area types, availability, and suitability, as well as insights into the use of these facilities by professional drivers, with particular attention to gender inclusivity and security concerns.
- Chapter 4: **Insights and challenges in SSPA development and operation** – This chapter provides a critical evaluation of the available data and highlights best practices for improving SSPAs. It includes examples of innovative solutions and strategies that have successfully enhanced driver safety and security, serving as models for further development across Europe.

- Chapter 5: **Mapping of demand and supply & gap analysis** – This chapter compares the current supply of parking spaces with the demand from professional drivers. It highlights regional disparities and identifies significant gaps between existing infrastructure and the needs of the road transport sector.
- Chapter 6: **Recommendations** – This chapter provides concrete recommendations aimed at closing the identified gaps in parking infrastructure. It also outlines steps for improving the overall quality of rest facilities for professional drivers while presenting a long-term vision for 2040.
- **Annexes:** Contain supplementary information that supports its main findings. These include background information on the mapping such as the methodological approach, data sources, demand and supply maps, and the results of the survey to SSPAs and nearby hotels, detailed in Annex I. Annex II provides detailed insights gathered during the stakeholder consultation, covering surveys, targeted stakeholder meetings, and ad-hoc events, summarized in the synopsis report.

## 2. Background and context

### Key Takeaways

- Several key emerging trends in the road transport sector will have a profound and lasting impact on SSPAs, including EU green initiatives, technological developments, societal changes and labour trends.
- EU green initiatives, such as the Alternative fuels infrastructure regulation (AFIR), will accelerate vehicle and fuel decarbonisation, which will, in turn, require SSPAs to provide the necessary alternative fuel infrastructure (e.g. electric and hydrogen) for long-haul vehicles.
- The Intelligent Transport Systems (ITS) Directive provides a set of guidelines and actions towards the deployment of digital and technological advances that will propel the modernisation and connectivity of long-haul vehicle fleets and, consequently, SSPAs.
- The growth of e-commerce and projected rise in road freight volumes will drive greater demand for parking, underscoring the need for an expanded SSPA network in line with the new TEN-T requirements.
- A denser network of SSPAs is likely to attract a more diverse workforce, including women and younger workers, thus reducing the labour shortages in the long-haul road transport sector.

The previous chapter outlines the main purpose and scope of this study building on the challenges the road transport industry faces regarding the status, availability, and suitability of safe and secure rest facilities and parking areas (SSPAs) for professional road freight drivers across the EU. This calls for a deeper understanding of the subject of safe and secure parking for professional freight and passenger drivers, namely concerning (1) the key emerging trends that are expected to have an impact on road transport, (2) the EU political landscape and regulations in an SSPA network, and (3) the most recent social, economic and technological developments around the subject. Therefore, this Chapter focuses on setting the scene for this study, providing key findings drawn from desk research analysis conducted in each of these three areas.

### 2.1 Key emerging trends with an impact on SSPAs and in the road transport sector

The gathered literature emphasises the key role of road transport in the EU's social and economic development<sup>21</sup> and the importance of ensuring that long haul drivers have access to certified SSPAs to guarantee compliance with the regulated resting periods during working hours<sup>22</sup>. Nevertheless, it is essential to acknowledge and understand what the future landscape for road transport will be and if and how that may affect the implementation, certification and use of SSPAs.

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<sup>21</sup> Boldizsár, A., MESZAROS, F., & Torok, E. (2022). Social and Economic Analysis of the EU Road Freight Transport Fleet. *Cognitive Sustainability*, 1(2). <https://doi.org/10.55343/cogsust.16>

<sup>22</sup> Regulation (EU) 2020/1054 of the European Parliament and of the Council of 15 July 2020 amending Regulation (EC) No 561/2006 as regards minimum requirements on maximum daily and weekly driving times, minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 as regards positioning by means of tachographs <https://eur-lex.europa.eu/eli/reg/2020/1054/oj> and Regulation 2024/1258 amending Regulation (EC) No 561/2006 as regards minimum requirements on minimum breaks and daily and weekly rest periods in the occasional passenger transport sector, <https://eur-lex.europa.eu/eli/reg/2024/1258/oj>

The first major trend that affects several sectors in the EU, and globally, is **climate change** and the targets defined as part of multiple **EU green initiatives**, including the Fit for 55 Package. The European Commission<sup>23</sup> foresees the transport system as facing direct physical impacts (e.g. extreme weather events), and indirect vulnerabilities stemming from the heightened complexities within its interconnections with other critical infrastructure (e.g. ICT systems). To mitigate or prevent these effects, increased focus has been placed on decarbonising the transport sector through the European Green Deal and the Sustainable and Smart Mobility Strategy and via setting ambitious short-medium- and long-term GHG reduction targets. The EU also establishes milestones for road transport, envisioning at least 30 million zero-emission vehicles by 2050, underscoring the importance of electrification and cleaner fuels in achieving climate neutrality<sup>24</sup>. These electrification and alternative fuel strategies will require extensive charging infrastructure, putting pressure on existing parking areas to accommodate charging and refuelling stations<sup>25</sup>. Furthermore, these technologies will inherently lead to changes in fleet composition and allocation, and more adaptive and dynamic journeys as long-haul truck and coach drivers and commercial vehicle operators will need to balance these changes with their physical and regulatory requirements for resting while on the job<sup>26</sup>.

The deployment of **digital solutions and technological advancements** is a core element outlined in the ITS Directive<sup>27</sup> and Action Plan<sup>28</sup>. These regulatory developments will propel the required revolution in freight and passenger road transport in the EU and are expected to contribute to a cleaner, safer and more efficient sector. As an example, since 2019, all trucks and coaches newly registered in the EU must have a smart digital tachograph installed, and the second generation of these devices is mandatory for newly registered vehicles as of 21 August 2023 and will be also required for all vehicles involved in international transport as of 21 August 2025<sup>29</sup>. Another example of an emerging technology that will revolutionise the road freight transport sector is the deployment of connected automated vehicles (CAV), which, when combined with other concurrent trends, such as artificial intelligence, electrification and the sharing economy, hold promise for a safer and more efficient road transport system<sup>30</sup>. In addition, these trends have the potential to assist truck and coach drivers at multiple points in their operational journey, including driving assistance through

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<sup>23</sup> European Commission (2020), [https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub\\_en](https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub_en).

<sup>24</sup> Guc, K., Road Transport (2023) <https://www.eea.europa.eu/en/topics/in-depth/road-transport#:~:text=Road%20transport%20is%20one%20of,in%20the%20European%20Green%20Deal>.

<sup>25</sup> Göckeler, K., Hacker, F., Oeko-Institut. (2023). The Future of road freight transport is electric. Press Release. <https://www.oeko.de/en/news/press-releases/the-future-of-road-freight-transport-is-electric/>

<sup>26</sup> Breiter, A., Frode, P., Jain, V. and Peloquin, S. (2023). Powering the transition to zero-emission trucks through infrastructure. McKinsey & Company: Travel, Logistics & infrastructure. <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/powering-the-transition-to-zero-emission-trucks-through-infrastructure#/>

<sup>27</sup> Directive (EU) 2023/2661 of the European Parliament and of the Council of 22 November 2023 amending Directive 2010/40/EU on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023L2661>

<sup>28</sup> COM/2008/0886 final. Communication from the Commission - Action plan for the deployment of Intelligent Transport Systems in Europe. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52008DC0886>

<sup>29</sup> European Commission Joint Research Centre (2022), Smart Tachograph. [https://dtc.jrc.ec.europa.eu/dtc\\_smart\\_tachograph.php.html](https://dtc.jrc.ec.europa.eu/dtc_smart_tachograph.php.html)

<sup>30</sup> European Commission, Digitalisation: Driving the transition towards Smart and Sustainable Mobility (2022). <https://digital-strategy.ec.europa.eu/en/policies/digitalisation-mobility>

active safety systems that oversee the requirements for rest and compliance with the EU regulatory work breaks, as well as facilitating the search for safe and secure parking options<sup>31</sup>.

The rapid technological advancements in digitalisation highlight another emerging trend related to **societal changes** tied to urbanisation and **e-commerce growth**, which have been impacting the demand for passenger and freight transport in the EU. Urbanisation has led to heightened demand for passenger and road transport services and options. Additionally, the rise of telecommuting and e-commerce has led to further changes in consumer behaviour and, as a result, has reshaped the demand for freight transport, particularly for light delivery vans<sup>32</sup>, which have been experiencing a sharp rise in registrations<sup>33</sup>. These evolving patterns in consumer behaviour and travel, along with the defined targets for zero-emission mobility in urban areas, will result in reconfigurations to the vehicle fleet composition and an increase in journey volumes for both passenger and freight road transport. This situation will require the implementation of dynamic travel routes and innovative solutions for SSPAs, where truck and coach drivers can take necessary breaks to avert unintended accidents, congestion, delays and additional operational costs<sup>34</sup>.

Due to changing demographics and the potential unattractiveness of jobs in road transport, **labour shortages** are and will continue to be a challenge in the sector and have been considered a chronic problem by the International Road Transport Union (IRU) in their latest driver shortage report<sup>35</sup>. Here they outline the poor working conditions in the sector, including long hours, low wages, a poor work-life balance and unsafe and unhygienic work settings. The report adds that this labour shortage will be further aggravated as the high proportion of older drivers approaches retirement while the sector faces difficulties with attracting younger individuals, due to the minimum legal age to access the profession, which goes up to 21 and even 26 years old in some countries. In response to these challenges, the IRU and the ETF have called for the development of a denser network of safe and secure parking areas that will improve working conditions for truck and coach drivers, hence potentially attracting a more diverse workforce, including women and younger workers<sup>36</sup>.

These trends could potentially stimulate other already expected effects on the **resilience and transparency of the supply chain and workforce**. This could be through changes in competition dynamics, which remains a challenge to the functioning of the internal market as it predominantly revolves around cost factors, and, consequently, on price competitiveness. This emphasis on costs, combined with the industry's sensitivity to price and changes and its labour-intensive nature, has resulted in the imposition of a perceived cycle of pressures: the demand for cheaper goods and faster passenger trips leads to reduced prices but also lower wages and less time for breaks, unattractive job conditions, the outsourcing of companies and the emergence of fraudulent

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<sup>31</sup> Lynch, B., McCaffrey, C., Hanak, J., Sagar, A., EY (2023). Embracing the automation revolution in trucking. <https://www.ey.com/content/dam/ey-unified-site/ey-com/en-us/insights/retail/documents/ey-embracing-the-automation-revolution-in-trucking.pdf>

<sup>32</sup> Eurocommerce (2022), European E-Commerce Report. [www.eurocommerce.eu/european-e-commerce-report-2022/](http://www.eurocommerce.eu/european-e-commerce-report-2022/)

<sup>33</sup> European Automobile Manufacturers' Association (ACEA) (2023), Fact sheet: Vans. <https://www.acea.auto/fact/fact-sheet-vans/>

<sup>34</sup> Long, M. (2022), Special to Transport Logistics. <https://www.ttnews.com/articles/mandates-e-commerce-and-congestion-complicate-truck-stop-parking-issues>

<sup>35</sup> IRU (2023), Driver Shortage Global Report 2022. <https://www.iru.org/resources/iru-library/driver-shortage-global-report-2022-summary>

<sup>36</sup> IRU (2024), How bad is it? Help the EU scope coach and truck parking shortages. <https://www.iru.org/news-resources/newsroom/how-bad-it-help-eu-scope-coach-and-truck-parking-shortages>

practices<sup>37</sup>. Tackling these challenges will require passenger and freight road transport businesses to balance these existing cost pressures with guaranteeing transparency and the rights of truck and coach drivers, including securing their safety, comfort and rest needs. These promote added attention towards driver welfare in parking areas, namely when it comes to rest facilities and health and safety, as enhanced transparency may extend to working conditions, prompting parking areas to improve health and safety standards for drivers<sup>38</sup>. To promote these “best practices”, ESPORG, together with its public and private partners, from the European Commission, International Transport Forum, IRU, and others, has launched the “European Excellence in Truck Parking Award” to promote excellence and to assist in spreading good practices in view of improving safety, security and quality of services offered by truck parking operators to professional truck drivers, resulting in promoting safety, security, and connectivity. In 2024, Delta Park, TIP Group’s Secure Truck Parking received this award alongside a Gold Certification under the EU standards<sup>39</sup>.

To promote sustainable growth in the road passenger and freight transport sector that is socially, economically, and environmentally responsible, the industry needs to adapt to the aforementioned evolving trends. Developing a working environment that aligns with the quality of other job markets is vital, as this will enhance the attractiveness of employment opportunities in the sector. One vital step towards these improvements is to answer the pressing need for more secure parking facilities for trucks and commercial vehicles across Europe, as this is directly linked to enhancing driver safety and reducing cargo theft and potential accidents due to overworked or tired drivers, addressing a significant gap in the current transport infrastructure. Nevertheless, when looking at these parking facilities it is important to recognise the differences between truck (freight) parking compared to parking coaches engaged in long-distance scheduled lines and tourism specificities (passengers). The main difference stems from the type of “load” and the resulting different organisation of services and drivers’ activities. In **passenger transport**, passengers have specific needs and requirements which condition the stopping, parking and resting. Overall, it is safe to assume that, in the case of long-distance scheduled passenger lines, parking issues, infrastructure, ownership and management as well as the necessity of security and overnight resting facilities for drivers are significantly different from those of truck drivers. Furthermore, with a few exceptions, these SSPAs are not yet suited to meet the needs of touristic passengers. The Stakeholder Consultation report (see chapter 4 and Annex II) confirms this tendency.

## 2.2 Political context

### 2.2.1 Recent Legislative Developments

Aiming to provide a swift and efficient strategy to address the challenge of decarbonising the transport sector, including light commercial vehicles (LCVs) and heavy-duty vehicles (HDVs), the European Commission has agreed on a new Regulation (EU) 2023/1804<sup>40</sup> on the deployment of alternative fuels infrastructure (AFIR). This Regulation, that is included in the Fit for 55 policy

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<sup>37</sup> De Smedt, L and De Wispelaere, F (2021), Road Freight Transport in the European Union. [https://transfair-project.eu/wp-content/uploads/2021/03/TRANSFAIR\\_Quantum\\_Dimension\\_Transport\\_EU\\_EDITED\\_Feb2021.pdf](https://transfair-project.eu/wp-content/uploads/2021/03/TRANSFAIR_Quantum_Dimension_Transport_EU_EDITED_Feb2021.pdf)

<sup>38</sup> Gomez, A. Ulrich, M., Eckert, A., Liu, Y., Isinger, T., Martin, M. (2022). Challenges for Achieving Supply Chain Resilience and Transparency within CoyPu. Proceedings of the International Workshop on Data-driven Resilience Research 2022 co-located with Data Week Leipzig 2022 (DATAWEEK 2022), Leipzig, Germany, July 6, 2022. Volume 3376 of CEUR Workshop Proceedings. <https://researchr.org/publication/GomezHUELIM22>

<sup>39</sup> TIP (2024). TIP receives ESPORG’s European truck parking of the year 2024 award. <https://www.tip-group.com/en/news/tip-receives-esporg-s-european-truck-parking-of-the-year-2024-award>

<sup>40</sup> Regulation (EU) 2023/1804 of the European Parliament and of the Council of 13 September 2023 on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1804>

packages, aims at defining targets to ensure the minimum infrastructure to support the required uptake of alternative fuel vehicles across all transport modes and in all EU Member States to meet the EU's climate objectives. Additionally, it establishes requirements towards full interoperability of the infrastructure, comprehensive user information, and adequate payment options at alternative fuels infrastructure<sup>41</sup>.

AFIR defines targets that are relevant to parking areas, particularly in the context of electric vehicle charging infrastructure. This includes setting requirements for the deployment of charging infrastructure at parking areas. For example, by the end of 2027, each safe and secure parking area must have at least two publicly accessible electric recharging stations (by 2030 in the comprehensive network); this requirement increases to four publicly accessible electric recharging stations per SSPA by the end of 2030 in the core network and by 2035 in the comprehensive network<sup>42</sup>. Even though AFIR does not specifically regulate parking for road haulage, its requirements for charging infrastructure will have significant impacts on the design and operation of parking areas, especially on those managing SSPAs, since planning will be needed for the installation of electric vehicle charging stations and alternative refuelling stations to comply with AFIR requirements. Furthermore, this Regulation could indirectly encourage the development of more SSPAs to support the rollout of charging and refuelling infrastructure for passenger and freight heavy-duty vehicles.

Nevertheless, the previous section further outlines the clear need for not only sustainable but also safe and secure parking areas along the European road transport network to allow freight and passenger transport drivers to rest. These areas must be adapted to the capacity needs of modern logistics and should provide for a safe and secure environment with adequate facilities for drivers and cargo. Even though this is a primary responsibility of Member States, the Commission has undertaken a row of initiatives targeted at supporting and coordinating efforts in providing an adequate number of parking and rest areas in response to the continuous growth of road transport<sup>43</sup>, namely:

- Directive 2008/96/EC<sup>44</sup> on road infrastructure safety management recognises that a sufficient number of safe rest areas is important for crime prevention and road safety. This legislation aims to guarantee that, when new road sections are built, adequate and safe parking areas are foreseen.
- The ITS Action Plan and the Directive (EU) 2023/2661<sup>45</sup>, listing secure parking places for trucks and commercial vehicles as a top priority, these regulatory guidelines recognise the need to have

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<sup>41</sup> European Commission (2024). Alternative Fuels Infrastructure. Alternative fuels for sustainable mobility in Europe. [https://transport.ec.europa.eu/transport-themes/clean-transport/alternative-fuels-sustainable-mobility-europe/alternative-fuels-infrastructure\\_en](https://transport.ec.europa.eu/transport-themes/clean-transport/alternative-fuels-sustainable-mobility-europe/alternative-fuels-infrastructure_en)

<sup>42</sup> IRU, ESPORG, ETF (2023). Subject: More safe and secure truck parking areas needed on entire TEN-T Network. <https://www.iru.org/system/files/Joint%20letter%20-%20More%20safe%20and%20secure%20truck%20parking%20areas%20needed%20on%20the%20entire%20TEN-T%20Network.pdf>

<sup>43</sup> European Commission (2024). Parking areas. Transport modes. Road. [https://transport.ec.europa.eu/transport-modes/road/parking-areas\\_en](https://transport.ec.europa.eu/transport-modes/road/parking-areas_en)

<sup>44</sup> Directive 2008/96/EC of the European Parliament and of the Council of 19 November 2008 on road infrastructure safety management. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0096>

<sup>45</sup> Directive (EU) 2023/2661 of the European Parliament and of the Council of 22 November 2023 amending Directive 2010/40/EU on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023L2661>

appropriate information on safe and secure parking places. As a result, the EU has established a European Access Data Point to enable continuity of services throughout the EU.

- Delegated Regulation 885/2013<sup>46</sup>, requires the provision of information services for safe and secure parking places for trucks and commercial vehicles.

Following these regulatory developments, in 2020, as part of the EU's Mobility Package I, the European Parliament adopted Directive 2020/1057<sup>47</sup> and by Regulation (EU) 2020/1054. These legal acts were introduced to ensure better working conditions for road transport drivers. Directive 2020/1057 was introduced to respond to several challenges concerning the posting of workers in road transport. The revised Regulation (EC) No 561/2006, amended by Regulation (EU) 2020/1054 as part of Mobility Package I introduced new rules to allow more flexibility to take weekly rests also ensuring that drivers can regularly go home and have a right to suitable accommodation when taking their regular weekly rest on the road.

Regulation (EU) 2024/1679<sup>48</sup>, adopted on the 13<sup>th</sup> of June 2024 to amend Regulations (EU) 2021/1153 and (EU) 913/2010, establishes the guidelines for the development of the trans-European transport network. It further stipulates that every 100km, the comprehensive network must be equipped with resting areas providing safe and sufficient parking space, and appropriate facilities<sup>49</sup>, detailing the standards for (1) the level of service and security SSPAs and (2) the procedures for their certification, provides Member States with clear guidelines, targets and standards for improving conditions for these areas, which will simultaneously improve long haulage drivers' working conditions.

## 2.2.2 Recent Initiatives from the Sector

In a joint letter to the EU Transport Commissioner, several transport associations, including ETF, IRU and ESPORG, urged the EU to create more safe and secure parking areas in Europe for the period 2025-2027<sup>50</sup>. In addition to the legislative developments and efforts in the development, implementation and certification of SSPAs, practical actions and incentives from the sector are required for their successful development. In this regard, private businesses are taking the initiative through a large number of service providers. This is the case of Samsung SDS Europe, which has set up a network of secure parking lots for their transport routes throughout Europe using the Bosch

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<sup>46</sup> Commission Delegated Regulation (EU) No 885/2013 of 15 May 2013 supplementing ITS Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of information services for safe and secure parking places for trucks and commercial vehicles. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R0885>

<sup>47</sup> Directive (EU) 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020L1057>

<sup>48</sup> Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1315>

<sup>49</sup> Commission Delegated Regulation (EU) 2022/1012 of 7 April 2022 supplementing Regulation (EC) No 561/2006 of the European Parliament and of the Council with regard to the establishment of standards detailing the level of service and security of safe and secure parking areas and to the procedures for their certification. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1679>

<sup>50</sup> Allen, A. (2024). EU urged to expand safe and truck parking to enhance driver well-being. Health & Safety International. <https://www.healthandsafetyinternational.com/article/1870064/eu-urged-expand-safe-truck-parking-enhance-driver-well-being>

Secure Truck Parking service<sup>51</sup>. This consisted of developing an online platform for reserving secure truck parking spaces that include security features such as fences, barriers and video surveillance, in addition to lighting and sanitary facilities to provide greater safety and convenience for drivers. This implementation has resulted in multiple benefits, including reduced transport security costs by up to 40%, increased transparency in logistics partners' use of specified secure parking lots, improved security for drivers and freight and more efficient route planning and reliable supply chains<sup>52</sup>. Furthermore, SNAP Account, a network established with the ambition of enhancing the lives and operation of truck drivers, collaborates closely with partners and clients to offer innovative transportation solutions to its stakeholders. Within their umbrella, they have developed a Truck Parking Network, which features a comprehensive network of safe and secure parking truck facilities for both local and international road transport (Transports Internationaux Routiers orTIR) across 18 European countries along key international transport corridors. The main goal is to provide long-haul drivers with an accessible and convenient secure parking network across Europe, including the guarantee of cargo safety and surveillance, as well as providing essential services and amenities at the truck parking locations and noise-free zones to ensure a comfortable rest for the drivers<sup>53</sup>.

The abovementioned regulatory developments underscore a heightened commitment to enhancing access to SSPAs, consequently promoting the wellbeing and safety of long-haul drivers while also contributing to the security of the transport and logistics chain. In this regard, certain companies seem to be addressing these demands by developing their own initiatives aimed at providing better and more accurate information on the localisation of SSPAs and the availability of parking spaces and services. Nevertheless, further efforts are required to achieve the goal of establishing a comprehensive and accessible network of SSPAs throughout Europe.

## 2.3 Related developments

The gathered regulatory and implementation advancements distinctly underscore the commitment and interests of the European Commission, EU Member States and relevant organisations and businesses, in establishing and deploying a network of certified SSPAs across Europe. The main objective of these initiatives is to guarantee the safety and well-being of long-haul drivers, ensuring they are adequately rested and have access to all necessary services and amenities. Nevertheless, it is also important to understand how different technological, economic and societal developments might shape the future of safe and secure parking areas.

As mentioned already in this section, one of the greatest challenges for long-haul truck drivers, bus drivers and commercial vehicle operators is the **shortage of drivers**. In 2023, the IRU reported over 3 million unfilled truck driver positions across 36 countries studied, with shortages forecast to double in 5 years if the current practices remain. The IRU further reports the persistent global demographic gaps in the truck freight sector, with only 12% of drivers being below 25, and significant gender inequality, with just 6% of drivers being women<sup>54</sup>. This shortage will add increased pressure to improve working conditions and enhance driver comfort and safety at parking facilities. Modern

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<sup>51</sup> Bosch (2023). Case Study: Digitalisation of parking lots and booking portal for increased transport security. Bosch Secure Truck Parking. <https://www.bosch-secure-truck-parking.com/en/topics/case-study-samsung/#facts-and-figures>

<sup>52</sup> Bosch (2023). Case Study: Digitalisation of parking lots and booking portal for increased transport security. Bosch Secure Truck Parking. <https://www.bosch-secure-truck-parking.com/en/topics/case-study-samsung/#facts-and-figures>

<sup>53</sup> OTRA (2024). The OTRA Truck Parking Network. <https://www.weareotra.com/truck-parkings>

<sup>54</sup> IRU (2023). Global truck driver shortage to double by 2028, says new IRU report. <https://www.iru.org/news-resources/newsroom/global-truck-driver-shortage-double-2028-says-new-iru-report>

SSPAs with better amenities, secure environments and access to services will be vital in improving the working conditions and mental health of drivers, thereby potentially attracting younger and gender-diverse drivers and retaining them. On the other hand, to counteract the adverse effects of this trend, there is a growing push for automated and autonomous trucks<sup>55</sup>, which will require specialised parking areas that can accommodate driverless operations, including connectivity infrastructure to manage vehicle communications and advanced security to protect cargo during unmanned hours.

According to IRU, an ageing population partially explains driver shortages, suggesting that the available pool of national workers may not be enough to cover the gap. Therefore, recognising the gravity of this shortage, IRU members called on governments to focus on **tailored immigration policies** through the “Driver Shortage Also Needs Legal Immigration” resolution adopted last year. IRU has joined forces with the International Centre for Migration Policy Development (ICMPD) and the Migration Partnership Facility (MPF) on a new initiative called Skilled Driver Mobility for Europe, which aims to comprehensively map the countries of origin and destination of professional drivers as well as support the mobility of drivers from countries with a surplus to those facing a shortage<sup>56</sup>. These strategies will have multiple impacts on the implementation of SSPAs:

- Considering the cultural and linguistic diversity in the services offered, these facilities should cater to long-haul drivers from different countries including multilingual information systems, diverse food options and communication tools tailored to a global workforce.
- As migrant drivers may take longer cross-border trips, they may face specific challenges, such as a lack of familiarity with safe parking locations in foreign countries. Therefore, increasing the number of secure, well-identified parking areas will be critical to ensure their safety.
- As international drivers may cross multiple borders, these parking areas may require different standards for vehicle and border security to comply with the ones in practiced in different departure and destination countries. Harmonising cross-regional standards would improve safety for migrant workers.

The regulatory guidelines and highlighted case studies also emphasise the key role of **data and connectivity** in freight and passenger road transport sectors. Advancements in this field are expected to contribute significantly to a cleaner, safer and more efficient transport system by establishing interoperable, real-time and seamless ITS services to assist with traffic and travel information as well as intelligent parking for trucks and commercial vehicles<sup>57</sup>. These two factors will facilitate vehicle connectivity and, consequently, lead to the emergence of smart parking areas that can communicate with trucks via mobile digital platforms, therefore enabling drivers to receive real-time information about available parking spaces and helping to reduce the stress of finding SSPAs, especially in congested areas. Moreover, through enhanced real-time data collection and analysis, connected parking locations could employ advanced surveillance technologies to ensure the safety of

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<sup>55</sup> Kelkar, A., Heineke, K., Kellner, M., Möller, T., Brennecke, R. and Chauhan, S. (2024). McKinsey & Company. Will autonomy usher in the future of truck freight transportation? <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/will-autonomy-usher-in-the-future-of-truck-freight-transportation>

<sup>56</sup> IRU (2024). New European skilled driver mobility project tackles chronic shortages. <https://www.iru.org/news-resources/newsroom/new-european-skilled-driver-mobility-project-tackles-chronic-shortages>

<sup>57</sup> Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32010L0040>

cargo, and detect unauthorised access, hence guaranteeing safety and security. In this regard, the ongoing National Access Point (NAP) support action in Europe (NAPCORE) will play a significant role in SSPAs by (1) working towards data standardisation<sup>58</sup> and interoperability of NAPs<sup>59</sup> and (2) supporting EU-wide services and enhancing compliance with regulations<sup>60</sup>, such as the Delegated Regulation (EU) 885/2013.

In response to the challenges of decarbonising the transport sector, the EU is fully committed to accelerating the **energy transition** and **shift to alternative fuel vehicles** through multiple and varied regulations, guidelines and policies defined under the European Green Deal<sup>61</sup>. Regarding HDVs, the revised CO2 emission standards will be key to drive down the emissions in the road transport sector and ensure the increasing supply of new zero-emission vehicles (ZEVs) to the market, consequently driving the roll out recharging and refuelling infrastructure<sup>62</sup>. A direct impact of this on SSPAs is the need for the redesign, investment and replanning of parking layouts to accommodate charging/fuel needs in answer to the targets defined in AFIR for LCVs and HDVs<sup>63</sup> requiring the installation of electric vehicle charging stations, and hydrogen fuelling infrastructure for fuel cell trucks at parking stations. Additionally, as a result of installing charging or refuelling stations at SSPAs, cooling or heating solutions for these alternative fuels will be required as these are temperature controlled, therefore parking areas may need to offer support systems such as cold storage or heating stations to ensure optimal operating conditions for specific fuel types. In support of this, certain businesses are already promoting these SSPAs as future sustainable energy hubs<sup>64</sup> by enabling co-funding opportunities for high-capacity charging stations for heavy-duty vehicles and recognising sustainable trucking practices as critical for the well-being and safety of professional drivers.

The future of SSPAs for long-haul drivers is evolving and adapting in the face of all these developments. To address these trends, parking infrastructure will need to become smarter, greener and more secure, with a strong focus on driver wellbeing, sustainability, and seamless cross-border operations. Moreover, investments in technology, energy infrastructure, and security systems will be critical to meet the needs of the future freight and passenger road transport system.

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<sup>58</sup> What is NAPCORE? – NAPCORE. <https://napcore.eu/description-naps/>

<sup>59</sup> European Commission, National Access Points, [https://transport.ec.europa.eu/transport-themes/smart-mobility/road/its-directive-and-action-plan/national-access-points\\_en](https://transport.ec.europa.eu/transport-themes/smart-mobility/road/its-directive-and-action-plan/national-access-points_en)

<sup>60</sup> National Access Points (NAP): Moving Towards a single European Transport Area Requires a Digital Layer Interlinking all of the Elements of Transport – NAPCORE. <https://napcore.eu/description-naps/national-access-point/>

<sup>61</sup> COM (2019) 640 final. Communication From the Commission: The European Green Deal. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN>

<sup>62</sup> European Commission (2024). Revised CO2 emission standards for Heavy-Duty Vehicles. Press corner. [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_24\\_2527](https://ec.europa.eu/commission/presscorner/detail/en/qanda_24_2527)

<sup>63</sup> Regulation (EU) 2023/1804 of the European Parliament and of the Council of 13 September 2023 on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1804>

<sup>64</sup> Milence (2023). Milence promotes Safe & Secure Truck Parking Areas as future sustainable energy hubs. <https://milence.com/de/press-release/milence-promotes-safe-secure-truck-parking-areas-as-future-sustainable-energy-hubs/>

## 3. Current status of parking across the EU

### Key Takeaways

- The existing typology of parking areas across the EU includes a variety of purposes and security levels), off-motorway areas (private, easily certifiable), terminal waiting areas, company depots and SSPAs.
- High demand exists across Europe for secure parking, especially in Germany, Belgium, France, Italy, and Spain. Limited supply of adequate facilities and secure parking spaces remains a significant issue, with Western Europe also reporting high crime rates at crime and incident hotspots.
- User feedback and opinions on parking facilities and rest areas have been gathered by using a mixed-method approach, incorporating qualitative (advisory boards meetings, regional conferences) and quantitative (four targeted online surveys) data collection.
- Secure parking remains a niche market despite growing supply and this study does not identify a clear causal link between the need for SSPAs and their actual usage in the current market.
- A successful SSPA business model must be tailored to local conditions, ensuring financial viability through a well-prepared impact assessment, feasibility study, and option analysis. Beyond parking, SSPAs should serve as service hubs, adapting to evolving logistics, driver needs, and sustainability goals while optimizing investment and integrating seamlessly with freight operations.
- Results from consultations show that market growth can be driven by affordable upgrades to existing parking areas, such as moving from bronze to silver certification levels, and by making quick improvements at smaller rest areas along motorways. Public funding, particularly for security features, can further accelerate this growth.
- Inclusivity in SSPAs is critical as the driver workforce diversifies. Gender-sensitive measures, such as reserved spaces near facilities for female drivers and on-site or at-distance security personnel, could enhance security and comfort.

