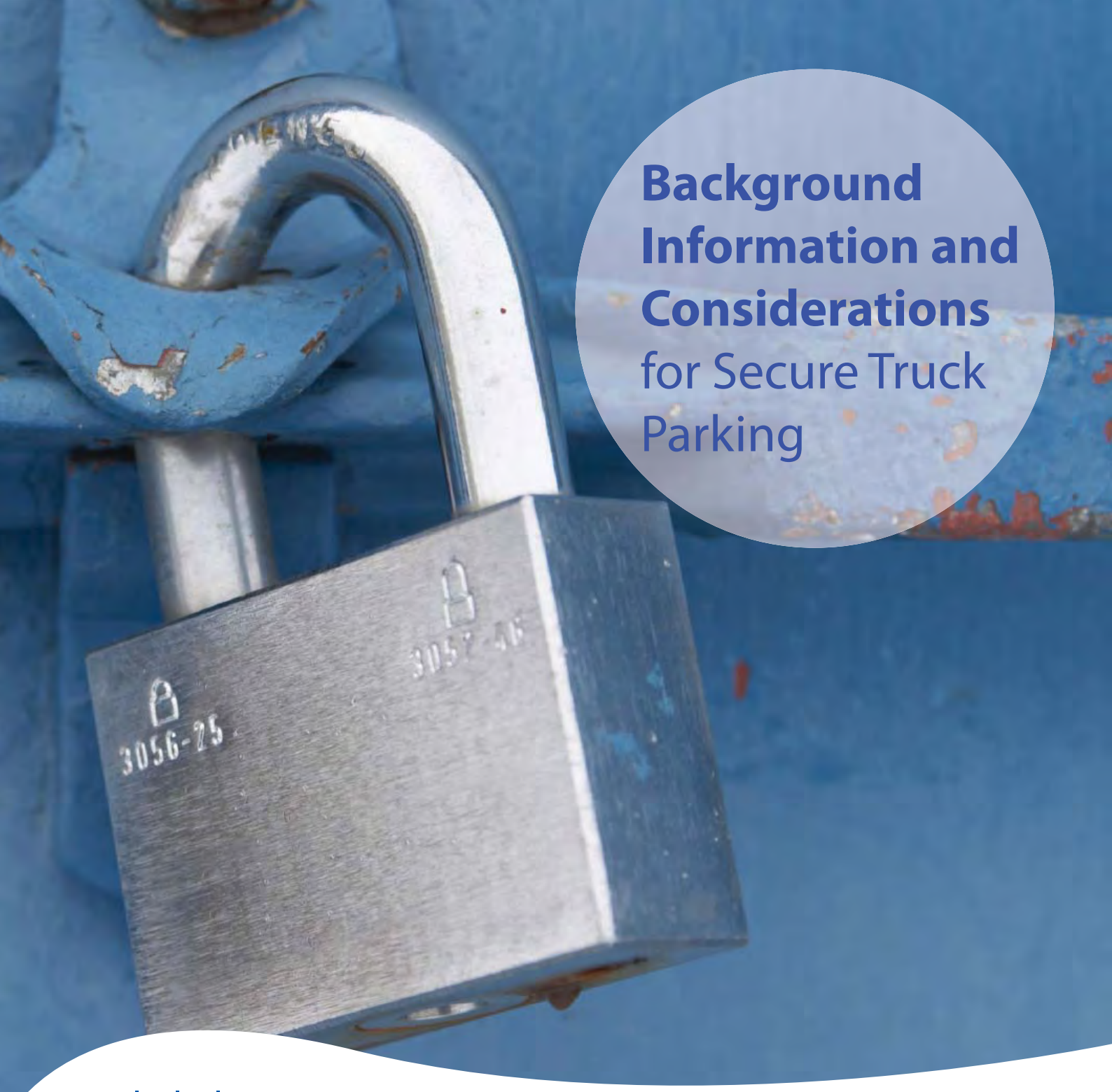

Background Information and Considerations for Secure Truck Parking

Directorate-General for Energy and Transport

EUROPEAN COMMISSION

SETPOS

Authored by the SETPOS Partners
Co-ordinated by

AECOM

Work Package Leader:
GROUPE SAVE

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EXECUTIVE SUMMARY

Executive Summary

This report combines the Final Security Framework and part of the Final Operational and Legal Framework (Deliverable VIII-IX). It forms part of the findings of research undertaken as part of Work Package 2 (WP2) of the SETPOS (Secured European Truck Parking Operational Services) project. The main objectives of the work were to:

- Assess the problem of truck crime and previous research relevant to this project
- Provide an overview of security policies in place for the road transport sector, together with existing truck parking standards and guidelines, and assess their potential relevance to the development of secure truck parking standard, and:
- Explore the broad cost implications of improved truck parking security

The findings from this work will provide the foundation for the development and promotion of the SETPOS secure parking standard.

The Problem of Truck Crime

The theft of cargo and/or freight vehicles causes a loss of more than 8 billion Euros per year for the European economy, but the scale of current actions to address truck crime does not appear to fully reflect the size of this problem. In overall terms, there are insufficient parking spaces available across the European road network, and these shortages are likely to become worse over the next 10 to 20 years. Findings from others suggest that these shortages may be most acute in Southern and Eastern European member states. While there is generally a lack of available statistics on the size and nature of the truck crime problem, truck crime hotpots have been identified in a range of locations, most of which near areas that have high volumes of freight movements, or large population centres.

Policy that targets individual transport corridors is valid in principle, but would have limited practical value in terms of a European wide solution to the truck crime problem. While the idea of defining an optimal truckstop network may have appeal, this would be difficult to achieve in reality due to the lack of available information on truck crime. Background research undertaken for WP 2 highlights the need for improved decision making information to assess the full scale of the truck crime problem, and to monitor the effectiveness of policy making and initiatives like SETPOS. The concept of establishing a peak European wide body on truck crime to unite the efforts of member state initiatives is worthy of further consideration.

Considerations for Developing a Truck Parking Security Standard

A range of international transport and security policies/regulations were reviewed as part of this work, but few appear to have any direct relevance to the development of a secure parking standard.

Issues surrounding insurance may not necessarily have direct relevance to the creation of a standard, but are very important for this project, and for the future. While French insurers have introduced a condition into contracts requiring trucks to be parked in secure premises overnight, other European insurers do not recognise or reward this practice. Formal buy into a security standard by insurers could have an immediate impact in strengthening the market for secure parking areas. In light of this, further work is recommended on this issue.

Inconsistencies surrounding public liability insurance are also important in relation to efforts to improve the provision of secure parking. Legal practice in some countries, such as Germany, appears to place an undue amount of emphasis on the responsibilities of service provides, as opposed to users. There is a need to provide sensible limits on liability, to avoid placing unnecessary cost/risk burdens on site operators.

The policy review revealed a significant amount of variation between member states in relation to how they provide truck parking facilities on motorways. There will always be a mix of funding and planning models in use, and the challenge to SETPOS lies in establishing standards that are broadly relevant and accepted by the majority of member states.

From the outset of this project, it was agreed that SETPOS should build on previous research on truck crime, and not duplicate work completed by others. This is particularly important in relation to the development of the secure parking standard itself.

A range of existing guidelines and standards were reviewed as part of this work. While it is difficult to make direct comparisons between these, most approaches appear to fall into one of two distinct groups. The first type of approach involves a simple, prescriptive based standard which specifies a list of mandatory security measures. This other main approach is less prescriptive, and recognises that local circumstances play a role in determining risk, and the demand for secure parking.

The former approach is pragmatic and can be easily understood by industry, but is not flexible and hence may place a burden on site operators who could be forced to invest in equipment that is not necessary. The latter approach is more flexible and can meet the needs of different sectors of the road freight market, but may require more complicated accreditation procedures.

SETPOS must strike an appropriate balance between these approaches and provide a standard that is simple, readily understood, and meets the general needs of a large number of stakeholders.

Cost Issues

While there is unanimous agreement across industry that there is a need for greater provision of secure parking, but it is worth noting that stakeholders often welcome any positive measure regardless of its cost. There is a low willingness to pay for overnight parking amongst many sections of the industry. Innovative strategies are needed to ensure that secure parking facilities are used appropriately by the industry. When one considers the costs of truck crime on individuals, companies and the economy, increased parking costs are clearly justifiable. Levels of future freight crime and developments in the insurance industry will have a major impact on the level of demand for secure parking areas in the future.

Next Steps

As a result of this work we have developed a more thorough understanding of security measures and procedures needed to develop a secure parking standard. The next step is to further consider the views of stakeholders and develop the SETPOS standard. This work will be undertaken in WP 3, and will aim to answer to the following key questions:

- Which security measures should be included in a secure parking standard?
- How many levels of security will the SETPOS standard need?

INTRODUCTION

1 Introduction

1.1 Purpose of Report

This report combines the Final Security Framework and part of the Final Operational and Legal Framework (Deliverable VIII-IX). It forms part of the findings of research undertaken as part of Work Package 2 (WP2) of the SETPOS (Secured European Truck Parking Operational Services) project. The main objectives of the work were to:

- Assess the problem of truck crime and previous research relevant to this project
- Provide an overview of security policies in place for the road transport sector together with existing truck parking standards and guidelines, and assess their potential relevance to a secure truck parking standard, and
- Explore the broad cost implications of improved truck parking security

The findings from this work are expected to form the foundation of the secure parking standard that will ultimately be developed and promoted as part of the broader aims of the project.

1.2 Defining Security

It is important at the outset to define what is meant by 'security' and to distinguish this from safety, as the terms are often used interchangeably in discussions on truck parking issues. 'Security', as used in this report, relates to criminal acts that may take place in a parking environment. There are many influences on the level and intensity of transport crime, such as anti terrorism laws, national and EU level regulations and directives and supply chains' security and technology. For the purposes of this report we have defined three broad types of criminal acts these are incidents that relate to drivers, vehicles or cargo.

A key objective of this first phase of work is to consider initiatives that are already in place relating to transport, and specifically truck, security. These include:

- Anti-terrorist security,
- Container security,
- Supply chain security
- HGV security

Many of these initiatives rely on the use of specialised technology and formal, well defined procedures. The principal focus of SETPOS is to develop a standard for secure truck parking areas which is relevant across different freight sectors, cargoes and vehicles. While schemes relating to container security and other specific areas are not directly relevant to this project, facets of such schemes may help inform the development of a secure parking standard. Where team members have knowledge of these schemes we have noted their relevance, however it is beyond the scope of this project to look at these in detail. It is nevertheless important to note that co-operation between different players involved in transport security initiatives is important.

In addition to looking at issues surrounding security of cargo and vehicles, which are key concerns to shippers and transport managers, we have also considered how improvements can be made to the security and safety of drivers. As part this initial phase of work, we have gathered views from a wide range of stakeholders, including:

- Drivers
- Forwarders, hauliers
- Shippers or shippers' organisations
- Truck parking operators

- Associations related to truck parking
- Car driver organisations
- Insurance companies
- Security organisations.

Further input and feedback from these stakeholders will be sought though future work stages

1.3 Structure of Document and Terminology

Section 2 of this document assesses the problem of freight truck crime in Europe, while Section 3 discusses considerations with regard to the European transport corridors. Section 4 reviews relevant general security policies for the road transport sector, standards and guidelines previously developed in relation to secure truck parking. Section 5 discusses the common requirements for developing a security standard and the final section summarises the potential cost implications of improved security levels. The table below describes terminology and stakeholders which are referred to throughout this report.

Table 1.1: Commonly used Abbreviations

Abbreviation	Description
AEO	Authorized economic operator
C-TPAT	Customs-Trade Partnership Against Terrorism
Carrier	Synonym to haulier (see 'Haulier').
CEMT	European Conference of Ministers of Transport (see www.cemt.org).
Corridor	Here two types of corridors are meant: 1) General, long distance roads and corridors that are well utilised by freight vehicles. This includes roads which are part of the Trans European Network (TEN) 2) Pan-European transport corridors, as defined at the second Pan-European transport Conference in Crete, March 1994, as routes in Central and Eastern Europe that required major investment over the next ten to fifteen years.
Freight forwarder	A freight forwarder is an individual or company that dispatches shipments via asset based carriers and books or otherwise arranges space for those shipments. Synonymous to haulier (see 'haulier')
GVZ	Güterverkehrszentrum; in English: goods traffic centre
Haulier	A person who owns lorries which carry goods for other people. A haulier employs truck drivers directly. Sometimes commissioning truck drivers who work on their own account / are self-employed. Source: Kernerman English Multilingual Dictionary. K Dictionaries Ltd. http://dictionary.reference.com/browse/haulier (accessed: November 06, 2007).
IRU	International Road Transport Union (see www.iru.org)
ISA	Importer Self-Assessment Program
ISPS	International Ship and Port Facility Security Code
Safety	Safety is the condition of being protected against accidents.

Abbreviation	Description
Secured TPA	Secured Truck Parking Area meaning a TPA where a number of security measures that protect trucks and their load are in place
Security	In general terms security is something that assures safety, i.e. for example measures to prevent crime or accidents. The word "security" in general usage is synonymous with "safety," but as a technical term "security" means that something not only is secure but that it has been secured. In this report “security” is defined as steps taken to prevent criminal intent.
SETPOS	Secured European Truck Parking Operational Services
Shipper	Someone who prepares goods for shipment, by packaging, labelling, and arranging for transit, or who coordinates the transport of goods. A shipper is often the client of freight forwarders or hauliers.
SPA	Secured Parking Area(s)
Truck	Synonym to lorry
Truck drivers	Lorry drivers. Often employed by a haulier (see ‘haulier’)
Truck Parking Area (TPA)	Similar to Parking Rest Areas (these normally in combination with Restaurant/Motel etc). In this document we use the term SPA (see ‘SPA’). Alternative expressions include Truckstop (English), Autohöfe, LKW-Parkplätze (German), Zones de stationnement pour camions (French), Truck Etape (Brand).

PROBLEM ASSESSMENT

2 Problem Assessment

2.1 Introduction

Before commencing more detailed work to develop a secure parking standard, it was considered vital to review research previously undertaken on the topic, both at the European level and by individual member states. The first task of this background work was to assess the extent and nature of road crime across Europe. This section provides an overview of recent research conducted on road crime, considers truck crime 'hot spots' and issues surrounding specific transport corridors on the Trans European Road Network (TERN). The implications of these issues to SETPOS are then considered before relevant policies and guidelines are reviewed in the next section.

2.2 The Extent of Road Freight Crime

Roads are used to transport the majority of freight in the European Union. Approximately 72% of the total land-based transport of goods is by road. The significance of road freight transport for the economy of the EU is obvious. Each day goods worth many billions of Euros are transported on the Trans European Road Network (TERN).

Despite the scale of road freight activity in the EU and its importance to the economy, there are few official statistics available to verify, in full, the size and nature of criminal threat against drivers, vehicles and goods. This has occurred not only because the relevant data is missing; but also because information about truck crime is not easily comparable between member states.

The most significant recent work undertaken on truck crime was a research project by Dutch consulting group NEA (NEA Transportonderzoek- en opleiding B.V) entitled 'Study on the feasibility of organising a network of secured parking areas for road transport operators on the Trans European Road Network.' This work reviewed a large number of European information sources for statistics on truck crime. A number of problems with existing information were found. For instance, it was found that many statistics did not differentiate between cars, vans and trucks. Other statistics concerned 'freight crime' in general, while others differentiated between crime against drivers and crime against cargo.

The NEA study was mostly concerned with freight crime along the Trans European Road Network which makes it highly relevant to this project. As part of the study, a questionnaire was sent to representatives of the road freight industry across Europe. After filtering data to remove information relating to cars and vans, high level truck crime statistics were then reported for seven EU member states. The figures are shown in Table 2.1 and represent numbers of thefts of commercial trucks heavier than 3.5 tons.

Table 2.1: Commercial Vehicle Theft in Various Countries (theft of trucks > 3.5 tons) (Source: NEA feasibility study p. 26)

	1999	2003	2004	2005
Belgium		236	269	
Czech republic			76	84
Germany			1930	2012
Netherlands	352	349	368	319
Slovenia	150	46	68	68
Sweden		204	258	
United Kingdom			2237	2092

The NEA study concluded that it was difficult to extract a trend from such a limited data set, however when looking at theft levels in the early 1990s reported in a study by the ECMT, there appeared to be an increase in levels of vehicle thefts over the previous five years. It is important to note however, in this period that the overall volume of goods transported increased, and hence the authors concluded that it was doubtful that vehicle thefts had increased in real terms.

It was also argued that lack of information and comparability issues mean that truck crime statistics do not meet the needs of transport policy makers and should be improved. It is worth noting that similar arguments have been made in other truck crime initiatives such as the Danish Manual on secure truck parking.

The most precise and reliable data regarding transport crime appear to be from sources which deal with specific geographical areas or monitor specific sectors.

In the United Kingdom, the number of incidents reported to TruckPol, a specialised police task force set up to reduce truck crime, increased from 3,117 in 2005 to 3,423 in 2006 (NB, not all police authorities in the UK report to TruckPol). Similarly, the number of hijacks increased by 50% from 86 in 2005 to 129 in 2006. TruckPol has reported that the average loss per truck crime incident in the UK is EUR 46,362.

Another study undertaken by NEA entitled “Organised theft of commercial vehicles and their loads in the European Union” is also highly relevant to this project. This work analysed the TAPA EMEA IIS database in an attempt to understand more about freight crime. The study found that incidents of truck crime occur in five different types of locations, as shown below in Table 2.2.

Table 2.2: Origin of Freight Crime from 2003 to 2006 (Source: NEA “Organised theft of commercial vehicles and their loads in the European Union” p. 20).

Location	Share (%)
En route	41
Secure parking	4
Non secure parking	27
Facilities	28
Total (%)	100
Total (abs)	1359

According to this source 27% of all thefts occurred in non-secured parking areas. It is somewhat concerning that 4% of all theft occurred in secured parking. It is not specified what was understood by 'secure'; however, it from this information it appears that security measures cannot prevent theft totally. 'Facilities' referred to 'mode shift facilities' or a shipper/receivers facility at the origin or destination of a journey.

2.3 Factors in Road Freight Crime

2.3.1 Organised crime groups

Theft of loads and vehicles is highly disruptive to the economy and is frequently committed by organised criminals, who are likely to be involved in other serious crimes such as commercial burglary, tobacco and alcohol smuggling, importation of firearms, VAT evasion, money laundering and terrorism.

An intelligence assessment published by the UK's National Criminal Intelligence Service in 2005 described organised theft from commercial vehicles in the following terms:

'Road freight crime is a highly lucrative, low risk criminal enterprise. Where exact load values have been reported total losses amounted to £74 million in 2004. In addition to the value of the stolen loads millions of pounds of tax revenue is lost to the UK each year.'

Other research and comments from industry stakeholders suggests that crime tends to be well organised and planned by structured groups which often have well defined internal roles (e.g. scouts, drivers and receivers). Such groups often possess customised tools to assist in the theft and are experienced in the operation of large goods vehicles.

The use of violence to obtain high value loads may be on the increase[1]. A number of armed robberies can turn into kidnap situations when drivers are taken hostage by organised crime groups. Foreign drivers are particularly vulnerable targets because they are often unfamiliar with the risks present in other countries; and also because it is often very difficult to track criminals and traces load between different EU member states. Moreover, foreign registered drivers are unlikely to return to the country in question to give evidence in court. Organised crime gangs are aware of all of these issues and will exploit the opportunities they present.[2]

Europol's Organised Crime Threat Assessment 2006 states that these groups are specialised and dynamic, possess international dimensions and group structures, and use legitimate business structures such as internet based distribution channels (e.g. E-Bay). Europol has stated that international obstacles must be overcome to tackle organised crime groups because of their international dimension and their wider impacts on society and the European economy.

2.3.2 The threat of terrorism

Vehicle borne explosives and chemical devices are commonly used by terror groups, and this cannot possibly be ignored by the security authorities. A number of well publicised incidents have occurred in recent years, such as the IRA in the City of London and most recently the use in Iraq by insurgents provides evidence of this.

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[1] TruckPol reports 129 hijacks and attempted hijacks in 2006 and 60 similar crimes in the first 3 quarters of 2007. This data does not detail the number involving kidnap. TruckPol quarterly report for July-Sept. 2007 and TruckPol annual report for 2006.

[2] TruckPol does not distinguish for incidents involving foreign drivers, though. Since it is accepted that, on a pan-European basis the scale of freight crime is unknown, similarly there is no breakdown into the number of foreign driver/victims.

Vehicles carrying hazardous materials such as petrol tankers are judged to be those most at risk from terrorist organisations. Therefore recommendations relating to the policing and safe parking of such vehicles will assist with counter terrorism strategy. This currently forms part of UK's Special Branch counter terrorism strategy.

2.3.3 Risk levels

The risk of truck crime varies across the EU depending on the general stability and overall crime levels within specific member states. Other contributing factors include security measures, the relative jurisdiction of policing authorities, options for and levels of police activity; the quality of intelligence about criminal activities, the value of loads and the volume of traffic.

The risk of truck crime is strongly related to the actual amount of road freight transport in a certain region. This means in principle that the central countries of Europe are exposed to relatively high levels of risk because so much freight moves through these areas. Additionally areas with deep sea ports, airports, major motorway networks and areas of substantial population density are also prone to risk. A dense road network with a large number of escape routes can also increase the risk of truck crime.

While there is generally a lack of available data on truck crime, incidents reported from 2003 to 2006 suggest a substantial percentage of attacks occur at parking areas. While relatively few issues occur at secure parking areas; more than a quarter of all thefts are reported to occur at non-secure parking areas. 'A load at rest is a load at risk' would appear to be a reasonable maxim for shippers and others to consider given available information. Improved provision of secure parking areas could therefore have a significant impact on improving the safety of loads and drivers.

2.3.4 Truck crime intelligence

The lack of hard data on truck crime tends to invite speculation about its causes. Police, transport operators, insurers and policymakers differ in their views on crime trends related to road freight transport.

What cannot be disputed however is the fact that road freight crime has a very large impact on the European economy. Estimates suggest that truck crime currently costs EUR 8.2 billion per annum, before other costs are included. TAPA EMEA informally estimate that a further 60% of on-costs can be added to the value of the theft of vehicle/load.

Lack of data makes it very difficult at present to distinguish separate trends in organised and non-organised crime. Comments from some stakeholders suggest that levels of organised crime may be increasing whilst general crime levels are not, although there are no statistics which prove this. In the UK, a recent threat assessment concluded that 'a significant amount of road freight crime can be attributed to highly organised crime groups, with established criminal networks'.[3]

[3] National Crime Intelligence Service (NCIS) in 2005 suggested that, curtain slashing attacks – traditionally viewed as an opportunistic crime, are becoming more organised. National Crime Intelligence Service report 'The Threat to the United Kingdom from Road Freight Crime' published in March 2005. Criminals undertaking 'jump-up' thefts (curtain slashing) operate in teams of up to 15 at hot spot motorway service areas and lorry parks. Although this is a more

If this trend is correct, it could, to some extent, explain the gap between perceived and actual risks. Whilst total crime levels may not be increasing, the seriousness of the crimes could be. Yet, given the lack of data, this cannot be verified. Improvements in data collection should be made to generate improved understanding of the current causes of truck crime and how these may change in the future.

2.4 Comments from Information Review

It is not possible to present a complete picture of the size and shape of road freight crime across Europe, nor is it possible to accurately identify trends, or understand current levels of organised crime as opposed to opportunist crime.

However, what information is available suggests that there is merit in taking action to reduce crime which occurs when vehicles are parked. Almost one third of road freight crime has been estimated to take place at non-secured truck parking areas. Increased provision of secure parking and rest areas, which conform to recognised standards, has the potential to significantly alleviate this problem.

2.5 Stakeholder views on Transport Crime

In addition to the desk based research described above, views were sought from a range of stakeholders across the EU. The following carriers, insurers and motorways companies were contacted as part of this initial phase of research. While it was not possible to speak to stakeholders in each EU member state, we focused on countries accounting for a large volume of freight movements and occupying important strategic locations on the TERN. It is important to note that information expressed in this section represents the views of those interviewed and may not necessarily be supported by statistics or reflect the opinions of all stakeholders in the freight industry. A summary of stakeholder comments and views is provided in the subsections overleaf.

opportunistic mode of theft, criminals are very resourceful and employ tactics to evade detection from law enforcement.

Table 2.3: Key Stakeholders Interviewed During Background Research.

	Insurers	Hauliers	Motorway companies
France	- AXA - Groupama Transport - AGF	- FM Logistic - Syndicats des transports routiers - THM - Transports Graveleau - AFTRI - Gondrant transport	- ASF - Cofiroute - Escota - SAPN
Germany	- Barth August und Co - Giffey O. KG Versicherungsmakler - AXA Konzern	- Fédération allemande des transporteurs routiers de marchandise - Day and Night - HZ Logistics - Hitachi Transport System - DHL Freight	- N/A - This type of company does not exist in Germany
Belgium	- BDM NV - AGF Belgium Insurance - AXA Belgium	- DCRL - Tradova - TDS - Graveleau	- N/A - This type of company does not exist in Belgium
Great-Britain	- AXA - AON - Allianz - Groupama - Marsh	- Dodd's Group - Freightline International Ltd - Arrow - T World Shipping Ltd	- ND Scott
Italy	- Italiana Assicurazioni - Assicurazioni Generali - Groupama Assicurazioni	- Eurotir - Jerich It. - Giordano Alberto - Trasmar - Mectrans - Bonarde trasporti	- Societe autostrada Tirrenica - Autostrade centro Padane - Autostrada per l'Italia - Autostrada dell Brennero

2.5.1 Problem assessment of crimes on Pan-European roads

Stakeholder comments suggested that levels of truck crime have worsened significantly since the 1980s. According to insurers, in 2004, 269 instances of cargo theft were reported in Belgium, while in Germany and in Great Britain, 1930 and 2237 cases were reported respectively. In France a 35% increase of cargo thefts was recorded between 1997 and 2003. During this period, the number of incidents reported to the OCLDI (Office Central de Lutte contre la Délinquance Itinérante, a central government office in charge of fighting crime) also increased. Despite these reported trends, time series data are not readily available for the majority of EU member states, hence it is difficult to know how overall crime levels have changed over time.

The following sections review in detail the situation in Germany, Belgium, France, Great-Britain and Italy according to interviewed stakeholders.

2.5.2 Germany

German motorways have a strategic importance because they effectively link the Eastern and Western parts of Europe. The German road network is therefore frequented heavily by vehicles from international countries and with many types of goods (dangerous, sensitive and general goods which are not defined as sensitive goods or which have a high added value).

