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**The European Commission Communication:
Urban Transport Security**

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The Communication on “Urban transport security” addresses the security issues regarding urban and suburban public passenger land transport to, from and within cities and their suburbs. Such transport is carried out by busses, surface and underground trains and trams ('light railways'). These transport operations are usually referred to as 'urban transport', and to avoid confusion this terminology is adopted throughout this Impact Assessment.

INTRODUCTION

*"In light of the events in Madrid, the European Council believes that full implementation of measures to combat terrorism is a matter of urgency"*¹.

There is a terrorist threat² in Europe and security is a high political priority for the European Union. The European Community has taken measures to protect aviation and maritime³ transport, including airports⁴ and ports⁵. New provisions in the Community's customs code address the security of goods in international operations⁶. The European Commission has also made a proposal for supply chain security⁷ and issued a Communication regarding the protection of critical infrastructure in energy and transport⁸.

As a result of the terrorist attacks on urban transport in Madrid and London, the European Commission is considering how best to enhance, at the European level, the security of citizens using urban transport in Europe⁹

1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

In 2005 the European Commission contacted Member States to make an initial assessment of national measures. In the responses, a number of actions have been recommended. These include:

- Overcoming barriers to international cooperation;
- Compiling and assessing best practices;
- Developing security related staff training;
- Addressing the definition of minimum standards concerning design of equipment, security technology and operational measures.

¹ Council of the European Union Declaration on Combating Terrorism, 7906/2004

² Annex 1 sets out attack scenarios and their consequences

³ Regulation (EC) N°725/2004, OJ L129, 29.04.2004, p.6

⁴ Regulation (EC) N°2320/2002, OJ L 355, 30.12.2002, p.1

⁵ Amended Proposal for a Directive on enhancing port security COM (2004)393, final of 28.5.2004

⁶ Regulation (EC) N°1875/2006, OJ L 18.12.2006 amending Regulations 2454/1993 and 2913/1992

⁷ Proposal for a Regulation on enhancing supply chain security Com (2006)79, final of 27.2.2006

⁸ Communication on the protection of critical infrastructure in energy and transport, Restricted document of 2.2.2007

⁹ Annex 2 lists the urban passenger transport systems in the 25 Member States European Union in 2006

To follow up on these recommendations a public consultation, in the form of a questionnaire¹⁰, was both published on the Commission's website¹¹ and circulated in spring 2006 to collect the views of the Member States, professional associations and other interested parties on how best to ensure a real and effective European cooperation between stakeholders.

A total of 30 responses were received, 14 from Member States, 5 from individual transport operators and 11 from associations representing all major public transport stakeholders at the national or international level. It should be noted that this consultation focussed on practical ideas on stakeholder cooperation on a European level. Although the questionnaire was public it is understandable that it did not attract the attention of individual citizens. The number of contributions and coverage can therefore be considered reasonable.

Stakeholders' replies show a high level of common understanding of the problems and their solutions.

- They consider the threat of terrorism a common phenomenon and want to contribute to the European cooperation;
- They strongly support cooperation at political and technical levels between Member State representatives, transport operators and other stakeholders;
- They prefer to separate discussions between railway and other urban passenger transport modes due to the different technical and operational specifications, but opt for close cooperation in all areas of common interest;
- They believe that the cooperation should take place in dedicated technical expert groups and conferences allowing for cross-fertilization of results and dissemination;
- They prefer that cooperation should address existing measures as well as measures under development with a focus on preventive measures and on crisis management;
- They believe that the costs for participation in meetings, conferences or twinning programmes present an obstacle for a number of prospective participants. Therefore they suggest that the EU should provide funding for travelling expenses;
- They suggest that a coordinating National Contact Point should be established in all Member States;
- They wish the Commission to proactively facilitate the process of cooperation, coordinate initiatives in international fora and thereby minimize the risk of duplication of work.

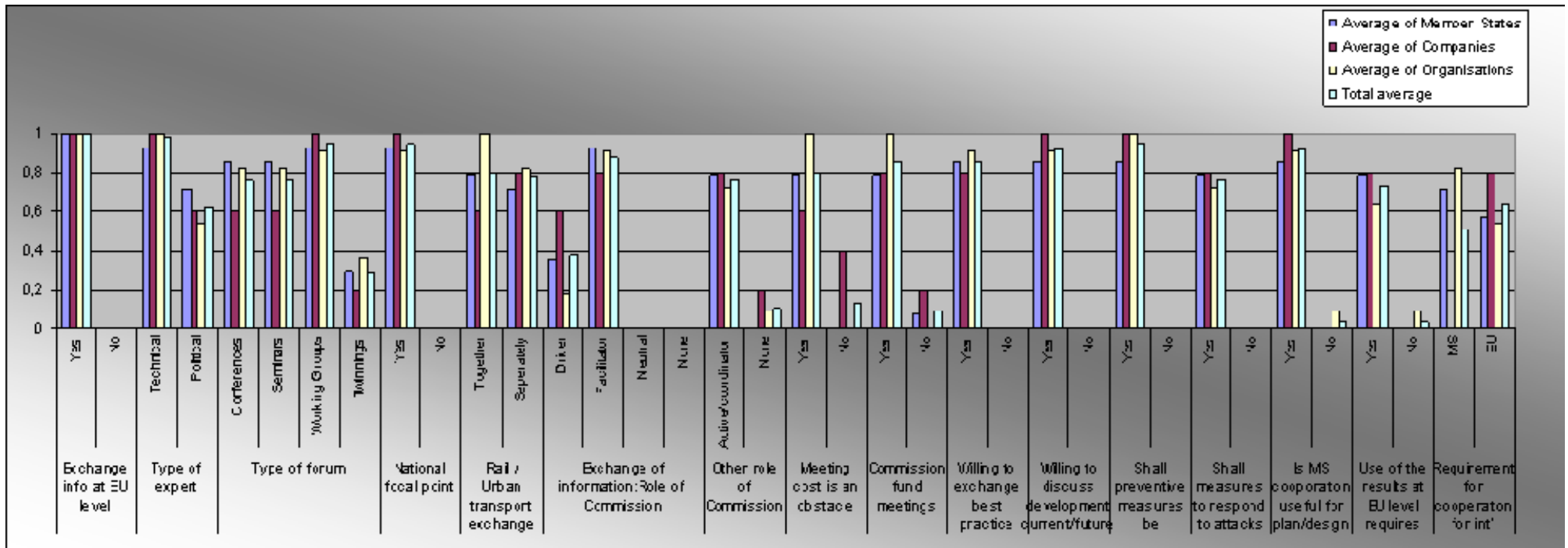
Graphic Nr. 1 summarizes the issues raised in the public consultation of 26 February 2006 and the views of stakeholders.

¹⁰ European Commission, DG TREN: Questionnaire for the Member States, professional associations and other interested parties on rail and passenger transport security. Brussels, 24 February 2006. The consultation was conducted according to the Commission Guidelines on Impact Assessment Sec(2005)791 of 15 June 2005 with March 2006 update.

¹¹ http://ec.europa.eu/dgs/energy_transport/security/consultations/2006_04_15_en.htm

Graphic 1

Issues raised and replies given in the public consultation of 24 February 2006



Values:
 1 = complete agreement
 0 = complete disagreement

The Impact Assessment draws upon these consultations and numerous contacts with interested parties.