This chapter examines the typology of parking areas, key figures on SSPAs and the suitability of SSPAs in the context of gender equality.

The insights presented reflect the current state of parking facilities and the transport sector in the EU, as well as the findings from the quantitative and qualitative data analysis conducted for this study. The list of parking typologies provided afterwards is based on this existing status, which is also reflected in the data gathered under the framework of this study.

The implementation of such a mixed-method approach allowed to develop a comprehensive roadmap that identifies the current sector characteristics and needs, highlighting common thoughts across multiple stakeholder groups.

### 3.1 Data collection methods for assessing SSPA developer and user needs

This section presents insights and feedback from users of SSPAs, unsecured parking areas, and rest areas, based on both quantitative data, collected through online surveys, and qualitative data, collected through Advisory Board meetings and Regional Workshop discussions. The goal is to convey diverse perspectives within the sector.

The mixed-method approach, that incorporates both qualitative and quantitative data collection, has been applied to develop a comprehensive roadmap that identifies sector needs, strengths, and weaknesses, and highlights common viewpoints across different stakeholder groups.

Approximately 1,400 stakeholders shared their perspectives and experiences on parking, rest facilities, and infrastructure across the EU. Of these, around 1,200 participated in surveys, while nearly 200 engaged through Advisory Boards and regional conferences.

For the quantitative data, four targeted online surveys were conducted, segmented as follows:

- **Vehicle Drivers:** 915 respondents;
- **Coach Operators:** 79 respondents;
- **Light Commercial Vehicle Operators:** 16 respondents;
- **Transport Operators:** 256 respondents.

Further details on the surveys, respondents, and findings are provided in the Stakeholder Consultation Report (Annex II).

### **3.1.1. Organisation of Advisory Boards**

On the qualitative side, Advisory Board Meetings and Regional Workshops were organised, bringing together a wide array of public and private stakeholders. Participants included representatives from national authorities across various Member States, parking developers and operators, transport companies, road sector investors, professional drivers, insurance companies, and field experts.

The Advisory Board Meetings were divided in two main categories, Stakeholder Groups and Thematic Areas, and each participant was asked to choose at least one of each to commit to during the study.

The Stakeholder Groups consisted of the following six categories:

1. Authorities
2. Insurance Companies,
3. Transport Operators (HGVs, Coaches, LCVs),
4. Professional Drivers,
5. Safe & Secure Parking Developers and Operators and
6. Shippers.

On the other hand, the Thematic Areas consisted of five categories, namely:

1. Connectivity
2. Diversity,
3. Energy Transition,
4. Innovation and
5. Crime, theft & illegal migration.

The Advisory Board meetings for each group were held twice in an online format: once in May–June 2024 and again in September 2024.

More information about the Advisory Board composition and their outcomes can be found in the Stakeholder Consultation Report (Annex II).

### **3.1.2 Regional conferences**

In addition to advisory boards, regional conferences raised awareness of the study and engaged stakeholders in discussions about its goals and early findings. These regional conferences took place in:

1. Jabbeke, Belgium – February 6, 2024;
2. Saint-Geours-de-Maremne, France – June 18, 2024;
3. Madrid, Spain – June 25, 2024;
4. Madrid, Spain – October 1, 2024;
5. Padua, Italy – October 10, 2024.

These events allowed transport operators, authorities, and facility managers to share insights on regional needs, safety challenges, and secure parking solutions. By gathering firsthand input, the conferences provided a clearer view of practical issues across different regions.

More information about the regional conferences composition and outcomes can be found in the Stakeholder Consultation Report (Annex II).

## **3.2 Typology of parking areas**

Based on the available data and the discussions in the advisory board with truck parking operators, parking areas for professional drivers can be subdivided as follows:

### **3.2.1 On-motorway parking areas**

These parking areas are often open to all types of vehicles meaning that trucks also share this space with private cars, coaches and their passengers and other types of private vehicles. In certain Member States, such as Germany, on motorway parking areas must grant open access to any road user by law. We may therefore differentiate between on motorway parking areas and (slightly) off-motorway parking areas. Depending on the Member State such parking areas are often owned, operated or concessioned by public authorities.

### **3.2.2 Off-motorway parking areas**

Such parking areas are usually located at around 3 kilometres from the motorway. They are often owned and operated by private operators and are reserved for trucks and commercial freight vehicles.

These are the parking areas that could become certified safe and secure parking areas rather easily because in most Member States they are subject to fewer restrictions than on motorway parking areas.

### **3.2.3 Truck waiting areas**

Truck waiting areas at port and rail terminals: such truck waiting areas are critical because – different from public parking areas – drivers also spend time outside their driving and rest times while waiting for entry into the terminal. The Connecting Europe Facility (CEF) programme funding railroad terminals defines “secure truck waiting areas” in intermodal terminals, without providing detailed specifications. Such specifications may be helpful in order to provide secure parking at intermodal terminals as stipulated in the recommendations chapter (Chapter 6).

### 3.2.4 Private transport company grounds (company depot)

An increasing number of truck parking reservation suppliers offer reservation schemes for truck parking in parking lots owned by transport companies as evidenced by the multiplication of reservation providers such as Trucks'nB and Kravag. In this scheme, the transport company opens their yard to drivers from other transport companies – in a sort of 'Airbnb' approach, which is bookable via publicly available apps. An alternative form of this concept is used by niche transport operators, such as the transport companies transporting cars, who park in each other's yards.

### 3.2.5 Safe and secure parking areas (SSPAs)

SSPAs can be subdivided into parking areas that are certified and those that are not certified.

The only recognised certification enshrined in legislation is the one according to the EU standards set out in the Commission Delegated Regulation (EU) 2022/1012 (see section 1.1 Purpose and scope of the study). This standard defines four security levels and a common service level as a precondition to be certified. Certification is carried out by independent, impartial and neutral audit bodies that are accredited according to transparent rules foreseen in the Delegated Regulation.

Another industry standard is the TAPA EMEA Parking Security Requirements (PSR<sup>65</sup>), which is run by the TAPA association. Additionally, TAPA has established mutual recognition with the European SSPAs standards.

Regional industry standards, such as the Vereinigung Deutscher Autohöfe e.V. (VEDA) certifications (Premium Parking and Quality Parking)<sup>66</sup>, also exist but remain marginal. This initiative focuses on enhancing security, control, and comfort at truck stops along the German Autobahn. Participation is open to any qualified truck parking area, including "Autohof" stops (truck service areas), provided they meet the required standards.

Furthermore, ESPORG previously implemented an industry certification for parking and facilities, which included defining minimum acceptable security standards and outlining methods for maintaining these standards. This certification aimed to ensure that parking areas for trucks and commercial vehicles met essential security and operational requirements, providing a safer environment for drivers and cargo.

At the current stage, both Pan-European parking organisations ESPORG and TAPA have officially endorsed the standards laid down in Delegated Regulation 1012/2022.

So far, certification under Delegated Regulation 1012/2022 indicates that most certified sites are off-motorway parking areas, a trend corroborated by TAPA EMEA PSR audits. This predominance is due to the fact that private operators of off-motorway sites can more easily implement access restrictions for trucks compared to on-motorway locations. The recommendations chapter (Chapter 6) further explores this issue, providing guidance on how lower-level certifications could be made more feasible for on-motorway sites. These recommendations aim to increase certification levels across Europe, ensuring a more comprehensive network of secure parking areas for professional drivers.

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<sup>65</sup> Parking Security Requirements (PSR) by TAPA EMEA: <https://tapaemea.org/standards-trainings/parking-facility-security-requirements/>

<sup>66</sup> Vereinigung Deutscher Autohöfe (VEDA) certificates: <https://www.truck-parking.com/en/>

### 3.2.6 Parking areas for coaches

The results of the Vehicle Drivers and Coach Operators surveys, included in this study (Annex II), reveal that coach drivers consistently use SSPAs less frequently than LCV or HGV drivers. Instead, they tend to follow their passengers, often staying overnight at the same locations, such as hotel parking areas.

When asked about their preferred locations for 45-minute breaks, daily breaks, and reduced or regular weekly rests, coach drivers frequently mentioned service areas and roadside spots while traveling, as well as destinations. However, hotels emerged as their clear favourite, with 77% of coach operators declaring this option as their drivers' first choice. Recognising this trend, some municipalities, such as Pamplona in Spain or Brussels in Belgium<sup>67</sup>, have established dedicated coach parking terminals in urban areas.

The survey results indicate that SSPAs are largely irrelevant for the coach industry, given its distinct operational needs. Most coach drivers already rest at hotels during daily and weekly breaks, while their "en route" stops prioritise service areas and dedicated parking near destinations or terminals, separate from truck-dominated spaces. These findings might underscore the need for separate dedicated research to examine the specific parking requirements of coach drivers, including the types of facilities and services they use and need.

Further details on coach drivers' parking behaviour are available in the Survey Analysis Report, part of the Stakeholder Consultation Report (Annex II).

### 3.2.7 Parking areas for LCVs

In this report, LCVs are defined as vehicles or a combination of vehicles between 2.5 and 3.5 tonnes used in international transport of goods also based on the rules set out in Regulation (EC) No 561/2006. These vehicles are an important category because they are subject to the EU Community Licence<sup>68</sup> and will be also falling within the EU rules on driving time, breaks and rest periods under Regulation (EC) No 561/2006 as of 1 July 2026.

The results of the Vehicle Drivers and LCV Operators surveys, detailed in the Survey Analysis Report (Annex II), indicate that the parking behaviour of LCV drivers is similar to that of truck drivers. Unlike coach drivers, LCV drivers prefer SSPAs and rest areas for their breaks and rests.

However, the limited responses from LCV operators, when compared to the other categories highlight a concerning lack of awareness regarding current and upcoming driving and rest time regulations. The lack of awareness should be addressed by launching campaigns targeting LCV operators to assess compliance and related infrastructure needs.

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<sup>67</sup> In Europe there are tools like <https://busparkingmap.com/> that help locate parking facilities for tourists. Additionally, many city authorities provide such information directly to visitors. For instance, the city of Brussels offers details about coach parking on its <https://www.visit.brussels/en/professionals/travel-trade/coach-parking>.

<sup>68</sup> Since 21 May 2022, vehicles or combination of vehicles between 2.5 and 3.5 tonnes used in international transport of goods within the EU require a Community Licence. A certified true copy of the Community Licence must therefore be kept on board of every licensed LCV used in cross-border EU transport of goods, including when they perform cabotage operations. The new provision applies to road freight vehicles only. This also means that these vehicles or combination of vehicles with a permissible laden mass equal to or less than 2.5 tonnes are excluded. However, a motor vehicle of less than 2.5 tonnes coupled with a trailer, making the combination above 2.5 tonnes, used for the international carriage of goods, are included.

Additional information on coach drivers' parking behaviour can be found in the Survey Analysis Report, included in the Stakeholder Consultation Report (Annex II).

### 3.3 Key findings on secure parking areas

The key figures and insights on secure parking areas and parking behaviour in this section are derived from survey results collected as part of this project, along with opinions and experiences shared by experts and stakeholders in advisory board meetings. On a general level, it appears that:

- Both operators and drivers state that there is an insufficient number of adequate parking facilities in general (see definition of parking facilities as defined in Section 3.2) and a lack of SSPAs (defined as in Section 3.2.5 of this document) across Europe.
- According to the calculations in this study and extensively presented in Chapter 5 of this document, the demand for 2040 amounts to approximately 507,000 secure parking spaces<sup>69</sup>. This section provides additional details on the geographical gaps and stakeholder feedback;
- The EU Member States with the highest need for parking facilities are reported to be Germany, Belgium, France, Italy and Spain.

Further information on the current state of SSPAs, participant feedback and parking behaviours is available in Section 4 of this document, while additional details on Advisory Board meetings, Regional Workshops, and survey outcomes and methodologies, as presented in Section 3.1, are included in Annex II of this report.

#### 3.3.1 Current market situation

The mapping report, which is part of this study (Chapter 5), shows that currently around 60,000 parking spots can be considered somewhat secure (more than basic). At the same time, the report shows that reliable data are only available for very few parking areas due to a limited number of reliably certified parking areas so far.

#### 3.3.2 Secure parking remains a niche market

While the supply of certified safe and secure parking areas is on the increase and several parking areas could reach this status easily, parking offering security and services to drivers remains a niche market. The relatively long construction phase remains an issue. A quick fix could be based on upgrading existing parking areas to appropriate security and service levels.

The survey conducted in this study indicates that 15 euros per night per parking spot seems to be the high bar for transport companies. Based on such a low willingness to pay for parking, it appears doubtful if the willingness to pay for hotel accommodation corresponds to current hotel prices. Hence, a cost-efficient motel-based scheme seems to be the only option for the driver to take the regular weekly rest outside of the cabin as elucidated in the recommendations chapter.

It is important to clarify that this study does not establish a causal link between the identified need for SSPAs and their actual utilisation in the current market. While there is broad recognition that

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<sup>69</sup> The estimation considers a shortage of 4,025 parking spaces, with an average number 120 spaces each. See Gap Analysis in Chapter 5.

safety and security should be standard across all parking areas in the EU, the study does not employ a methodology that determines whether the demand for SSPAs directly translates into their use. The assumption that needs equate to actual demand requires further examination to differentiate between the perceived necessity and the willingness to use certified parking areas.

Chapter 4, particularly Section 4.1, provides detailed insights into stakeholders' perspectives on parking facilities and SSPAs within the current market context.

### 3.3.3 Incidents and crime

The mapping report shows both logistic hotspots and crime incidents. The survey highlights that especially Western Europe remains the area with the highest need for parking areas and Germany as well as France are the countries with the highest number of incidents and serious problems. Inter alia, the fact-finding mission of the European Parliament's committee on petition to the Hauts-de-France region in 2022 evidences the problematic situation in this region<sup>70</sup>. As further outlined in Chapter 5, the incidents data collection is problematic due to a lack of data sharing and transparency regarding crime and incidents. Law enforcement authorities are reluctant to share data on crime and incidents related to parking for trucks and commercial vehicles and related crime. Especially in a cross-border prevention and repression context, such a lack of data poses challenges for investors willing to choose an appropriate security level for their parking area.

The survey outcomes (see Annex II) show that almost 80% of drivers have faced a threat to their safety and/or dangerous situation while the vehicle was parked. On the other hand, 85% of transport operators reported having faced incidents or vandalism when the vehicle was parked in an unsecure parking area, 41% of transport operators reported an incident when parking in SSPAs. the percentage is 41% when parking in SSPAs.

Parking areas that are neither certified under Delegated Regulation 1012/2022, nor under any other security label (see Chapter 5 of this document) can still implement effective security measures. The Stakeholder Consultation report shows that CCTVs and lighting are considered effective to prevent theft and vandalism to a certain extent (see the section on Advisory Board meetings in Annex II of this report). However, such measures provide neither effective procedures nor do they lead to interventions by security staff or law enforcement authorities in a systematic manner.

Chapter 6 recommends to implement the Bronze security level at a larger scale, reinforcing the principle that safety and security should be the norm across all EU parking areas.

The Bronze level provides a cost-effective approach by incorporating essential security measures such as perimeter lighting, visual deterrents, routine surveillance checks, monitoring at entry and exit points, and clear signage to restrict access to authorized vehicles. These measures enhance security in a cost-effective manner. This could be rolled out by upgrading parking areas in a quick and cost-effective manner. The main items to be upgraded would be lighting and services for drivers. A coherent approach across EU Member States would deliver quick and lasting results, while remaining reasonable in terms of capital expenditure.

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<sup>70</sup> European Parliament, PETI Fact-finding visit to Hauts-de France 23 - 25 May 2022, [https://www.europarl.europa.eu/cmsdata/249214/Briefing\\_PETI\\_FFV\\_Hauts-de-France\\_May%202022\\_online\\_EN.pdf](https://www.europarl.europa.eu/cmsdata/249214/Briefing_PETI_FFV_Hauts-de-France_May%202022_online_EN.pdf)

### 3.3.4. Growth potential for safe and secure parking areas

The Advisory Board consultations have shown that the duration of construction, including groundworks, access roads, utility connections, driver amenities and security infrastructure, for a greenfield site is relatively long. Moreover, on average, occupation rates increase up to 30% in the first year, up to 50% in the second year and up to 70% in the third year of operation (nightly occupancy). This is insufficient to have a stand-alone business case for truck and LCV parking. Therefore, cross-selling with other services is usually the norm for secure parking areas. This currently includes restaurants, fuel stations, truck wash services and additional services.

The following growth drivers were identified during the stakeholder consultation activities:

- Upgrading existing parking areas to a relatively low security level such as Bronze or Silver should be relatively cost efficient. Conservative estimates based on existing cases show that – aside from potential groundworks – a capital expenditure around 300,000 euros would be required for an upgrade from Bronze to Silver, and around 550,000 euros for a parking area with 140 spaces (assuming only an upgrade, not an extension). If groundworks were required, they would – of course – significantly increase the price. Therefore, selecting sites with an upgrade potential, such as those located off-motorway, and which do not require significant groundworks, could speed up the process of deploying secure parking areas.
- Similarly, smaller on-motorway rest areas, that already have lighting and a basic camera system, could be easily upgraded to Bronze level, if this is compatible with national regulations.
- For new sites and groundwork-intensive upgrades, public funding can have an important leverage effect. This should focus on Silver to Platinum level sites with high groundwork-intensity. Parking operators are of the opinion that such public funding should be used until a sufficient network coverage is achieved, after which it can be phased out.

### 3.3.5 Impact of Business Model on Parking Area Use

Business models define how an SSPA operates, generates revenue, and serves its users. There is no one-size-fits-all approach; different locations require various models based on local conditions. Factors such as crime rates, migration challenges, fuel pricing differences, and border restrictions all influence demand and operational strategies. When drawing up a business plan, there must be a well-defined strategy to take all these factors into consideration: first **plan**, then **carry out**, **check** if everything works according to local conditions, and **act** accordingly.

A well-prepared **financial impact assessment** is crucial for ensuring the long-term sustainability of the business model for parking area use. This assessment, integral to an effective business plan, should confirm that investments in SSPAs will result in high utilisation rates, making them financially viable. However, a one-size-fits-all approach is not applicable, as each SSPA requires a tailored model that reflects its specific local conditions. Nevertheless, the final outcome must demonstrate its financial viability.

The financial impact assessment should be conducted in parallel with other key evaluations, such as feasibility studies and option analyses, which are essential for planning the effective deployment of SSPAs.

An effective business model should also consider opportunities for cross-selling, such as opening restaurants to non-parking users to improve profitability. Occupancy rates typically take about three years to reach 70%, requiring financial resilience and long-term planning<sup>71</sup>. Adapting to changing circumstances is crucial; for instance, with Bulgaria and Romania becoming full members of the Schengen area, shifts in corridors can be expected and the elimination of border checks may significantly impact the number of truck crossings at key border points. In 2022, approximately 6.84 million goods transport vehicles crossed Romania's borders, with 86% of this traffic occurring at the borders with Hungary and Bulgaria—equating to around 5.89 million truck crossings annually<sup>72</sup>. Similarly, catering to diverse driver habits, such as dietary requirements can improve service appeal. Before establishing an SSPA, a solid **feasibility study** is essential. A clear vision and mission should guide decision-making and location selection is critical—not only along the TEN-T network, but also on comprehensive freight corridors. An SSPA is more than just parking; it is a service hub that enhances driver wellbeing, addresses migration issues, incorporates sustainable energy solutions, and ensures connectivity. To achieve economic sustainability and optimize investment, the feasibility study must include an **option analysis** that evaluates multiple scenarios and assesses the specific needs and demand of the area. This approach ensures that the selected security level aligns with local requirements, enabling the most effective allocation of resources and maximizing the return on investment.

In addition, understanding customer needs is vital. Making the parking process seamless saves time and optimises the supply chain. The new generation of drivers brings different expectations, and services must adapt accordingly. Meeting EU parking standards in both quality and quantity ensures a return on investment. Futureproofing by incorporating alternative fuels is necessary to align with 2040 sustainability goals. Additionally, continuous staff training ensures high service levels. In order for an SSPA to work fluently, considering each of those components and aptly adapting is essential.

In the current situation, stakeholders highlight several issues in existing SSPAs<sup>73</sup>. Insufficient capacity, lack of reliable, up-to-date information, high booking and payment system fees (15-20% commission), and limited visibility in routing and planning systems are common concerns. Proposed solutions include increasing SSPA availability, improving real-time information access, and optimising booking and payment processes to reduce costs. Enhancing integration with logistics planning tools will further improve usability and efficiency.

### 3.4 Suitability of SSPA in the context of gender equality

Safe and Secure Parking Areas along the TEN-T corridor play a crucial role in providing essential services to long-haul drivers, who depend on them for rest, safety, and wellbeing. As Europe's transport workforce becomes more diverse, with increasing numbers of female drivers as well as drivers from minority ethnic groups, people with a migrant background and other demographic characteristics – who often also may face overlapping challenges related to multiple aspects of their identity– the need for gender-sensitive and inclusive SSPAs becomes ever more pronounced. These SSPAs should not only meet the highest standards of safety and security but also serve as a model for

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<sup>71</sup> Estimated average, according to ESPORG's observations among its members. Such estimation is deemed sufficient for economic viability.

<sup>72</sup> Source: [https://trans.info/en/romania-schengen-loss-399040?utm\\_source](https://trans.info/en/romania-schengen-loss-399040?utm_source)

<sup>73</sup> Based on Advisory Board meetings, particularly with safe and secure parking operators – see notes in Stakeholder Consultation Report (Annex II).

the sector, providing a blueprint for gender equality and diversity in transport, helping to increase the attractiveness of the sector.

The European Union has committed to advancing gender equality and inclusivity through various strategies, such as the EU Gender Equality Strategy 2020-2025<sup>74</sup> which calls for systematically including a gender perspective in all stages of policy design in all EU policy areas. Also, the Sustainable and Smart Mobility Strategy<sup>75</sup> that has laid down the need to attract a more diverse workforce to the transport sector, with a focus on women and youth and the European Pillar of Social Rights<sup>76</sup> which advocates for fair and equal treatment in all work environments have been providing incentives for achieving a Union of Equality.

These frameworks highlight the need for all sectors, including transport, to ensure equitable access to safe and secure working environments. SSPAs, as critical infrastructures along the TEN-T network, must align with these broader EU goals by setting high standards for gender sensitivity and inclusivity, ensuring that they cater to the needs of a diverse workforce.

Owing to its critical relevance for the sector, the study has devoted particular attention to these aspects, having organised two targeted consultations with advisory board members and assigning specific attention to it as part of the survey campaign. Key findings have confirmed:

- **Challenges in data collection:** The workshops revealed that limited data on female drivers using SSPAs make it difficult to assess and respond to women's specific needs. Although anecdotal evidence suggests that more women are entering the professional driver profession, hard data is necessary to inform policies and design improvements in SSPAs. The proposal to introduce QR codes in female restrooms to gather direct feedback from women drivers, as well as to engage with women's transport associations, offers a practical solution to bridge this data gap. Moreover, and in line with EU gender mainstreaming practices<sup>77</sup>, systematically collecting gender-disaggregated data will be essential for tracking progress, identifying unmet needs, and ensuring that SSPAs are not only safe but also accommodating for all drivers.
- **Impact of SSPAs on attracting and retaining female drivers:** With Europe facing a chronic shortage of professional drivers<sup>78</sup>, enhancing the attractiveness of the profession is a top priority for the Commission, as laid down in MOVE workplan 2020-2024<sup>79</sup>. While there is little direct desk research evidence linking SSPAs to recruitment or retention, workshop participants agreed that well-maintained, gender-sensitive SSPAs could play a key role in improving working conditions for female drivers. In this regard, clean, secure, and comfortable parking areas are essential for increasing the appeal of the profession to women, particularly as they may be more vulnerable to issues of personal safety and hygiene during long-haul journeys. These insights align with the EU's efforts to reduce gender disparities in traditionally male-dominated sectors through

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<sup>74</sup> European Commission, *Gender Equality Strategy 2020-2025*, 2020, <https://ec.europa.eu/newsroom/just/items/682425/en>

<sup>75</sup> European Commission, *Sustainable and Smart mobility Strategy*, 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789>

<sup>76</sup> Delivering on the European Pillar of Social Rights, <https://ec.europa.eu/social/main.jsp?catId=1226>

<sup>77</sup> European Commission, *Handbook for equality mainstreaming at DG MOVE*, 2024, <https://op.europa.eu/en/publication-detail/-/publication/e8600d42-31e7-11ef-a61b-01aa75ed71a1/language-en>

<sup>78</sup> IRU, *Global truck driver shortage report 2023*, 2024, <https://www.iru.org/resources/iru-library/global-truck-driver-shortage-report-2023>

<sup>79</sup> European Commission, *DG MOVE Strategic Plan 2020-2024*, 2020, [https://commission.europa.eu/system/files/2020-10/move\\_sp\\_2020-2024\\_en.pdf](https://commission.europa.eu/system/files/2020-10/move_sp_2020-2024_en.pdf)

improved working conditions, as outlined in the European Commission's Gender Equality Strategy. SSPAs free from gender-based discrimination and that cater specifically to the needs of female drivers could thus become a competitive advantage not only for the parking companies themselves, but also for companies and the industry overall, encouraging more women and underrepresented groups to consider careers in long-distance transport.

- **Inclusivity beyond gender aspects:** While gender is a central focus, the workshops also raised broader inclusivity concerns. Current SSPAs may not fully accommodate drivers from diverse cultural, religious, or LGBTIQ backgrounds. For example, dietary needs that differ from the standard "snacks and drinks available 24/7" requirement in EU SSPA standards may not be met, potentially prejudicing drivers with specific dietary restrictions. Nonetheless, consensus from advisory board members has been reached on the need to adopt a phased approach to inclusivity, with short-term recommendations to adopt a more pronounced focus on women and progressively incorporating the needs of other minority groups.
- **Security and safety as key priorities:** The consultation activities have shown that security remains a top concern for all drivers, but especially for female drivers who may be more vulnerable to threats during overnight stays. On-site security was mentioned as a deterrent for conflicts among drivers of different backgrounds, promoting harmony among various cultural, religious backgrounds, etc. Although EU SSPA standards do not currently mandate the presence of on-site security personnel, the workshops highlighted that the physical presence of such personnel significantly enhance the sense of safety for women drivers. In this vein, many participants and drivers, regardless of gender, strongly advocated for including this requirement in future revisions of EU standards, particularly for SSPAs aiming to achieve higher service levels.
- **Allocation of strategic parking spaces for female drivers:** While the concept of women-only parking spaces was deemed impractical and unwanted by the stakeholders consulted, participants agreed that soft actions, such as prioritising parking spaces near restrooms or security staff buildings for female drivers, could greatly improve security and convenience. This measure has already been implemented in some locations on an ad-hoc basis and is perceived as having reduced the need for female drivers to walk through large parking areas alone, particularly at night.

Overall, the evidence collected suggested concrete **recommendations** for different stakeholders, including for **parking managers** to promote wellbeing programmes, which is important considering that long-haul can be an isolating and mentally challenging job, and for **local authorities** to interact with parking managers to ensure that transport options are in place for linking parking and commercial areas of interest.

Additionally, **EU recommendations** could include reserved parking spaces for female drivers near security offices, to prevent women from having to walk across the parking area alone. It was suggested that a seal could be issued to SSPAs that offer such measures to allow drivers and companies to acknowledge they are gender inclusive. Indeed, by placing these reserved spaces near security offices, the physical proximity to security personnel and surveillance equipment could help deter potential threats and provide a sense of safety, encouraging more women to feel comfortable using these facilities.

In practice, these recommendations could be developed as part of voluntary EU guidelines or incorporated into existing safety certification frameworks for SSPAs. This would also support broader EU efforts to promote equality in long-distance transport and logistics, while addressing specific safety concerns raised during stakeholder consultations.

Finally, the stakeholder consultation process also revealed several areas where **targeted revisions to the existing EU standards** for SSPAs could significantly enhance both security and inclusivity. These revisions might include a greater focus on dietary considerations and the collection of gender-disaggregated data about drivers as part of the reporting requirements for parking managers.

Higher service levels could also require the presence of on-site security personnel, consistently identified as the most important factor contributing to a sense of safety and security. While Delegated Regulation 2022/1012 addresses physical security measures, such as fencing, lighting, and surveillance cameras, the human element is often overlooked, despite being crucial for both preventing incidents and providing immediate assistance when needed. Therefore, requiring on-site security personnel at parking areas seeking higher service levels could significantly elevate safety standards and reassure drivers that assistance is readily available.

## 4. Insights and challenges in SSPA development and operation

### Key Takeaways

- Key factors influencing the use and perception of SSPAs are safety, cleanliness of the facilities, comfort and parking availability, as well as the need for improved data on parking management and availabilities.
- Different driver categories show distinct parking and rest habits. For example, truck and LCV drivers often use SSPAs for their breaks, daily and reduced weekly rest, while coach drivers prefer to park and rest where their passengers stop.
- Trucks and LCVs use secure parking areas systematically, while coaches are more likely to follow their customers, i.e. the coach is parked near their destination and the driver sleeps at the hotel.
- The study's methodology does not allow for an in-depth analysis of how parking availability influences operators' and drivers' decisions to use SSPAs. However, drivers' perceptions of cleanliness and safety across different parking solutions suggest that, given the available supply and the current state of the European market, stakeholders may prefer SSPAs over other parking options whenever feasible..
- Currently, road transport operators implement few, if any, wellbeing measures—such as training and support programmes—for drivers, which does little to improve drivers' working conditions.
- The involvement of national and public authorities in SSPA deployment is heterogeneous. In several cases this entails delays in permits and insufficient market needs assessments, while increased involvement could streamline construction, support private investment, and align parking infrastructure with regional requirements.

Four relevant cases that can be looked at benchmarks are i) Topcorridors in the Netherlands, ii) the SSPA network in Spain, iii) Pass4Core network in Italy, iv) the SSPAs network in Hungary and Romania. These four good practices present innovative and scalable approaches for improving safe and secure parking across diverse Countries and regions in the EU. Each case highlights valuable lessons in strategic planning, public-private collaboration, stakeholder engagement, and adaptability to local needs.

This chapter focuses on stakeholders' perspective and feedback on safe and secure parking areas and resting facilities across the EU and four best-practices. The insights presented reflect the findings from the quantitative and qualitative data analysis and desk research conducted for this study.

### 4.1 Stakeholder perspectives on parking facilities

Among all interviewed categories, key factors influencing the use and perception of SSPAs include safety, cleanliness of the facilities, comfort and parking availability. The analysis and data collection efforts also highlighted an emerging need for improved data management and real-time communication between operators and drivers to better serve the logistics sector.

The main focal points, describing user experience on SSPAs and the issues and challenges of the sector are presented in the following sub-sections.

