ISRM THE INSTITUTE OF STRATEGIC RISK MANAGEMENT

THE INCIDENT COMMAND SYSTEM

Strategic Risk and Crisis Management
Level 6 Diploma, Module 3

by Dylan Nash

INTRODUCTION

This paper aims to look at how the Incident Command System (ICS) plays a role in 21st century crises. Both legacy and recent disasters will be analysed to determine the ICS's role and how government organisations at all levels, non-government organisations (NGO), and communities can come together for a unified structure to combat these increasingly frequent incidents. FEMA (2018, 10) notes that the Incident Command System (ICS) is a framework that can apply across several disciplines enabling incident managers from different organisations to work seamlessly together by providing a standardised approach to command, control, and coordination which allows for a common hierarchy where these organisations can be effective. The paper will go on to determine if this older framework, initially established to fight wildfires in California during the 1970's (Bigley and Roberts, 2001; Lutz and Lindell, 2008) is still of benefit to these modern crises. Crises events, whether on a large scale and involving multiple organisations from different sectors, or whether a localised incident which may only involve a few local agencies; the ICS is a framework that has displayed itself as a robust, go-to framework for command and control throughout many incidents, **"ICS-based organisations may perform more reliably under extreme conditions than organisations founded on alternative approaches"**. (Bigley and Roberts, 2001, 1281). So, is this a legacy framework for legacy crises, or is the very framework that was set up to support these older crises evolved to match the speed and complexity of the 21st century?

"So, is this a legacy framework for legacy crises, or is the very framework that was set up to support these older crises evolved to match the speed and complexity of the 21st century?"

MAIN THEMES

This paper will illustrate its [ICS] traditional structure and how it has holistically been used in crisis situations and emergencies. It will examine the more traditional aspect of the framework exploring legacy crises, such as, the California wildfires (1970's), Hurricane Katrina, and 9/11. It will also examine more recent incidents to include the Maui wildfires (2023) and the Hurricanes that have recently affected the US eastern seaboard. A discussion on how 'command - and - control' is delivered throughout the model, and will inform how the ICS engages with its environment when used effectively and not so effectively and why it may have been like this due to limitations within its structure or organizations utilizing it. Finally, it will identify and scrutinise how organisational culture impacts the use of this model and why it may impede or enhance its ability to function in a crisis.

> **"Finally, it will identify and scrutinise how organisational culture impacts the use of this model and why it may impede or enhance its ability to function in a crisis."**

LITERARY REVIEW

The ICS is the base framework that was developed in response to the lack of coordination seen by different agencies and fire departments when trying to fight wildfires in California in the 1970's destroying more than 175,00 acres of forest (Bennet, 2011, 30; Bigley and Roberts, 2001, 1282). The initial objective was **"to help the incident commander (IC) safely and effectively manage and employ resources, and ensure responder safety through a coordinated planning and response effort"** (Bennet, 2011, 30). Lutz and Lindell (2008) state that prior to the introduction of the ICS there were numerous problems associated with response at all levels. This included important aspects of a crisis such as no organisational structure, lack of reliable information, major communication issues, no interagency coordination, unspecific objectives amongst the agencies, and more. **"The adoption of the ICS helped to curb strategic uncertainty by reducing the autonomy of member agencies. It reduced institutional uncertainty by establishing a common management framework"** (Moynihan, 2005, 356). Lutz and Lindell (2008) also explain that in the 30 years leading up to the 9/11 terrorist attacks on the World Trade Centres (WTC), the ICS was continuously developed and revised to identify and rectify many of these and other problems. Post 9/11 further flaws were identified which led to the creation of the National Incident Management System (NIMS) ICS and the the Department of Homeland Security (DHS) with the need for the Federal Emergency Management Agency (FEMA) to be a part of it (Birkland, 2009, 424).

With the aforementioned development and flexibility of the ICS framework and other entities within it, such as the Emergency Operations Centre (EOC); the EOC in NYC, which was originally located in 7 World Trade Centre (7WTC) before being evacuated due to the attacks on the WTC. Following its evacuation, a new location needed to be established immediately for the coordination of emergency services that would respond to these attacks. A location at Pier 92 on the Hudson River was established and within 3 days of the attacks occurring it [EOC] was fully operational and in many ways mirrored the very EOC that had been destroyed a few days prior. This illustrates that the organisations that utilise this framework can both structure and restructure at a moment-to-moment basis and remain flexible to unpredictable events that occur during a crisis situation (Kendra and Wachtendorf, 2003; Birkland, 2009; Bigley and Roberts, 2001).