With manufacturing being increasingly outsourced to Eastern European countries, Germany's status as a through route for road freight traffic is becoming increasingly important, a fact illustrated by the introduction of a road pricing scheme for trucks which was developed in part to ensure foreign vehicles more effectively pay for their use of the local network.

The German organisation ADAC (Allgemeiner Deutscher Automobil-Club) considers that there is a shortage of about 9,000 parking spaces along German motorways. While truck crime problems in Germany, like most countries, are serious, anecdotal evidence suggests that the criminality rate in this country is fairly low considering the heavy usage of these parking areas. Countries generally considered to be the most dangerous by the many police authorities and insurance companies (e.g. Italy, Greece and France), have lower numbers of truck movements compared to Germany. This suggests that there is unlikely to be a direct relationship between motorway usage and criminality rate, and that truck crime is driven by other factors.

In Germany, there are no specific legal requirements with regards to security, aside from the need to have permanent lighting. The authorities recommend a video surveillance system, however this is not mandatory.

Some areas most exposed to transport crimes in Germany are as follows (these places are in general situated on major roads of transfer of goods and logistics flux).

- Aachen
- Trier
- Hamburg
- Mannheim
- Nürnberg
- Solingen

2.5.3 Belgium

More than 40% of the Belgian hauliers questioned by the project team commented that transport crime is not very important in their country; and that they do not really feel concerned or affected by the security issues.

Others however, suggested that the truck crime has become more and more of a serious problem and have heightened their desire to address it. Police have reported particular problems with organised crime and thefts of complete loads. In the opinion of these stakeholders, the construction of Secure Parking Areas is an appropriate solution for the EC to peruse.

Where hauliers did report problems, they generally suggested these were worst in routes between key industrial centres and ports, such as Antwerpen. The areas rated as most exposed to transport crimes by the interviewer in Belgium were as follows:

- Braine le château
- Rumst
- Brussels
- Antwerpen

- Hazeldonk
- Mons
- Zeebrugge

2.5.4 France

In France thefts of goods are reported as very frequent. More and more thefts are being reported in France, and it is likely that official statistics under report the issue, thefts are generally not reported if goods are not insured or the value of the theft is below the excess levels for insurance premiums.

The major risk relates to opportunist attacks organised when drivers stop their trucks on motorways. According to French insurers questioned within the framework of this survey, theft with violence on lorry-drivers is becoming an increasing problem. This type of crime can result in drivers being absent from work due to physical or psychological disorders. As a result there have been reports of drivers refusing to transport certain high value merchandise such as mobile phones.

Moreover, the value of loads stolen appears to be increasing. France is increasingly confronted with thefts of complete containers. A theft of a container containing spirits typically represents between 200,000 and 400,000 Euros while a theft of mobile phones represents between 800,000 and 10,000,000 Euros. In many cases it is being reported that complete loads are being stolen.

While it has become apparent that those vehicles are better and better equipped to prevent theft, the driver is still considered a vulnerable link in the safety chain. Consequently, there is a need to find better ways to protect drivers from the different risks they are confronted with.
Some areas most exposed to transport crimes in France are shown below. These are generally areas situated near major roads, industrial estates and logistics warehouses used for storing high value goods such as spirits, mobile phones, multimedia products, cosmetics and perfumes:

- Strasbourg
- Le Plessis Belleville
- Soissons
- Vitrolle
- Paris
- Avignon
- Lille
- Bordeaux
- Dunkerque
- Lyon

A study was performed by the OCLDI (Office Central de Lutte contre la Délinquance Itinérante) regarding freight thefts counted by the French gendarmerie:

In 2006, freight thefts listed by the OCLDI represented 2545 facts, that is to say 16% more than in 2005. These thefts are principally made by breaking and entering on truck stops or rest areas situated on all major roads. Electronic materials (hi-fi, television…) represented the biggest volume of targeted goods.

2.5.5 Great Britain

In Great-Britain the number of attacks on lorries are reported by stakeholders as being on the increase, although it is important to note that statistics on crimes are not comprehensive. It is generally felt that thefts of loads are increasing while driver attacks have remained relatively steady. In the first three quarters of 2007, attacks on lorries rose steadily from 460 to 576.
Metals theft has risen from 11% to 20% of all loads. Hijacks increased from 89 in 2005 to 129 in 2006 reflecting a rise of 50%.[4]

According to British insurers questioned within the framework of the SETPOS project, security problems and truck crimes are increasing problems within Great Britain and the government has not undertaken adequate initiatives to fight the problem. Stakeholders suggested that truck crime is often not followed up vigorously by local Police, main because there is only a very low probability of ever recovering stolen goods.

Stakeholders made a distinction between organized crime and opportunist crime, and it was felt that organised crime attacks, even if they are a minority, are responsible for most of the overall value of truck crime. This organized crime generally involves the theft of complete loads as opposed to opportunist crime attacks. Stakeholders felt that that the installation of lorry surveillance systems on Secure Parking Areas (SPA) would be the cheapest solution for dealing with truck crime. The areas reported as being most exposed to transport crimes in Great Britain were as follows:

- Birmingham
- Manchester
- Erskine
- Accrington
- Wolverhampton
- London
- Basildon
- Coventry

A large part of the British hauliers who were questioned think that Secure Parking Areas will be efficient only if security levels are established to a high level (see TAPA study discussed on page 11 for further details).

2.5.6 Italy

The problem of theft from lorries is considered to be a major issue in Italy. Thefts occurring in secured parking areas are regarded as the main problem on the Italian network. Italian authorities are reported as being concerned by security problems and thefts on motorways are also frequent in addition to thefts of goods on truck stop areas. This means that the incidence levels are high and that most theft takes place from secured parking areas as opposed to any other area.

The Italian network is equipped with parking areas which are secured to different levels (SPAs in Italy are identified as well as their particularities: fences, guards…). That is to say that In Italy some truckstops are secure like Beziers Truckstop in France, and Uhrsleben in Germany. Other truckstops are only equipped with lighting and fences, and tend not to be officially recognised. These types of facilities are situated all along major motorways. Local authorities tend to bear the cost associated with these kinds of parking areas and for this reason there is a heightened

[4] Cf. TruckPol quarterly report for July-Sept. 2007 (which also carries data from the previous two quarters) and the TruckPol annual report for 2006. These are available from www.truckpol.com/downloads

interest in improving law enforcement in such areas. The following areas were considered the most exposed to transport crimes in Italy:

- Milan
- Naples
- Pescara
- Rome
- Turin
- Brescia
- Verona

2.5.7 Views Expressed by European Hauliers

Hauliers from France, Italy and Great Britain felt that the greatest security problems related to the potential for theft of cargo, and it was suggested that these problems have become worse over time. Some French hauliers commented that there have been large increases in violent thefts, while hauliers in Great Britain felt that opportunist and organized thefts by professional groups were becoming more frequent.

Comments from stakeholders in Belgium and Germany suggest that while they are aware of truck crime issues, they are, on the whole, less concerned than stakeholders in other countries such as Great-Britain or France. Stakeholders felt that in general, Belgium and Germany are more proactive in taking action to prevent truck crime than other countries because of the large volumes of traffic of freight traffic using their networks as through routes to and from countries in Eastern Europe.

These views are consistent with those provided by insurance companies, who reported that France, United Kingdom and Italy are the highest risk countries for truck crime. Insurance claims in these countries have been reported to represent as much as 60% of insurers' expenses.

2.5.8 Operational practices currently used as alternatives to designated truck parks

Many hauliers across Europe park vehicles at their own premises. Such sites have a number of major advantages over non designated parking areas, most notably they are generally secured (well fenced and have video surveillance), and are situated in locations near the origins and destinations of many trips. While there may be a useful role for own premise parking, this will only ever have limited application because drivers would often be compelled to leave major roads / motorways to reach many premises. Furthermore, many freight and logistics companies would be naturally reluctant to open up their premises to third parties, particularly companies they have not had previous dealings with. Sites may also not be well equipped to cater to the needs of drivers or to deal with large volumes of vehicles.

Other systems are also exploited by companies such as "uncouple-couple" systems, generally referred to as "trailer dropping". This system requires two tractor units and two drivers to tow a single trailer in stages, or swap trailers mid way through a trip. When used in appropriate situations this can reduce or negate the need for drivers to take overnight breaks. However this can be expensive and can only be organised when base depots and/or customer premises are in suitable locations.

Another alternative sometimes adopted by hauliers is to use two truck drivers to make a nonstop trip over distance that a single driver could not achieve without taking overnight rest. This practice is often used Belgium and Germany, but is generally too expensive for most companies. The problem of driver shortages means this practice is unlikely to be economically feasible for the vast majority of transport operators both now and into the future. In addition

drivers generally have poorer quality rest when taking sleeping breaks in a moving vehicle as opposed to a stationary one.

There appears to have been an increasing move to equip trucks with new security technologies such as GPS which enable authorities to trace the vehicle if it is stolen. Compared to the value of a lost load, these systems are typically inexpensive, however insurers are not fully convinced of their ability to reduce risk because criminals often have a good understanding of the systems and can deactivate them. More information on this issue can be found in research undertaken by Johnston, Roger G. Research on Improving Cargo Security as presented at the North American Cargo Security Forum in 2006.[5]

2.5.9 The concept of secured truck parking areas

The concept of a secure truckstop has developed in response to problems previously discussed. Security problems have only become a major issue for freight companies over the past two decades, and before this period, secure parking areas generally did not exist. The hauliers contacted in this phase of work suggested the need for better policies and regulations to increase the provision of secure parking areas. SPA appear to be an important solution to the problem of truck crime, but there is obviously a large cost associated with providing such services, driver and company willingness to pay varies by sector and country.

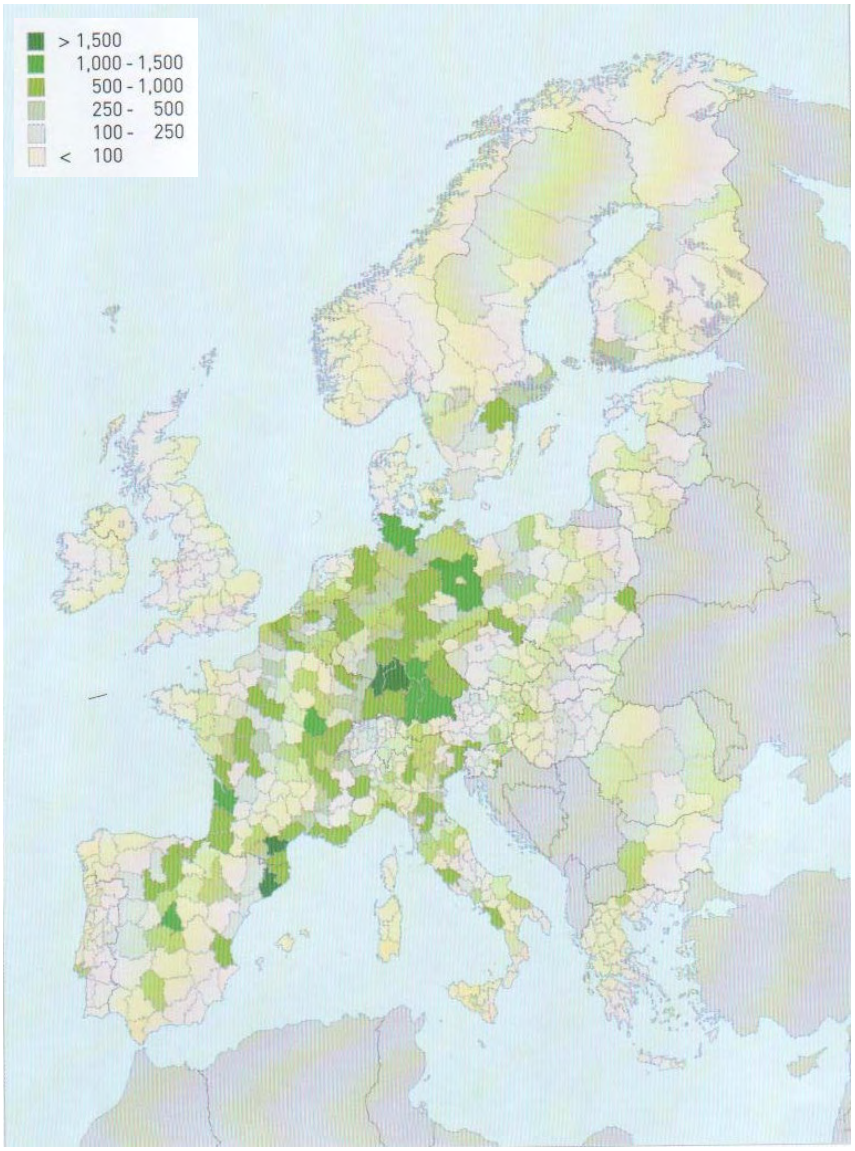
2.6 Parking Demand Across Europe

To following section provides an overview of demand for non-secure and secure parking across the EU, based on research previously conducted by NEA (Source Martin Quispel et al. Freight flows in an enlarging Europe: From Facts to Visuals. Rijswijk, October 2006). Maps from this work have been reproduced to provide a visual representation of present and future levels of demand.

[5] The most common methods are blocking (breaking off or shielding the antenna), jamming (building in a noisy radio frequency transmitter) or spoofing (using widely available GPS satellite simulators).

As shown in Figure 2.1, in 2002 the highest levels of demand were experienced in the Hessen/Rheinland-Pfalz region, the South of France and North Eastern Spain. Other notable areas of high demand included the Bavaria and Brandenburg and Schleswig-Holstein regions in Germany, and the area around Madrid in Spain.

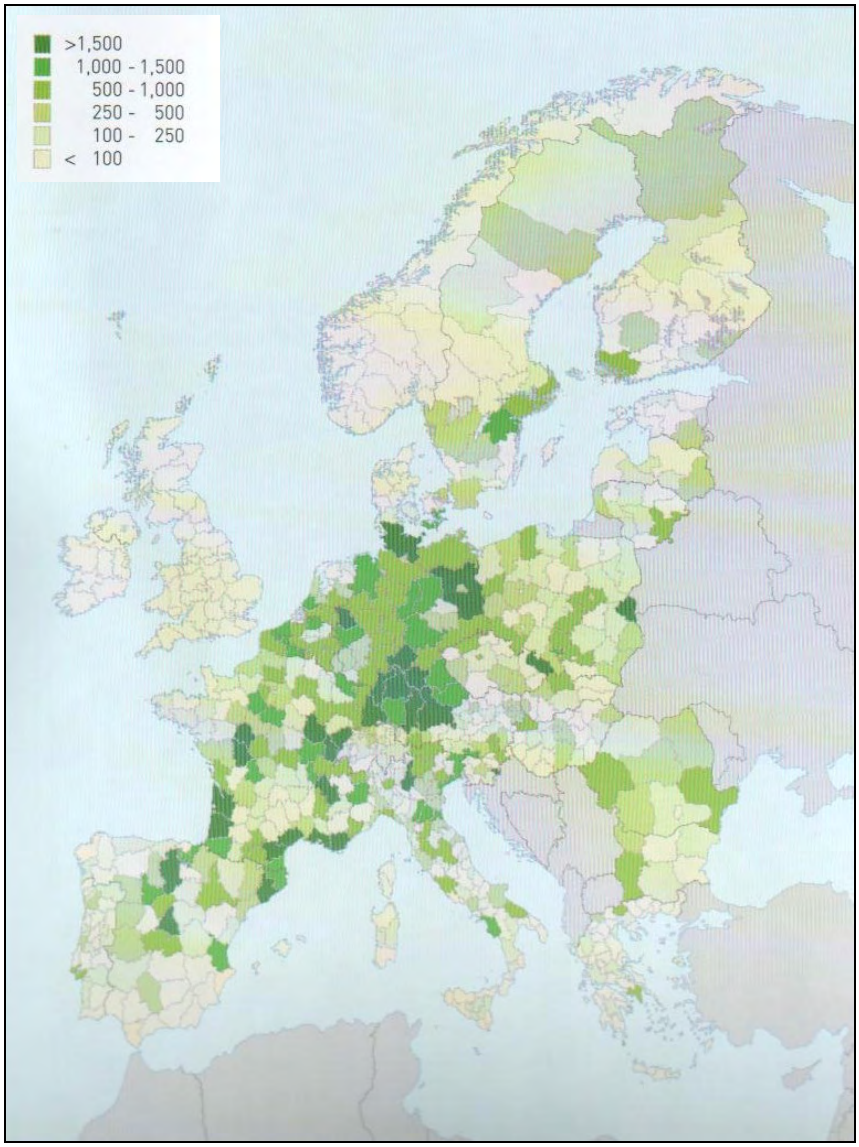
Figure 2.1: Demand for Parking Areas in 2002 – Number of parking slots[6].



[6] From NEA 'Freight Flows in an Enlarging Europe, p. 53

Figure 2.2 shows parking demand estimates for 2020. The highest levels of demand are forecast for South East Germany, Schleswig-Holstein, and areas in Germany which are close to the Polish border. Other notable areas include the South West and South East of France, the regions around Paris and Madrid, the Eastern most part of the Czech Republic, and the Southern region of Poland near the border of the Republic of Belarus.

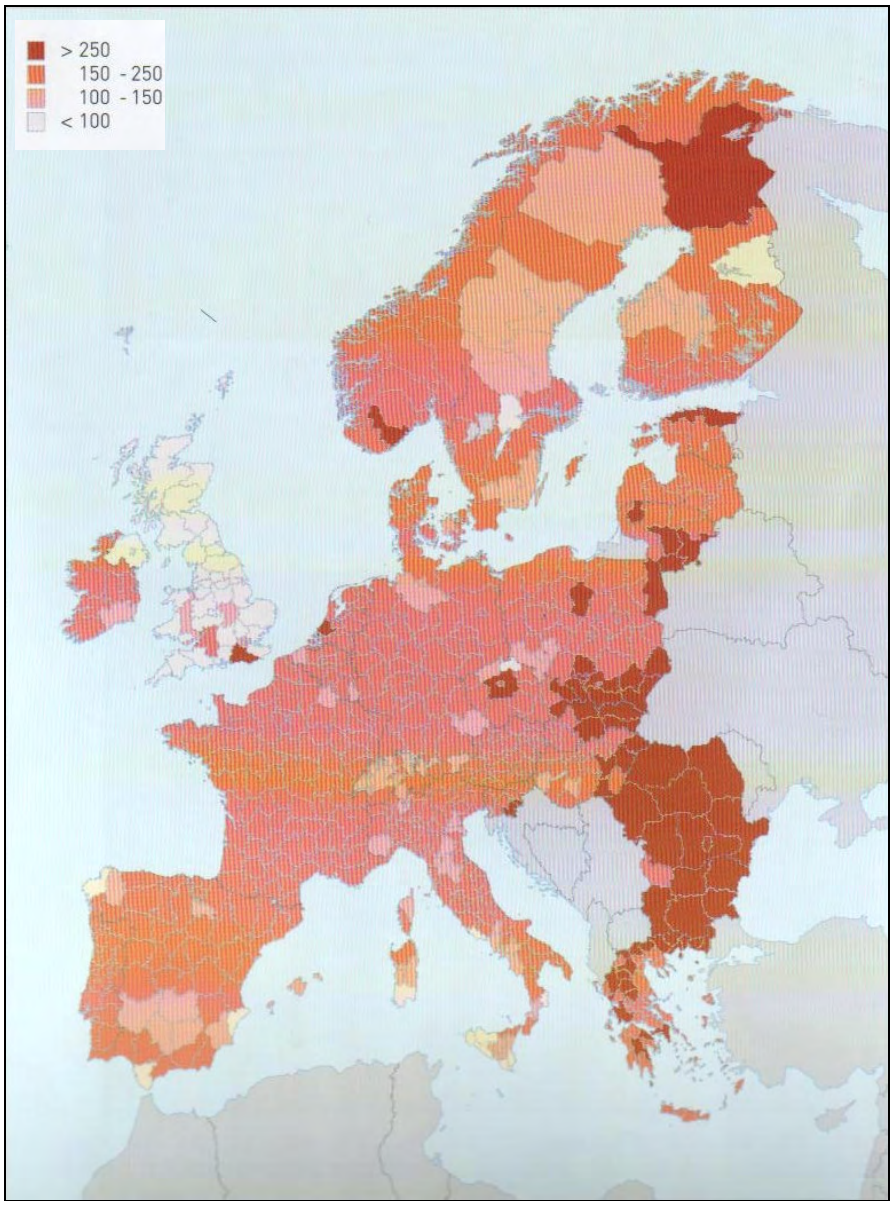
Figure 2.2: Total Demand for Parking Areas in 2020 – Number of parking slots[7]



[7] From NEA 'Freight Flows in an Enlarging Europe, p. 54

Figure 2.3 shows a parking 'demand index', highlighting those regions that will have the greatest total demand for parking (as shown by the dark shaded areas). According to NEA, many secured areas will be required in Eastern European countries such as Estonia, Lithuania, Southern and Eastern Poland, Slovakia, Romania, Bulgaria. Parts of Greece are also expected to require an increase in secure parking facilities. Further provision is also likely to be needed to a number of areas in Northern Europe, such as the Ashford area/Channel Tunnel gateway in the UK, and the areas around Rotterdam in the Netherlands, and Arendal in Sweden.

Figure 2.3: Demand Index for Secure Parking Areas 2004 – 2020[8]



[8] From NEA 'Freight Flows in an Enlarging Europe', p. 55.

2.7 Truck Crime 'Hotspots'

In 2006, representatives each from TAPA and FFI developed a list of truck crime 'hotspots' requiring an improved provision of secure parking areas. Table 2.4 below lists the 20 areas most in need of improvements. A comparison of these sites to a more extensive list developed by NEA is shown in Appendix A.

Table 2.4: Parking Hot Spots Identified by TAPA and FFI[9]

Ranking	Country	Region
1	France	North of Paris
2	Netherlands	Venlo and Eindhoven
3	Great Britain	South East of London
4	Spain	Barcelona
5	Germany	Mannheim area
6	Belgium	Brussels area
7	France	Avignon
8	Italy	South West of Milano
9	Great Britain	South East of Birmingham
10	Spain	Madrid
11	Germany	South West of Hamburg
12	France	North of Lille
13	Spain	North of Malmo
14	Poland	Poznan
15	Germany	Nurnberg
16	Italy	Verona
17	France	Bordeaux
18	Lithuania	Kaunas
19	Hungary	Gyor
20	Austria	St. Poelten

[9] Document provided to authors by TAPA/FFI

2.8 Agencies Providing Information and Raising Awareness in the Freight Sector

There are a number of organisations throughout Europe that provide information about freight crime trends and assist companies to report incidents. Several of these agencies are also active in trying to raise driver awareness of the potential for attacks and theft. Brief overviews of key organisations are shown overleaf.

2.8.1 Eurowatch

Eurowatch is a multi-country service that addresses crime against vehicles and freight throughout Europe. It provides information on crime in different countries and helps drivers contact the police when a crime occurs abroad. They provide 24-hour access to police and emergency services and also provide drivers and owners with a single telephone number to call in emergencies.

Eurowatch's coverage extends to western, central and eastern Europe and parts of the Russian Federation. The number of countries covered by the service is 40 (including Andorra, Liechtenstein, and Monaco, which are represented by neighbouring countries) Eurowatch has a track record of locating and recovering stolen vehicles and shipments and, where possible, assisting police to arrest perpetrators. This record is particularly strong for crimes that cross national borders where criminals often have an advantage over the police.

The Eurowatch service works through a network of National Service Providers that have accreditation to police in each country. They use the technology of the service and its standard procedures for incidents. A key feature of Eurowatch is that it enables all types of GPS system to transmit positioning data into the network, which is then relayed to the police in the country of incident. This allows police to view the vehicle position in real-time during the emergency.

A summary of their services can be seen below:

- 24-hour access to police around the world
- A single telephone number to call
- All national languages spoken
- Supports any GPS tracking system
- Gives police tracking data in real-time

For more details, see www.eurowatchcentral.com (accessed on 4th Feb 2009)

2.8.1.1 TruckWatch

TruckWatch is an example of a partnership between the police, a charity and the freight sector operating in the north of England - The charity People United Against Crime acts as the facilitator for TruckWatch bringing together the freight sector, the police and representative bodies such as the Road Haulage Association.

The aims of TruckWatch are to:

- Reduce the number of freight crime incidents taking place in the Yorkshire and Humber region
- Maintain an effective communication network for TruckWatch members
- Introduce a range of complementary crime reduction measures which address the wider security issues faced by the freight transport sector
- Achieve a collaborative crime reduction initiative, which is self-sustaining.

TruckWatch is a membership scheme and includes not only small and medium sized local companies but also national companies and local authorities with large fleets of vehicles. A key activity of TruckWatch is to notify member drivers about stolen vehicles and their loads following a call to the police. Drivers are offered rewards for information received, which leads to the recovery of property and arrests.

Because of its nature, freight crime is borderless. A vehicle or load stolen in West Yorkshire might be driven to Merseyside or the West Midlands for distribution of the load or disposal of the vehicle. The extended coverage provided by a regional TruckWatch means there is a much wider network of members and a greater chance of members spotting travelling criminals whilst they are in the region.

Police play a vital role in providing the operators of TruckWatch with current statistics, hot spots and the latest criminal modus operandi. TruckWatch aims to assist the membership to prevent and deter freight crime by making hauliers and drivers more aware of the threats in the region in which it operates.

For more details, see www.truckwatch.org (accessed on 4th Feb 2009)

2.8.1.2 TruckPol

TruckPol is a police intelligence gathering body operating in the UK. In 2006 TruckPol reported that the average loss per truck crime incident was valued at €46,362 (heavily qualified by discrepancies in trade/retail value to hauliers, shippers and insurers).

The aim of TruckPol is to bring together representatives from the police, government and industry, particularly haulage, logistics, shipping, insurance and manufacturing, to share data and intelligence on current criminal activity, highlighting emerging trends and 'hot spot' areas to make the freight transportation and logistics industry a safer place within which to work. TruckPol is the only national unit of its kind which can provide a strategic overview, reporting back on the nature and extent of the problem through the Home Office Vehicle Crime Reduction Section, Serious Organised Crime Agency (SOCA) and Association of Chief Police Officers (ACPO).
TruckPol also maps incidents, which indicates the level of activity across the country. As a result of this work they have found that they following regions in UK suffering the most from freight crime:

- London
- South East
- West Midlands
- East Midlands
- Yorkshire and the Humber
- North West

The TruckPol website provides quarterly reports on truck crime and the initiative forms part of the ACPO (Association of Chief Police Officers) Vehicle Crime Intelligence Service (AVCIS), based at the Centex site, Ryton on Dunsmore, Warwickshire For more details see:

www.westmidlandspolice.uk/TruckPol/
www.TruckPol.com (accessed on 12 Dec 2007)

2.8.1.3 Cost implications for Policing and society

As pointed out previously, it is virtually impossible to assess on a pan-European basis, the true costs of freight crime. This is because not all authorities record the value of the losses incurred or provide full detail about the nature of the incidents. Thus obtaining a comprehensive picture is not currently possible.