The Impact Assessment also relies on a study made by the consortium responsible for an EU funded research project¹² entitled COUNTERACT.

On 14 June 2007, the Impact Assessment Board received a preliminary draft of this Impact Assessment Report. The Board met on 18 July 2007 to review the draft and adopt its Opinion.

This revised Impact Assessment Report takes account of the Impact Assessment Board's opinion throughout, in particular on the following points:

- (1) A refocused and enlarged section on problem definition, setting out much more clearly the specifics and diversity of urban transport systems in the European Union;
- (2) A list of possible security measures and a costing model is made. However, a list of actions that may be underway or planned by Member States is not enclosed because this category of information is often classified for security reasons;
- (3) Greater clarity on the subsidiarity tests are carried out including further underlining that the Member States are best placed to address the problems of urban transport security;
- (4) More clarity to the policy options and the impact assessments has been made;
- (5) The international cooperation on urban transport security is in its infancy. It is hoped that closer cooperation at a European level will have a positive impact on the international cooperation;
- (6) Better concrete examples of how the practical stakeholder cooperation shall be "kick-started" and managed, stressing however that the different initiatives should be discussed, tested and fine-tuned in discussion with Member States and stakeholders at an early point in the Urban Transport Security Expert Working Group;
- (7) A clearer explanation of the methodological difficulties inherent in trying to model security enhancement against environmental, economic and social impact for each policy option;
- (8) The structure of the revised Impact Assessment is now in line with the Secretariat General's Guidelines for Impact Assessments. The previous chapters regarding protecting urban passenger systems and relevant issues for security in urban transport are now incorporated into the problem definition;
- (9) DG TREN subscribes to the findings of the external study as far as they are mentioned in the Impact Assessment. An internet reference has been made to the external study.

¹² Cluster of Users Networks in transport and Energy Relating to Anti-terrorist Activities, a project funded under the EU 6th Framework Program for Research and Development managed by the International Association of Public Transport <http://www.counteractproject.eu>.

2. PROBLEM DEFINITION

"Acts of terrorism are against the values on which the Union is founded. The threat of terrorism affects us all"¹³.

Urban passenger transport in Europe is at risk from terrorist attack¹⁴. *"That threat is serious, is growing and will, I believe, be with us for a generation. It is a sustained campaign, not a series of isolated incidents"*¹⁵, according to the head of a national security service in Europe. While attacks to date have been most pronounced in Madrid and London, recent failed attempts to target railways in Germany in summer 2006 simply underline that the threat exists throughout the European Union. The use of suicide bombers, emerging from within the national communities and the innovative way in which they plan and execute these attacks would suggest that it is extremely difficult for the Member States to know where, when, how and by whom they will be attacked next.

The reaction to the publication in Denmark of cartoons depicting the prophet Mohammed, in 2006, shows that the threat is volatile. Any European country, which would normally be considered at a low risk, can overnight become a prime terrorist target. Furthermore, there is unfortunately only a low level of expertise required to be able to mount such attacks, which is the knowledge of how to manufacture or how to handle explosives.

Urban transport offers easy targets for terrorist attacks. Its systems are used by significant numbers of passengers simultaneously and throughout the day; they are open, readily and easily accessible with little, if any, access control and, normally, no screening. Their geographical spread provides numerous options for access, whilst multiple stops and interchanges attract a maximum of passengers. Any attack risks causing a considerable number of victims.

Ironically, the characteristics which make urban transport a target for terrorists are important for the travelling public's choice of transport: it should be easily accessible and available to enable people to travel to their destinations as quickly, as cheaply and as safely as possible. Indeed, European transport policy as well as all Member States' transport policies aim at encouraging an increased use of urban transport to overcome congestion and environmental problems in urban and suburban areas caused by extensive use of the private car, as is demonstrated in the Commission's Green Paper on Urban Transport¹⁶.

The authorities and transport operators are faced with a multitude of problems, in particular: ensure awareness of the increasing threat; ensure that security measures do not hinder mobility; ensure that security plans are being developed for all urban passenger transport systems; ensure best security value for money of investment in security measures, both in terms of protecting the travelling public, mitigating the consequences of an attack and contributing to general anti-terrorism deterrence.

¹³ Council of the European Union Declaration on Combating Terrorism, 7906/2004

¹⁴ Annex 3 provides an overview of recent attacks on urban transport

¹⁵ Dame Eliza Manningham-Buller, Director General of the Security Service, UK, speech at Queen Mary's College, London 9 November 2006

¹⁶ Adopted in parallel with the Communication to which this Impact Assessment refers: Green Paper on Urban Transport, document COM(2007)? of [insert date]

However, given the complexity of urban transport systems involving numerous transport providers, local service industries and millions of daily passengers, a "one-size fits all" security policy is unrealistic. The challenge of improving security in urban transport systems whilst maintaining full and unrestricted service is complex and learning by trial and error can be very costly both in terms of direct costs spent in security as well as human casualties, economic damage and citizens' trust when protection fails. To solve this issue all the key stakeholders must become involved. Their particular needs and roles must be recognised and addressed in any solutions which emerge. This is the main challenge being examined.

Currently, security for urban transport is provided by the transport operators, local and national authorities. Whereas European measures are in place for aviation, maritime transport and international transport of goods, no comparable measures exist for urban transport. In addition, whereas aviation and maritime transport measures could build on rules established in international organisations, neither international organisations nor rules exist for urban passenger transport.

Urban passenger transport security is generally not being addressed with the same systematic approach as aviation and airport security. It is obvious that individual states have differing threat assessments and priorities guiding their responses to terrorism. Some national authorities have robust and well-rehearsed systems for disrupting attacks or managing their consequences. However, such an approach is not the norm throughout the European Union. The approach may even differ between cities within a Member State and transport operators within an urban area. For this reason the security must address all elements be it vehicles (tram, bus, metro, train), infrastructure or personnel where each part of the chain is important. The diversity of the security threat and the current preparedness to prevent and deal with the consequences of a terrorist attack means that it is not possible to describe a detailed problem definition for all urban transport systems (e.g. lack of security plan, lack of problem awareness, research).

For all these reasons the problem definition of this assessment is of universal character: How to maintain and, whenever possible, extend urban transport whilst at the same time protecting it from terrorist attacks and maintain users' confidence it, whilst recognising that many operators have to do with limited expertise and funds earmarked for security purposes.

2.1. Security threats

The terrorist threat in urban transport is real. It will remain high for the foreseeable future and is likely to increase. The recent incidents in Europe and Mumbai underline the attractiveness of these targets for the terrorist and the vulnerability of urban transport.

Terrorist attacks on urban transport systems are not a new phenomenon. But while previous events were confined to a limited number of countries and involved essentially national, regional and local terrorist groups, the situation has dramatically changed with the emergence of diffused, often international networks or autonomous terrorist groups and the phenomenon of suicide bombers. In addition, incidents considered by European society to be trivial can trigger uncontrolled events leading to terrorist attacks by easily and wilfully emotionalised elements of the population. No country is immune to this threat.

