

Strategic Coordination Report 2019

First Edition



About Counter Terrorism Preparedness Network

What we do

CTPN brings together strategic leaders, practitioners and academics to inform city-level policies and practices that build resilience to keep our cities and communities safe from terrorism.

Why we do it

The threat from terrorism has not diminished, rather it has become more complex. Cities that develop strategic arrangements and explore policy design and implementation in an integrated manner can use this as a lever in developing resilience against terrorism.

How we do it

CTPN promotes dialogue, the sharing of practices and experiences, and provides a means of developing new approaches to counter terrorism, as well as the strategic preparedness and response arrangements of cities in this context.



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About us in numbers

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Member cities

12

Resilience leaders

7

Academic partners

7

Independent experts

Member cities



Barcelona



Greater Manchester



London



Paris



Rotterdam



Stockholm

**Welcome to CTPN's
first edition report on
Strategic Coordination.**

**This report will provide you
with an opportunity to reflect
on academic analysis, learn
about initiatives from other
cities and consider strategic
recommendations that could
support the enhancement
of strategic coordination
arrangements in your own city.**

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The complex and changing nature of terrorism requires innovative and collaborative solutions at a city-level. Counter Terrorism Preparedness Network (CTPN) enables cities to work together across borders to counter terrorism through the holistic lens of preparedness and resilience.

As a part of this, five first edition reports have been developed by CTPN to dive into pertinent areas of counter terrorism. They examine current counter terrorism initiatives from across the globe, delve into academic discussions, share learning and analysis, and offer strategic leaders and policy-makers recommendations that aim to build resilience to keep our cities and communities safe from terrorism.

This report focuses on the challenge of strategic coordination and has identified the following key findings:

The need to **promote a culture of trust and inclusivity** in a multi-agency environment.

The importance of **investing in infrastructure** (such as facilities for co-location) that can support efficient and effective coordination.

The need to continuously **develop arrangements through planning, training and exercising** at the strategic level.

The importance of undertaking **critical capability assessment** to inform priorities.

Initiatives from across the globe



Barcelona

Joint trainings

Colocation in Barcelona and Rotterdam



International

Analysis of the Norway terrorist attacks, 2011



London

The London Situational Awareness Team (LSAT)

Secure online platforms



Paris

Incident Command discussion

Paris Operational Watch Centre



Rotterdam

Colocation in Barcelona and Rotterdam

Regional Operational Commander



Stockholm

Leadership in the Drottninggatan truck attack

On-Duty Chief Coordinating Officer

Prepared communication in Stockholm

Methodology

To produce this report, we engaged with academics, subject matter experts and practitioners in London and internationally, sent out a survey to CTPN cities, undertook a literature review and desktop research, and held both working groups and interviews.



Interviews



Literature review



Surveys

The threat of terrorism remains high, and as international terrorism continues to evolve, so must its counter-measures. This includes working together to develop strategic coordination arrangements that enable cities to better prepare for, respond to and recover from terrorist attacks.

Terrorist attacks, whether contained to a specific area or widespread, often occur with no notice. This requires pre-determined structures, mechanisms and arrangements to be established and activated quickly in response to a hostile, uncertain and sensitive situation. This takes place at operational, tactical and strategic levels, but it is the element of strategic coordination that will be the focus of this report.

Managing multi-agency strategic coordination is a complex, challenging and demanding process that must take place independently of the scene(s). This is exacerbated in Complex Coordinated Terrorist Attacks, or CCTAs, defined by the US Department of Homeland Security in 2018 as acts of terrorism that occur either simultaneously or close together, with little or no warning. CCTAs are comprised of coordinated and separate groups of attackers at several locations, who employ one or more types of weapons with the

intent to inflict as much damage as possible, and result in a high number of fatalities. Although all terrorist attacks require the activation of some form of strategic coordination, dependent on scale and severity, CCTAs present significant issues for strategic coordination and the response network, in terms of situational awareness, decision-making and resourcing.

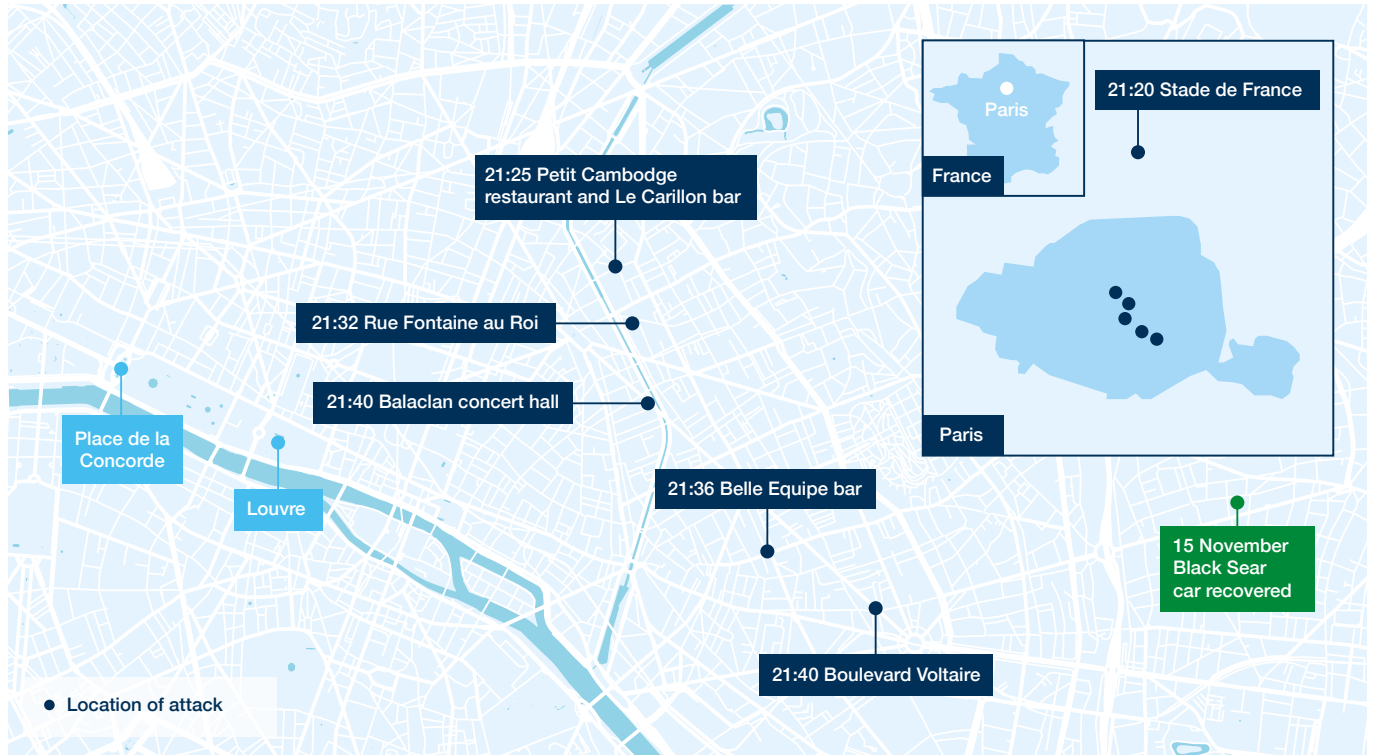
CCTAs present significant issues for strategic coordination and the response network, in terms of situational awareness, decision-making and resourcing.

Assistant Commissioner Alan Brown, Strategic Commander for the Metropolitan Police Service during the 7 July 2005 bombings in London, emphasised the complexities of strategic coordination in the face

of CCTAs. In the initial aftermath of the coordinated bomb attacks on London's transport network, significant efforts to minimise chaos and restore order were needed to organise and deploy resources and allocate tasks. This had to be done before emergency and transport services could establish precisely what had happened and where,¹ and required extensive coordination with multiple responding agencies. More recently, this was evidenced by the Paris attacks of 2015 (see Figure 1), where six attacks took place across the city in the space of 20 minutes, causing 138 deaths including those of the seven perpetrators.

The impact of terrorist attacks in an urban environment cannot be overstated and it is the purpose of this report to explore how strategic coordination arrangements can be enhanced at the city level. Specifically, the report considers the strategic coordination arrangements of Counter Terrorism Preparedness

Figure 1 Map of the Paris Attacks 2015²



Network (CTPN) cities of Barcelona, Greater Manchester, London, Paris, Rotterdam and Stockholm in order to understand the commonalities and differences relating to strategic structures, leadership and decision-making in a multi-agency environment. This report is based on the review of academic literature, engagement with senior practitioners and workshop contributions.

It seeks to understand the components of strategic coordination that are necessary in order to respond to terrorist attacks in urban environments, primarily cities. When a terrorist attack occurs, it is vital that any response activities are coordinated, efficient and controlled, in order to manage the complexities and demands of incident response. Strategic coordination is a means of organising and administering these demands, both within and across response agencies.

Although differences and challenges exist between cities at the policy level in terms of the legal and political nuances, the fundamental principles for strategic coordination are broadly shared. These principles can be applied and tailored to the needs of cities. Furthermore, the report identifies a number of strategic recommendations to advance strategic coordination arrangements.

In applying these recommendations where appropriate, city regions can develop their overall coordination structures' capabilities to respond to a terrorist attack. These can also be used to identify common interests between the city regions for future collaborations. Although the report focuses on strategic coordination in a counter terrorism context, it is recognised that many of the coordination principles are generic in nature and also apply to other types of incidents.



The majority of relevant academic literature, as well as practitioner documentation, makes consistent reference to terms including coordination, command and control, and collaboration.

Rather than seek to clarify the various applications of each term, it is generally accepted that these terms are often connected and interchangeable. Therefore, this report will offer a definition for strategic coordination only as an all-encompassing term and the focus of this report.

Strategic Coordination

The transferrable principles of strategy have seen it develop from its military origins into common practice. The term strategy is derived from strategos, which means general in Greek. A strategic approach is, therefore, associated with military 'generalship' and the compilation of relatively long-term plans designed to achieve a desired end state.³

On the other hand, coordination is both the "process of managing interdependencies between activities",⁴ and "the integration of multi-agency efforts and available capabilities, which may be interdependent, in order to achieve defined objectives".⁵

Combined, strategic coordination can be understood as the way in which response organisations come together to achieve common aims, objectives and goals through high-level decision-making.⁶ It is concerned with the ends (vision or desired end state), ways (options available), and means (capabilities) of responding while ensuring all decisions are proportionate, legal, accountable and justifiable. Strategic coordination seeks to integrate separate responses to achieve collective synergy.

4 Levels of Coordination and Response

As a matter of routine, emergency responders and organisations with responsibilities for emergency response deal with localised incidents daily.

As incidents occur that are greater in scale – in terms of numbers of people, environmental impacts or infrastructure affected – the need for coordination, collaboration and higher levels of response rises dramatically. Incidents can take place at local, regional or national levels and demand varying levels of response.