In terms of police statistics freight crime also suffers from the difficulty of not being 'high volume crime' in other words, when compared to other types of crime the number of incidents is comparatively low. And experience shows that the police service is generally under pressure to reduce the types of crime which are committed frequently and are considered 'high volume'. This is compounded by a view from some agencies that crime against businesses is 'victimless' and therefore not of the same priority as crime against the citizen.

Despite being comparatively low in terms of volume, freight crime is highly disruptive to the smooth operation of a borderless Europe. It has significant 'knock-on' effects and undoubtedly damages the European economy. So, it is not unreasonable to characterise freight crime as 'low volume – high value' crime. It is also worth noting that freight crime tends to be carried out by organised crime groups and there is evidence that these 'professional criminals' are involved in a wide range of other criminal activity including drug smuggling, people trafficking and money laundering.

Notwithstanding the various difficulties outlined above in attempting to measure the cost implications of freight crime, it is possible to get a 'snapshot' view of the problem through the work of the 'ACPO Vehicle Crime Intelligence Service' (AVCIS) in the UK. AVCIS operates a specialist service - TruckPol, which monitors and tracks freight crime in the UK including the types of incidents, value of loads and the types of property being targeted.

Although this report only considers the experience in the UK it is possible to use the data as a case study and to extrapolate from that, the picture in the rest of Europe. The statistics and costs quoted below are drawn from the TruckPol quarterly report for January – March 2008 and as such are reasonably current and up-to-date. It should be noted that, with regard to the accuracy of their statistics TruckPol issues the following caveats.

- On freight crime volumes:

'Our reports are not a definitive list of all road freight crime as not all crime is reported to the police and not all police forces report all crime to TruckPol'

- On the value of property stolen:

'Whilst TruckPol makes every effort to ensure that values (of stolen vehicles and property) are recorded accurately, there will be discrepancies between the value to the haulier, shipper and insurers and values given to the police at the time of reporting. Because of this, the values given must be viewed as a minimum guide only'

Having set the 'cost implications' in the context of patchy and inconsistent data on a pan-European basis; it is appropriate to examine the information provided by TruckPol in the UK.

Table 2.5: Road Freight Crime by Incident Transport in UK

Incident Type	No. Of incidents (Jan 08)	No. Of incidents (Feb 08)	No. Of incidents (Mar 08)
Hijack	8	4	2
Theft of vehicle	157	81	140
Theft from vehicle	66	36	166
Theft (other)	14	7	18
Attempted theft	42	8	18
Deception	2	1	4
Warehouse	3	3	2
Miscellaneous	0	0	0
Total	**292**	**140**	**350**

TruckPol received 783 reports at the time of writing this report. In comparison, TruckPol received 862 reports during the same period in 2006 and 440 reports in 2007.

The 'crime by incident type' figures illustrate the variations of modus operandi employed by criminals. In the instances of the hijackings, in one incident the offenders posed as security personnel, in others firearms were used. This indicates the level of organisation and determination being shown by criminals. It is also the case that a number of hijacks were committed against foreign drivers – further confirmation of the suspicion that foreign drivers are targeted because they are potentially more vulnerable.

Table 2.6: Value of Vehicles and Loads Recorded by TruckPol

	Recorded Value January-March 2008		
	£ Sterling	€ Euro	$ US Dollar
Vehicle Value	£9,140,015	€11,496,729	$17,858,280
Load Value	£9,817,004	€12,348,277	$19,181,020
Combined Value	**£18,957,019**	**€23,845,006**	**$37,039,301**

The average loss per incident is £24,524

As reported by TruckPol during the first quarter of 2008 the average loss per incident is £24,524 (€30,458). Although the absence of a consistent approach to data collection makes it difficult to quantify exact values, this is a conservative estimate as 55% of crime reports received by TruckPol do not specify the load value.

In addition to the direct costs of stolen loads, the loss of a goods vehicle or a load is a complex challenge involving many organisations. These include the haulage company, shipper, insurer, the company awaiting delivery of the products, and statutory bodies like the police, customs and excise. Clearly the task of dealing with a loss adds considerable 'hidden costs' as the various stakeholders go through the claims and recovery process.

Additionally there is the inconvenience and potential loss of business for the end user of the missing goods. Many of the companies in the supply chain suffer consequential losses, which although difficult to quantify are all commercially damaging.

For one of the 'primary victims' i.e. the haulier, the extremely competitive nature of the commercial transport sector means that many smaller companies may face bankruptcy if a goods vehicle is stolen.

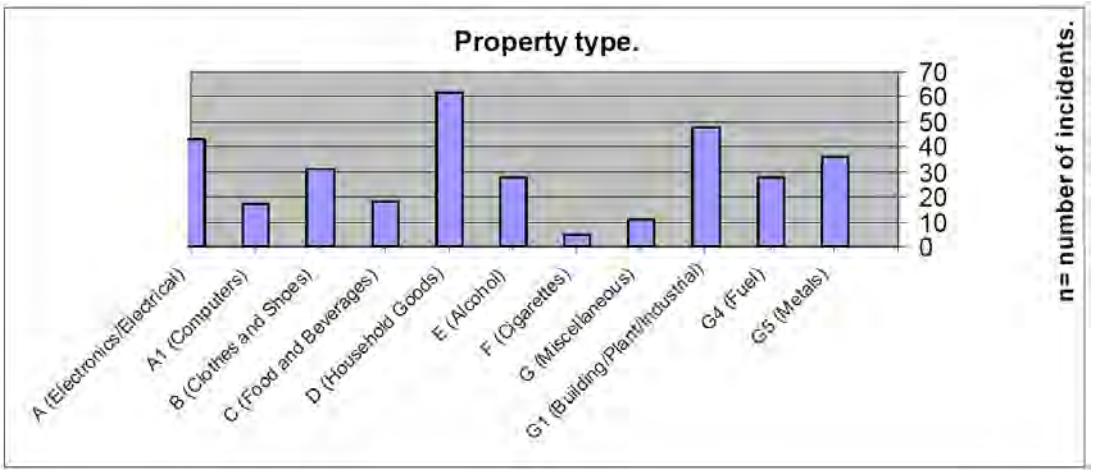
In addition to the opportunity costs of being a victim of crime there are also the 'reputational costs' to be considered. These will impact on hauliers and can also have a negative effect on geographical locations, which gains a reputation as a high crime area. In extremis it can also impact on the way multi-national companies view regions or entire countries as a safe place to do business. In summary, the theft of goods vehicles and their loads causes severe economic harm to the immediate victims. Additionally the impact of a crime spreads and causes secondary loss and disruption to all of the stakeholders in the logistics supply chain.

Property is classified in seven primary categories in order to achieve a common EU standard in accordance with both Home Office recommendations and European Council of Ministers of Transport (ECMT) guidelines in a paper entitles 'Theft of Goods and Goods Vehicles' CEMT/CM(2001)19. They are;

Table 2.7: Road Freight Categories

Category	No. Of incidents
A	Electronic / Electrical
B	Clothes and Shoes
C	Food / Beverages
D	Household Goods
E	Alcohol
F	Cigarettes
G	Misc / Other

Figure 2.4: Road Freight Crime by Property Type



Although the intelligence picture on how criminals dispose of stolen goods is not good. Study of the types of property stolen illustrates that criminals target products that can be easily disposed of. What intelligence there is indicates that a large percentage of stolen goods enter the 'grey

economy' and are retailed through market traders, small retailers etc. Other means of selling stolen goods include the use of internet sites.

Goods sold in this way further damage the economy by undercutting the legitimate economy. Governments also suffer significant losses from unpaid VAT on these goods. On mainland Europe it is certain that stolen goods are moved across borders and sold in different countries, there is also intelligence to suggest that stolen goods are exported from the UK. Criminals are currently also targeting goods that are highly saleable on the grey market or fetch a high price in poorly regulated markets, examples of this are diesel and metals.

2.8.1.4 Relevance for SETPOS

The lack of available statistics discussed in at the beginning of this section highlights the need for a peak body to integrate the efforts of local truck crime organisations such as TruckWatch and TruckPol and to develop an agenda to collect better decision making information on the scale and nature of truck crime issues across Europe. This function could be served by widening the remit or establishing a specialised group within an existing European level entity such as Eurowatch. Unfortunately the present lack of information means that it will not be possible to fully measure the achievements of SETPOS however it is critical to obtain better data in the longer term as a secure parking standard is rolled out to other sites and other initiatives are undertaken.

2.9 Key Findings of Background Research

The 'Problem Assessment' stage of WP2 has revealed a number of key general findings, notably:

1. There are security problems with many truck parking areas, and while it is difficult to judge the precise scale of these problems, truck related crime and its costs to the EU are universally accepted by industry stakeholders.
2. In overall terms there are insufficient parking spaces available across the European road network, and these shortages are likely to become worse over the next 10 to 20 years. There is a need for more secure parking spaces both in the short and long term.
3. There is a need for improved decision making information to assess the full scale of the problems and to monitor the effectiveness of efforts to reduce truck crime. There is merit in the concept of establishing a peak European wide body on truck crime to unite the efforts of specific member state initiatives, such as TruckWatch or TruckPol.

The theft of cargo and/or freight vehicles causes a loss of more than 8 billion Euros per year for the EU. The scale of current actions to address truck crime does not appear to fully reflect the scale of the problem. Actions are needed by all stakeholders in the short medium and long term to tackle the problem.

The following sub sections present recommendations for specific stakeholder groups.

EUROPEAN NETWORK CORRIDOR CONSIDERATIONS

SETPOS

3 European Network Corridor Considerations

3.1 Introduction

3.1.1 Definition of a Corridor

For the purpose of this report a corridor will be defined as a number of roads and or motorways crossing international boundaries, where trucks transporting goods in Europe are most likely to drive. This chapter will highlight the current corridors in Europe, their requirements in terms of security, previous investigations and future recommendations for policy makers, operators and other relevant bodies within the freight transport sector.

3.1.2 Trans-European Corridors

The Trans-European Transport Networks (TEN-T) are a planned set of road, rail, air and water transport connections serving Europe. The transport network is part of a wider system of Trans-European Networks (TENs) alongside a telecommunications network (eTEN) and a proposed energy network (TENe). TEN-T aims to provide integrated and intermodal long distance high speed routes for the movement of people and freight across the continent.

The Trans-European Road Network (TERN) is a key element of the TEN-T, designed to improve the internal road infrastructure within the EU. The TERN is strategically vital for the movement of goods which service the need for the European Community and its inhabitants. It consists of major road transport arteries which are designed to serve the entire continent. The majority of which are motorways and high quality roads as illustrated in Table 3.1 below. From 2003 to 2005 an increase was recorded in the length of motorway within the TERN whilst the length of ordinary road decreased.

Table 3.1: Length (km) of TERN within the EU 27 Member States

	2003	2004	2005	2013	2020
Motorway Percentage	46473 (47%)	47364 (48%)	48186 (49%)	59201 (59%)	63125 (63%)
High quality road Percentage	21153 (22%)	22115 (22%)	22002 (22%)	25684 (26%)	27375 (27%)
Ordinary road Percentage	30287 (31%)	28967 (30%)	28317 (29%)	15004 (15%)	9845 (10%)
Total	97912	98445	98505	99889	100345

http://ec.europa.eu/transport/infrastructure/networks_eu/road_en.htm

The data compiled by the European Commission suggests this trend is to continue into the next decade, with motorways and high quality roads estimated to account for 90% of the TERN infrastructure by 2020. The TERN consists of motorways and high quality roads, whether existing, new or to be adapted, which have one or more of the following characteristics:

- Play an important role in long-distance traffic
- Bypass the main urban centres on the routes identified by the network
- Provide interconnection with other modes of transport
- Link landlocked and peripheral regions to central regions of Europe

A diagram of the TERN corridors is shown in Appendix B

3.1.3 Pan-European Corridors

The Pan-European Corridors are distinct from the TERN, which include all major established routes within the European Union. The corridors where defined at the second Pan-European Transport Conference in Crete, March 1994, as routes in Central and Eastern Europe that required major investment over the following 15 years. Additions were made at the third conference in Helsinki, 1997 and a 10th corridor was added following the end of hostilities between the states of the former Yugoslavia. The corridors were developed with the key objective of speeding up the development of transport routes and further contribute to smooth economic exchange throughout Europe. The current list of Pan-European Corridors is highlighted below in Table 3.2.

Table 3.2: Pan-European Corridors

Route	Direction	Countries
I	North-South	Finland – Estonia – Latvia – Lithuania – Poland
II	East-West	Germany – Poland – Belarus – Russia
III	East-West	Germany – Poland – Ukraine
IV	East-West	Germany – Czech Republic – Slovakia – Austria – Hungary – Romania – Bulgaria – Greece – Turkey
V	East-West	Italy – Slovenia – Croatia – Bosnia & Hertz – Hungary – Slovakia – Ukraine
VI	North South	Poland – Czech Republic – Slovakia
VII	East-West	Germany – Austria – Slovakia – Hungary – Serbia & Montenegro – Bulgaria – Romania
VIII	East-West	Albania – Macedonia – Bulgaria
IX	North-South	Finland – Russia – Belarus – Lithuania – Ukraine – Moldova – Romania – Bulgaria – Greece
X	East-West	Austria – Slovenia – Serbia & Montenegro – Macedonia – Greece – Bulgaria – Turkey

A diagram of the Pan-European corridors is shown in Appendix C

3.2 Corridor Requirements

In addressing the issue of 'specific corridor requirements' there appears to be a need for further work to understand the underlying differences between particular areas and regions. It is difficult to identify specific corridor requirements by simply looking at available statistics on crime incidents. Table 3.3 below presents a somewhat biased picture on the distribution of

incidents because some member states such as the UK are more organised than others in measuring and monitoring freight incidents. The effect of this is that countries with better monitoring systems will rank higher in the incident statistics, and worse in relation to overall levels of truck crime.

Table 3.3: Percentage of incidents per country[10]

Country	Percentage of incidents
UK	29%
France	13%
Belgium	10%
Germany	10%
Netherlands	9%
Italy	8%
Spain	8%
Sweden	4%
Czech Rep.	1%
Poland	1%
Other	7%
Total	**100%**

Although it is difficult to obtain a complete picture of the problems faced by the freight industry, it appears that routes carrying a high density of freight and those which are close to densely populated areas are most likely to require additional parking security. This is particularly the case for drivers and vehicles which take rest periods when waiting to cross borders or when close to their final delivery points.

From the information examined in the previous section, there appears to be a fairly low level of priority to tackle the problem of freight crime from a national government point of view. The low priority shows is reflected by the (limited) level of data collection and police resources presently committed by the national governments to fight this problem. The limited data and anecdotal evidence which is available suggests that the large and/or main transit countries are home to the greatest number of crime hot spots. Densely populated areas are well represented, such as Greater London, Flemish Region, Brussels-Antwerp, Ile-de-France and Madrid.

The question arises whether specific transport corridors can be identified in Europe and, if so, if they require specific attention in regards to security in general and parking in particular. The European Commission is focused on the safety, effectiveness and efficiency of major transport arteries which form part of the Trans-European Transport Network. A key difficulty however relates to the fact that these are not exclusive routes and that freight operators used an extensive and wide network which means isolating a route for improvements is only ever likely to yield limited benefits. In this phase of work we have sought to approach to subject by looking a specific corridor threats and assessing their relevance to main routes generally.

As discussed in the previous chapter, statistics are either not available or insufficient to support this task other than only fairly generic terms, e.g. there will be some areas (London; South East: West Midlands in the UK) where one can safely predict that numerous SPAs are essential simply because of available crime statistics. The highly flexible European economy with its

[10] IIS database, years 2003 – 2006

widely distributed and fast changing manufacturing and production sites also creates difficulties in identifying relevant corridors where actions can be taken.

3.2.1 Cross-border requirements

Customs officers have reported on many occasions (in conversation with the authors on the occasion of security congresses) that border areas are especially favoured by criminals. Such areas can allow criminal to commit their planned theft quickly flee over the frontier. In the age of 'Schengen rules', when physical borders have been abolished in Europe, national borders lose their importance but as shown in the previous chapter the opportunities to pursue freight crime throughout Europe in a joined up way are limited at present. There still is an intra-EU border problem from a law enforcement perspective.

A Europe-wide organisation where transport related incidents can be reported does not exist but would be useful. Increased co-operation among national law enforcement bodies is a key early recommendation of the SETPOS consortium.

There are also the problems at the outer borders of the EU that should also be noted. Lithuania is one of the last remaining border countries of the European Union. It receives significant traffic from and to Russia, which tend to use the Port of Klaipeda to travel to the main part of the continent, which is more reliable and faster than St. Petersburg. Most of the goods are carried by trucks, and hold-ups at the border are commonplace. The country possesses two motorways and in principal there should be a demand for secured parking. In this context cross-border requirements coincide with corridor requirements because it is part of corridor IX that links Lithuania with Belorussia or Romania with Moldavia and the Ukraine.

Large freight volumes move through Finland to Russia, and tend to encounter very long waiting times at the border. Finland should be considered a key target country for improved parking facilities and related information systems. In the cross-border region of Russia a public private partnership is planned to build new highways and long queues and congestion associated with Russian customs clearance procedures. In Finland crime is less of an issue that the lack of space in general terms as it is presently rated as one of the countries with the lowest transport crime risks in Europe[11].

3.2.2 Parking areas at transhipment points

For the most part facilities at ports and railway stations provide services related to transhipment. There is a tendency for loaded freight vehicles to arrive too late or too early at the transhipment point which can often place them at greater security risk. Port terminal areas can generally be considered highly secure. Trucks that are too early or too late have to wait somewhere in the vicinities in an unsecured environment, thus become a target for theft.

3.2.3 Illegal immigration

Ashford truck stop reports that there are one or two trucks a month with illegal immigrants on board. Illegal immigration is not just a problem at national borders. Illegal immigrants and people smugglers often have a specific country as the target country, and trucks tend to be the most favoured means of transport. [12] It is less likely that illegal immigrants enter vehicles in a secured truck parking area.

[11] NEA, Organised theft, p. 9.

[12] "An average of 20 illegal immigrants are caught at Poole each month, many of them hiding on freight trucks." See article "UK trial for detention lorry" at http://www.roadtransport.com/Articles/2007/10/05/128624/uk-trial-for-detention-lorry.html. 5 Oct 2007. (accessed 16 Jan 2008).

3.3 Previous Investigation

3.3.1 Pan-European Corridor IV Study

This corridor runs from "Dresden/Nürnberg (Germany), via Praha (Czech Republic), Wien (Austria)/Bratislava (Slovakia), Budapest (Hungary) to Romania. In Romania Corridor IV divides into two branches. The northern branch runs from Arad via Bucuresti to Constanta at the Black Sea, the southern branch from Arad via Craiova to Sofija (Bulgaria) and divides again. One branch runs further to Thessaloniki (Greece) and the other to Istanbul (Turkey). A map of corridor IV is shown below in Figure 3.1.

Figure 3.1: The Pan-European Corridor IV[13]

The secretary for the Pan-European Transport Corridor IV conducted a survey among freight forwarders and freight insurers about security issues on this route, which resulted in a report published in 2005 called 'Transport Security for Goods, Vehicles and Drivers in the Pan-European Transport Corridor IV' The authors of the study concluded that while the problem of criminal attacks on goods transport carriers had been considerable; they had reduced over the previous few years prior to the survey. As such, security risks in Corridor IV were considered no greater than elsewhere in the European Union. One reason suggested for this was that member states were more proactive in transport planning in the lead up to the entry into the European Union. In addition, satellite technology was found to simplify transport movements and with the abolition of customs checks, trucks were no longer stationary for long hours at a stretch and are therefore less vulnerable to crime generally.

The report suggested that the countries in the South of corridor IV "are more dangerous to drive through" (p. 6). They maintain that the kind of goods transported plays an important role: those goods with high black market value such as designer clothes, electronic goods such as video and audio equipment, compact discs, cigarettes and similar products are especially attractive to thieves.

[13] Source: http://www.tinavienna.at/corridor4/ (accessed on 16 Nov 2007)

In relation to 'hot spots' it was suggested that vehicles in motion on free stretches are not usually endangered. High risk situations for crime were found to occur both in official designated truck parking spaces in and public parking spaces, irrespective of whether these places were well lit or whether located near service areas. The interviewed forwarders advocated a list with "a chain of safe parking spaces […]. The users of these parking spaces would pay for the service, which would mean that the spaces would be guarded day and night by security personnel but not by the national police. The parking spaces would have to be lit up and fenced-in." (p. 9)

Forwarders also suggested that forwarders and drivers should be vetted before they could use such spaces, and that companies expecting freight should be alerted about the location of vehicles as they travel to their destination. It was also stressed that corridor IV is of European importance because it is one of the main arteries of goods traffic, and for this reason there was a requirement to consider the possibility of terrorist attacks on this route.

In their summary of the study, it was concluded that the northern corridor countries so far have profited more from infrastructure investments than the southern corridor countries, and that security standards of Truck Parking Areas is higher in the north compared to the south. Northern sites were also considered to be better maintained than those in the Southern countries.

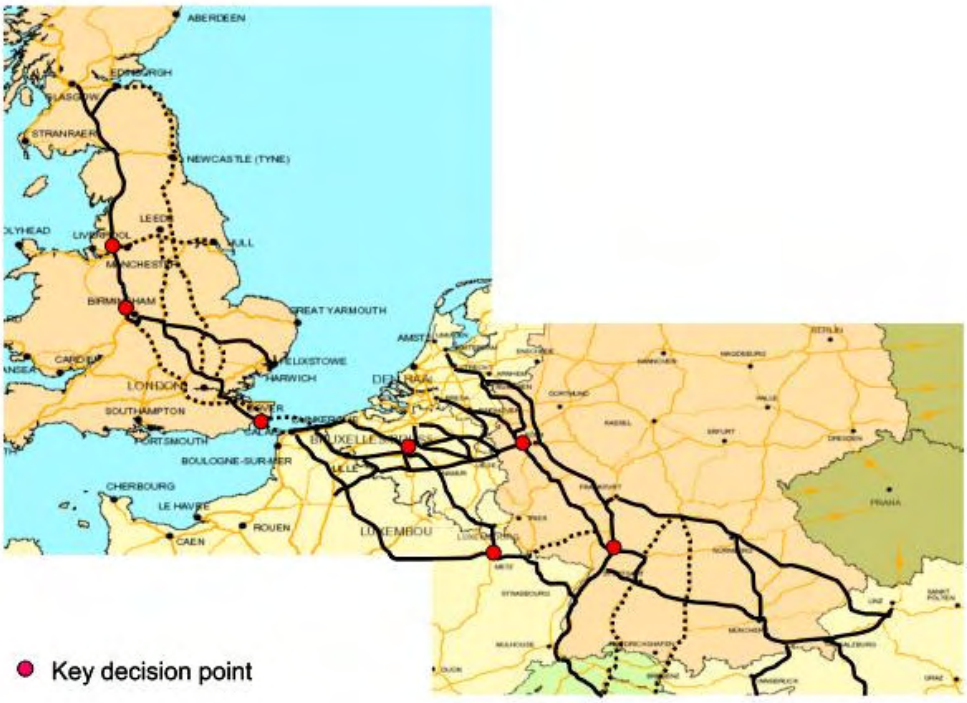
3.3.2 TEMPO Project

TEMPO stands for Trans European Intelligent Transport Systems Projects and consists of six Euro-Regional projects namely Streetwise, Arts, Serti, CENTRICO, Corvette und VIKING. These six projects cover regions across Western Europe.

TEMPO is exploring how telematics could be used help reduce congestion and accidents and to improve overall traffic safety. Telematics may increase capacity utilisation of the road network, however a key question relates to the need and the feasibility of ITS-measures on European long distance corridors.

The CENTRICO project covers the region of Northern mainland Europe plus the Southeast of Great Britain. Cf. www.centrico.org. The project has looked at how drivers make choices in relation journey planning according to at certain key decision points. An example of such a point is shown in Figure 3.2: e.g. a motorway triangle or interchange where a traveller makes a decision which motorway alternative to follow aiming at a long-distance destination. While truck parking is only one of several issues – the main considerations apply to any vehicle and to any incident management (e.g. corridor re-routing) in the face of traffic congestion – the project asks the important question whether there is a measureable pattern in freight journeys across Europe which should be accounted for in recommendations regarding truck parking.

Figure 3.2: Key Decision Points in Journey Planning [14]



3.3.3 Considerations for SETPOS

In the case of truck parking the key decision point is less likely to be a motorway triangle or interchange but a truck stop where a truck driver could make a decision which next truck stop they would take the next break at. For certain stretches there may be so few truck stops that the decision is a foregone conclusion; however, in certain areas there might well be a choice.

The TEMPO approach of discerning or establishing key decision points is interesting. However, Figure 3.2 above shows that in an area with a dense road network the decision points do not lead to any clear requirements with respect to security. Furthermore the routes and alternatives shown relate to just a few large routes.

Hence, it does not seem sensible or necessary to copy the key decision point approach used in TEMPO to SETPOS. There are presently no corridor requirements in SETPOS in the sense that SPAs should be built only at certain junctures. The timely information of drivers in regard to available spaces should be guaranteed by the SETPOS database to be developed in WP5. The problem of where the best strategic locations are for secure truck stops can be better resolved by the 'hot spot' approach, i.e., looking today there are 'hot spots' are occurring and where are likely to be in the future to determine where there is the greatest need for SPAs to be built.

[14] Source: Bozuwa, Jeroen et. al. Long-Distance Corridor Feasibility Study Final Report, January 2003. pp 13 and 59.

3.4 Defining the TERN as Secure Transport Corridors

More than 40% of the incidents of organized theft of cargo and/or vehicles takes place ‘en route' (see Section 2.1). The provision of adequate secure parking areas will therefore not solve the entire problem of organized theft of cargo and/or freight vehicles.