The nature of public transport is that it is accessible to all, has many points of entry and exit and is integrated through a vast range of interchanges. Yet it is these very features which offer the terrorist the opportunity to inflict both very considerable casualties and destruction.

Despite efforts to protect the system, terrorists will continue to try to exploit loopholes in security. Threat and vulnerability studies show that the volume and range of potential 'soft targets' are considerable. The key threats are addressed below.

2.1.1. Suicide bombing

A notable feature of the current terrorist phenomenon is the rise in attacks being carried out by suicide bombers. The attraction to the terrorist of such an act is that within a crowded and busy urban transport system, it is difficult to detect the bomber amongst the travelling public.

Determined suicide bombers could have their operation disrupted if there is sufficient security and surveillance, including detection systems or foot patrols, especially with sniffer dogs. It might not be enough to prevent the terrorist detonating a concealed weapon but it might prevent him from hitting the chosen target. Indeed, if the target of choice is fixed, the presence of security could at least forestall the event.

2.1.2. Detonation of improvised explosive devices (IED)

Choice of target and weapon might be the same as that used by a suicide bomber. In addition, a terrorist may choose to detonate a device from a distance or with a timer in order to avoid detection and to save his own life.

2.1.3. Assault on urban passenger transport infrastructure or rolling stock

The physical elements of the urban transport systems are vast and difficult to protect. A terrorist group wishing to target rolling stock, bridges, tunnels and stationary carriages could inflict considerable damage to the infrastructure and its users.

2.1.4. Arson attack

An arson attack on an urban transport system could result in both considerable casualties and the destruction of infrastructure. Extinguishing the fire could result in flooding and damage to rolling stock, infrastructure and key electrical systems. An example of an arson attack on urban transport took place in Korea in 2003 resulting in 120 deaths.

2.1.5. Chemical attack on an underground system

The chemical attack on the Tokyo subway, in 1995, shows that a chemical attack with a particularly dangerous substance could cause many fatalities and the shutting down of substantial sectors of a metro system. Simultaneous attacks throughout a system would simply overwhelm the ability to respond, in particular given the challenges of working underground in confined spaces.

2.2. Targets for terrorist attacks

In addition to passengers and other people, urban transport systems encompass a range of material assets, which could be targeted or indirectly affected by terrorist acts:

- **People:** A terrorist attack on urban passenger transport systems could jeopardise many lives: Millions of passengers commute daily and a high proportion of staff are equally exposed to the risk. In addition, large stations host commercial activities and services attracting people not necessarily using the transport system;
- **Urban passenger transport infrastructure** includes rail tracks, tunnels, bridges/viaducts, switches/rail junctions, stations (surface, elevated, underground), workshops, depots and offices. This infrastructure is either with public access (e.g. stations, platforms) or restricted access (e.g. offices, workshops). It is located in crowded areas (e.g. city centres). Several European metro systems are amongst the oldest in the world, which makes them more vulnerable than modern infrastructures, which may have integrated security considerations into their design;
- **Rolling stock** (buses, trains, metros and trams) have regular routes and timetables to facilitate use by travellers. At the same time, this makes them more vulnerable to attack;
- **Operational control systems** including control centres, communication networks and equipment, software, etc. are usually located in restricted access areas. However, they may have several users, be accessible online and communicate with remote equipment and mobile systems. Therefore even if the hardware part is not physically accessible, the software is a very sensitive element and exposed to cyber crime;
- **Power supply systems** are connected to the national grid and provide the power to operate trains and auxiliary systems.

2.3. Consequence and response of a terrorist attack

A terrorist attack on urban transport could cause a large number of human casualties. The disruption of entire urban transport systems would scare the public and immediately affect mobility. On top of the direct economic, environmental and social impacts, extensive media coverage of an attack would affect the image of urban transport as well as that of the country and the government in office.

The attractiveness of urban transport as a target usually depends on the number of passengers affected. Thus peak hours and major events, such as sports and cultural events tend to increase the risk of an attack. However, small and medium-sized cities and smaller urban passenger transport operators cannot be ruled out as potential targets.

In the London bombings of 7 July 2005, 52 people were killed and more than 700 injured. The vital importance of the London urban passenger transport system to London's economy makes it particularly vulnerable as a terrorist target. Every day more than 6 million passengers use the buses, over 3 million use of the underground and nearly 1.5 million use the train within the capital. The transport systems in other European cities are of similar importance¹⁷.

Whilst some European governments and the transport sector are actively engaged in seeking ways to reduce the security risk to the passenger, including consequence management

¹⁷ E.g. the urban transport systems in Milan carry out 1.6 million passenger trips per day, Prague 3 million and Paris 10 million.

measures, urban transport is far from being approached in the same systematic manner as aviation and airport security.

It is important to be well-prepared to deal with a terrorist attack and its aftermath. A comprehensive security plan covers all the steps until the urban passenger transport service can be resumed. The preparation of such a security plan must involve all relevant stakeholders and it should be based on exercises and will require regular up-dating.

2.4. Protecting urban passenger transport systems

The key to any successful policy for enhancing security is to develop a coherent security concept based on the likely threats to urban transport and the perceived vulnerabilities. It should be noted that the implementation of such a concept has to rely on the availability of adequate resources.

In a previous section, a number of possible scenarios were developed to demonstrate the most likely scenario for an attack. A similar section outlined the unique vulnerability of the system to such attacks underlining the particular difficulties in countering them. However, there are a number of security measures that can be taken. A range of measures appropriate to the scenarios are shown in the accompanying annexes¹⁸.

2.4.1. Organisations, systems and procedures

Effective protection begins with an overall strategy. At the strategic level, the security policy for authorities and operators has to be established. This strategy leads to the development of an operational plan, which defines organisational structures, roles and responsibilities of relevant actors leading to a clear chain of command. It is, however, difficult to achieve given the multitude of actors and stakeholders involved, including transport operators, local and regional authorities, national authorities such as police, emergency services, security, intelligence agencies and, at the political level, the relevant government ministries.

Some countries¹⁹ have recently established a national coordination security committee in order to respond more efficiently to the increased terrorist threat. In all European countries the ultimate responsibility for security lies with the central government. It should be noted that, generally, good intelligence is likely to prevent a premeditated attack on urban transport. Therefore, whilst transport operators should contribute to security, it must be recognised that their role, however important, is only the last line of defence.

A first basic step for an effective security system is to identify clearly the roles and responsibilities of all participants and indicate what tasks have to be carried out. In effect, at the tactical level this implies very clear contingency plans and procedures. Once such an operational plan with relevant systems and procedures has been elaborated, it must be made known and understood to all stakeholders. The most effective way for determining whether the plans and procedures work is to regularly test the system, at least once a year. To avoid disruption of operations, such procedures can be tested through Table Top Exercises or in

¹⁸ See Annexes 4 and 5

¹⁹ E.g. in Singapore a National Security Co-ordinating Committees oversees all home-front security co-ordination. The level of efficiency and security in their mass transit systems are very advanced. Their benchmarking systems make annual evaluations and comparisons with other equally sized cities possible. Hong Kong SAR has pursued a similar course.

sections – for example one for CCTV operators or another specifically for first responders. Nevertheless, at some stage, a complete exercise would be important and should seek to integrate all parties from the policy and strategic levels to operators on the ground.