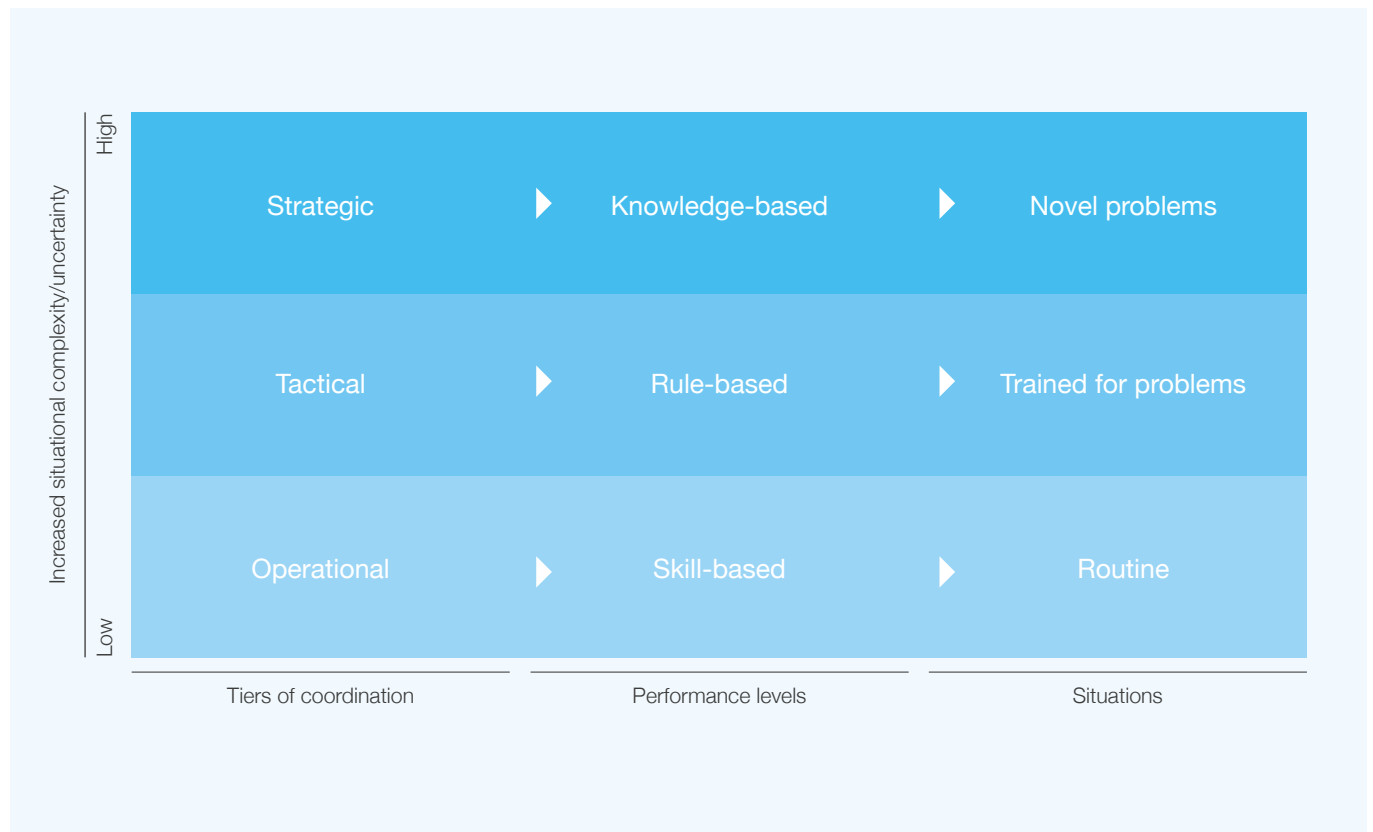
In the context of emergencies such as terrorist attacks, coordination must occur simultaneously at the operational, tactical and strategic levels⁷ and across agencies, in order to manage the logistics, responsibilities and oversight of response priorities.⁸ This supports the need for multi-agency working in planning activities before terrorist attacks take place; joint training and exercising for awareness of roles and responsibilities; and the strengthening of partnerships to engender trust and to help with agreeing common aims and objectives during incident response.⁹

Strategic: Incidents that take place at the local, regional and/or national level and have significant impacts and consequences require a degree of centralised coordination and/

or extensive resources. The role is heavily knowledge-based and it may involve diverse partnership collaboration with experienced persons in command.¹¹

Tactical: Incidents that occur at a local level but have more significant impacts (such as a large motorway collision involving multiple vehicles and casualties), present a less rehearsed and perhaps more unfamiliar scenario for responders to confront. Such situations require tactical management, where designated persons in charge can take a rules-based approach, improvising where necessary, to adapt to complexities such as situational ambiguity and resource coordination requirements.¹²

Figure 2 Illustration of Performance Levels and the Need for Increased Levels of Response¹⁰



4 Levels of Coordination and Response

continued

Operational: Incidents that are locally contained and managed, meaning that trained staff deal with pre-defined situations that occur, such as house fires or road-traffic collisions. This skills-based approach often follows rehearsed routines and is based on set rules and procedures.¹³

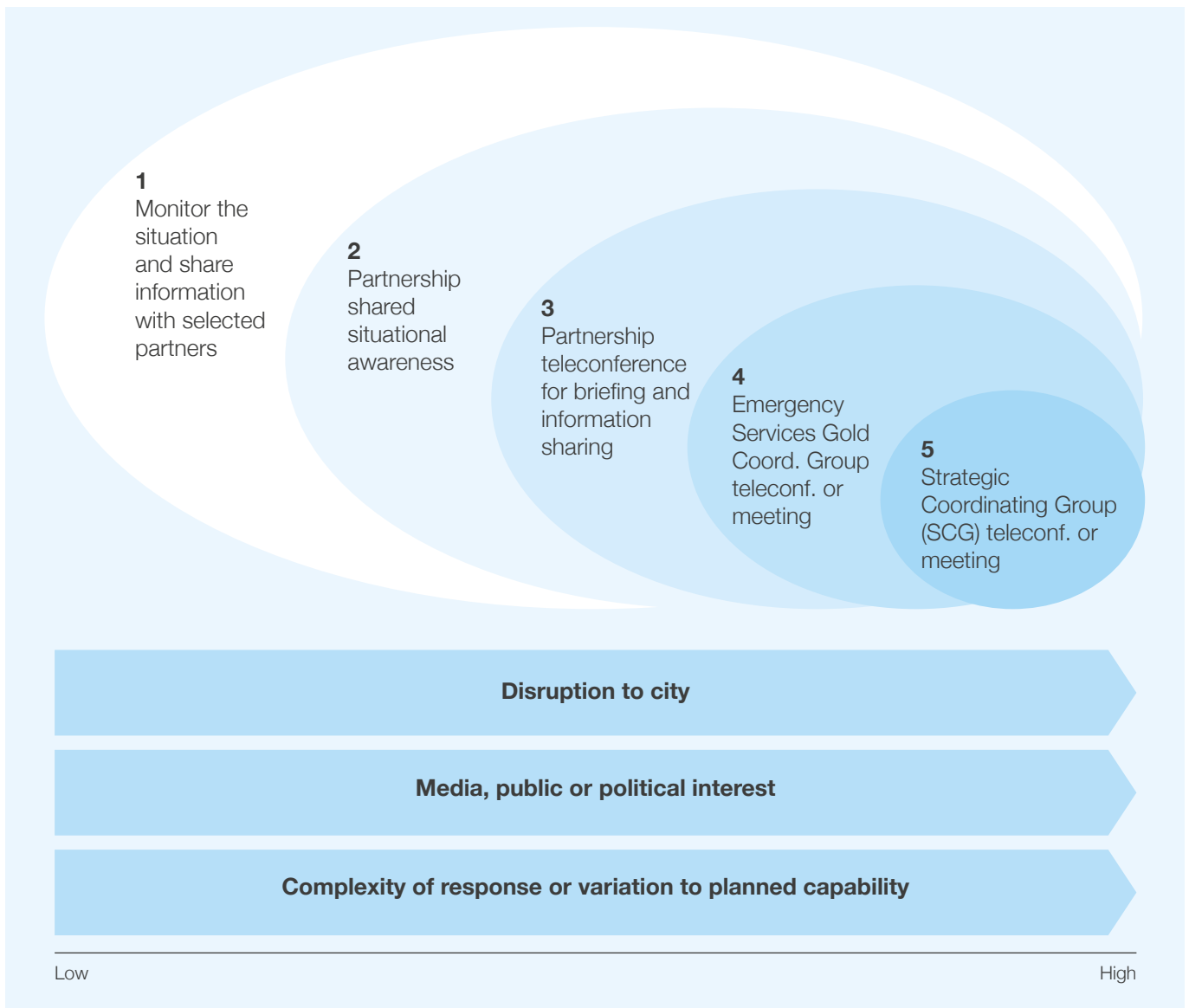
An incident that requires strategic coordination includes all three tiers of response.

While strategic leaders provide direction, purpose and mandate to gain a sustainable edge over the

threat, tacticians translate this into practice. “Just as the term strategy originated with the Greeks, so too did the term tactics. The original meaning of tactics is order, literally the ordering of formations on the battlefield.”¹⁴ Therefore, once strategic structures are established, the tactical level ensures that resources are applied to achieve strategic objectives, discharged through operational activities. This notion of a tiered, hierarchical response structure exists across cities but there are variations in the way in which the structure is labelled and managed.

Figure 3 illustrates that the higher the level of disruption; media, public or political interest; and complexity of response experienced, the more likely it is that strategic coordination will be necessary. This is organic and dynamic in nature and the scales may move up or down according to the incident. However, it is widely recognised that any formally declared terrorist attack would require full strategic coordination arrangements to be invoked.

Figure 3 Levels of Activation for Strategic Coordination, London Strategic Coordination Protocol



5 Strategic Coordination Structures

In order to formulate recommendations on strategic coordination arrangements, it is important to understand the current arrangements in each CTPN city.

For cities, these differences must be taken into account when trying to learn from each other or importing models from elsewhere. A tool built in response to particular contexts or risks may produce different results when replicated in another environment. On the other hand, cities operating in

a similar environment, or with similar risk profiles, will more easily transfer learning from each others' coordination arrangements. Moreover, even where extensive differences in strategic coordination are apparent city on city, many challenges and solutions are generic, and cities can therefore share experiences and exchange mechanisms and functions for common interests.

Comparative analyses show that “no single principle of organisation dominates the crisis management area”.¹⁵ Countries with the kind of administration that has clear structures, ministerial responsibility and strong control tend to coordinate through hierarchy, where decisions are made by the central government. In this type of model, cities are peripheral actors. By contrast, other countries traditionally rely on shared decision-making based on a network composed of many public

organisations from different levels of government (including cities) to coordinate the response to an incident.¹⁶ Finally, some countries tend to combine both control and consensus and achieve coordination through a network managed by a leader (hybrid network hierarchy).^{17,18} The political models in place within each city will inform the different roles, position and responsibilities of municipal authorities and the associated strategic arrangements for counter terrorism. Moreover, in each city, coordination mechanisms are usually tailored to fit into the preferred model.

Coordination can be achieved through horizontal interactions or by hierarchical means.¹⁹ During an incident, there is a need for specialised expertise, skills and resources, but also for cross-cutting arrangements to resolve coordination problems and conflicts, lay out clear responsibilities



5 Strategic Coordination Structures

continued

and ensure leadership.²⁰ To manage an incident, there are two ways to coordinate. First, coordination can be based on hierarchy, with a vertical coordination mechanism and leader at the top of a clear chain of command. Second, coordination could be network-oriented, with governmental and non-governmental organisations gathering to coordinate the response without being managed by a single organisation – “as an alternative or a supplementary coordination mechanism” to manage complex issues when hierarchy is less viable.²¹ Building networks is not only crucial to having a comprehensive coordination structure during incidents, with access to the right people and resources, but networks are also important for better preparedness to ensure coordination.²² These networks can be formalised through partnership arrangements such as those of the London Resilience Partnership or Stockholm Resilience Region.

One of the challenges for such network preparedness lies in the difficulty in predicting which actors will be involved in the response.²³ Not all networks and coordinating organisations have developed activation mechanisms or formed relationships that can be used during terrorist attacks.

The efficiency of the network to achieve its goal relies not only on coordination mechanisms and collaboration, but also on its structure.

The capacity to create relationships with organisations during an incident may prove difficult for several reasons. Often officials rely on past experiences to identify partners to include in response, but this approach does not necessarily allow them to prepare for new forms of threat. For example, the management of the Westminster Bridge attack

in London required the involvement of the Foreign and Commonwealth Office – a non-traditional actor in this network – because a number of the victims were foreign nationals.

The control and consensus boasted by the hybrid model achieves coordination through a combination of vertical and horizontal networks managed by a leader. A network is a group of “autonomous organisations that work together to achieve not only their own goals but also a collective goal”.²⁴ Although regular coordination mechanisms usually exist between central emergency organisations (eg. police, fire, ambulance), a response network extends far beyond, to include organisations responsible for the management of the social and economic aspects of the response (eg. housing, social services, health), as well as volunteer and citizen associations (eg. Red Cross) with whom links and processes need to be developed.²⁵ The efficiency of the network to achieve its goal relies not only on coordination mechanisms



and collaboration, but also on its structure.²⁶ The wider political and legislative landscape therefore becomes relevant as strategic coordination structures support the decision-making process and the implementation of policy-driven decisions.²⁷

An assessment of cities involved in CTPN identified several protocols that were based on national laws and similarities relating to underpinning legislation, governance structures, coordinating forums and facilities. In the UK, London and Greater Manchester follow the Civil Contingencies Act 2004, which gives resilience forums statutory duties, and outlines the arrangements that drive strategic coordination between agencies. National arrangements are set out in 'Responding to Emergencies: Central Government Response. Concept of Operations'²⁸ complemented by 'Emergency Response and Recovery Guidance.'²⁹

In Stockholm, the roles and responsibilities of each agency in case of emergencies and acts of terrorism are also set by different legislative acts. As in the UK, the central government is appointed responsible for the national coordination; the County Administrative Board for regional coordination; and the municipalities for the local coordination. A national non-statutory framework has been developed to address coordination structures. Regional joint multi-level coordinating structures and mechanisms have been developed and implemented in Stockholm by participating agencies. The work is based on a joint partnership agreement, forming the coordinating body of Stockholm Resilience Region in 2015. The host agency is the County Administrative Board, a regional governmental authority with a formal mission to support local and regional collaboration during emergencies, and to lead in specific situations.