However, it is recommended that the EC should recognise the issue of security as an integral part of policy on TERN. Given that the Commission is actively promoting the free movement of goods by way of the completion of the TERN, it follows that it should also promote transport security along these corridors because insecurity will hinder this free movement and the performance of the European economy.

As secured parking areas tend to have much lower crime figures than unsecure areas, the establishment of more of these types of facilities should be promoted. However, research has shown that the demand among drivers and transport operators is highest relates to parking areas with basic security, and which are free of charge. The NEA study (2007) says “the demand for long rests with a low/minimal security level is far higher than the demand for truck parking areas with a high security level, and to a lesser extent the demand for parking areas with a medium security level” (p. 99).

The European Parliament report points out that 59% of all thefts take place during when a vehicle is stopped. However theft from secure parking areas is fairly limited – more than a quarter (27%) of all thefts are from non-secure parking areas. The remaining quarter take place when vehicles stop during a trip, at origins and destinations and when vehicles/trailers are changed.

The demand for highly secured and therefore fairly expensive `freight forts', seems to be limited, although an exception may need to made under for certain regions with high levels of freight movement and population densities.

In addition to the hot spots identified in the previous chapters, it must be noted that countries such as Greece, Bulgaria, Romania, Poland, Slovakia, Lithuania, Estonia and the North of Finland have need of a special effort as to secured parking. One might think it would be ideal to strategically map out the whole of Europe and develop an optimum network of SPAs. There are two reasons, however why this would not be possible:

- Lack of information on the location of truck crime; and
- Manufacturing and production sites evolve at a rate that is faster than parking infrastructure planning.

Since in many Member States SPAs are not seen as an essential part of infrastructure, it is believed that if parking facilities with a basic security level, with simple elements like optimal lighting, are defined as part of the infrastructure then this could go a significant way to addressing problems concerning parking capacity and security.

Given that the EC (with the support of the European Conference of Ministers of Transport) actively promotes the completion of the TERN, defining parking facilities as an essential part of the infrastructure would provide general benefits for the free movement of road freight and the wider European economy.

The theft of cargo and/or freight vehicles causes a loss of more than 8 billion Euros per year for the EU. The scale of current actions to address truck crime does not appear to fully reflect the scale of the problem. Actions are needed at all authority levels in the short medium and long term to tackle this issue.

3.5 Recommendations to Policy Makers and Transport Authorities

There are substantial differences in policy between EU member states in relation to the provision of secure parking areas. Some governments have explicitly stated that they will not use public funds to improve parking facilities, while others have initiatives providing financial support for the construction or improvement of secure truck parking areas. Despite this, it is recommended that all policy makers and transport authorities consider the following broad actions in the short, medium and long term:

1. Establish common, reliable methods of recording and analyzing incidents related to freight crime, which will provide reliable data on which to base strategic and operational decisions
2. Set measurable targets for goods vehicle crime reduction, established in co-operation and co-ordination with the relevant authorities.
3. Increase levels of co-operation between the various authorities and stakeholders in order to facilitate the sharing of data on crime hot spots and trends.
4. Work toward standardisation of security equipment, vehicle markings, and legal requirements for fitting heavy goods vehicles with specific security equipment.
5. Influence police and interior ministries to provide more police resources for monitoring and tackling freight crime.
6. Improve and increase the number of parking areas and implement provide support for labelling sites in accordance with the SETPOS secure parking standard.
7. With the support of police authorities and industry associations, disseminate advice and guidance to operators on safe routes, safe parking areas, crime hot spots, and appropriate precautions and security equipment.
8. Support developments in technology to track cargo across supply chains.
9. Supply additional secure parking areas

The following sub sections consider a range of steps that could be taken by industry to reduce the opportunities for truck crime.

3.6 Recommendations for Freight Operators and Shippers

3.6.1 Prevention of Information Leaks

The circumstances of some incidents of theft suggest that criminals often have prior knowledge of the location and cargo carried in vehicles. It is likely that in a number of cases crucial information about a load and its location/destination has leaked from somewhere in the supply chain. Several procedures can be implemented to reduce the risk of this occurring, such as:

- Employee vetting - New employees can be screened before being granted access to classified information such as cargo specifications, particularly in relation to high value loads.
- Waiting period - New employees can be prevented from transporting high value cargo within a certain period of time of commencing a new job (e.g., 6 months).
- Classifying information - Distribution of cargo information only to the employees for whom it is essential. All others, including drivers, may be excluded from accessing such information. Information technology can be utilized to filter, to direct and encrypt information and to closely monitor its usage. Port terminals often have such technology at their disposal, but

their outreach is often limited to a small number of co-operating hauliers. The majority of – often foreign -- vehicles or those calling infrequently are not yet covered by such technology and procedures.

- Employment history registers - There are a number of organisations within the EU now using special central registers with verified employment history information on drivers, planners, etc. This information may either be positive in the case of proven professional attitude, or negative in the case of the employee having been convicted of relevant crime. Such a system could also be utilised to help reduce risk of truck crime, however concerns about privacy and data security would obviously need to be considered if such a system were to be developed.

3.6.2 Use of adequate equipment

It is self-evident that high value/marketable cargoes should not be shipped in ordinary curtain sided trucks. Curtains can be easily opened with a sharp knife and hence these vehicles are extremely vulnerable to theft. Aluminium box body trailers or designs made from composite materials may are generally much more secure.

New technologies and after-market anti theft systems are continually being released on to the market, many of which are capable of supplying the police with information to help recover stolen vehicles. European standards for such equipment are in place, and it is recommended that fleet managers stay abreast of these developments, particularly if transporting loads that are vulnerable to attack[15]

Additionally, it is recommended that the vehicle manufacturing industry should continue to participate in a dialogue in relation to fitting anti theft devices at the manufacturing stage, to improve the overall level of security in truck fleets.

3.6.3 The importance of trade associations

There are a number of means by which shippers can help reduce the risks of vehicle theft and driver attacks. Shippers may, for example, form or join appropriate trade groups themselves to share best practice knowledge and identify new methods of reducing the risks of truck crime. TAPA-EMEA is the prime example of such a group, and has already defined rules for secure movement, storage and handling of cargo. TAPA is focused principally on high and very high value cargo, but there is also need to develop frameworks and rules for other cargoes.

3.7 Recommendations for Insurance Companies

Insurance companies are key players in efforts to reduce truck crime, and can help reduce risks by co-ordinating the collection of data criminal incidents. An important first step is to record and maintained basic information theft of commercial vehicles and their loads, but in the longer term efforts should also be made to capture information on the circumstances of individual instances of theft, the follow-up actions that have been taken and how the case or claim has been closed.

When drawn together, such data could provide valuable information on crime patterns in specific areas or by particular types of cargo. It is important to note though that such information would need to be highly classified to ensure privacy is not breached and that criminal organisations could not make use details to target particular areas or companies.

[15] UN/ECE and EU regulations prescribe the conditions that vehicle alarms must meet, although there are no ECE regulations for the approval or certification of tracking equipment installed to protect a payload. The European Standardisation committee has set up a working group (WG14) to draw up standards for ‘after theft’ sytems.

This information could be used to map ‘supply chains’ of truck crime and reveal points which are susceptible to organised crime, and steps that could be used to reduce risk in these areas.

It is in the interests of shippers, clients, insurers and other stakeholders to be actively involved in the development and improvement of security levels and systems in supply chains. This process can start with mapping of relevant supply chains to identify areas of risk, implement actions to improve security, and to monitor the effectiveness of these actions.

3.8 Conclusion

It is quite difficult to disentangle corridor requirements from general parking requirements. This is mostly because statistics that are based on corridor requirements are unavailable. Statements made as a result of the NEA research and from the corridor IV group nevertheless provide some usefulness. By 2020 NEA expect a substantial need of additional secured parking spaces for Southern and Eastern Poland, Slovakia, Romania, Lithuania, Estonia and the North of Finland. (From NEA ‘Freight Flows in an Enlarging Europe’, p. 55.)

The corridor IV group have collected expert opinions to the effect that there should be “a chain of safe parking spaces” (p. 9) in corridor IV. The other vulnerable areas mentioned (cross-border and transhipment points and illegal immigration) tend to be located on specific corridors, however, they are easier to conceptualise as isolated phenomena, similar to the ‘hot spot’ approach.

As a general conclusion one can say that what applies to the truck parking situation in general also applies to corridors: there is a lack of parking spaces to enable drivers to take rest and use overnight facilities, and in addition there is a lack of secured spaces at certain junctures. The corridor perspective is a valid perspective but after taking it into consideration it appears to have limited value in developing a European wide solution to the truck security problem.

POLICY AND REGULATORY CONSIDERATIONS

4 Policy and Regulatory Considerations

4.1 Introduction

There are a number of regulations in place which are relevant to SETPOS and the ultimate set of recommendations that will be made by the project. This section considers key regulations and assesses their relevance to the development of a secure parking standard. These range from EC laws and regulations, to broader international agreements. Where relevant, we have also reviewed policies and schemes for air freight and other non road modes.

4.2 Road Transport Infrastructure (Directive 2008/96/EC)

In the EU the trans-European road network is of paramount importance in supporting integration, cohesion and a high level of well-being. An important part of these objectives involves road safety.

The objective of Directive 2008/96/EC is the establishment and implementation by the EU member States of procedures that would ensure consistently high levels of road safety throughout the trans-European road network. These procedures relate to road safety impact assessments, road safety audits, the management of road network safety, as well as safety inspections by the EU member States.

This Directive has an important link to SETPOS as it specifically stipulates in paragraph 17 that:

“Sufficient roadside parking areas are very important not only for crime prevention but also for road safety. Parking areas enable drivers to take rest breaks in good time and continue their journey with full concentration. The provision of sufficient safe parking areas should therefore form an integral part of road infrastructure safety management.”

This Directive also recognises that safe parking must be considered within the Impact Assessment and Road Safety Audit processes of Infrastructure Projects. For Impact Assessments an element that has to be taken in to consideration is:

“(g) presence of a sufficient number of safe parking areas”.

For Road Safety Audits there must be criteria in the detailed design stage that overs:

“(g) provision of safe parking areas”.

4.3 Authorized Economic Operator (AEO)16

The air transport industry operates a comprehensive security regime, and each element of transport chains are subject to strict rules and screening. Following pressure from the US, the EC is establishing its own security rules, which are partly based on C-TPAT programme (see section 3.4 for further information). In 2003, the EC outlined a series of measures to address security issues for air transport. The package of measures includes a new security-management model for the EU's external borders, and a harmonised risk assessment system. An amendment to the Community Customs Code (Regulation (EC) n° 648/2005) was also made in 2005, to introduce a number of new measures to tighten security for goods crossing international borders. In the medium term, these changes are expected result in faster and more targeted checks, which will benefit customs authorities, the public and industry alike.

As a result of these and other policy developments, EU member States are now entitled to grant Authorised Economic Operator (AEO) status to any organisation that meets common criteria relating to the operational control systems, financial solvency and compliance records.

[16] Quoted from the European Commission, Taxation and Customs Union web presentation

In short, the AEO scheme involves companies in transport supply chains being approved by customs authority as being compliant with supply chain security standards.

The AEO system has been developed for the air cargo sector and it is not mandatory to become an AEO for surface transport operators. The EC intends to grant as yet unspecified "advantages" for AEOs and for those exporting to the US. This is expected to be beneficial for industry but import oriented and intra-EU operating companies will not gain any specific benefits from achieving AEO status. On this basis, the AEO system does not appear to have significant potential for application to secure parking in the short or medium term. In subsection 5.0.4 of the assessment form for AEOs, applicants must state how they ensure the secure transport of their goods. Use of secured truck parking areas may be an appropriate answer to this question. In this respect, SPAs may become relevant for AEOs, but at the same time they are unlikely to be relevant for road freight operators and users.

4.4 ISO 28000

ISO/PAS 28000 (*www.iso28000.de*) is a publicly available specification for security management systems for the supply chain. The specification "is a high-level management standard that enables an organisation to establish an overall supply chain security management system" (p.5). The standard does not go into the detail of individual security measures, but is focused on general risk assessments and identifying security management targets. The specification defines an organisational structure that should be adopted in terms of authority, responsibilities, training and awareness, in order to maintain a certain level of supply chain security management. This standard may have some relevance to SETPOS in terms of defining general procedures and steps that could be taken address broad security risks.

4.5 ISO 28001

This international standard provides an option for organisations to establish and document reasonable levels of security within international supply chains and their components. This standard enables individual organisations in the supply chain to make better risk-based decisions concerning the security in those international supply chains. It is also a basis for determining or validating the level of existing security within such organisations supply chain(s) by internal or external auditors or by those government agencies that choose to use compliance with this international standard as the baseline for acceptance into their supply chain security programmes.

Outputs resulting from this international Standard are the following:

- Develop and implement supply chain security processes
- Establish and document a minimum level of security within a supply chain(s) or segment of a supply chain
- Assist in meeting the applicable authorized economic operator (AEO) criteria set forth in the World Customs Organisation Framework of Standards and conforming national supply chain security programmes

This standard may have an impact on the SETPOS recommendations in so far as it may help to help suggest general steps that could be taken to develop a security standard.

4.6 Customs Trade Partnership Against Terrorism (C-TPAT)

C-TPAT is a US based programme which sets out rules for European shippers exporting products to the US. While European organisations cannot join C-TPAT, they can become C-TPAT compliant by introducing a checklist of procures covering areas such as personnel screening, access controls, container surveillance and other matters.

As large US-American companies introduce C-TPAT for their whole supply chain to receive customs privileges, the pressure on European shippers to comply with the system will increase. At present the advantages may be limited to fewer inspections for C-TPAT compliant shipments. However, in the long run “green lanes” – introduced to expedite shipments – may further intensify the need for compliance.

The German freight forwarder Hellmann, for example, had to equip their premises in the Bremen GVZ with a new gate and a new fence to be able to continue to receive export goods from C-TPAT member Philip Morris.

In some respects C-TPAT is equivalent to the AEO concept, but covers a greater number of areas compared to the AEO. C-TPAT focuses on threats from outside the country, while it is less concerned about problems that arise from inside the country. With this in mind, C-TPAT appears to bear limited value for intra-European transport security which is no longer based on physical borders. Policies which focus on terrorist threats are also fundamentally different from efforts to deal with conventional crime. Another weakness of C-TPAT is its Importer Self-Assessment Program (ISA) which is less powerful than a more robust certification scheme.

4.7 ISPS Code

International Ship and Port Facility Security Code (ISPS) was developed for similar reasons to C-TPAT, namely to help reduce risks of terrorist attacks in shipping. The code was initiated by the US Coast Guard as part of the US government's response to the September 11 terrorist attacks. The US delegation to the International Maritime Organisation argued strongly for the measure and it was eventual implementation by the IMO in 2004. It is a two-piece set of legislation describing minimum requirements for security of ships, ports and port facilities. Part A of the code provides mandatory requirements while Part B provides guidance in implementation.

The code is currently limited to ships over 500 tons gross. Its main objectives are:

1. To detect security threats and implement security measures
2. To establish roles and responsibilities concerning maritime security for governments, local administrations, ship and port industries at national and international level
3. To collate and promulgate security-related information
4. To provide a methodology for security assessments so as to have in place plans and procedures to react to changing security levels

(AV, ISPS: Risk Analysis, impact and contrast across the code, Intervessel, Southampton, 2005)” (accessed on 24 October 2007)

Like C-TPAT ISPS involves the development of a ‘standard’ for security improvements. However, unlike the SETPOS security standard, ISPS is focused on water borne transport. Certain similarities exist in securing the port facilities which in some way could be considered similar to parking places with additional functionalities. However, this only has limited relevance. Like C-TPAT, ISPS focuses on terrorism and on being able to quickly change security levels. For these reasons the ISPS code will not be further explored in the framework of this project. Interfacing with port facilities is to be considered an important issue for SETPOS, but ISPS is not expected to be instrumental for this.

4.8 Dangerous Goods Regulations

The transport of dangerous goods on European roads is regulated in the ADR (European Agreement Concerning the International carriage of Dangerous Goods by Road) (http://www.unece.org/trans/danger/publi/adr/adr_e.html), and first came into effect in 1968. The

regulation contains an Appendix (A) which defines those goods deemed to be dangerous, and sets out their packaging and labelling requirements. Appendix B of the dangerous goods regulation defines the conditions with regard to the construction and operation of vehicles that carry hazardous goods. An amended version of the regulation has been in force since the 1st of January 2007.

Figure 4.1: Dangerous Goods Vehicle

A quote from the Appendices A and B to Council Directive 94/55/EC(1), as announced in Commission Directive 2001/7/EC(2), is shown below. This relates to the requirement for supervision of vehicles carrying dangerous goods by road.

"Vehicles carrying dangerous goods in the quantities shown in special provisions S1 (6) and S14 to S21 of Chapter 8.5 for a given substance according to column 19 of Table A of Chapter 3.2 shall be supervised or alternatively may be parked, unsupervised, in a secure depot or secure factory premises. If such facilities are not available, the vehicle, after having been properly secured, may be parked in an isolated position meeting the requirements of (a), (b) or (c):

(a) A vehicle park supervised by an attendant who has been notified of the nature of the load and the whereabouts of the driver;

(b) A public or private vehicle park where the vehicle is not likely to suffer damage from other vehicles; or

(c) A suitable open space separated from the public highway and from dwellings, where the public does not normally pass or assemble;

The parking facilities permitted in (b) shall be used only if those described in (a) are not available, and those described in (c) may be used only if facilities described in (a) and (b) are not available."

The Danish Manual (as discussed in Section 4) has proposed that trucks transporting dangerous goods should also be parked in secure truck parking areas, noting the fact that secure parking sites in Italy are required to reserve 10% of their total area for dangerous goods. In our view a standard for parking that incorporates requirements for dangerous goods vehicles, mainly because of the infrastructure that is required (fences and other elements) is expensive and not affordable for many site operators. In many cases such features would not generate a return sufficient to pay back the level of investment required. A less significant issue relates to the potential for risks to be compounded if vehicles with high value cargo and other vehicles with dangerous goods are parked closely together. Terrorists may find such areas more attractive on the basis that a greater level of economic damage could be generated through attacks.

Furthermore it is worth noting that a secure truck parking area that could be defined by SETPOS may not qualify as a vehicle park as listed above under (a). Security personnel need to focus on managing a large number of activities including entry, exit, trailer-dropping and other procedures, and hence it would also be difficult at the same time supervise trucks with dangerous goods.

4.9 Temperature Control Vehicles

While we are not aware of any specific legislation relating to the security of temperature controlled vehicles, they are a distinct and recognisable category of truck stop users and are worthy of consideration. Temperature control vehicles are often considered a nuisance by drivers of other vehicles because refrigeration units tend to make considerable noise during the night. Hence, it would be best if they could run off the mains at truck stops. Such facilities could easily be integrated into the planning of a new secured truck stop. On the other hand, it should be noted that temperature controlled vehicles tend not to be exposed to large amounts of theft and that drivers of such vehicles have a lower risk of being subjected to criminal violence. It is therefore recommended that temperature controlled vehicles are not considered a distinct demand group for secured truck parking space.

Figure 4.2: Refrigerated Vehicle

4.10 Livestock Vehicles

EU regulation No 1/2005 relates to the protection of animal transports and related operations. Upgraded standards were introduced in 2007 for journeys longer than 8 hours. For cattle, for example, there are the following maximum journey times in hours.

Table 12: Maximum journey times for cattle[17]

	Basic Standard Vehicle	Higher Standard vehicle	
		Travel	Rest
Cattle	8	14	1
Unweaned Calves	8	9	1

- Journey time is from first animal loaded to last animal unloaded.
- Time spent on Roll-on/Roll-off (RO-RO) vessels counts towards the journey time.
- Time spent by animals in pens on specialist livestock vessels does not count towards total journey time, provided certain conditions are met.
- Time whilst on the aircraft during air transport does not count towards total journey time.

[17] New rules as of 5th Jan 2007. Department for Environment, Food and Rural Affairs: Advice for transporters of cattle (p. 4).

Figure 4.3: Livestock Vehicle

In many cases driving time is below the maximum of 8 hours, and where these 8 hours coincide with the driver's working hours (see section 3.10) there is no overnight parking requirement. If the journey is longer, then the driver is required to drive into "licensed staging posts" where water and feed are available. Livestock are certainly valuable, however, it seems logical to have secured truck parking for vehicles carrying livestock. To cater for this group however, there would be a need to be watering and feeding facilities on top of the security facilities, which is clearly not viable and not in demand among this sector.

4.11 Driving Time Legislation

Regulation (EC) n° 561/2006 relates to EU drivers' hours rules for drivers of lorries over 3.5 tons and is especially pertinent for SETPOS. The following legal requirements are most relevant in relation to secure truck parking spaces the following rules are most critical (paragraph or article number in brackets).

- A daily rest period should not be less than an uninterrupted period of nine hours (17)
- There is a 'regular daily rest period' of at least 11 hours. "Alternatively, this regular daily rest period may be taken in two periods, the first of which must be an uninterrupted period of at least 3 hours and the second an uninterrupted period of at least nine hours" (4 g)
- "The daily driving time shall not exceed nine hours" (Art. 6), however, the daily driving time may be extended to at most 10 hours not more than twice during the week. (Art. 6)
- After a driving period of four and a half hours a driver shall take an uninterrupted break of not less than 45 minutes, unless he takes a rest period. (Art. 7)
- This break may be replaced by a break of at least 15 minutes followed by a break of at least 30 minutes each distributed over the period in such a way as to comply with the provisions of the first paragraph. (Art. 7)
- Provided that road safety is not thereby jeopardised and to enable the vehicle to reach a suitable stopping place, the driver may depart from Articles 6 to 9 to the extent necessary to ensure the safety of persons, of the vehicle or its load. (Art. 12)

The working time regulations place more pressure on drivers to find parking spaces. This issue is directly relevant to SETPOS. The EC has published a guidance note on article 12 quoted

above of Regulation (EC) No 561/2006[18]. This note clarifies the circumstances under which drivers are permitted to diverge from minimum rest requirements and maximum driving times. The circumstances described refer solely to exceptional and non-foreseeable occurrences such as road blockages or extreme weather conditions. Events that are in any way foreseeable, such as traffic jams, are not included within this definition. “No place at the parking area” is expressly mentioned as exceptional circumstance in the article, but only provided that it was not possible to determine this before arrival.

The development of the SETPOS database could provide drivers with the opportunity to know beforehand about the availability of a parking space, but could also create a situation in the long term where drivers assume responsibly to check with the database whether there is a space.

Appendix D contains a complete list of regulations which are related to the working time directive and digital tachographs.

4.12 Insurance Issues

Insurance policies can have a significant impact the level of demand for secure parking areas, and often vary significantly between member states. This section provides information on policies relevant to truck parking practices, and presents examples of decision making procedures that are used when processing claims. A number of specific insurance issues raised by stakeholders are also presented.

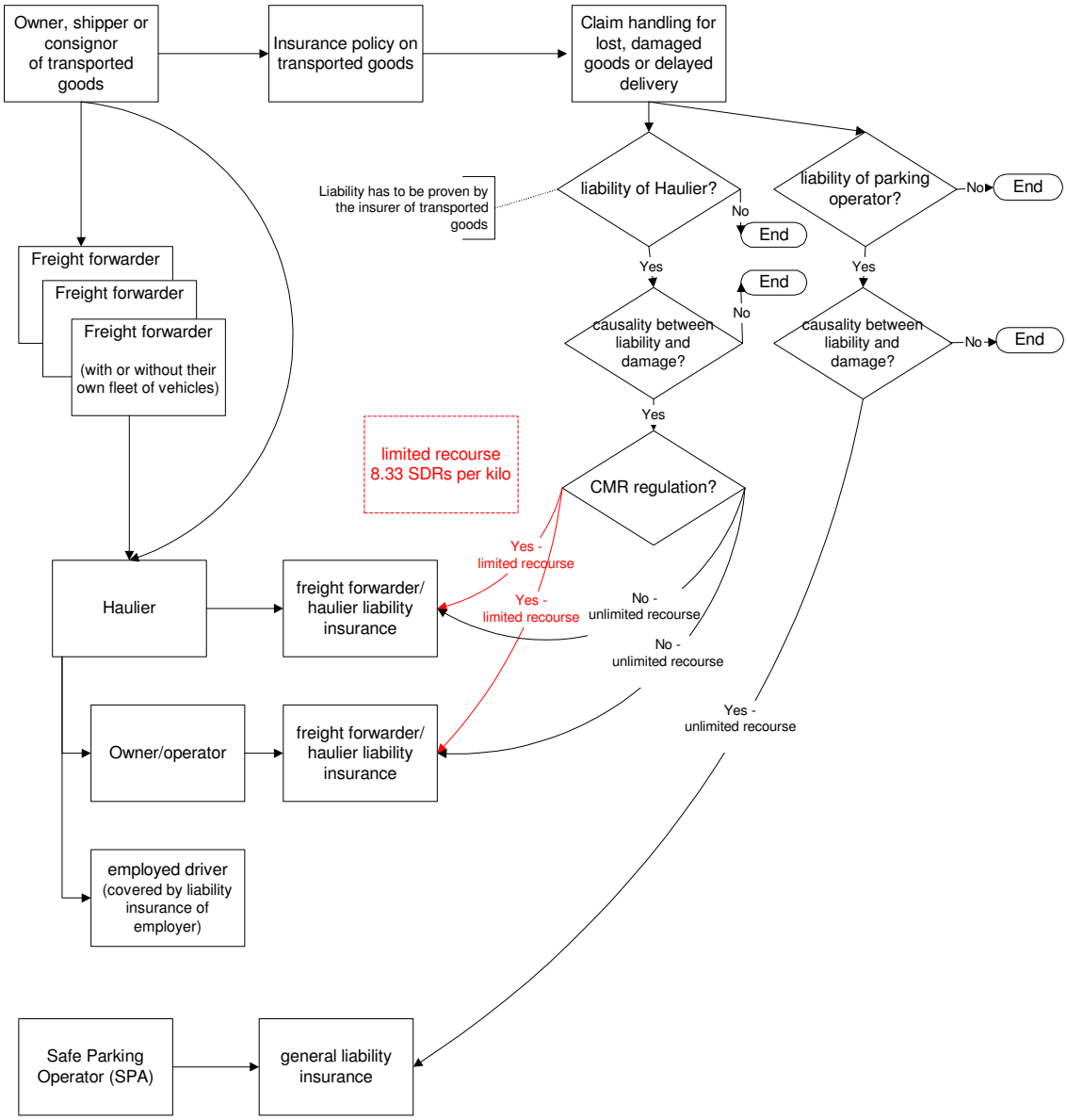
4.12.1 Insurance of Merchandise

Table 4.1: Merchandise Insurance

Language	Translation
English	Insurance of merchandise
German	Warenversicherung
French	- Police d’assurance française des marchandises transportées par voir de terre - Police française d’assurance couvrant la responsabilité du transporteur national de marchandises par route - Clause vol 11/17/2005

[18] European Commission. Regulation (EC) No 561/2006, Directive 2006/22/EC, Regulation (EEC) No 3821/85.

