

# Safeguarding crowded spaces against terrorism

**Milad Haghani**

University of New South  
Wales



© 2024 by the authors.  
License Australian Institute  
for Disaster Resilience,  
Melbourne, Australia. This  
is an open source article  
distributed under the terms  
and conditions of the Creative  
Commons Attribution  
(CC BY) licence ([https://  
creativecommons.org/  
licenses/by/4.0](https://creativecommons.org/licenses/by/4.0)). Information  
and links to references in this  
paper are current at the time  
of publication.

Crowded places are susceptible to terrorist threats, necessitating proactive safety measures encompassing legislative action, risk assessment mandates and heightened public preparedness.

The global community has seen a notable upsurge in population growth, accompanied by a heightened enthusiasm for events and mass gatherings, particularly in the post-pandemic era. While these shifts undeniably enrich the vitality of communities, they simultaneously introduce novel security and risk management challenges.<sup>1</sup> Australia, akin to numerous other nations, has encountered a heightened interest in events and mass gatherings. The successful hosting of the Women's FIFA World Cup is an example of Australia's embracing of such collective events and gatherings.

Festivals, sporting events, concerts and public celebrations draw large crowds. However, the volume of people and the significance of these gatherings make it crucial to assess and address their inherent risks. Crowded spaces have become potential targets for terrorism, necessitating a comprehensive approach to assess and mitigate associated risks. Throughout history, there have been numerous incidents where crowds became targets of violence and terrorism. Tragic events like the 2002 Bali bombings, the 2015 Paris attacks and the 2017 Manchester Arena bombing serve as stark reminders of the vulnerabilities associated with crowded spaces.

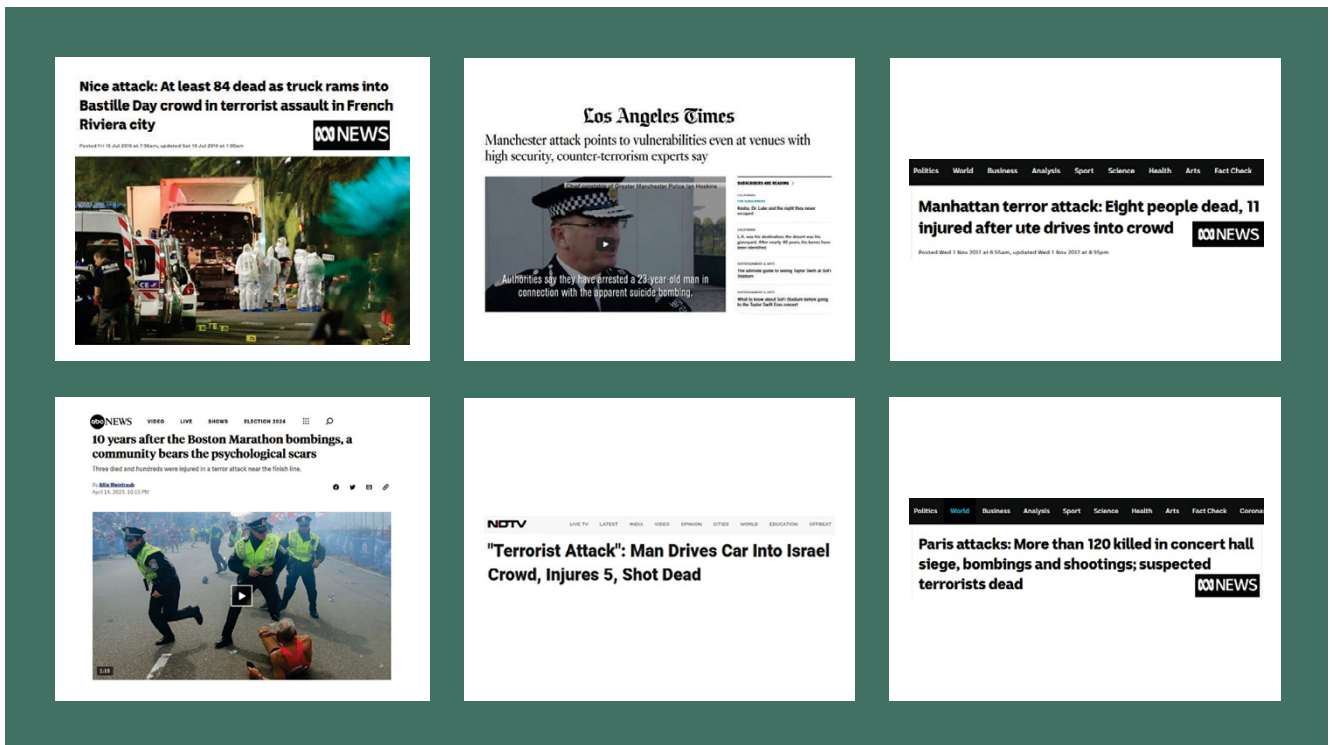
According to the Global Terrorism Database<sup>2</sup>, nearly 150 terrorist attacks have been identified against concerts, festivals and mass gatherings between 1970 and 2019.<sup>3</sup> The potential risk is acknowledged in Australia's counter-terrorism strategy 2022.<sup>4</sup>