In Barcelona, civil protection legislation defines associated responsibilities and authority in the response to an emergency. According to the Organic Act 6/2006 of 19 July on the Reform of the Statute of Autonomy of Catalonia, the Government of Catalonia is responsible for all matters of public security, safety and public order, including terrorism. The strategic coordination arrangements are set out by the Municipal Civil Protection Commission with contribution from different agencies. Coordination with the Ministry of the Interior of the Spanish national government, and the state police forces (Cuerpo Nacional de Policía and Guardia Civil) is carried out through the Security Committee of Catalonia, in accordance with article 164.4 of Act 6/2006, with equal participation of the Catalan and Spanish governments.

Likewise, Paris follows articles L-2212-2 and L-2512-13 of the General Code of Local and Regional Authorities, which set the responsibilities for the Mayor and for the Prefect. The Prefect is under the authority of the Ministry of the Interior and manages police services and the fire brigade and is responsible for interior security in Paris and its surroundings. This highlights how clear roles and responsibilities at an administrative level, underpinned by legislation, are widely considered as crucial components in shaping strategic arrangements. It also highlights that certain types of development may need changes to legislation, depending on the legal context and the extent of the desired changes.

These common approaches are shared by Rotterdam and other cities more broadly.

Across all cities participating in CTPN, legislative duties are translated into practice through governance structures (e.g. political oversight, strategic leadership and sub-groups) that are appropriate to each.

Furthermore, standards exist to guide planners on how best to achieve common elements of strategic coordination. The International Organisation for Standardisation is a global federation of national standards bodies that come together to establish criteria, methods, processes and practice with technical subject matter expertise. The 'ISO 22320: 2018' are the security and resilience emergency management standards and guidelines for incident management, and outline global practices for implementing incident-response systems. These guidelines specify that all incident management is predicated upon the knowledge that in any incident, including those of a terrorist nature, there are certain management functions that must be carried out, irrespective of the severity of the incident or number of people affected.³⁰

These management functions are understood to be those of strategic coordination, and they cover management processes and structure, including the allocation of roles and responsibilities, tasks and resources. Functions are underpinned by organisations working together through joint direction, decision-making and cooperation,³¹ and the need for work in this area has been frequently identified, although some work has developed significantly in more recent years.³²

Recommendation 1

Cities to consider reviewing strategic multi-agency structures to ensure appropriate connectivity, responsibilities and information-sharing in response to a terrorist attack.

6 Strategic Planning and Preparation

At a city level, strategic planning and preparation are critical to responding to and recovering from terrorism.

Operationally and tactically, agencies will respond to the incident as per their respective policies, procedures and plans. In a counter terrorism context, immediate priorities are to work together to save life and limb and contain and/or neutralise the threat. Although this is also paramount at the strategic level, it expands to include minimising the impact on communities more broadly, and disruption to critical services and the transport network, as well as recovery, for example.

This can be understood as consequence management, which often works in parallel with strategic communications. The importance

of timely, accurate, strategic communications will be explored later in the report.

Figure 4 provides an overview of the strategic frameworks available to the London Resilience Partnership. These sit under the structures and arrangements detailed within the overarching Strategic Coordination Protocol that outlines the official procedure(s) of how the response to and recovery from an emergency will be coordinated. In a terrorist attack, frameworks such as Mass Fatalities, Humanitarian Assistance and Recovery may be activated in support of these arrangements.

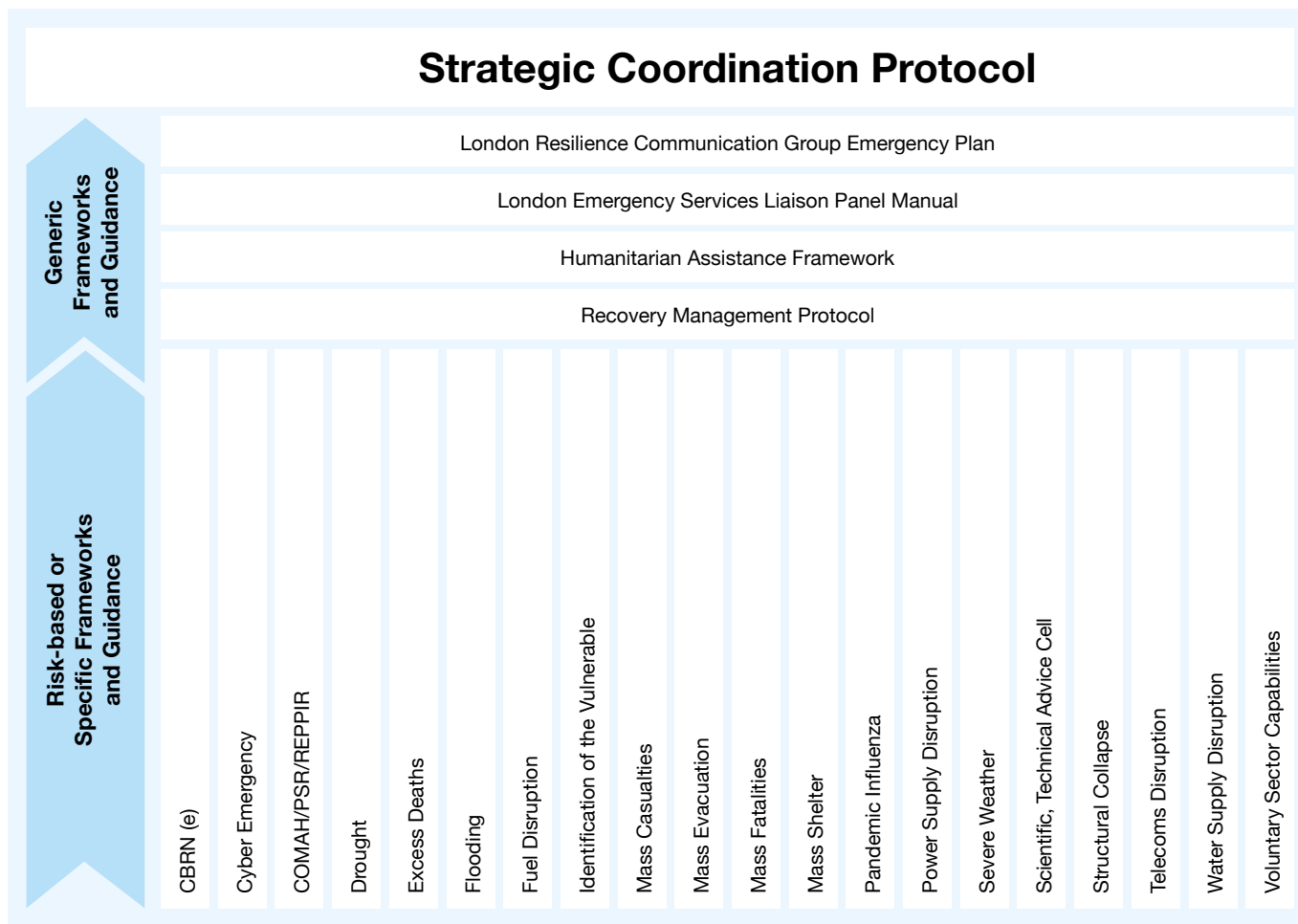
Frameworks can be defined as a high-level description of how any given capability will be coordinated and delivered. A framework will typically include a definition and purpose of the capability; triggers and associated activation process; coordination structure; key response considerations; and a draft strategy. It is intended to inform

strategic decision-making and offer guidance in an emergency. Strategic frameworks demand the disciplined calculation of overarching “objectives, concepts, and resources within acceptable bounds of risk”³³ and should align with “grand strategy” (that is, national strategy) in pursuit of a predetermined interest, in this case the response to terrorism.

It is important to make a distinction between a strategic framework, which informs strategic priorities and decision-making, and a tactical or operational plan, which otherwise initiates and directs the management of personnel and assets to reduce, control or mitigate the effects of an emergency at a local level.³⁴ Strategic planning must, therefore, align with operational priorities, be informed by the risk and threat level, as well as the associated planning assumptions, and consider the wider consequences. This demands the inclusion and participation of experts from across organisations and sectors in the planning process,



Figure 4 Strategic Coordination Protocol



and needs clear governance structures to ensure standards are met and lessons from previous incidents are learned and integrated.

Strategic frameworks demand the disciplined calculation of overarching “objectives, concepts, and resources within acceptable bounds of risk”.

Although terminology differs, all CTPN cities work with strategic frameworks in some form. To quote President Eisenhower, “The plan is nothing, planning is everything”. The process of developing such

documentation strengthens multi-agency preparedness through working together, enhancing the joint understanding of risk, identifying needs and solutions, and agreeing shared objectives. This documentation then forms the foundation for the development of training and exercising, to ensure that the processes and procedures are understood, embedded and rehearsed.

Training and exercising is widely considered to be an important part of the planning and preparatory phase. Investment in joint training and exercising programmes provide a platform for relationships and trust to be built; knowledge, understanding and technical expertise increased;

and organisational or multi-agency arrangements to be developed. As noted after the 2017 terrorist attack in Stockholm, “the experience from this and other terrorist incidents show that there is a need for the actors to in a greater extent take joint preparations, to ensure that roles, responsibilities and expectations among the involved actors is clear”.³⁵ This requires training to take place within organisations, as well as across the multi-agency environment.

A collaborative multi-agency approach towards planning, training and exercising fosters functional partnerships and strengthens the capability of a city to prepare for, respond to and recover from terrorism. Workshops or conferences

led by experts have also proved successful. Examples of this include the Strategic Coordination Summits hosted by London Resilience Group. These have included scenario-based discussions on a Marauding Terrorist Firearms Attack and a Chemical Attack on the transport network. It is important to convene a diverse delegation that goes beyond the core emergency services, in order to harness experience and expertise from across sectors.

The efficiency and effectiveness of a response, however, is subject to the capabilities of organisations and the collective multi-agency partnership. A capability is the power or ability to do something, and usually includes doctrine, strategic and operational plans, resources and logistics, levels of capacity, training, exercising and interoperability. It is also subject to the skills, knowledge and experience of operational responders up to strategic leaders. In this context, a capability is the collective ability to respond to and recover from a terrorist attack, but this can be challenging to measure in practice. A holistic capability assessment may be time-consuming, complex, resource-intensive and revealing, yet it is the best way to understand the depth of existing arrangements and how these can be developed.

Recommendation 2

Cities to develop a counter terrorism framework. Consideration should be given to the different types of terror attacks including marauding terrorist attacks and the use of CBRN materials.

Recommendation 3

Cities to consider commissioning a strategic training needs analysis to inform the development and delivery of a training and exercising programme for strategic leaders with consideration to wider international sharing and participation.

Recommendation 4

Cities to consider undertaking a full multi-agency capability analysis to understand the city's true ability to respond to and recover from a terrorist attack and subsequently identify any risks, gaps and solutions.

Joint Trainings

Case study 1



There is a three-month course on coordination of large emergencies and catastrophes at the Public Security Institute of Catalonia. It is a multi-agency course, where the heads of all agencies involved in the response to an emergency work together to learn how to respond from a multidisciplinary approach.

Individuals from different agencies get to know what others do, how they can complement one another and learn to coordinate resources and actions. The course was initiated in 2018.

In the UK, the College of Policing offers a Multi-Agency Gold Incident Command (MAGIC) course that is tailored towards leaders and commanders who would operate at the strategic level during incident response. It brings together leaders from across agencies and sectors to consider the core elements of strategic coordination and apply these in a table-top scenario.



