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NSAI Standards

Standard Recommendation
S.R. CEN/TR 14383-7:2009

Prevention of crime - Urban planning and building design - Part 7: Design and management of public transport facilities

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Prévention de la malveillance - Urbanisme et conception des bâtiments - Partie 7: Conception et gestion des espaces dédiés au transport public

Vorbeugende Kriminalitätsbekämpfung - Stadt- und Gebäudeplanung - Teil 7: Planung und Management von Anlagen und Einrichtungen des öffentlichen Personennahverkehrs

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Foreword

This document (CEN/TR 14383-7:2009) has been prepared by Technical Committee CEN/TC 325 “Prevention of crime by urban planning and building design”, the secretariat of which is held by SNV.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

The status of Technical Report (CEN/TR) was proposed to give all countries the opportunity to compare experiences and to harmonise procedures.

This Technical Report is one of a series for the “Prevention of crime by urban planning and building design”, that consists of the following Parts:

— Part 1: *Definition of specific terms*

— Part 2: *Urban planning*

— Part 3: *Dwellings*

— Part 4: *Shops and offices*

— Part 5: *Petrol stations*

— Part 8: *Protection of buildings and sites against criminal attacks with vehicles*

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Introduction

The public transport system has to meet the citizen's mobility needs under the most advantageous economic, social and environmental conditions for the community. It is an instrumental factor in national unity and solidarity, national defence, economic and social development, in balanced strategic land use planning and sustainable development, and in driving international exchanges, particularly towards European partners.

In meeting these needs, it is equally important to comply with objectives on minimising or reducing risks, accidents, nuisance (particularly sound pollution), pollutants and greenhouse gas emissions by implementing measures designed to reinforce the application of the legal right of all public transport users, including disabled or handicapped people, to move freely and to choose the means they wish to use, and to exercise their legal entitlement to transport their property themselves or to commission the services of a company or institution of their choice to do so.

The success if this kind of service hinges on:

– the strength of social ties in public transport areas, which are in fact a community resource (respect for others, for community values, voluntary sharing of community resources, respect for rule of law, etc.);

– the efficiency of the production facilities (integrity of the technical and financial assets, the physical protection provided by the transport, a regular and reliable quality service, etc.), which are by definition a source of regular contact with the population and are thus embedded in the urban fabric.

Any unruly, aggressive or assaultive behaviour will by its very nature have a negative knock-on effect on public trust in the service. More generally, public trust can be eroded by an environment left to degrade (dirt, poor lighting, graffiti, etc.) and by repeated unruliness. The erosion of public trust can foster avoidance behaviour from customers (drop in traffic) and staff (strikes, skipping ticket checks, etc.) alike. Crime often also targets the production facilities (equipment, buildings, infrastructure, information systems, etc.), thus causing financial losses, equipment breakdowns, service delays, malfunctioning customer service devices, or even generating traffic safety risks (accidents, derailments, etc.).

Hence, crime, whether carried out or perceived, threatens the fundamental policy issues of any public transport system, i.e. public trust and efficient production facilities, with significant economic and social consequences.

Crime problems require action, on the individuals involved, on the organizations and structures that manage community activity, and on the locations housing the activity.

Pre-planning for, or "designing-out", crime and disorder often adds little or no additional cost to the project, but can save large amounts of money in the long run. Returning to a location to "retro-fit" crime prevention measures is always more expensive than designing the location properly in the first place.

All public transport systems in industrialized countries face these same issues. There are numerous examples of where public transport companies have undertaken crime prevention actions, many of which have entailed heavy funding. We can now draw upon a significant pool of experience and best practices. Indeed, public transport facilities are fast developing towards intermodal services and expanding out to European scale. This has prompted the need to draft a set of risk analysis procedures complete with guidelines.

Developments in problem orientation

Recent trends in mass transport project characteristic have to be taken in account, before identifying appropriate recommendations for the design, the management and the planning process.

Below, four trends in mass transport project characteristic are discerned.

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Trend 1: More and more huge and multifunctional mass public transport projects

Railway stations in big cities and at airports, in order to fulfil their desired function as “multiservice areas” often become “mega structures” where all kind of functions are integrated: transport, shopping and leisure. The transport function is just one of the other present functions of the whole structure.

In order to emphasize its huge size and importance, architects of these mega structures often propose impressive, challenging forms and constructions. These structures become regional or even national icons.

However, to structures of this kind, special points of attention apply for security design and management.

These points are:

– their huge size make people feel get lost soon if the concept of the structure is complex, the orientation on passenger routes towards the goal is limited, and the signage is incomplete;

– different functions in the same structure mean different proprietors and different managers; if the demarcation of the areas (what belongs to whom) is not clearly defined, if managers use different rules for the public, different security systems (every function its own surveillants and CCTV system) the management of the total structure will not as effective as it could be and should be;

– big structures are more different to connect to their environment properly; there is a greater danger that they become and remain isolated, internally oriented blocks, which often make an unfriendly impression to their direct environment. From the outside, you mainly see blind walls and huge car parks;

– different functions mean different opening times when it is not possible to close off the not-in-service parts (for example the shopping mall in the late evening) and offer alternative routes to transport passengers, the latter will have to walk long routes through scary, unsurveilled corridors

– different functions have different peak hours; but if more functions have a peak at the same time of the day and all corridors have to be designed on this maximum flow of visitors, these corridors will be far too big for the silent hours and the visitors will feel lost there.