A key element of organisations, systems and procedures is the ability to communicate. The official report on the events surrounding the London Underground attack noted that whilst the benefits of good systems and procedures were evident and regular testing and exercising had honed the responders' skills, poor communication systems had hampered the response effort. This conclusion is confirmed by a number of exercises in civil protection, where the problems with communication and coordination between fire brigades, police, paramedics and authorities have emerged as key obstacles.

Contingency plans are generally in place for urban passenger transport systems. However, they are often limited to safety and civil protection issues. There is a perception that some Member States might be less advanced than others in developing such techniques and therefore should be encouraged to do so as a matter of priority. An example of how to build standard operational procedures is presented in the Annex²⁰.

2.4.2. *Surveillance and detection*

CCTV is a surveillance and detection method which is increasingly used in railway and metro stations. The theory is that such devices positioned both overtly and covertly allow a well-trained operator to track suspicious persons. Additionally, the video footage can offer invaluable evidence in court.

However, CCTV has several limitations and drawbacks. There are issues such as the protection of privacy and civil liberties of the citizen against potential misuse of the acquired information. Moreover, the operation is labour intensive and therefore the running costs are high. Although, in theory, such systems have some detection capabilities²¹ their practical use is limited to deterrence and post-incident investigations. Given the volumes of passengers it is often difficult to target the right person, especially in real time. Furthermore, the operation must also be directly linked to staff that can immediately intervene on the ground. A well-rehearsed security plan would save many lives. The camera alone will not.

There are other detection systems being developed which are sufficiently sensitive to detect the numerous types of material or substance that can be used for constructing a weapon. However, this is a complex problem given that precursors which in themselves are inert can subsequently be mixed with others to form dangerous explosives. Moreover, delicate calibration and repeated false alarms are major issues for potential disruption of service.

Apart from the cost of installing such systems, there is an operational penalty to be paid in terms of efficiency. Urban transport could be slowed down substantially due to search procedures or prohibition from carrying certain materials or substances.

²⁰ See Annex 6

²¹ The detection capability may increase with a combination of sophisticated image processing and well-trained operators. Even though information and communication technologies based on autonomous smart devices can overcome some of these CCTV drawbacks, the value of the system is currently limited to the post-Incident stage.

Security detection equipment does not have to be exclusively static. Portable detection equipment is available and can occasionally be less intimidating to passengers hesitant about the portal system. Such equipment can be moved to a number of sites based on intelligence or risk analysis, and its usefulness, including its deterrence factor, merits further consideration.

In order to prevent attacks, of any kind, the level of protection would have to increase very significantly with inevitable cost implications.

2.4.3. Resilience and response

Emergency response preparedness is necessary because complete protection of an urban passenger transport system is not possible. An effective emergency response and a resilient urban transport system can limit the number of casualties, reduce the severity of damages caused and ensure that the urban passenger transport system can recover as quickly as possible. Therefore, given that one aim of terrorism is the disruption of the social and economic activities, a resilient transport system would be a less desirable target.

Resilience and response require adequate planning, workable systems and procedures with training and equipment being key aspects.

It is also important to encourage passengers to be vigilant. Public awareness programs and efficient ways to communicate unusual or suspicious behaviour should be developed.

2.4.4. The cost of security enhancements

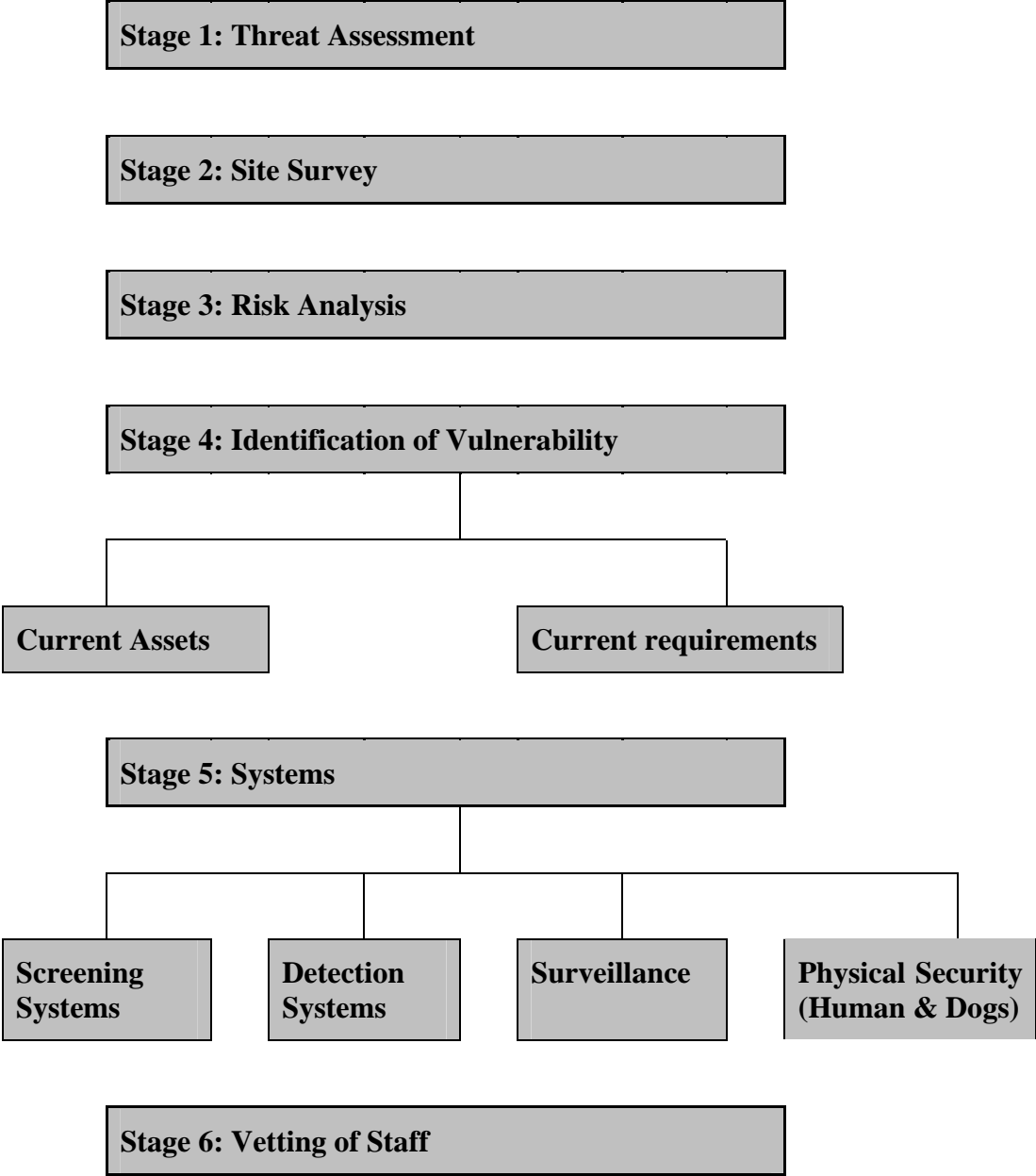
Whilst it is possible to acquire prices of individual items of security equipment, providing a reliable estimate of the cost of a complete solution for an urban passenger transport system is more difficult.