Figure 4.4 Dependencies in the Case of Merchandise Insurance[19]



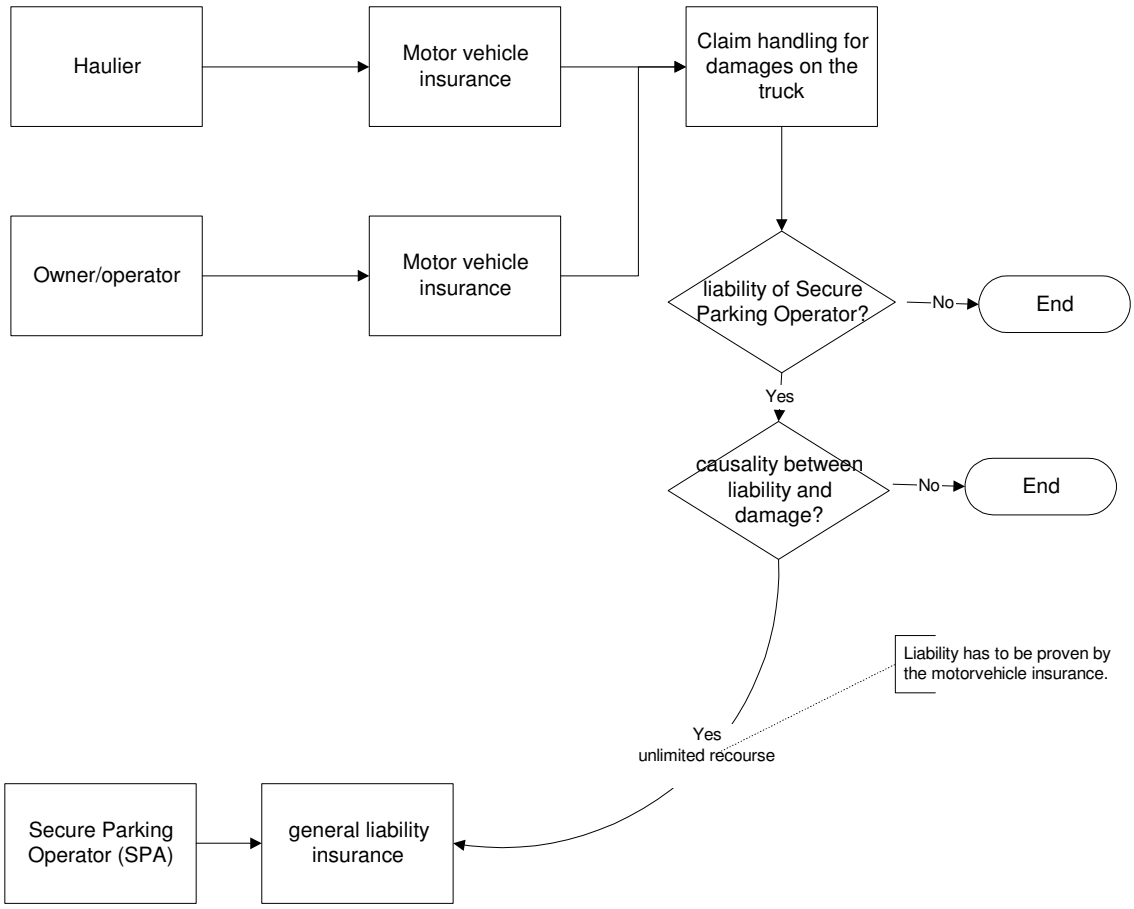
[19] Source: UICR, 2008

4.12.2 Motor vehicle third party liability insurance

Table 4.2: Motor Vehicle Insurance

Language	Translation
English	Motor vehicle insurance
German	Fahrzeugkaskoversicherung
French	Assurance des véhicules terrestres à moteur et de leurs remorques et semi-remorques

Figure 4.5: Relationships in Motor Vehicle Insurance [20]



In Germany, the framework of the motor vehicle insurance includes 'Special conditions for the carriage and storage of highly valued goods' (in German: Besondere Bedingungen für die Beförderung und Lagerung hochwertiger Güter"). This notification – issued by the Gesamtverband der deutschen Versicherungswirtschaft for optional use – provides guidelines regarding insurance of highly valued goods during transport and storage. One clause demands the use of guarded parking spaces or guarded freight forwarders' premises.

[20] Source: UICR, 2008

However, the notification allows for diverging arrangements which means that in the final analysis it must be specified on an individual contract basis which parking spaces should be used for which goods.

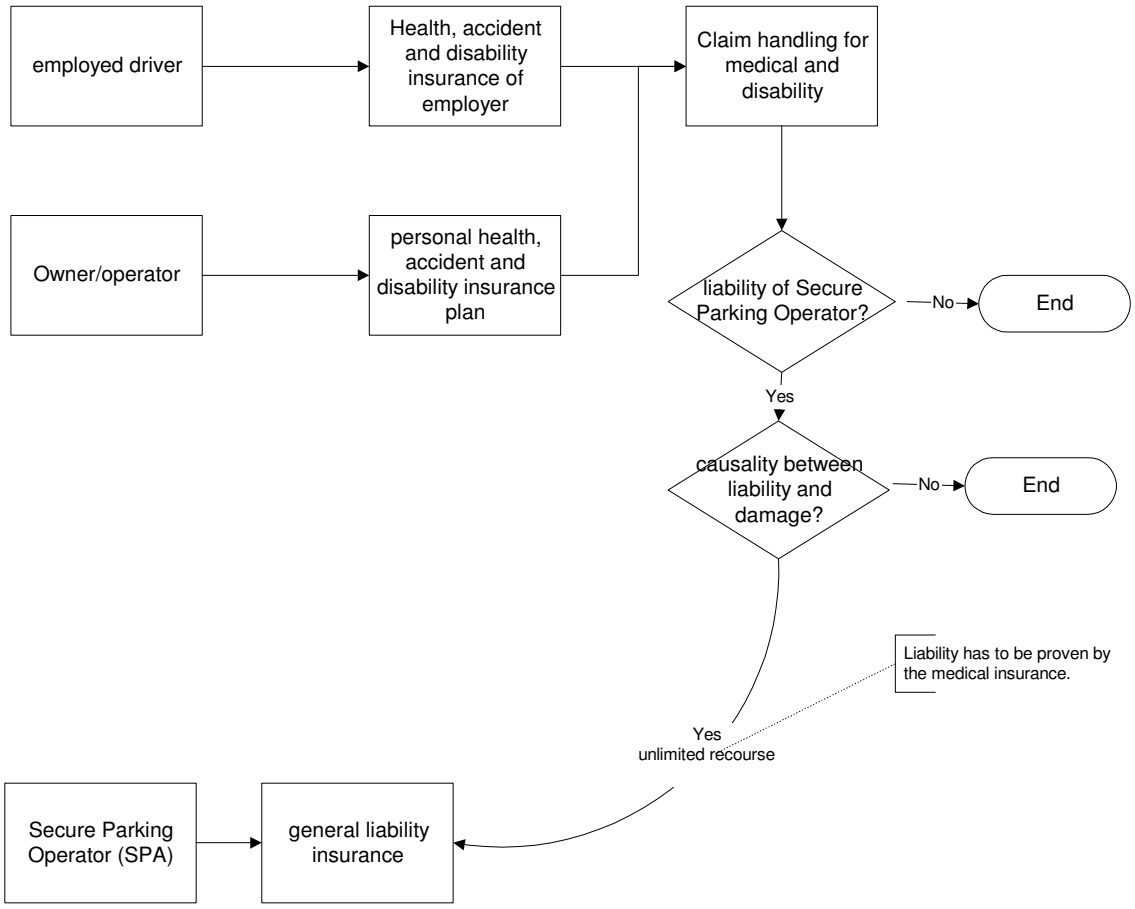
German freight forwarders claim – on the basis of their experience -- that German insurance agencies do not as a rule provide premium rebates for operators whose vehicles park in secured truck parking areas.

Personnel insurance

Table 4.3: Personnel Insurance

Language	Translation
English	Personal insurance
German	Unfall- und Krankenversicherung
French	Assurance accident et maladie

Figure 4.6 Liability of SPA Operator in Case of Damage [21]



[21] Source: UICR, 2008

4.12.3 Public liability insurance for operators of a truck parking area

Table 4.4: Public Liability Insurance

Language	Translation
English	Public liability insurance for operators of a truck parking area
German	Betriebshaftpflichtversicherung für Betreiber des LKW-Parkplatzes
French	Responsabilité civile professionnelle

A decision was once made in a German court (1 U 46/04, 14.07.2004, OLG Karlsruhe) that required a negligent parking space operator to pay the claimant the current market value of goods stolen from a parked car. Actually, organisers of a golf tournament set up a parking site in an agricultural field. It was marked off with a plastic band. At the entrance there was a sign stating, that the parking is being guarded. The parking fee was only Euro 3. The only staff on the site were people directing incoming traffic to available parking spaces. The court based its decision on the fact that the operator had advertised a secure/guarded parking area in spite of the fact that the area was not guarded at all. This activity was, according to the court, not enough to provide the security announced at the entrance and the organisers had to cover the loss of the stolen contents. German SPA operators have experienced an unwillingness on the part of German insurers to insure liability. Lawyers asked for help advised our team that there would be little value in using signs to advise SPA users that management would not take responsibility for any damage. Even a maximum liability could not be committed to. It appears that legal practice in Germany differs considerably from legal practice elsewhere. German judges tend to attribute more responsibility to TPA operators who report concerns that mishaps may be classified as 'gross negligence.' Views of stakeholders suggests that French or British judges would be less likely to adopt such a stance.

4.12.4 Position of the French Insurer AXA

The French insurer AXA will encourage its clients to park their trucks in Secured Parking Areas. An article was published regarding this topic on the *Transport Info Hebdo* magazine N° 221 dated February 6th, 2009. Mr Olivier Outrequin authorised the SETPOS team to translate the publication as follows:

8 – Strategies and markets / Secure Parking Areas (SPA)

AXA will take in charge a part of the costs

From the end of February 2009, the insurer AXA will deduct a part of the SPA costs from its clients' annual premium.
Thus, AXA breaks the insurers' habits to simply denounce the theft guarantee or increase the deductibles in case of theft in a parking location without perimeter protection and without guards or *CCTV*: *"We do not consider SPA are useless and we support the initiative of motorways' operators which create such sites,* explains Olivier Outrequin, Manager of the land transport department in AXA France.

We want also to encourage our customers to secure their load because the theft is very expensive for insurers and make more fragile the life itself of carriers. Parking their trucks in SPA, hauliers reduce the risks and, in compensation, we think we have an obligation of reduction. This will take the form of a not inconsiderable contribution to the expenses of a night parking (Probably, up to 10% of the annual insurance premium). Each year, the client will send

a statement of its costs in SPA and the percentage accepted will be deducted of its annual premium."

For hauliers, this initiative is an opportunity: "if this makes lower the costs of parking, we can only be interested, states Alain Berriot from Transports Richaud (Montfavet, 84, France). *We will use more and more Secure Parking Areas, and especially when we transport high value cargo.*

4.12.5 Overview of Insurance Issues

'Insurance of merchandise' and 'motor vehicle third party liability insurance' practices may have a profound effect on the success of a secure parking standard. If insurers provide rebates for companies using secure parking areas, or impose higher deductibles if trucks are not parked in secured areas, then the demand for secured parking will rise. At present recommendations issued by insurance companies do not recognise any overall level of security at truckstops, but sometimes acknowledge isolated measures (e.g. fences and non parking security measures such as use of immobilisers).

Public liability insurance may not affect the development of a secure parking standard in a direct sense, but can impact on the commercial attractiveness and risk profiles of truckstops as businesses. In Germany, legal practice tends to place a large amount of responsibility on TPA operators. If the liability cannot be limited, then entrepreneurs will not be prepared to carry the risk and operate a secure truck parking area.

In general terms, insurers across Europe do not recognise parking practices in the design of premiums. French insurance companies offer premium benefits for owners parking in secured areas. (see NEA feasibility study), while German insurance companies are reported as being very unlikely to do this, although in principle there is no reason why they cannot. The circumstances in the UK appear to be the same as in Germany. NEA provided the following assessment of this situation

"Although insurance companies have an interest in truck crime reduction, they are not actively assessing their clients parking behaviour. Secured parking is therefore not compensated by lower insurance premiums [in the UK]. A problem that is experienced by insurance companies is that subcontracting among transporters blurs the picture of who's responsible for which load and which truck" (source: NEA country feasibility study p. 153)

It is unclear how the insurance market will develop over the coming years, however what is certain is that improved recognition of truck parking practices can have a profound effect on the demand for secure parking areas in the long term.

4.13 Implications of Land use Policies and Legal Structures

There is a significant amount of variation between member states in relation to how they provide truck parking facilities on motorways. In some cases parking areas are provided via infrastructure planning. Land may be publicly owned but operations are often leased to franchisees, and parking is free or free for a limited period. Germany's Tank and Rast provides an example of an operation under this scenario. The situation in the UK was broadly similar, but operators now own the land that motorway service areas are located on. In France private companies which lease the operation of motorways also operate associated parking areas. Appendix E provides a detailed description of landuse policies and legal structures across key EU member states.

Clearly there is no approach that would work in all circumstances as the mix of public and private sector involvement in the provision of parking services varies so much between member states. Additionally, it is also worth noting that not all countries have the same truck parking

needs. Hence, while for one country it may be desirable to change a law to help the private sector improve the provision of sites, this may not be appropriate for another member state.

What is clear from this work is that there is no single solution to the problem, and SETPOS must establish standards that are broadly relevant and cost effective for the majority of member states.

4.14 Data Protection Considerations

Privacy issues are a key consideration for SETPOS in relation to use and storage of images from a CCTV system, and the storage of relevant electronic information. The right to data privacy is heavily regulated and rigidly enforced in Europe, principally through Article 8 of the European Convention on Human Rights (ECHR). The European Commission harmonized data protection regulation, which member states were required to enact by the end of 1998.

Data protection regulations stipulate a number of key principles which must be complied with by anyone processing personal data. Specifically there is a need to comply with the following eight enforceable principles of good practice. These stipulate that data must be:

- Fairly and lawfully processed
- Processed for limited purposes
- Adequate, relevant and not excessive
- Accurate
- Not kept longer than necessary
- Processed in accordance with the data subject's rights
- Secure
- Not transferred to countries without adequate protection

There is a clear and obvious need for SETPOS recommendations to comply with European and national data protection laws. In general, European laws require procedures for the use of personal data to be made clear to relevant members of the public, e.g. that the purpose and procedures regarding data capturing (CCTV, photographs) must be documented, drivers must be alerted to the fact that they are filmed or their photographs are taken, that drivers may have a right to access such films/pictures and that the removal of media on which films/pictures are stored must be recorded, etc.

The following table provides a summary of legally acceptable procedures in relation to CCTV and photographs for key member states.

Table 4.5: Data Protection Laws in the UK, France and Germany

Country	Law	CCTV / Photos
UK	Data Protection Act 1998.	Cf. CCTV code of practice issued by the Information Commissioner, see http://www.ico.gov.uk/Home/for_organisations/topic_specific_guides/cctv.aspx
France	Law no. 78-17 of 6 January 1978 concerning information technology, files and civil liberties)	www.cnil.fr
Germany	Federal data protection law; Bundesdatenschutz gesetz	www.bfdi.bund.de; Common Criteria Protection Profile Software zur Verarbeitung von personenbezogenen Daten; Version 2.0, 15.1.2007

The UK code of practice appears to be a useful model for SETPOS. While the need to comply with data protection directives can increase the costs of establishing an SPA, these costs are simply unavoidable and must be factored into any SPA business case assessment.

4.15 Summary

As highlighted in this chapter, regulation, policy and agreements exist at national, European and international levels for freight movements by road and other means. The key regulations have been assessed in terms of their relevance to SETPOS, the development of a secure parking standard and the ultimate set of recommendations that will be made by the project. The key considerations regulation and different vehicle types for SETPOS are presented overleaf.

Table 4.6: Key Policy Considerations for SETPOS

Policy / Regulation	Consideration
AEO	Does not appear to have significant potential for application to secure parking in the short or medium term. Unlikely to become relevant for road freight operators and users.
ISO 28000	May have some relevance to SETPOS in terms of defining general procedures and steps that could be taken address broad security risks.
ISO 28001	May have an impact on the SETPOS recommendations in so far as it may help to help suggest general steps that could be taken to develop a security standard.
C-TPAT	Appears to bear limited value for intra-European transport security as no longer based on physical borders.
ISPS	Focused on water-borne transport so unlikely to become relevant for road freight operators and users.
Drivers Hours Minimum Rest	Development of the SETPOS database could provide drivers with the opportunity to know beforehand about the availability of a parking spaces
Landuse Policy and Legal Structures	SETPOS must establish standards that are broadly relevant and cost effective for the majority of member states.
Insurance	Improved recognition of truck parking practices can have a profound effect on the demand for secure parking areas in the long term. Formal buy into a security standard by insurers could have an immediate impact in strengthening the market for secure parking areas. Further work is recommended on this issue.
Data Protection	The UK code of practice appears to be a useful model for SETPOS

Table 4.7: Vehicle Type Considerations for SETPOS

Vehicle Type	Consideration
Dangerous Goods Vehicles	Expensive and not affordable for many site operators. In many cases such features would not generate a return sufficient to pay back the level of investment required. Could also be identified as a terrorist threat
Temperature Controlled Vehicles	Due to lack of freight crime associated with these vehicles they are not considered a distinct demand group for secured truck parking space.
Livestock Vehicles	Catering for this group would require watering and feeding facilities on top of security facilities, which are clearly not viable nor in demand in this sector.

COMMON REQUIREMENTS FOR DEVELOPING A SECURITY STANDARD

SETPOS

5 Common Requirements for Developing a Security Standard

5.1 Introduction

From the outset of this project, it was agreed that SETPOS should build on complement and build on previous research on truck crime, and not duplicate the efforts of others. This is particularly important in relation to the development of the secure parking standard itself. This section provides an overview of previously developed parking standards and guidelines, and discusses their relevance to SETPOS. It should be noted that comments and recommendations in this section have been made with respect to the recent paper published by European Economic and Social Committee on European road Safety policy and professional drivers. While the SETPOS parking standard will focus on overall levels of security, this project recognises that the security and well being of drivers is equally important to security of loads and vehicles. For the SETPOS standard to be successful, consultation must take place with different stakeholders to understand common requirements, benefits must apply to the majority and not just a select few.

5.2 The 'Danish Manual'

In late 2005/early 2006, a special Danish project group was established to look at truck parking issues. This coincided with efforts by the EC to look at the problem, and in June 2007 the Danish group published a paper titled "minimum requirements for a 'standardized' safe parking site". The manual outlines a basic minimum level of security requirements and does not set out more detailed technical specifications for different types of sites. Specific security measures are left to the discretion of site operators. The main purpose of the project was to improve security and safety levels for drivers, and to protect cargo and vehicles. The paper made the following recommendations:

- Light vehicles should not included in a parking standard
- Secure truck parking areas should not be open to 'ordinary' pedestrians but only to security staff and drivers of the trucks parked at the site
- A certification scheme should be established for secure truck parking sites. Regular audits must take place to ensure standards are maintained.
- Sites should have standardised access control
- Parking reservation systems should be in place
- Fencing and CCTV systems should be mandatory
- Site operators should co-operate with the police
- Information about secured sites should be made publically available
- All incidents should be reported

The paper was comprehensive and considered both physical security as well as organisational security. The importance of co-operation with the police and incident reporting procedures were also discussed. The manual also included discussion of quality assurance procedures, i.e. certification. The manual is extremely relevant to the development of the SETOPS standard. In particular, the main recommendations could guide the development of a 'level one' security requirement.

TAPA Guidelines

On 27 March 2006 TAPA and FFI developed a statement of “demands regarding sites and contents of secured parking places [in] Europe”. The truck parking group, which consisted of two representatives from FFI and two from TAPA, defined the following minimum standards for secure parking areas.

Organisational security requirements:

- On-line booking only (verifiable sender principle)
- Control of access (registration of arrival/departure and other rules)
- 24/7 security personnel
- Use quality procedures (management, staff-vetting, multi lingual skills, transport experience)
- Specification of contingency planning procedures (safety, intervention)
- Maintenance and regular checks on physical/electronic installations
- Solid “tailor made” organisational procedures ensuring overall parking area security

Physical and Electronic security requirements:

- Perimeter protection (fence-ditch-hill) with anti-ram
- Access control (e.g., barrier) for vehicles and pedestrians
- CCTV coverage of outside perimeter and in/out access (48 hour storage of images)
- Sufficient lighting to enable clear CCTV image

Facilities:

- Sanitation and eating facilities of minimum standard

TAPA focus principally on the security of cargo and high value loads. The group initially called for a single level comprehensive standard to be developed as part by SETPOS to be applied across Europe. It was argued that because relative security levels cannot be easily quantified, a single standard would be the most effective option. As of June 2007, TAPA modified their original policy position and suggested that a three tiered approach is developed: a minimum security level, unmanned sites and manned.

The work completed by TAPA is obviously highly relevant to the development of the SETPOS standard. Shippers of high value loads have a high willingness to pay for secure truck parking services, and in this respect the work completed by TAPA could be useful in guiding the development of a ‘premium’ security level. It is important to note that SETPOS should also benefit other sections of the industry, and it is critical that elements of other standards and guidelines are also considered and incorporated into the final standard.

5.3 Park Mark

The Park Mark scheme was developed by the following organisations

- The Association of Chief Police Officers (ACPO) for England, Wales & Northern Ireland
- The Association of Chief Police Officers Scotland (ACPOS) for Scotland
- The Association of Chief Police Officers Crime Prevention Initiatives (ACPO CPI)

Management of the scheme is the responsibility of the British Parking Association (BPA). The Association of Chief Police Officers (ACPO), launched the Secured Car Parks scheme in 1992 as part of their Secured by Design initiative. The schemed aimed to encourage car park operators to improve security standards as a means of reducing criminal activity, the fear of crime and the perception of crime in all car parks and vehicle retention areas.

The Park Mark scheme is not aimed at truck parking, but there are a number of elements which could be relevant to the development of the SETPOS standard, notably:

- They have several levels depending on an assessment of crime risk
- Granting of the award does not create any liabilities to the owner or operator over and above their general contractual obligations

Quality assurance/certification plays an important role in the scheme. This scheme is pragmatic in that its originators also take into account whether an area is secure or not before security measures are introduced. Thus, a combination of security measures and the 'insecurity factor' of the surroundings are used to determine the security award, i.e. whether security is sufficient in the eyes of the police or not. It is noteworthy that there is no liability connected with this scheme. In Great Britain this seems sustainable given that there appears to be a reasonable balance between the rights of operators and users in the judicial system (see previous section for discussion of legal issues).

5.4 The Dutch Covenant Criteria

The 'Dutch covenant' are a group of stakeholders in The Netherlands that formed a group to reduce levels of crime. The issue of road transport crime is part of a larger campaign in the Netherlands to reduce criminality by 20% by 2008. In 2004 an action plan was drafted by the group, setting a target of a 25% reduction in transport crime by 2008. Signatories include the Ministries of Economical Affairs, Justice, Interior, Transport as well as industry stakeholders (EVO, KNV, TLN) and the Association of Insurance Companies and the Netherlands Distribution Land.

As a result of this forum, the Dutch Ministry of Transport, Public Works and Water Management commissioned a study on crime prevention on motorway service areas in 2006. The study focused mainly on publicly owned truck parking areas along Dutch motorways. The authors suggested that it would be ideal to provide definitive design guidelines for all service areas. However, this was not considered possible as they concluded that "there needs to be room for interpretation in the guidelines to improve safety on each service area effectively" (p. 3).

The paper also made recommendations in relation to:

- Governance structure guidelines and the need for improved communication and division of responsibilities between Public Works and Water Management and the 'market parties', i.e. leaseholders of service stations and restaurants) (XTNT, p. 5)
- General policy making and achievable outcomes for short and long term private initiatives relating to the creation of secured truck parking. It was recommended that initiatives should be supported by the state

The Dutch paper is focused on high level strategy and policy, and is relevant to SETPOS only in a general sense. Given their experience, it will be important for stakeholders from this group to provide comments on deliverables from SETPOS, and in particular the security standard.

5.5 Central Office for the National Board of Road Freight Transport Operators (Italy)

The Italian network contains parking areas which are secured according different levels. The Central Office is currently developing a list of minimum requirements for secure parking areas. The following requirements are defined in the draft list:

- Sites must be enclosed and include video surveillance
- Sites must be equipped by a lighting system
- Parking areas must provide sufficient water drainage
- Sites must contain at least 50 parking spaces for lorries
- 10% of the total area must be used for hazardous products
- Each space must by at least 18 meters (59 ft) long and 3.8 meters (12 ft) wide
- 30% of the area must be equipped with terminals to enable refrigerated lorries to plug in to preserve perishable goods
- Sites must provide maintenance services for vehicles (repairs, washing…)
- Sites must provide a range of services for drivers, including mini hotels, toilets, showers, washhouse, fax, internet and phone. Optional services include "mini markets", bio-diesel and emergency assistance
- Sites must have an electronic identification system and a safe method of payment
- (Source: NEA Country Studies)

Unfortunately, at the time of writing the final list of required measures from the Central Office was unavailable for review. The Office has not responded to repeated requests for further information for the purposes of the project.

5.6 Light and Heavy Goods Vehicle Parking Award

The scheme, currently under development by ACPO and the RHA, seeks to extend the Park Mark/Secure by Design Scheme (see Section 4.4) to light and heavy goods vehicles. The scheme will be particularly relevant to SETPOS because it not only sets out physical and organisational requirements for parking sites, but is also focused on gathering standardised, consistent information on incidents involving theft or attack of drivers. The scheme will also include guidelines on management responsibility and best practice (e.g. in relation to cleanliness, staff management etc). Further information on the award is expected to be made available to the project team as the SETPOS standard is developed.