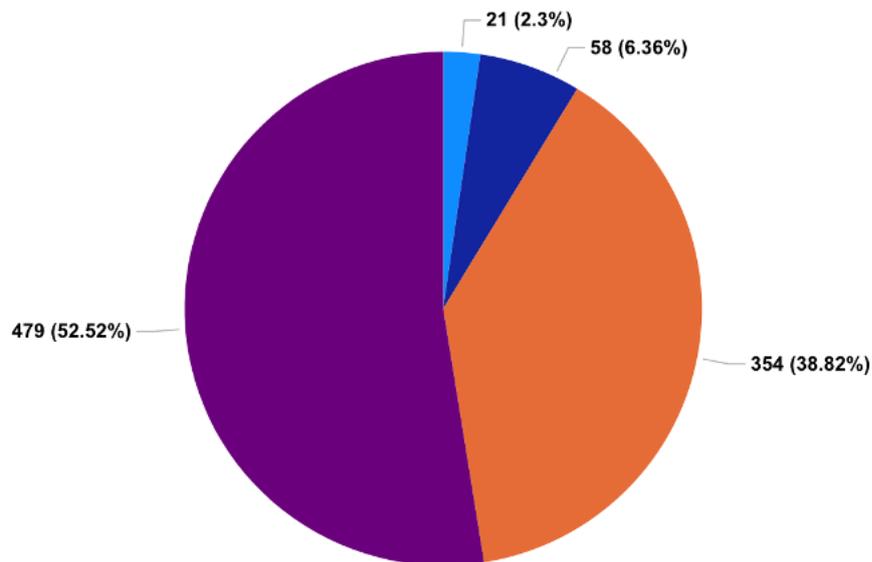
#### 4.1.1 Lack of SSPAs across Europe

The survey's results reveal that most respondents, including both drivers and operators, consider parking for trucks and commercial vehicles insufficient, with a particularly high percentage identifying a lack of secure parking options (53% for drivers) and resting areas (39% for drivers) across Europe.

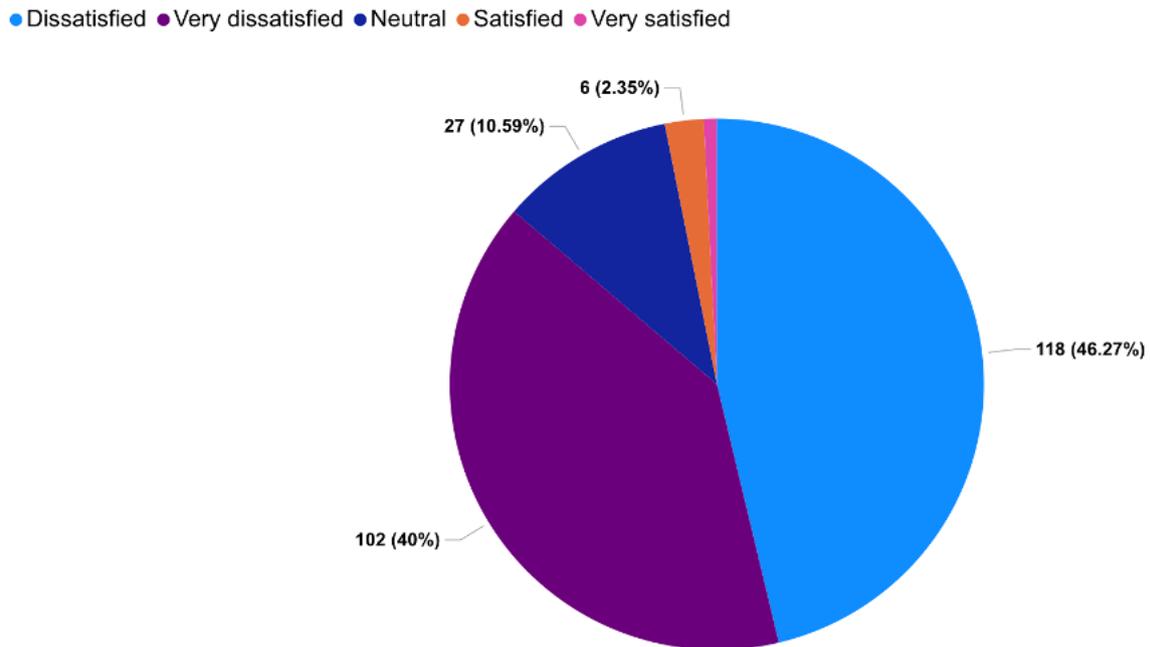
Stakeholders attending the Advisory Board Meetings and Regional Workshops confirm and reinforce this pattern on the lack of facilities.

Figure 1 Most needed types of parking in the EU according to vehicle drivers

● Company depots ● Parking for abnormal trucks or cranes ● Rest areas ● Secure parking areas



**Figure 2 Transport operators satisfaction levels of with current public parking facilities in EU**



Furthermore, when asked, approximately 87% of operators declared to be dissatisfied or very dissatisfied about the parking availability in the EU. To gather insights about regional specifics, drivers were also asked to identify the EU regions where SSPAs are most needed and where they stop most frequently. The data outlines that the areas in which drivers think there is the most need for SSPAs are Belgium, Netherlands, Germany, France, Italy, Portugal, and Spain which are also reported as i) the countries in which drivers stop the most and ii) the countries with the highest number of negative comments and observations in relation to their parking areas and resting facilities.

Furthermore, both drivers and operators have emphasised the need to address parking shortages and enhance safety measures as key actions to improve the overall driver experience, increase satisfaction, and boost retention rates.

#### 4.1.2 Quality of facilities available

The negative sentiment regarding the average quality of existing facilities was a recurring topic in meetings and workshops, and this pattern is confirmed by survey results.

Among drivers, 52% of respondents felt that parking area facilities were unclean, while 46% deemed the facilities acceptable. Only 2% of all driver respondents called parking area facilities “clean” (including all types of parking areas as defined in Section 3.1 of this document).

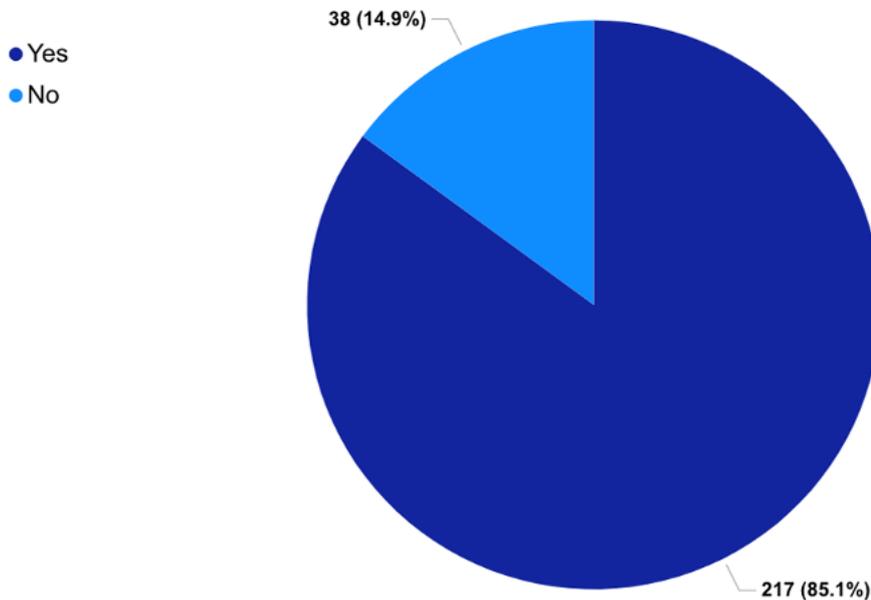
Regarding SSPAs, approximately 55% of respondents say that facilities are “clean” or “acceptable”.

#### 4.1.3 Safety and security risks while the vehicle is parked

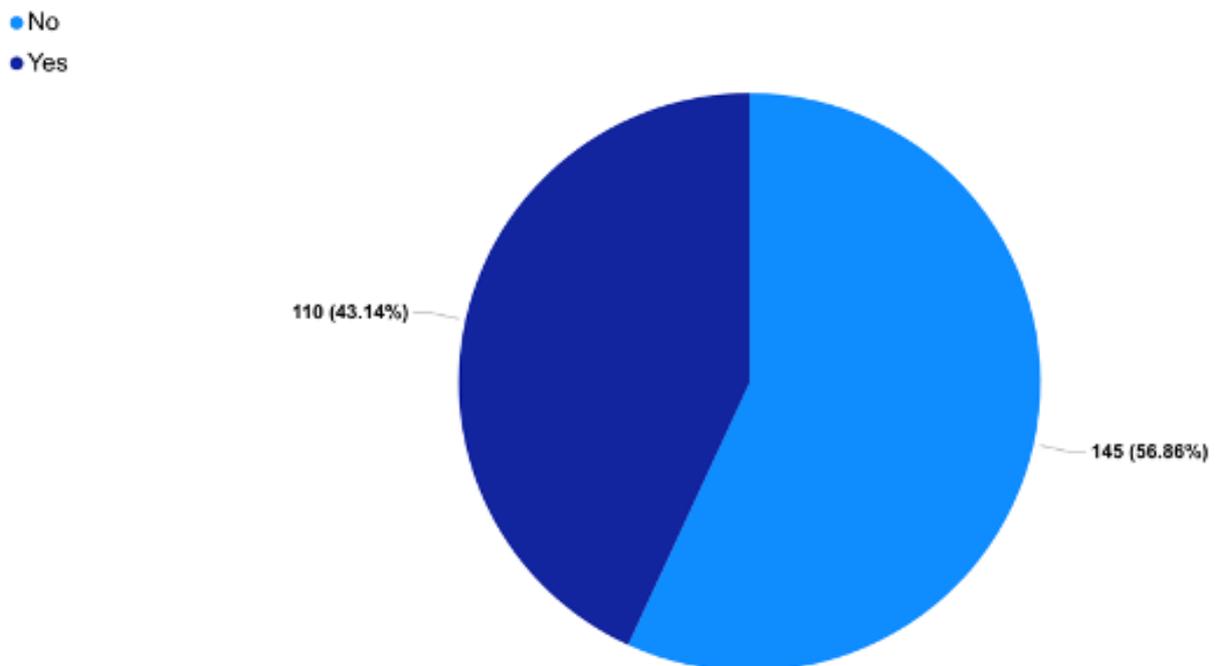
The security, wellbeing and comfort of drivers during their rest, particularly during overnight stays are among the major concerns of operators.

85% of transport operators report experiencing incidents and/or vandalism when vehicles are parked in unsecured areas, while this percentage drops to 41% for vehicles parked in secured areas.

**Figure 3 Transport operators: did you experience theft or vandalism on unsecure parking areas?**



**Figure 4 Transport operators: did you experience theft or vandalism on secure parking areas?**



On the other hand, 79% of drivers declare having faced a security threat and/or dangerous issue while the vehicle was parked, while only 9% of drivers report feeling safe at parking areas in Europe.

Crime and theft are a major concern, with theft being the most commonly reported issue in both survey comments and advisory board meetings. This is followed by incidents of fuel and cargo theft,

cabin break-ins, and frequent mentions of unauthorised passengers and violent robberies or attacks occurring while vehicles are parked.

Crime is among the most significant issue, with theft in general, including driver’s personal belongings, being most commonly reported in both the surveys open comments and the advisory board meetings, followed by fuel and- cargo theft, cabin break-ins. Migrants and violent robbery or attacks have also been frequently mentioned as issues arising while the vehicle was parked.

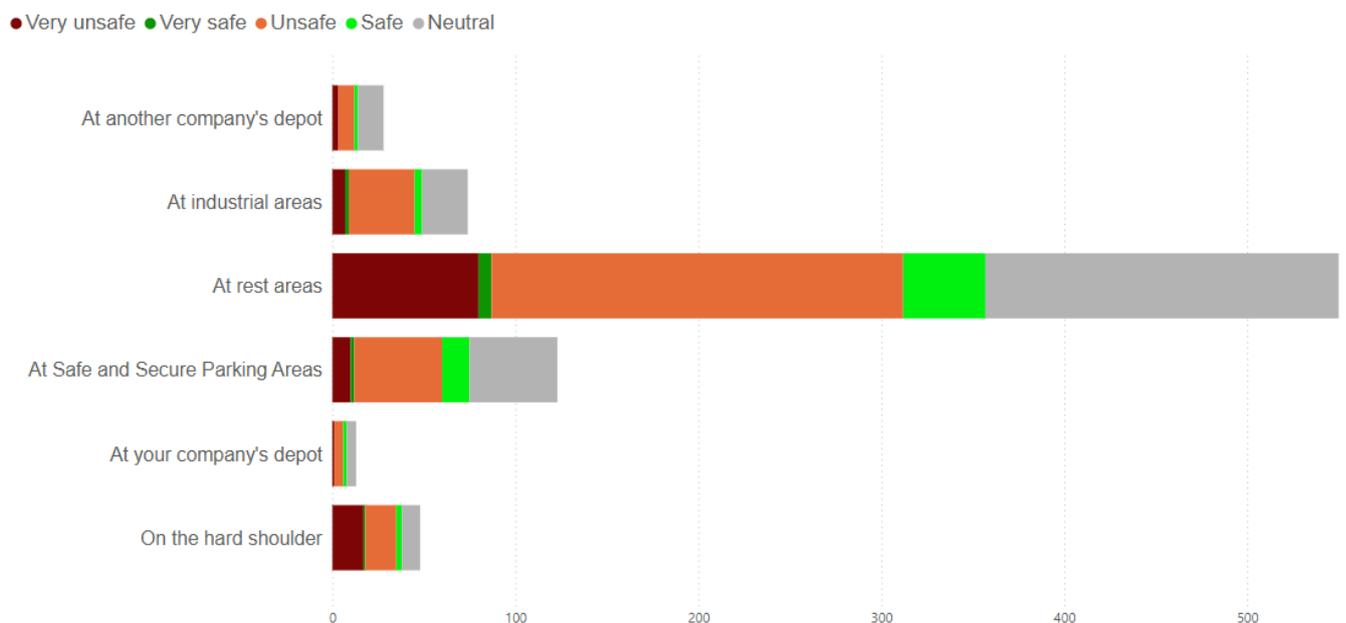
#### 4.1.4 Stakeholders' Preferences and Demand for SSPA

The study’s methodology does not allow for an in-depth analysis of how parking availability influences operators’ and drivers’ decisions to use SSPAs, even when such facilities are reasonably priced and recognised as necessary. This is primarily due to the still-limited supply of such facilities across Europe, which results in a significant gap between the supply and demand for parking spaces, particularly for SSPAs (Chapter 5).

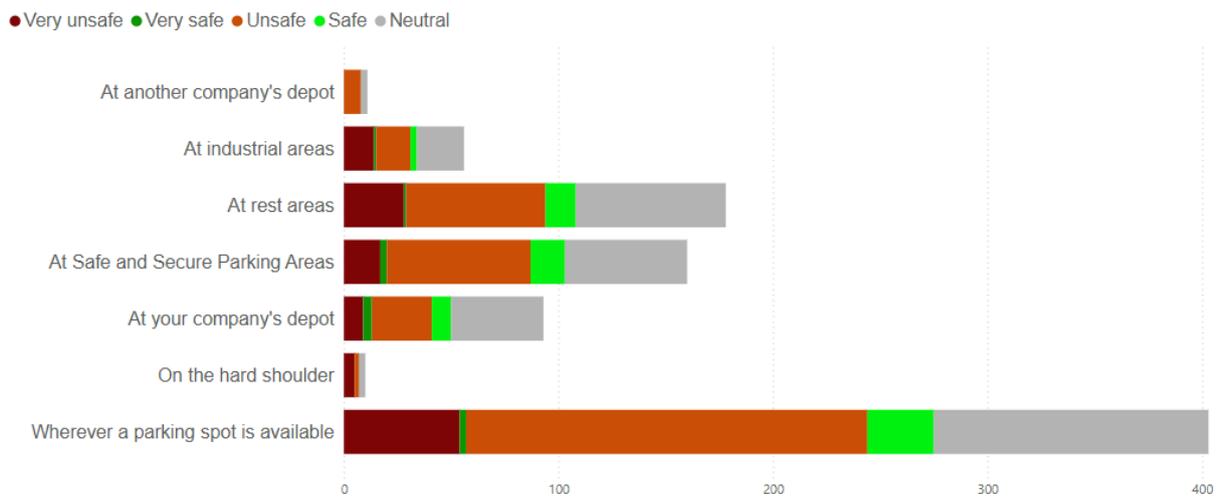
Due to this unmet demand, as also evidenced by drivers’ feedback presented above, drivers often park wherever they find an available space, as searching for a designated spot or an SSPA takes too long during their route—up to one hour on average, according to 50% of drivers. Moreover, approximately 92% of survey participants consider SSPAs (53%) and rest areas (39%) to be the most needed facilities in Europe (Annex II, page 37).

Nevertheless, drivers’ perceptions of safety and cleanliness across different parking solutions during breaks and rest periods highlight two key aspects that support the idea that, given the currently available supply of such facilities in the EU, stakeholders may prefer SSPAs over other parking options whenever feasible. In fact, as outlined by the survey results (Annex II), when asked about their perception of safety while parked during breaks or rest periods, drivers express greater concern when their vehicle is parked on hard shoulders or in industrial areas compared to SSPAs.

**Figure 5 Vehicle driver safety perception and parking solutions during a break (of minimum 45-minutes)**

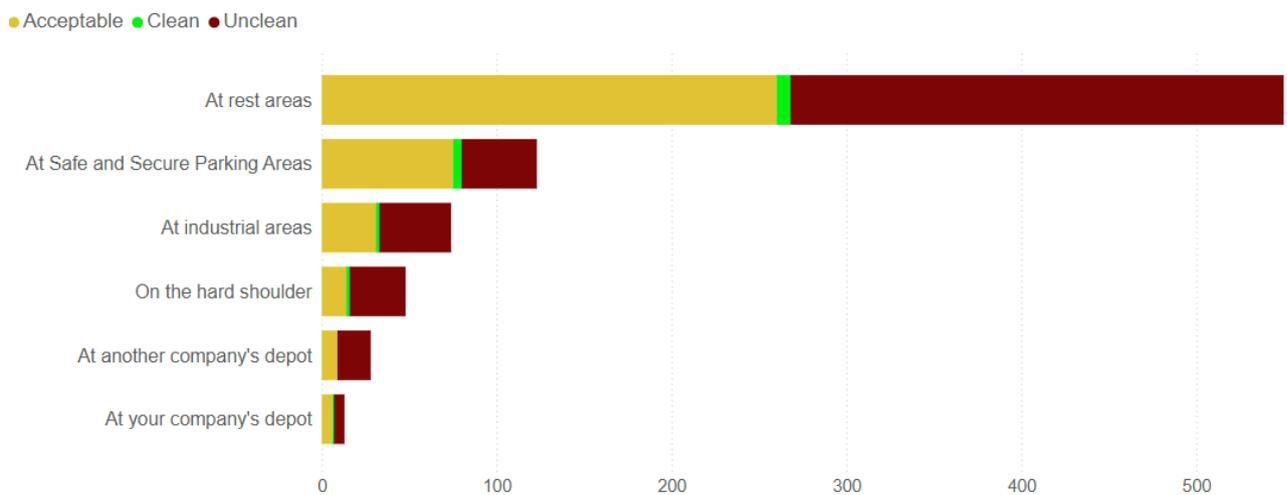


**Figure 6 Vehicle driver safety perception and parking solutions during daily or reduced weekly rest break**

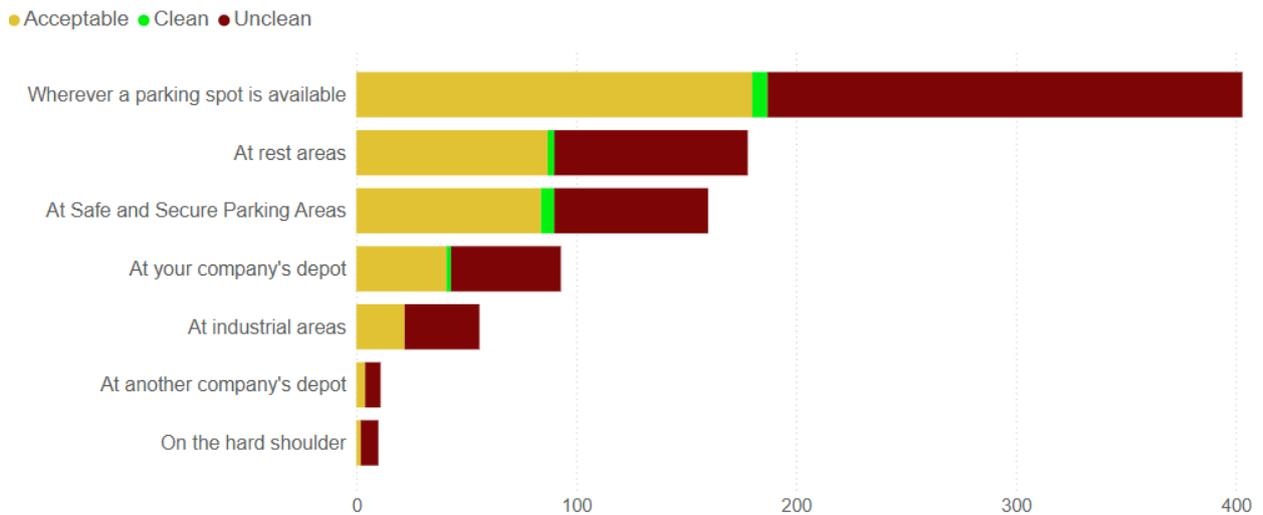


The pattern remains consistent when analyzing drivers' perceptions of SSPA cleanliness, as shown by cross-referencing their rest habits during breaks and daily and reduced weekly rest periods with their typical parking locations. Over 56% of drivers consider SSPAs to have clean and acceptable facilities, making them the top-rated option for cleanliness.

**Figure 7 Vehicle Driver cleanliness perception and parking solutions during a break (of minimum 45-minute)**



**Figure 8 Vehicle driver cleanliness perception and parking solutions during the daily or reduced weekly rest break**



As a result, given the still-limited supply of such facilities across Europe and the existing gap between demand and supply, it is not possible to quantify how stakeholders' appetite for SSPAs translates into actual parking preferences. Drivers often cannot choose their preferred parking facility due to unavailability or full occupancy. The shortage of SSPAs forces them to park wherever a space is available—particularly for breaks—rather than exclusively in SSPAs.

Nevertheless, when considering drivers' perceptions of safety based on parking location and the cleanliness of facilities, SSPAs are the top-rated option. Further details on parking and rest behaviours, as outlined in the survey results, are available in Section 4.1.10 of this document.

#### 4.1.5 Data availability and management

Both the qualitative and quantitative data emphasise a need for improved data management and real-time information for better route planning and reservation capabilities of parking areas. Specifically, the majority of operators consider real-time access to parking availability crucial for route planning, though only 27% find current parking information reliable. Additionally, 75% of operators believe that accurate data on available SSPAs enhances route planning and helps comply with driving and rest time regulations.

When asked about improvements in SSPA reservation systems, operators admit prioritising real-time availability updates and/or prefer integration with existing navigation systems, underscoring trends highlighted in previous findings.

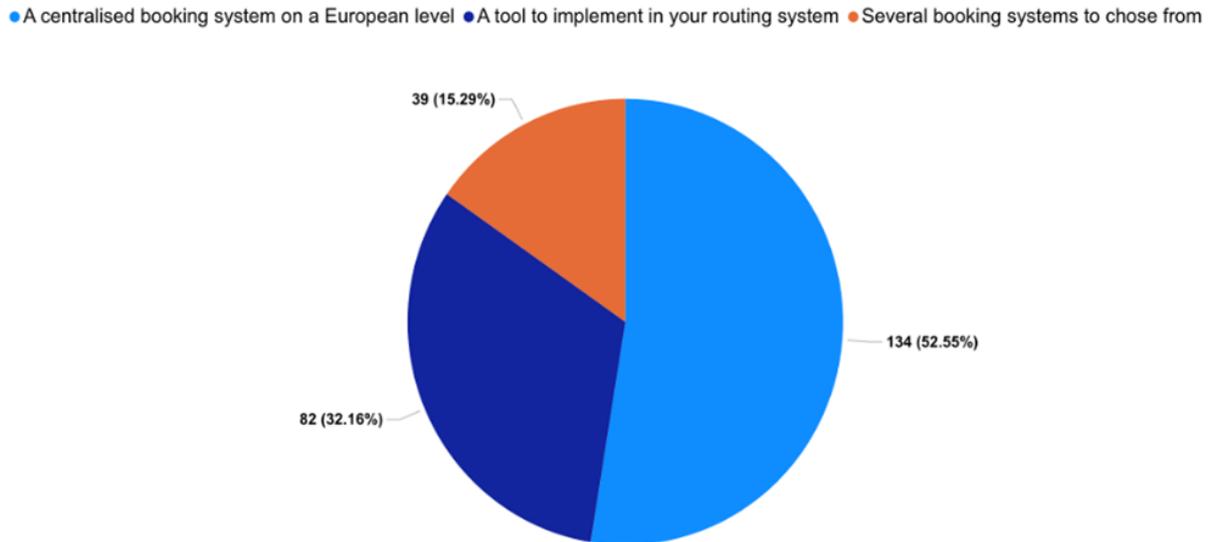
#### 4.1.6 Route planning and reservation

Regarding data availability and management for route planning and reservations, transport operators acknowledge that they lack a routing system or a fixed plan for stops, with over 50% indicating that they do not make parking area reservations at all.

Transport operators have expressed interest in centralised booking tools at EU level, as shown by the survey outcomes (Annex II), if it were available and functional, providing reliable up-to-date information about parking facility availability. Such systems could significantly enhance route planning and improve intermodality.

The advisory board meetings and the survey outcomes interpretation show that, by leveraging data for predictive planning of ‘secure routes’, this system could facilitate the concept of ‘green lanes’<sup>80</sup>, which would optimise logistics from factory to warehouse, through intermodal terminals, secure parking at connected SSPAs, customs, and ultimately to the final destination.

**Figure 9 Transport operators route planning solutions preferences**



The use of centralised EU systems can also help in eliminating the need to navigate multiple booking platforms and improve connectivity and streamlining operations, while fostering a more efficient and sustainable logistics network.

Finally, operators admit that if given the option, they would prefer to use a European centralised booking system for route planning, instead of several booking systems (53% vs 15%).

#### 4.1.7 Payment of SSPAs facilities

Regarding the payment for SSPAs, there is a consensus among drivers and transport operators that drivers should not bear the cost of parking. 75% of vehicle drivers say that the cost for parking facilities is addressed by the employer.

Transport operators currently express a willingness to pay up to 15 euros for an SSPA; however, the survey findings reveal that they are open to paying a higher price for SSPAs that offer enhanced security features.

A cross analysis of the higher lever security parking areas – namely Platinum and Gold - shows that currently prices range from approximately 15 euros to approximately 35 euros per night. Lower security lever parking areas – particularly Silver and Bronze - charge between 5 and 15 euros.

<sup>80</sup> The concept of Green Lanes was introduced by the European Commission following the outbreak of COVID-19 to ensure that freight vehicles do not experience more than 15 minutes of total delay when crossing internal borders within the TEN-T network. Stakeholders involved in the present study have found it relevant to apply a similar concept to SSPAs, arguing that these areas provide reassurance that cargo has been transported safely, and as a result, vehicles parked in SSPAs could be given priority when accessing key logistics hubs, such as ports. Further references are available here: [https://ec.europa.eu/commission/presscorner/detail/%5Beuropa\\_tokens:europa\\_interface\\_language%5D/ip\\_20\\_510](https://ec.europa.eu/commission/presscorner/detail/%5Beuropa_tokens:europa_interface_language%5D/ip_20_510)

Finally, payment through toll payment system (based on License Plate Recognition Cameras - LPR cameras) has proven highly effective, followed by payment via fuel cards and booking applications. This renders it possible for the drivers to pay seamlessly and hassle-free. Road and toll operators should be part of the effort to facilitate payment for parking areas.

#### **4.1.8 Driver Wellbeing**

The study's outcomes clearly indicate that transport operators either do not offer access to wellbeing programs or security training for their drivers, or, when they do, such offerings are insufficient and do not adequately meet driver needs. Furthermore, the advisory board meetings and workshops highlighted the importance of parking managers offering comprehensive wellbeing programs at SSPAs.

Considering the isolating and mentally challenging nature of long-haul driving, such amenities are seen as essential for enhancing the overall working environment. Hence, these programs could encompass not only mental health support and stress management activities but also recreational opportunities, such as promoting gym or sports memberships, providing information about walking routes in the parking area, and creating social spaces where drivers can relax and interact.

While such initiatives are currently limited, one remarkable example is Truckers Life Foundation<sup>81</sup>. Truckers Life Foundation has focused on improving the health and safety of professional drivers by promoting active lifestyles. Over the years, the organisation has supported and promoted the construction of outdoor gyms across Poland and neighbouring countries and secured the support of multiple sponsors across the EU. Thanks to its active engagement on social media the organisation has contributed to enhanced wellbeing in the road transport sector.

#### **4.1.9 Shortage of drivers**

According to operators, the shortage of drivers represents the most significant challenge facing the transport industry today. Both drivers and employers express considerable concern over driver wellbeing, which encompasses safety, security, comfort, and work-life balance. These issues are key deterrents for individuals considering a career in driving.

This trend documented in the background section is further illustrated by the demographics of participants in the driver vehicle survey, which reveals a split in age distribution: 51% of respondents are between 36 and 50 years old, 29% are over 51, and only 20% are younger than 35.

This data underscores the labour shortage, particularly as the workforce consists primarily of older employees nearing retirement, with few younger individuals entering the profession.

Addressing this labour gap is crucial and attracting younger workers should be a priority. Initiatives that promote career opportunities, enhance working conditions, and offer training programs tailored to the interests of younger generations are essential for sustaining growth and ensuring the transfer of necessary skills within the industry.

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<sup>81</sup> See: <https://truckerslife.eu/en/>

#### 4.1.10 Parking and rest behaviours

Both the advisory boards meetings and the survey results demonstrate differences and patterns in the various driver categories as related to their parking and rest habits and behaviour. For example, trucks and LCV drivers display similar behaviour in choosing parking locations and tend to take their breaks and rest time in SSPAs, while coach drivers show a different parking usage attitude, preferring to stop and rest at the same location as their passengers. When asked where they mostly park for their breaks, on average, drivers put rest areas as first preferred option with 67% and SSPAs as second preferred option, followed by industrial areas. However, when it comes to daily and reduced weekly rests, 44% of drivers declare that they park “wherever a parking is available” (Annex I of the Stakeholder Consultation report, Chapter 5, page 135). Rest areas and SSPAs are equally popular preferences. If considering the type of vehicle operated, it appears that HGVs and LCVs drivers use more SSPAs for such kind of rest than coach drivers.

In both the advisory board meetings and the survey results, drivers and operators have extensively expressed concerns about the lack of adequate rest infrastructure, particularly SSPAs (see Annex I of the Stakeholder Consultation Report, Chapter I). Taking also into consideration that 50% of drivers report it can take up to one hour to find a parking space (Annex I, Chapter I), the preference for resting “whenever a parking is available,” as highlighted in the survey, aligns with drivers' feedback on the limited supply and availability of parking facilities and related services across the EU. This choice reflects the stress and concern drivers experience while searching for suitable facilities that meet their needs and preferences.

Looking at the 45-hour rest, drivers identify their home as their primary rest and sleeping location (57%), with SSPAs being the second most preferred option. Taking also into consideration the reasons for choosing where to park, both truck and LCV drivers consider SSPAs and company depots the safest places to park, while industrial zones and non-secured areas are regarded as the least safe.

Finally, various stakeholders participating in the advisory board meetings noted that many drivers take their rests in their cabins for several reasons, including the lack of appropriate facilities near where the vehicle is parked, high hotel costs, and concerns about leaving the cargo unattended.

Detailed references and analysis on the parking and rest behaviours are available in Annex I of the Stakeholder Consultation report, with particular reference to Chapter 5.

#### 4.1.11 Engagement of public and national authorities

At present, public authorities and national stakeholders are not sufficiently engaged in the deployment of SSPAs. Their involvement is crucial in two primary areas: i) the permit and construction phases, and ii) market and needs assessment for the area or region.

On one hand, parking operators and investors have highlighted that the time required to obtain all necessary permits for construction activities is excessively long, often involving multiple local authorities and extensive documentation. Streamlining the permitting process would lead to a more uniform, efficient, and expedited rollout of parking areas. Additionally, early support and involvement from local authorities could help reduce the time needed to gather the required documentation.