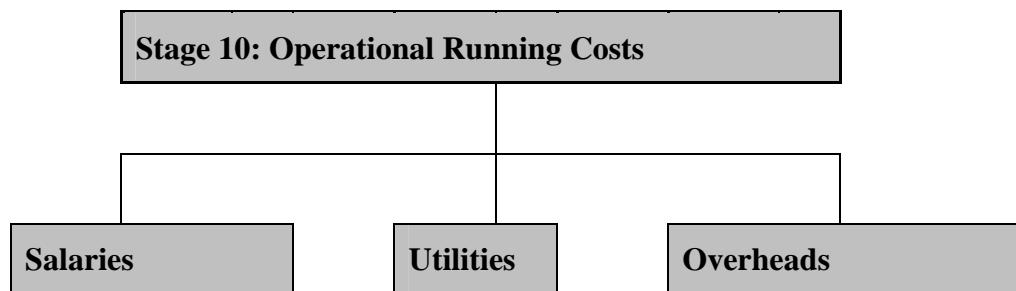
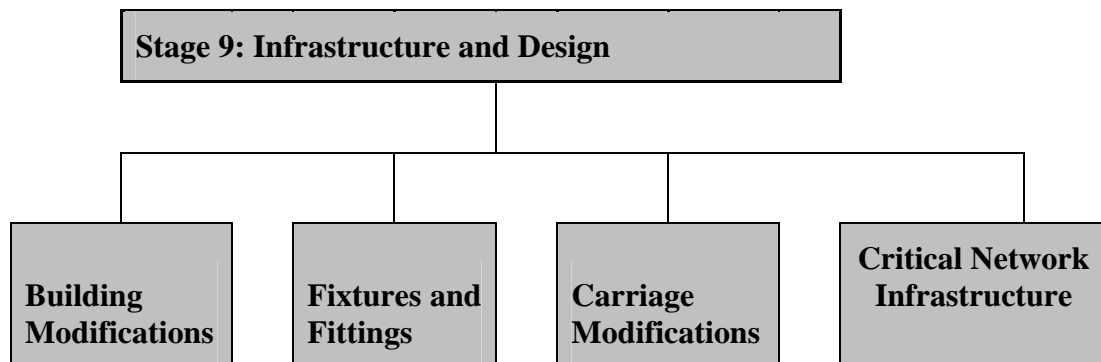
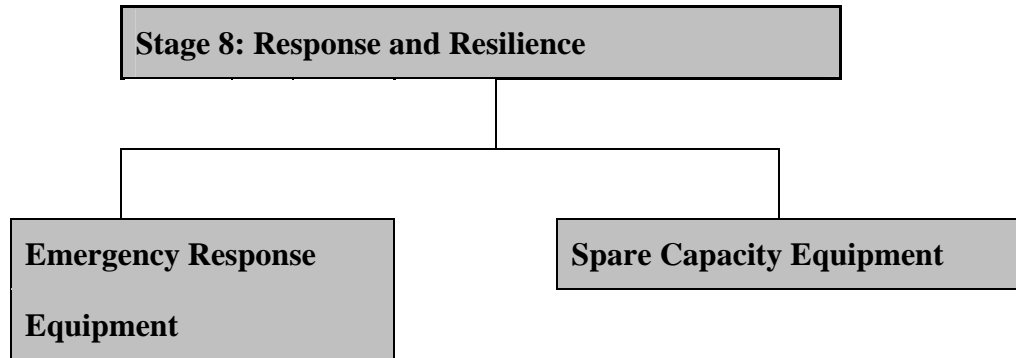
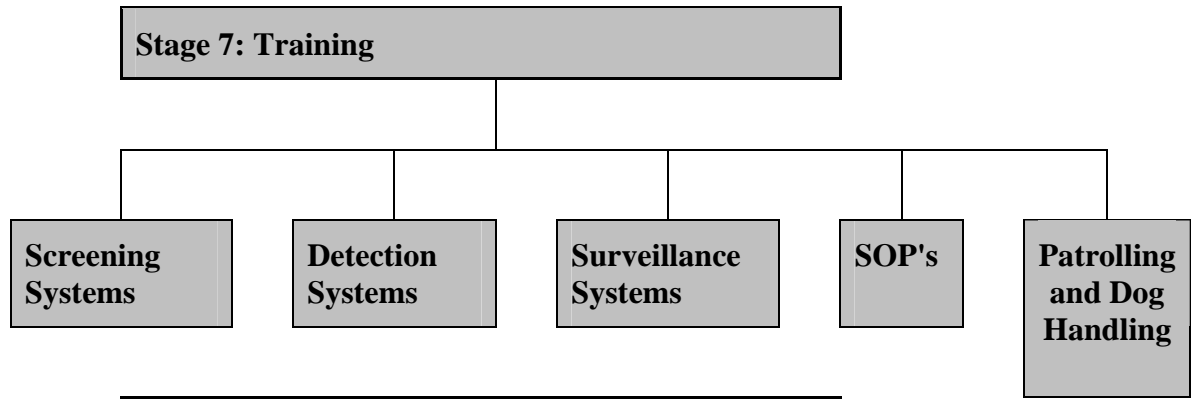
A complete security solution for an urban transport system depends on many aspects which vary from one system to another. Differences can be substantial: aspects include existing security measures which may or may not be derived from safety measures, the threat assessment, the level of security protection deemed realistic under the circumstances, technical facts including station layout and, of course, size of the transport system.

The flow chart below is a visual representation of the key stages in determining estimates of how much security will cost. It demonstrates the complexity of trying to estimate the cost of security measures.

Security Plan

(Costing exercise)





The flow chart, possibly with the exception of stage 1, would be a basis for security assessments and cost estimates for each individual station of the urban transport system in question as well as other facilities. It may equally be used for an assessment of the system as a whole.

For example whilst the cost of one CCTV camera at €1000 may not seem substantial, it is recalled that a major European urban transport operator considers it necessary to operate with more than 25,000 cameras on its network. Moreover, the costs for this hardware have to be supplemented by both considerable additional software costs and running costs which only would allow full use to be made of a complete CCTV system. In the Annex both a list of indicative costs of specific security measures²² as well as a case study²³ of the costs of enhancing security of an urban transport system are presented.

It must be noted that most security enhancement measures would have positive impacts on safety and other related issues.

2.5. Relevant issues for security

2.5.1. Current practice and operational limitations

A review²⁴ of the security activities of European urban transport providers highlights the following conclusions:

- Some urban passenger transport systems do not have comprehensive security plans. As a key result, some stakeholders are not adequately aware of their roles and responsibilities;
- A number of useful procedures and plans exist in all urban passenger transport systems due to safety obligations such as fire protection. The safety plans often do not include any security considerations and measures. Security and safety may require different solutions;
- Safety and security plans should be developed into a coherent and comprehensive approach. For example, the safety plan should address fire as well as include anti-terrorism measures to cover arson and chemical attacks;
- There are urban transport systems which have made considerable investment in cameras, two-way communication systems, control rooms but it is not universal;
- Security measures must take into account the basic requirements of openness and accessibility of urban transport systems;
- Piecemeal measures are not sufficient; Security plans have to combine the strengths of human, design and technology factors;
- Prevention measures aim to better protect passengers and systems, but they cannot guarantee 100% security. Security strategies should always comprise of prevention and response to improve incident management capabilities.