## How legislation can help protect crowded places

Legislation plays a pivotal role in establishing a structured framework to manage and minimise risks within crowded spaces. It provides a basis for risk assessment, contingency planning and resource allocation and fosters a proactive approach to safety. In the United Kingdom, the development of Martyn's Law<sup>5</sup> underscores the recognition for legislative action to enhance crowded space security. Named after Martyn Hett, a victim of the Manchester Arena bombing in 2017, the law makes it mandatory for venue and event organisers to implement thorough security measures. Provisions include the requirement for thorough risk assessments, enhanced communication between stakeholders and the development of tailored security plans.

In Australia, legislation would establish consistent security protocols across various crowded spaces, ensuring that risk assessment, emergency response plans and communication plans are uniform and efficient. Legislative requirements would compel event organisers and venue owners to proactively address security concerns, fostering a culture of prevention rather than reaction. Clear guidelines would facilitate the allocation of resources, both financial and personnel, for security measures that ensure venues are adequately equipped to handle potential threats.

Incidents like the Lindt Cafe siege in Sydney in 2014 underscore the importance of effective security measures. Australia, with its vibrant event culture and propensity for large gatherings, could greatly benefit from enacting legislations similar to Martyn's Law. By doing so, the nation could create a standardised approach to safeguarding crowded spaces. The presence of comprehensive legislation would boost public confidence in attending crowded events.



Crowded spaces have become potential targets for terrorism around the world.

## Analytical tools to evaluate and mitigate risks

Security risk assessment mandates bring forth new needs and requirements for event organisers including the need for objective and evidence-based analytical tools. These tools play a significant role in assessing and mitigating risks in crowded spaces. These assessments include several factors or variables:

- **Threat environment:** This includes analysing intelligence reports, threat assessments and monitoring global and local terrorism trends. Factors such as the presence of known terrorist organisations, previous attacks in the region and geopolitical considerations should be considered.
- **Event or venue profile:** Factors like the expected attendance, event type (e.g. sporting event, concert, festival), significance or symbolism of the venue and the profile of attendees can influence the level of risk.
- **Location and surroundings:** The geographical location of the venue or event can inform the risk assessment. Factors such as proximity to potential targets, neighbouring buildings or infrastructure, accessibility of escape routes, proximity to local law enforcement and the local security environment should be evaluated.
- **Previous incidents:** This includes factors such as past incidents, both terrorist-related and other security breaches, that have occurred at similar venues or events.
- **Crowd dynamics and physical layout:** Factors such as crowd density, movement patterns, potential bottlenecks and

response capabilities of the crowd in emergency situations should be assessed. Understanding how the crowd may behave during an incident can inform risk-mitigation strategies.

- **Physical security measures:** Evaluating existing physical security measures in place is important. Factors such as the presence and effectiveness of access control systems, surveillance cameras, perimeter barriers and screening procedures should be considered. The assessment should identify any gaps or vulnerabilities in the security infrastructure.
- **Emergency response and evacuation plans:** Assessing the adequacy of emergency response plans and evacuation procedures is critical. Factors such as the availability of trained personnel, communication systems, medical facilities and the coordination with local law enforcement and emergency services should be evaluated.

A variety of analytical tools can be developed and used concurrently in relation to each event to allow a comprehensive approach in risk assessment and mitigation. Data-driven risk metrics tools can help evaluate the likelihood of an attack. By assigning scores or levels to the risk factor variables, the overall terrorism risk level can be assessed. Using scenario modelling, various hypothetical risk scenarios can be created and analysed. This helps to understand the potential effects of different threats, allowing for the identification of vulnerabilities and the development of appropriate responses. Crowd simulation software can play a role by allowing for virtual testing of emergency response scenarios. The application of

AI-based computer vision systems can also amplify surveillance capabilities by enabling automated identification of anomalies and abnormal behaviour that could lead to early detection of suspicious activities.