On the other hand, national and public authorities have not provided adequate effort in developing a national strategy that addresses market needs regarding SSPAs and the necessary security levels.

Overall, participants agree that public and national authorities should enhance private investment and actively support EU efforts by engaging in market and needs assessments specific to their

regions. This is especially important for developing a strategy that aligns with actual needs and effectively addresses them.

Ultimately, while participants acknowledge the value of EU funding initiatives, particularly the Connecting Europe Facility (CEF), they agree that further action is needed from national governments as well. This includes boosting national funds to co-support these initiatives in alignment with EU strategies, standards, and requirements.

#### **4.1.12 Cooperation between EU institutions and Member States**

When asked to comment on the importance of cooperation with European authorities, representatives from Member States that participated in the advisory board meetings and/or in the regional conferences agreed that it is vital, particularly for raising awareness about the implementation and enforcement of the Mobility Package. They underscored the necessity of educating and informing stakeholders about EU Delegated Regulation 1012/2022, emphasising its relevance for parking operators striving to provide safe and secure facilities and the importance of adhering to these standards.

## **4.2 Best practices in SSPA development: Four key case studies**

This section discusses several relevant cases from which valuable lessons can be learned. These may relate to business models, and other innovative solutions and strategies that have improved driver safety, security and comfort, which can be further replicated. The analysis also includes the impact of recent developments from the supply/demand size and, importantly, thematic use cases linked to the outcomes and lessons learned from the stakeholder and thematic consultation rounds (stemming from workshops on diversity, connectivity, safety, alternative fuels and other thematic issues explored).

- Topcorridors in the Netherlands
- SSPA network in Spain (mowiz truck Astigarraga<sup>82</sup>)
- “Pass4Core” network in Italy
- SSPAs network in Hungary Romania

### **4.2.1 Topcorridors in the Netherlands: Implementing a Comprehensive Corridor Vision for Truck Parking**

The Dutch Top corridors initiative highlights the challenges of developing safe and secure truck parking as part of a broader infrastructure vision. Led by several Dutch provinces, together with the Ministry of Infrastructure and Water Management and in collaboration with key ports and logistics sectors, this vision aims to establish Europe’s most sustainable and innovative transport corridors. As part of the EU TEN-T Core Network, the initiative emphasises the importance of safe, efficient, and environmentally responsible freight flows, essential for the sustainable growth and competitiveness of both the Top corridors regions and the EU TEN-T Corridors.

Efficient and safe freight flows are critical for the success of these corridors. Recognizing the shortage of secure truck parking, especially in the East, Southeast, and South corridors, studies pointed to a shortfall of as much as 2,400 parking spaces.<sup>83</sup>

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<sup>82</sup> See: <https://www.esporg.eu/wp-content/uploads/2023/02/mowiz-TRUCK-Premios-Esporg.pdf>

<sup>83</sup> For example, see: Additional research on truck parking: realising sufficient truck parking spaces (in Dutch), Studio bereikbaar, 2018.

A global project was initiated, incorporating both public and private initiatives for individual parking spaces. This comprehensive approach laid the foundation for two Connecting Europe Facility (CEF) applications, with public and private parties actively participating. The applications targeted the expansion of existing parking areas—such as Maasvlakte Plaza and Truckparking Venlo—and the development of new facilities at strategic locations like Dordrecht and North Sea Port, aiming to meet the projected need for additional parking space.

Approximately €10 million in CEF funding was granted to the projects. In July 2020, Truckparking Maasvlakte Plaza was expanded by 210 spaces, while Truckparking Venlo added 165 spaces the following year. However, spatial procedures and the need to secure support from municipalities have slowed progress. So far, this has limited expansion to 375 additional parking spaces, as land availability has become a critical issue. In some cases, municipalities reconsidered their support due to factors like alternative land use, concerns over local congestion, or impact on nearby residential areas. As a result, new locations had to be identified, or alternative initiatives were pursued.

Lessons Learned:

- An overarching vision of truck parking along a corridor allows for coordinated development that best meets demand. For individual truck parking operators, this is much more challenging to determine, which can lead to a suboptimal distribution of parking spaces. In this way, scarce capacity can be utilised optimally.
- The availability of land and permits is essential. Changes in local political priorities can lead to withholding or withdrawing their cooperation, which can cause significant delays in project implementation. Truck parking areas are too often perceived at the local level as a burden, with the benefits insufficiently outweighing the sense that the local community bears the disadvantages. Currently, no measures have been implemented in the Netherlands to address these challenges, highlighting a significant gap that presents an opportunity to develop strategies such as community engagement, incentives to showcase local benefits, or policy adjustments. It would be an opportunity to learn from best practices from other regions.

#### **4.2.2 SSPA network in Spain (mowiz truck Astigarraga)**

Finalised in 2022, the Safe and Secure Parking Area (SSPA) in Astigarraga is part of a broader initiative aimed at enhancing parking facilities for heavy goods vehicles across the area, particularly in the French-Spanish border region, along the Atlantic TEN-T Core Network.

The project has been led by BIDEGI, the Gipuzkoa Agency for Infrastructure, which is responsible for managing and maintaining the AP-1/AP-8 highways in their respective Gipuzkoa sections.

This project has successfully secured approximately 20% of its co-funding from the Connecting Europe Facility (CEF1)<sup>84</sup>, which has been instrumental in covering the associated costs and activities necessary for its development.

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<sup>84</sup> This project has been supported under CEF 1, specifically the CEF 1 Regulation (EU) 1316/2013, which was in effect until July 2021 as part of the 2021-2027 multiannual financial framework (MFR). The term "CEF 1 projects" refers to those that received co-funding during the period from 2014 to 2020. In April 2021, the CEF 2 Regulation (EU) 2021/1153 came into force, repealing Regulations (EU) No 1316/2013 and (EU) No 283/2014. Projects co-funded after the new regulation was enacted are categorised as CEF 2 projects.

The SSPA in Astigarraga has been designed to accommodate over 315 heavy goods vehicles (HGVs) and is built to meet the Gold-level certification standards set by the EU Parking Standard (Delegated Regulation 2022/1012). Upon completion, the parking area was able to accommodate an additional 26 parking spots, bringing the total number of spaces offered to 341.

In alignment with the project's objectives, the beneficiary implemented various construction and operational features designed to enhance the functionality of the parking area. This includes the establishment of state-of-the-art security measures, such as advanced lighting systems, perimeter fencing, and a comprehensive surveillance network. Furthermore, innovative Intelligent Transport Systems (ITS) services have been integrated to optimise the management and accessibility of the parking facilities.

The overall project also includes significant upgrades to the existing parking infrastructure in Oiartzun, where another SSPA has been reconstructed to achieve the same high standards of safety and security, catering for 190 HGVs and 10 buses.

Together, these efforts contribute to a cohesive strategy aimed at improving parking solutions across the region, ultimately enhancing the safety and operational efficiency of transport networks. By leveraging CEF funding, the project not only meets the immediate needs of transport operators and drivers but also aligns with EU regulations, fostering greater transparency and reliability in parking services.

After deployment, the parking area has been managed by mowiz Truck.

Lessons learned:

- **Effective Public-Private Partnerships:** The project demonstrates the effectiveness of collaborative efforts between government entities and private stakeholders for the development and management of critical infrastructure projects, like the SSPA in Astigarraga, fostering shared responsibilities and resources;
- The successful addition of 26 parking spots, bringing the total to 341, illustrates the importance of flexibility and scalability in project planning and adaptability to the changing of circumstances. Anticipating future demand and integrating additional capacity into the design can enhance the overall utility of parking facilities, meeting the evolving needs of heavy goods vehicle operators.

#### 4.2.3 "PASS4CORE" network in Italy

The "Parking Areas implementing Safety and Security FOR (4) CORE network corridors in Italy (PASS4CORE-ITA)" project is co-financed by the CEF funding programme. The project's primary objective is to develop a national network of SSPAs for heavy goods vehicles (HGVs) along Italy's primary road network. The project encompasses four core network corridors under the TEN-T, namely the Scandinavian-Mediterranean corridor, the Baltic Sea-Adriatic Sea corridor, the Mediterranean corridor, and the Rhine-Danube corridor.

In particular, the PASS4CORE initiative offers logistics and transport operators significant opportunities, including:

- Upgrading existing parking facilities to organised, publicly accessible parking areas;
- Providing safe and secure waiting areas for customers;
- Enhancing owned parking facilities with amenities for drivers, such as fencing, lighting, restrooms/showers, vending machines, restaurants, Wi-Fi, and electric vehicle charging stations;
- Achieving EU standards for Safe and Secure Truck Parking Areas.

Furthermore, PASS4CORE has established a broad partnership, paving the way for the implementation of SSPAs not only along motorways but also in other strategic locations. The partnership included:

- Italian Ministry of Transport and Infrastructure (Comitato Centrale Albo Autotrasporto);
- Motorway Concessionaires such as A4 Trading and CAV;
- Five rail-road terminals located in Livorno, Orte, Parma, Padova, and Verona;
- Core Airport such as SEA – Malpensa Airport (MXP);
- Logistics Service Providers (LSPs), such as GRIM LSP – Torino, CPP LSP – Padova and CSM Verona.

The partnership engaged in the establishment of 1,350 parking areas and the upgrade of more than 300,000 square meters across 13 dedicated sites to obtain various certification levels European Parking Standards (Delegated Regulation 2022/1012).

The project is co-funded at 20%. Following the success of PASS4CORE, the PASS4CORE2 initiative was launched in 2021, co-funded to expand the network by adding three new partners and additional locations.

Lessons learned:

- The holistic regional approach, which in this case is focused on simultaneously building and upgrading multiple parking facilities across different areas of the country along four distinct TEN-T corridors, highlights the effectiveness of a unified strategy for addressing parking solutions in multiple locations. By catering to the immediate needs of transport operators and drivers, the project underscores the importance of stakeholder engagement throughout both the planning and implementation phases.
- The project's success is largely attributed to the involvement of a diverse partnership, including RAM S.p.A. as the implementing body for the Italian Ministry of Infrastructure and Transport, along with 11 other beneficiaries. These partners are not limited to parking operators but also include motorway operators, rail-road terminals, and other private entities. This collaborative

approach ensures consistency in service quality, strengthens connectivity within the transportation network, and highlights the critical importance of stakeholder engagement.

#### 4.2.4 SSPAs network in Hungary and Romania

The project was initiated to promote the integration and interconnection of all transport modes by improving accessibility, connectivity, and reducing infrastructure quality gaps between EU Member States, particularly Hungary and Romania. As part of this effort, four SSPAs were strategically located along the Orient-East-Med (OEM) Corridor.

The project was coordinated by Trade Trans Combi Romania and Bivak Kft.

The locations were selected to meet the specific needs of the countries and address the shortage of facilities along the OEM Corridor. This corridor, which runs through Hungary and Romania, links Central Europe with the North, Baltic, Black, and Mediterranean seas, providing key advantages for freight transport and enhancing service quality for the haulage industry.

1. To do so, the project covered four key initiatives: **Construction of a new Gold-level SSPA** with 170 parking spaces at Kiskunfélegyháza on the Hungarian motorway M5;
2. **Construction of a new Gold-level SSPA** with 180 parking spaces at Curtici, near Romania's motorway E671;
3. **Upgrading an existing SSPA** at Nagykanizsa on the Hungarian motorway M7, expanding it from 25 to 35 HGV parking spaces, reaching Bronze-level standard;
4. **Upgrading an existing SSTA** at Hatvan on the Hungarian motorway M3, expanding from 60 to 80 HGV parking spaces at Silver-level standard.

All of these SSPAs are equipped to connect to their respective National Access Points in compliance with Delegated Regulation 885/2013 and API design guidelines from Delegated Regulation 1012/2022.

During its deployment, the project encountered unforeseen risks due to external factors, arising from archaeological excavations in Kiskunfélegyháza<sup>85</sup> and the spread of the COVID-19 pandemic and the measures implemented to contain it.

Despite these challenges, the beneficiaries remained committed to the project and successfully built and upgraded all four parking areas to the required quality levels, fulfilling all deliverables and milestones.

The project, which was co-funded by the EU's CEF1 program covering 50% of the total eligible costs, is part of a larger cluster initiative aimed at addressing the shortage of SSPAs across Europe.

The project can also be seen as a cluster initiative, since it has successfully raised awareness about the importance of safe and secure parking facilities and sparked investment interest from various stakeholders in neighbouring areas.

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<sup>85</sup> The archaeological discoveries in Kiskunfélegyháza revealed a site covering 2 hectares, providing insight into a 13th-century shepherd's village. The remains found included evidence of houses, animal stalls, and a variety of artifacts, such as plates, clothing, and spoons. During the archaeological investigations, Bivak Kft. formed a collaborative partnership with the local museum to ensure the preservation of the site.

Numerous parking facilities meeting the security standards outlined in Delegated Regulation 1012/2022 have been developed or are currently in progress along the OEM Corridor. These facilities are located in Győr (HU), Tatabánya (HU), Tata (HU), Ploiești (RO), Balástya (HU), Pecica (RO), and Orțișoara (RO). Together, they provide over 300 parking spots, with some co-funded by the EU and others resulting from private investments.

Lesson learned:

- The project's implementation has improved road transport safety and security along the OEM TEN-T corridor and the Romania-Hungary-Western European routes, where road traffic has increased in recent years. This enhancement is achieved by establishing and upgrading four parking areas in various locations, tailoring the security levels of these facilities to the specific needs and characteristics of each area.
- The project serves as a benchmark for other SSPA initiatives planned by other stakeholders and or investors looking to replicate this experience in the neighbour area, by providing a model for establishing new parking areas compliant with Delegated Regulation 1012/2022 or upgrading existing facilities.
- Throughout its deployment, the project witnessed active involvement from various stakeholders, including public authorities, who contributed to achieving the project's goals and objectives. Flexibility and commitment were essential to keep the project on track, successfully delivering all four parking areas to their required quality and security levels. An example of the project's flexibility and problem-solving approach is how groundworks and archaeological investigations were conducted simultaneously to reduce delays.

## 5. Mapping demand and supply & gap analysis

### Key Takeaways

- This chapter maps out the demand for and supply of parking spaces and the demand-supply gap.
- In the current situation, the supply of SSPAs is limited and unevenly distributed across the EU. Given a much greater demand than the current supply, there is a significant gap when the entire demand for parking capacity is to be accommodated at SSPAs.
- If the total demand is to be met by SSPAs, there is currently a gap of 390,057 parking spaces or 3,250 parking areas. By 2040, demand is projected to increase further, resulting in an estimated gap of 483,000 parking spaces or 4,025 parking areas.
- The demand-supply gap is present across the European Union, with its scale varying by region and Member State. The most significant gaps are observed in France, Germany, the Benelux, Member States in Central Europe, Spain and Italy.
- Even with continued investments in upgrading existing and developing new parking areas in the coming years, the demand-supply gap is unlikely to be substantially reduced by 2040. However, certifying currently non-certified parking areas that already include security elements could help close the gap. Many of these areas already possess security features that could enable them to achieve bronze or silver certification with minimal additional effort.
- The results of the mapping exercise, indicate a need for a denser network than can be inferred from the targets outlined in the Revised TEN-T Regulation.
- All SSPA levels are needed to address the gap, with particular attention required for the bronze/silver levels, where the gap is largest.
- Currently, there are insufficient overnight facilities near secure parking areas for truck drivers, and existing options often do not meet their budgets or specific needs. As an alternative, it could be considered to allow drivers to take regular weekly rest in their cabins at high-quality SSPAs, which could improve driver conditions, attract investment, and help address the long-distance transport sector's driver shortage.
- Existing data on transport-related crime and incidents is limited due to the voluntary nature of reporting and concerns about negative publicity among stakeholders. More comprehensive data is essential to make well-informed decisions about the most appropriate security level for specific locations.

To assess current and future parking shortages, a comprehensive mapping exercise was conducted. This chapter outlines the key findings from mapping parking demand and supply, followed by a gap analysis. In addition to the base year 2022, forecasts have been made for 2040. A notable development since the earlier Study on Safe and Secure Parking Places for Trucks (2019)<sup>86</sup> is the UK's departure from the EU in 2020, which has impacted both the demand for and supply of parking spaces, as well as the resulting gap.

More (technical) detail on the mapping exercise is included in Annex 1.

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<sup>86</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019

## 5.1 Contextual background

### 5.1.1 The Trans-European Transport (TEN-T) Network

The demand for parking spaces arises from drivers on long-distance routes (> 500 km) within the EU, who need suitable places to take their mandatory rest breaks. Since 2013, DG MOVE has established Core Network Corridors, representing Europe's key strategic transport routes. These corridors are crucial for long-distance road transport, enabling seamless cross-border connectivity. Long-distance trips (trips more than 500km) are likely to involve the TEN-T corridors because they provide the long-distance road connections across Europe. In 2024, the European Commission revised these corridors and updated the relevant regulations to address changing transport needs.<sup>87</sup> Following the adoption of the revised TEN-T Regulation, the network now distinguishes between:

- the **core network** (to be completed by 2030) comprising nine European Transport Corridors,
- the **extended core** (to be completed by 2040), and
- the **comprehensive network** (to be completed by 2050).

Figure 10 shows the TEN-T core and comprehensive road networks and overlays the core network corridor sections.

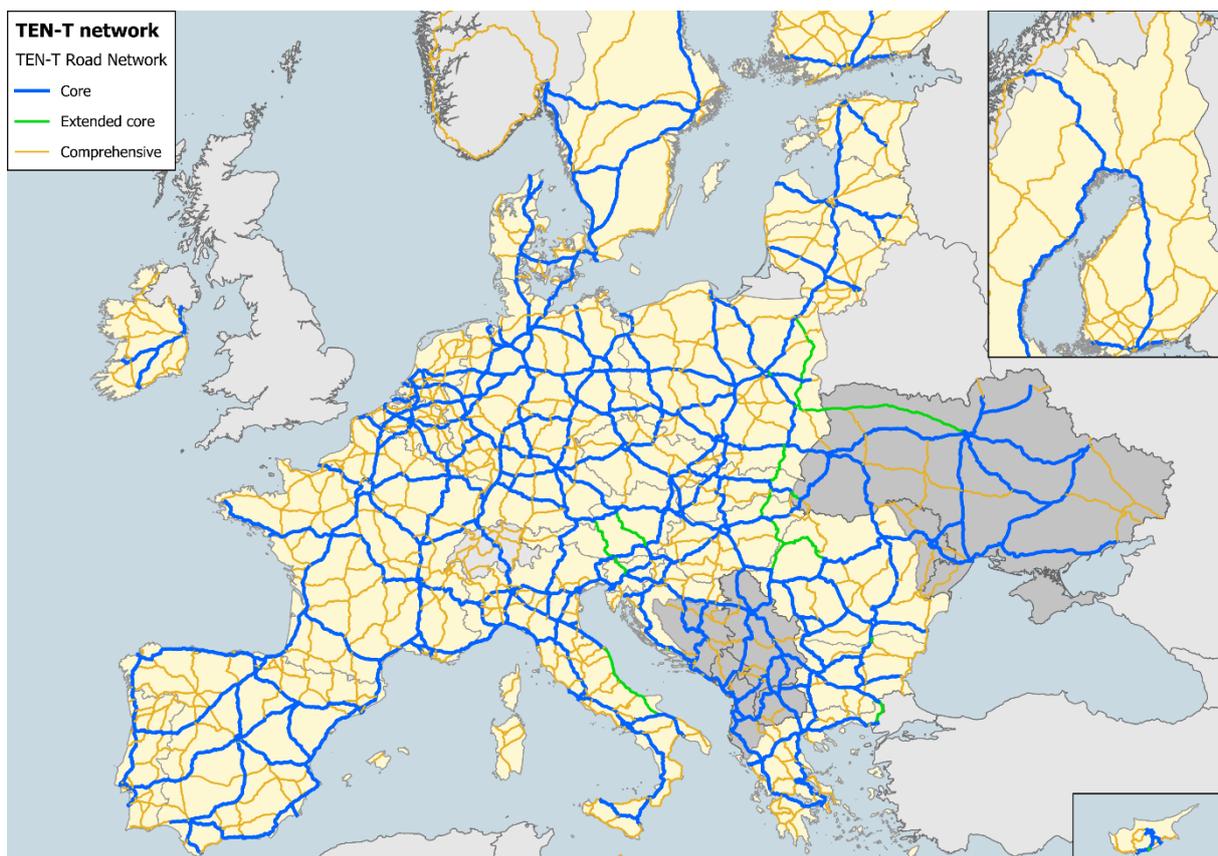


Figure 10 TEN-T network - June 2024

<sup>87</sup> Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013.

### 5.1.2 Significance of SSPAs in the context of Demand, Supply, and Gap Analysis

SSPAs play a crucial role in ensuring the balanced and efficient allocation of parking spaces across the EU. This chapter examines the spatial distribution of parking demand and supply, identifies gaps, and evaluates their impact on the safety and security of freight transport. Key aspects include:

- Understanding the projected need for secure parking areas based on future developments of long-distance freight flows, particularly in high-demand regions and logistical hotspots.
- Analysing the current and planned supply of secure parking areas to identify where additional infrastructure investment or upgrades are required.
- Addressing disparities between the availability and need for secure parking, especially in regions prone to logistical bottlenecks or heightened security risks.

## 5.2 Mapping of demand for parking places

The objective of this mapping exercise for demand for parking places is to understand the spatial and temporal distribution of demand for SSPAs, which is crucial for addressing the infrastructure gaps that challenge the efficiency and safety of European freight transport. This section outlines the methodology and findings of a detailed mapping exercise designed to quantify current and future parking needs.

### 5.2.1 Methodology

A comprehensive analysis of goods traffic flows was carried out using 2022 transport data, applying the same methodology used in the 2019 Study on Safe and Secure Parking Places for Trucks<sup>88</sup>. This approach was selected because of its continued relevance and to ensure comparability and enable a more accurate assessment of changes and trends between the findings of the previous study and the current analysis.

#### Key methodological points:

- The calculations are based on an origin-destination (O/D) matrix for freight transport within EU countries. Transport flows from the matrix are assigned to a road network, allowing the determination of the number of trucks required and identifying points where 9 hours of driving time have elapsed. At these points, stops are assumed in compliance with EU driving and rest time regulations<sup>89</sup>. This process is applied to all transport routes across Europe, enabling the derivation of total demand and its spatial distribution based on the identified stop locations.
- The analysis focuses on long-distance transport (journeys over 500 km), primarily using the TEN-T road network. Trips are classified based on the type of freight transported, grouped by value: high value (> €10 per kg), medium to high value (> €3 per kg), and all goods. This categorisation helps determine the appropriate security levels required for parking facilities.

More detailed information about the methodology can be found in Annex I.

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<sup>88</sup> European Commission, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report [2019].

<sup>89</sup> Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85, OJ L 102, p1-14.

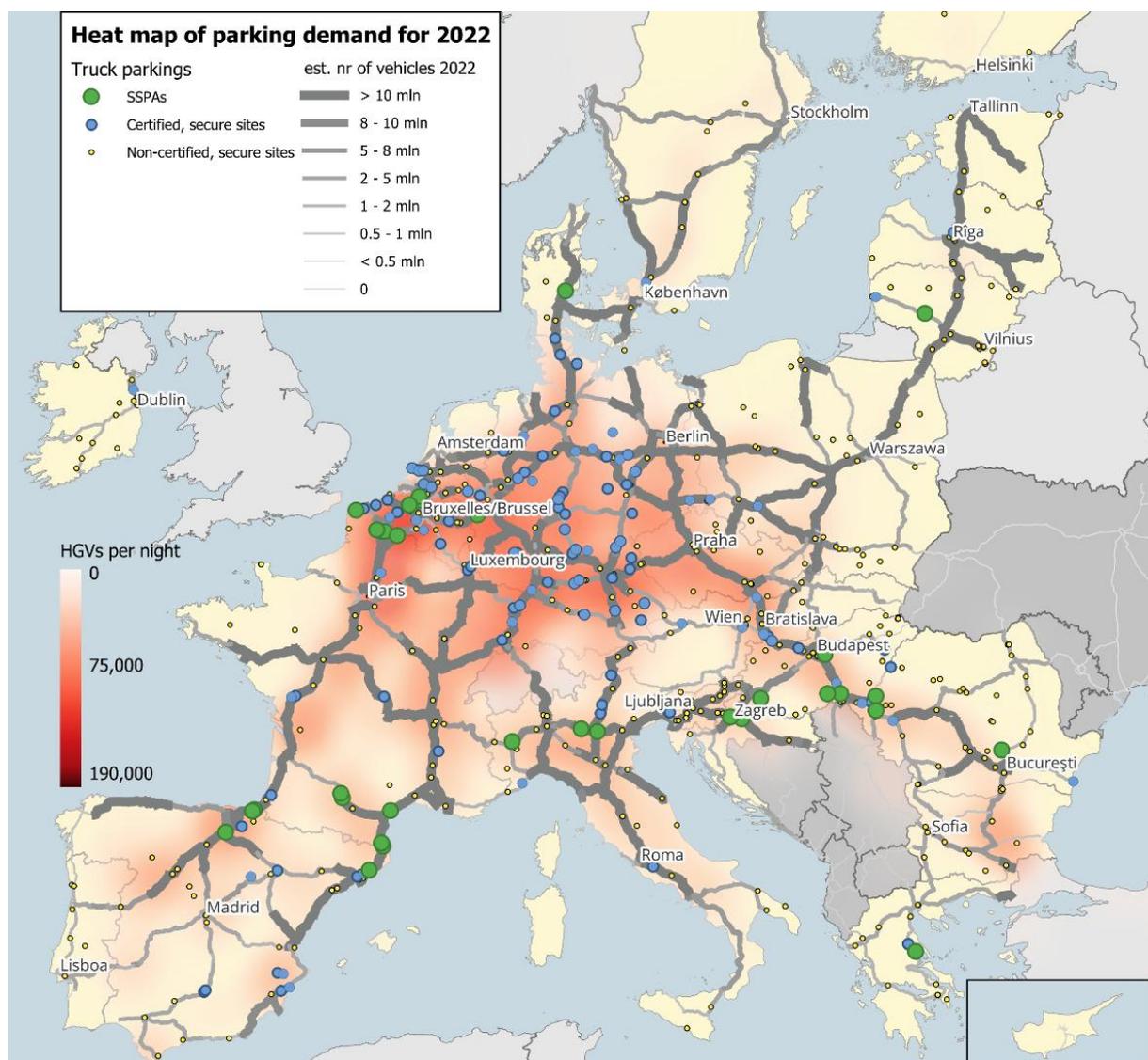
### 5.2.2 Current and future demand for parking areas

This section outlines the total parking demand for 2022, its spatial distribution, and forecasts how this demand is expected to develop by 2040. The total parking demand observed in 2022 is presented in the following Table 1, with a distinction made between various goods value categories.

**Table 1 Current overnight parking demand- EU27- Long distance trips (HGV/night) 2022**

	<i>All goods</i>	<i>Medium and high value (&gt; €3 per kg)</i>	<i>High value (&gt;€10 per kg)</i>
Parking demand (HGVs/night)	395,000	92,000	31,000

Figure 11 shows a heatmap of parking demand for 2022, highlighting the main road arteries supporting long-distance goods transport across the EU. Parking demand is concentrated along key corridors, particularly within the TEN-T network.



**Figure 11 Road freight flows and demand for parking in 2022**

Furthermore, Figure 11 shows that in Western Europe, high truck parking demand covers the port area of Calais, the regions around Paris and Brussels, and regions surrounding Nancy and Basel. The trans-Alpine road connections are visible as access routes to Italy. From Calais/Paris to northern Spain, the Atlantic corridor is recognisable, highlighting Bordeaux and Bilbao as high-demand locations. Other hotspots include the areas around Algeciras, Munich, and Sofia. In the east, high demand appears between Praha and Vienna/Bratislava. At Member State level, Germany, France, Italy, Spain, and the Benelux show the highest parking demand due to their roles in connecting major transport corridors and supporting industrial areas and logistics hubs.

To estimate parking demand in 2040, the analysis uses transport flow projections from the EU Reference Scenario 2020<sup>90</sup>. These projections are based on several assumptions, including economic growth modelled through changes in gross value added (GVA) by sector and gross domestic product (GDP) by country. However, the projections do not consider potential future infrastructure developments, such as the Fehmarn Belt Tunnel between Germany and Denmark, which could affect freight flows and parking requirements. The total parking demand observed in 2040 is presented in Table 2, with a distinction made between various goods value categories.

**Table 2 Future overnight parking demand- EU27- Long distance trips (HGV/night) 2040**

	<i>All goods</i>	<i>Medium and high value (&gt; €3 per kg)</i>	<i>High value (&gt;€10 per kg)</i>
Parking demand (HGVs/night)	507,000	114,000	35,000

Figure 12 illustrates the estimated parking demand for 2040, highlighting incremental growth compared to 2022. The overall demand is expected to rise, with a more pronounced need for additional parking capacity in specific high-traffic corridors.

The estimated increase in demand is significant in Northern and Western Europe, particularly in Germany, France, and the Benelux region. Similarly, Italy and Spain are expected to experience notable growth. These regions will remain crucial in 2040, connecting logistics hotspots (seaports, industrial hubs, and distribution centres) via the European transport network. Additionally, a significant increase in demand is also becoming evident for Poland, Central European countries (Czech Republic, Austria, Slovakia, and Hungary) as well as Southeast Europe (Romania and Bulgaria).

As previously described, the projected growth in demand is largely driven by the economic activity in these regions. In contrast, peripheral and rural areas are expected to show limited growth due to their lower levels of logistic activity. According to the EU Reference Scenario 2020, projections for GVA per sector and GDP per country highlight increased road freight transport, fuelled by e-commerce and rising consumer demand, particularly in Northern and Western Europe.