> **"This illustrates that the organisations that utilise this framework can both structure and restructure at a moment-to-moment basis and remain flexible to unpredictable events that occur during a crisis situation."**

Prior to it [framework], there was a common practice of entities from all fields and at different levels of government to work off their own standard operating procedures (SOP's), communication networks, command structures, etc. This often led to a lack of accountability and disorderly, uncoordinated, and ineffective or inefficient integration of responders and resources to successfully intervene in a crises event (Bigley and Roberts, 2001; Bennet, 2011). It was realised that this was an inoperable way to work; when multi-agency cohesion was required, the ICS was developed to be able to bring any agency, government or non-government at any level onto the same way of working and with the same standards of operation by way of a common terminology and organisation (ICS Review Document, 2018, 10; Moynihan, 2005, 357). With the U.S. Government being established almost 200 years prior to its introduction, it would appear that the way in which the ICS is set up almost mirrors, supports, and compliments the hierarchical structure of the government, with Federal and State governments sharing power and then the State governments creating local governments which allows for a more "home-rule" in order to carry out State functions. In theory this allows for a holistic integration of the framework structure by way of local governments being able to respond at their level with assistance moving to State and Federal level as required (Birkland, 2009, 425), the very way in which the ICS framework is designed to operate. It allows for both centralised and decentralised command so that the individual teams (groups of emergency management personnel when considering the actual agencies or local government when considering the governmental structure) that may be responding to an incident can make decisions at the tactical level while still being supported and guided by the operational and strategic level commands (IC or department heads - State/Federal government). Howitt and Leonard (2006) support this by stating that due to the proximity and knowledge of local governments to areas affected by disasters, there is at least a minimal response capacity that these local governments are better situated to respond and act more quickly to initial alerts. They generally have mutual agreements for support and aid from nearby communities with resources from state or national governments being provided when local capability is inadequate or has been exhausted. The responsibility that rests with these local governments is a form of this decentralised command, thereby supporting the claim of a “bottom up” system of emergency management.

This framework, when utilised in such a way that allows for its structure to function at optimum capacity can run at its most efficient. However, not without its faults. Organisational culture can often times work against the crisis in which it is being implemented for. This can be recognised in the case with Hurricane Katrina where Howitt and Leonard (2006, 18) describe that this normal model was inadequate to handle the results of Katrina, also, subsequently Rita and Wilma. They further state that there could be several reasons for the failure of this framework to properly be employed. This includes, poor city planning and infrastructure, the lack of quality of advanced planning to include emergency plans & rectifying identified short-comings, weak elected leadership, unqualified crisis managers and the failure to mobilise resources needed to evacuate the local population.

> **“To best avoid these issues, integration and inclusion of all agencies at all levels must work toward a common goal through mutual adjustment, learning, and adaptation across horizontal and vertical lines of command.”**

This poor organisational culture can be seen in the way of horizontally linear power struggles with agencies (local police, fire, and ambulance) at each respective agency level - tactical, operational, or strategic, but also in vertically linear power struggles - local, state, federal governments. At times, local governments may feel that knowledge, command and control, and decision making that should be made by themselves is not respected and can be impeded and overruled by higher level agencies. Alternatively, they may also feel that these senior branches of government end up providing little or no support. This can be for several reasons, but power and knowledge are two key elements. Bresnen et al. (2003, 159) conducted research on social practices in project settings and found that in these settings groups are often temporarily, spatially, and culturally differentiated in ways that militate against the diffusion of knowledge. They further cite that because these groups can be highly task-focused, they also militate against the emergence of networks of actors who are able to develop a positive and shared community understanding.

Comfort (2007, 189) identified in her essay "Crisis Management in Hindsight: Cognition, Communication, Coordination, and Control" that cognition, which is the triggering insight of an emerging risk, also plays an important contributing factor. Without cognition the interaction of the three Cs (communication, coordination, and control) of emergency management are paralyzed or disconnected ultimately leading to failure, as seen with the response to Hurricane Katrina. She further states that cognition has a relationship to action, and it's this combination that can take emergency management from a static, rule-bound exercise to a dynamic and fluid one where learning, innovation, and adaptation to a changing environment can cultivate. However, she notes that the vulnerability to build this cognition lays within the levels in which organizations at the linear and vertical lines function.