Strategic leadership and decision-making is fundamental to strategic coordination. Indeed, strategic leadership is particularly important in crisis management to successfully navigate inherently unpredictable, complex and high-impact situations.³⁶

Decision-making at this level is inevitably intertwined with the political environment, a subjective position that is influenced by the level of shared situational awareness achieved. A frequent perception of emergency response is that strategic leaders make crucial decisions on strategic problems, and orchestrate efficient and collaborative response efforts to implement such decisions.³⁷ It is important to clarify that such decisions must be based upon information that is gathered at scene from operational staff, and then conveyed up the chain of command to inform decision-making and the management of resources. This requires some flexibility in hierarchical response structures, in order to absorb the effects of unexpected changes in circumstances or issues with information accuracy.³⁸

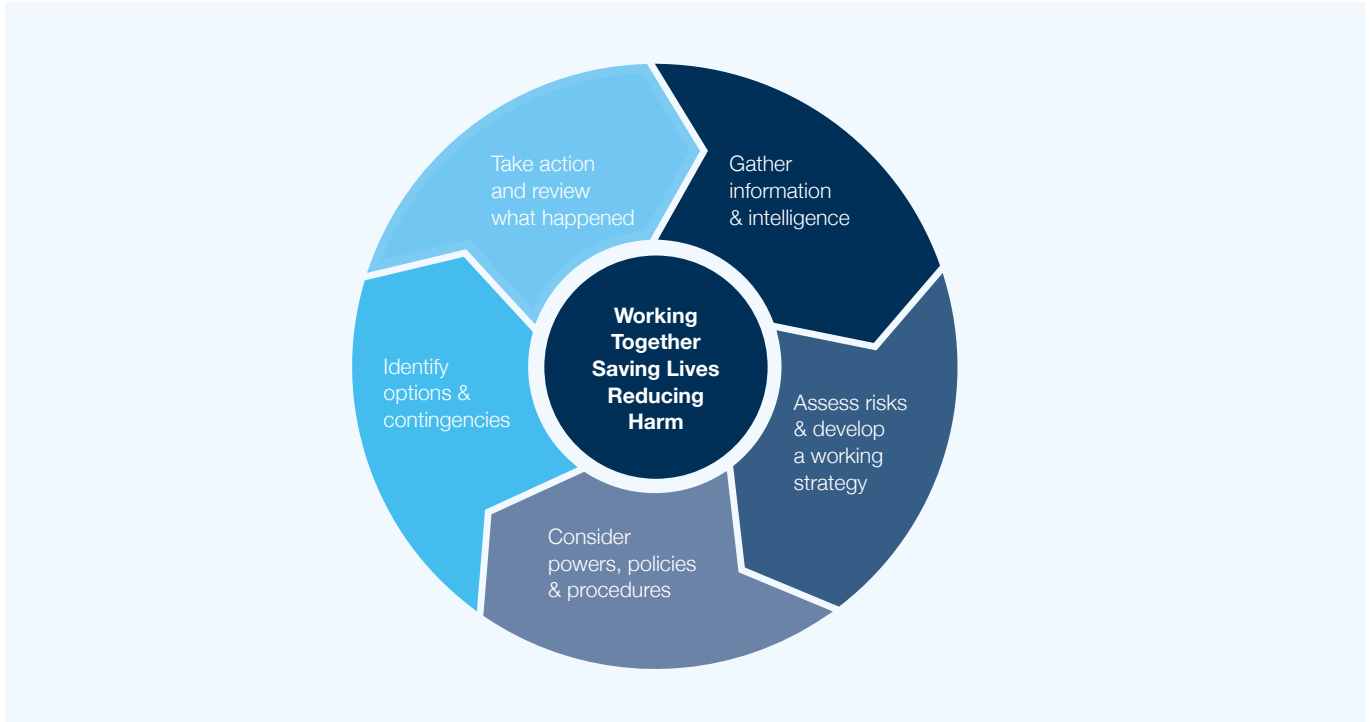
If strategic decision-making is based on the situation, impact and scale of the incident, as well as the strategic frameworks and advice available, it follows that the mechanisms and processes to enable rapid analyses and shared situational awareness to inform evidence-based decisions are essential. For those making critical decisions, it is important that they neither overestimate nor underestimate the role of pattern and nuance recognition in this process, and the role that these play in drawing inferences without complete real-time information. Responders use past experiences as a method of comparison to analyse present situations, make assumptions and draw similarities or highlight differences, which can lead to very successful outcomes.³⁹

Drawing on past experiences is useful, as demonstrated in Case Study 2, where Paris was able to hold on the deployment of resources, knowing that resource preservation may be required.

Strategic leadership is particularly important in crisis management to successfully navigate inherently unpredictable, complex and high-impact situations.

However, using previous experiences in reasoning, and subsequent intuitive decision-making, can also lead to flawed choices because in general people are more effective at drawing comparisons than distinguishing

Figure 5 Joint Decision Making Model



differences. When decision-makers feel that a situation is “out of their control”, this actually inhibits their ability to recognise patterns, and may lead to an over-simplification of complex situations.⁴⁰ It is sometimes simpler and faster – in the absence of answers or understanding – to simplify situations in order to deal with confusion, but in doing so, this affects situational awareness and again, the ability to recognise and analyse situation specific nuances and their meanings. Decision-makers may then address limitations with their own knowledge, potential false beliefs, preconceptions and assumptions, rather than considering the way in which they think and how that could affect decision-making.⁴¹

Novella presents practical options for strategic decision-makers to challenge their own biases

and intuitions to ensure the best possible decisions are made in terrorist attacks.⁴² These include recognising and examining carefully any assumptions that have been made, and weighing them against available information and potential outcomes. Strategic decision-makers must develop the habit of making well-reasoned cases for any actions, judging the validity of arguments and claims that led to the requirement for such action. Crucially, decision-makers must seek the perspectives of those around them, ensuring all-inclusive thinking for the selection of the best response options.

Shared situational awareness is defined as “the state of individual and/or collective knowledge relating to past and current events, their implications and potential future developments”.⁴⁵ The Joint Decision-

Making Model released by the UK Government,⁴⁶ supports this process, and has been adopted by a number of cities.

Endsley identified three basic levels of situational awareness:

Level 1, Perception: building a complete picture of what’s happening

Level 2, Comprehension: developing an understanding of causation, consequences and wider impacts

Level 3, Projection: formulating what might happen and what the implications could be⁴⁷

Shared situational awareness is defined as “the state of individual and/or collective knowledge relating to past and current events, their implications and potential future developments”.

Shared situational awareness forms the evidence base for decision-making and all that follows. In its truest sense, it relies upon real-time, accurate, verified information that has been filtered, processed and distilled to offer value to strategic leaders. However, the response to a terrorist attack inherently requires rapid decision-making set against quick-time operational realities, and relatively slow-time information feeds from a multitude of dynamic and imperfect sources. This causes what has been described as the “evidence gap”.⁴⁸ This is the zone or period of greatest uncertainty, caused by insufficient reliable and actionable information compared with demand.⁴⁹

Accurate, up-to-date information is fundamental to enabling organisations to make sense of an event in real time,⁵¹ and to relay their understanding within their organisation and across partnerships. Coordination needs to rely on well-designed communication and information infrastructure, in order to avoid irregularity of information among organisations.⁵² If “crisis response involves making decisions based on the best information available”,⁵³ it follows that a reliable and consolidated supply of information is critical for successful strategic leadership. This means reducing the evidence gap and instilling clear information-management processes and procedures that harness the confluence of interactions that surround a response, and ultimately determine strategies.

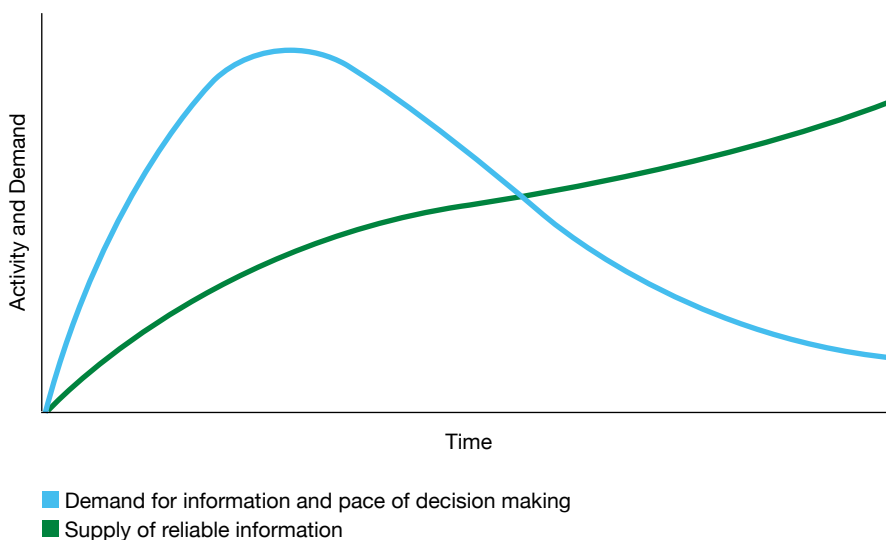
The need for improved inter-agency communications and shared situational awareness is frequently identified. This was clarified by Pollock,⁵⁴ who was commissioned to lead a review assessing serious disasters in the UK and the issues

that affected interoperability among responders, exposing the negative impacts derived from insufficient doctrine, communications and shared situational awareness in situations of crisis. The Pollock Review revealed the need for a common system that has the capacity to deal with surges of activity, and the ability to quickly access and share information between stakeholders. This has been progressed to a degree through 24/7 monitoring, for example, but the evidence gap persists.

7.1 Supporting Shared Situational Awareness

A lack of shared situational awareness can be seriously problematic for strategic coordination.⁵⁵ This is especially pertinent for terrorist attacks or CCTAs, where collation of information from each scene might take time, and any lack of awareness may influence the deployment of resources. Terrorist attacks require sustained response coordination from multiple organisations and on multiple levels, which is distinguished as collaboration and leadership.⁵⁶

Figure 6 The “Evidence Gap” in Crisis Management⁵⁰



Incident Command discussion – Paris, 2015

Case study 2



On 13 November 2015, gunmen and suicide bombers carried out coordinated attacks at a concert hall, a major stadium, restaurants and bars, killing 131 and wounding many more. Documented findings have stated that although there were many lessons identified, the death toll would have certainly been higher had crucial decisions not been made immediately after the start of the attacks.⁴³

Two decisions were made immediately after the first phase of the attacks in Paris, beginning at the stadium during a football match at which the then president, President Hollande, was present. After the first explosion, which was audible inside the stadium, President Hollande, concerned that attackers may have been lying in wait for spectators leaving the stadium, decided not to tell them what had happened, but to continue with match play and quietly put the stadium on lockdown. Spectators remained largely unaware of what was happening outside the stadium.

This demonstrates how decision-making processes can be intertwined with those who are normally independent of the chain of command. Although President Hollande was an elected official, it is reasonable to note that the President would not normally participate in response efforts and strategic decision-making, especially in the initial stages of response. The strategic direction supported an effective response, and demonstrated the breadth of stakeholders who can be involved and the weight that they can give to decision-making.

Furthermore, in line with learning from the Charlie Hebdo attacks that had occurred in January of the same year, police decided to hold back on the mass deployment of resources to the stadium, fully aware that a second wave of attacks was possible. The preservation of police resources ensured that resources were available to be deployed to subsequent attacks elsewhere in the city. Complex Coordinated Terrorist Attacks are designed to inflict maximum fatalities, cause confusion and challenge response-coordination efforts.⁴⁴ This crucial decision demonstrated situational awareness.

Challenges nevertheless existed, especially owing to the complexity of the attack locations, in that there were three separate command posts that operated independently of one another. This affected the ability of responders to create an accurate real-time information picture upon which to base decision-making. Further to this, France allows the self-deployment of resources to emergencies; however, because these resources were not deployed through a central resources-management system, officers arriving at scene created bottlenecks with their cars, affecting access for other emergency vehicles. Although these issues might seem more operational or tactically focused, they derive from policy and strategic decision-making. Work must be done to ensure that strategic direction and oversight translates reasonably well into practice, and that the practicalities of decision-making are considered.



Solutions should be developed to preserve the confidentiality of sensitive information while still enabling organisations with response functions to be adequately informed in a timely manner.

In a multi-agency environment, there may be a shift towards shared ownership for the collective outcomes of the incident. Shared ownership (and broader factors that are outside the remit of this report, such as group dynamics and psychology) can risk diluting responsibility. This is why a clear and measurable strategy that is aligned with the legal duties of multi-agency partners needs to be coupled with incident-specific objectives that are attributed to the relevant lead agency to deliver and report back on progress. This is even more critical when information is fragmented, contradictory or based on cognitive biases, and so on.

The challenges posed by leading sustained operations over multiple operational periods in potentially multiple locations are not to be understated. Strategic leaders will find themselves in highly complex, high-pressure environments with varying public and governmental demands, and media scrutiny.

This is exacerbated by the provision (or lack thereof) of slow, inaccurate or unverified information, as multi-agency coordination involves the frequent exchange of information; management of resources; the provision of advice; and collaborative work on complex tasks.⁵⁷ Therefore,

a balance must be struck between the need for additional information and the effects of paralysed decision-making while further physical, procedural and technological solutions are sought.⁵⁸

7.2 24/7 Monitoring and Secure Online Platforms

Across CTPN cities there are different structures in place to collect and share information on what incidents are occurring. These tools serve three purposes: 1) monitoring incidents in real time to alert services; 2) share interventions and response options across partnerships; and 3) allow frequent sharing of information to create a common operating picture.

There are structures that monitor city operations 24/7 and produce daily briefings such as those in Paris and London. In terms of coordination, some organisations are on-call 24/7 but do not necessarily monitor ongoing issues, trends and events 24/7. In Stockholm, all partner agencies have a common objective to share any horizon-scanning implications with the entire region via push notices in a joint information-sharing tool. This forms a comprehensive horizon-scanning and reporting system that supports all partner agencies with further analysis and decision-making.