<sup>90</sup>See: <https://op.europa.eu/en/publication-detail/-/publication/96c2ca82-e85e-11eb-93a8-01aa75ed71a1/language-en>

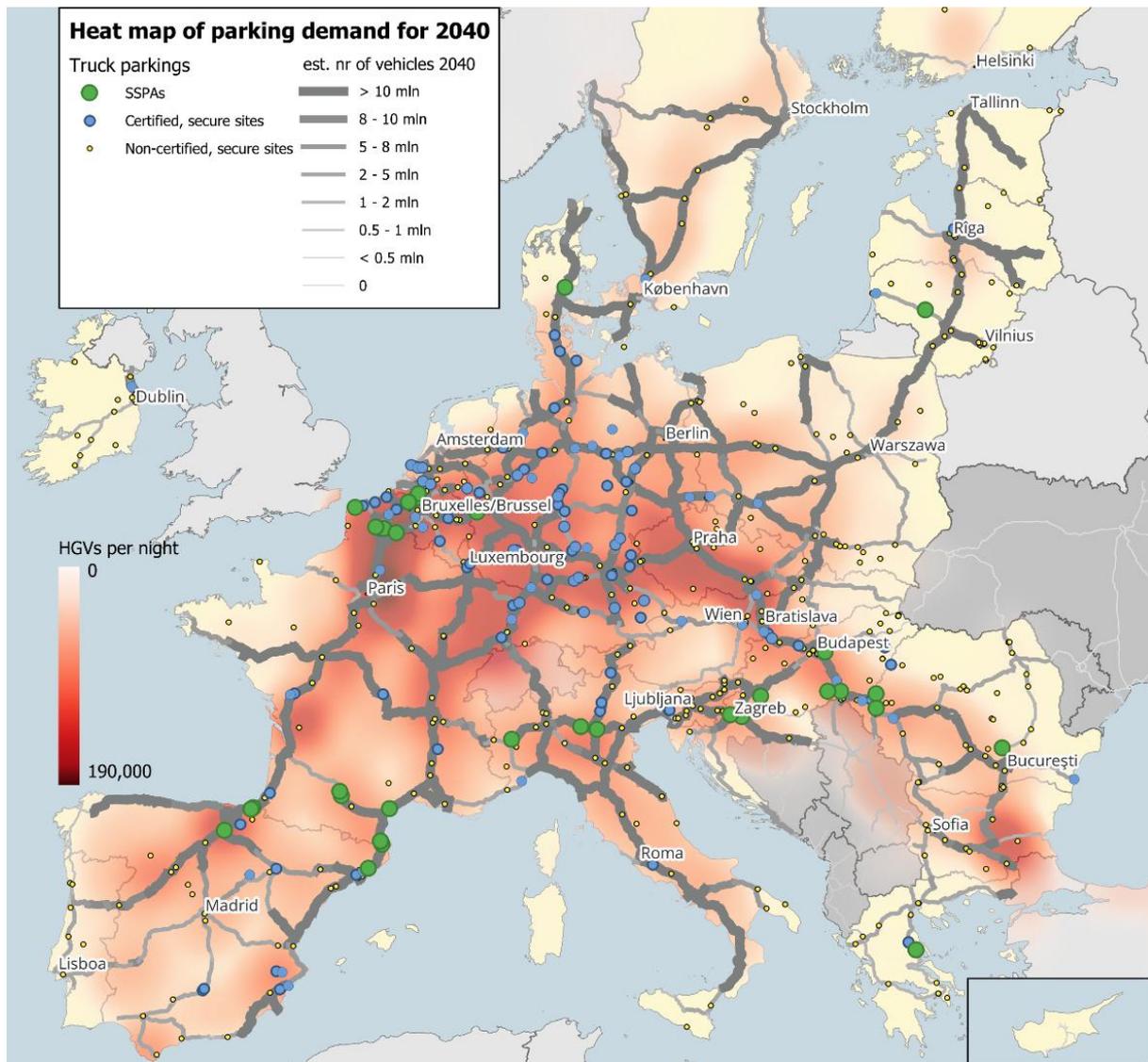


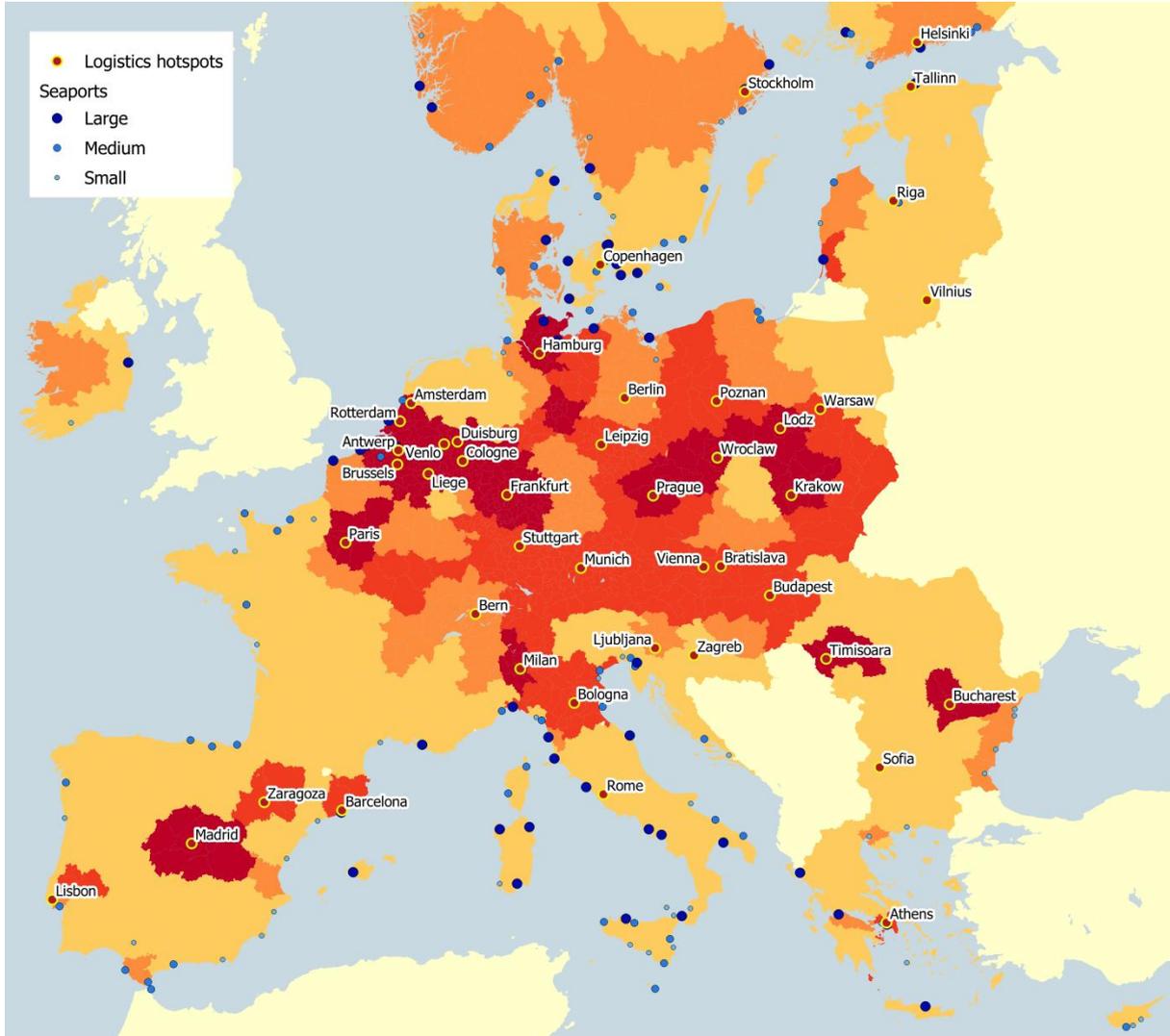
Figure 12 Road freight flows and demand for parking in 2040

The two maps on the demand for parking capacity clearly show significant spatial differences across the EU as a whole. Additionally, from 2022 to 2040, there is a significant growth in demand. This applies not only to the absolute size of the demand but also to its spatial distribution. In areas where there was already a high demand for truck parking capacity, the demand continues to grow. Moreover, new areas are emerging where demand is developing, particularly in Central and Southeast Europe. More detailed information on the transport modeling for determining the demand for parking capacity can be found in Annex I.

### 5.2.3 Logistical hotspots

Transport by road across Europe serves as the primary means of connecting producers and consumers. Over time, well-established patterns of settlement and economic activity have contributed to the development of a long-distance transport network. This network is anchored by key nodes such as maritime ports, which serve as international gateways and European short sea nodes, and inland distribution hubs, often referred to as "logistical hotspots." These hubs are pivotal locations where goods can be stored and are favoured by transport and distribution companies for warehousing. Logistical hotspots typically offer excellent multimodal connections to seaports and population centres, enabling efficient movement of goods across regions.

Figure 13 below shows the geographical location of the logistical hotspots<sup>91</sup>. The principal road corridors, connecting these logistical hubs, facilitate the movement of cargo across key regions. For example, there are major corridors running from Dutch and Belgian seaports towards Central Europe, and from Central Spain towards Paris. Other significant routes include Northern Italy across the Alps to Central Europe, Turkey across the Balkans towards Germany, and Poland towards Central Germany. These corridors allow for a seamless flow of goods between important logistical and population centres across Europe.



**Figure 13 Logistical hotspots in the EU**

The map of logistics hotspots reflects Europe's key supply chain drivers, highlighting regions with strategic advantages for distribution. Proximity to major consumption centres, such as in the Netherlands, Germany, and France, plays a crucial role, ensuring quick access to large markets. Well-developed transportation infrastructure supports seamless connectivity, with areas like Venlo, Rhein-Ruhr, and Rotterdam standing out, while Paris benefits from its large economy and logistics industry. Spain, with Madrid as its hub, thrives on domestic consumption and infrastructure, despite limited external links. In Eastern Europe, Romania is emerging due to low costs and a pro-growth

<sup>91</sup> Prologis Research. (2017). Europe's Most Desirable Logistics Locations, edited and supplemented by Panteia (2025), <https://www.prologis.com/insights/global-insights-research/europes-most-desirable-logistics-locations>

environment, attracting labour-intensive logistics operations. These factors collectively shape the prominence of logistics hubs across the continent.

Strategic importance and heavy traffic also create vulnerabilities. High volumes of goods and frequent vehicle movements increase the risk of theft, smuggling, and other crimes, making enhanced security measures essential. These hotspots are also where truck drivers frequently stop to take their legally required rest periods, further emphasizing the need for safe and secure parking facilities to protect drivers, cargo, and vehicles. Addressing these challenges is crucial for maintaining operational efficiency, safety, and security, providing a seamless transition into the need for targeted measures in these critical logistical areas.

Long-distance transport routes connect the logistics hotspots with each other. Transport patterns along these routes are often shaped by natural gateways, such as the Pyrenees and Alpine crossings, or key ferry routes, like the Dover Straits. The presence of these natural barriers and crossings leads to traffic being funnelled into specific corridors, making them vital arteries for European road freight. By focusing on enhancing infrastructure in logistical hotspots and along key corridors, a significant proportion of the logistical demand can be efficiently met.

### **5.3 Security and crime challenges**

The transportation sector faces significant security risks, with organised crime exploiting vulnerabilities along Europe's road networks. However, a fundamental challenge for this study was the lack of comprehensive and reliable data on cargo crime incidents. The limited availability of data is rooted in two key issues: first, relevant stakeholders, including private companies and public entities, often do not collect such data systematically; second, even when data exists, it is difficult to share due to concerns about reputation, confidentiality, or national security. These barriers hinder the ability to fully understand the scale and scope of cargo crime across the EU.

With the limited amount of data gathered, this section presents findings on crime patterns, hotspots, and their implications for safe and secure parking. The analysis begins with findings on cargo crime incidents and ends with highlighting the emergence of trafficking and smuggling of humans along immigration routes.

#### **5.3.1 Cargo crime incidents**

##### **Overview of data sources**

For the purpose of this study, data on crime incidents in EU27 countries reported to TAPA between January 2023 and May 2024 were analysed, including the locations of these incidents. These records are compiled in a database named the TAPA EMEA Intelligence System (TIS), which contains data from most countries globally. The TAPA EMEA Intelligence System gathers data from a variety of trusted sources, including TAPA members, law enforcement agencies, insurers, and industry partners, as well as open-source intelligence and secure parking operators. This data is validated and standardized to ensure accuracy and includes reports on cargo theft, security risks, and trends. Contributions from regional TAPA teams and incident reports from drivers further enhance its comprehensiveness, making TIS an important tool for supply chain security management.<sup>92</sup> The information is gathered through voluntary reporting, which varies considerably across countries.

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<sup>92</sup>See: <https://tapaemea.org/incident-service/>

It is important to mention that no similar instrument currently exists to provide a comparable overview of transport-related crime in the EU. The scarcity of data, coupled with the voluntary nature of reporting, proves a limitation to offering a comprehensive understanding of cargo crime patterns.

Between January and May 2024, a total of 4,810 crimes were reported to TAPA across the EU27. In approximately 16% of these cases, monetary losses were reported, amounting to €73.2 million in total. Most incidents were reported in Germany (1,483 incidents, €11.6 million), Italy (882 incidents, €13.5 million), and France (754 incidents, €10.1 million). However, the highest total monetary losses were recorded in the Netherlands at €21.2 million, despite only 130 reported crimes during this period. More than half of the reported crimes (2,644) involved theft from vehicles, while about a quarter (1,117) were categorized as theft without further specification. For 2,230 reported crimes, the type of location was also documented. Of these, 692 incidents occurred at unclassified parking areas, whereas only 8 took place in secured parking areas.

Figure 14 and Figure 15 show the crime by location type and incident type.

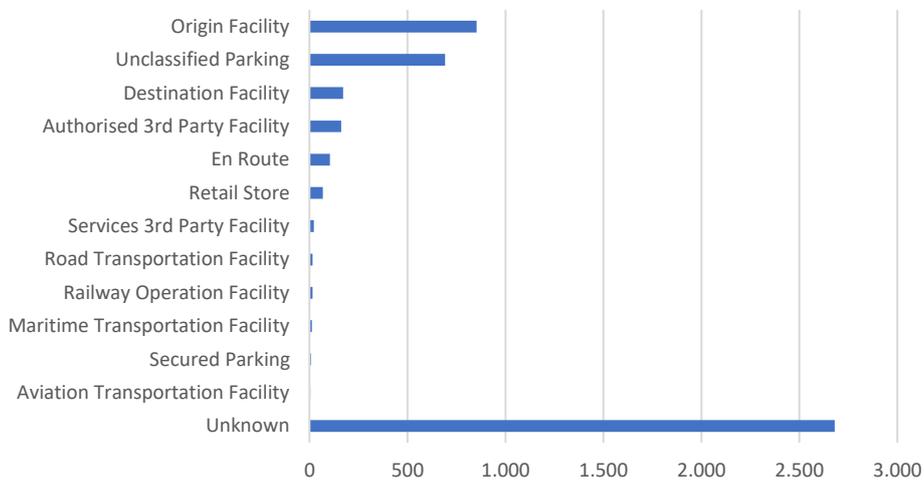


Figure 14 Number of crimes by location type (source: TAPA)

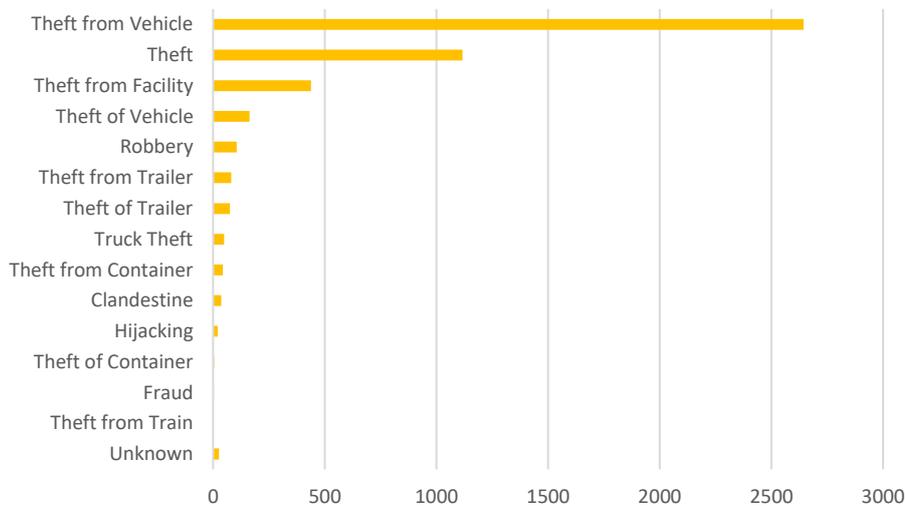


Figure 15 Number of crimes by incident type (source: TAPA)

The incidents have been aggregated and presented in Figure 16, providing an overview of incidents per Member State. The high number of recorded incidents in Germany, Italy, France, and Spain aligns with the location of key logistical hotspots and major transit routes in these countries, highlighting the consistency between high cargo traffic areas, critical corridors, and security challenges. This emphasizes the need for robust measures in regions vital to European supply chains.

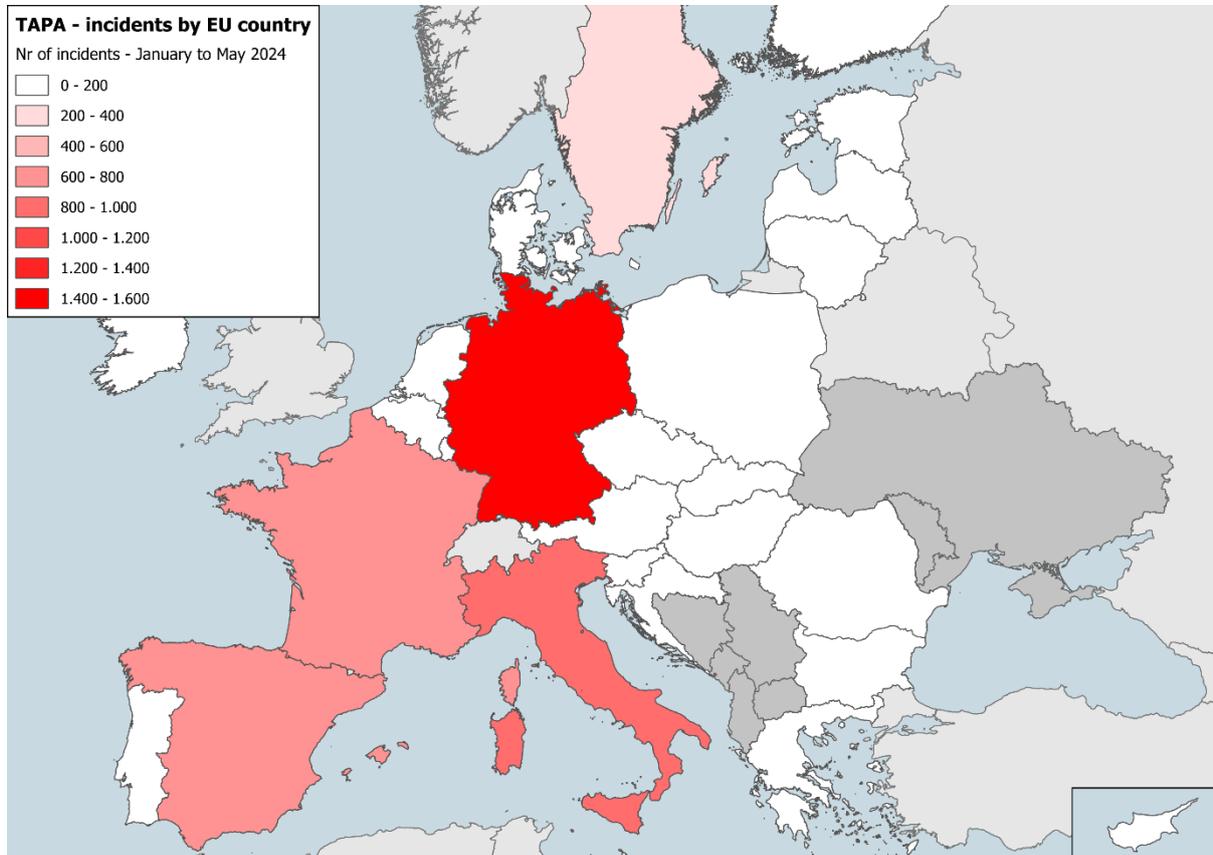


Figure 16 Incidents by country (source: TAPA)

The reporting of these incidents has been further enriched with data provided by BVBA Wim Dekeyser, international loss adjusters<sup>93</sup>. This dataset includes cargo theft incidents from 2023 and 2024, with exact locations. These incidents mostly occurred en-route or near the destination. This figure shows the number of recorded incidents related to cargo theft across various European countries. The higher incident numbers in Germany, Belgium, France, and Spain can be linked to their significant size, the presence of major logistical hotspots, and critical transit routes. Germany leads with 112 incidents, reflecting its role as Europe's largest economy and a key transit hub, particularly in the Rhein-Ruhr region. Belgium, despite its relatively small size, reports a high number of incidents (98), which can be attributed to its dense logistical activity, including the Antwerp-Brussels corridor, a major hub for European trade. France and Spain similarly rank high due to dense transport networks like Paris and Madrid and their strategic roles in European supply chains. In contrast, smaller countries like Sweden, Poland, and Austria report fewer incidents, reflecting lower traffic density or fewer logistical hotspots. This highlights the connection between logistical activity, transit significance, and associated security challenges. Figure 17 presents a bar chart showing the number of incidents per country, displayed in descending order. The spatial distribution of the incidents is shown in Figure 18.

<sup>93</sup> See: <http://www.wimdekeyser.be/>

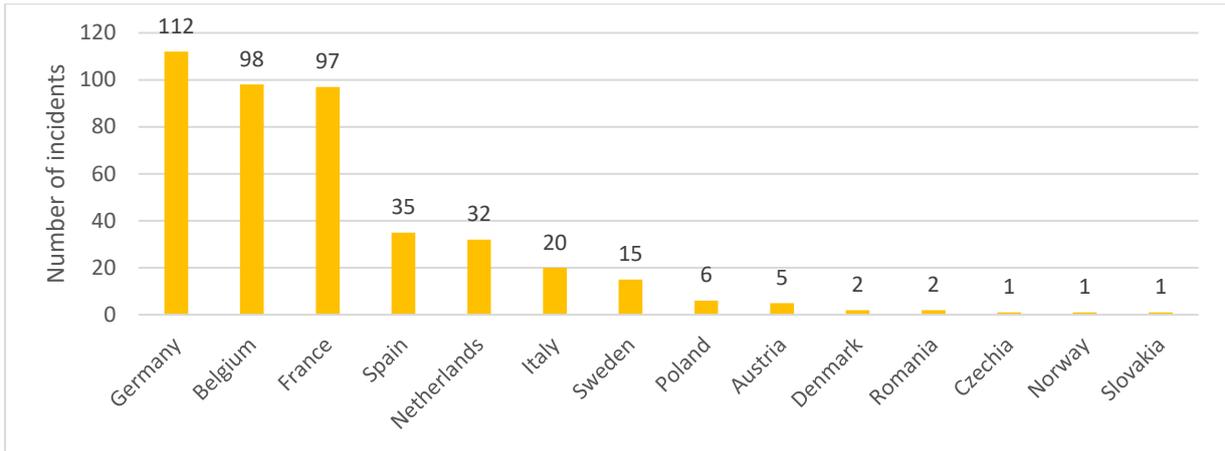


Figure 17 Cargo theft countries (source: BVBA Wim Dekeyser)

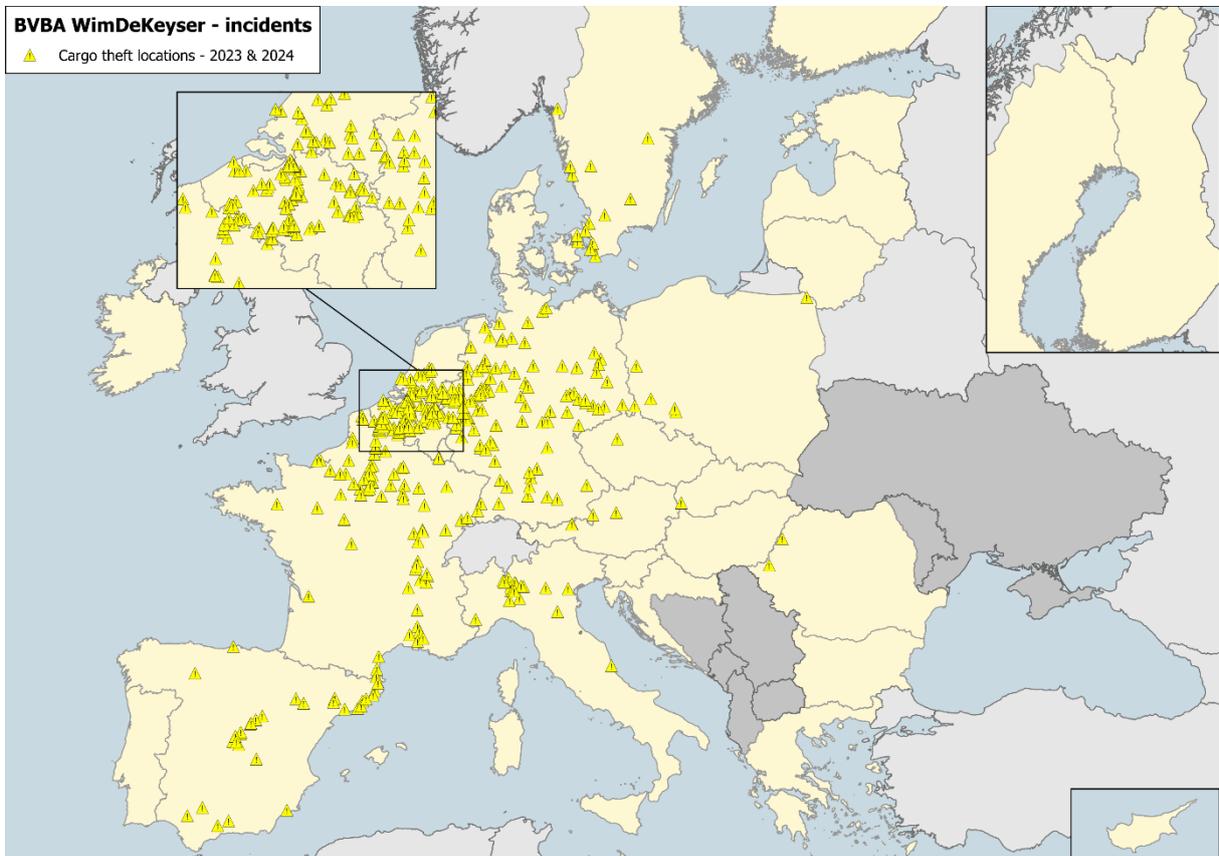


Figure 18 Cargo theft locations (source: BVBA Wim Dekeyser)

The data also reveals notable gaps. Reporting bias is likely present, especially in Eastern Europe, where fewer incidents were recorded despite significant logistical activity.

## Patterns of crime

This subsection on the patterns of crime is based on consultations and input from Europol.<sup>94</sup> Organised crime persistently exploits Europe's transportation sector, creating substantial risks for both truck drivers and the security of transported goods. Criminal networks leverage the vast road infrastructure, ports, and border regions to engage in cargo theft, drug trafficking, and migrant smuggling.

Cargo theft remains a significant threat, with highly organised criminal groups employing specialised techniques such as:

- Cutting tarpaulin sides to access goods.
- Stealing cargo from parked trucks in unsecured rest areas.
- Executing sophisticated operations to unload freight from moving vehicles. In some cases, criminal networks disguise their activities by using legitimate trucking companies or embedding themselves within the logistics chain. Violence, including hijackings, adds to the risk faced by drivers.

Drug trafficking networks use trucks as a primary means of transport, concealing illicit substances such as cannabis, cocaine, and heroin within legitimate cargo. Sophisticated concealment compartments are commonly employed. Similarly, migrant smuggling operations exploit rest stops and parking areas, clandestinely loading individuals into trucks without drivers' knowledge or complicity.

Crime hotspots in the EU are concentrated around major transport infrastructures such as ports, motorways, and parking areas. These locations, including border regions and transport hubs, facilitate the movement of goods and people, which organised criminal networks exploit for illicit activities. Key regions like the Western Balkans, Romania, and areas near ports in Spain and the Netherlands are notable hotspots.

Criminal networks are highly mobile and adaptable, swiftly changing their operations in response to law enforcement actions or new opportunities. This adaptability allows them to exploit gaps in security across different regions and infrastructures, making crime patterns fluid and hotspots dynamic.

## Implications for parking security

This subsection on the implications for parking security is based on consultations and input from Europol.<sup>95</sup> A significant portion of crime occurs when trucks are stationary, particularly in poorly secured parking areas and rest stops. Organised criminal groups often target these areas for cargo theft, using well-planned strategies. For instance, along routes between Romania, France, and Germany, criminals have caused millions of euros in losses by stealing goods from trucks in rest areas. Criminals frequently cut the tarpaulin sides of trucks to access valuable goods, transferring them to other vehicles for quick getaways.

In addition to theft, trucks parked in unsecured areas are sometimes unknowingly used for smuggling, with criminals hiding illicit goods or people in the cargo without the driver's awareness.

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<sup>94</sup> Europol input for DG MOVE study on the safety of truck drivers in the EU (Europol Unclassified - Basic Protection Level), July 2024. See Annex 1 - Mapping Study Report.

<sup>95</sup> Ibid.

Parking areas with limited or no security measures, rather than being inherently dangerous, become hotspots for criminal activity due to the opportunities they present. Criminals capitalise on the lack of surveillance or physical protection, using these vulnerabilities to operate without detection. For example, areas around Spanish ports are exploited for drug trafficking, as criminal groups use the infrastructure to smuggle illicit goods into and across the EU.

To counter these threats, strengthening the security of parking and rest areas is essential. This includes implementing measures such as surveillance systems, physical barriers, and certified security standards. Additionally, raising awareness among truck drivers and encouraging collaboration between law enforcement agencies are critical steps toward making the transportation sector safer for drivers and less attractive to organised crime.

### 5.3.2 Immigration routes

Since the mid-2010s, in addition to the mainly opportunistic threat of cargo theft, there has been an increase in trucks being targeted for illegal trafficking or stowaways of persons. According to FRONTEX statistics on detected migration along the southern and eastern EU borders, the numbers peaked in 2016 and in 2023. FRONTEX data shows the number of detected migrants arriving at the seven main entry points, the largest of which are the Central Mediterranean (Southern Italy) and the Western Balkan routes (see Figure 19).

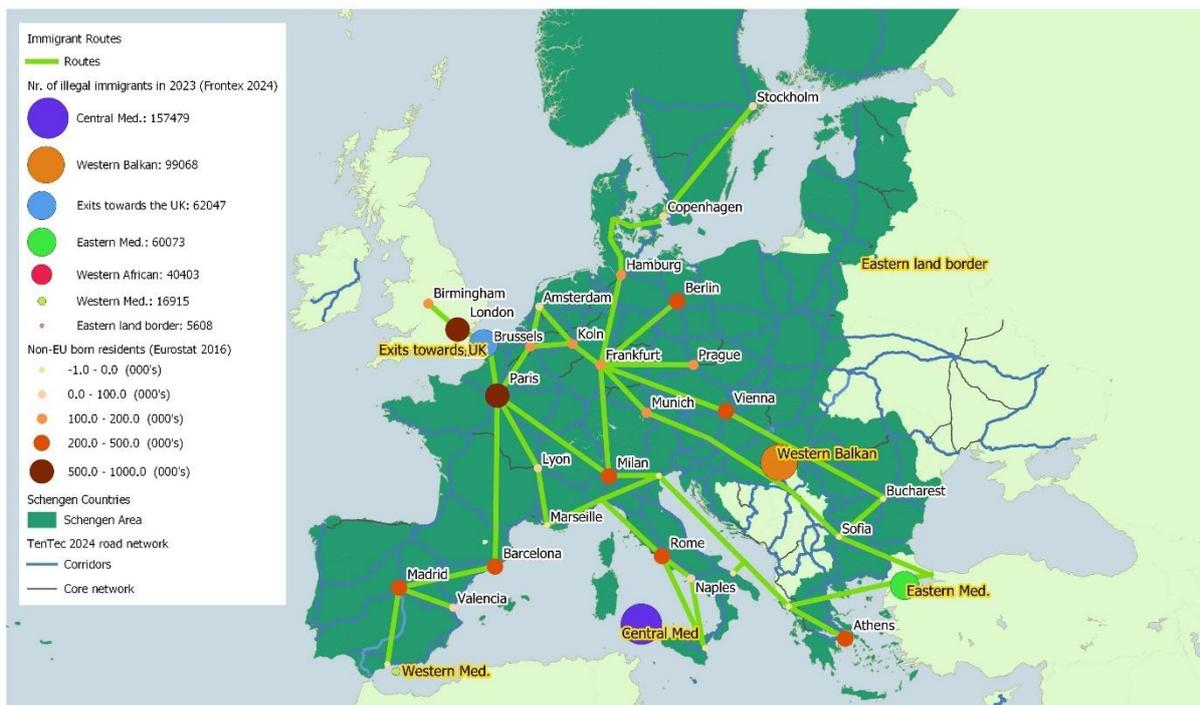


Figure 19 Immigration routes 2024

According to 2016 Eurostat data<sup>96</sup> on citizenship by country of birth, the two largest destination cities for non-EU born citizens were London and Paris, and there are long established immigration patterns towards these cities. Trucks on these routes are being increasingly targeted by criminal organisations

<sup>96</sup> Data retrieved at time of 2019 study with following remarks: Eurostat does not specify the destinations of migrants arriving in Europe illegally, so the indicator showing the number of non-EU born migrants (arriving legally or illegally) registered as living in specific cities is used as a proxy for probable destinations. See: Eurostat: Population by citizenship and country of birth - cities and greater cities [urb\_cpopcb]. Eurostat data still exists, but no data has been collected for the majority of the selected cities: 4 out of 22 mentioned in figure.

taking advantage of the migrants, as a way of moving people illegally across the Schengen borders. In recent years this has led to a particular problem between the UK (non-Schengen) and the nearby continental ports in France and Belgium, especially Calais. Although security measures to protect truck drivers and trucks have been implemented at the Channel ports, the threat of illegal boarding of vehicles has dispersed inland. Thus, the security risk faced by lorry drivers has intensified and become more widespread.