With the introduction of such a framework [ICS] into any organisation, to best avoid the aforementioned issues, it must be remembered that integration and inclusion of all agencies at all levels must work to the common goal. This framework, although developed and refined over the years is still a framework with the purpose of bringing many self-organisations into what could become a complex system. By seeking available resources efficiently and integrating them into the already existing structures which will build out the framework for effective action, organisations will often have to change the fundamental ways in which they operate and respond to disasters.

This change occurs through the voluntary selection among alternatives for any participating agency with order only returning to the community through mutual adjustment and creative process of reciprocal exchange, learning, adaptation, and choice amongst these horizontal and vertical lines and governments who carry multiple levels of responsibility, experience, and knowledge (Comfort, 1994, 393).

REPORT

To determine if the ICS is adequate for modern disasters and crises, it is critical to analyse how it came about and if these origins and original purposes still have a bearing in the 21st century. In the proceeding report, an analysis will be conducted to verify the effectiveness of the ICS within a more current époque by looking at its use in more recent crises. Furthermore, after identifying that organisational culture appears to play a major factor in effectiveness, will it still be an identified shortcoming with these recent events and if so, how does this get rectified so that the function can operate at its optimum capacity? Finally, a look at alternative options such as the British Gold, Silver, Bronze (GSB) system of hierarchy in emergency management will briefly be discussed to see how it compares.

The purpose for the creation, and establishment of the ICS as a base framework for disaster response and resilience of organisations was a good faith reason, however, many responders viewed it as nothing more than complex charts, a multitude of work sheets, and organisational cluster (Bennet, 2011, 31). Bigley and Roberts (2001, 1282) go onto support this claim by stating that the system is highly formalized with extensive rules, procedures, and policies and formal authority is exercised through hierarchical positions with jobs in the system being specialized and requiring particularized training. Really though, with a more strategic view and proper understanding of its development, it should be described for what it really is: a modular, flexible, standardised system used for the effective and efficient management of resources in a safe, efficient, and effective response to disasters and crises which can be used in small routine operations or in catastrophic events with flexibility being a key principle (Bennet, 2011, 30/31). The ICS can still be considered a useful tool for modern day crises and disaster response as it continues to allow for a standardised framework amongst different agencies and organisations to understand how they are going to respond to and provide relief for a crisis event. This is not just limited to natural disasters but also lends itself to many other types of disaster whether it be a hazardous material incidents such as the East Palestine, Ohio incident, where on the 3rd of February 2023, a train laden with HAZMAT material derailed, catching fire and spilling hazardous material into the local environment (US EPA, 2023), terrorist attacks, or any other incident. Many of the same disaster response actors are going to be the same throughout a response to include local, state, and federal agencies, or NGOs who wish to assist in disaster relief.

By having this common framework, organisations involved will be able to understand what will need to happen upon first identification of a crisis. The framework allows for a network of inter-organisational relationships to be formed with the primary focus being that of coordinating and solving problems and can be defined as Problem-Solving Networks (PSN). This problem solving will be dependent on a collective effort with organisations needing to work together to solve the very problems that appear before them (Vylund et al., 2024). Even if an organisation is unable to get involved in a response from the start, by having an understanding that this is what other agencies will be using as the base framework, when they are afforded the opportunity to get involved, they already know that there will be a common command and control structure, language, and standard operating procedures (SOPs) which lends itself to an organisation's smooth transition into the overall picture. Krausburg, Bordini and Dix (2023) identify that to properly form a hierarchy of resources, the chain of command in the ICS framework is an important aspect requiring the participation of all involved in the response to an incident, thus subjecting it to a span of control. Once this span of control is determined, a command ratio between the superiors and the subordinate units can be established. Without this, leaders can easily get overwhelmed. Where the ICS framework appears to fall short is within the tactical level. That's not to say that there aren't issues at the other levels, however, through the research it appears that predominately issues come at a tactical level with strategic level implications. For example, during the response efforts to the Gorkha-Dolakha earthquakes that hit Nepal on the 25th of April and 12th of May 2015, when aid workers would either intentionally or unintentionally bypass systems or not consider cultural norms at the tactical level, this had negative relationship implications at the operational and strategic levels between state and non-state actors. State officials would often feel disrespected by international actors who were there to assist (Melis, n.d.). This is one such problem that appears more common now at this level than seen before, the more diverse communities in which first responder may find themselves interacting with, whether through domestic or international response. On the tactical level, this will lead to responders engaging with communities whose language and culture differ from their own.

