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# SPACE TECHNOLOGY ITS ROLE IN DISASTER MANAGEMENT TODAY

Fake news; Radicalisation in Central Asia; Ransomware & cybersecurity; Lindt Café siege; Treating Afghanistan's victims of war; Emergency management & resilience; Artificial Intelligence; 3D printing technology; Drones & EENA; Computer modelling in large scale incidents; The impact of NIMS; Robotics for good

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Cover story: Space technology for humanitarian and disaster applications

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# comment

ew places have been safe from the reach of the vicious tendrils of terrorism in the short time since our last edition was published. We have seen attacks involving



.. **78** major loss of life in Pakistan, China, South Sudan, Libya, Iraq, Afghanistan, Nigeria, Egypt, Sweden, Russia and the UK. Sadly, this list is by no means exhaustive.

We also witnessed the truly shocking pictures of people trapped in a high-rise tower **Computer modelling in large incidents .... 80** in one of the world's wealthiest capital cities (see p28 for Grenfell Tower analysis). On pages 30 and 32 we report on other human-caused crises, those of malware and cyber crime.

> Whether motivated by human malice or criminality, justified by ideological reasons, 84 or exacerbated by poor or lackadaisical emergency planning, vulnerabilities and weaknesses are still repeatedly exposed.

> As *CRJ* and its authors have consistently stated over the years, the challenges presented by such incidents are dwarfed 86 in terms of the possible human loss caused by climate disruption. And we have also examined what happens when security and climate issues collide.

On the CRJ website, we noted recently how climate related issues can ripple out 88 and trigger wider global security crises, as highlighted by a report that names 12 significant climate and security epicentres, all of which present extremely serious risks.

As we go to press, Europe is in the grip of a heatwave dubbed 'Lucifer', and wildfires are raging in many parts of the world, while catastrophic flooding devastates other areas.

Yet there is still profound resistance, lack of engagement or willful detachment – whether politically, economically, or institutionally 4 - to acknowledge the potential impact of 7 climate risks. How to embed resilience, 8 prevention and mitigation in an effective and meaningful way, so as to engage governments, businesses, communities and individuals?

A vital first step has to be discarding some of the entrenched and unproductive institutional or organisational terminology, definitions and doctrines that many organisations seem to adhere to so doggedly. Interminable pontification about pointless semantics and pushing narrow, short-term, self-interested motivations are simply dodging pressing crisis issues. It is time to set agendas aside and truly think in global human terms, eschewing treacherous tunnel vision and joining up the dots – we need to see the whole picture for it really is. Emily Hough







The Grenfell Tower fire has been described as an event unparalleled in modern London's history in the scope and scale of its impact, says **David Rubens**. And it is an indication of the fragility of the crisis management frameworks upon which we so heavily rely

renfell Tower was exactly the sort

of complex, high-impact, multi-jurisdictional event that crisis

management procedures have been developed

to handle, and to give responding agencies -

including local councils – a framework and

a guideline to prepare for and respond to.

This article is based on information in the

public sphere, and there is enough available

to build a picture of what did and did not

happen in the immediate aftermath of the

fire, and to identify significant failures in the

to the organisational failures that became a

A crisis, as opposed to a major incident or

routine emergency, falls outside of normal

nature, scale and impact, goes beyond the

Just as a person can freeze when

faced with a sudden and unexpected

situation that is beyond their capacity to

comprehend, so too can an organisation.

to a crisis that allow the organisation to

maintain critical functionality, even when

There should be a series of automated

processes associated with the initial response

management frameworks and, because of its

capabilities of these frameworks to respond to it.

critical and central part of the disaster.

management processes that were directly linked

are going to challenge management frameworks. It is important that organisations prepare themselves by 'normalising' that process through repeated practise, using real-world opportunities to trigger at least the initial stages of a crisis response capability. This is the doctrine that has been at the heart of the success of both the UK's national Cabinet Office Briefing Rooms (COBR), and London Resilience's crisis management frameworks. Both organisations recognise the value of an all hazard response mechanism that can utilise frequent potential incidents and near misses to practise their

While the Grenfell Tower incident may have been unique, the need to respond to it was not, and an initial question would be how ready the council was to respond to such an incident with the full range of crisis More than 150 homes were said to have been destroyed in the tower and surrounding areas. The fire caused at least 80 deaths and more than 70 people were injured, but the final toll is, as yet, unknown, and probably never will be

the situation can seem overwhelming. One aspect of a crisis that should not have been an issue with the Grenfell Tower is whether a crisis situation existed. It should have been clear to the local council that this was a crisis that required the initiation of a strategic multi-agency crisis management framework at the highest level. Crises are rare, so it is always likely that they

moves in as realistic a setting as possible.

management frameworks and stakeholders.

In crisis management, the first question that needs to be asked is not 'What shall we do', but rather 'What has just happened'?

In the Grenfell Tower, that became almost immediately clear, but the implications were not. However, within the earliest stages of responding, it should have become clear that this was a significant event that was going to have a long-term impact on the lives of the tower block's residents, as well as the surrounding community.

While the scale of the tragedy may not have immediately been clear, it was evident that significant levels of resources from multiple agencies, both formal and informal, would be required. It should also have been clear that as well as responding directly, the local council would be responsible for setting up a co-ordination framework to act as the central focus point of the local response operation and that this should be run as a co-ordination centre, rather than a command and control centre, the latter being more appropriate for the actual fire rather than community response.

