

Securing LAND TRANSPORT HUBS *and* networks

Stephen Cooper OBE, CEO, Apstec Systems discusses security screening and the art of the possible

Land transport networks and hubs are easy targets for terrorists to attack but are notoriously difficult to secure. They are necessarily open to the public, experience the mass movement of people on a daily basis, the slightest disruption to which may result in chaos and are often housed in buildings that have not been built with security in mind.

Despite the challenges posed by this situation, these networks and hubs have attracted some horrific attacks over the years, and security needs to be addressed. The big question is: How do you secure these locations and networks in a practical way that is acceptable to the traveller and transport operator?

Considerations

- **Threat and risk** – security risk assessment for mass transport

scenarios is not fundamentally different to any other risk assessment, but the scale and complexity of these operations suggests that compromise is required. Specifically, any attempt to mitigate risks posed by anything less than a genuinely mass casualty threat is going to be difficult

- **Bags and contents** – many travellers will be accompanied by luggage that will require screening too. This may include large and complex bags and the approach to their screening will require careful consideration
- **Scale** – a number of factors contribute to the challenges of securing mass transport operations, but their sheer scale is probably the most important. Nothing will disrupt these operations faster than a security plan that is too ambitious

- **Traveller experience** – whatever security screening measures are implemented; they need to be acceptable to the travelling public as well as the operator
- **Proportionality and affordability** – security screening measures implemented in mass transport use cases must be based in reality. Anything less than an affordable, proportionate and pragmatic approach is sure to fail

So, what does all of that amount to? In short, if the operation is too ambitious and tries to do everything, it will probably be overwhelmed; the focus should be on mass casualty threats; the security screening posture needs to be linked to threat and must be able to respond rapidly to changes in the threat environment; all options should be considered to streamline security screening e.g. 'fast track lanes' for those without bags or with little luggage; screening all bags

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appears unrealistic; operations need to integrate the latest tech that can contribute to a successful outcome.

Approaches

There are a number of approaches that could be taken to security screening at transport hubs.

Do nothing – given the attractiveness of mass transport as a target for terrorism, the enduring nature of the threat and the increasingly interesting technology being introduced to the market, this seems an indefensible position.

Do everything – so, if doing nothing is not an option, doing everything is definitely not an option. Nothing will snarl up a transport hub faster than a poorly implemented security screening concept. With New York Grand Central Station attracting 0.75m passenger movements a day, it seems unlikely that it will be feasible to

security screen all travellers. Taking a credible 3% false alert rate, screening all passengers at the Grand Central Station would result in 22,500 alerts requiring resolution per day and that does not sound feasible or very affordable.

Do something – not every mass transport hub or network will have the same threat environment, be equally iconic or have the same vulnerabilities, so operational concepts should and will vary. They may include some of the following ideas:

- ♦ **Threat and response** – the response level should be linked to the threat level
- ♦ **‘Pop up’ solutions** – consistent with the need for a responsive operation, ‘pop up’ security screening solutions that can be brought into action quickly seem appropriate

- ♦ **Streaming** – for everyday travellers and day trippers, with small bags or no bags, there’s scope to run some form of a ‘fast track’ system
- ♦ **Random screening** – the concept of generating random alerts to proportionately mitigate known vulnerabilities is well established and accepted. Consequently, it seems fitting that the random selection of travellers and their bags for screening, with different percentages being screened depending upon the threat level, should be a core concept of any mass transport security operation

Operational success – deterrence

Whilst it hasn’t been explicitly stated earlier in this article, all that has gone before is about deterrence. The point has already been made that to try to ►

screen everything and everybody is disproportionate and almost certain to prove to be impractical. However, by taking a pragmatic approach to security screening in mass transport applications, a significant step forward has already been taken. You don't need to do everything to deter a threat, you just need to do enough.

Enabling technology

Finally, it is necessary to talk about technology and the latest developments. Inevitably most, if not all, of this technology and these products are driven by AI and this is always the headline. However, AI is not the most relevant buzzword in this case. More important to understand is the 'speed' at which things can now be done and the degree of 'discrimination' that can be brought to bear, in order to tell the difference between what's a threat and what is not a threat.

Screening people – traditional walk-through metal detectors in the context of securing public areas are totally outdated. There now exists a family of devices that screen people with a range of functionality:

- Discriminative metal detectors are widely available and can be rapidly deployed. If the threat is predominantly weapons these can be effective and offer a reliable means of discriminating between threat and benign items. Focussing on mass casualty threats should enable a high degree of discrimination without generating anything other than a low level of false positive alerts
- Millimetre wave imaging systems can be effective at identifying threat items of interest carried on the body, provided that all bags are removed from the passenger. If bags cannot be separated from the traveller, then body-worn or shoulder bags may physically mask or contain the threat item, concealing it from the view of the sensor
- Hybrid solutions that employ a combination of millimetre wave scanners and discriminative metal detection offer the ability to detect non-metallic threats concealed on the body as well as discriminate between benign metallic items and threat items.



This functionality offers some scope to screen some passengers with bags without resorting to a full baggage screening solution

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Screening bags – the speed of screening bags using X-ray has long been the limiting factor when it comes to passengers screening. However, all of that is about to change with the development of high throughput baggage X-ray systems that also offer the ability to detect specific threats. These products have only just entered the market but appear to

have a prominent role to play in mass transport security in the future.

Summary

None of this may seem game changing in its own right, but the dial has certainly shifted. Pragmatism and proportionality must be front and centre of any operational concept to screen passengers and their belongings for threat items. Subject to that being the case, there is no doubt that, thanks to considerable investment in research and development by the security industry, and to the drive of government sponsors and the interest of the 'user' community, there now exists the ability to deliver an effective security screening regime that can provide a meaningful response to threats against land transport hubs and networks.

That response should not be 'doing nothing' and it should not be 'doing everything', but it can certainly be 'doing something' – and 'doing something' looks like a very good deterrent. ■

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