Figure 5.1: Parked HGVs

5.7 IRU and ETF's Common Criteria for Rest Facilities

Prior to new driver hours laws which came into force in 2007, the IRU and ETF published a discussion document on the consequences of the regulations on driver rest area facilities. The paper identified four key EU regulations/policy areas that reinforce the need for improved provision of rest facilities. These were:

1. Eurovignette Directive
2. Drivers' hours regulations
3. Security requirements
4. ADR (European Agreement Concerning the International carriage of Dangerous Goods by Road)

The paper highlighted significant concerns with the lack of parking provision in central and Eastern Europe. Following discussion of these general concerns, the paper then outlined essential features for adequate rest areas. The paper placed considerable emphasis on basic site elements such as ensuring a sufficient number of parking spaces and providing sanitary facilities, emergency call facilities, clear signage for international drivers and appropriate levels of customer service.

Only lighting and an incident alarm system were considered to be mandatory security features. However, it was suggested that additional security features (e.g. routine police patrol, camera system or security personnel) should be considered for 'frontier points', hotpots and port / airport terminals.

The suggestions set out in this paper are practical low cost steps that can be taken to improve truck parking standards, and provide a good balance between the needs of management and drivers. The SETPOS standard should also aim to provide a balance between the needs of stakeholders, and hence elements of this work will be useful in the next stage of work.

5.8 Categorisation Belgium / Flanders for Parking Places

Background research revealed a one-page release titled 'Categorie indeling Belgische parkeerplaatsen Engels origineel 2', which discusses parking issues in the Belgium/Flanders region. The release appears to be a rough draft of a three-level security scheme. It is interesting to note that category 1 is the low-cost minimal requirement; it still provides a basic level of security. This category requires the following features:

- Emergency telephone [in] visible places, including a directory of emergency service(s)
- Camera surveillance 24 hours per day
- Remove bushes and dispose of dark places

This is a very pragmatic scheme, and may be relevant to the design of a low cost minimal standard which may be appropriate for areas that do not have high amounts of truck crime.

5.9 VEDA Paper

This paper was developed by VEDA, the German association of private truck parking areas (privately owned TPAs located away from motorways). VEDA suggest that a pragmatic two level security standard should be developed. It was suggested sites without security personnel (but with involvement of TPA staff) could qualify for the level one standard, while sites with security personnel would qualify for a higher level of accreditation.

Fencing, lighting and video surveillance were identified as essential physical security measures. A range of operational procedures were also recommended, including entry/departure checks, incident recording and reporting, reservation systems etc.

5.10 NEA Secure Parking Framework

In their 'Study on the feasibility of organising a network of secured parking areas for road transport operators on the Trans European Road Network' NEA examined a number of previous studies looking at the defining characteristics of a 'secure' parking area. Considering a range of different approaches, the study suggested that

- A standard based on a simple list of security features is not effective, and that a strategy or plan is needed that is based on several levels of security
- The varying needs of different market segments must be recognised by a standard (e.g., the parking area security level needed for the transport of electronic equipment will not be the same as for the transport of potatoes)
- It would be undesirable for all parking areas to meet the highest security level, because this would mean that a large part of the industry could not afford to pay for parking. What is required is "simply a sufficient number of parking areas in order to accommodate each type of transport and each type of corresponding security needs." (p. 74)

In light of these issues, NEA conceptualised a security framework based on the 'Black Market Value' (BMV) of goods being transported. A more detailed description of this framework is provided in Appendix F. The system is based on the premise that all consumer products have a Black Market Value, but that their attractiveness to thieves will depend not only on value but also on weight e.g., a highly specialised piece of machinery may have a high market value but is in most cases not attractive for thieves because it would not be easy to dispose of. Using these categories, a 'crime index' was developed based on BMV value to weight categories, and relatively levels of local truck crime. Thus the highest security levels are required for goods with high BMV values, for vehicles parking in areas which have high levels of crime.

To simplify the system further and make it more accessible to the transport industry a two tiered system was developed for 'Black market value hot spots' and 'non hot spots'. These were related to specific security measures, as shown in the table below.

Table 5.1: Physical and Organisational Measures that can be Considered for Hot Spots and non Hot Spots (source NEA 'Feasibility' Study)

Security elements	Hot spots	Non hot spots
Entry/exit control		
Fence	X	
Physical entry barriers	X	X
(automatic) registration incoming and departing vehicles	X	
Driver identification	X	
At point of entry/exit: Weighing of vehicles	X	
Interaction with other traffic		
Exclusive for truck-parking	X	
Exclusive for tanking, restaurants, etc. for truck parking drivers	X	
Control during stay		
24-hour camera surveillance	X	
Monitors for drivers when outside secure parking area (e.g. in restaurants)	X	
Optimal lighting of parking slots	X	X
Additional lighting high risk cargo	X	
ORGANISATION AND COMMUNICATION		
Security management		
Security manager	X	X
Integration of security management and security management of other facilities	X	
Registration and central administration of (security) incidents	X	X
Security plan/protocol and security manual	X	
Security services		
24-hour manned entry/exit control	X	
24-hour camera security surveillance and regular physical surveillance	X	
Options of (remote) checks of availability of parking slots/parking parking capacity	X	
Options of reservation of parking slots	X	
Communication with authorities/policies		
Communication of incidents	X	X
Direct alarming of police	X	

Security elements	Hot spots	Non hot spots
Regular surveillance of police	X	X
Active participation of (police) authority with security plan of parking area	X	
Communication with users organisations		
Communication of available facilities and organisation	X	
Communication of (security) incidents	X	

The framework developed by NEA has a number of notable strengths. The framework is conceptually very strong, and recognises the fact that security needs vary across the industry, and incorporate local circumstances and levels of risk. A major downside is that the approach is based on information which is not readily available from the industry (i.e. BMV values and uniform information local truck crime levels). An 'index' based approach would be as easily understood by industry as other more straight forward approaches. Despite these shortcomings, the 'hot spot' - 'non-hot spot' approach is useful and may help guide the development of a more prescriptive multi level standard.

5.11 Stakeholder Views on Security Measures: Group Save Stakeholder Survey

To help inform the development of the secure parking standard, a survey of stakeholder views on security measures was undertaken in December 2007. The survey sought views on the relative importance of various truckstop features, and was circulated amongst freight shippers and operators, insurance agencies, trade associations and government authorities. Appendix G provides a complete list of the truckstop features included in the questionnaire. Respondents were asked to rate the importance of each, using a simple three point scale. A summary of the main findings of the survey is provided below. Findings are grouped according to the main categories used in the questionnaire. A full overview of results is contained in Appendix H.

5.11.1 Entry exit control

The majority of entry and exit control features were viewed as important by stakeholders. Most groups suggested that systems to weigh vehicles and check seals would not be necessary. Government authorities also suggested that the decision to use high technology systems, such as micro phonic fencing cables and electric beam detection, should be made by site operators subject to local circumstances and risk levels.

Some of the logistics and transport companies interviewed provided specific dimensions that they would like to see applied for certain measures, e.g. fences should be at least 2.40 – 2.50 m in height. Several respondents in this group also suggested that physical entry barriers could be difficult to implement in areas where there were land constraints. It was also suggested that barriers should prevent the unlawful entry pedestrians/the general public.

5.11.2 Interaction with other traffic

It was unanimously agreed the interaction of trucks with external traffic should be limited to the greatest extent possible at sites, and that members of the general public should not have access to SPAs. Most stakeholders agreed that separate spaces for short-term parking (with less security) should be avoided.

5.11.3 Control during stay

Stakeholders were in broad agreement on security features for controlling vehicles on site. Twenty four hour camera surveillance was considered very important, as were most other common features such as optimal lighting of parking slots and additional lighting for alarms. It was agreed by all stakeholders that additional lighting for high risk cargo vehicles must be avoided because this would only highlight valuable loads to thieves. Training of the personnel was considered important or very important.

5.11.4 Security management

All security management elements (security manager, protocol for recording incidents etc) were considered important or very important by stakeholders.

5.11.5 Security services

Stakeholders agreed that at a general level security services were important, but a range of vehicle specific features were felt to be unimportant by stakeholders. Shippers/transport operators, insurers and authorities all commented that dedicated parking bays for oversized vehicles were unnecessary. Shippers/transport operators suggested that permanent power supplies for vehicles would be useful. A number of trade associations felt that additional features for dangerous products (e.g. grit bins, retention basins) were not important. Authorities did not feel it was necessary to restrict external access to service stations located within sites.

5.11.6 Communication with authorities

Shippers/transport operators considered information on the movement of vehicles with dangerous load is very important. Communication channels with customs and police authorities were also viewed as important. The police play a significant role in the security of future SPA: active participation of authority with security plan of parking areas, direct alarming and regular surveillance.

5.11.7 Communication with parking users

Appropriate communication with sites' users was considered important or very important by most stakeholders.

5.11.8 Certification

It was agreed by all stakeholders that certification was important or very important. External certification was seen as preferable over self certification by shippers/transport operators and insurers

5.11.9 Alarm scheme

An alarm scheme for emergencies was regarded as important or very important by stakeholders.

5.11.10 Specific truck needs

Trade associations and shippers/transport operators felt that trailer/driver change over areas were important, and agreed that facilities for allowing load transfers were not.

5.11.11 External identification of secure parking areas

The category covered a range of topics including the optimum distance between truckstops, site visibility from motorways and markings for entry and exit. Shippers/transport operators suggested that the distance between each site should be between 50 and 250km, or 125 km on average. Other stakeholders did not suggest specific distances between sites, stating that the spacing of sites should be determined by driving time limits.

5.11.12 Reservation

Reservation features were thought very important by shippers/transport operators. This group appeared to endorse all methods presented (phone, internet, messaging). It was noted that use of the internet for bookings could reduce the workload of site operators. One stakeholder also commented that security personnel should not be required to manage reservations, but should have access to this information to control vehicles entering and leaving sites. GPS services, text messaging services and call centres were not important for insurers, but internet/phone reservation systems were viewed positively. Authorities commented that while reservations should be mandatory, decisions about which methods are used should be left to site operators.

5.11.13 Driver facilities

Shippers/transport operators attached a high degree of importance to driver facilities. Toilets, showers, and cafeteria were viewed as essential features for all SPAs. Most of the other features in the questionnaire were viewed as important or very important, with the exception of mini-hotel accommodation, premium-catering, bar facilities (some stakeholders felt alcohol should be prohibited), laundry, lorry wash and vehicle repairs. Emergency assistance, rules and regulations posted in different languages, restaurant, toilets and showers were all considered very important. Several stakeholders felt that Maut machines (for paying road tolls in Germany) were important in order to avoid the need for additional stops during transit.

Other stakeholders considered most driver faculties important of very important. Accommodation, lounges, fax, vehicle repairs, fast food and automated tellers were seen as less important by this group. Authorities viewed only showers, toilets and a cafeteria as important and suggested that other features should be determined at site level.

5.12 Stakeholder Views on Security Measures: UICR Driver Survey

Union Internationale des Chauffeurs Routiers (UICR) represents a large number of drivers across Europe. As part of background work for this project, the group conducted a survey of professional drivers to seek views on issues surrounding truck crime. The survey questionnaire was sent to UICR members in late 2007. In total 20 surveys were distributed and 9 were returned. While this is a very small sample, respondents were based in a wide variety of countries and provided useful comments to help inform background research and future stages of work. Appendix I provides a summary of responses to the questionnaire. From this it can be seen that drivers are strongly supportive of the need to improve provision of secure parking areas, but there is a low willingness to pay for such improvements. Italy, Spain and France

(Paris-Marseille) were considered to be the most significant hotspots where risk of attack was greatest.

Drivers considered the following to be key characteristics of a secure parking area:

- Increased provision of parking areas would increase safety on the road (not security in the parking areas)
- Parking areas should cater to three distinct groups (more for comfort than for security): regular trucks, refrigerated trucks and heavy goods transports
- Sites should have clearly marked entrance and exit, easy to enter and exit
- Sites should have necessary infrastructure for drivers (s. WP 5 – Index)
- Sites should be well lit
- There should be a security presence at sites, with regular police checks
- Parking areas should have camera monitoring of entry and exit points, and should record details of truck and driver.
- Parking areas should be contained by fences
- Sites should have short-term parking for coffee brakes, with less security
- Parking areas should be located in quiet areas
- Separate parking areas should be provided for cars with trailers and motor homes

These requirements are broadly consistent with those identified by other stakeholders (e.g. in the Group Save survey).

A supplementary questionnaire was issued by UICR in late 2007 exploring driver use of technology. Findings from the survey are yet to be finalised, but results to date have revealed a number of issues, notably:

- Around one fifth of those drivers surveyed had mobile phones with internet capabilities, and around half of this group used these features
- Mobile phones are the most commonly used means to communicate with dispatchers
- Significant numbers of drivers on long distance routes have access to laptops and sat nav systems

Issues surrounding use of IT systems will be explored further as part of WP 5.

5.13 Discussion

As we have seen there are quite a variety of different initiatives that have either been developed or are under current consideration. The following table provides a broad comparison between the various schemes examined as part of WP 2.

Table 5.2: Summary of Security Schemes*

	Areas of recommendation						
Source	Governance / policy	Physical security measures	Procedural security measures incl. police	Procedural security measures without police	Certification	Availability and reservation	Subjective safety / quality / dignity features
Danish Manual	X	X	X	X	X	X	X
TAPA guidelines		X	X	X	X		
TAPA-FFI		X		X			X
Park Mark		X	X	X	X		X
The Dutch Covenant Criteria	X	X					X
Central Office for the National Board of Road Freight Transport Operators (IT)		X*		X*	X*		X*
Light and Heavy Goods Vehicle parking award		X	X	X			X
IRU / ETF		X	X	X			X
Categorisation Belgium / Flanders		X	X	X			
VEDA		X	X	X		X	
NEA feasibility study	X	X	X	X	X	X	

*Inferred from the summary in the NEA country report; unfortunately the original Italian recommendations are presently not available to the project team.

The different approaches are not easy to compare, mainly because the level of detail covered varies significantly between the different standards/guidelines. The following specific issues were observed:

- Concept overlap creates difficulties separating the importance of different security features. For example, one approach may refer to a ‘CCTV system’ while another might recommend a ‘Fence covered by CCTV system.’ It is difficult to establish precisely how the ‘CCTV system’ is applied between the two schemes.

- If certain measures are not mentioned in one paper it does not necessarily mean that such measures should not be implemented. The Danish manual for instance, notes that the proposals are only made in relation to a first level for the physical layout, and that individual parking sites should define more detailed technical specifications for certain types of sites

Despite these difficulties, most approaches appear to fall into one of two distinct groups. The first type of approach involves a simple, prescriptive based standard which specifies a list of mandatory security measures. This other main approach is less prescriptive, and recognises that local circumstances play a role in determining risk, and the demand for secure parking.

The former approach is pragmatic and can be easily understood by industry, but is not flexible and hence may place a burden on site operators who could be forced to invest in equipment that is not necessary. The latter approach is more flexible and can meet the needs of different sectors of the road freight market, but may require more complicated accreditation procedures.

SETPOS must strike an appropriate balance between these approaches and provide a standard that is simple, readily understood, and meets the general needs of a large number of stakeholders.

COST ISSUES

6 Cost Issues

6.1 Introduction

The cost implications of secured truck parking cannot be reported at this early stage of the project and will be considered in detail as part of Work packages 4 and 6. This chapter nevertheless provides a broad overview of some of the issues that will need to be considered as we move forward on the project.

6.2 Truckstop Business Models

Parking areas along major roads or highways customarily made money by selling fuel. Additional services like restaurants may have generated additional revenue, but in most cases this does not greatly exceed the costs associated with the construction of parking areas. Parking fees are sometimes charged, but in many cases are not. If returns on fuel are not sufficient, TPA operators revert to charging a parking fee while at the same time issuing a meal voucher. This provides an incentive for drivers to spend some money at the restaurant. This business model is widely used at truckstops throughout Europe.

6.3 Tariffs for Secure Parking

The table below shows details of tariffs charged at sites involved in the SETPOS project. Prices appear to be roughly similar in spite of the fact that the sites are located in very different regions. Truckstop operators however, have reported that the market is very sensitive to price increases. Even a highly utilised truckstop like Ashford cannot raise prices indefinitely. Their price is currently (as of September 2007) GBP 18.50 and it had only been raised a few months from. GBP 16.50.

Table 6.1: Parking Tariffs at SETPOS Sites

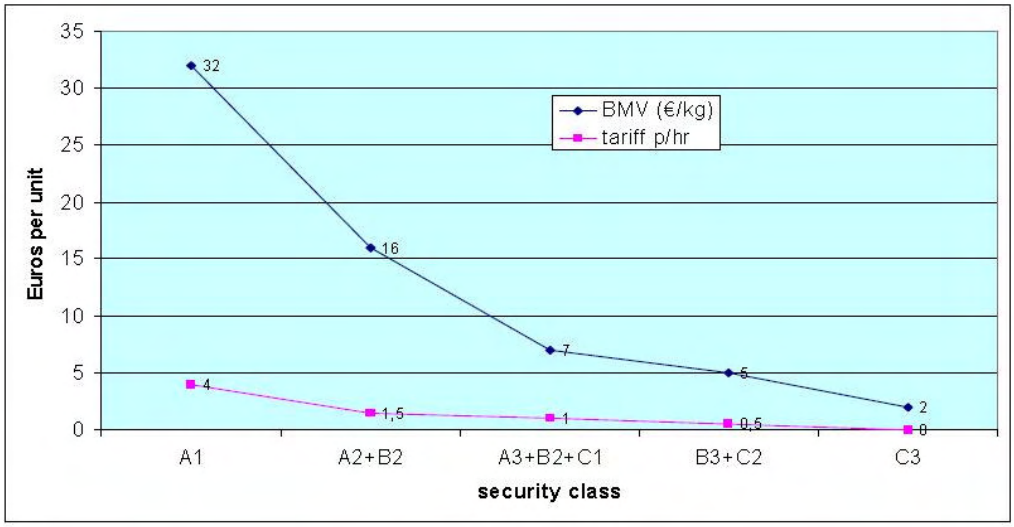
SPA	1 hour	24 hours/day fee	Weekend	Remarks
Ashford Truck Stop	First 2 hours for free if driver consumes something	GBP 18.50 including eating voucher of 6.50		
Truck Etape Valenciennes	First 2 hours for free, then decreasing scale EUR 3 for 2.5 hours, EUR 5 for 3 hours, EUR 8 for 4 hours, EUR 11 for 5 hours, etc. (VAT included)	EUR 16.5 excl. VAT	EUR 34.24 excl. VAT – from Sat to Mon a.m.	
Rasthof Uhrsleben	EUR 3.50	EUR 25	EUR 50 – from Fri afternoon to Mon a.m.	From 8th hour onwards day fee applies
Autohof Woernitz	EUR 3	EUR 30	EUR 60.—from Fri noon until Sun 22:00	From 10th hour onwards day fee applies

6.4 The Views of Hauliers and Shippers

In their feasibility study, NEA suggested that "**it is generally not the transport operator** who decides the security level of the truck parking area to be parked at **but the shipper**" (p. 91). The haulier or carrier will park in a secured area only if the client is prepared to pay for it. Surprisingly, anecdotal evidence suggests there is no strong link between high value goods loads and driver willingness to pay for secure parking.

Figure 6.1 shows that the maximum value that shippers are willing to pay for secured parking is approx. EUR 4 per hour if the cargo is valued at EUR 32/kg. If the value of the cargo is only EUR 2/kg, then readiness to pay is nil (NEA Feasibility study). These findings appear to be consistent with the actual prices asked for by SPA discussed earlier.

Figure 6.1: The Maximum Shippers are Willing to Pay for Secured Parking



Shippers' future willingness to pay for secure parking will depend on changes in levels of transport crime, and the policies that will be adopted by the insurance industry. Premiums, deductibles and incentives for secured parking are certainly likely to influence shippers' behaviour.

6.5 Amortization of Secured Truck Stop

Building a SPA from scratch is expensive. NEA (feasibility study country reports) examined the facilities at the Maat Truck Parking area as an example.

Table 6.2: Example of Investment for Dutch SPA in 2007[22]

Category	Costs (in 1,000 Euro)
Acquisition and preparation of territory (approx. 7000 sqm)	1,000
Security cameras etc	60
Infrastructure, fencing etc	470
Facilities	120
Soft- and hardware (identification, etc)	130
External advice	100
Total	1,880

The study estimated that the total costs of operations per year (rents and depreciation; excl. land rent) to be in the region of EUR 250,000. Land rent was estimated to add a further EUR 40,000 to this cost. Table 6.3 shows estimates of daily operations costs.

[22] NEA feasibility study country reports

Table 6.3: Operational Costs According to Occupancy Rates[23]

Slot type	80% average occupancy rate		60% average occupancy rate	
	Excl. territory costs	Incl. territory costs	Excl. territory costs	Incl. Territory costs
Large slot (90 sqm)	EUR 11.21	EUR 13.00	EUR 14.94	EUR 17.33
Small slot (65 sqm)	EUR 8.09	EUR 10.79	EUR 10.79	EUR 12.52

As one can see from the figures above costs of building and running a SPA in Western Europe are high and considering shippers' low willingness to pay for secured parking spaces, it is no surprise that profit margins of SPAs are generally small.

SPA operators would not react positively if they were forced to make available secured space for dangerous goods vehicles, temperature control vehicles and vehicles carrying livestock, particularly if there is no current obligation for such vehicles to use SPAs and if they are not subsidised for this purpose. Such policies would make operations costs of a SPA more expensive without generating a justifiable return.

This section has provided a preliminary picture of the costs associated with developing and operating SPAs. Further work on these issues will be undertaken as part of work packages 4 and 6. These findings will be compared to NEA's findings in their feasibility study.

6.6 Commentary

As the previous section has shown, parking involves security risks for trucks, cargo and drivers alike. While there is unanimous agreement across industry that there is a need for greater provision of secure parking, it is worth noting that stakeholders often welcome any positive measure regardless of its cost. There is a low willingness to pay for overnight parking amongst many sections of the industry and innovative strategies are needed to ensure that secure parking facilities are used appropriately. When one considers the costs of truck crime on individuals, companies and the economy, increased parking costs are clearly justifiable. Levels of future freight crime and developments in the insurance industry will have a major impact on the level of demand for secure parking areas in the future.

[23] NEA feasibility study country reports

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APPENDIX A: PARKING ‘HOT SPOTS’

Appendix A: Parking 'Hot Spots'

Table A-1: Parking hot spots identified by, NEA[24], TAPA/FFI[25]

Country	Hot spots according to NEA	Hot spots according to TAPA and FFI (figures in brackets indicate priority)
Austria	St. Poelten	St. Poelten (20)
Austria	Zöbern	
Austria	Gottlesbrunn	
Belgium	Braine Le Chateau	
Belgium	Rumst	
Belgium	Brussels	Brussels area (6)
Belgium	Antwerpen	
Belgium	Hazeldonk	
Belgium	Mons	
Belgium	Zeebrugge	
Cyprus	None	
Czech republic	None	
Denmark	None	
Estonia	None	
Finland	None	
France	Strasbourg	
France	Le Plessis Belleville	
France	Soissons	
France	Vitrolles	
France	Paris	North of Paris (1)
France	Avignon	Avignon (7)
France	Lille	North of Lille (12)
France	Bordeaux	Bordeaux (17)
France	Blincourt	
France	Duinkerken	
France	Lyon	
Germany	Aachen	

[24] Study on the feasibility of organising a network of secured parking areas for road transport operators on the Trans European Road Network
[25] Document provided to authors by TAPA/FFI

Country	Hot spots according to NEA	Hot spots according to TAPA and FFI (figures in brackets indicate priority)
Germany	Trier	
Germany	Hamburg	South West of Hamburg (11)
Germany	Mannheim	Mannheim area (5)
Germany	Nurnberg	Nurnberg (15)
Germany	Solingen	
Greece	Aspropirgos	
Greece	Patras	
Hungary	Szombathely	
Hungary	Gyor	Gyor (19)
Ireland	Dublin	
Italy	Milano	South West of Milano (8)
Italy	Napoli	
Italy	Pescara	
Italy	Roma	
Italy	Torino	
Italy	Brescia	
Italy	Verona	Verona (16)
Latvia	Kaunas	
Lithuania	None	Kaunas (18)
Luxembourg	None	
Malta	None	
The Netherlands	Venlo	Venlo (2)
The Netherlands	Eindhoven	Eindhoven (2)
The Netherlands	Breda	
The Netherlands	Weert	
Poland	Poznan	Poznan (14)
Poland	Piotrkow	
Poland	Wiskitkach	
Portugal	None	
Slovak Republic	None	
Slovenia	None	
Spain	Talavera	

Country	Hot spots according to NEA	Hot spots according to TAPA and FFI (figures in brackets indicate priority)
Spain	Barcelona	Barcelona (4)
Spain	Madrid	Madrid (10)
Spain	Lloret	
Spain	Sabadell	
Sweden	Malmo	North of Malmo (13)
Sweden	Helsingborg	
Sweden	Jonkoping	
Sweden	Norkoping	
Sweden	Telleborg	
UK	Birmingham	South East of Birmingham (9)
UK	Manchester	
UK	Erskine	
UK	Accrington	
UK	Wolverhampton	
UK	London	South East of London (3)
UK	Basildon	
UK	Coventry	
Bulgaria	None	
Romania	None	
Total of 'hot spots'	**65**	

APPENDIX B: TRANS-EUROPEAN ROAD NETWORK

Appendix B: Trans-European Road Network

APPENDIX C: PAN-EUROPEAN ROAD NETWORK

Appendix C Pan-European Road Network

APPENDIX D: DRIVING TIME REGULATIONS

Appendix D: Driving Time Regulations

- Convention on the Contract for the International Carriage of Goods by Road (CMR), 19.05.1956
- 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 (Text with EEA relevance) – Declaration
- Regulation (EEC) n°3820/85 of 20th December 1985 on the harmonization of certain social legislation relating to road transport (also called 'Drivers' Hours' Rules')
- Regulation (EEC) n°3821/85 of 20th December 1985 on recording equipment in road transport (also called 'Analogue Tachograph')
- Regulation (EC) n°2135/98 of 24th September 1998 amending Regulation (EEC) n°3821/85 on recording equipment in road transport and Directive 88/599/EEC concerning the application of Regulations (EEC) n°3820/84 and (EEC) n°3821/85 (also called 'Digital Tachograph')
- Regulation (EC) n°1360/2002 of 13th June 2002 adapting for the seventh time to technical progress Council Regulation (EEC) n°3821/85 on recording equipment in road transport (Text with EEA relevance) (also called 'Technical Specifications of Digital Tachograph')
- Directive 2002/15/EC of the European Parliament and of the Council of 11th March 2002 on the organisation of the working time of persons performing mobile road transport activities (also called 'Working Time Directive')
- Regulation (EC) n° 561/2006 of 15 March 2006 on the harmonization of certain social legislation relating to road transport and amending Council Regulations (EEC) n°3821/85 and (EC) n°2135/98 and repealing Council Regulation (EEC) n°3820/85 – EU drivers' hours rules
- Directive 2006/22/EC of 15 March 2006 on minimum conditions for the implementation of Council Regulations (EEC) n° 3820/85 and (EEC) n° 3821/85 concerning social legislation relating to road transport activities and repealing Council Directive 88/599/EEC
- At international level, drivers' activities are regulated by the European Agreement concerning the work of Crews of Vehicles engaged in International Road Transport (AETR), of 1st July 1970 (Consolidated text dated 1999).