The adoption of these protective measures by venue owners and event organisers necessitates 2 steps. First, the development of tools by researchers and experts, and second, the acquisition of tools by organisers, along with the training or hiring of staff who are proficient in using such tools. Alternatively, these tasks can be outsourced to enterprises that are equipped with these capabilities and expertise.

## How public preparedness helps build resilience

Public preparedness and community education are layers of protection against terrorism in crowded spaces. Building public awareness regarding potential threats, promoting vigilance and educating individuals about evacuation procedures and the best emergency response can significantly enhance the resilience of individuals and communities. Collaboration between government, security professionals, community leaders and the media can facilitate effective dissemination of such information.

To improve public preparedness and education, governments and organisations can invest in awareness campaigns on crowd safety. Involving community leaders, schools and businesses in these initiatives has potential to foster a culture of security consciousness and resilience. This can be embedded in the general safety education offered at schools, for example. Students can act as ‘knowledge vectors’, disseminating this crucial information within their community and raising the levels of community preparedness over time.<sup>6</sup> This might ultimately lead to an improved safety culture within communities.

## Summary

While Australia is generally considered a low-risk country for terrorism threats, it is essential to recognise that a single incident can have catastrophic consequences. Legislation plays a vital role in establishing a framework for protecting crowded spaces. In Australia, there is a recognised gap in the existing emergency management guidelines concerning terrorism risk assessment and mitigation for crowded spaces. *Australia’s Strategy for Protecting Crowded Places from Terrorism*<sup>7</sup> was a major step forward in this direction, but more can be done in mandating risk assessment and safety protection. Martyn’s Law is an example of legislation specifically designed to enhance security in crowded public places. The protection of crowded spaces from terrorism requires a holistic approach that encompasses evidence-based and accurate risk assessments and analytical tools. In implementing these measures, information sharing and collaboration between organisers, professional security teams and law enforcement and emergency authorities will be challenging but crucial. Public preparedness and education can also help build resilience.

Investing in crowd safety measures may entail additional challenges and costs, but it is ultimately an investment in human lives. Research in other contexts, such as road safety, demonstrates society’s willingness to incur certain costs to reduce the risk of harm to lives. Further research could quantify societal willingness to pay for enhanced public safety measures in the context of mass events.

Once these capabilities and tools are developed locally and become standard practice, they have the potential to significantly enhance public safety. This expertise can also be leveraged globally; showcasing the role of Australian experts and companies can offer in providing enhanced security measures. This export of knowledge and solutions to regions with potentially higher risks of terrorist attacks can contribute to bolstering global safety standards. By fortifying its public spaces with comprehensive security solutions, Australia will reduce the attractiveness of its events as targets for terrorists and malicious actors. Such a deterrent reinforces the benefits of investments in public safety.

## Endnotes

1. Feliciani C, Corbetta A, Haghani M and Nishinari K (2023) *Trends in crowd accidents based on an analysis of press reports*. *Safety Science*, 164:106174.
2. Global Terrorism Database. At: [www.start.umd.edu/gtd](http://www.start.umd.edu/gtd).
3. De Cauwer H, Barten D, Tin D, Mortelmans L, Ciottone G & Somville F (2023) *Terrorist Attacks against Concerts and Festivals: A Review of 146 Incidents in the Global Terrorism Database*. *Prehospital and Disaster Medicine*, 38(1):33-40. <https://doi.org/10.1017/S1049023X22002382>
4. Department of Home Affairs (2022) *Safeguarding Our Community Together Australia’s Counter-Terrorism Strategy 2022*. At: [www.nationalsecurity.gov.au/what-australia-is-doing-subsite/Files/safeguarding-community-together-ct-strategy-22.pdf](http://www.nationalsecurity.gov.au/what-australia-is-doing-subsite/Files/safeguarding-community-together-ct-strategy-22.pdf).
5. Martin’s Law. At: [www.gov.uk/government/publications/terrorism-protection-of-premises-draft-bill-overarching-documents](http://www.gov.uk/government/publications/terrorism-protection-of-premises-draft-bill-overarching-documents).
6. Sakurai A and Sato T (2016) *Promoting education for disaster resilience and the Sendai Framework for Disaster Risk Reduction*. *Journal of Disaster Research*, 11:402–412.
7. Commonwealth of Australia (2023) *Australia’s Strategy for Protecting Crowded Places from Terrorism*. At: [www.nationalsecurity.gov.au/crowded-places-subsite/Files/australias-strategy-protecting-crowded-places-terrorism.pdf](http://www.nationalsecurity.gov.au/crowded-places-subsite/Files/australias-strategy-protecting-crowded-places-terrorism.pdf), accessed 21 October 2023.