

# Boston Strong

## HOW PLANNING AND TRAINING SAVED LIVES IN THE 2013 BOSTON MARATHON

**B**oston's 10-year journey towards greater emergency preparedness, coordination and training enabled a fast and efficient response to the 2013 Boston Marathon terrorist bombing. This saved lives, restored order, and resulted in the swift capture of the remaining suspect. This was followed by an exemplary display of strength and solidarity by the community.



01 Two bombs exploded during the 117th Boston Marathon, killing three people and injuring 261 others.

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## The Challenge

On the morning of 15 April 2013, as runners approached the end of the 117th Boston Marathon, two improvised explosive devices (IEDs) detonated near the finish line. The bombs exploded 12 seconds apart on Boylston Street, claiming the lives of three and injuring another 261 people.

The aftermath of the attacks posed enormous challenges for emergency personnel. Police worked to secure the blast scene amidst the chaos of hundreds of injured victims, and despite poor situational awareness. Their efforts were further

compounded by the many bags that the spectators dropped as they scattered to safety, and investigators had to treat each abandoned bag as a potential bomb.

The City of Boston and the Massachusetts state government were taken by surprise, but their response was highly effective. The rapid coordination among state and municipality officials, hospitals, transportation authorities, private firms, safety experts and volunteers was not an accident. At least 10 years of planning, training and preparation contributed to an extraordinary survival rate among the injured.

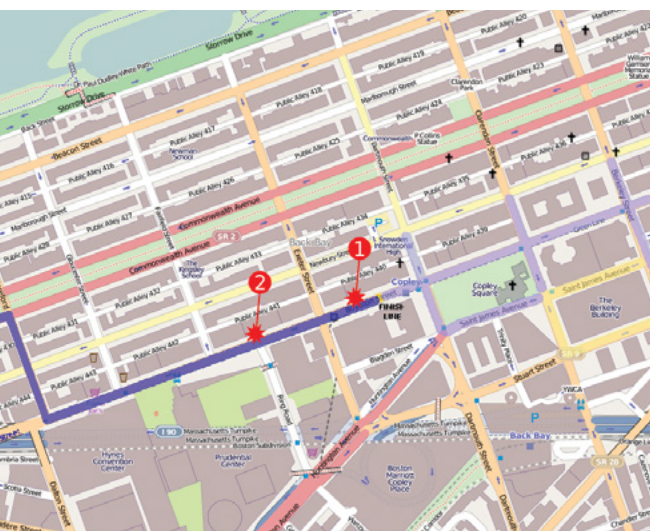
## The Solution

Massachusetts' preparedness was the legacy of the events of 11 September 2001. Drawing lessons from the deadliest terrorist attack in US history, regional government agencies worked with stakeholders to enhance long-term resilience capabilities, and develop specific emergency measures for events like the Boston Marathon.

Large investments were made to improve communications, while plans and procedures were updated to reflect changing circumstances. In 2004, the Massachusetts Emergency Management Agency installed the WebEOC, a tool to enable real-time sharing of information amongst the emergency management community. Three years later, Massachusetts'

Statewide Interoperability Executive Committee, consisting of members from Massachusetts' five security regions, developed the Statewide Communications Interoperability Plan to integrate communication systems more seamlessly across the state. In 2011, Massachusetts added an Improvised Explosive Device (IED) Annex to its regional response plans, which provided for coordinated resource deployment when responding to an IED incident. Finally, using Federal grants, the state conducted Joint Counterterrorism Awareness Workshops to plan and practise responses to IED-related threats. Representatives from law enforcement, fire departments, emergency medical services (EMS), communication centres, private sector communities, and non-governmental organisations took part.

During a House Homeland Security Committee hearing after the bombings, Boston Police Commissioner Edward Davis testified that if these simulations had not taken place, more people would have died in the attacks. According to him, Urban Shield Exercises improved coordination and communication between departments, and "made a difference in our ability to respond to the explosions."



- 01 The two explosions that occurred 12 seconds apart on Boylston Street.
- 02 The efficient dispatch of casualties to the hospitals.
- 03 An emergency medical technician and two members of the public evacuating a casualty.





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At the city level, Boston participated in Urban Shield Exercises since 2011 to validate its investments in emergency response equipment and training, utilising a series of scenarios involving multiple threats to public safety and security. These simulations involved many aspects of emergency response, including intelligence, law enforcement, police, and EMS. In 2012, eight Boston hospitals took part in the exercise, which simulated the management of casualties and the activation of the Medical Intelligence Centre (MIC).

The MIC had been formed in 2009 to communicate and share information during large-scale incidents. It played a crucial role on the day of the bomb attacks. Minutes after the blasts, EMS personnel alerted the MIC, which in turn immediately notified local hospitals about the possible surge in admissions. The MIC also disseminated reports to relevant agencies and hospitals, with information on patients, hospital supply needs, security updates, and services available to the victims.

Beyond long-term capability building, authorities improved their emergency preparedness for the Boston Marathon through a Tabletop Exercise conducted one month before the event. They discussed specific disaster scenarios, and plans to deal with these. One of the scenarios featured an IED explosion. Subsequently, a multi-agency coordination centre was set up for the Marathon, comprising personnel from groups that had participated in the Urban Shield Exercises.





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## The Outcome

Boston's 10-year effort to improve its disaster preparedness enabled an efficient and coordinated response to the terrorist attacks. This saved lives, restored order, and eventually led to the capture of the surviving suspect.

The emergency medical response, in particular, has been given enormous credit. The three people who were killed by the bombs all died before reaching a hospital. The other 261 casualties, including those with severe injuries, survived. Not a single hospital was overwhelmed with patients in the aftermath of the bombings. This outstanding result was due to the efficient communication and coordination across the city, especially through the MIC. The runners' first-aid tent was rapidly converted into a mass-casualty triage unit, and medical personnel dispatched all the injured to eight hospitals in minutes, based on each hospital's capacity and capabilities.

Civil society and the public also played an active role. People shared information through social media, and those present contributed their photographs and videos to investigators to assist in the identification and pursuit of the suspects. Others provided lodging, blankets, food, phone calls, and other assistance to runners who could not complete the race and





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needed to locate friends and family. Over the following days, the whole community came together and paid tribute to the victims at memorials and services.

Researchers from Harvard University later conducted a comprehensive study on Boston's response to the 2013 Marathon bombings. They reiterated that Boston's fast and effective emergency response was the product of years of planning. The

improvements in interoperability and communication among different agencies, as well as the simulation exercises conducted in the preceding years were key.

Many of these lessons from Boston can be applied to other scenarios, such as natural disasters and industrial accidents, and can offer other cities guidance in improving their resilience.



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- 01 Centrepiece of the makeshift memorial that sprang up steps away from the marathon finishing line.
- 02 Hundreds of running shoes were hung in tribute on the police barricades along Boylston and Berkeley streets.
- 03 Boston Strong: a case of preparedness and community solidarity in the face of an unexpected crisis.