APPENDIX E: LANDUSE POLICIES AND LEGAL STRUCTURES IN SELECTED MEMBER STATES

Appendix E: Landuse Policies and Legal Structures in Selected Member States

The section below provides an overview of legal frameworks used in different member states for the provision of truck parking facilities. The majority of this information is drawn from the 'legal and financial framework' sections in the NEA feasibility study[26], but has also been supplemented with information from other sources examined in this initial phase of work as well as comments from stakeholders.

Austria

"Truck parking areas are an integral part of the infrastructure network planning, in which security is of special concern. Such planning originates from public organisations. Specific legal requirements are in effect for organisations that exploit these areas." NEA Final Report Country Studies p. 16

Belgium

No information, NEA Final Report Country Studies p. 19

Cyprus

No information, NEA Final Report Country Studies p. 20

Czech Republic

A mix of public and private parties are responsible for the provision of (truck) parking areas along the TERN in the Czech Republic. The parking tariffs are to some extent related with the supply and demand in the market and are depending on the presence of security facilities (source: NEA Final Report Country Studies)

Denmark

On the Danish Motorway there are a number of road side facilities including motorway services, rest facilities with so called "infoteria" [Rest facilities with kiosks, cafeterias, toilets, picnic areas and parking areas located at intervals of approximately 50km (25km from motorway service stations)] and lay bys. The Danish Road Directorate owns the land and sites are operated mainly by private parties. The Danish Road Directorate's manned motorway services and rest facilities are run by private partnership companies. Various oil industry companies run motorway services while Infoterias are run by private franchises. Maintenance and cleaning of rest facilities, upkeep of green areas and parking areas is all outsourced to private contractors.

Parking is generally free along the TERN (E roads) and there are no dedicated publically run secured sites for trucks (e.g. fenced). All secured truck parking areas are managed by private operators (source: NEA Final Report Country Studies)

Estonia

The development of parking areas is an integral part of the infrastructure planning, but security concerns are generally not given consideration. The Estonian Road Administration is responsible for the planning rest sites. The Estonian Road Administration, local road offices, private parties and other interested parties (e.g. investors or road associations) also have input into decisions about where truck parking locations are built.

At present the Association of Estonian Road Carriers (ERAA) is planning to build 4 secure truck parking areas on key routes into Estonia (source: NEA Final Report Country Studies)

[26] FINAL REPORT COUNTRY STUDIES Study on the feasibility of organising a network of secured parking areas for road transport operators on the Trans European Road Network. The source is given as 'NEA Final Report Country Studies'.

Finland

Truck parking areas are generally not seen as an integral part of the infrastructure network planning. No security related specific legal requirements are in effect for site operators.
Parking tariffs are neither related to supply and demand nor to presence of the number of security facilities (source: NEA Final Report Country Studies)

France

“The development of (truck) parking areas is public (along the Routes Nationales) or private (along the Peages). Although the parking tariffs are only to some extent related to the supply and demand, there is a strong relation with the number of security facilities.” NEA Final Report Country Studies p. 46

If a private company wants to build a Truck Parking Area along a French motorway, it must first request a building permit from the client. In France, most clients are represented by the National Management of the Roads (i.e. the State) and a minority are represented by the Regional Management of the Roads (always the State). The client must abide by the rules of the town planning and French law.

Along major roads (e.g. Routes Nationales) or along secondary roads (Routes Départementales) applications are treated as a private request. The request must be made by filing a building permit to the town hall (Commune) of the town in which the land is situated.

The town hall then need to approach the local offices of the Ministry of the Environment to present a position according to local town planning rules (The Ministry of Environment is DDE in French: Direction Départementale de l’équipement. In practice it is the local government department responsible for road maintenance and issuing building permits).

If the development of a Secure Parking Area is initiated by local authorities, these authorities are required to submit the “proposition of infrastructure” to the local offices of the Ministry of the Environment. If such an initiative is private, the request for a building permit must also be addressed to the Ministry of the Environment.

In summary, if a company wants to build a TPA in France, it is required to check if the land is zoned for development activity).If the land is not zoned for building, (e.g. fields and green space areas around motorways) then it is necessary to undertake survey to establish its suitablility for development, assess environmental impacts etc. These procedures generally take around 18 months. Following this, if the company wants to build on the land, they must present its building permit to the town hall and to wait more or less 3 months until the permit is issued.

If the State decides to build a TPA, a tutelary authorization and land survey are prerequisites. The State must also launch a tender to select a builder. This procedure takes around 12 months.

VINCI Concessions must comply with the following terms and conditions in relation to the construction for the new Truck Etap site:

- Provision for spaces for vehicles which transport dangerous goods
- Decontamination area for potential accidents of ADR vehicles
- Acceptance of temperature controlled lorries
- Acceptance of security trailers
- Basic security features such as access control and video surveillance…
- Facilities for drivers, e.g., showers, toilets
- Allowing payments by card or swipe card

Germany

"In Germany the Federal Ministry of Transport in co-ordination with regional motorway directorates, regional and local authorities (municipalities of affected towns, etc.) are usually involved in the planning procedure and may make proposals or provide comments on the planned location of parking areas. Private parties are usually not involved in this co-ordination procedure.

Planning and design of parking areas along TEN roads (for trucks etc) follows the standardised design rules for motorways. These rules relate to the distance between parking areas (frequency standards), size and type of rest area (with restaurant or without, availability of toilets) whereas specific security standards are not defined, except for illumination. (source: NEA Final Report Country Studies).

Regulations Relating to German autobahns

In Germany the Federal Highway Administration (a body consisting of representatives of the Bundesministerium für Verkehr, Bau und Stadtentwicklung BMVBS, Landesverkehrsministerien and regional institutions) initiate a special planning procedures under the premises of the national legislation, known as Bundesfernstrassengesetz FSTRG. Local authorities and private third parties are involved in this procedure. This can take five or more years – after which time the Federal Highway Administration then grants approval to build a rest area along the autobahn.

In summary, the federation and the individual Länder define a development concept in relation to a specific location. The Länder is responsible for the planning and the federation takes a supervisory role from a technical point of view. When the federation has finally granted permission for development, this is followed by a process known as 'Planfeststellungsverfahren'. This means that building permission is given under certain conditions (how the development is designed, whether dispossessions are part of the matter, whether conservation issues must be considered, etc.). Parties that may be affected by the development (neighbours and loca residents, for example) are part of the 'discussion times' (Erörterungstermine) that are part of the Planfeststellungsverfahren. The communities concerned as well as organisations of Environmental Protection are always involved in this process.

When the planning of a new TPA is complete, a tender is released for the operation of the facilities. The company winning the tender must buy the land on which the rest areas is built, however, it does not own the parking facilities. When the concession period has expired the holder must sell back the land to the state. There are quite strict restrictions on what concession holders can build. They cannot, for example, set up large luminous advertising boards, discount supermarkets etc within facilities.

Parking is free of charge (both for trucks and cars) on rest areas along the autobahns.

Regulations Outside Autobahns

Autohöfe are permitted to charge for parking and are privately owned. Local communities are mainly involved in the development process. In contrast to the rest areas on autobahns, only communal (or Länder relevant) restrictions apply. Adult book shops and discount supermarkets are just some of the secondary developments which often form part of Autohof development plans.

Although considerable flexibility is provided about how these types of facilities are built, entrepreneurs have reported difficulties in working through the bureaucratic procedures. Many communities do not have a land utilisation plan, the creation of which may take years andcan delay TPA projects. The ADAC foundation is currently sponsoring a study on this problem (carried out by Prof. Schäfer in Darmstadt and Prof Schuster in Zwickau).

Greece

No information, see NEA Final Report Country Studies (p. 78)

Hungary

The development of new (truck) parking areas in Hungary is undertaken by a mix of public and private organisations. In Hungary, the territory along the TERN is entirely in private hands. The provision of parking areas, however, is in public hands. Parking tariffs are completely determined by supply and demand and also generally relate to the number of security facilities (source: NEA Final Report Country Studies)

Ireland

No information, NEA Final Report Country Studies p. 83

Italy

"[] in the context of the Law 40/1999, 229/2000 and 448/2001, (relating to financial support of public transport and the impact of road freight transport on safety, security and environment), the Central Office for the National Board of Road Freight Transport Operators manages a portfolio of public funds (about EUR 13 million, of which EUR 5 million for 2006) for co-financing construction of new secured parking areas or upgrading existing parking areas (source: NEA Final Report Country Studies)

Of the 20 areas that have been identified for potential development by the Central Office for the National Board of Road Freight Transport Operators in 2006, at least 4 are located on sensitive transport areas along the Alpine crossing, e.g. Brenner, Gotthard, Monte Bianco, and Frejus. Five are located along two TEN-T corridors (Gorizia and Udine, along the V Corridor Lisbon-Kiev) and one in the area of Firenze and Arezzo, along the I Corridor Naples-Berlin.

This selection of regions was not based on high crime rates but on sites having strategic importance in relation to existing and foreseeable traffic volumes, or whether the regions contain/or are serving important intermodal nodes (ports, terminals, etc.) (Source: NEA Final Report Country Studies)

According to the NEA report, the construction of the secured parking area must be subjected to the following rules:

- The parking area should be enclosed by fences and under surveillance both in the entrance and the exit points
- It should be equipped with lighting installations allowing during night time security and mobility
- It should be designed in order to ensure sufficient water drainage
- The parking area must contain at least 50 parking spaces for trucks, each one with dimensions not lower than 18 meters lengths and 3.80 width. At least 10% of total parking supply should dedicated to dangerous goods [etc.]" NEA Final Report Country Studies p. 89

Latvia

Most of the initiatives concerning truck parking areas are initiated by a mix of private and public organisations (Source NEA Final Report Country Studies).

Lithuania

Most of the development of new parking areas is undertaken by a mix of private and public organisations. Parking tariffs are complete[ly] determined by supply and demand, and is related to the presence of security facilities." NEA Final Report Country Studies p. 100

Luxembourg

No information, NEA Final Report Country Studies p. 102

Malta
No information, NEA Final Report Country Studies p. 104

The Netherlands
Truck parking sites are both privately and publically funded and operated. Service areas along motorways are owned by the State, while Public Works and Water Management are responsible for their maintenance. Leaseholders of service stations and restaurants “pay their long leases to the department of Treasury” (XTNT, p. 3). There are also service areas located along regional roads, which are mainly managed by private entrepreneurs. (XTNT, p. 1)

Poland
Private parties can be involved in development planning of truck parking areas however they are also publically provided. The land of parking areas along the TERN can be in both private and public hands; No specific legal requirements are in effect for organisations that exploit these areas; the tariff structure is to some extent related to supply and demand (source: NEA Final Report Country Studies)

Portugal
Landownership of parking areas along the TERN was until 2006 public, but has since 2006 become private; No specific legal requirements are in effect for organisations that exploit these areas. Tariff structures are to some extent related to supply and demand (Source: NEA Final Report Country Studies)

Slovak Republic
According to Slovak policymakers, parking areas (in terms of number [and] location) are an integral part of the infrastructure and incorporated in infrastructure planning. Landownership of parking areas along the TERN is vested with the National Highway agency. Part of the land is rented to private parties that exploit petrol stations, motels or parking areas. These private parties are responsible for security of the parking areas. No specific legal requirements are in effect for organisations that exploit these areas. Tariff structures are unrelated to supply and demand, nor is there any relationship between prices and security levels (source: NEA Final Report Country Studies).

Slovenia
According to Slovenian policymakers, parking areas are an integral part of infrastructure planning, but security concerns are not considered to have a role in planning process which is entirely a public matter. Landownership of parking areas along the TERN is vested with the state; also exploitation is public so there are no formal tendering processes. No specific legal requirements with respect to security are in effect for organisation that exploit these areas.
Tariff structures are unrelated to supply and demand, nor is there any relationship between prices and security levels (source: NEA Final Report Country Studies).

Spain
No information, see NEA Final Report Country Studies p. 138

Sweden
Truck parking is an integral part of infrastructure planning and security is a factor in the planning process. Planning / initiating truck parking areas mostly is a process involving both [] the public and private sector; Landownership of parking areas along the TERN is in a mix of private & public hands. No specific legal requirements are in effect for organisations to exploit these areas. Tariff structures are unrelated to supply and demand, nor is there any relationship between prices and security levels (source: NEA Final Report Country Studies)

Recently Vägverket (Government department for road administration) has become interested in the issues related to secure parking. Sweden has a crime hot spot in the southern part of the country between south of Jönköping and the port of Malmö. Here criminals can escape more easily than in the open country which provides little shelter. Vägverket supports a private initiative to build a secured parking area and is generally monitoring SETPOS’ activities.

UK: United Kingdom

In the UK, truck parking facilities are offered by Motorway Service Areas (MSAs) and by dedicated truck parking areas. MSAs are positioned every 49 km on motorways and by law are required to provide offer overnight parking, toilets and showers, dining facilities, refreshments and shops, cash machines, some security features, refuelling facilities (many also provide accommodation). Motorway service Areas are accessible to all vehicles, so not only to HGV's. Parking for HGVs is usually free for the first two hours, after which a charge applies. The number of parking spaces available to HGVs at a single site can vary, but is most often between 30 and 60. The vast majority of motorway services in the UK are owned by one of three companies: Moto, Welcome Break or RoadChef. Sites on which the MSAs are located were formerly owned by the state, but in recent times have been sold to the private sector as part of privatisation. As a result the UK government has a reduced ability to set the terms and conditions under which MSAs operate.

Food sold at MSAs is generally expensive and not highly regarded by truck drivers. MSAs tend to target private motorists because they tend to spend more money while stopping for breaks compared to truck drivers. The majority of truck drivers in the UK favour dedicated truckstops which are more affordable and better cater to their needs. Truckstops are privately owned and operated and located off motorways (but usually at a distance of no more than 5 – 10 km).

Over the past 5 to 10 years many dedicated truckstops have disappeared from the UK network as land prices have increased which have made alternate land uses (e.g. light industrial and residential developments) more profitable. Truckstops tend to generate marginal returns on capital because drivers to not spend large amounts of money when taking overnight rest (e.g. they often carry their own food). Added to this, signage for truckstops (which are all located away from the motorway network) is difficult and expensive to obtain for site operators, and drivers travelling in an unfamiliar area may simply not know where a rest area might be. These issues have been recognised by the UK Highways Agency who launched a free truckstop guide in 2006 in an effort to halt the decline of these facilities.

Bulgaria

No info, NEA Final Report Country Studies p. 156

Romania

No info, NEA Final Report Country Studies p. 159

APPENDIX F: NEA SECURE PARKING FRAMEWORK

Appendix F: NEA Secure Parking Framework

In their 'Study on the feasibility of organising a network of secured parking areas for road transport operators on the Trans European Road Network' NEA examined a number of previous studies looking at the defining characteristics of a 'secure' parking area. This work included research undertaken by the IRU, Transfigoroute, organisations of shippers and forwarders as well as surveys of truck crime undertaken in the UK, Denmark and the Netherlands. It was concluded that "All these lists and suggestions for improvement of security show a large overlap in the type of measures considered to be relevant, so there seems to be a wide consensus on this between different types of stakeholders." (p.67)

In analysing different approaches NEA noted, among other things:

- The complexity of the road transport market is often not considered. No distinction is made between parking areas for lorries carrying low and high value goods
- Some frameworks do not distinguish between technical and organisational measures
- More often than not there is no proper distinction between security criteria and improvement measures
- The cost-effectiveness of measures is not clear (p. 68)

The report also discussed the TAPA approach in detail, and it was suggested that rather than concentrating on secure parking areas, they should instead focus on the whole supply chain or at least the component of the supply chain from the supplier's warehouse to the client's storage facilities. In the view of the authors, the TAPA approach did not represent the best model for truck parking security because it focuses on a specific market segment.

Considering both simple and more complex approaches, NEA suggested that

- The TAPA approach incorporates some flexibility and takes into account varying levels of risk
- The TAPA approach cannot be applied en mass because it would be too expensive. This stems from the fact that it was developed mainly for the benefit of shippers of high value goods
- A simple list of security measures is non-flexible and not does not take account local risk and circumstance. This approach does not account for different crime types (e.g. cargo theft versus theft of property from drivers). Advocating certain fixed security measures may place an unnecessary cost burden on site operators.

NEA highlighted the fact that not all security measures are suitable against all types of crime. For example 'driver identification' represents an excellent measure to combat cargo theft or vehicle theft, but is less effective in reducing the risks of theft and violence against drivers.

The study advocated that

- A security criteria list is not sufficient, but that there must be a strategy or plan "having different stages corresponding with different levels of security in parking areas" (p. 73)
- The varying needs of different market segments must be recognised by a standard (e.g., the parking area security level needed for the transport of electronic equipment will not be the same as for the transport of potatoes)
- It would be undesirable for all parking areas to meet the highest security level, because this would mean that a large part of the industry could not afford to pay for parking. What is required is "simply a sufficient number of parking areas in order to accommodate each type of transport and each type of corresponding security needs." (p. 74)

It was suggested that a security standard could be developed which relates to the Black Market Value (BMV) of the goods being transported. An incident database would be required to enable

such as system to be developed, because non-differentiated crime statistics do not indicate whether the crime was petty crime or theft of high value cargo.

On the basis of UN statistics on the value of commodity products, the following classification of black market value was suggested (p.78):

1. High (> Euro 10/kg)
2. Medium (Euro 3-10/kg)
3. Low (<= Euro 3/kg)

The system is based on the premise that all consumer products have a Black Market Value, but that its attractiveness to thieves will depend not only on value but also on weight e.g., a highly specialised piece of machinery may have a high market value but is in most cases not attractive for thieves because it would not be easy sell. Using these categories, a 'crime index' was developed, as shown below.

Table F-1: Crime Indices (source NEA 'Feasibility' Study)

Black market value	**Crime-index region**		
	A: high	**B: medium**	**C: low**
1 High (> Euro 10/kg)	A1	B1	C1
2 Medium (Euro 3-10/kg)	A2	B2	C2
3 Low (<= Euro 3/kg)	A3	B3	C3

Thus a differentiated picture of 'security needs' was developed. It was suggested that certain categories could be collapsed as shown by the shaded areas in the table i.e.;

A1
A2+B1
A3+B2+C1
B3+C2
C3

A1 represents the highest security requirement and C3 the lowest. The most heavily secured parking area is needed for cargo with a high BMV (cargo value: more than EUR 10 per kilogram) in regions with high (parking related) crime rates. These categories were then combined with the classification developed for specific security measures. A varied five-level scheme was suggested to accommodate different threat levels, as shown overleaf.

Table F-2: Crime indices with security measures (source NEA 'Feasibility' Study)

	A1	A2+B1	A3+B2+C1	B3+C2	C3
PHYSICAL PROPERTIES					
Entry/exit control					
Fence	X	X	X	X	
Physical entry barriers	X	X	X	X	X
(automatic) registration incoming and departing vehicles	X	X			

To simplify the system it was suggested that the 5 categories be condensed to 3, as follows

Category 1: High BMV, high crime-rates (comparable with security class A1)
Category 2: Medium BMV and medium crime-rates (A2, A3, B2, B3, C1, C2)
Category 3: Low BMV, low crime rates (comparable with security class C3)

To simplify the system further and make it more accessible to the transport industry a two tiered system was developed for 'Black market value hot spots' and 'non hot spots'. These are related to specific security measures and are shown in the table overleaf.

Table F-3: Physical and organisational measures that can be considered for hot spots and non hot spots (source NEA 'Feasibility' Study)

	Hot spots	Non hot spots
PHYSICAL PROPERTIES		
Entry/exit control		
Fence	X	
Physical entry barriers	X	X
(automatic) registration incoming and departing vehicles	X	
Driver identification	X	
At point of entry/exit: Weighing of vehicles	X	
Interaction with other traffic		
Exclusive for truck-parking	X	
Exclusive for tanking, restaurants, etc. for truck parking drivers	X	
Control during stay		
24-hour camera surveillance	X	
Monitors for drivers when outside secure parking area (e.g. in restaurants)	X	
Optimal lighting of parking slots	X	X
Additional lighting high risk cargo	X	
ORGANISATION AND COMMUNICATION		
Security management		
Security manager	X	X
Integration of security management and security management of other facilities	X	
Registration and central administration of (security) incidents	X	X
Security plan/protocol and security manual	X	
Security services		
24-hour manned entry/exit control	X	
24-hour camera security surveillance and regular physical surveillance	X	
Options of (remote) checks of availability of parking slots/parking parking capacity	X	
Options of reservation of parking slots	X	
Communication with authorities/policies		
Communication of incidents	X	X

Direct alarming of police	X	
Regular surveillance of police	X	X
Active participation of (police) authority with security plan of parking area	X	
Communication with users organisations		
Communication of available facilities and organisation	X	
Communication of (security) incidents	X	

APPENDIX G: TRUCKSTOP FEATURES

Appendix G: Truckstop Features

Questionnaire Results					
		Logistics and transport firms	**Insurances**	**Associations**	**Administrations**
Entry / Exit Control	**Fence**	Regarding entry and exit control, all the measures proposed are appreciated by logistics and transport firms. The majority of the companies questioned think that these installations are very important. However, the weighing of vehicles and seal procedures were considered the least important measures. Some of the firms interviewed provided a number of suggestions including: fences must measure at least 2,40 m / 2,50 m, physical entry barriers may involve space problems on German Autobahn and other pedestrians aside from the diver / co-pilot should not be allowed to pass the barriers.	For insurances, it is clear that fences, physical entry barriers, driver identification, registration of incoming and departing vehicles and filming of trucks during entry and exit are necessary. All the entry and exit control measures are important for the security of the sites. For insurers, weighing of vehicles and seal procedures are not to be considered.	Entry and exit control measures have to be considered in the future design of SPA. Among the proposed measures, only three are not important in associations' opinion: weighing of vehicles, seal procedures and installation of security height road blockers at the entry and exit.	A lot of comments were made by administrations and especially by the Belgian Government, regarding security measures for entry and exit control. The administrations indicated that it is up to the designated security manager to decide which high-tech solutions are most effective and that an analysis of the cost should be made to determine if the installation is necessary or not. For example: weighing of vehicles, micro phonic fencing cables, electric beam detection and access to SPA with chip and pin code. Administrations also stated that the use of a camera is a minimum security requirement. As for the number plate recognition system, in Belgium the application would prove difficult. The access to databases with personal information are restricted by law and the government limits the access for the public to existing databases.
	Physical entry barriers				
	(automatic) registration incoming and departing vehicles				
	Seal procedures				
	Clear zone between fence and structures, vehicles, vegetation				
	Fence covered by CCTV				
	Secure gatehouse for guards				
	Recognition system of lorries registration numbers				
	Installation of Security Height Road blockers at the entry and exit				
	Micro phonic fencing cables				
	Electric beam detection				
	Access to secured area only with chip and pin code				
	Filming of truck during entry and exit				
Interaction with other traffic	**Exclusive for truck-parking**	For logistics and transport firms, it is extremely important that SPA are reserved for Truck-Parking to prevent crimes against vehicles, cargo and also against drivers and personnel. Opening the services up to the public must be avoided and set zones for short and long term parking defined.	The interaction with other traffic must be limited as much as possible to reduce risks. Among the proposed measures, all insurers questioned don't want the SPA have separate spaces for short-term parking with less security. Security must be the same for all lorries even in case of short breaks. It is not appropriate to establish lower security for short-term parking. It was also stated the SPA should be exclusive to HGVs and not open to the public.	SPA must only be opened to HGVs, opening to the services to public must be avoided.	Future Secure Parking Areas must be exclusive for Truck-parking. These SPA must not be opened to the public. Belgian administrations are not in favour of a security difference between short-term parking and long-term parking.
	Fuelling and area exclusive for Truck Drivers				
	Special spaces for short-time and long-time parking				
	Separate parking area for cars with trailers and motor homes				
	Opening of the services to the public				
	Short-term parking for coffee breaks with less security				

Control during stay	**24-hour camera surveillance** **Monitors for drivers when outside secure parking area (e.g. in restaurants)** **Optimal lighting of parking slots** **Additional lighting high risk cargo** **Additional lighting when alarm** **Lighting at all entrances/exits** **Lighting of all passageways** **Permanent lighting** **Ported coaxial or leaky cable detection cables** **Surveillance under totally automatic control** **Personnel 24h/24** **Security personnel patrols area at regular intervals** **Training of the personnel: first-aid certificate** **Training of the personnel: Fire security** **Training of the personnel: Languages courses**	It is clear that 24-hour camera surveillance is very important. Other measures such as optimal lighting of parking slots and additional lighting when alarms are activated must be considered. Additional lighting for high risk cargo vehicles must be avoided given that this would highlight valuable loads to thieves. Regarding training of the personnel, all training is important including first-aid, fire security and languages courses. It is important to employ well trained personnel able to speak at least English. Drivers also propose to install monitors in the restaurant and even in toilets in order to keep an eye on lorries.	All controls are important for insurers, especially 24-hour camera surveillance, additional lighting when alarm is activated and security personnel on site 24-hours a day. It was suggested additional lighting of high risk cargo vehicles must be avoided. A high risk cargo area offers more risks than loss prevention and may also disturb the sleep of drivers.	24 hour camera surveillance and security personnel on site are necessary. Security personnel should conduct patrols at regular intervals, a 24 hour security presence will eliminate the chance of criminal activity targeted at unstaffed periods.	24-hour camera surveillance and permanent lighting are essential. All lighting is important although less so for high risk cargo as it could draw criminals attention. The combination of personnel and automatic surveillance is a necessity.
Security management	**Security manager** **Information in real time** **Registration and central administration of (security) incidents** **Security plan/protocol and security manual**	Security management is very important for better management of the site.	Security management is very important in insurers' opinion. No measure has to be neglected.	Security management is important for associations.	In administrations point of view, all of the measures proposed in the security management section are very important aside from the transmission of information in real time.