There are significant benefits for organisations that foster collaborative efforts in response, especially in the face of terrorism, where social media can play a devil's advocate role that can apportion blame and catalyse rumours that may negatively impact cohesion in cities and communities. Efforts to collaborate strengthen credibility that organisations are doing their best, both individually

Recommendation 5



Cities to consider investing in the co-location of emergency services and key stakeholders to improve monitoring, information-sharing, coordination and response.

and collectively; prevent ambiguities through joint decision-making in coordination or response; and counteract the dissemination of incorrect information through open and honest information-sharing.⁵⁹

24/7 monitoring has the potential to close the evidence gap, allowing information to be collated and shared quickly, but there are sometimes complicated barriers in using information-sharing platforms.

For example, all platforms generally require access permission, as well as particular operating systems for functionality. This requires the procurement of certain technology. Access to information-sharing platforms that hold sometimes restricted or sensitive information demands prior thought in requesting access, as well as administration to give permissions for such access. Although seemingly simple, these issues can inhibit situational awareness and multi-agency communication. (*continued p25*)

Colocation in Barcelona and Rotterdam

Case study 3



Barcelona has a joint control room where the control teams of the fire services, medical emergency services and police services (Mossos d'Esquadra and Guardia Urbana) work together.

In addition, the strategic meetings are always held in the same place. This fosters trust and relationships between partners, as well as greater information-sharing.

The police forces work in a joint space, distributed functionally, instead of separated by each police force, to improve coordination; they serve as a first pool in the area of security. Firefighters and medical emergency teams each have their own space, and work is already underway to integrate the two agencies in a single space to improve coordination, thereby creating a second pool in the area of safety. The integration of these two pools gives a comprehensive approach to all kind of emergencies.

The Joint Coordination Room also has other spaces to improve coordination, with different meeting or backup rooms to host strategic committees or to set up monitoring teams in case of extraordinary acts or terrorist attacks. If needed, other agencies will also send representatives to coordinate with the emergency services, under the authority of the Mayor and the

Municipal Manager of Prevention and Security. The Joint Coordination Room also is in permanent communication with other control rooms, such as the Center of Operational Coordination of Catalonia (CECAT).

In Rotterdam, police, fire and rescue services and the emergency medical service have had a joint control room in the World Port Center in Rotterdam since 2005.

Since then, they have been using a joint control room system and a computerised system, into which all services can insert incident information. In the same building there are prearranged rooms for the strategic and policy-level multi-agency work in the regional operations team, as well as the Municipal Policy Team led by the Mayor.

Within the joint facilities, the different multi-agency levels can work in their respective prearranged rooms. Via video link, support groups and an analysis team can follow the meetings live from neighbouring rooms or other facilities, thereby working in parallel with the strategic meetings. Altogether, combining prepared facilities with IT-communication supports the structures and contributes to the best of conditions for multi-agency communication and the timely action of decisions.



The London Situational Awareness Team (LSAT)

Case study 4



The London Situational Awareness Team provides the Mayor and the Greater London Authority with a 24-hour horizon-scanning, situation-monitoring and incident-response function.

This service is provided during business-as-usual operations, predominantly from open-source monitoring, complemented by reporting and communications with emergency services, transport partners and central government.

This team is newly established and has therefore not yet been tested in a London-based terrorism incident. Nevertheless, some major disruptive events have occurred during recent months that can be used as a template to examine how such an issue would be responded to.

1. DETECT: The primary function of the team in an incident that occurs without warning is detection. This will more likely than not be detected from open sources – particularly social media. A number of techniques can be used to make rapid assessments as to the probability of an incident.

2. INFORM: It is likely that the team could release an alert to partner organisations with response roles within 10 minutes of an event (although this is dependent on circumstances). In the first instance, this would act as a notice for stakeholders, who can seek information from other sources for confirmation.

3. CONFIRM/UPDATE: Through first responders, further open-source information and any other relevant information streams, reporting becomes more refined and updates are issued as soon as new information comes to light. This corresponds with the development of an overall common operating picture.

4. SUPPORT: Concurrently, processes for supporting a decision-maker's incident response would be put into place. At this stage, reporting is not only informed by developments but by the necessity to ensure that the information picture is delivered in the required format and at appropriate cut-off times to support meeting cycles.



Paris Operational Watch Centre

Case study 5



In Paris, a permanent watch of the Prevention and Protection Department is active at all times to collate information, anticipate and prevent any events that may affect the population and the territory. This centre sends daily information messages to the different city departments.

In addition, it coordinates the city's security inspectors and security agents. It also manages the list of on-call city officials. It can receive alerts from the population, from city agents and through permanent liaison with the police and the military firefighters. It processes the alerts and, depending on the severity of the threat, transmits them to the on-call duty city executives. The alert is then transmitted to the department concerned and, if necessary, distributed to the 51,000 city agents.

The Prefect of Police or the Secretary General of the Paris Defense and Security Zone are responsible for triggering the alert in case they need to tell the population. The city will, however, relay the alert through its various channels. A crisis unit can be called to bring together city officials to lead the municipal action.



Secure Online Platforms

Case study 6



Resilience Direct is a nationwide system run by the Cabinet Office in the UK, but with local administrators using it in the preparation, response and recovery phases of an incident.

All local authorities, emergency services and partners from the resilience forum can have access to it, and levels of access are available to ensure content security. It is used for storing and sharing information, and documents, such as response plans and guidance, and documents related to training and exercises, media strategies or minutes and actions of meetings. It allows different organisations to share information across geographic boundaries and has a mapping functionality that can be used in planning and response.

The London Situational Awareness System (LSAS) is an online platform that is accessible by organisations across the London Resilience Partnership. The system enables partners to input weekly updates or updates during incident response so that a common operating picture can be generated and shared. It has the functionality to display organisational and regional strategies, as well as the status of critical services, for example, using a red-

amber-green rating and a dashboard format. Documents relating to pre-planned events or industrial action, or alerts such as weather warnings can also be uploaded to raise awareness and provide visibility.

The Secure Web-based Information System (SWIS) is a web and mobile application run by the Swedish Civil Contingency Agency, MSB. All Swedish agencies within the national crisis-management system are mandated to use it and it allows each organisation to manage clearances within the system and thereby distributes the responsibility to build their own internal information-sharing system. The system acts as a platform for sharing all kind of digital documents and information, i.e. status reports and notifications via text messages and emails. The platform is mainly used to distribute joint regional situational pictures and to send out notifications due to horizon-scanning processes and alerts during critical incidents. The regional structure of the system is set up by the Stockholm Resilience Region, but each partner organisation is allowed and expected to push out information as needed.



7 Strategic Leadership and Decision-Making

continued

Although technology may centralise the information and increase the flow of information shared, this is not to be substituted for weekly meetings and personal interactions. These are vital for creating relationships and trust. Building personal networks requires investment (time and financial) and cooperation because they often underpin successful strategic coordination.

In some cities, weekly meetings/ teleconferences are formalised between all relevant organisations

to share information about future activities in the city and potential risks, including terrorism. These support the common operating picture and keep partnership networks active.

In the context of terrorism, information-sharing between organisations relies on existing tools and structures. However, it is acknowledged that a strong culture of sensitivity exists. Some organisations have links with intelligence agencies, mostly through the police, and

although they understand the limits of information-sharing in this context, city practitioners identified the secrecy around some information as a hindrance. Solutions should be developed to preserve the confidentiality of sensitive information while still enabling organisations with response functions to be adequately informed in a timely manner.

Recommendation 6



Cities to consider investing in digital and physical infrastructure, such as secure electronic platforms and facilities to enable live feeds into and from strategic meetings.

Recommendation 8



Cities to consider developing information-sharing protocols to include sensitive information.

Recommendation 7



Cities to consider developing a 24/7 monitoring function, as well as reviewing and updating early warning and activation mechanisms, for the strategic multi-agency structures.

7.2 The Importance of Building Trust between Partners

The institutionalised processes and cultures of organisations, and how they interact with one another, offer further important evidence of the weaknesses that may be apparent within strategic coordination systems.⁶⁰ Although terrorist attacks bring with them higher levels of uncertainty and increased situational complexity, especially with a combination of simultaneous, multi-sited attacks, “the ability to deal with a crisis situation is largely dependent on the structures that have been developed before chaos arrives”.⁶¹

Certain behaviours and attitudes from personnel can hinder the achievement of overall aims and objectives. The presence of too many response organisations, challenges with staying in touch, differences of opinion and varied technology can inhibit the flow and quality of communication. Limited acceptance of designated strategic leaders or the coordinating authorities by diverse responders may lead to deferred implementation of decision-making. Finally, challenges stemming from the typical decentralisation of decision-making, progressing to recentralisation for purposes

of oversight and multi-agency coordination, present unique issues with the competition of power and control.⁶²

City representatives put trust as one of the fundamental preconditions for successful collaboration in the research on strategic coordination arrangements. It refers both to organisations and individuals, but also in relation to trusting the actual devised structures and processes in place to deal with terrorism in cities. Trust in structures and processes can be fostered by having a high level of transparency in quality-assuring



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activities, peer assessments and consultation of plans, policies and procedures from a broad range of partners. Practitioner research has evidenced that trust in processes further includes having trust in other organisations' ability to implement jointly decided actions within their own organisation. This can be developed through collaborative projects, such as joint training and exercising programmes.

The ability to deal with a crisis situation is largely dependent on the structures that have been developed.

Trust between organisations is often mentioned in relation to sharing (or the absence of sharing) information. Any developed cultures of secrecy clearly affect how other agencies can contribute, prepare and support the response to terrorist attacks. Trust also appears to be transferred from institutions and organisations to individuals, and vice versa, when certain associations or similarities can be made. For example, where people have never met but perhaps know that the other person has similar experiences and accreditations, or interests, they can identify commonalities and trust relatively quickly. On the other hand, some organisations have strong cultural identities that may serve as a barrier within a multi-agency context. Moreover, organisations are often driven by their own agendas, priorities and legitimisation, which risks hindering the development of relationships and trust between organisations. By extension, this can influence the attitudes and behaviours of those in charge of incident response.

When individual or organisational behaviour affects trust, this influences how successful strategic coordination will be in managing a terrorist attack.⁶³ Any initiatives coming from either the bottom up or top down may not be adhered to, or properly implemented, including within necessary timeframes. This can lead to dysfunctional micromanagement and further frustrations in strategic coordination, in trying to ensure progression.⁶⁴ When trust exists, there is an opportunity for the opposite to occur.

Prior to the truck ramming attack in Stockholm during 2017, the agencies within Stockholm Resilience Region had been working closely together, developing generic multi-agency structures, as well as training and exercising terrorist scenarios. The joint effort, noted in the evaluation and debrief, resulted in a high level of trust between the organisations, as well as to the overall multi-agency arrangements.

Recommendation 9



City administrations to promote a culture of trust and inclusivity within and across organisations at a city-policy level, harnessing the influence of strategic and political leaders.

Building Collaborative Trust in Stockholm

Case study 7



In 2015, after four years of development, the Stockholm Resilience Region partnership was formed. One of the first joint directions from the chief executives within the partnership was to heighten the joint capabilities related to terrorist attacks and time critical incidents from a collaborative perspective.

This followed joint efforts in training, and the development of processes, physical facilities and frameworks to guide actions in response to a heightened terrorist threat or an attack. A joint exercise focussed on a terrorism scenario was planned to be carried out on 10 May 2017.

On 7 April 2017 a stolen delivery truck was deliberately driven at high speed along Drottninggatan, a busy pedestrian street in the heart of Stockholm. The attack resulted in five fatalities and 14 persons were severely injured, witnessed by hundreds of people. The Police quickly closed down the underground transport network and railways while the perpetrator was traced.

Simultaneous to a swift and significant on-scene response, the partnership structures and functions were activated. This included the arrangements for information sharing, conferences, joint regional situational pictures and coordinated actions relating to public communication and support. The multi-agency coordination at a tactical level took place in the regional coordinating centre, providing the partner organisations with verified

information from the Police, as well as providing the strategic level with proposed priorities and options. The overall coordination work was managed by joint partnership resources.

Evidence provided by a diverse range of staff who had been involved in the management of this attack, highlighted the underpinning factors that enabled the response. At Police operational level it was well noted that training and exercising had been carried out multiple times, which had been agreed as a key component in successful strategic coordination. There was almost immediately a consensus that it was a terrorist attack, and staff at all levels and from multiple agencies were swift to respond. Some issues were noted regarding the way the police, fire and rescue, and medical services synchronised, but overall it was agreed that the collaboration structures in place functioned well.