This document give recommendations for not only regular and simple transport facilities, but also recommendations that take into account the specific design and management attention points as mentioned for the complex multifunctional mega structures.

Trend 2 : More and more underground structures

In former times, underground structures formed a minority and existed only in huge metropoles. Nowadays, underground projects become more and more common.

In existing urban areas, only very little space is available for expansion of buildings and railway facilities. The space required is only available under the surface. Engineers and architects have to look more and more to underground solutions. Underground structures, however, are critical to safety. This applies to fire safety (escape routes are longer and carry on more in the vertical dimension) but also to security. Especially the perception of security is at stake: “the deeper, the more sensitive” one could say. To reach the same level of security perception in underground structures, designers have to perform twice as well as in normal buildings.

Trend 3 : More and more stations and transfer points in the outskirts of town

With the expansion of the public transportation networks in urban areas (train, metro, tramway, buses) more and more stations, not only simple metro stations but also important regional transfer points, are being located in the outskirts of town.

These are often unpleasant areas: in the middle of an industrial zone and/or near a noisy highway.

Designers have to look to special solutions to make people feel comfortable in these kind of places, when walking to and from the station/bus station, or when waiting for the connecting train/bus.

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Trend 4 : More and more separation between public and private space

Historically, the spaces devoted to transport facilities have been open spaces: train and bus stations, regular lines for road, maritime stations, etc. In practice, all those facilities that did not have the role of international border were of an open and public character. Today, some of these spaces still belong to the field of the public space, but the standard becomes more and more to establish two distinguished spaces: the public area and the private area. The public area serves as an area of access for the control (public space) and the private area serves as 'safe area'. From a point of view of formal surveillance and effective support in emergency cases, this separation may be a favourable condition. The separation between public and private areas has, however, also negative consequences.

The most important consequence is the limitation of the individual rights of the users. Only allowed persons (in the possession of the travel ticket) have right to the restricted safe areas. Thus, these private spaces are not contributing any more to 'urban integration' (= all spaces for all functions for all people). From this former consequence, another consequence, very relevant for the crime prevention subject, follows: persons without allowance to enter the private zones, all have to be concentrated in the (little) space remaining public. In addition, a third consequence, related to the former: not all functions, like restaurants and shops, are suitable for both types of space (the private or the public). That means: separation of functions has to be made. This separation may lead to a lower degree of 'urban integration'.

The fact that spaces become more and more separated, influences the design of safe transport facilities related to the prevention of conventional criminality:

- It supposes the restriction of use of the restricted private space
- It means the transport facilities spaces are seen as spaces of risk
- It adds technical and technological problems in the design
- It introduces new security questions and new challenges for the pursuit of the same degree of 'urban integration' as before the separation.

Trend 5 : More and more concerns for poorly staffed or unstaffed stations in the countryside

In the period the European train systems were built (1850-1900), trains were the only available long distance travelling facility. Every small village along the line was connected and got its own staffed station.

For several reasons the transport authorities have reduced or totally taken away the staff. The buildings are relatively expensive to maintain and may also be neglected by the transport authorities who are inclined to concentrate on maintenance and problem solving in bigger stations.

Result is often an increase in feeling of insecurity of the passengers (still) using these small stations.

Worst-case scenario is the total closing down of the station due to further reduction of the passenger amount and/or increasing maintenance cost.

This document deals with measures to be taken in order to guarantee the long-term maintenance and security of small countryside stations. This is especially important in respect of the revival of the regional train systems, which can be seen already in some of the European countries.

The growing concerns push the European countries to different solutions depending on the political context: restaffing, CCTV, alarm system, etc.

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1 Scope

This document sets out guidelines to the methods of assessing the exogenous and endogenous risks of crime and/or perceived insecurity and proposes measures designed to preclude or reduce these risks. The objective is to strengthen the overall security of land-based public transport, such as : bus stop, bus station, train station, train stops/halts, modal interchanges, open access underground and tramway systems, controlled access underground and tramway systems, taxi ranks, station car parks, river bus terminals, bicycle parking facilities.

This document does not cover terrorism or the revenue vehicles themselves. It covers the areas that are dedicated to mass transit and open to the public.

The core document focus is on the security of passenger spaces, in respect also of security aspects.

The document applies to existing public transport facilities as well as new public transport facilities.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14383-1:2006 — *Prevention of crime — Urban planning and building design — Part 1: Definition of specific terms.*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14383-1:2006 apply.

4 Design and management processes for transport-dedicated areas

4.1 General

This section proposes that:

– the crime prevention input in transport related projects should follow a conventional “project management” approach, with a system of stages in which all effective stakeholders are identified and engaged;

– creating or refitting a transport location, and day-to-day transport facility management are considered as two separate projects, where the former leads on to the latter. However, it is essential that wherever possible details of the proposed usage and operational methods to be adopted at the location are made available during the planning stage. In this way, advice from crime prevention specialists is likely to be more effective when the transport location becomes operational.

Safety planning and safety assurance for a transport-dedicated area can be run through in conventional project management stages. However, the stakeholders involved, the questions posed and the available policy resources will be different according to whether the project is location design or location management. This is why the document goes on to cover the safety assurance process separately for these two project formats.

The present section details the stakeholders (4.2) and stages (4.3 and 4.4) of the respective processes, while the following sections focus on the content of these processes, i.e. diagnostic methods and guidelines in terms of an action plan.

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