²² See Annexes 4 and 5.

²³ See Annex 7.

²⁴ COUNTERACT, see chapter 1.

2.5.2. *Efficiency*

Urban transport seeks to deliver an affordable and accessible service to its users. Therefore any enhancement to security has to be assessed against the need for the efficient provision of a service. Any security measures that impact negatively on user numbers, scheduling times, access to the system and passenger throughput must be fully considered before implementation.

2.5.3. *Citizens' rights*

Security enhancements should not unnecessarily erode the liberties and individual human rights of the travelling public. In fact, a key element in terrorist strategies is to erode the very civil liberties a democracy seeks to defend. If new procedures and new technology become more intrusive in the name of security enhancement, or if data collection is extended beyond what is reasonable, the implementation of security policy will face major difficulties. Moreover, if new investigative techniques discriminate against any social groups, then security enhancement will have been diluted by unintentional but associated social consequences.

2.5.4. *Cost*

Security measures cost money²⁵. Security budgets are normally limited. It is therefore essential for operators to find security solutions which are in line with their budgetary resources and offer, in each individual case, best value for money. This is particularly important where expensive and often not adequately tested new technological products are becoming available, which may be of particular interest where economies of scale can be achieved. Cooperation between operators, indeed between those in different Member States, could reduce costs. Incorporating health and safety objectives with security will improve the return on investment.

It has not been possible to find figures for the security spending in the EU for the urban passenger transport systems²⁶. However, an indication may be that in the USA spending for security was US\$ 9 per passenger per national flight compared to US\$ 0.01 per passenger per urban transport trip²⁷ in 2005.

2.5.5. *Awareness and cooperation*

The effective protection of urban transport systems must ensure that all relevant parties, including the national, regional and local political authorities, the transport operators and the travelling public, are aware of their role and responsibilities. These responsibilities could range from greater harmonisation of effort, targeted investment, particularly in research and development, and if appropriate, educating the public on basic security and safety procedures or simply on why they have to pay more for the provision of security.

²⁵ See Chapter 2.4.4 and Annexes 4, 5 and 7.

²⁶ Several operators and International Association of Public Transport have been asked to provide estimated security cost figures. The measures which are put in place to provide security are often of multiple use (e.g. crime, vandalism, safety and sanitary) and therefore it is difficult to give estimation of security costs.

²⁷ "On the ground: Protecting American roads and transit against terrorism" by Arnold Howitt, Jonathan Makler, Brookings Institute, April 2005

2.5.6. *European action, subsidiarity and proportionality*

The intervention at the European Community level must respect the principles of proportionality and subsidiarity. In addition, it must be consistent with other EU strategies and policies.

It must be ensured that intervention to enhance security takes into account the effort and investment already undertaken in the Member States.

3. KEY OBJECTIVES

The overall aim of this impact assessment is to identify the best option to enhance urban transport security, whilst ensuring the following:

- **Economic activity:** efficient urban transport is essential for the daily economic life of a city. Stopping the service will hinder employees getting to their place of work and prevent citizens' mobility. In addition, human casualties and material damage of an attack create further economic impacts;
- **Environmental protection:** urban transport reduces pollution and congestion substantially. The use of private cars and motorised two-wheelers increases when urban transport is not available²⁸;
- **Social equity:** efficient and affordable urban transport is socially fair by making mobility possible almost independent from income levels. Moreover, it should be noted that terrorism in urban transport particularly threatens those who cannot afford private means of transport.

The overall aim can be defined through the following objectives:

The general objectives are:

- Protect citizens using urban passenger transport;
- Ensure that urban transport security measures do not unduly reduce the mobility of citizens;
- Raise security awareness of all stakeholders.

Specific objectives:

- Encourage development of security plans for all urban passenger transport systems;
- Ensure that security measures are developed in such a way as to allow a continued free flow of passengers;
- Encourage development of voluntary common standards for equipment and processes;

²⁸ Alternative modes to urban transport such as walking and cycling are more environmental friendly than urban transport. However, these two alternatives will not be sufficient to replace the urban transport.

- Develop security measures offering best value-for-money;
- Coordinate political initiatives and research at the European and international levels.

Operational objectives:

- Encourage cooperation between all stakeholders;
- Exchange of best practices;
- Encourage training and exchanges;
- Develop benchmarking;
- Promote technological cooperation and research;
- Encourage cooperation between operators of different modes of transport;
- Promote cross-fertilisation between systems.

The over-riding objective is to maintain and, when possible, expand the number of citizens travelling in secure urban passenger transport systems in Europe. Security measures should not lead to the exclusion of disadvantaged groups. Linked to this is the general objective to raise the awareness amongst all stakeholders around the security of urban transport throughout the European Union.

4. POLICY OPTIONS

The following policy options have been identified for analysis, particularly in relation to meeting the objectives set out in chapter 3. They are:

1. No action at the European level, i.e. a continuation of the present situation where neither coordination nor initiatives are taken at European level. No coordinated reaction to the increased threat.
2. Comprehensive measures at the European level laying out specific security requirements for all urban passenger transport operators in all Member States.
3. Limited measures at the European level requiring a mandatory security plan for all urban passenger transport systems in the Member States. A security plan is a logical first step from which other, more detailed security measures can be developed.
4. Practical stakeholder cooperation at the European level. This would include e.g. an exchange of best practices between Member States and operators across the EU, the development of general guidelines and peer review.

5. IMPACT ANALYSIS

There are two principal avenues to improve urban transport security. Firstly, the likelihood of a terrorist attack could be reduced. Secondly, in case of an attack, the potential human losses

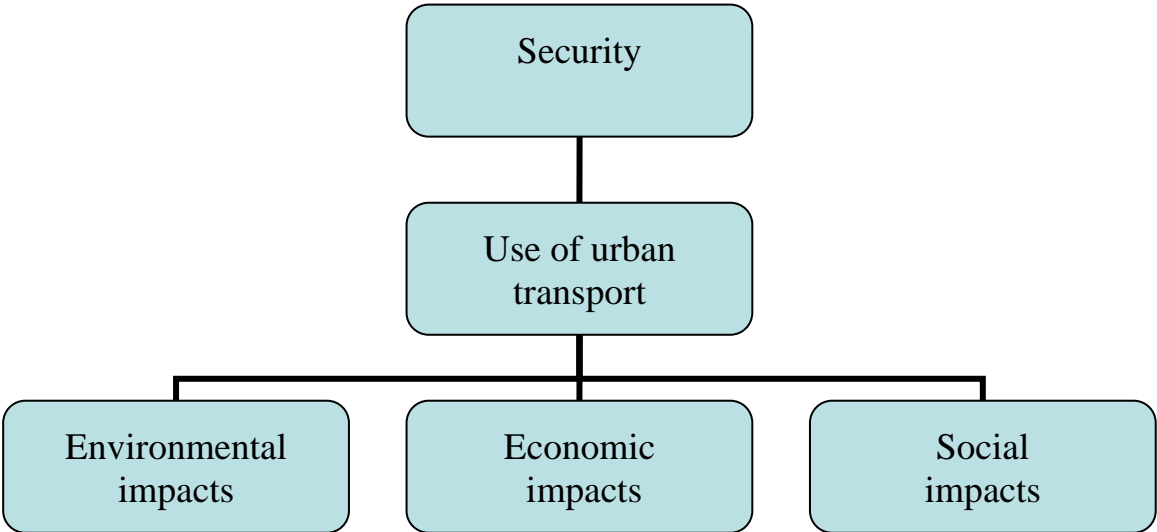
and material damages could be alleviated. While it is not possible to assign *a priori* reliable numbers to either aspect²⁹, it is important to analyse security measures at least qualitatively in terms of these criteria. The combined effect of the two criteria constitutes the primary benefit of any security measure.