During the partnership evaluation conference the participants expressed a high-level of trust in the structures, being informed as needed and knowing where to go for situational reports and bilateral contacts. This trust stemmed from joint training and exercising, education and a proactive approach towards developing relationships between individuals and organisations. The partnership structures and routines had also become familiar as a result of utilising them in ordinary work.



7.3 Participation of Actors in Strategic Coordination

There is a need for senior leaders who have the authority, autonomy and experience to make decisions at the strategic level to participate in strategic coordinating groups. Having the right people around the table, and a strong chair, appears to be a precondition for successful strategic coordination. It has been argued that teamwork is critical to the effective management of any incident, and this is just as crucial at the strategic level: "no individual has enough knowledge or cognitive capacity to fully address complex mission problems... a team effort is necessary to ensure that key information is gathered and considered, assumptions are revealed and tested and plausible interpretations and plans are considered".70

There is a need for senior leaders who have the authority, autonomy and experience to make decisions at the strategic level to participate in strategic coordinating groups.

In many cities, it is often the chair of the coordinating group who decides who will be participating in the meeting. Some of the organisations – e.g. emergency services – participate in every coordinating group, but others will be invited depending on the nature of the emergency. However, the nature of counter terrorism could limit the agencies participating because of levels of security clearance required, as noted previously. Meetings

where intelligence or sensitive information is to be shared are often conducted on a need-to-know basis, and may be closed to wider stakeholders. Inclusiveness is however, where possible, necessary to enable effective coordination, and consideration should be given as to whether the information can be shared in a redacted form. The benefits of collaboration with partners, e.g. local authorities, business, transportation or health agencies, for example, have been proven time and time again.

The role of the strategic coordinating group chair varies across CTPN cities. Depending on the strategic arrangements, the chair might be the Mayor, the Police Chief, Deputy Governor or the best person otherwise available, depending on the emergency. In the case of terrorism, the lead for responding to a terrorist attack normally falls to the relevant police service. In London, this is the Metropolitan Police Service, which would also chair the strategic coordinating group by default. Rotterdam and Stockholm, however, have implemented the roles of neutral commanders to jointly act as independent mediators and coordinators alongside the lead agency (see Case Studies 8 and 9 overleaf).

In Stockholm, it is clearly stated that the chair is not representing any specific organisation in their role. In the case of terrorism, the police would retain responsibility for operations, but the independent chair would make sure that police operations were informed by other agencies and wider consequence-management priorities. A common

trend among some cities is that the chair is supposed to be impartial, should act neutrally, and does not command the assets of other organisations.

The Rotterdam Regional Operational Commander and Stockholm's On-Duty Regional Chief Coordinating Officer enable a fair, rationalised and holistic approach towards coordination. The roles are exercised by facilitating, moderating and mediating meetings to ensure a collaborative and coordinated approach, rather than acting with a formal mandate or command position.

Recommendation 10



Cities to consider the benefits of a neutral commander to work alongside the lead agency during the response to a terrorist attack or another incident.

On-Duty Chief Coordinating Officer

Case study 8



Following the formation of the Stockholm Resilience Region in 2015, one of the first joint directions from the Chief Executives within the partnership was to heighten the common capabilities related to terrorist attacks and time-critical incidents.

This followed joint efforts in education; development of processes; protected facilities for supporting physical multi-agency meetings; scenario analysis; and frameworks of how to act in times of heightened threat or in case of an ongoing terrorist attack. A key decision was to define and, in 2016, implement the function of an On-Duty Chief Coordinating Officer.

There are eight individuals within the function and they are recruited from the partnership agencies and appointed by the chief executives' group, trusting in their personal integrity, overall experience and collaborative approach towards leadership. When active, the function is a joint independent and impartial resource, focusing on the common societal needs and effects of collaboration.

The function doesn't have a formal mandate to make decisions but is by trust given the power to provide interim directions. The function primarily reports to the chair of the Regional Strategic Coordinating Group. During their on-duty service they are also responsible for the weekly regional multi-agency meetings, which enabled the recurrent practice of the procedure, developing the joint situational picture and joint directions.

The joint structures and impartial joint functions have, both generally and relating to the 2017 attack, been found to be very valuable in applying a holistic approach to the demands of the incident.



Regional Operational Commander – Rotterdam

Case study 9



With the forming of Safety Regions in the Netherlands, the Coordinated Regional Incident Management Procedure was adopted nationally.

In the meantime, in Rotterdam a “neutral commander” was developed and introduced as the chair of the crisis team; an educated and trained senior officer from one of the participating services (police, fire, ambulance and port authority).

It is his or her task to monitor the incidents going on, detect trends and the possible interference in incidents at an early stage. If an incident demands a coordinated joint operation, the coordinator is authorised to scale up within the regional multi-agency structure, and provides a multi-agency common operational picture to the officers called to the incident and the tactical/strategic meetings.

These neutral commanders are responsible for the multi-agency approach of the incident management; they chair the meetings of the crisis teams and don't interfere with the operations of the service from which they came.

They operate according to a schedule, so it is possible that an officer of the ambulance service acts as on-scene commander at a major fire, or a fire officer is leading in the case of a terrorist attack. The commander is not determined by the type of incident.



Communication with the public is another important issue and is seen by cities as a critical component when responding to terrorist attacks. The public must be informed so that fear and anxiety are reduced, expectations are managed and counter-productive information, such as stereotyping, blaming and speculation are countered through clear and honest updates.

An informed public is also one that may be increasingly receptive to advice, and could be utilised in response and recovery efforts.

Identified challenges in public communications relate to striking the balance between the need for the public to know what is happening, and the sensitivities of alerting or informing those who may be perpetrating the attacks. Furthermore, organisations responding to terrorist attacks must also deal with any fake information on different social media platforms and that of the traditional mainstream.

Having designated owners or communication leads is important, so that there is consistency and direction in communications, rather than the release of inaccurate, contradictory or confusing information from partners.

To facilitate this, cities highlighted the benefits of using pre-prepared and coordinated messages from the start, allowing responders to spend more time on gathering accurate

information than on communicating it. Formulating messages and prioritised information from a multi-agency perspective makes it possible to use all agencies as communication nodes for spreading general information. In this sense, having designated owners or communication leads is important, so that there is consistency and direction in communications, rather than the release of inaccurate, contradictory or confusing information from partners. In a counter terrorism context, communications are often led centrally by the police.

Communication is just as crucial within and among responding organisations, in order to counteract the dissemination of incorrect information (information that informs decision-making), ensure that any agreed actions are relayed to and executed by the relevant staff, and reduce ambiguities that lead to confusion and delays in response activity.⁷¹ In order for trust among responders to exist and be developed, there must be a willingness and openness to share information among partners. Sensitivities around the attacks may lead to a resistance to share certain information, but it is the task of strategic leaders to consider what should be shared to the benefit of the cities in which they work.

Responding to terrorist attacks requires people to be dynamic, flexible, assertive and team-minded. These characteristics are part of the fabric of effective communication. Strategic decision-makers recognise that to meet the challenges of a lack of information, or information that is ambiguous, they can gather information through partners and colleagues and solve problems together in a dynamic manner, even when they work within conflicting organisational hierarchies, structures and cultures.

Xiao and MacKenzie contributed towards extensive literature on communication in high-pressure, high-stress environments.⁷²

They identified four key areas for observation: the importance of following protocol; following the leader, which require respect for authority and following explicit directions; anticipating, whereby solutions are implemented in response to questions and interpretation of incident-specific nuances; and activity monitoring, when agencies may begin response actions in unison with other responders.

There are three situations that have been identified as points where strategic communications are likely to break down: when pressure exists to find alternative solutions to complex problems; when it is necessary to carry out unanticipated and non-routine procedures; and when team members have to adjust to new roles following a diffusion of responsibility in response to a change of plan.⁷³ Strategic leaders must work within high-pressured environments when dealing with terrorism, and as such must be aware of the areas in which communication is most likely to break down. Work must be done to ensure that tasks, roles and responsibilities and alternative solutions are clearly communicated to all relevant personnel, that personnel understand

them, and that support is given during monitoring and oversight to ensure delivery.

When organisations are in good contact with one another, collaboration for any public communication is easier, because organisations are more typically on the same page in terms of strategy, response activity and requirements. There are embedded methods in many cities to address

communication challenges, and this includes joint training and exercising, whereby organisations can begin to develop relationships before they must come together in the heat of response. This also helps with issues around jargon and supporting interoperability by creating a shared and commonly understood response language.⁷⁴

Recommendation 11



Cities to initiate city-to-city learning on strategic communications.



Prepared communication in Stockholm

Case study 10



Within the Stockholm Resilience Region there are two communication networks on a day-to-day basis: a strategic network consisting of all partners' Directors of Communication, and a tactical network consisting of partner communicators.

The networks are facilitated by the joint function Regional Communications Coordinator and they are used for continuously developing the multi-agency communicative strategies, routines and approach in different types of scenarios. Before the attack of 7 April 2017, there had been joint efforts regarding messaging the public in an event of a terrorist attack. The results were integrated within the framework for terrorist attacks.

During the first hour of the Drottninggatan attack, the prepared joint messages were commonly used as a starting point to inform the public.

With that as a basis, the communication network worked to refine and tweak the public communication throughout the whole operation. The evaluation of the multi-agency response showed that all 26 municipalities and most other organisations used parts of the prepared communication and joint messages on their websites.



9 The Application of Lessons Identified

The Gjørv report into the handling of the Norway terrorist attacks in 2011 posed questions such as, What did they know? What were their options then and there? Which alternatives were rejected, and why?⁷⁵

Inquests, investigations, reviews and debriefings scrupulously examine how decisions are made and rationalised. Those tasked with leading inquests and investigations will look at whether plans were enacted and followed, and whether any flexibility, or lack thereof, in adherence to such plans and procedures was necessary. True leaders must be willing to be accountable, to accept any shortcomings and work to improve on them. The true test of an organisation's ability to learn lies within the subsequent response to similar incidents.⁷⁶

Inquests, investigations, reviews and debriefings scrupulously examine how decisions are made and rationalised. Those tasked with leading inquests and investigations will look at whether plans were enacted and followed, and whether any flexibility, or lack thereof, in adherence to such plans and procedures was necessary.

A short overview of coordination arrangements and an analysis of official documentation detailing the response to the Norway terrorist attacks in 2011 is provided (see Case Study 11). Pollock discusses

the differences in cultures of organisations that are willing to learn and can be deemed flexible and resilient, and those that either choose not to, or face serious challenges that inhibit learning.⁷⁷

An absence of a culture where organisations are willing and motivated to acknowledge issues, learn, improve and change ultimately means that learning will not happen. There are undeniable complexities within learning agendas, as strategic

coordination arrangements are not just relevant for one organisation, but require buy-in and engagement from numerous stakeholders. Nevertheless, examples of existing barriers to learning have been identified and include: rigid institutional beliefs and norms that prove inhibiting to accountability and change; any tendencies to blame other factors; and the disregard of complaints or signals that may in hindsight have constituted early warnings. These barriers may be the result of communication failures between stakeholders, a lack of skills at varied tiers of response, failure to follow agreed procedures, or even insufficient resources to meet demand.⁷⁸

Ignoring such behaviours will most likely result in the systemic failure of such organisations to deliver on responsibilities.⁷⁹ This can be circumvented by commitment from



9 The Application of Lessons Identified

continued

senior management, who set the standard, encourage accountability and communicate with staff, to ensure that this is acknowledged and understood. Effort must be made by those responsible for setting the direction and culture of organisations to incorporate learning into training and exercising, debriefing and anything identified from inquests. This should include auditing and monitoring of recognised areas for improvement and associated actions.

Debriefings and indeed inquests that take place after incidents such as the Norway attacks may yield findings like those that have already been identified in pre-incident training and exercising. It can be deduced that lessons, although identified, were not fully learned. Debriefs can be considered fairly standard practice; they can lead to actual changes when something has failed and there is a recognised need to improve coordination. For all cities, debriefings are central to recovery and the improvement of response processes. Debriefing is not only used for accountability, it can and should be used for continuous improvement.

To reach a level where debriefs and evaluations are used systematically as a tool to improve and develop joint processes needs structures, routines and resources, as well as trusted methodologies and cultures of learning and development. This is a policy matter to set and continuously

maintain. The experiences within responding organisations offer a wide range of tools that can be used to learn, including regular follow-up discussions during weekly meetings, partnership-led reports, joint workshops and external reviews and formal evaluations. This process needs to be embedded into common protocols. To ease the process of gathering information, anonymous questionnaires or similar methods can be used. Further, ensuring a clear and joint terminology separating formal evaluation/investigations from joint follow-ups and learning processes can be a way of fostering constructive ways of development from both positive and negative experiences. This applies at all levels up to and including formal inquiries.