## 5.4 Mapping of supply of parking places

Mapping the supply side of parking capacity builds on the inventory established in the 2019 Study on Safe and Secure Parking Places for Trucks<sup>97</sup>. However, a new category, EU-certified secure parking areas, has been added. With this addition, the following parking categories are distinguished:

- Certified parking areas according to the EU Parking Standards
- Secure but certified under a different standard
- Non-certified parking areas with security elements
- All Parking areas, including both secure and non-secure sites

These categories are further explained and mapped in the following sections.

### 5.4.1 Certified parking areas according to the EU Parking Standard

The idea for the EU Parking Standards was established in the 2019 Study on safe and secure parking places for trucks<sup>98</sup> and the EU standards were then developed in the Commission Expert Group on safe and secure parking areas and enshrined in the legislation through Delegated Regulation 2022/1012<sup>99</sup>. Parking areas certified according to the EU Parking Standard are categorised into four levels—Bronze, Silver, Gold, and Platinum. The majority of parking areas are gold-level, providing relatively high security. Promoters of parking areas are more likely to choose gold certification, as it offers a stronger business case.

Figure 20 shows the distribution of these certified sites, which are primarily located in Belgium, the Pyrenees region, Northern Italy, and Hungary. These certified sites are clustered in only a few countries, currently leaving significant gaps across the TEN-T core network, such as in Germany, Poland and countries in central Europe such as Czech Republic, Slovakia and Austria.

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<sup>97</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019

<sup>98</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019, <https://data.europa.eu/doi/10.2832/067535>

<sup>99</sup> Commission Delegated Regulation (EU) 2022/1012 of 7 April 2022 supplementing Regulation (EC) No 561/2006 of the European Parliament and of the Council with regard to the establishment of standards detailing the level of service and security of safe and secure parking areas and to the procedures for their certification; OJ L 170, 28.6.2022, p.2



**Figure 20 SSPA parking locations (EU Parking certified)**

In addition to existing locations, new Safe and Secure Parking Areas (SSPAs) are currently under construction or scheduled to begin soon. Once completed, they will increase the available supply of safe and secure parking places. These projects include:

- 49 ongoing CEF projects, expected to add 4,614 SSPA parking places for trucks, nearly doubling the current supply.
- 15 new CEF projects, for which the exact number of parking places is not yet known. However, based on the average number of parking places from the ongoing CEF projects, an estimated 1,412 additional parking places could be created.

Figure 21 below provides an overview of all ongoing and upcoming SSPA projects funded through the Connecting Europe Facility. These projects are expected to be completed within the next few years, with most developments taking place in Italy, Greece, and Spain. Notably, a new CEF project in Bulgaria will establish four SSPAs, where no such facilities currently exist. While these new locations will improve the geographical coverage of SSPAs across Europe, significant gaps persist, particularly in Germany and Poland.

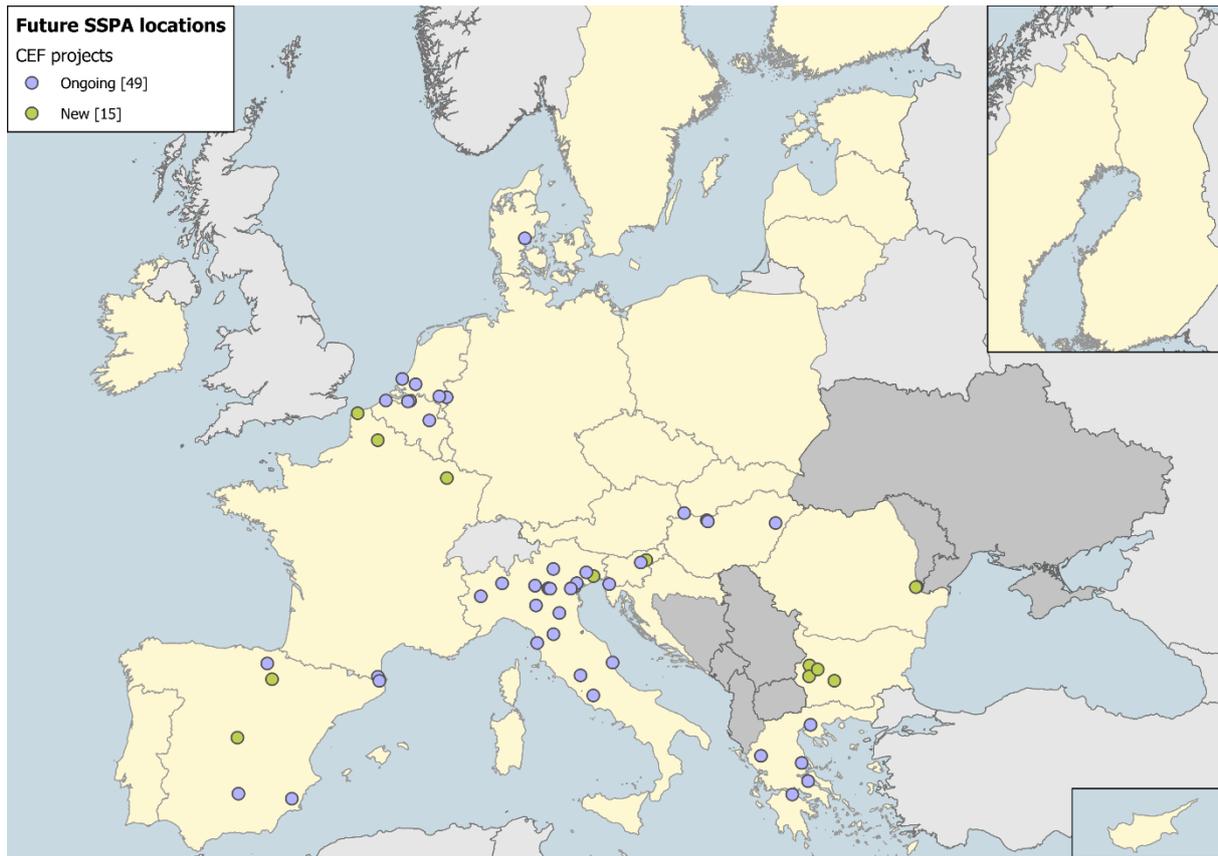


Figure 21 Future parking facilities to be realized with CEF funding

#### 5.4.2 Secure but certified under a different standard

In addition to the EU Parking Standard, classifications such as ESPORG<sup>100</sup>, VEDA, LABEL, and TAPA<sup>101</sup> are also mapped. These classifications typically indicate the types of technical facilities available at parking areas, including security cameras, 24-hour guards, floodlighting, and fencing. Certified parking areas validated through independent checks and audits meet specific security and service standards. These include:

- ESPORG: 84 sites
- TAPA: 74 sites
- VEDA Premium: 18 sites
- Truck Parking Rotterdam: 7 sites

These certified secure parking areas are shown in Figure 22. Germany notably has relatively better coverage compared to many other European countries. These facilities are mainly concentrated in regions such as Belgium, the Netherlands, and the area around the Pyrenees. In contrast, Poland and the Czech Republic have very limited availability, with almost no facilities in this category. Similarly, Southeast European countries, including Bulgaria and Greece, as well as Scandinavia, have very few or no such parking facilities.

<sup>100</sup> Nowadays, ESPORG adheres to the EU Parking Standard.

<sup>101</sup> It is noted that the TAPA certification standard closely resembles the EU Parking Standard.

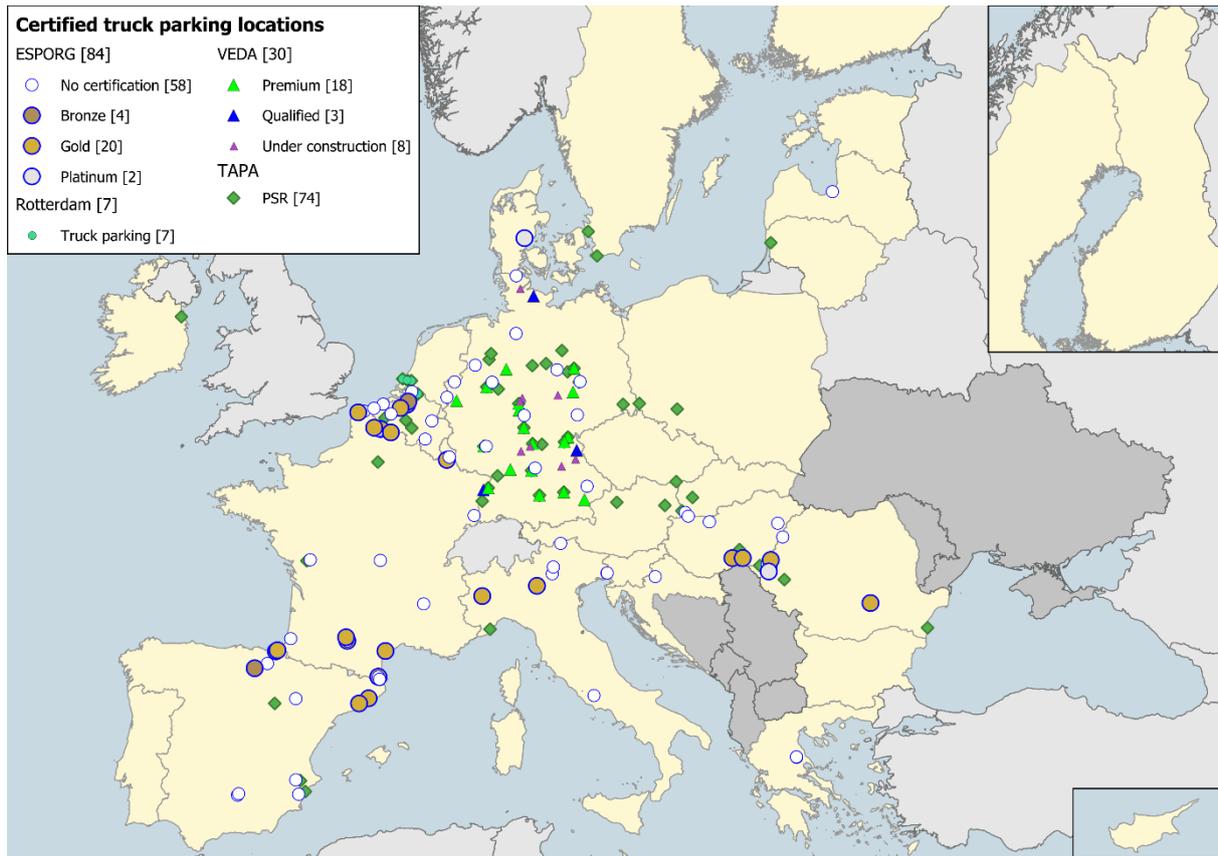


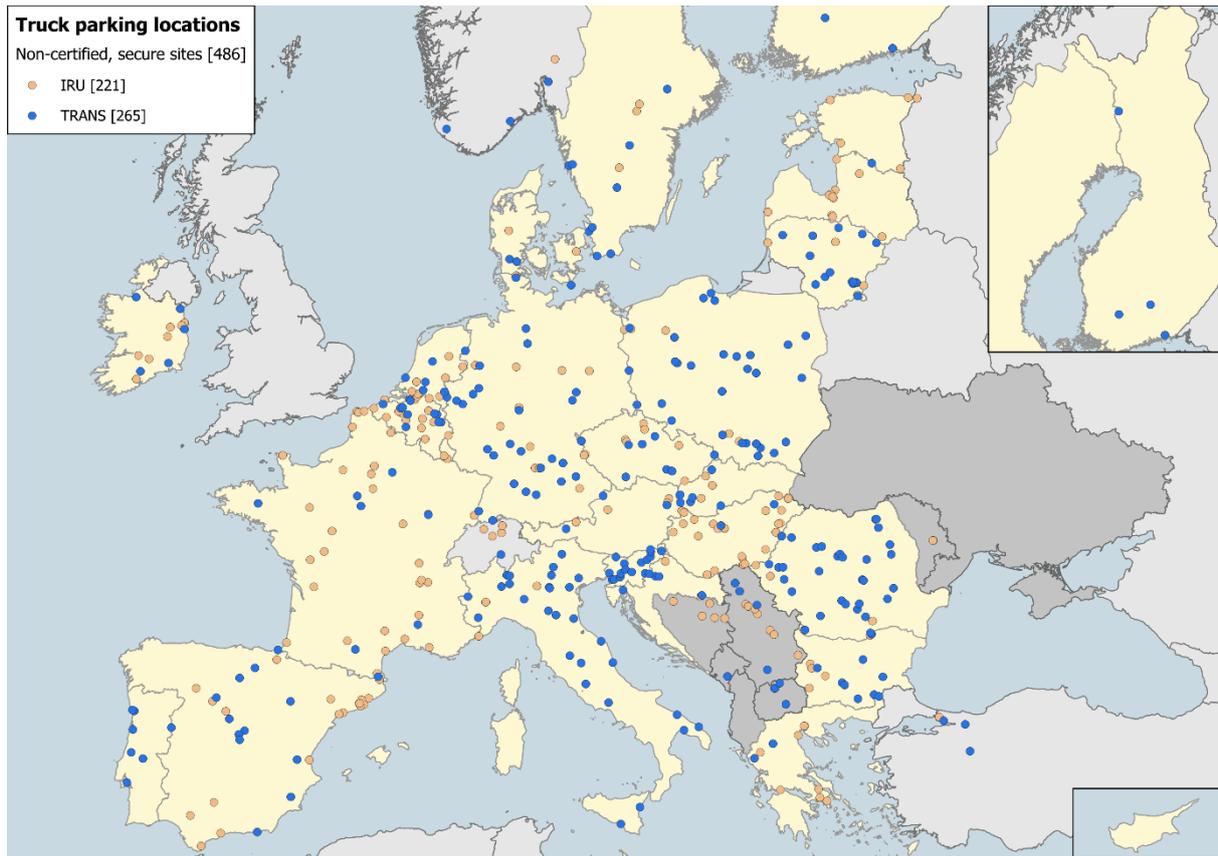
Figure 22 Certified parking facilities (different types)

### 5.4.3 Non-certified parking areas with security elements

Non-certified parking areas make up a considerable portion of the supply and vary widely in the security features they offer. While these facilities extend the availability of parking spaces, their lack of consistent standards leaves drivers reliant on informal methods to identify suitable parking areas. Figure 23 indicates the locations of 486 such parking sites, distributed across Europe.

Non-certified parking areas present several challenges:

- Inconsistent coverage: The distribution and quality of non-certified facilities vary significantly across Europe, leading to uneven parking availability.
- Reliance on informal networks: Drivers often depend on personal experience or informal networks to locate suitable parking areas.
- Limited security measures: Many non-certified sites lack adequate security features, exposing drivers and cargo to potential theft or other crimes.

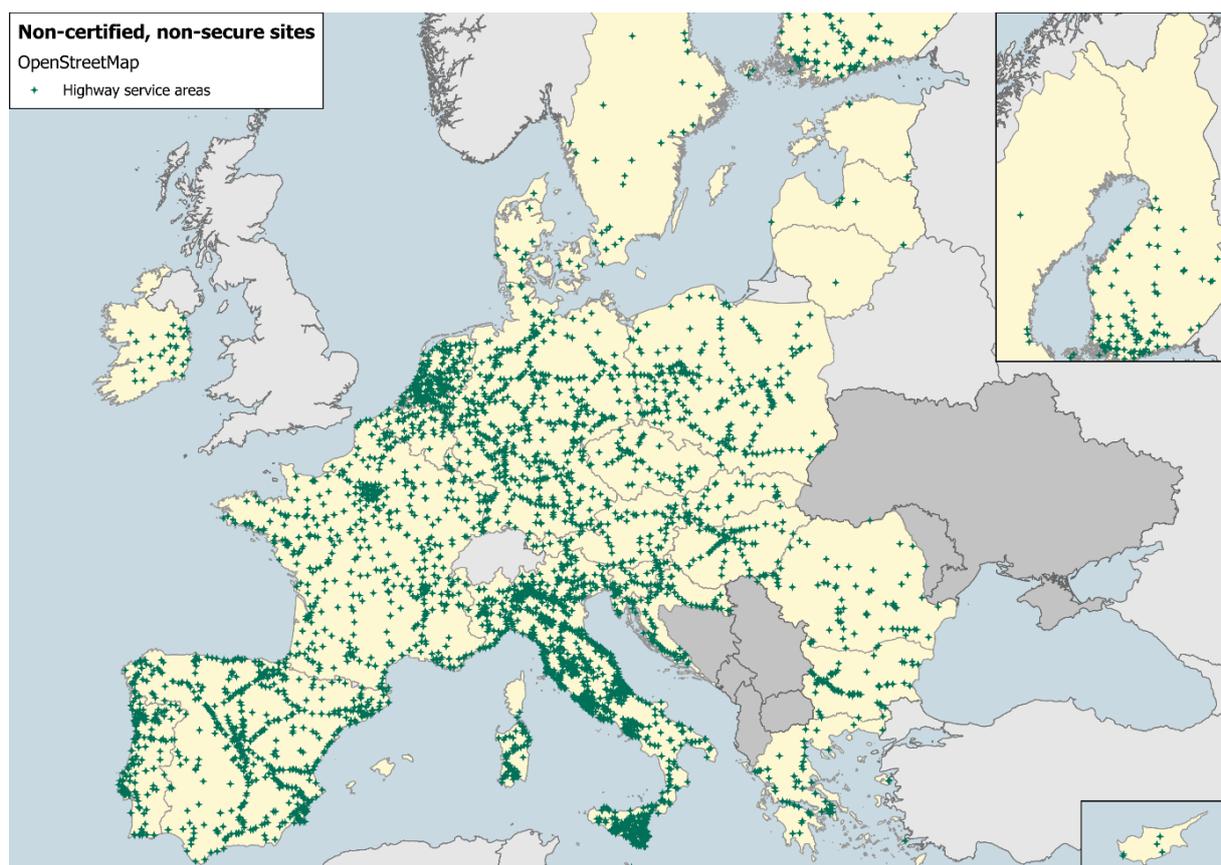


**Figure 23 Non-certified parking facilities with security features**

Despite current challenges, such facilities offer a significant opportunity to strengthen the overall supply of secure parking areas. To close gaps in the certified parking network, existing non-certified parking areas with basic security features could be certified, potentially following necessary upgrades.

#### 5.4.4 All parking areas, including service areas and basic facilities

All parking areas combined, whether certified or not, also include service areas and basic facilities. The level of security and available amenities can vary widely across these locations. Service areas along major roads, including motorways and dual carriageways, provide essential amenities for drivers. At a minimum, these areas include petrol stations, parking facilities, dining options, and public toilets. Many also offer additional conveniences such as showers, shops, and ATMs, making them suitable for both short breaks and extended rest periods during long-distance travel. Altogether, including the service areas mentioned here and the parking categories discussed earlier, there are approximately 6,500 parking facilities, providing around 380,000 parking places. Figure 24 illustrates the geographical distribution of these facilities.



**Figure 24 All parking areas (source: OpenStreetMap)**

The service areas and basic facilities are designed to accommodate a wide range of vehicles but typically lack advanced security features found in certified parking areas. These facilities are more evenly distributed across EU countries, with a significantly higher density compared to the earlier categories of parking areas. Major road connections are clearly recognizable based on the pattern of facility locations. The density of these facilities varies across regions, with countries such as the Netherlands and Italy having a higher concentration. Although these areas provide essential services, they do not meet the stringent standards required for safe and secure parking.

#### **5.4.5 Summary parking area supply**

The results of the supply of parking places are presented in Table 3, categorised by type of certification. In some cases, parking areas appeared multiple times in the lists due to being registered under several certification standards. To ensure accuracy and avoid double counting, the lists have been corrected, providing a clear overview of available parking places.

Table 3 Supply of parking areas

	Number of parkings	Number of parking places
<b>Certified EU parking</b>	<b>35</b>	<b>4,943</b>
SSPA – current	35	4,943
SSPA – ongoing CEF projects <sup>102</sup>	49	4,614
SSPA – new CEF projects <sup>103</sup>	15	1,412
<b>Secure, certified otherwise</b>	<b>157</b>	<b>18,708</b>
ESPORG (previous certification standard <sup>104</sup> )	66	8,676
Parking Rotterdam	7	1,022
TAPA	66	7,390
VEDA	18	1,620
<b>Non-certified, security elements</b>	<b>441</b>	<b>37,165</b>
IRU Transpark	195	21,186
TransParking	246	15,979
<b>All parking areas, including service areas and basic facilities</b>	<b>6,500</b>	<b>380,000</b>
OpenStreetMap (OSM))	6,500	380,000

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<sup>102</sup> Parking areas currently under construction.

<sup>103</sup> Parking areas to be built.

<sup>104</sup> Nowadays, ESPORG adheres to the EU Parking Standard.

## 5.5 Gap analysis

This section builds on Sections 5.2 and 5.4, on the demand for and supply of parking capacity, respectively. This section examines the demand and supply of truck parking capacity, covering both the current situation<sup>105</sup> and projections for 2040. It then analyses the gap between demand and supply in both cases.

### 5.5.1 Current parking demand, supply, and gap

#### Current demand for parking capacity

From a demand perspective, based on cargo flows and applying current driving and rest time rules, it is estimated that:

- on an average weekday there are approximately 395,000 truck drivers engaged in long-distance transport across the EU, requiring overnight parking. The total demand calculated based on the number of stops required by EU regulation, therefore amounts to: 395,000 parking places per night (2022 base year). The total demand concerns: low-, medium-, and high-value goods.
- of this, trucks carrying medium- and high-value goods account for 92,000 spaces per night.
- trucks carrying low-value goods account for 303,000 spaces per night.
- the ratio between trucks carrying medium- and high-value goods and low-value goods is slightly less than 1:3.

#### Supply of parking capacity

Based on the inventory of various data sources on parking facilities (as described in Section 5.4), the following overview has been compiled.

- The total supply of parking spaces amounts to 380,000 (secure and unsecure).
- Of these, there are 60,816 parking spaces of more than a basic level. More than basic means: not certified but with security elements, secure and certified, and SSPAs.
- Of these, 23,651 parking spaces are certified secure, according to various certification methods. These different certification methods are not all easily comparable. SSPAs are a part of this set.
- Of these, 4,943 parking spaces are on an SSPA.

Figure 25 presents the demand for and the supply of parking places for 2022. Note that each category is a subset of the preceding one.

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<sup>105</sup> Based on the latest data available from 2022.



Figure 25 Estimated overnight parking demand and supply 2022

### Demand-Supply Gap

It is a key requirement that the entire demand for parking capacity must be facilitated at SSPAs. Further it is assumed that:

- New parking areas will on average consist of 120 parking spaces. This assumption is based on the average size (rounded) of existing certified parking areas (whether or not SSPAs).<sup>106</sup>
- trucks carrying medium- to high-value goods could be facilitated at an SSPA of gold/platinum level, and trucks carrying low-value goods at an SSPA of bronze/silver level.

Linking the value of transported goods to the security level of the corresponding truck parking area offers insight into the demand for various security categories. In addition, other factors can also drive the need for facilities with a higher security level, including proximity to logistics hotspots, the prevalence of transport-related crime, and the risk of illegal migrant boarding.

When demand and supply are subsequently compared, the following conclusions can be drawn.

- If the total demand is to be facilitated by SSPAs, there is a shortage of 390,057 (395,000-4,943) parking spaces or **3,250 parking areas**.

<sup>106</sup> Size estimation derived from the total number of secure parking spaces created (existing and planned). This amounts to about 30,000 spaces distributed across about 250 parking locations, with an average size of 120 parking places per area.

- Taking into account the 1:3 ratio for trucks carrying high- and medium-value goods versus those carrying low-value goods, the estimated gap is **approximately 812 parking areas for shortages at the gold/platinum level and 2,438 at the bronze/silver level.**
- There is a significant gap; the current supply of SSPAs is small compared to the calculated demand. If we were to include the entire supply of more than basic parking areas, amounting to 60,816 parking spaces / 633 parking areas, this would still not be sufficient to close the gap. The gap would then be reduced to 334,184 (395,000-60,816) parking spaces or **2,785 parking areas.**

To address the EU-wide shortage of parking areas and narrow the gap, it is essential to invest in expanding existing sites, constructing new ones, and upgrading uncertified parking areas by adding security features. Essential for becoming an SSTPA is that the truck parking areas are certified according to EU security and service standards. Some uncertified areas may already meet lower certification levels, such as bronze or silver, while others will require more significant improvements to meet these standards.

Additionally, the following combinations involving a specific demand segment and a supply segment have been explored; however, these combinations do not meet the requirement that the total demand must be accommodated at SSPAs.

- When the total demand is compared with the total supply of parking spaces (secure and unsecure), a gap of 15,000 spaces is identified. In this case, the gap is smaller, but parking takes place in unsecure parking areas.
- When the parking demand of trucks carrying medium- or high-value goods is considered and linked to a certified parking area (whether or not an SSPA), a gap of 68,349 parking spaces is identified. Assuming an average parking area size of 120 spaces, this equates to 570 parking areas. Here too, the gap is smaller, but only trucks carrying medium- and high-value goods are considered. Additionally, non-SSPAs are included, which are not certified according to the EU Truck Parking Standard.
- When the parking demand of trucks carrying high-value goods is considered and linked to an SSPA, a gap of 26,057 parking spaces is identified. Assuming an average parking area size of 120 spaces, this equates to 217 parking areas. The same applies as in the previous point, but in this case, the comparison is limited to trucks carrying high-value goods and SSPAs. Even then, a gap remains, although it is significantly smaller.

The gap analysis can also be conducted at an EU Member State level. In Figure 26 below, the demand, supply, and gap for each EU Member State are presented. It should be noted that the demand for parking capacity in some cases must also be considered in conjunction with adjacent Member States. This is particularly relevant in regions where demand is concentrated in border areas or in smaller Member States in general. Overall, there is a gap between the demand for and supply of parking capacity across the board. As highlighted in the EU-level analysis, the current supply of SSPAs falls significantly short of the demand for parking capacity.

The following can be concluded from Figure 26.

- Due to the relatively low number of SSPAs compared to demand, the gaps follow the same pattern as the demand for parking capacity.
- The highest demand for parking capacity is observed in Germany and the Benelux (83,298 parking places), and France (81,689 parking places), where the gap is therefore the largest.

- Additionally, a significant gap can be identified in Central Europe (52,121 parking places), followed by Spain/Portugal (43,538), Italy (43,244 parking places) and subsequently Poland and the Baltic States (36,523 parking places)
- These are followed by Scandinavia (28,948 parking places), the Southeast European Member States (Romania, Bulgaria, and Greece: 18,770 parking places), and Ireland (1,485 parking places).

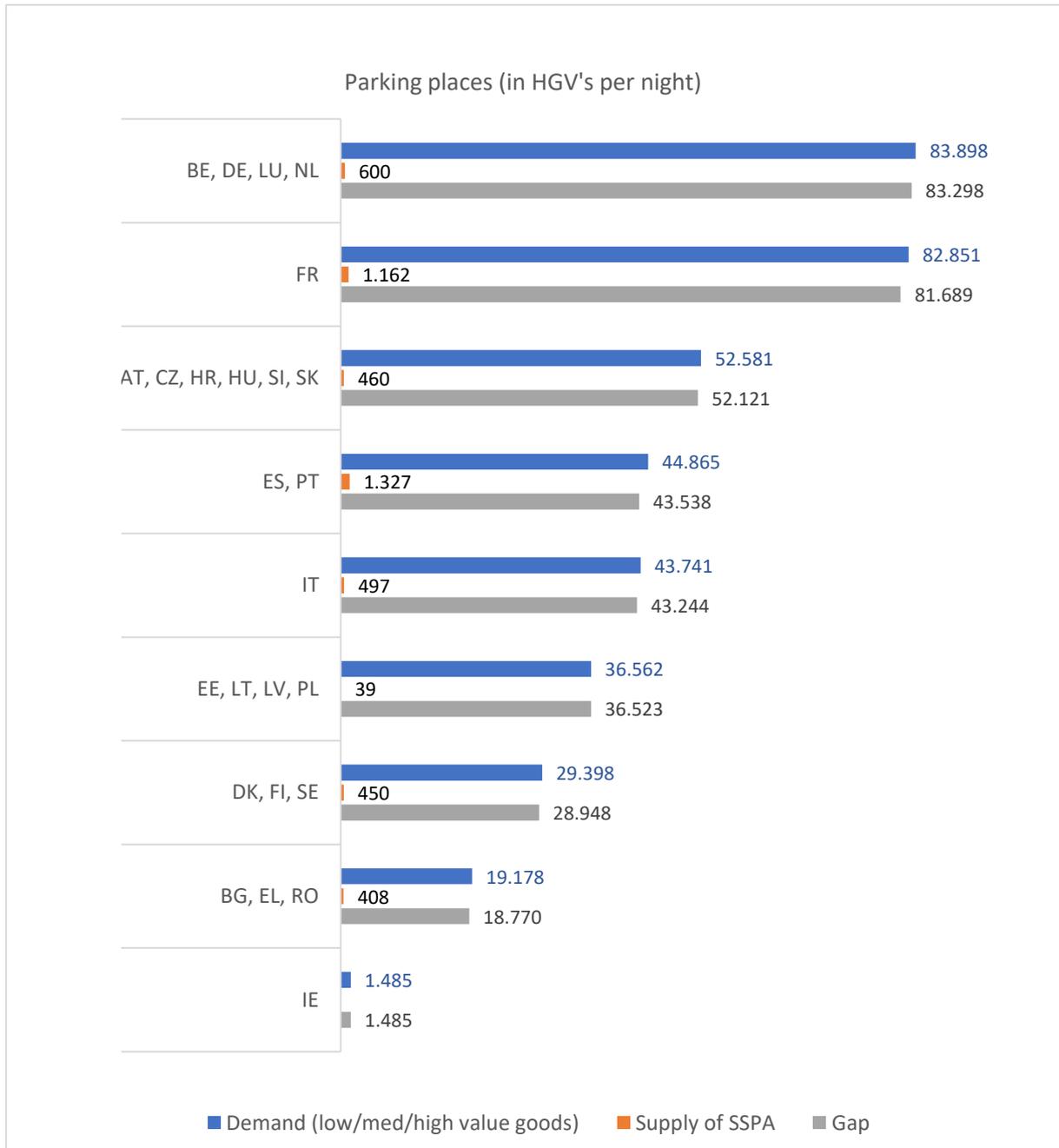


Figure 26 Current parking demand, supply & gap per Member State or group of Member States

### 5.5.2 Parking demand, supply, and gap in 2040

Following the previous section, this part will successively address the projected demand for parking capacity, the anticipated supply, and the gap between the two for 2040. Looking ahead to 2040, both the supply of and the demand for parking locations are expected to increase. The increase on the demand side has previously been addressed in Section 5.2.2. Regarding the supply side, as shown in Section 5.4.5, several projects funded through CEF are underway to either build new SSPAs or upgrade existing parking facilities to meet the EU Secure Parking standard. These efforts will add 64 SSPA locations across the European Union, nearly tripling the current supply of 35 such sites. All these projects are expected to be completed within the next few years.

Beyond this, further development is likely to continue, contributing to the growing supply of safe and secure parking areas. This expansion is expected not only for SSPAs but also for parking areas certified under other standards, for example, initiated by private investors. To reflect these anticipated developments, two scenarios have been developed to estimate the supply of parking locations in 2040. However, it must be remarked that these projections are broad estimates, and actual developments depend on market appetite for developing new parking areas or expanding and upgrading existing ones, as well as on conditions such as land availability and permitting requirements. Below, the focus is first on the demand for parking capacity in 2040, after which the two scenarios are further elaborated.