Security services	**24-hour manned entry/exit control**	Security services are all important, either for crimes against vehicles, cargo or drivers and personnel. Only heavy goods parking bays seem unnecessary in drivers' opinion. Permanent power supply for refrigerated lorries would be a plus for cargo.	Security services are very important for insurers. However, it appears that dangerous parking bays and heavy goods parking bays are not a priority.	All measures regarding security services are either important or very important except for additional criteria regarding dangerous goods. Some parking sites can be overcrowded and due to legal running time restrictions, drivers have to park somewhere. For the pre-planning of the route, options of remote checks of availability of parking slots would be a very effective tool.	Security services are considered important. Heavy goods parking bays and back of the service station without doors and windows don't seem to be very useful for administrations. Regarding turnstile access between the fenced area and the services area, it was recommended the service area is outside from a security point of view.
	24-hour camera security surveillance and regular physical surveillance				
	Restricted access to CCTV functions				
	Minimum 30 days retention of all CCTV recordings				
	Preventive maintenance for CCTV systems				
	Options of (remote) checks of availability of parking slots/parking capacity				
	Options of reservation of parking slots				
	Dangerous goods parking bays				
	Heavy goods parking bays				
	Guards provided with panic button connected to external monitoring station				
	Two way communication between guards and monitoring station				
	Permanent power supply for refrigerated transport				
	Additional criteria regarding dangerous products (grit bins, recycling / retention basins)				
	Direct access by turnstile between the fenced area and the services area (if the services area is outside the Secure Park)				
	Back of the service station without windows and doors				
	Use of flora limited as much as possible for visibility				
	Emergency telephone in visible places				
Authorities / Police / customs	**Communication of incidents**	Logistics and transport firms consider that information on the positioning of sensitive and dangerous products are very important as well as communication with Customs. The police play a significant role in the security of future SPA: active participation of authorities with security plan of parking areas, direct alarming and regular surveillance are essential.	Communication with Authorities, Police, Customs and the Fire brigade is an important element. Information on the positioning of dangerous was not seen as important.	Communication with Authorities, Police, Customs and the Fire Brigade is seen as important. Due to language barriers, it is sometimes difficult for drivers to alarm the Police that is why the services of Eurowatch are very useful.	In administrations opinion, communication of incidents, information on the positioning of the dangerous products and emergency call box connected with the fire brigade and the Police are the most important measures. Regular surveillance by Police and information on the positioning of sensitive products was not considered as important. Moreover, direct alarming in Belgium is forbidden by law. In this country, a call center exists managed by a private security firm which serve as a filter. This system serves with the intention to reduce false alarms. However in the case of the guard detecting a burglary, he has to notify the Police.
	Direct alarming of police				
	Regular surveillance by police				
	Active participation of (police) authority with security plan of parking area				
	Information on the positioning of sensitive products (vehicles / drivers / products)				
	Information on the positioning of dangerous products (vehicles / drivers / products)				
	Information on the positioning to Customs (vehicles / drivers / products)				
	Emergency call box connected with the fire brigade and the Police				

Communication with parking's users	**Communicating platform** **Communication of available facilities and organisation** **Communication of (security) incidents**	All types of communication are important but communication of (security) incidents is a very important element.	Communication of security incidents is very important and others also remain important.	Communicating platform is not important for associations whereas other types of communication are important.	Communication with parking's users is very important.
Certification	**External certification** **Self certification system**	Certifications, particularly external certifications are necessary for the quality and the recognition of the site. Systems have to be evaluated externally.	External certification seems to be more important than self certification.	These two certifications are important for the quality of the site.	No Response
Alarm Scheme	**Alarm scheme driver – TPA guard**	Alarm scheme is important for all types of crimes.	Alarm scheme is very important to prevent crimes against cargo, drivers and personnel	Alarm scheme is very important.	No Response
Specific needs for trucks	**Trailers depot** **Possibility to change driver** **Loading / transfers / unloading on the site**	Specific needs for trucks are important and would enable the change of driver and the drop of trailers. However, loadings, transfers and unloading on the site are not important elements for transport and logistics firms.	It is not necessary to clearly mark entry and exit of SPA. Parking guide system for all SPA in Europe would be very useful.	Loading / transfers / unloadings are not necessary whereas trailer depot and driver changeovers are.	No Response
Identification of the Secure Parking Area	**Parking Guide System for all SPA in Europe** **Languages spoken at the Truck Stop** **Clearly marked entry and exit** **Visible from the motorway** **Distance between each site**	As for the part identification of the Secure Parking Area, the distance between each site should be between 50 and 250 kilometres. The average distance was is 125 km. Moreover, the number of parking slots is also to be considered, it must be sufficient.	No Response	All types of reservation systems can be used by drivers.	Belgian administrations think that a reasonable distance in Belgium is very relative, you drive through it in a couple of hours, so well within regulation of the rest time.
Reservation	**Internet** **GPS services** **Text Messaging Service** **Call centre** **Telephone directly at the rest area** **Possibility to leave a reserved parking area without disturbing others in case of a change with the arrangements of work** **Method / system of payment** **Number of parking slots**	All methods of reservation can be useful for drivers and must be considered. The number of parking slots is very important but it depends of the area. More places are necessary around large cities or ferries. Some transport firms mentioned that all major petrolcards should be accepted (Shell, Total...) and that internet should be the smart way to reduce the work loads of the company in charge of the reservations. Some others think that a call center which serves for several secure parking locations appears the best solution. It was also mentioned that reservations are not something that is part of the guard workloads. Moreover, drivers want to have the possibility to leave a reserved area without any problem in case of change. This measure is very important for them.	For reservations, some insurers indicate that the systems which work faster are the most appreciated.	For associations, GPS services, text messaging services, call center and telephone can be used with confidential codes and the use of internet should be preferred.	For administrations and especially for Government it is important that reservations can be made, but how, is not something they want to regulate. But to reach as many as possible drivers, the traditional way: the phone should not be neglected.

Comfort for drivers	**Mini-hotel** **Toilets for men and women** **Pay or free showers (for men and women)** **Cafeteria** **Restaurant (with opening hours or 24h/24h and tables placed near the windows to have a look at trucks)** **Self-service** **Classic catering** **Fast-food** **Bar with alcohol** **Bar without alcohol** **Lounge** **Affordable leisure time facilities (fitness, TV room…)** **Shopping facilities with opening hours** **Internet access** **Fax** **Laundry** **Phone box** **Mini-market** **Eco / green / bio diesel distribution** **Emergency assistance** **Lorry wash** **Currency exchange** **Automated Teller Machine** **Vehicle repair** **Service station with opening hours posted as well as accepted currencies** **DocStop (medical help for professional drivers)** **Maut machine, Maut equipment repair service** **Indication of prices of meals, special offers reserved for drivers** **Rules, regulation and advices posted in different languages on the site**	In drivers' opinion, it is logical that they have basic accommodation at their disposal such as: toilets, showers, cafeteria… Most services proposed are considered important except mini-hotel, classic-catering, bar with alcohol, laundry, lorry wash and vehicle repair. Five very important services were highlighted namely: Emergency assistance, rules and regulations posted in different languages, restaurant, toilets and showers. Other services will be good to have but not essential. Some of the drivers questioned stated that the installation of Maut machine is important in order to avoid additional stops during transit for any Maut issues (Maut machines are present in Germany and will be shortly introduced in other European countries). Bar with alcohol must be prohibited, absolutely no alcohol served at these sites. Although services are not a requirement of SETPOS security standard, it is important to bring some comfort to drivers.	For insurers, all services can be useful for drivers, especially emergency assistance. Mini-hotel, lounge, fax and vehicle repair are not important.	Self-service, fast-food and automated teller machines are not important for the comfort of drivers. All other services are very important or at least important.	Only toilets for men and women, showers and a cafeteria are very important. Services are not the main concern of Governments from a security point of view, except for the basic accommodation.

APPENDIX H: STAKEHOLDER SURVEY RESULTS

Appendix H: Stakeholder Survey Results

GENERAL RESULTS	Against vehicles			Against cargo			Against drivers and personnel		
	Very important	Important	Not important	Very important	Important	Not important	Very important	Important	Not important
Entry/Exit control									
Fence	**67%**	30%	3%	**70%**	27%	3%	**61%**	28%	11%
Physical entry barriers	**72%**	28%	0%	**64%**	36%	0%	**41%**	18%	7%
(automatic) registration incoming and departing vehicles	**49%**	38%	13%	**56%**	38%	6%	**62%**	28%	10%
Driver identification	**46%**	43%	11%	**57%**	34%	9%	**52%**	34%	14%
Registration incoming/outgoing pedestrians	**60%**	34%	6%	**57%**	34%	9%	**57%**	36%	7%
At point of entry/exit: Weighing of vehicles	3%	22%	**75%**	9%	33%	**58%**	0%	11%	**89%**
Seal procedures	23%	33%	**44%**	32%	**36%**	32%	7%	26%	**67%**
Clear zone between fence and structures, vehicles, vegetation	29%	**60%**	11%	**52%**	26%	22%	19%	**55%**	26%
Lighting of fence	43%	**52%**	5%	36%	**54%**	10%	42%	**44%**	14%
Fence covered by CCTV	**55%**	45%	0%	**57%**	41%	2%	44%	**50%**	6%
Secure gatehouse for guards	**37%**	32%	31%	36%	**41%**	23%	**42%**	36%	22%
Recognition system of lorries registration numbers	36%	**40%**	24%	**42%**	35%	23%	22%	33%	**45%**
Installation of Security Height Roadblockers at the entry and exit	27%	**38%**	35%	16%	37%	**47%**	9%	30%	**61%**
Micro phonic fencing cables	27%	**45%**	28%	29%	**45%**	26%	23%	**40%**	37%
Electric beam detection	37%	**36%**	27%	**39%**	32%	29%	32%	23%	**45%**
Access to secured area only with chip and pin code	39%	**48%**	13%	**50%**	37%	13%	**51%**	31%	18%
Filming of truck during entry and exit	**58%**	34%	8%	**59%**	29%	12%	**46%**	29%	26%
Interaction with other traffic									
Exclusive for truck-parking	**60%**	35%	5%	**52%**	32%	11%	**56%**	32%	12%
Fuelling and area exclusive for Truck Drivers	31%	**45%**	24%	27%	**36%**	25%	**39%**	32%	29%
Special spaces for short-time and long-time parking	32%	**43%**	25%	30%	**32%**	27%	30%	**35%**	**35%**
Separate parking area for cars with trailers and motor homes	42%	**45%**	13%	**39%**	34%	18%	**40%**	37%	23%
Opening of the services to the public	13%	43%	**44%**	16%	30%	**41%**	15%	**45%**	40%
Short-term parking for coffee breaks with less security	11%	40%	**49%**	11%	32%	**43%**	9%	38%	**53%**
Control during stay									

24-hour camera surveillance	**79%**	18%	3%	**81%**	14%	5%	**70%**	22%	8%
Monitors for drivers when outside secure parking area (e.g. in restaurants)	31%	**41%**	28%	**39%**	**39%**	22%	**38%**	35%	27%
Optimal lighting of parking slots	**68%**	32%	0%	**72%**	28%	0%	**60%**	32%	8%
Additional lighting high risk cargo	**42%**	26%	32%	**47%**	24%	29%	**39%**	22%	**39%**
Additional lighting when alarm	**53%**	34%	13%	**56%**	30%	14%	**58%**	27%	15%
Lighting at all entrances/exits	**54%**	38%	8%	**56%**	30%	14%	**57%**	37%	6%
Lighting of all passageways	36%	**49%**	15%	33%	**48%**	19%	47%	**50%**	3%
Permanent lighting	**47%**	42%	11%	**47%**	39%	14%	**52%**	39%	9%
Ported coaxial or leaky cable detection cables	18%	**55%**	27%	19%	**56%**	25%	20%	**60%**	20%
Surveillance under totally automatic control	26%	**48%**	26%	31%	**44%**	25%	22%	**53%**	25%
Personnel 24h/24	**58%**	34%	8%	**62%**	28%	10%	**67%**	25%	8%
Security personnel patrols area at regular intervals	38%	**44%**	18%	**42%**	40%	18%	41%	**43%**	16%
Training of the personnel: first-aid certificate	17%	31%	**52%**	16%	24%	**60%**	**68%**	23%	9%
Training of the personnel: Fire security	35%	**50%**	15%	37%	**41%**	22%	**52%**	34%	14%
Training of the personnel: Languages courses	11%	42%	**47%**	12%	39%	**49%**	26%	**62%**	12%
Security management									
Security manager	40%	**46%**	14%	**44%**	39%	17%	38%	**43%**	19%
Information in real time in form of vigil of all the safety and security rules	**39%**	**39%**	22%	**39%**	37%	24%	**41%**	34%	25%
Registration and central administration of (security) incidents	**56%**	39%	5%	**52%**	38%	10%	**49%**	42%	9%
Security plan/protocol and security manual	**45%**	**45%**	12%	**46%**	**46%**	8%	**47%**	41%	12%
Security services									
24-hour manned entry/exit control	**66%**	26%	8%	70%	20%	10%	**55%**	34%	11%
24-hour camera security surveillance and regular physical surveillance	**66%**	31%	3%	**71%**	26%	3%	**59%**	38%	3%
Restricted access to CCTV functions	**50%**	36%	14%	**47%**	42%	11%	**47%**	41%	12%
Minimum 30 days retention of all CCTV recordings	**61%**	28%	11%	**61%**	29%	11%	**59%**	32%	9%
Preventive maintenance for CCTV systems	**62%**	35%	3%	**58%**	37%	5%	**62%**	29%	9%
Options of (remote) checks of availability of parking slots/parking capacity	**57%**	27%	16%	**59%**	26%	15%	**55%**	31%	14%

Options of reservation of parking slots	**55%**	34%	11%	**49%**	38%	13%	**57%**	23%	20%
Dangerous goods parking bays	**36%**	32%	32%	**41%**	33%	26%	**47%**	24%	29%
Heavy goods parking bays	32%	30%	**38%**	30%	30%	**40%**	**39%**	24%	36%
Guards provided with panic button connected to external monitoring station	**54%**	27%	19%	**55%**	37%	8%	**56%**	35%	9%
Two way communication between guards and monitoring station	**60%**	32%	8%	**64%**	31%	5%	**59%**	38%	3%
Permanent power supply for refrigerated transport	23%	34%	**43%**	34%	**48%**	18%	24%	32%	**44%**
Additional criteria regarding dangerous products (grit bins, recycling / retention basins)	20%	34%	**46%**	31%	**38%**	31%	**34%**	**34%**	32%
Direct access by turnstile between the fenced area and the services area (if the services area is outside the Secure Park)	17%	**43%**	40%	23%	**48%**	29%	32%	**47%**	21%
Backside of the service station without windows and doors	14%	37%	**49%**	16%	30%	**54%**	18%	**41%**	**41%**
Use of flora limited as much as possible for visibilty	21%	**58%**	21%	19%	**58%**	22%	22%	**62%**	16%
Emergency telephone in visible places	**48%**	39%	13%	42%	**47%**	11%	**58%**	36%	6%
Communication with Authorities / Police / customs and Fire Brigade									
Communication of incidents	**67%**	30%	3%	**63%**	34%	3%	**65%**	35%	0%
Direct alarming of police	**59%**	38%	3%	**59%**	36%	5%	**61%**	39%	0%
Regular surveillance by police	17%	**61%**	22%	18%	**61%**	21%	15%	**70%**	15%
Active participation of (police) authority with security plan of parking area	40%	**57%**	3%	39%	**61%**	0%	39%	**58%**	3%
Information on the positioning of sensitive products (vehicles / drivers / products)	**47%**	31%	22%	**45%**	34%	21%	**40%**	29%	31%
Information on the positioning of dangerous products (vehicles / drivers / products)	**39%**	33%	28%	**42%**	**42%**	16%	**50%**	34%	16%
Information on the positioning to Customs (vehicles / drivers / products)	17%	**43%**	40%	19%	**46%**	35%	16%	40%	**44%**
Emergency call box connected with the fire brigade and the Police	**56%**	42%	2%	**54%**	41%	5%	**56%**	44%	0%
Communication with parking's users									
Communicating platform	26%	**48%**	26%	26%	**45%**	29%	31%	41%	28%
Communication of available facilities and organisation	23%	**57%**	20%	31%	**56%**	14%	30%	**60%**	10%
Communication of (security) incidents	**43%**	34%	23%	**47%**	36%	17%	**48%**	39%	13%
Certification									

External certification	**37%**	**37%**	26%	**44%**	40%	16%	**53%**	30%	17%
Self certification system	6%	**53%**	41%	6%	**64%**	30%	10%	**57%**	33%
Alarm scheme									
Alarm scheme driver – TPA guard	**48%**	42%	10%	**55%**	39%	6%	**69%**	24%	7%
Specific needs for trucks									
Trailers depot	32%	**44%**	24%	34%	**40%**	26%	30%	**38%**	32%
Possibility to change driver	22%	**59%**	19%	25%	**58%**	17%	29%	**53%**	18%
Loading / transfers / unloading on the site	19%	31%	**50%**	21%	36%	**43%**	20%	36%	**44%**
Identification of the Secure Parking Areas									
Parking Guide System for all SPA in Europe	**49%**	45%	6%	**51%**	40%	9%	**50%**	43%	7%
Languages spoken at the Truck Stop	27%	**49%**	24%	34%	**40%**	26%	38%	**48%**	14%
Clearly marked entry and exit	**52%**	39%	9%	**49%**	34%	17%	**53%**	40%	7%
Visible from the motorway	**36%**	**36%**	27%	**43%**	34%	23%	**47%**	33%	20%
Distance between each site	**52%**	41%	7%	**52%**	32%	16%	**61%**	32%	7%
Reservation									
Internet	30%	**37%**	33%	31%	**49%**	20%	**43%**	**43%**	13%
GPS services	**38%**	31%	31%	31%	**44%**	25%	37%	**43%**	20%
Text Messaging Services	22%	**44%**	34%	14%	**49%**	37%	27%	**43%**	30%
Call centre	16%	**42%**	**42%**	14%	**43%**	**43%**	19%	**50%**	31%
Telephone directly at the rest area	19%	**56%**	25%	14%	**60%**	26%	23%	**61%**	16%
Possibility to leave a reserved parking area without disturbing others in case of a change with the arrangements of work	28%	34%	**38%**	24%	**43%**	33%	31%	**55%**	14%
Method / system of payment	31%	**38%**	31%	32%	**39%**	29%	**45%**	41%	14%
Number of parking slots	**55%**	31%	14%	**59%**	32%	9%	**53%**	40%	7%
Comfort for drivers									
Mini-hotel	7%	27%	**66%**	8%	24%	**68%**	31%	31%	**38%**
Toilets for men and women	24%	**42%**	34%	26%	**37%**	**37%**	**52%**	45%	3%
Pay or free showers (for men and women)	22%	**41%**	37%	28%	**36%**	**36%**	**47%**	**47%**	6%
Cafeteria	12%	38%	**50%**	23%	35%	**42%**	40%	**47%**	13%

Restaurant (with opening hours or 24h/24h and tables placed near the windows to have a look at trucks)	25%	**39%**	36%	26%	**37%**	**37%**	**44%**	39%	17%
Self-service	8%	19%	**73%**	8%	32%	**60%**	16%	**45%**	39%
Classic catering	11%	22%	**67%**	4%	36%	**60%**	9%	**47%**	44%
Fast-food	0%	29%	**71%**	0%	48%	**52%**	6%	44%	**50%**
Bar with alcohol	4%	24%	**72%**	4%	17%	**78%**	10%	27%	**63%**
Bar without alcohol	12%	27%	**62%**	16%	24%	**60%**	26%	**39%**	35%
Lounge	7%	30%	**63%**	11%	19%	**70%**	27%	33%	**40%**
Affordable leisure time facilities (fitness, TV room...)	8%	27%	**65%**	10%	23%	**67%**	17%	**50%**	33%
Shopping facilities with opening hours	4%	42%	**54%**	4%	44%	**52%**	5%	**91%**	4%
Internet access	12%	38%	**50%**	16%	**42%**	**42%**	23%	**52%**	25%
Fax	19%	30%	**51%**	13%	35%	**52%**	23%	**57%**	20%
Laundry	8%	35%	**57%**	4%	28%	**68%**	13%	**45%**	42%
Phone box	15%	31%	**54%**	12%	16%	**72%**	23%	**54%**	23%
Mini-market	4%	37%	**59%**	4%	28%	**68%**	10%	**59%**	31%
Eco / green / bio diesel distribution	14%	38%	**48%**	12%	35%	**54%**	16%	**50%**	34%
Emergency assistance	**54%**	32%	14%	**50%**	35%	15%	**55%**	39%	6%
Lorry wash	8%	42%	**50%**	4%	27%	**69%**	10%	43%	**47%**
Currency exchange	8%	31%	**61%**	4%	35%	**61%**	13%	**55%**	32%
Automated Teller Machine	7%	29%	**64%**	4%	33%	**63%**	13%	42%	**45%**
Vehicle repair	25%	**39%**	36%	**56%**	19%	25%	24%	36%	**40%**
Service station with opening hours posted as well as accepted currencies	33%	**44%**	23%	24%	32%	**44%**	32%	**48%**	20%
DocStop (medical help for professional drivers)	4%	46%	**50%**	8%	42%	**50%**	35%	**45%**	20%
Maut machine, Maut equipment repair service	14%	**43%**	**43%**	16%	36%	**48%**	28%	**50%**	22%
Indication of prices of meals, special offers reserved for drivers	18%	39%	**43%**	8%	**50%**	42%	29%	**48%**	23%
Rules, regulation and advices posted in different languages on the site	**45%**	31%	24%	**44%**	32%	24%	**53%**	44%	3%

APPENDIX I: UICR SURVEY

Appendix I: UICR Survey

General Requirements for secure parking spaces (WP2)

1. General

Do you recognize a general need for secure parking spaces in Europe for professional drivers?

Summary of responses

- Universally agreed that there is a need for safe and secure parking areas. This desire was not just expressed by drivers that transport high value load, but all respondents.
- Agreed that there is a need for more parking areas in general
- There is already an awareness of security in parking areas. Drivers observe who they park next to (in terms of nationality). Drivers do not just fear crime from the outside SPAs, but also from within the parking areas.
- A general statement was also made that Truck parking areas are often blocked by car and trailer or motor homes.

2. Risks

Which are the most frequent daily risks that professional drivers meet in parking lots?

Summary of responses

Fear in darkness, theft of transported goods, fear of stolen or damaged vehicles, fear of personal assaults, concerns of damaged vehicle because of badly indicated entrance and exit of parking lot, concerns about increasing fatigue level connected with too little number of adequate well-equipped parking lots. Italy, Spain and France (Paris-Marseille) were mentioned as risk areas.

3. Definition

Which expectations do you have of a secure parking space?

Summary of responses

- Increased provision of parking areas would increase safety on the road (not security in the parking areas)
- Parking areas should cater to three distinct groups (more for comfort than for security): regular trucks, refrigerated trucks and heavy goods transports
- Sites should have clearly marked entrance and exit, easy to enter and exit
- Sites should have necessary infrastructure for drivers (s. WP 5 – Index)
- Sites should be well lit
- There should be a security presence at sites, with regular police checks

- Parking areas should have camera monitoring of entry and exit points, and should record details of truck and driver.
- Parking areas should be contained by fences
- Sites should have short-term parking for coffee brakes, with less security
- Parking areas should be located in quiet areas
- Separate parking areas should be provided for cars with trailers and motor homes

Information system (WP5)

1. Parking Index

What will the professional driver find in this electronic index of the Truck Parking areas?

Summary of responses

- Standard security equipment (barriers, cameras, fences)
- Power supply for refrigerated transport
- Pay Showers, toilets, laundry
- Hotel rooms
- Restaurant with opening hours posted
- Shop with opening hours posted
- Currency exchange
- Automated Teller Machine
- Internet access
- Vehicle repair
- Service station with opening hours posted as well as accepted currencies
- Fuel prices
- DocStop (medical help for professional drivers)
- Affordable leisure offers (fitness, TV room etc.)
- Languages spoken at the truck stop (also rules, regulations and advices posted in different languages on the site)
- Price index on meals, special offers for truck drivers
- Maut machine, Maut equipment repair service.

2. Guide to available parking spaces

In your opinion, how should a driver find out if there are available parking spaces at a Rest Area?

Summary of responses

- Parking Guide System along the motorway with easy to follow Sign-posting, similarly as in the cities for cars
- Internet
- GPS Services
- Text messaging service
- Call Centre
- Telephone directly at the rest area

It was suggested that a unified Parking Guide System is developed for Europe. Access to this system in whatever form would have to be free of charge for the driver in order to use it.

3. Reservation system

In your opinion, how should a driver reserve or cancel a parking space?

Summary of responses

- Internet
- Call Centre (possibly together with DocStop)
- Telephone directly at the rest area
- Text messaging Service (seems to be the favourite way to do so)

Business Model

On a long-term basis this project has a chance to succeed only if the service is self-supporting.

- Is the driver willing to pay a fee for the services mentioned in points 1-3 of the Information System?

Summary of responses

Drivers indicate that they will not use a system or a service that they have to pay for. If fees are credited toward rest area facilities or can be collected from the employer this could help the development of a user pays system. Payments should also be taken from fuel cards.

- If yes, how much and how should these services be paid for (per call, per inquiry, per booking, per subscription)

Summary of responses

Per booking or per subscription is possible, but respondents had no comments on how these could be paid for.

- If no, would the driver tend to use cost free and not secure parking spaces?

Summary of responses

Yes, but there respondents advised suggested the need for caution in this area. When one refers to secure parking areas, this does not automatically mean that all other parking areas are dangerous. There is a need to differentiate between the cost for information, reservation services, and fees for the parking area. If a driver is required to pay for parking out of their own pocket, they are likely to look for a free parking area. This can lead to risks because drivers may be stay on the road beyond their allowable driving hours.

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For more information on the SETPOS project please contact:

Jonpaul Simpson

Senior Consultant
Sustainable Transport Group
AECOM

Tel: +44 (0)161 927 8057
Email: jonpaul.simpson@aecom.com