The use of Large Language Models can be an effective tool. Lovaco et al. (2024) state that LLMs are based on forms of Statistical Language Models which models the likelihood of a word appearing in a given sequence. LLM's which undergo training in iterative processes, with some feedback, can learn to provide a potential outcome by humans, thus enabling for potentially better real-world decision making. Whether an organisation is delivering international assistance or domestic assistance, language and cultural barriers can bring with it major problems, especially when time is of the essence and decisions are made at a rapid pace. Otal, Stern and Canbaz (2024) have conducted research into this very issue and have found that the use of Large Language Models (LLMs) with the help of Artificial Intelligence (AI) could be a new tool adopted by these tactical level organisations to assist in multi-lingual disaster related events and, also assist with categorising groups such as medical, fire, infrastructure, etc.

They further found that by developing applications to support this model, real time information can be managed by these local emergency services and can establish a communication network who can then offer immediate and pertinent advice to the general public. They further state that by doing so can empower individuals (both responders and victims) to make informed decisions during an emergency which can ultimately contribute to a more resilient and responsive emergency management ecosystem.

Another discrepancy comes in the form of organisational culture and SOPs. If you were to compare an entity like a county police department to the same county's fire department, the culture will be different. Moran, Neal and Murray (2024) identify this in their 2024 US Geological Survey (USGS) report about disaster response to a potential volcano eruption. They go on to state that during large scale responses, the USGS must change their command structure out of necessity from one of more autonomy for the individual staff member to one of a more hierarchical management structure. They further state that due to large scale responses not being as common as smaller responses, these transitions are mostly improvised and have external staff which leads to a lot of confusion due to the lack of practice or experience with complex, dynamic, and unfamiliar situations. This can be in organisational attitude, how they approach problems, how they view each other, and other factors. Although understanding that these entities will need to work together for a common goal, these recognised issues could ultimately have major downstream implications if not addressed prior to a major incident occurring.

Further to this are the base line SOPs these organisations may be using. At this level these entities will commonly have their own SOPs for their specific operations. For example, the way in which a fire department responds to a road traffic accident (RTA) can be different from that of the ambulance service or police department. Evidence of this can be seen in the Maui wildfires where Hardy (2023) found that during the fires the Maui Police and Fire services along with the Hawaii Emergency Management Agency (HI-EMA) and various other entities partnered to respond, however, the severe conditions of the disaster revealed major deficiencies and interagency coordination. Hardy (2023) further goes on to state that due to a lack of a centralised command in the early phases of the response exacerbated coordination difficulties and that the failure of this interagency coordination and the restricted adaptability of response protocols underscore the need for enhancements. This is just for one county; if several or possibly dozens of county emergency services could be involved with a major crisis, it is easy to see how the combination of these smaller discrepancies could have a severe impact at a higher level. As previously mentioned, the purpose of the ICS is to give a common language and SOPs for all involved with a crisis, but as these lower level agencies utilise their own SOPs on a regular basis, it can become difficult for them to adjust and adapt to the ICS model.

As the tactical level issues are recognised, there is the issue of the operational and strategic level problems that play a role in the overall crisis picture as well. One of the major insights that the author has noted during their research is that of organisational culture and bureaucracy.

> **“The failure of interagency coordination and the restricted adaptability of response protocols underscore the need for enhancements.”**

It appears that as you move up through the government levels, the organisational culture has had a major effect on how higher-level agencies interact during a crisis event. Although a common issue when dealing with government, through the research it appears to be more prevalent now then even 10 years ago. These agencies seem to place greater emphasis on DEI (Diversity, Equity, Inclusion) hiring rather then hiring the right people for the right job, or making political appointments to officials who don’t carry the proper credentials for the very position in which they’re appointed. Balfour (2024), while conducting research into the relief efforts following Hurricanes Helene and Milton found exactly these traits. He states that from the very nature of government bureaucracy, government agencies like FEMA will often be inherently inefficient and ineffective and that a group that is tasked with saving lives following a crisis is prioritising DEI hiring practices and training above ensuring the most qualified people are leading the efforts.

He further states that government agencies headed by political appointees have more of a political agenda that is prioritised by the current regime, thus, aside from local first responders, immediate relief and government help - especially federal government assistance - didn’t arrive until later and that charities and local communities were far more effective at providing the assistance required. Further to this, there was also an incident during the Hurricane Helene relief related to the issue of a political agenda. It came to light that a manager within FEMA had instructed their teams to give preference to victims who supported the Democratic Party presidential candidate and bypass those who were visibly Donald Trump supporters. Bowman (2024) reported on NPR that FEMA confirmed a worker had to be fired after they told one of the teams responding to Hurricane Helene not to go to homes with yard signs showing support for President-elect Donald Trump with the FEMA Administrator, Deanne Criswell, stating that the actions of this employee are “reprehensible”. With FEMA being a national agency which is tasked to assist all when there is a crisis, it could be seen that this gross misconduct can lead to mistrust in the overall effectiveness of the agency.

