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AFTER LONDON: Securing Public Transport Systems Against Terrorist Attacks

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THE bombings in London underscore the vulnerability of underground transport systems to terrorist attacks in large cities where millions of passengers commute daily. Following the incidents in London, many other countries in Europe and elsewhere have taken steps to bolster security on their respective domestic transport systems, including underground rail networks and airports. The enhanced security measures include the deployment of additional security personnel, sniffer dogs as well as increased vigilance by the crew who run or man the systems. The question remains, however, whether the measures would be adequate to secure the systems against possible future terrorist attacks.

Vulnerability to large-scale attacks

Surface and sub-surface transport systems are more vulnerable to large-scale attacks than air transport and, unlike the aviation sector, more difficult to secure. Decades of experience in dealing with terrorist attacks and the threat of attacks has enabled security services to deal with threats in the aviation sector with a fair amount of success. However, despite increased security and vigilance, the terrorist threat to the aviation infrastructure has not been eliminated completely.

This is because terrorist groups also continuously improvise their tactics, seeking to exploit gaps and vulnerabilities in the security systems. Nothing demonstrated this more vividly than the September 11 attacks in the United States where terrorists used civilian aircrafts as weapons of terror to cause widespread death, destruction and chaos.

Securing surface transport systems, which include buses and railways both above and underground, is often a daunting task because of the nature of the operations involved. In major cities, rapid transit transportation systems which employ surface, elevated, or underground railway systems, or a combination of them, move large numbers of passengers daily. The systems are designed for efficiency - to move a high volume of traffic without unreasonable delays, especially during rush hours. Consequently, the access points, such as in railway stations, are designed to deal with high volume traffic with ease rather than for security. The systems have many access and exit points, which make passenger and baggage screening not only extremely difficult but cause huge delays and pedestrian backups if carried out. Similarly, securing railway tracks which run through cities and the countryside is almost impractical. Most of the underground rail networks, especially in Europe and North America are old and logistically unsuitable for emergency evacuation purposes.

Post-Attack Crisis Management

Another difficult task is post-attack crisis management. As the 2003 Daegu subway fire disaster in Seoul demonstrated, disaster management and emergency rescue measures are often insufficient and under-prepared. Most often, the staff manning the transportation system do not have sufficient training and not equipped with proper communication and other emergency equipment. If there is a fire following an explosion, highly toxic materials such as plastics and paints used in railway cars and other station infrastructure could cause more damage than the explosion itself and make rescue operations all the more difficult.

Evacuation and management of the affected passenger traffic is also a challenging operation. Most often people die or get injured in the attempt to get out of the stranded train or in trying to exit from the scene of the explosion. This eventually leads to a stampede. If there is any suggestion of chemical and biological agents being used in the attacks, the fear factor and panic get compounded - as demonstrated by the sarin gas attacks carried out by the Aum Shinrikyo in the Tokyo subway system in March 1995.

Terrorists will target underground transport systems because their complex layout makes them hard to secure. Besides, the system offers the terrorists easy accessibility and mobility. They could mingle with high volume traffic, avoid detection, board trains at will and place the devices in the desired locations. Terrorists do not necessarily have to be in close proximity to the detonation sites because they can trigger the explosions by using mobile phones. This becomes more problematic if the terrorists use suicide tactics to cause the explosion.

Daunting but not impossible

A massive increase in the movement of people both domestically and internationally has put a premium on security and those responsible for providing transport. Although the task of securing the public transport system or places where large numbers of people assemble has become more daunting, it is not an impossible one. A wide range of measures can be put in place, including improved surveillance systems, such as CCTV on platforms, in stairwells and in carriages. Improved communication systems can also be installed. Passenger screening at entry and exit points may be a gigantic task and might cause inconvenience and delays. But eventually the users would learn to live with it, just as air travelers got used to enhanced security measures after September 11. To contain the damage from an attack, it may be necessary to use flame-retardant or flame-proof materials in carriages. Stations can be redesigned to ensure that passengers get easier access to escape routes and emergency services. To counter possible chemical or biological attacks, transit systems need to upgrade security with sensor systems for detecting chemical agents in stations.

Most important however is advanced planning and preparedness. With proper training, it may be possible to prevent incidents by being vigilant and by identifying suspicious people and packages. As the London crisis management efforts demonstrated, emergency and evacuation exercises carried out by different agencies helped the rescue operations immensely. It is to the credit of the people in London that they behaved most calmly without much panic, which also facilitated rescue operations. This could be attributed to their long experience with terrorism which others may lack. It is therefore necessary that law enforcement agencies develop a response plan involving regular drills with the public to practise evacuations and

crisis management. If a chemical or biological attack takes place, proper decontamination and rapid prophylaxis - steps to prevent the spread of diseases - can often save lives and prevent chemical exposure to the larger population. This also would require preparedness and regular exercises.

Implications for Singapore

Singapore's Mass Rapid Transit System (MRT) serves a million passengers daily. As Singapore's National Security strategy doctrine has recognized, the economy of the country depends significantly on the efficiency of this mass movement of people. Singapore has adopted extensive measures to deal with contingencies in the public transport system especially in the MRT network, including the deployment of transit security personnel, disaster management drills as well as public vigilance broadcast messages and posters. Singapore has also prepared itself to respond to both conventional attacks such as bombings, as well as non-conventional threats such as attacks using chemical, biological and radiological substances. The Singapore Civil Defence Force, its hospitals and research laboratories are highly geared to respond quickly to any emergency including chemical and biological attacks. Following the attacks, the Singapore government has bolstered the security measures. There should be no let-up in all these measures.

Given the nature of the terrorist threat today, it is not possible to make a nation's transportation system completely secure. However, careful planning and adequate preparedness could minimise the vulnerabilities of the transport infrastructure and reduce the threats to a tolerable level. Should a threat materialise, the immediate response must be to restore normalcy and public confidence in the quickest possible time.

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