There may also be secondary benefits. Improving security can have a secondary positive impact on safety, crime prevention and health. Security policy measures should be designed to minimize secondary costs such as diminishing passenger volumes.

While the probability of an attack is particularly difficult to assess, there is information on the possible implications of such an attack. In terms of lives lost, the attacks in Madrid and London alone have resulted in 242 deaths and over 2000 injured persons. The infrastructure damage on the London Underground and in Madrid ran to hundreds of millions of Euro and arguably more significant was the damage done to businesses in the two capital cities.

As illustrated in Figure 1 below security is a factor for the use of urban transport, which in turn creates positive social, economic and environmental impact for urban areas. Therefore, the analysis of each policy option regarding its environmental, economic or social impacts will depend primarily on the "security value" of the policy option. For this reason the impact assessment has not separated the analyses of environmental, economic and social impacts per policy option.

Figure 1



5.1. No action at the European level

No action, at European level, means continuing as at present and without responding to the European Council's declaration on terrorism and to circumstances which have changed due to the terrorist threat.

One political argument for this policy option could be that the terrorist attacks have so far always been targeting one or more specific Member States and therefore have had

²⁹ Calculations have been attempted to assess the overall damage of London and Madrid attacks. However, the complexities involved in such calculations make the results highly unreliable.

geographical limitations. Nevertheless, attacks with a wider geographical spread cannot be excluded with immediate consequences for the citizens and urban transport users.

No action at the European level will not reduce the threat from future attacks on urban transport nor limit the impact of such an attack. This policy option will not have any direct cost implication on the EU budget. However, it will have implications for costs at national, regional and local levels. A lack of cooperation implies technical solutions being developed by individual operators without taking account of the experience made elsewhere. This will inevitably lead to detrimental efficiency and cost. Finally, it will be a sign that there is no will for a collective response to the threat.

5.2. Comprehensive measures at European level

Enforcing or standardising measures through detailed legislation at the European level is a conventional feature in some policies of the European Union. In terms of anti-terrorism measures, there are already precedents in the Community transport legislation regarding aviation and maritime security. This option describes a scenario where such an approach is extended to urban transport.

The main challenge of this approach would be to take into account different local conditions. Furthermore, the legal construction of the European Community and its Member States would create additional complications for adopting such rules.

If Community legislation on the implementation of detailed security measures were to be introduced, it would have to be sufficiently flexible to handle the complexities of the sector. Urban transport systems are diverse; they vary in terms of capacity and resources from national assets to local communities.

At this stage, there is a high risk that creating comprehensive European legislation could be inappropriate, against the principle of subsidiarity, costly and harm operational efficiency.

5.3. Limited measures at European level: Mandatory security plans for all urban transport systems

This policy option would require a security plan for all urban transport systems in the European Union. A security plan is a logical first step from which other, more detailed security measures can be developed.

Some Member States have urban transport security plans for all, or part, of their urban transport systems whereas other Member States have no such plans.

There are two main advantages in ensuring that all urban transport systems in the European Union have security plans. Firstly, this policy option would demonstrate appropriate awareness of the problem vis-à-vis citizens and ensure that urban transport users can have confidence that appropriate security measures have been taken. Secondly, where no such plan exists for urban transport the creation of such plan will, by this very action, increase security awareness of governments, transport operators and other stakeholders.

It is commonly agreed that security plans would be useful, although there are different views whether they should be required by law. Urban transport operators would like clarity on responsibilities, and would like to enter into a dialogue with other stakeholders and cooperate

at a practical level. However, at the same time they are worried about costs of additional security requirements.

A regular peer review of the security plans, including each individual urban transport system, is an essential element in this approach. The process could allow an insight into how others have approached the problem. Unfortunately, peer review is rarely used in urban transport security. More details on how a peer review could function are presented in the Annex³⁰.

5.4. Practical stakeholder cooperation at European level

This policy option is built on voluntary cooperation between Member States and national stakeholders. The approach is used in a range of policies where the conventional Community approach has not been applied.

This option contains two distinct stages. Firstly, an informal cooperation between all stakeholders could be facilitated. Secondly, based on the conclusions from the first stage, the cooperation could evolve towards a more structured form.

Stage 1 - Informal cooperation

The first stage can be further divided into two levels of cooperation. The cooperation could start on security plans and risk assessments. This could lead to a more technical cooperation.

Sharing best practises on risk assessment and developing security plans is a natural starting point for cooperation. This necessitates a common forum for bringing all stakeholders together. One of the first topics could be the development of a systematic risk assessment. Some larger urban passenger transport providers have good security procedures. However, many smaller operators and other entities associated with urban transport (for example retailers in a station), can neither afford their own tailor-made security policies nor possess the ability even to evaluate or appreciate their weaknesses. Sharing information on how to conduct even a limited risk or vulnerability assessment could prove beneficial to all concerned.

A further step could include the exchange of best practices on measures to secure the network. Similarly practical cooperation between stakeholders could include appraisals of new technology or developments in infrastructure. There could be an exchange of experiences gained with the application of certain types of equipment, including surveillance and detection technology. Furthermore, cooperation could be broadened to issues relating to personnel. These could include staff vetting procedures and training of staff. Eventual experience on encouraging passenger vigilance could be discussed.

Stage 2 – Structured cooperation

Based on stage 1, it may prove appropriate to continue with a more structured approach. This could be done by developing a common set of benchmarks for security systems and procedures. It would facilitate the implementation of security plans and support the

³⁰ See Annex 8.

measurement of operational security. It could also help urban transport operators to compare their security measures with measures taken by others³¹.

Furthermore, common guidelines could be developed to support choosing technical solutions, staff screening, its education and training, and corporate security certification, *inter alia*.

Tools for cooperation

To facilitate the cooperation at European level, working groups consisting of the appropriate stakeholders could be established. These groups could discuss best practices and eventually formulate benchmarks and guidelines.

Twinning programmes could be another central element of such cooperation. Twinning could facilitate hands-on learning with a moderate cost.

A dedicated IT portal could complement the process of collecting and disseminating information.

Other remarks

Practical stakeholder cooperation would be a relatively low cost method of enhancing urban transport security. However, it will not solve all security problems.

This policy option is the easiest to implement as it has the lowest number of obstacles and uncertainties to overcome and it has the support of all stakeholders. Practical stakeholder cooperation will assist Member States finding efficient and cost beneficial solutions to their problems in urban transport security.

The consultation process has shown that all stakeholders are willing to join a practical cooperation process. Its success will evidently depend on the level at which this commitment will be translated into practical work. Stakeholders agree as well that it would be impossible to achieve without the Commission playing a central coordinating role.