Recommendation 12

Cities to consider using joint multi-agency debriefings as well as city-to-city peer reviews as opportunities for continuous improvement, and to establish an oversight committee to ensure the integration and implementation of lessons in a timely manner.

Analysis of the Norway Terrorist Attacks, 2011

Case study 11



On 22 July 2011 at 15:25, a lone right-wing terrorist parked a van filled with explosives outside the Government Quarter in Oslo, killing eight people and injuring nine more. The perpetrator then drove from Oslo to Utøya. He arrived at Utøya Island, where a political youth camp was taking place, almost two hours after the Oslo bombing, and began killing people on the island at 17:21.

This created extremely challenging and high pressured circumstances for those tasked with coordinating the response to the incidents, because the perpetrator had crossed police organisational borders.

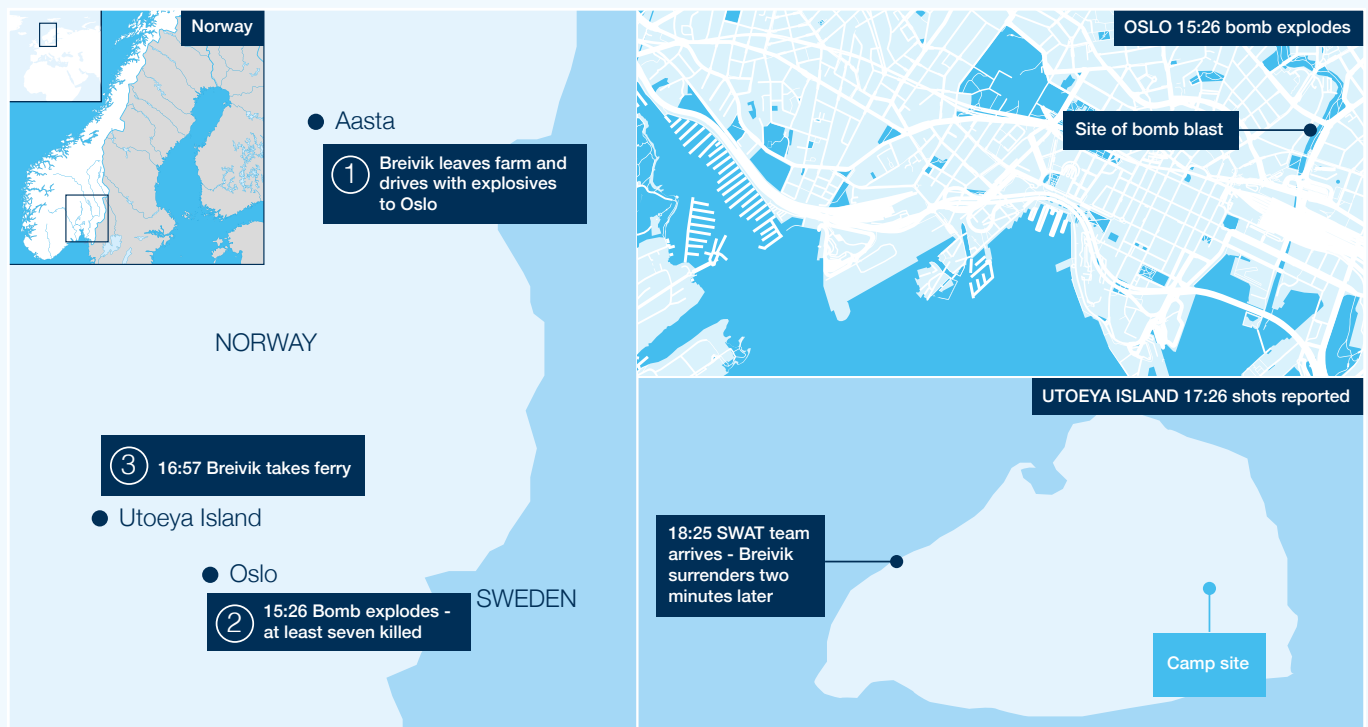
This demanded joint efforts between partners who would not normally work together.

In Norwegian police agencies, oversight and decentralisation of decision-making at the operational level (referred to as the tactical level in Norway), is managed by an Incident Control Officer (ICO). The ICO is

mobilised to local emergencies that require overarching coordination and resources from multiple sources. These officers have the authority to delegate tasks and responsibilities. The tactical level (referred to in Norway as the operational level and styled after military structure), is an information and coordination hub that monitors and evaluates incidents away from the scene. An appointed Operations Control Officer (OOC) has the designated authority to manage the ICO on scene, and oversee strategic decisions, as long as no official strategic body has been established. To make further distinction, the ICO dictates how tasks are executed, but the OOC dictates what tasks are done.⁸¹

The strategic level of response is known as the “staff body”, which is set up when the needs of an incident have become too great for operational and tactical staff to manage, and when certain criteria have been met. This body brings together experts and intelligence officers who set strategic direction and make decisions.

Figure 8 Map of the Norway Terrorist Attacks, 2011





During the response to the bombing, among the chaos, the OCO handed over full responsibility for the on-site response to the bombing in Oslo to the ICO at scene. This caused crucial situational awareness to be lost and impacted the knowledge, decisions, and priorities of strategic leaders.

This highlighted fragmentation in the unity of command. As per the International Standards for Emergency Management, “Unity of command means that every individual has a designated supervisor to whom he or she reports at the scene of the incident. These principles clarify reporting relationships and eliminate the confusion caused by multiple, conflicting directives.”

A further exacerbating factor became apparent in the relaying of critical information relating to the perpetrator. Because the OCO was so busy in the midst of a complex and evolving terrorist incident, staff could not relay credible information regarding the perpetrator, which had been received from two independent sources within 10 minutes of the bombing in Oslo. This caused a delay in relaying the information to the ICO on scene, who passed it on to Delta Force, the police anti-terror unit that would deem the information too vague to action.

The OCO had ordered that information regarding the possible perpetrator be distributed to three police patrols on duty. These patrols were ordered to cancel their current activities and focus on finding the possible perpetrator’s van, but they did not follow this order, instead needing to focus on other tasks at scene.⁸⁴

It is also possible that police patrols that were attached to separate police organisations may not have recognised those giving the order as having the authority to do so, or may not have respected the order because they did not usually report to those people, or even know of them. This demonstrates a need for varied and diverse training and exercising, where partners from a variety of organisations and areas are invited to develop relationships and common operating procedures where appropriate.

At 17:47, more than two hours after information about the perpetrator had been received, it was relayed to all police units in and beyond Oslo. Strategic leaders had only been given this information minutes earlier. This again demonstrated difficulties with the chain of command in relation to communication flow. Although all emergencies, and terrorist attacks in particular, bring with them a sense of chaos, urgency and uncertainty, it is nevertheless

critical that strategic leaders do all within their power to maintain situational awareness in order to set strategic aims and direction. The flow of information from the bottom up is crucial to this.

As less attention at the operational, tactical and strategic levels was paid to catching the perpetrator, due to the need to respond to a devastating bomb, the official report into the management of the attacks concluded that lives could have been saved on Utøya Island.⁸⁵ In this respect it must be remembered that terrorist attacks may explicitly target the weaknesses of those tasked with responding, being purposely calculated to cause confusion and challenge response-coordination efforts.⁸⁶

In this respect it must be remembered that terrorist attacks may explicitly target the weaknesses of those tasked with responding, being purposely calculated to cause confusion and challenge response-coordination efforts.⁸⁶

Although the incident was unprecedented for Norway, the breakdown in coordination and decision-making only heightened the uncertainty and chaos, and affected crucial police operations. Decentralisation of decision-making to ensure rapid and effective management of the bombing, although possibly appropriate at the time, was inconsistent with evolving demands. The beginning of a second terrorist attack necessitated a shift from decentralisation of decision-making to a redistribution of that authority, including the inclusion of further staff and partners, and then heightened strategic oversight, intelligence-gathering and analysis.⁸⁷ Hindsight is accepted as an unfair bias because it is easy to critique responses once time has passed and all the information is known. Nevertheless, as the complexity of attacks increase, so too must the strategic buy-in, oversight and coordination. It must be noted that these situations are not only extremely pressurised but require a fast response based on often incomplete information. There is much to learn for all cities.

Debriefings in Paris

Case study 12



In Paris, debriefings are important following incidents and are used for continuous improvement in coordination.

There have been two phases of changes in the preparation for coordination in the context of terrorism in Paris. A number of terrorist attacks in 1995–1996 underlined the necessity to coordinate emergency services and led to the creation of the Red Plan. Debriefings after debriefings, the plans were adjusted and the firefighters in Paris elaborated a Red Alpha Plan (now called ORSEC-NoVI), adapted to terrorism and to the possibility of multiple attacks.

During the coordinated attacks in Paris in 2015, seven Red Alpha Plans were activated at the same time. The attacks showed that the emergency services could become targets, and debriefings resulted in inter-ministerial working groups to provide documents and doctrines such as the Emergency Response in Case of Mass Casualties Doctrine. These documents and doctrines set out how the services need to react to such an attack, underline the need for liaison officers and set the directives for the creation of three zones on site (exclusion zone, control zone and support zone) to avoid putting emergency services at risk.



Considering the academic research and case studies reviewed, it is evident that there are specific measures that could be implemented by cities in order to strengthen strategic coordination arrangements in response to terrorism.

Terrorist attacks are distinguished by their complexity, initial ambiguity, typical severity of impacts and the requirement for the establishment of sound strategic coordination structures to manage extensive resources and decision-making processes.

Discussion and evidence has clearly concluded that strategic leaders and decision-makers are required to work in extremely high-pressure situations. They must be able to navigate uncertainty and deploy resources in collaboration with partners; they must reduce the impacts of attacks and they must initiate dynamic action in response to unique terrorism-specific challenges. Although many cities have strategic coordination arrangements in place, it seems pertinent that cities work to carry forward the recommendations to ensure a consistent standard for each city. Terrorist attacks have become more prevalent in recent years and this requires response staff who are well trained and exercised to meet these challenges.

Research has shown the benefits of colocation for building trust, joint decision-making and a more accurate real-time information picture. Certain infrastructure and planning is required to underpin such benefits, and cities are encouraged to consider the technological solutions and physical resources that they may need to develop.

A culture of trust has been discussed and emphasised as key to information-sharing and joint working among organisations with response roles and capabilities. This requires an open-minded approach to ensure the inclusion of multiple stakeholders and the unity of command. This report helps to provide cities with an opportunity to learn from each others triumphs and shortcomings, in order to better prepare for any future challenges, learn lessons and instigate change.

The recommendations outlined in this report will require political and strategic buy-in, funding and promotion across multi-agency partners. It is imperative that cities continue to evolve and adapt to meet the uncertainties of the future, and this responsibility sits at a strategic and/or city-policy level.

10.1 Strategic Recommendations for Enhancing Strategic Coordination

1	Cities to consider reviewing strategic multi-agency structures to ensure appropriate connectivity, responsibilities and information-sharing in response to a terrorist attack.
2	Cities to develop a counter terrorism framework. Consideration should be given to the different types of terrorist attacks including marauding terrorist attacks and the use of CBRN materials.
3	Cities to consider commissioning a strategic training needs analysis to inform the development and delivery of a training and exercising programme for strategic leaders with consideration to wider international sharing and participation.
4	Cities to consider undertaking a full multi-agency capability analysis to understand the city's true ability to respond to and recover from a terrorist attack, and subsequently identify any risks, gaps and solutions.
5	Cities to consider investing in the co-location of emergency services and key stakeholders to improve monitoring, information-sharing, coordination and response.
6	Cities to consider investing in digital and physical infrastructure, such as secure electronic platforms and facilities to enable live feeds into and from strategic meetings.
7	Cities to consider developing a 24/7 monitoring function, as well as reviewing and updating early warning and activation mechanisms, for strategic multi-agency structures.
8	Cities to consider developing information-sharing protocols to be developed to include sensitive information.
9	City administrations to promote a culture of trust and inclusivity within and across organisations at a city-policy level, harnessing the influence of strategic and political leaders.
10	Cities to consider the benefits of a neutral commander to work alongside the lead agency during the response to a terrorist attack or another incident.
11	Cities to initiate city-to-city learning on strategic communications.
12	Cities to consider using joint multi-agency debriefings as well as city-to-city peer reviews as opportunities for continuous improvement, and to establish an oversight committee to ensure the integration and implementation of lessons in a timely manner.

