Public transport in Europe, and in particular mass passenger transport, faces a range of threats to its security including a serious and sustained threat from international terrorism.

Terrorism has a history of targeting public transport systems both worldwide, for example in Mumbai (2006) and Moscow (2010), and in a number of EU Member States, including the UK (2005), France (1996) and Spain (2004).

Terrorist attacks against public transport networks are linked to a number of factors, such as political, religious, economic causes, national claims, etc. The persistence of such underlying factors suggests that this threat will remain for a long-time in the European Union.

The primary aim of these terrorist attacks is to i) cause a large number of casualties, when the passengers are the immediate target and/or ii) disrupt the public transport system, cause economic damage, create public panic, attract publicity for terrorists 'causes, etc. The large media impact of such actions makes public transportation an extremely attractive target for terrorism.

The potential for these actions to cause great loss of life was made clear in 2004 in Madrid, when bombs exploded in commuter trains causing many fatalities[1]. After this terrorist attack, the European Council adopted a Declaration on combating terrorism of 29 March 2004 (Document 07906/04) [1] and in particular to enhance the level of security in all modes of transport, followed up by numerous European initiatives (e.g. COM(2011) 790 final *"First Annual Report on the implementation of the EU Internal Security Strategy",* etc.

In the current worldwide context, where public transport networks have been seen to provide attractive targets for terrorism and attacks, the consideration of security is a major concern in the design of passenger stations and terminals. Each station, with its idiosyncrasies, poses different challenges in relation to security, requiring an individually tailored response. The requirements of passenger stations and the complexities of future emerging threats and possible attacks are continually changing and it is necessary for the understanding of security design to respond and evolve in parallel.

SECURESTATION aims at providing an approach to improving station and terminal security through design. In order to be able to understand the nature of the threat, and to develop a cost efficiency security solution, SECURESTATION has developed a comprehensive quantitative risk assessment methodology and analyzed the effects of security incidents with the use of advanced predictive tools. This, as well as the pedestrian movement and behavior simulations conducted in emergency situations, have been brought together in the form of a constructive design handbook; offering an effective decision making tool for the design and operation of passenger stations and terminals.

[1] 13 bombs and 10 explosions,175 fatalities and 626 injured - Javier Villen Barranco, Madrid, 11 de March ,2004, 2nd Europe, Middle East & Africa Safety Forum, November 18th 2004.