6. COMPARING THE OPTIONS

This Impact Assessment examines four policy options. The first option is to undertake no action at European level. The European Union has committed itself to combating terrorism and every measure should be explored in order to determine if it can contribute to enhancing security. The European Council Declaration of March 2004³² demands that the European Commission takes action. When the lives of innocent citizens in Europe are at stake and the economic, environmental and social impacts are high, then ways to best support a positive development, at a European level, must be identified. Learning from positive as well as negative experiences can save lives and money. Developing common standards, jointly pursuing technological development and coordinating international initiatives at a European level would cut the overall costs for all stakeholders and would enhance security. Therefore,

³¹ The bench marking systems in Hong Kong and Singapore are so developed that an annual comparison of security systems is made.

³² Council of the European Union Declaration on Combating Terrorism, 7906/2004.

doing nothing at a European level would be an inefficient and expensive option. This policy option is therefore unsustainable.

The second policy option is to introduce comprehensive measures at European level. Although there has been previous intervention through legislation on other security and terrorism matters, the complex and diverse nature of the urban passenger transport sector would offer particular difficulties for the enhancement of security through detailed legislation. Several Member States have already taken measures, including legislation to combat terrorism on urban transport systems. However, the threat is not even and legislation imposing specific solutions or agreeing a common security level will not be common objectives for all Member States. The reason is that not all Member States would politically judge it to be commensurate with the costs and consequences of introducing comprehensive new measures or technology. This policy option will also enquire overcoming legal obstacles at national and European levels. On balance, introducing comprehensive European measures in the form of legislation would not be proportionate, be against the principle of subsidiarity and therefore this policy option is not found to be the most suitable way forward.

The third policy option is to introduce limited measures at the European level by requiring mandatory security plans for all urban transport systems. This policy option would not contain new obligations for those urban transport systems which already have security plans in force but create new obligations for the others. However, this option would not encourage security cooperation at European level, nor the transfer of know-how between stakeholders. It would furthermore require a solution to considerable legal issues linked to the complexity of urban transport where responsibility, legal competence and funding show a very diverse picture. Verification of such measures would likely prove difficult and controversial.

Finally, the fourth policy option is to encourage practical stakeholder cooperation. The unique nature of the system, the wide variation in threat assessments and vulnerabilities, does not readily facilitate a "one size fits all" approach to security. Furthermore, being closest to the problem, the national stakeholders are best-placed to set standards that would be applicable to operators across the board, whilst being sensitive to their local circumstances. The complexity of urban passenger transport systems in the European Union suggests that local solutions might offer a better chance of success as opposed to the imposition of top-down solutions.

Table 1 sets out the advantages and disadvantages of the four policy options.

Table 1: Comparison of four policy options with regard to their impact on cost, awareness raising, security enhancement and barriers to implementation.

Nil = 0 or negative, + = Low, ++ = Medium, +++ = High

Policy Option vs. Indicator	Cost efficiency (including environmental protection, social equity, and, economic production and efficiency)	Raising awareness	Security enhancement	Easy implementation
<u>Policy Option 1:</u> No action at European level	Nil	Nil	+	+++
<u>Policy Option 2:</u> Comprehensive measures at European level	+	+++	+++	Nil
<u>Policy Option 3:</u> Limited measures at European level: Mandatory security plans for all urban transport systems	++	++	++	++
<u>Policy Option 4:</u> Practical stakeholder cooperation at European level	+++	+	++	+++

The comparison of the four policy options leads to the conclusion that the practical stakeholder cooperation is the best option. This policy option offers the most appropriate and cost-beneficial route towards improving security in urban transport as well as reducing the impact of a potential terrorist attack. The option also stands the test of subsidiarity: the Member States are free to decide their own action. Finally, the proposed action is proportionate to the problem and in line with the legal instruments available.

7. CONCLUSIONS AND RECOMMENDATIONS

The terrorist threat against urban transport systems is volatile and involves a new type of violence. It is important that the new threat is recognized and appropriately addressed by decision-makers and urban transport operators at national and European levels.

To address this challenge, four policy options were analysed in this document. The option of practical stakeholder cooperation at a European level emerges as the most favourable solution in the current circumstances.

The urban transport sector would benefit greatly by consolidating relevant knowledge, exchanging expertise and learning from other sectors. Consequently, there is a need to support these activities to enable smaller and less experienced operators to adopt a systematic approach to security.

Practical stakeholder cooperation was also the preferred option of Member States representatives, transport operators and other stakeholders, as confirmed in the public consultation of spring 2006. Moreover, all parties expressed their intention to contribute to and participate actively in such a process.

For this purpose the Commission could set up an Urban Transport Security Expert Working Group which would organise the technical work. The Commission would invite Member States, authorities and operators alike, to create a robust system of practical cooperation encompassing the entire Community in which the Commission would commit itself to playing a catalyst role. Experience made by one operator with new technologies should be made readily available to all interested operators through a European technology ledger.

For practical purposes and in order to manage what can be expected to be very considerable activities, the Commission would invite each Member State to nominate a national Focal Point. The Focal Point would be the Commission contact, facilitate the work of the Urban Transport Security Expert Working Group, ensure clarity of its purpose, consistency in national contributions and assist in taking stock of progress. The Focal Point should be a representative of the Member State's appropriate transport security authority.

8. MONITORING AND EVALUATION

The proposed policy approach presents a modest European dimension to urban transport security. Given that the policy area is still in its infancy, any monitoring and evaluation tools may need to be adapted regularly. In particular, the progress from informal cooperation to a structured one is open to debate. However, some potential indicators are sketched below.

1. Stage 1 – Informal cooperation

1.1. Measure for the level of practical collaboration between urban transport stakeholders

One obvious indicator of the level of the collaboration would be the number of urban passenger transport stakeholders participating in the exchange of best practices. The geographical coverage within Member States, the representation of different urban passenger

transport modes, and the sizes of the cities would provide more detailed information on this criterion.

1.2. Measure for the depth of practical collaboration between urban transport stakeholders

This indicator seeks to evaluate the range of different issues being discussed. This could be done by recording the number of agenda points of substance and/or by the number of subgroups.

1.3. Measure for twinning

This indicator monitors twinning activity. A straight-forward indicator could be the number of twinning visits made, either under Community financial assistance or by own initiative.

1.4. Number of security plans in place

This indicator monitors the number of urban transport systems that have developed a security plan.

1.5. Functioning of the Focal Point system

This indicator monitors the appointment, participation and activity of the Focal Point system.

1.6. Research and development activity in urban transport security

Establish and regularly update a list of ongoing publicly financed R&D programs in the area of urban transport security.

2. Stage 2 – Structured cooperation

2.1. Development of benchmarks

As indicated above, stage 2 activities are hypothetical at this stage. However, should creation of benchmarks be the way ahead, a natural indicator would be the number of benchmarks. Such an indicator may not reflect the considerable amount of work before the first benchmark can be adopted. Therefore an indicator based on a targeted assessment may be viewed to be more appropriate and desirable during that intermediate period.

2.2. Development of guidelines

Considerations above regarding benchmarks apply also to guidelines.