#### Demand for parking capacity in 2040

Transport volumes in 2040 have increased compared to 2022, with the ratio between the different categories of the value of transported goods having also shifted slightly. From a demand perspective, based on cargo flows and applying current driving and rest time rules, it is estimated that:

- in 2040 on an average weekday there are approximately 507,000 truck drivers engaged in long-distance transport across the EU, requiring overnight parking. The total demand calculated based on the number of stops required by EU regulation, therefore amounts to: 507,000 parking places per night. The total demand concerns: low-, medium-, and high-value goods.
- trucks carrying medium- and high-value goods account for 114,000 spaces per night.
- trucks carrying low-value goods account for 393,000 spaces per night.
- the ratio between trucks carrying medium- and high-value goods and low-value goods is slightly less than 1 to 3.5.

#### Supply of parking capacity and gap in 2040

For the supply of parking capacity in 2040, two scenarios have been considered.

- In scenario 1, it is assumed that all ongoing and new CEF projects for SSPAs will be completed, with the additional parking spaces they provide added to the existing supply for 2040. No further developments, constructions, or upgrades of other parking locations are considered in this scenario.
- In scenario 2, additional developments in parking supply across all certification standards are considered. Since specific future developments, apart from those already included in Scenario 1, are not yet known, investment trends from 2018 to 2024 for each certification standard are extrapolated towards 2040. The supply situation for 2018 was derived from the 2019 Study on

Safe and Secure Parking Places for Trucks<sup>107</sup>. As the United Kingdom was still part of the European Union at that time, its locations were included in the supply data. To ensure comparability between 2018 and the present, a harmonization step was undertaken by removing all UK parking locations from the 2018 data and reconciling differences in data sources.

It must be remarked that these projections are broad estimates, and actual developments depend on market appetite for developing new parking areas or expanding and upgrading existing ones, as well as on conditions such as land availability and permitting requirements.

The same requirements and assumptions as those used in the gap analysis of the current situation are applied to the 2040 scenario.

### **Scenario 1 -No future investment**

Next, the supply of parking capacity for Scenario 1 is specified, followed by the gap analysis.

#### **Supply 2040**

Based on the description for Scenario 1, the following can be observed.

- The total supply of parking spaces amounts to 386,000 (secure and unsecure).
- Of these, there are 67,000 parking spaces of more than a basic level. More than basic means: not certified but with security elements, secure and certified, and SSPAs.
- Of these, 30,000 parking spaces are certified secure, according to various certification methods, not all easily comparable. SSPAs are a part of this set.
- Of these, 11,000 parking spaces are on an SSPA.

#### **Gap 2040**

When demand and supply are subsequently compared, the following conclusions can be drawn.

- It is assumed that the entire demand for parking capacity must be facilitated at SSPAs. Further it is assumed that new parking areas will each consist of an average of 120 parking spaces. This assumption is based on the average size of existing certified parking areas (whether or not SSPAs).
- If the total demand is to be facilitated by SSPAs, there is a shortage of 496,000 (507,000-11,000 parking places) parking spaces or **4,133 parking areas**.
- If we also assume that trucks carrying medium- to high-value goods could be facilitated at an SSPA of gold/platinum level, and trucks carrying low-value goods at an SSPA of bronze/silver level, and taking into account the ratio of 1 to 3.5, then we arrive at a gap of approximately **918 parking areas for the shortage at gold/platinum level and 3,215 for bronze/silver level**.
- **There is still a significant gap, which has grown compared to 2022.** The supply of SSPAs is still rather small compared to the calculated demand. If we were to include the entire supply of more than basic parking areas, amounting to 67,000 parking spaces / 697 parking areas (approximately), this would still not be sufficient to close the gap.

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<sup>107</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019

### **Scenario 2 – Continuation of current investment trends**

Next, the supply of parking capacity for Scenario 2 is specified, followed by the gap analysis.

#### **Supply 2040**

Based on the description for Scenario 2, the following can be observed.

- The total supply of parking spaces amounts to 467,000 (secure and unsecure).
- Of these, there are 124,000 parking spaces of more than a basic level. More than basic means: not certified but with security elements, secure and certified, and SSPAs.
- Of these, 78,000 parking spaces are certified secure, according to various certification methods, not all easily comparable. SSPAs are part of this set.
- Of these, 24,000 parking spaces are on an SSPA.

#### **Gap 2040**

When demand and supply are subsequently compared, the following conclusions can be drawn.

- It is assumed that the entire demand for parking capacity must be facilitated at SSPAs. Further it is assumed that new parking areas will each consist of an average of 120 parking spaces. This assumption is based on the average size of existing certified parking areas (whether or not SSPAs).
- If the total demand is to be facilitated by SSPAs, there is a shortage of 483,000 (507,000-24,000 parking places) parking spaces or **4,025 parking areas**.
- If we also assume that trucks carrying medium- to high-value goods could be facilitated at an SSPA of gold/platinum level, and trucks carrying low-value goods at an SSPA of bronze/silver level, and taking into account the ratio of 1 to 3.5, then we arrive at a gap of approximately **894 parking areas for the shortage at gold/platinum level and 3,131 for bronze/silver level**.

**Scenario 2 shows a significant gap, which has grown compared to 2022. The gap is not much smaller than in Scenario 1. While more parking areas are added, the additional number of SSPAs remains small compared to the demand. This means that even with continuation of current investment trends, it is not sufficient to close the gap.** The supply of SSPAs is still rather small compared to the calculated demand. If we were to include the entire supply of more than basic parking areas, amounting to 124,000 parking spaces / 1007 parking areas (approximately), this would still not be sufficient to close the gap.

Figure 27 below presents the demand for and the supply of parking places for 2040, for scenario 1 and 2. Note that each category is a subset of the preceding one.



Figure 27 Estimated overnight parking demand and supply (scenario 1 and 2)

### 5.5.3 Comparison with the Revised TEN-T Regulation targets

The revised TEN-T Regulation states that by 2040<sup>108</sup>, secure parking areas should be developed on the core and extended core networks at an average interval of 150 km, ensuring safety and appropriate working conditions for professional drivers. These secure truck parkings should, in principle, be certified according to Union standards and procedures.

The extended core network spans approximately 74,000 km. **Meeting the target of an SSPA every 150 km would require around 500 parking areas.** However, the regulation does not specify the sizes of these parking areas. Mapping results indicate that a denser network than implied by the revised TEN-T Regulation targets would be necessary **to accommodate the truck parking demand: approximately more than 4,200 SSPAs are needed** for this in total, consisting of in total 930 parking areas for gold/platinum level and 3,270 for bronze/silver level.

### 5.5.4 Comparison of results with 2019 Study on safe and secure parking places for trucks

The 2019 Study on safe and secure parking places for trucks<sup>109</sup> also included an analysis of demand<sup>110</sup> and supply. At that time, there was also no mention of SSPAs, as the European standard for them did not yet exist. The following overview of the demand for parking capacity was established.

<sup>108</sup> Regulation (Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013), <https://data.consilium.europa.eu/doc/document/PE-56-2024-INIT/en/pdf>

<sup>109</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019

<sup>110</sup> 2015 was the base year for transport flow analysis in the 2019 Study on safe and secure parking places for trucks,

- The total demand, calculated based on the number of stops needed, amounted to 395,674 parking spaces per night (including 19,927 demand for parking places in the UK, which was still part of the EU at that time<sup>111</sup>). The total demand concerns all categories combined: low-, medium-, and high-value goods.
- Trucks carrying medium- and high-value goods accounted for 85,417 spaces per night.
- Trucks carrying low-value goods accounted for 310,237 spaces per night.
- The ratio between trucks carrying medium- and high-value goods and low-value goods was slightly less than (1:3.6).

From this, it can be concluded that the demand for parking capacity has increased since the 2019 study (with 2015 as the base year for determining that demand). The creation of transport capacity at SSPAs (4,943 parking places) since that time has not kept pace with the growth in demand for parking capacity in the EU-27 (not including the UK).

Figure 28 below illustrates the demand for and the supply of parking places from the 2019 Study on Safe and Secure Parking Places for Trucks. Note that each category is a subset of the preceding one and that the figures in this overview include those of the UK.

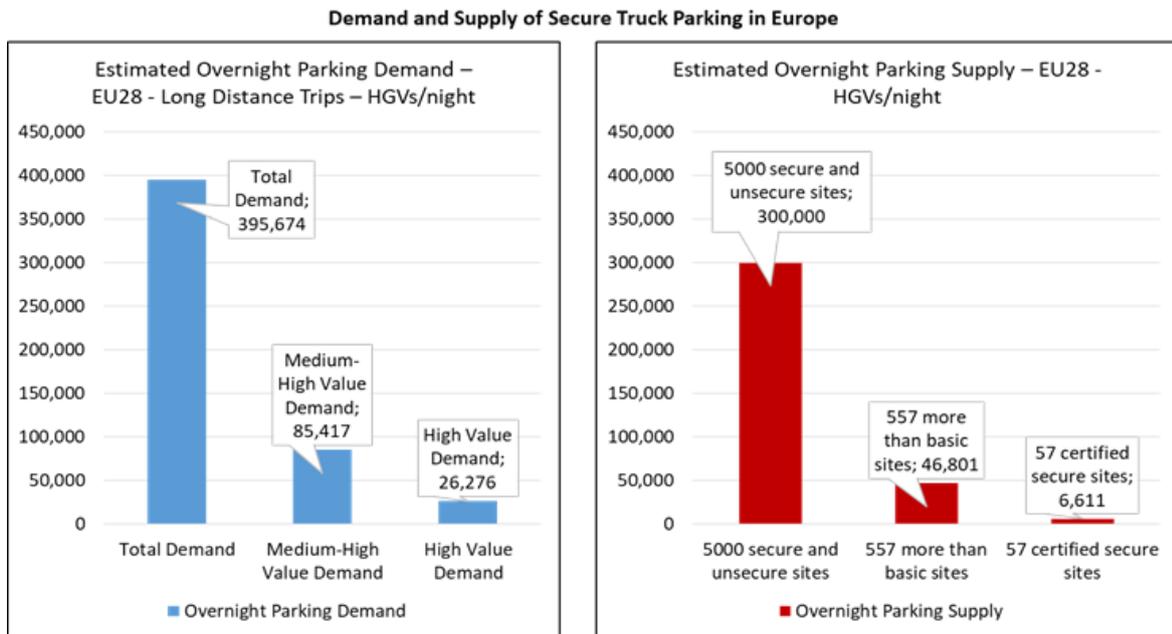


Figure 28 Demand and supply of secure parking in Europe (source: 2019 Study on safe and secure parking places for trucks)

## 5.6 Availability of facilities for overnight stay

To evaluate how many rest facilities are accessible for professional drivers for overnight stays, the proximity of hotels and motels to secured parking areas was analysed. Additionally, a small-scale survey was conducted to assess available amenities (star ratings) and prices. Based on these findings, key conclusions can be drawn regarding the suitability of these facilities for truckers' overnight stays.

<sup>111</sup> European Commission, Directorate-General for Mobility and Transport, Leeuw van Weenen, R. de, Newton, S., Li, T., Study on Safe and Secure Parking Places for Trucks, Task 3a: Mapping Demand and Supply

### 5.6.1 Hotels in the vicinity of SSPAs

For each certification standard of parking areas, an analysis has been carried out of how many hotels there are near each parking area, if any. To do this, geofencing techniques have been deployed to identify the hotels which are in the vicinity of a parking. Various distances were applied, ranging from 1 to 20 kilometre for each parking location. Information on hotels has been collected from OpenStreetMap, which contains around 123,000 hotels across the whole of the EU27. The results can be seen in Table 4, in terms percentages.

**Table 4 Percentage of parking facilities with nearby hotels in their vicinity, by parking category**

Source	1 km	3 km	5 km	10 km	20 km
EU certified parking	29%	46%	60%	89%	94%
Secured, certified otherwise	29%	55%	77%	95%	99%
Non-certified with security elements	20%	49%	71%	88%	97%
All parking areas	21%	50%	68%	89%	98%
<b>Total</b>	21%	50%	69%	89%	98%

Table 4 indicates that 46% of EU-certified parking areas have at least one overnight stay facility within 3 kilometres. Across all parking categories, approximately half of parking areas have at least one facility within this distance. The most relevant distance bands are 1 kilometre, considered walking distance, and 3 kilometre, which could be served by a shuttle service.

It should be noted that these distances are measured as the crow flies, not based on actual walking or driving routes. Consequently, a hotel counted as being near a parking area might be geographically close but still difficult to access due to barriers such as highways. Therefore, the percentages presented in Table 4 represent maximum estimates.

#### 5.6.1 Small-scale survey on hotel amenities

To gain deeper insights into the characteristics of hotels near parking areas, the analysis focused on the 16 EU certified parking areas with at least one hotel within 3 kilometres. Half of these SSPAs have exactly one nearby hotel, while the other half have more than one. Notably, four SSPAs have as many as five hotels in their vicinity.

The next step involved collecting details about these hotels, such as capacity, star rating, and prices. Since OpenStreetMap lacks this information, alternative data sources were used. Table 5 outlines the general global hotel star rating system, which is commonly used by various tourism authorities and independent organizations such as the Automobile Association (AA), Forbes Travel Guide (originally Mobil Travel Guide), and other hospitality rating bodies.<sup>112</sup>

<sup>112</sup> The History Behind the Hotel Star System', Walden University. <https://www.waldenu.edu/> and Understanding The Hotel Star Rating System', Swiss Education Group. <https://www.swisseducation.ac/>

**Table 5 General global hotel star rating system**

<i>Star Rating</i>	<i>Description</i>	<i>Amenities &amp; Services</i>
1-Star	Basic accommodation, minimal services, clean and safe.	Basic room with bed, bathroom, and maybe Wi-Fi.
2-Star	Simple and comfortable, limited amenities, may have restaurant or breakfast.	Larger rooms, limited on-site services like breakfast or restaurant.
3-Star	Mid-range, offers more comfort and convenience, often near business areas.	Includes room service, restaurant, business facilities, Wi-Fi, air conditioning.
4-Star	Upscale, high-quality service, with multiple amenities like a gym, restaurant, and spa.	Full-service facilities such as pools, spas, gyms, concierge services.
5-Star	Luxury, with personalized services, top-tier amenities, and superior room quality.	Luxurious rooms, personalized services, high-end restaurants, spa, chauffeur.

The desk research reveals significant variation in hotel attributes. Star ratings range from 1 to 4 stars, while room capacity varies from 4 to 194 rooms. Prices for a one-night stay range from €36 to €138. On average, room rates are €75 per night, with an average hotel capacity for overnight stay of 65 rooms.

Additional details on the hotels investigated are provided in Annex I.

### **5.6.2 Challenges relating to the lack of suitable accommodation on the road**

The analysis of overnight stay facilities reveals that many parking areas lack suitable accommodations nearby. While options may exist at greater distances, these are not viable for truck drivers, as they typically lack (motorised) transportation once their truck is parked in a secure parking area. Following from the survey<sup>113</sup>, for most drivers, 3 kilometres is the practical limit for accessing such facilities.

Many hotels identified near SSPAs primarily cater to tourists and business travellers, posing challenges for accommodating truck drivers. While these hotels offer comfortable amenities and convenient locations, their focus on longer-staying, higher-paying guests often results in a mismatch with the needs and budgets of truck drivers. For drivers, the cost of such hotels presents a significant barrier, as tight budgets and a preference for short overnight stays conflict with the higher prices typical of tourist and business-oriented accommodations. Findings from the small-scale survey confirm that most hotel rates are not aligned with the financial constraints of truck drivers..

Additionally, differences in schedules and behaviours—such as early departures or late arrivals—might lead to potential friction with other guests seeking a tranquil and leisure-focused environment. From the perspective of the driver, these hotels may also lack practical amenities tailored to their needs, such as flexible dining hours or easy access to secure parking nearby. For these hotels to

<sup>113</sup> In terms of time, a duration of half an hour to an hour was mentioned. This is linked to a distance of 3 km.

effectively cater to truck drivers, targeted adaptations would be necessary, such as dynamic pricing during low-demand periods, tailored service offerings, and collaboration with nearby parking facilities to ensure practical solutions for all parties involved.

Finally, the question arises whether hotels in the area have sufficient capacity to accommodate truck drivers. During peak periods, this is unlikely to be the case, as preference is given to guests willing to pay more and stay longer. During times of lower demand, however, truck drivers could provide a welcome addition to the hotels' regular clientele. Nevertheless, all things considered, this does not represent a consistent and reliable supply of overnight accommodation for truck drivers.

A possible solution lies in developing affordable and accessible accommodations specifically tailored to truck drivers' needs. This could include partnerships with nearby hotels to offer budget-friendly options or establishing dedicated facilities near or on SSPAs to ensure consistent, reliable overnight stay options for drivers. However, no initiatives of any significance have yet been identified to address this pressing issue, highlighting the significant lack of suitable accommodation options for truck drivers.

Ultimately, the focus should remain on improving working conditions for truck drivers by balancing the development of accommodations to enable sleeping outside the cabin with the immediate potential of SSPAs to provide a secure, amenity-rich environment that better meets drivers' needs. Given the lack of investment from private-sector entities or public authorities in dedicated accommodations, there should be a debate on the role of SSPAs. SSPAs already provide essential services and security, while also offering drivers a place to socialise and rest. Considering allowing drivers to spend their regular weekly rest in the cabin at high-quality SSPAs (e.g., gold/platinum category) could encourage investment in these facilities, enhance driver conditions, and address the long-distance transport sector's driver shortage. However, this would involve legislative changes to allow drivers to sleep in their cabins when parked at SSPAs.

## 5.7 Critical appraisal of modelling limitations and data availability

This section discusses the availability of data for various dimensions analysed in the mapping exercise, including transport flows, parking capacity, crime rates, and the availability of overnight stay facilities.

### 5.7.1 Mapping demand for parking

To assess parking capacity demand, the NEAC model<sup>114</sup> for transport flows is applied. This model examines long-haul trips for all origins and destinations within the EU for road transport, focusing on when stops are necessary and where parking facilities are required. The methodology used follows the same approach as in the 2019 Study on Safe and Secure Parking Places for Trucks<sup>115</sup>.

It is important to note that waiting times at terminals—those unrelated to driving times—are not included in this model, even though they contribute to the overall need for parking spaces. This is particularly relevant for countries with major ports and terminals, where such waiting times play a significant role in determining parking capacity requirements.

Additionally, the modelling does not account for shifts in required parking capacity between countries caused by factors other than trip duration, meaning capacity shifts may occur in border

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<sup>114</sup> See: <https://web.jrc.ec.europa.eu/policy-model-inventory/explore/models/model-neac/>

<sup>115</sup> European Commission: Directorate-General for Mobility and Transport, Maas, F., Ruschin, P., Stamos, I., Penasse, D. et al., Study on safe and secure parking places for trucks – Final report, Publications Office, 2019

areas. While the model is suitable for analysis at the European level, examining data at a more detailed level may reveal deviations due to local effects. For this reason, some results have been presented for clusters of Member States rather than for individual countries.

Furthermore, it is important to emphasise that general demand figures do not directly translate into the demand for parking spaces at a specific parking location. User preferences for specific parking locations may vary based on factors such as location and accessibility, security level, available amenities, and price. The chosen business model plays a crucial role in this regard and must be tailored to ensure optimal alignment with user needs. See also Section 3.3.5 for further details.

### **5.7.2 Mapping supply of parking capacity**

For mapping parking areas, various data sources were used. Compared to the 2019 Study on Safe and Secure Parking Places for Trucks<sup>116</sup>, an additional category of parking areas has been introduced: those certified according to the EU Truck Parking Standards. A key part of creating the parking inventory involved eliminating duplicate entries, as some locations appeared multiple times across datasets. These duplicates were filtered out to ensure accurate counts and prevent double counting.

Identifying the security and service features of certified parking areas, regardless of the certification method, is straightforward. However, assessing the large group of uncertified parking areas remains challenging due to limited information about their specific attributes. Expanding certification in the future will improve transparency regarding available security and services.

### **5.7.3 Mapping Crime**

Obtaining a comprehensive view of transport-related crime, in terms of both numbers and locations, proves challenging. Much of this information is confidential, and companies and authorities are generally reluctant to share data in this area. Nevertheless, several data sources have been accessed for this study (TAPA, BVBA Wim Dekeyser), providing a partial picture. This perspective, however, is fragmented, making it difficult to construct a complete overview for the European Union. For decisions regarding hotspots where additional secure parking is necessary, a more thorough and precise understanding is needed. However, it is also essential to consider that transport crime is both mobile and dynamic in nature, often drawn to the least secure locations.

### **5.7.4 Availability of hotels and motels**

There is extensive data on overnight stay facility locations, useful for analysing accommodation proximity to (secured) parking areas. This data comes from OpenStreetMap, community-sourced by volunteers, warranting some caution when comparing or analysing hotel and motel density in specific countries.

For this study, the database was considered sufficient. As previously noted, the specified distances between parking areas and hotels or motels represent a lower bound. Additionally, a limited survey was conducted on hotels that meet the distance requirements in relation to SSPAs to gather information on characteristics such as price and star ratings of hotels or motels, which are not included in OpenStreetMap. While the survey's statistical significance is limited, it provides enough insight to draw meaningful conclusions about the availability of adequate, sufficient, and nearby accommodations for truck drivers.

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<sup>116</sup> Ibid.

## 6. Recommendations

### Key takeaways

- Three core areas of intervention were identified for the 2040 vision for the sector, and the associated recommendations towards that vision: Addressing the shortage of SSPAs, Enhancing SSPA connectivity, and Improving safety and security measures and enhancing driver experience.
- The top priority recommendations proposed at the EU level focus on (1) enhancing security and service levels for SSPAs and parking areas, through quick-win upgrades for intermediate certifications (e.g. Silver +), (2) foster dialogue and collaboration with other relevant stakeholders to promote cross-border strategies for SSPA use and (3) development of a unified EU-wide reservation observatory to access real-time data on parking availability and communicate with parking facility operators .
- Recommendations within the three core intervention areas are further proposed to other stakeholders, including Member States, National, Regional and Local Authorities, Parking Managers, truck and parking associations, workers organisations, trade unions and transport organisations.
- The actions proposed to relevant stakeholders identified in the sector target (1) stakeholder collaboration to raise awareness of SSPA's benefits and define future standards and (2) enhancing driver wellbeing through better access and better equipped SSPAs and promoting education and feedback programmes to support safety and engagement.
- By coordinating these actions together across policy and transport supply chain actors, it is expected that they will have a catalytic and synergetic effect in overcoming the 2040 supply/demand gap.

### 6.1 What should the sector be like in 2040?

The collective insight of diverse stakeholders involved as part of the consultation activities – including industry experts, policymakers, drivers, companies and other stakeholder groups who contributed to this study through consultations, workshops and advisory meetings – shared perspectives highlighting the pressing need for integrated, safe, and inclusive SSPAs as essential infrastructure within the EU road transport system. Their consolidated view is depicted below:

*By 2040, Safe and Secure Parking Areas should be integral to the EU road transport infrastructure, meeting evolving needs in **safety, sustainability, connectivity, and inclusivity**. Aligned with the EU's new TEN-T Regulation, the envisioned network of SSPAs will play a fundamental role in maintaining resilient and efficient supply chains, as well as embody an essential part amid anticipated digitalisation and demographic shifts, and the transition towards a greener economy, as foreseen by the EU Megatrends Hub<sup>117</sup>. Moreover, to ensure SSPAs receive the necessary focus, they should be embedded across major transport, energy, and digital*

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<sup>117</sup> European Commission, *Megatrends Hub*, [https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub\\_en](https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub_en)

*policies, as their physical and digital connectivity will underpin the ability to support the entire logistics chain as well as the EU's Contingency Plan for Transport<sup>118</sup>.*

The findings from the mapping exercise highlight the considerable gap between demand for parking spaces and their availability, with calculations indicating that demand will further increase by 2040. If no additional action is undertaken, the **challenges currently facing the sector are likely to persist and even intensify by 2040**. As a result, the gap in the availability of infrastructure and resources will continue to widen and will be particularly pronounced in certain countries such as **France, Germany, Italy or Spain**. These countries, due to a lack of investment and forward planning, will very likely face severe difficulties in meeting growing demand and addressing crime cargo incidents. Achieving the vision for 2040 requires action in three core areas: addressing the secure parking shortage, enhancing connectivity, and improving safety, security and driver well-being.

### Addressing the shortage of SSPAs

- Address different layers of this shortage, namely (1) promoting attention to certifying existing parking areas through “quick win” upgrades and intermediate certification levels and (2) invest and incentivise development and construction of new.
- Expanding the capacity of SSPAs along TEN-T corridors is essential to meet the growing demand for safe parking by 2040 and support long-haul freight. To meet this future demand, continuous investment from CEF and complementary funding streams (e.g. national funds) will be essential.
- The substantial investments required to close the 2040 supply-demand gap for parking areas will benefit greatly from CEF funding. However, given the scale of this need, public-private partnerships (PPPs) should be leveraged to co-fund and sustain the expansion and maintenance of SSPAs, aligning private investments with public goals for safer and more sustainable transport.<sup>119</sup>
- Stakeholder consultations have highlighted the importance of pooling and blending funding instruments, so as to ensure an additional and synergetic use of the limited resources available at the EU and national levels, creating greater use of investments around key transport infrastructure and enabling key projects to be finalised in the medium and long term.
- Awareness should be raised to promote cooperation between the EU Commission, Member States and regional and local authorities, but also insurance companies and businesses towards (1) promoting cross-border strategic corridors for certified SSPAs, and (2) understanding market trends and business cases that could give way to the introduction of specific requirements on long-haul drivers having to rest and stop at certified parking areas and SSPAs.
- Strengthen the collaboration between the EU, Member States, truck and parking associations, workers organisations, trade unions, and transport organisations to raise awareness of SSPA's benefits and define future standards.

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<sup>118</sup> European Commission, [https://transport.ec.europa.eu/news-events/news/protecting-eu-transport-times-crisis-commission-adopts-contingency-plan-transport-2022-05-23\\_en](https://transport.ec.europa.eu/news-events/news/protecting-eu-transport-times-crisis-commission-adopts-contingency-plan-transport-2022-05-23_en)

<sup>119</sup> These examples also reflect the recommendations of European Coordinators Prof. Bodewig and Prof. Secchi. In their recent 2024 Position Paper, “*Transport Funding and Financing Adapted to Future Challenges*,” they advocate for the pooling and blending of EU and national resources to enable a broader range of transport projects to be timely completed.

### **Enhancing SSPA connectivity**

- Continued EU action is necessary to ensure effective digital connectivity between the various stakeholders of the transport and logistics ecosystem. In this regard, EU cross-border coordination mechanisms, such as NAPCORE<sup>120</sup>, are an enabler for ensuring interoperability and continuity of NAPs as well as for envisaging connected and cooperative SSPAs.
- Linking SSPAs dynamic information with NAPs will facilitate continuous data exchange on availability and standards, ensuring that facilities meet EU expectations and offer seamless service to drivers across Member States. However, the dynamic information currently foreseen in Delegated Regulation 885/2013 focuses only on occupancy.
- Developing a unified EU-wide reservation digital platform (observatory), which would enable drivers and transport undertakings to access real-time data on parking availability and communicate with parking facility operators, can significantly optimise the logistics network, improve traffic management, and reduce time spent searching for available areas.
- Developing an “IT Trust Centre” for data related to parking spaces in SSPAs, hosted by a neutral and impartial entity. In practice, this would be a centralised hub where data on SSPAs and linked dimensions (e.g. security) would be displayed, monitored and managed by an impartial organisation that would ensure the security of this information and compliance with data EU standards. This trust centre could allow for data exchange with public and private operators, granting them the appropriate access rights.
- Taking advantage of ITS and IoT solutions to modernise parking and driving operations and monitoring not only improves the security and effectiveness of these activities but might also greatly assist in tackling the lack of refined data on SSPAs, cargo theft and preferred routes.
- Implementing digital monitoring systems and cooperative mechanisms can also further support the physical implementation of ‘Green Lane-like’ initiatives, enabling fast-tracking at logistic hubs such as ports and rail-road terminals for trucks that have stopped only at SSPAs.

### **Improving safety and security measures and enhancing driver experience**

- Designing a unified real-time information sharing system for enforcement entities, particularly at high-demand locations identified along major corridors, will enhance compliance and safety of the cargo and contribute to better driver experience.
- As driver wellbeing is central to the vision, SSPAs will need to cater for an increasingly diverse workforce, including, for instance, several cultural, religious and health circumstances as part of the minimum service levels. Another example is the development of driver wellbeing programmes, as will be further recommended in the following subsections.
- Increased manned presence at highly certified SSPAs or at a distance will help to maintain high-security standards, addressing risks like theft and unauthorised access and ensuring higher levels of cleanliness at the sites.

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<sup>120</sup> National Access Point Coordination Organisation for Europe (NAPCORE) is a project dedicated to improving the interoperability and standardisation of National Access points (NAPs) across Europe. In summary, the project aims at coordinating mobility data exchange, harmonising data standards and enhancing accessibility, developing tools for data management and supporting EU-wide solutions.

## 6.2 Why and how should the EU act?

As mentioned above, the analysis conducted demonstrated that significant efforts are still needed in the coming years to complete a network of SSPAs as required in the EU legislation. The analysis also highlighted three different major areas of intervention and progress required *vis a vis* 2040 where EU action is still needed:

- Addressing the shortage of SSPAs and available parking areas
- Enhancing SSPAs connectivity
- Improving safety and security measures and enhancing driver experience

A number of those interventions, notably in what concerns the promotion of neutral and interoperable platforms, data sharing, and a digitally inter-connected and dense network of parking areas, require additional attention across the EU to move forward. Here we consider the wide variety of policy options that the EU can adopt, distinguishing two main broad categories<sup>121</sup>, soft regulation and legislative action. Table 6 summarises and prioritises the actions that are recommended on the EU side to assist in addressing the highlighted challenges for SSPAs and other parking areas.

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<sup>121</sup> Soft regulation consists of a flexible approach that can be materialised in recommendations, communications, opinions or strategies which encourage those to whom it is addressed to act in a particular way without being binding on them; whilst hard and legally binding EU rules in the form of legislative action are used to specify a certain course of action and require appropriate levels of enforcement.

**Table 6 SSPA interventions proposed at EU level**

Areas of recommendations for EU intervention	Recommendations for soft regulation at EU-level	Recommendations for legislative action at EU-level
<b>Addressing the shortage of SSPAs and available parking</b>	<ol style="list-style-type: none"> <li>Incentivise quick-win upgrades for intermediate-levels including options to certify non-secure rest facilities along motorways to a bronze level – as these require only minor groundworks.</li> <li>Prioritise platinum-certified SSPAs for areas with higher events of cargo theft.</li> <li>Mobilise high-level expert bodies, that include stakeholders with different backgrounds, such as the EGUM or the DTLF<sup>122</sup>, for bringing together different stakeholders (e.g.: truck and parking associations, workers organisations, trade unions and transport organisations) to explore ways to motivate long-haul businesses to have their drivers resting at SSPAs.</li> <li>Suggest, through an EU-wide Communication, that Member States promote and develop a coordinated cross-border corridor SSPA strategy within the EU neighbouring countries and that these objectives are included as part of their national transport plans<sup>123</sup>.</li> </ol>	<ol style="list-style-type: none"> <li>Propose amendments to the Delegated Regulation (EU) 2022/1012 focussed on incentivising quick-win upgrades to SSPAs by introducing intermediate-level certifications for these. As an example, Silver parking that would invest in high-level services could be certified as Silver + certification.</li> <li>Consider amendments the Mobility Package allowing rest periods in SSPA's and explore options for making SSPA's mandatory for certain rest periods, if no hotel is chosen.</li> </ol>
<b>Enhancing SSPA connectivity</b>	<ol style="list-style-type: none"> <li>Further promote EU-pilot cases integrating SSPAs, ports, terminals along a logistic chain, such as for instance through the Digital Transport and Logistic Forum so as to promote intermodality.</li> <li>Promote the development of an IT Trust Centre for data related to parking spaces in SSPAs that can be anchored in TENtec and hosted by a neutral and impartial entity.</li> </ol>	<ol style="list-style-type: none"> <li>To counteract issues regarding data availability particularly on the thematic of crime and migration, develop a working group between the Commission, Europol and Frontex<sup>124</sup> towards the definition of an official status and a common standard on the minimum level of information which enables a good</li> </ol>

<sup>122</sup> The EGUM is the European Commission high-level expert group on urban mobility, whilst the DTLF is the Digital Transport and Logistic Forum assembling experts from Member States, public entities and private organisations for coordinating policy in those fields.