- ¹ London Assembly, (2006). '7 July Review Committee: Volume 4: Follow-up report'. London.gov.uk. Available at: https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/archives/assembly-reports-7july-follow-up-report.pdf (Accessed 2 September 2019).
- ² BBC (2015). 'Paris Attacks: What Happened on the Night', BBC.co.uk (9 December). Available at: <https://www.bbc.co.uk/news/world-europe-34818994>
- ³ Horwath, R. (2006). 'The Origin of Strategy'. Strategic Thinking Institute. Available at: https://www.strategyskills.com/Articles_Samples/origin_strategy.pdf
- ⁴ Malone, T. W. and Crowston, K. (1994). 'The Interdisciplinary Study of Coordination', *ACM Computing Surveys (CSUR)*, 26(1), pp. 87-119.
- ⁵ JESIP. 'Definitions of Terms Used'. Available at: <https://www.jesip.org.uk/definitions>
- ⁶ Döbbeling, E. (2012). 'Emergency Management Global Best Practice for an Incident Response System', *Isotc292online.org*. Available at: http://www.isotc292online.org/siteassets/isotc/articles_publications/articles/iso-focus-2012-05-emergency-mangement---dobbeling.pdf (Accessed 9 September 2019).
- ⁷ Christensen, T., Andreas Danielsen, O. L. E., Laegreid, P. and Rykkja L. H. (2016). 'Comparing Coordination Structures for Crisis Management in Six Countries', *Public Administration*, 94(2), pp. 316-332.
- ⁸ Boin, A., Hart, P., Stern, E. and Sundelius, B. *The Politics of Crisis Management: Public Leadership Under Pressure* (Cambridge: Cambridge University Press, 2005).
- ⁹ Wilkinson, B., Cohen-Hatton, S. and Honey, R. (2019). 'Decision-Making in Multi-Agency Groups at Simulated Major Incident Emergencies: In Situ Analysis of Adherence to UK Doctrine', *Journal of Contingencies and Crisis Management*. Available at: <http://dx.doi.org/10.1111/1468-5973.12260>
- ¹⁰ Bye, R., Almklov, P., Antonsen, S., Nyheim, O., Aalberg, A. and Johnsen, S. (2019). 'The Institutional Context of Crisis : A Study of the Police Response During the 22 July Terror Attacks in Norway', *Safety Science*, 111, pp. 67-79.
- ¹¹ Ibid.
- ¹² Ibid.
- ¹³ Ibid.
- ¹⁴ Horwath (2006). 'The Origin of Strategy'.
- ¹⁵ Christensen, Andreas Danielsen, Laegreid and Rykkja (2016). 'Comparing Coordination Structures'.
- ¹⁶ Ibid.
- ¹⁷ Boin, Hart, Stern and Sundelius (2005). *The Politics of Crisis Management*.
- ¹⁸ Moynihan, D. P. (2009). 'The Network Governance of Crisis Response: Case Studies of Incident Command Systems', *Journal of Public Administration Research and Theory*, 19(4), pp. 895-915.
- ¹⁹ Christensen, Andreas Danielsen, Laegreid and Rykkja (2016). 'Comparing Coordination Structures'.
- ²⁰ Ibid.
- ²¹ Ibid.
- ²² Uddin, S. and Hossain, L. (2011). 'Disaster Coordination Preparedness of Soft-Target Organisations', *Disasters*, 35(3) pp. 623-638.
- ²³ Moynihan, D. P. (2009) 'The Network Governance of Crisis Response: Case Studies of Incident Command Systems', *Journal of Public Administration Research and Theory*, 19(4), pp. 895-915.
- ²⁴ Provan, K. and Kenis, P. (2008). 'Modes of Network Governance: Structure, Management, and Effectiveness', *Journal of Public Administration Research and Theory*, 18(2), p. 231.
- ²⁵ Boin, A. and 't Hart, P. (2010). 'Organising for Effective Emergency Management: Lessons From Research', *Australian Journal of Public Administration*, 69(4), pp. 357-371.
- ²⁶ Kapucu, N. (2006). 'Interagency Communication Networks During Emergencies: Boundary Spanners in Multiagency Coordination', *The American Review of Public Administration*, 36(2), pp. 207-225.
- ²⁷ Boin, Hart, Stern and Sundelius (2005). *The Politics of Crisis Management*.
- ²⁸ Cabinet Office (2013). 'Responding to Emergencies: Central Government Response. Concept of Operations', Gov.UK. Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/192425/CONOPs_incl_revised_chapter_24_Apr-13.pdf
- ²⁹ Cabinet Office (2013). 'Emergency Response and Recovery'. Gov.UK. Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/253488/Emergency_Response_and_Recovery_5th_edition_October_2013.pdf
- ³⁰ International Organization for Standardization (2018). 'ISO 22320:2018: Security and Resilience, Emergency Management, Guidelines for Incident Management'. Available at: <https://www.iso.org/standard/67851.html>
- ³¹ Ibid.
- ³² Wilkinson, Cohen-Hatton and Honey (2019). 'Decision-Making in Multi-Agency Groups'.
- ³³ Yarger, H. (2006). *Strategic Theory for the 21st Century: The Little Book on Big Strategy*. Strategic Studies Institute, p. 1. Available at: <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB641.pdf>
- ³⁴ Cabinet Office (2013). 'UK Civil Protection Lexicon: Version 2.1.1'. Gov. UK. Available at: https://docbox.etsi.org/stf/archive/STF472_SatEC_Scenarios/STFworkarea/Material/Field%20guides/UK/LEXICON_v2_1_1-Feb-2013.pdf
- ³⁵ Jacobson, A. (2019). *Leadership and Collaboration in Crisis Management: A Case Study of the Terror Attack in Stockholm in April 2017*, B.A. Thesis. Uppsala University. p.21. Available at : [urn:nbn:se:uu:diva-373859](http://nbn:se:uu:diva-373859)

- ³⁶ British Standards Institution (2014). 'BS 65000:2014 Guidance on Organizational Resilience', p. 6.
- ³⁷ Boin and Hart (2010). 'Organising for Effective Emergency Management: Lessons From Research'.
- ³⁸ Waugh, W. and Streib, G. (2006). 'Collaboration and Leadership for Effective Emergency Management', *Public Administration Review*, 66(s1), pp.131-140.
- ³⁹ Leigh, M. (2016). 'Critical Thinking in Crisis Management'. Emergency Planning College, 15. Available at: <https://www.epcresilience.com/EPC/media/MediaLibrary/Knowledge%20Hub%20Documents/J%20Thinkpieces/Occ15-Paper-AUG-2016.pdf> (Accessed 3 September 2019).
- ⁴⁰ Ibid.
- ⁴¹ Ibid.
- ⁴² Novella, S. *Your Deceptive Mind: A Scientific Guide to Critical Thinking Skills* (Chantilly VA: The Teaching Company, 2012).
- ⁴³ Homeland Security Advisory Council (2016). 'The Attacks on Paris: Lessons Learned. A Presentation of Findings', HSAC. Available at: https://static1.squarespace.com/static/5782ad8f9de4bb114784a8fe/t/5783fec9d482e95d4e0b79bf/1468268235955/HSAC-Paris_LessonsLearned_WhitePaper.pdf (Accessed 2 September 2019).
- ⁴⁴ Bye, Almklov, Antonsen, Nyheim, Aalberg and Johnsen (2019). 'The Institutional Context of Crisis'.
- ⁴⁵ MacFarlane, R. and Leigh, M. (2014). 'Information Management and Shared Situational Awareness: Ideas, Tools and Good Practice in Multi-Agency Crisis and Emergency Management'. Emergency Planning College, 12, p. 13.
- ⁴⁶ JESIP (2013). 'Joint Doctrine: The Interoperability Framework'. Available at: www.jesip.org
- ⁴⁷ Endsley, M. R. (1995). 'Toward a Theory of Situation Awareness in Dynamic Systems', *Human Factors*, 37(1), pp. 32-64.
- ⁴⁸ MacFarlane and Leigh (2014). 'Information Management and Shared Situational Awareness'.
- ⁴⁹ Ibid.
- ⁵⁰ Ibid.
- ⁵¹ Weick, K. E. (1993). 'The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster', *Administrative Science Quarterly*, pp. 628-652.
- ⁵² Comfort, L. K., and Haase, T. W. (2006). 'Communication, Coherence, and Collective Action: The Impact of Hurricane Katrina on Communications Infrastructure', *Public Works Management & Policy*, 10(4), pp. 328-343.
- ⁵³ British Standards Institution (2014). 'BS 65000:2014', p. 18.
- ⁵⁴ Pollock, K. (2013). 'Review of Persistent Lessons Identified Relating to Interoperability from Emergencies and Major Incidents since 1986'. Emergency Planning College, 6, p. 19.
- ⁵⁵ Durso, F. and Sethumadhavan, A. (2008). 'Situation Awareness: Understanding Dynamic Environments', *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 50(3), pp.442-448.
- ⁵⁶ Boin, A. and Bynander, F. (2015). 'Explaining Success and Failure in Crisis Coordination', *Geografiska Annaler: Series A, Physical Geography*, 97(1), pp. 123-135.
- ⁵⁷ Normandin, J. and Therrien, M. (2016). 'Resilience Factors Reconciled with Complexity: The Dynamics of Order and Disorder', *Journal of Contingencies and Crisis Management*, 24(2), pp. 107-118.
- ⁵⁸ Boin and 't Hart (2010). 'Organising for Effective Emergency Management'.
- ⁵⁹ International Organization for Standardization (2018). 'ISO 22320:2018'.
- ⁶⁰ Bye Almklov, Antonsen, Nyheim, Aalberg and Johnsen (2019). 'The Institutional Context of Crisis'.
- ⁶¹ Lagadec, P. *Preventing Chaos in a Crisis* (New York: McGraw-Hill, 1993), p. 54.
- ⁶² Jones, B.D. (2001). 'The Challenges of Strategic Coordination: Containing Opposition and Sustaining Implementation of Peace Agreements in Civil Wars'. International Peace Academy and Centre for International Security and Cooperation, Stanford University, New York.
- ⁶³ Brandstrom, A., Bynander, F. and Hart, P. (2004). 'Governing by Looking Back: Historical Analogies and Crisis Management'. *Public Administration*, 82(1), pp. 191-210.
- ⁶⁴ Danielsson, E., Olofsson, A., Larsson, G., Voss, M. and Landgren, J. (2011). 'Research Overview Management and Collaboration in Case of Accidents and Crises'. Department of Social Sciences & Faculty of Human Sciences, Mid Sweden University.
- ⁶⁵ Jacobson (2019). *Leadership and Collaboration in Crisis Management*.
- ⁶⁶ Comfort and Haase (2006). 'Communication, Coherence, and Collective Action'.
- ⁶⁷ Jacobson (2019). *Leadership and Collaboration in Crisis Management*.
- ⁶⁸ Ibid.
- ⁶⁹ Ibid.
- ⁷⁰ Hess, K., Freeman, J. and Coovert, M. (2008). 'CENTER: Critical Thinking in Team Decision-Making', *MacroCognition in Teams: Theories and Methodologies*. Edited by N. Warner, C. A. P. Smith and M .P. Letsky (Aldershot: Ashgate Press, 2008).
- ⁷¹ International Organization for Standardization (2018). 'ISO 22320:2018'.

⁷² Mackenzie, C., Harper, B. and Xiao, Y. (1996). 'Simulator Limitations and Their Effects on Decision-Making', Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 40(14), pp. 747-751.

⁷³ Fletcher, G., McGeorge, P., Flin, R., Glavin, R. and Maran, N. (2002). 'The Role of Non-Technical Skills in Anaesthesia: A Review of Current Literature', British Journal of Anaesthesia, 88(3), pp. 418-429.

⁷⁴ Manoj, B. and Baker, A. (2007). 'Communication Challenges in Emergency Response', Communications of the ACM, 50(3), p. 51.

⁷⁵ Gjørnv, A. (2012). 'Report for 22 July Commission (Preliminary English Version of Selected Chapters)'. Available at: https://www.sintef.no/globalassets/project/nexus/01--report-22-july-gjorv-commision-summary_english_version.pdf (Accessed 30 August 2019).

⁷⁶ Jacobson (2019). Leadership and Collaboration in Crisis Management.

⁷⁷ Pollock (2013). 'Review of Persistent Lessons Identified'.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Menard, C. and Shirley, M. Handbook of New Institutional Economics (The Netherlands: Springer, 2005).

⁸¹ Bye, Almklov, Antonsen, Nyheim, Aalberg and Johnsen (2019). 'The Institutional Context of Crisis'.

⁸² Ibid.

⁸³ International Organization for Standardization (2018). 'ISO 22320:2018', p. 14.

⁸⁴ Gjørnv (2012). 'Report for 22 July Commission (Preliminary English Version of Selected Chapters)'.

⁸⁵ Ibid.

⁸⁶ Bye, Almklov, Antonsen, Nyheim, Aalberg and Johnsen (2019). 'The Institutional Context of Crisis'.

⁸⁷ Ibid.

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