From a classical crisis management perspective, when a crisis does occur, there will be three significant shortages - manpower, resources and management capability. There is usually not enough manpower to manage normal operational

activities, so there is no spare capacity to manage a crisis. From a resource perspective, there is never enough spare capacity to prepare for the full range of potential crises, so there is a lack of necessary supplies, whether basic (food, bedding, accommodation), or specialist (decontamination units, search and rescue equipment, communications systems). Finally, most managers are tasked with managing the procedures and protocols associated with their roles, but have not been given the training or preparation to take an appropriate leadership role when faced with the sudden and potentially catastrophic challenges associated with a full-blown crisis.

Crises are complex and multi-dimensional, requiring a management framework that allows the myriad of teams associated with the immediate and longer-term response operations to share information, develop plans and identify needs on an ongoing and collaborative basis.

There is a well-established protocol for such a crisis management team (CMT), to be a central part of the crisis management capability development process covered in training, exercising and validation processes.

Each member of the CMT would be connected to their own networks, allowing speedy and effective collection of information and the development of a Common Operating Picture (COP). This, in turn, would have allowed a cohesive, integrated response plan to be developed and put into play during this particular incident, taking into account that the information itself would have been partial, unverified and rapidly changing, at least in the initial stages of the emergency.

Setting up a CMT at the earliest stage of the crisis would not only have allowed the highest level of effective management of information during the critical first few hours, but would also have demonstrated that the council leadership was able to assume the responsibility expected of it.

It became clear that the surrounding community had become the immediate first responders, offering comfort, shelter, food, clothing and other support services. This could and should have been expected, but once the level of community support being offered became apparent, the council's role should have been as a co-ordinating agency that would allow the most effective utilisation of the overwhelming level of community engagement.

The fact that such support was not given, and the ability of the community to respond immediately and in overwhelming levels was not met with the same level of agility, adaptability and initiative by the local council, became the central story within hours.

Although crises are complex, chaotic, with no clear solutions, or even a clear understanding of the basic problems, this cannot be an excuse for systemic failures across an organisation, especially at leadership levels.

The fact that the council as a whole, and

the leadership on an individual basis, seemed to have little or no understanding of what their role should be, nor how to manage those roles, is in an indictment of their capabilities, and their attitude to their responsibilities.

In fact, the challenges facing the leadership in the first few hours were exactly those that they should have expected, and should have had been able to respond to in an effective manner.

Those challenges included: Time pressure; rapid escalation of the event; lack of information the fact that the event and its consequences went beyond any plans that were currently in place; the need to make immediate decisions; and however these decisions were made, they potentially had catastrophic consequences.

An integral part of a crisis of this nature is there will be a high level of personal disruption and dislocation among survivors, as well as those who were not caught up in the initial event, but were affected by its impacts as they rippled across the community. There are also those within the wider community who are affected both physically and psychologically, who also require the support of formal response agencies.

It is a truism that the people who live in the community are the community, and it is the role of support teams to support them. When a breakdown of trust occurs, as often happens when the initial response is not managed effectively, the relationship can become defined through a worsening spiral of mistrust, alienation, aggression and then active opposition.

#### Dangers and opportunities

Although such antipathy is often based upon decades of perceived injustice and alienation, if managed properly, the crisis is an opportunity for the community to come together under a unifying leadership. As stark examples of both the dangers and the opportunities associated with crisis leadership,

The role of crisis managers is not to manage a crisis, but to ensure that all aspects of the organisation have an understanding of the challenges of crisis management and have the necessary skills and capabilities to respond effectively as part of a multi-agency crisis management operation on personal, team and organisational levels. Given the apparent failures of the council to respond effectively from the very first moments, it is relevant to ask what preparation had been made, what scenarios practised, and what training and exercising undertaken.

The UK's Civil Contingencies Act 2004 lays out seven duties that local councils have in terms of emergency preparedness. These include:

- To co-operate with other local responders to enhance co-ordination and efficiency;
- Ensure information is shared with other local responders to enhance co-ordination;
- Carry out risk assessments;
- Have emergency plans in place;

- Have business continuity management arrangements in place;
- Have arrangements in place to be able to warn and inform the public in the event of an emergency; and
- Provide advice and assistance to businesses and voluntary organisations regarding business continuity management.

There are also two significant documents concerning multi-agency emergency response - Joint Emergency Services Interoperability Principles (JESIP) and London Emergency Services Liaison Panel (LESLP). Although both of these documents are primarily aimed at emergency services responding to emergencies, rather than local authorities acting as a support agency to the affected community, both would presume that appropriate council representatives, including the chief executive, would have been aware of these plans, and would have participated in training and exercising.

The challenges created by the fire were not unique - not only were they predictable, but could be considered as fundamental to any major incident. In that sense, the apparent failures of the council to have accepted its responsibilities in preparing itself to have appropriate levels of crisis management skills and capabilities, as well as the apparent failure to respond effectively to the specific challenges of the Grenfell Tower disaster, can fit into a well-known pattern of behaviours that can come under the headings of a failure of leadership and initiative (Hurricane Katrina Congressional Report) and a failure of imagination (9/11 Congressional Report).

Whatever the specific details and horrors of Grenfell Tower, seen purely from an emergency management perspective, there was nothing in the hours and days following the event that could have been considered unthinkable, unexpected or unforeseeable.

In fact, the challenges associated with housing and safeguarding the wellbeing of traumatised victims, utilising the resources of the council, formal and voluntary agencies, as well as the community itself, lie at the heart of any major incident scenario.

The ability to provide succour and support to those most affected by crises is a modern government's responsibility, at all levels. That a failure of this nature can happen in the richest borough in London, in the absence of any other challenges or distractions, is once again an indication of just how fragile the crisis management frameworks that we so heavily rely on can be.

#### Author



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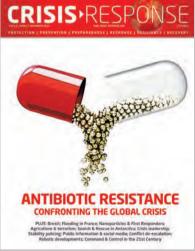
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