FINDINGS AND ALTERNATES

The ICS has many advantages which appear to outweigh the disadvantages. These advantages enable many different entities from both government and non-government organisations to function as a cohesive unit designed to aid and assist during times of crises by way of a unified and common command structure, language, and SOPs. But these advantages are only as strong as the organisations and people within them allow them to be. This author suggests that the best way to understand and effectively utilise these [advantages] is through regular training, practice, and application, **"ICS training to be provided to all sworn personnel"** (Maui Strong, 2023). However, although thorough prior training will best set-up organizations to manage crisis incidents when they do occur, only through actual application of this training is experience gained. As experience is gained by way of incident response, this will ideally lead to minimizing the stressors placed upon an organization during a crisis event. The more experience gained with each event will ultimately encourage and promote the resilience of the organization enabling them to better handle the pressures exerted upon them and best set them up for managing and succeeding during subsequent crises. The author's own thoughts include but are not limited to, regular training programs on the ICS for all members with more senior staff leading this initiative, regular table top exercises with different crises as the theme, exercises with other agencies and at different levels. Frequent and positive liaison with these other agencies, invitation and partnership with NGOs, regular inventory of disaster relief equipment and interaction with other agencies to best mutually support each other with this equipment. Finally, the author notes that strong after action reviews to improve and strengthen protocols and post crisis employee wellness support should be conducted. This is not an exhaustive list, however, by empowering the staff at all levels to understand their purpose throughout a crisis will lead to better resilience and recovery from a crisis event as they occur. Gozlan et al. (2024) stated that the reason hospitals were so effective with the Mass Casualty Incident (MCI) from the terror attack Hamas conducted on Israel which occurred on October 7th, 2023, was due to the frequent MCI drills the hospitals conducted, both by the Ministry of Health and independently by the emergency preparedness teams. They further state that staff resilience was a critical and key component in the hospitals competency and that the significance of well-defined protocols cannot be overstated and that it is important to conduct a debrief to learn from success, identify any gaps, and to disseminate the lessons learned.

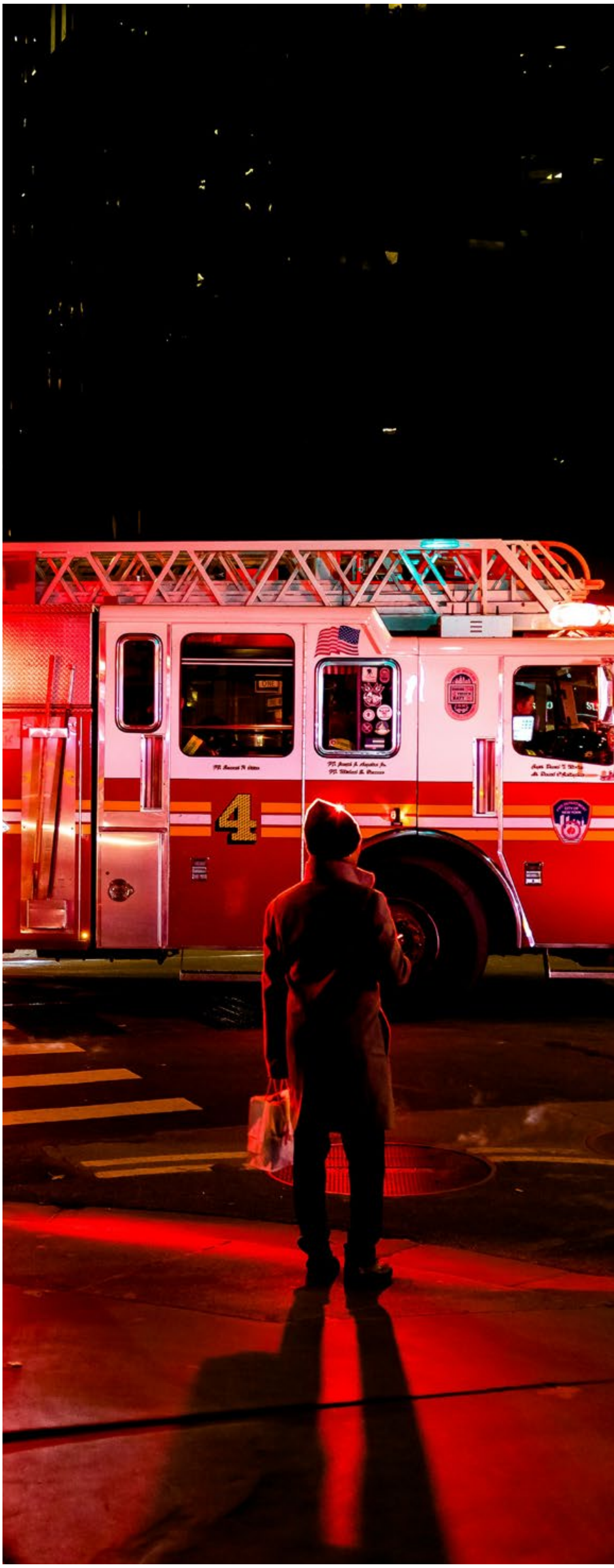
"By organisations within the UK taking time to study the lessons learned from the MCI in Israel, this could better set them up for a successful response if there were to be such an event in the UK."