<sup>123</sup> For a country that has incorporated SSPA concerns into its national transport strategy, see the example of the Spanish national transport authority's plan: [https://cdn.mitma.gob.es/portal-web-drupal/esmovilidad/ejes/211223\\_es.movilidad\\_accesibilidad\\_BAJA\\_vf.pdf](https://cdn.mitma.gob.es/portal-web-drupal/esmovilidad/ejes/211223_es.movilidad_accesibilidad_BAJA_vf.pdf). For an example of a full-fledge plan devoted to SSPAs development, Italy's approach can be consulted here: <https://rivistatir.it/wp-content/uploads/2023/11/speciale-aree-di-sosta-stampa-b.pdf>.

<sup>124</sup> Or embed the topic on existing groups, such as EMPACT, the European Multidisciplinary Platform Against Criminal Threats: <https://www.europol.europa.eu/media-press/newsroom/news/europol-and-frontex-forge-closer-cooperation>

Areas of recommendations for EU intervention	Recommendations for soft regulation at EU-level	Recommendations for legislative action at EU-level
	<ol style="list-style-type: none"> <li>Building on information provided to the NAP, develop a unified EU-wide reservation observatory, technologically neutral so as to enable compatibility with various devices, applications, and systems used by different stakeholders.</li> </ol>	<p>understanding of the problems on requiring real time data for law enforcement and incident data to be provided<sup>125</sup>.</p> <ol style="list-style-type: none"> <li>Develop the “IT Trust Centre”, which would allow an effective data exchange.</li> </ol>
<p><b>Improving safety measures and enhancing driver experience</b></p>	<ol style="list-style-type: none"> <li>Develop studies to determine the potential cost savings and benefits of providing safe parking for long-haul drivers, cargo and passengers, including improved road safety and driver satisfaction and well-being<sup>126</sup>.</li> <li>Strengthen the collaboration between with Member States, truck and parking associations, workers organisations, trade unions, and transport organisations to raise awareness of SSPA’s benefits and define future standards.</li> <li>Promote wellbeing programs at SSPAs focusing on supporting long-haul drivers’ mental health and providing recreational facilities and social spaces.</li> <li>Conduct studies on the need for higher service levels at SSPAs including a requirement for the existence of on-site security personnel<sup>127</sup>.</li> </ol>	<ol style="list-style-type: none"> <li>To fill in the gaps concerning the wellbeing of long-haul drivers and safety of cargo, the EU Commission could consider defining criteria for investing in an EU-wide “motel” infrastructure at SSPAs.</li> <li>Still concerning the aforementioned gaps, the EU Commission could explore the possibility of allowing drivers to take their regular rest in the cabins if parked on an SSPA<sup>128</sup>.</li> <li>As highlighted in Chapter 3, the Commission could propose the development of a seal to be issued to SSPAs that offer gender-inclusive measures to allow drivers and companies to acknowledge these are gender inclusive.</li> <li>Targeted revisions of the existing EU standards for SSPAs towards incorporating greater attention on</li> </ol>

<sup>125</sup> This recommendation is a cornerstone for ensuring the uptake of SSPAs across the EU. Arguably, investors (public or private) seek predictability before committing to investments and therefore need a clear understanding of the security level required for the parking area they plan to develop. This understanding must be based on robust evidence about crime and incidents, which is currently available at a very low level of detail.

<sup>126</sup> These studies should provide hard and substantial evidence on the sector’s evolution in contributing to enhancing gender diversity, which is one of the areas where concrete evidence is lacking.

<sup>127</sup> This would require substantial investment and regulatory oversight, as well as a unified standard across member states to ensure consistency in service quality and safety. It would also demand collaboration between the public and private sectors to finance, build, and maintain these facilities across TEN-T corridors.

<sup>128</sup> This would provide greater flexibility and may be feasible to implement provided that drivers are parked in a SSPA where they feel secure and there is access to essential amenities

Areas of recommendations for EU intervention	Recommendations for soft regulation at EU-level	Recommendations for legislative action at EU-level
		<p>dietary considerations and the collection of gender-disaggregated data about drivers as part of the reporting requirements for parking managers.</p> <p>5. Propose updates to the Delegated Regulation (EU) 2022/1012 towards expanding physical security measures at higher service level SSPAs to also include on-site security personnel.</p>

Taking into consideration the need to implement safe and secure parking areas with EU coverage, following the requirements from the new TEN-T Regulation, prioritisation and eligibility of SSPA projects for EU funding needs to be implemented. This **proportionate** action is also fundamental to guarantee that harmonised and coherent SSPA deployments are put in place at the EU level, providing guidance to national initiatives. Such coordination will support consistent development across Member States and foster national guidance and targeted funding, enhancing the **EU's added value** in this domain.

Initial calculations regarding funding gaps suggest that they could be addressed, assuming similar EU funds will be available up to 2040. However, in the case when the transport budget reduces in the next Multiannual Financial Framework (MFF), alternative funding and financing lines need to be explored. In this regard, there are potential synergies with the AFIR, as well as opportunities for blending funding calls and enhancing coordination among various funding instruments. This includes fostering better alignment between national funding programs (like Germany's STEP, Spain under NextGeneration EU and Italy's national funding program) and EU funding programs while adhering to Delegated Regulation 2022/1012 to ensure consistency with standards on services, safety and security.

### **6.3 Why and how should other stakeholders act?**

The set of actions recommended to the EU will inherently encompass the engagement with multiple stakeholders. These must provide constructive feedback and actively engage in the process of implementing the various EU initiatives, regulations and targets. Relevant stakeholders in this process include national, regional and local authorities, as well as private companies, investors and transport undertakings, all of which play a vital role in the development and management of SSPAs.

The Advisory Board and other stakeholder consultation activities have provided a large number of recommendations proposed to different actors in the sector. After their careful review and analysis, these were grouped into broader themes that would fit into the intervention areas introduced in this Chapter. Since different actors will have different spheres of influence, the actions proposed in Table 7 will be grouped by area of intervention, where relevant stakeholders will be identified.

**Table 7 SSPA interventions proposed to other relevant stakeholders**

Addressing the shortage of SSPAs and available parking areas
<p><b>Problem: Lack of integration of EU level SSPA regulations and targets at Member State level</b></p> <p><b>Action: Including SSPAs in the national transport strategies and masterplans<sup>129</sup></b></p> <p><b>Stakeholders:</b> Member States, and National, Regional and Local Authorities</p> <p><b>Pathways:</b></p> <ul style="list-style-type: none"> <li>• Member States should reflect the EU legislation and guidance on SSPAs development in the form of targets outlined in their National Transport Strategies while ensuring these strategies address transport demand in a coherent manner.</li> <li>• Member States should allocate funding to ensure that built and future SSPAs are in compliance with Regulations in place, such as Delegated Regulation (EU) 2022/1012, the revised TEN-T and AFIR. In particular, MS should develop financing incentives and facilitate the development of business models that will promote SSPAs to be aligned with the targets in AFIR.</li> <li>• Ensuring compliance with drivers' mandatory rest periods by integrating the development and certification of SSPAs as part of a nationwide strategy.</li> <li>• Provide better clarity on the definition of SSPAs, including a list of the targeted vehicles, services and users. This should be closely aligned with the concepts and certifications in Delegated Regulation (EU) 2022/1012.</li> <li>• Regional and Local Authorities can facilitate this by integrating SSPAs in their land and planning frameworks in harmonisation with their local and national transport masterplans, particularly near densely populated urban areas, where land is scarce and expensive, and transport demand is especially high.</li> <li>• Member States should allocate public funding towards SSPA certifications according to EU standards. This could be via an upgrade of existing unsecured parking areas, in line with the regulatory effort laid out in the previous table, for the EU to promote quick-win upgrades to certify non-secure rest facilities along motorways (and off-motorways) to, at least, bronze level.</li> <li>• Member States should map the existing and planned SSPA and parking areas, including certification. This could be used as a monitoring system to help Member States understand where (small and big) upgrades are needed, hence facilitating the management and channelling of public and private funding where it is most needed and efficient.</li> <li>• Plan campaigns to certify/recognise existing areas to SSPA standards, and initiate dialogues with different relevant stakeholders (truck and parking associations, workers organisations, trade unions and transport organisations) to campaign the promotion of SSPA use and accelerate their development.</li> <li>• Member States should also engage in collaboration to minimise the lack of SSPAs and parking areas closer to their borders as part of a cross-border corridor approach.</li> </ul> <p><b>Problem: Complexities linked to land use and investment for SSPA building</b></p> <p><b>Action: Streamline the permitting and approval process and investments</b></p> <p><b>Stakeholders:</b> Member States and National, Regional, Local Authorities and Parking managers</p> <p><b>Pathways:</b></p> <ul style="list-style-type: none"> <li>• Member States should streamline the permitting and approval process for parking projects to reduce the time from proposal to construction. This could involve setting</li> </ul>

<sup>129</sup> National transport strategies and masterplans are comprehensive and long-term planning documents that provide the strategic frameworks and targets to guide the improvement, management, monitoring and investment in a country's transport infrastructure.

up a fast-track system for projects meeting specific safety and security benchmarks.

- SSPAs could be defined as a stand-alone real estate class, which would involve creating uniformity in building authorisation processes and integrating SSPAs into zoning permits and streamline the approval process for constructing SSPAs.
- Develop a “national approach” (e.g. Germany) to safe and secure parking areas, by combining several projects, enabling economies of scale and attracting financing from sources such as the European Investment Bank (EIB) through blended calls. This could be through tax incentives towards upscaling the level of security at off-motorway SSPAs or integrating SSPAs as part of CEF transport projects.
- Private investors and parking managers should target investments on updates to and developments of SSPAs that comply with AFIR targets. Nevertheless, funding should be adequately prioritised to the primary needs of truck drivers. For example, on electric stations for trucks, the priority should be to invest in overnight charging stations that fit perfectly with the business models of SSPAs, namely drivers taking their daily (11h) or weekly (24 to 45h) rest on SSPAs, since fast-charging stations will come with high-investment and infrastructure costs and are not suitable for existing SSPAs.
- Regional and Local Authorities could support National Authorities in this by getting involved in awareness campaigns promoted by national governments

#### Enhancing SSPA connectivity

**Problem: Lack of robust data on SSPA planning, location, use and included services**

**Action: Facilitate data collection, sharing and access**

**Stakeholders:** Member States, and National, Regional and Local Authorities, Parking managers and EU agencies such as Europol and Frontex.

**Pathways:**

- Guarantee the implementation of the Delegated Regulation 885/2013 in terms of dynamic data sharing in National Access Points is urgent. This includes communication with parking operators about their obligations in this context.
- **Liaison with parking managers to ensure proper links between the activities happening in parking areas (e.g. number of parking spaces occupied and for how long) and planned driving operations** within the logistics chain (e.g. schedules).
- Parking managers should provide reliable and updated data through NAPs and be open to participating and getting involved in pilot projects for data sharing and the creation of trustful protocols.
- Parking managers and long driver associations should guarantee and enable cooperation between stakeholders in the sector for promoting the transfer of good and bad practices for SSPAs and data sharing.

#### Improving safety measures and enhancing driver experience

**Problem: Certified and non-certified parking areas lack basic services to guarantee the wellbeing and comfort of drivers**

**Action: Promote driver wellbeing through better access and better equipped SSPAs**

**Stakeholders:** Member States, and national, regional and local authorities, parking managers, truck and parking associations, workers organisations, trade unions and transport organisations

**Pathways:**

- Regional and local Authorities should actively engage and be involved in campaigns promoted by national governments to raise awareness about long-haul driver wellbeing.
- Moreover, local Authorities should liaise with parking managers to ensure that transport options (e.g. shuttle services) are in place for linking parking and commercial areas of interest.

- Strengthen the collaboration between with Member States, truck and parking associations, workers organisations, trade unions, and transport organisations to raise awareness of SSPA's benefits and define future standards.
- Incentivise SSPAs to invest in additional facilities that are not part of the common minimum level of services in EU standards, but that are key to increase the comfort of drivers (e.g. washing machines, gym, access to entertainment such as TV etc)

**Problem: Lack of investment in developing more inclusive certified parking areas and SSPAs**

**Action: Promote diversity and inclusion in parking areas**

**Stakeholders:** Member States, and National, Regional and Local Authorities, Parking managers and Associations

**Pathways:**

- Develop nationwide outreach campaigns and training programmes aimed at local governments and the private sector (investors, insurance companies) to raise awareness about the benefits of diverse-inclusive SSPAs.
- Regional and Local Authorities should actively engage and be involved in campaigns promoted by national governments to raise awareness about the importance of SSPAs being adapted to different demographics and cultures.
- Parking managers should foresee the allocation of parking places closer to the gate reserved for female drivers as well as the provision of services tailored to different cultures.

**Problem: Lack of communication channels for long-haul drivers dedicated to disseminating information, supporting and receiving feedback**

**Action: Promote driver education and feedback programmes**

**Stakeholders:** Long-haul businesses, Parking managers, Insurance businesses and Associations

**Pathways:**

- Providing support and guidelines for driver wellbeing programmes, especially adequate training for vehicle drivers regarding physical and mental health as well as security-related training when it comes to parking their vehicle safely, would be an asset for drivers and transport companies, including good practices, such as the TAPA security training for drivers.
- Organising periodic driver training programmes provided by long haul businesses in partnership with insurance companies. These should be focused on new digitalisation and technological updates as well as any new regulations put in place.

## **ANNEX I: BACKGROUND REPORT MAPPING DEMAND AND SUPPLY**

This annex is presented as a separate report. It provides an in-depth analysis of the methodology used to determine the demand for and supply of parking areas, as well as the datasets utilized for this purpose. Additionally, this report addresses other mapping-related topics. Finally, the report includes the mapping results at a finer scale: by country or country group.

## ANNEX II: Synopsis Report of the Stakeholder Consultation

The Stakeholder Consultation report is presented as a separate report. It is divided in 2 section and its aim is to present and analyse the surveys outcomes, as well as the advisory boards meeting and the regional workshop. The document includes 5 annexes.

### Stakeholder Consultation

Aiming at creating a representative roadmap of the EU that outlines the real needs of the transport and logistic sector, a comprehensive approach based on the collection of qualitative and quantitative information has been implemented.

The consultations provided essential input for understanding the priorities and challenges related to safe and secure parking and, more widely, feedback and opinions of the various stakeholders on parking facilities and infrastructure as well as rest areas.

All evidence collection activities for the study were thoroughly documented, including desk research and details of the stakeholders consulted - with anonymisation for public reporting. These activities encompassed various types of consultations, such as interviews, surveys, and meetings, where key insights were gathered from diverse stakeholder groups.

### Sources of Stakeholder Consultation

The stakeholder consultation relied on three main sources of information:

#### A. Quantitative data

As part of this project, four targeted online surveys have been developed to gather additional data and insights from stakeholders. These surveys are available in multiple languages, including English, French, German, Dutch, Italian, Romanian, Spanish, Bulgarian, Hungarian, and Polish, ensuring broad accessibility.

Each survey is designed to take no more than 15-20 minutes to complete. The four targeted categories were:

- Drivers of HDV, coaches and LCVs;
- Transport operators.
- Focused questionnaire for coach operators;
- Focused questionnaire for LCV operators.

The outcomes of the surveys, available in Annex II of this document, have been instrumental in guiding the stakeholder meetings and shaping the discussions at the regional conferences.

#### B. Qualitative data

##### (I) Expert insights

Relevant stakeholders were contacted to assess their interest in joining the Advisory Board. Each participant was asked to select at least one stakeholder group and one thematic area to focus on throughout the study. The aim was to collect stakeholder perspectives on safe and secure parking.

The stakeholder groups included Authorities, Insurance Companies, Transport Operators (HGVs, Coaches, Vans), Professional Drivers, Safe & Secure Parking Developers and Operators, and Shippers. The thematic areas covered Connectivity, Diversity, Energy Transition, Innovation, and Crime, Theft & Illegal Migration.

The Advisory Boards included experts who expressed their preference for the meetings they wished to attend.

The participant list encompassed a diverse range of stakeholders, such as:

- Drivers of commercial vehicles;
- Transport operators;
- Shippers;
- Experts on incidents and crime;
- Insurance companies;
- Parking operators;
- Experts on innovation in transport, especially alternative fuels;
- Experts on transport data connectivity;
- Public authorities;
- Discussion with the CINEA agency.

Detailed information concerning the Advisory Board compositions and outcomes are available in Annex II of this document.

## **(II) Regional specificities**

Regional conferences were conducted in various locations to raise awareness and generate interest in the study and its outcomes. These events provided a platform to share preliminary findings and facilitated discussions and open forums with a diverse set of participants and stakeholders.

Regional conferences were held in the following locations:

- Regional conference in France;
- Regional conference in Italy;
- Regional conference in Belgium;
- Regional conferences in Spain.

During these meetings, several key outcomes were identified, most importantly:

- The need for closer collaboration between national authorities and EU institutions was emphasized, particularly to raise awareness among transport operators and drivers about the importance of adhering to EU parking standards. This includes promoting national funding mechanisms that align with EU regulations to address the shortage of SSPAs;
- Closer collaboration is needed and is the key to success, also when it comes to public and private partnership;
- The meetings highlighted the importance of combining CEF funding for SSPAs with investments in alternative fuel infrastructure, ensuring future sustainability in logistics by addressing challenges such as grid connection and high-capacity charging for trucks;

- There was a consensus on the need for better coordination and planning at the municipal level to overcome legal and bureaucratic barriers, especially for land acquisition and permitting processes for SSPAs development;
- The importance of addressing driver well-being, crime prevention, and illegal migration was also underlined, with suggestions to enhance on-site security measures – to be selected deepening from the needs of the location - and ensure the safety of both drivers and cargo.

Further information about the Regional conferences and outcomes are available in Annex II of this report.

### Key Findings

This section synthesises key takeaways derived from a combination of representative surveys, qualitative expert insights, and a focus on regional specificities in transport hotspots, alongside desk research.

The **working conditions** for truck and LCV drivers are inadequate when it comes to parking opportunities. This concerns long haul drivers especially.

On average, drivers declare that it takes up to 1 hour to find a parking place in Europe.

Regarding the types of facilities most lacking in Europe, 53% of drivers identify secure parking areas as the primary need, followed by rest areas with 39%.

Spending the night at a hotel remains an exception, including when it comes to the regular weekly rest. One of the main reasons is the inadequate supply of hotels or motels at or near parking areas.

The drivers' needs are in line with Maslow's hierarchy of needs pyramid. Physiological needs were highlighted with clean sanitary facilities as the main priority, followed by food and relaxation facilities as well as WIFI.

Safety and security for drivers at public parking facilities is insufficient, while it is higher on Safe and Secure Parking Areas.

Ideas to improve the situation include:

- Mandatory minimum rules for sanitary facilities as well as freely accessible WIFI in all parking areas, whether secure or not, would remedy the feeling of "sanitary islands" and cater for the professional driver needs. This applies to all three driver categories.
- Systematic separation of areas for truck drivers and other vehicle drivers would allow truck drivers to rest and improve their mental health as well.
- Support and rules for driver wellbeing programmes, especially adequate training for vehicle drivers regarding physical and mental health as well as security-related training when it comes to parking their vehicle safely, would be an asset for drivers and transport companies, including good practices, such as the TAPA security training for drivers.

There is a **lack of parking in general and a lack of safe and secure parking areas in particular**:

Publicly available parking areas along key transport routes are lacking in general. Especially HDV and LCV drivers have to resort to parking in industrial areas and on the hard shoulder. The time to look

for parking is between 30 minutes and one hour in several cases, which poses serious problems for on-time delivery of cargo, driving and rest time rules and stress for the drivers.

Certified safe and secure parking areas are lacking all across Europe, with Germany being the most salient example per capita with only one certified parking area and Spain and Italy having adopted national parking master plans on the other end of the spectrum.

The survey results confirm this pattern, as both vehicle drivers and transport operators highlighted Germany as the country they most frequently commented on negatively due to the lack of certified safe and secure parking areas. In contrast, countries like Spain and Italy, which have been adopting national parking master plans, received fewer negative remarks.

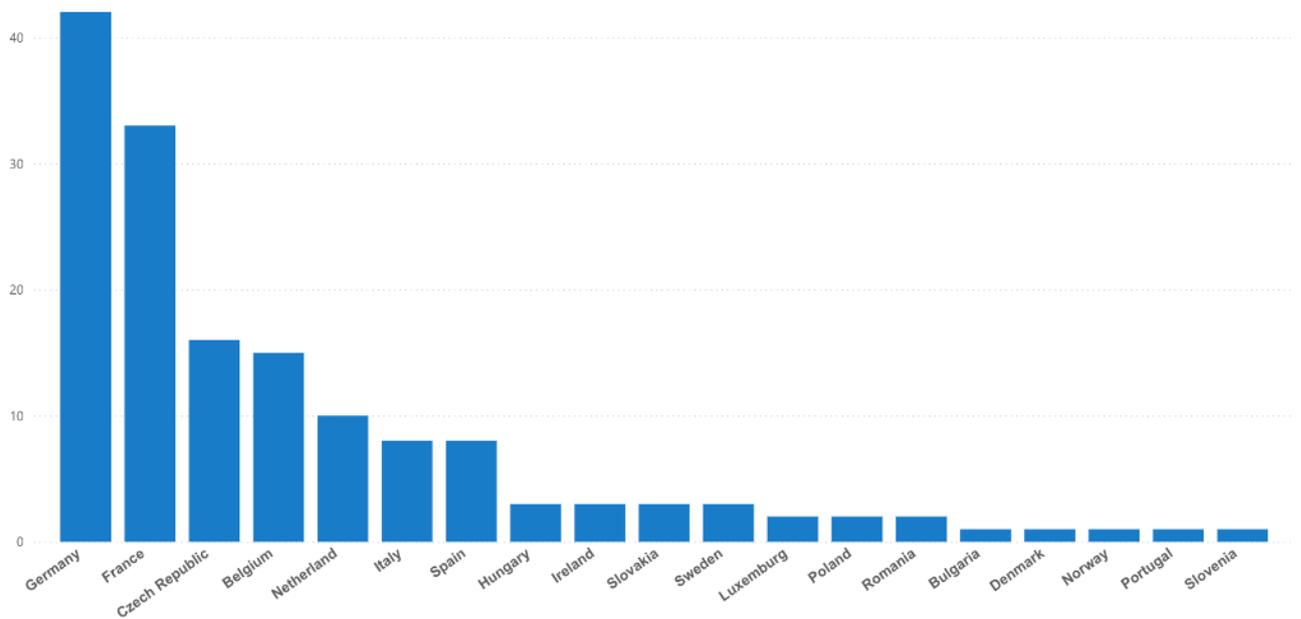


Figure: EU Countries with the highest number of Negative Comments and Observations by Vehicle Drivers

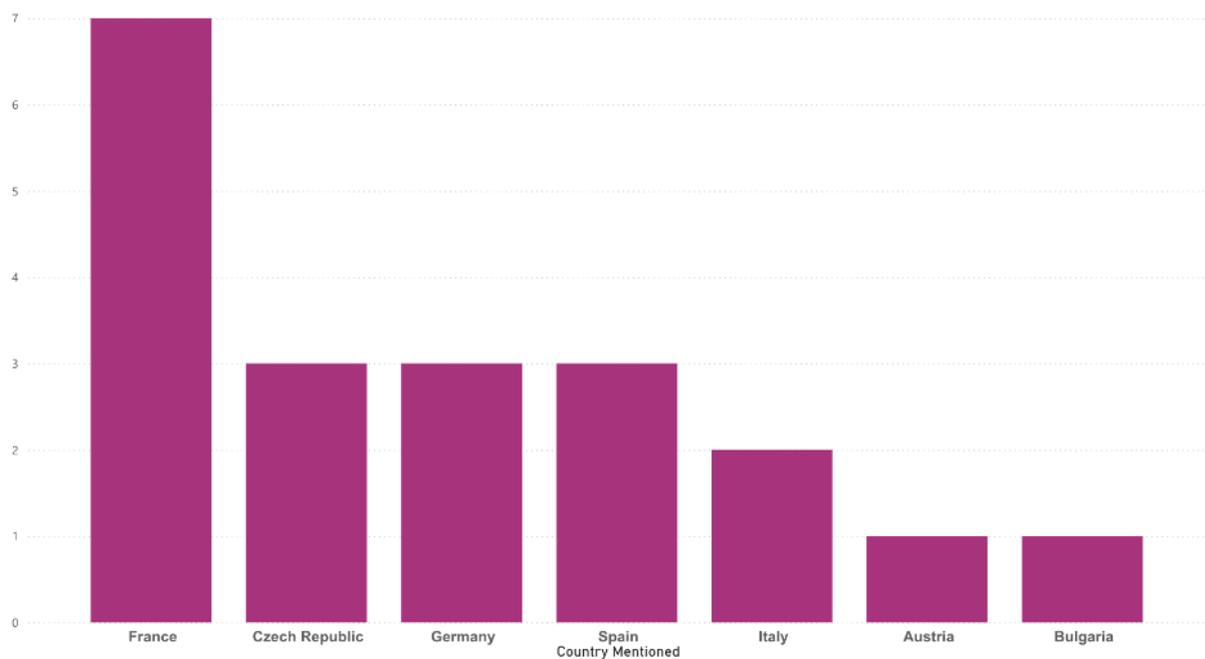


Figure: EU Countries with the highest number of Negative Comments and Observations by Transport Operators

Ideas to improve the situation include the following:

- Defining minimum service criteria for all public parking areas for commercial vehicles will allow for the opportunity to take short breaks in a reasonable environment.
- Encouraging transport companies or non-transport landowners to adopt an Air BnB business model for their truck yards would allow for an alleviation of the parking pressure.
- Supporting the creation and especially the upgrade of Safe and Secure Parking Areas would allow for a network effect. These parking areas are the ones on which drivers can stay for the nightly rest and trucks and/or trailers can be parked for the regular weekly rest or longer periods.

Since the last EU-funded study from 2018 there is a **mentality change** regarding payment for parking:

Shippers and transport companies understand the need to pay for parking areas – especially at certain hotspots. According to parking operators, payment is facilitated especially when it can be carried out via the toll collection service or via the commonly accepted fuel cards;

At the same time there is still a question mark behind the capital expenditure required for parking areas. The parking area operation business has an average time period of at least three years until there is a profit margin at all. The further ramp-up of profits is slow. This contrasts with low margin but high-volume business such as fuel stations and larger margin business such as truck wash and restaurant facilities. Therefore, several potential parking operators focus on the latter businesses first and are hesitant to develop parking areas with a certain degree of security.

**Public funding schemes** for parking widely differ:

The European CEF programme (Connecting Europe Facility) seems to be a success overall. Around 65 parking areas were or are being built thanks to CEF funding. This programme focuses on the criteria laid out in Delegated Regulation 1012/2022, which creates transparency and reliability;

The German funding programme STEP for HGV parking is not connected with the European certification obligations. In the underlying regulation the German Transport Ministry defined a series of criteria and provided guidance on locations where parking is needed. While security-related elements are funded, they are not necessarily mandatory. The budget has been allocated and construction is expected to start in 2025.

On the other hand, after having redacted a national strategy that includes a detailed need analysis, with demand and supply information and heat maps, Italy<sup>130</sup> and Spain<sup>131</sup> have launched a funding programme for safe and secure parking areas based on the Delegated Regulation 1012/2022. It has many similarities with CEF. Therefore, it complements the EU objectives.

Ideas to improve the situation include the following:

- Enhanced coordination between various funding instruments by fostering better alignment between national funding programmes (like Germany's STEP or Italy's and Spain's national

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<sup>130</sup>Programma di sviluppo di aree di sosta e parcheggio sicure e protette (SSTPA) in Italia, 2022: <https://www.ramspa.it/attivita/pianificazione-sviluppo/gestione-linee-intervento>

<sup>131</sup>Plan de Acción de la Dirección General de Carreteras, Spain, 2023.

initiatives) and EU funding programmes, keeping the requirement to adhere to the Delegated Regulation 2022/1012 to ensure consistency with the safety and security standards;

- Simplify the approval process for parking projects to reduce the time from proposal to construction. This could involve setting up a fast-track system for projects meeting specific safety and security benchmarks;
- Launch campaigns aimed at raising awareness among transport operators and drivers about the availability of safe and secure parking facilities, as well as the importance of using them;
- Foster collaboration among EU member states to share successful strategies and solutions for enhancing parking facilities and complying with EU regulations;
- CEF Synergy Promotion - Encourage synergy within the CEF for projects aimed at enhancing SSPAs equipped with alternative fuel infrastructure.

**Data exchange** is seen as a key driver for the detection of potential security hazards and parking-related services. Parking areas with a higher security level can be equipped with hardware and software enabling the detection of unauthorized passengers aboard trucks, license plate data collection, identifying drivers and co-drivers as well as matching trucks and trailers. Such data can be useful for law enforcement or green-lane schemes at borders or in customs zones. The workshop in Belgium highlighted the usefulness of technology to use parking areas as “security hubs” *en route* to international seaports.

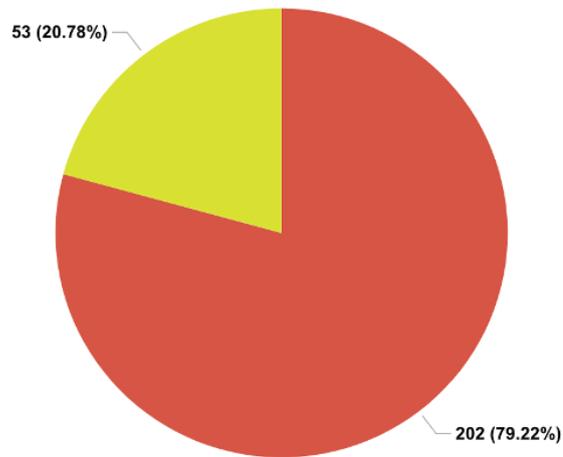
Initiatives such as NAPCORE elaborate the framework for occupancy related dynamic data. Such data should be made available for road users and commercial providers of road information services.

Ideas to improve the situation include the following:

- The creation of neutral trust centres for data collection could speed up the data transmission of parking operators to public authorities, including law enforcement and road authorities, and the market of app and information providers;
- The implementation of the Delegated Regulation 885/2013 in terms of dynamic data sharing by national access points seems urgent. This includes the communication to parking operators about their obligations in this context.

The introduction of **alternative fuels** is a challenge for parking operators. One of the focus areas is on the obligations to install overnight charging points for trucks in line with the AFIR regulation. It must be ensured that the chargers do not diminish the number of parking spaces, that reservation and space monitoring are interfacing with the parking entry and exit system, and that energy provision is ensured at all times.

● No ● Yes



**Figure -Transport Operators: Do you use alternative fuels (hydrogen, electric propulsion)?**

Parking areas should not be disincentivized to obtain a certification under Delegated Regulation 1012/2022 in view of the AFIR's obligation to install overnight charging points. This could be ensured either by public support for the charging and power supply and/or mandatory regulations to become certified.

For long haul drivers there are insufficient hotel accommodations to spend the **regular weekly rest** outside of the cabin. As set out in the recommendations chapter, one possibility could be the creation of a network of trucker motels as in North America. These could accommodate professional drivers at a moderate cost and acceptable level of comfort.

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