Even though the UK in recent years has not experienced an MCI type event to the scale that Israel had in 2023, it still has experienced these types events in recent times. One of the most notable incidents was the Manchester Arena bombing, where on the 22nd of May 2017, concert goers in Manchester were killed and wounded by a terrorist suicide bomber. This bombing resulted in an MCI which regrettably saw the deaths of twenty-two people (mainly children) and over one hundred wounded (Kerslake, 2018, 5). Given that incidents like this do sometimes occur, the UK Risk Registry for 2025 has identified that events that could lead to this type of scenario are not that of fiction, with potential for substantially worse scenarios occurring. In the registry it has been determined that a scenario involving terrorism scores a Likelihood of >25% (ranging from unlikely to almost certain) and an Impact of moderate. Or, alternatively, something such as a nuclear exchange involving the UK, even a miscalculated one, is scored as a Likelihood of 5-25% (highly unlikely), but with an Impact of significant. Referring back to the impact score of a terrorist related event, the risk registry determines that an impact rating of moderate (a score of 3 on a scale of 1-5) means that there will be an expected 41-200 fatalities (deaths), 81-400 casualties (wounded), and hundreds of millions of pounds in economic loss (HM Government, 2025).

These are just a couple of examples from the registry, but it is important not to forget other potential risk scenarios to include natural or environmental hazards, health hazards, or cyber attacks, which all have the potential to lead to an MCI related incident. By organizations within the UK taking time to study the lessons learned from the MCI in Israel; this could better set them up for a successful response if there were to be such an event in the UK. Especially considering that the 2025 UK Risk Registry states that in a scenario where the UK is attacked by a foreign state actor, **“Although no population centres are deliberately targeted, a successful attack is likely to result in civilian fatalities as well as members of the emergency services”** (HM Government, 2025).

Although the ICS has its advantages, the author notes that a primary disadvantage, which isn’t so much a characterizing disadvantage of the ICS itself but rather affects its efficacy and could be seen as a “achilles heel”, is that of poor organisational culture. Poor culture can be like a poison that rots any agency from the inside. This should be addressed at all levels and should be a cause for concern if not rectified. Posts and positions must be filled by those who are adequately trained to do so, bureaucracy must be pushed aside in times of crisis and political views and opinions need to be ignored.

This is hard to do and there will always be "bad apples" who must be relieved from their positions if they do not wish to contribute to a team environment that affords the best possible chance for success. McCarrolla and Lambert, (2024) found that organisational culture is multi-dimensional and linked to the approach of leadership and their willingness to distribute authority throughout an organisational hierarchy. They further state that to have a strong culture is desirable in any institution and is accomplished through engaging all staff with a shared set of positive values driven by leadership. This can be accomplished through the aforementioned suggestions for advantages; however, appointment of positions should be carefully selected. When the proper leaders are selected for the proper positions and whom all share the same positive core values, this has the ability to have a more profound impact on the organization as a whole. Leadership who fosters a sense of buy-in through positive shared values and decentralized command by encouraging shared authority throughout the organization departments sets the organization up for better overall success. The individual departments working to accomplish a task can feel as though they are part of the strategic picture common goal, but with their individual operational and tactical goals as building blocks to that strategic picture.



ICS OR GSB

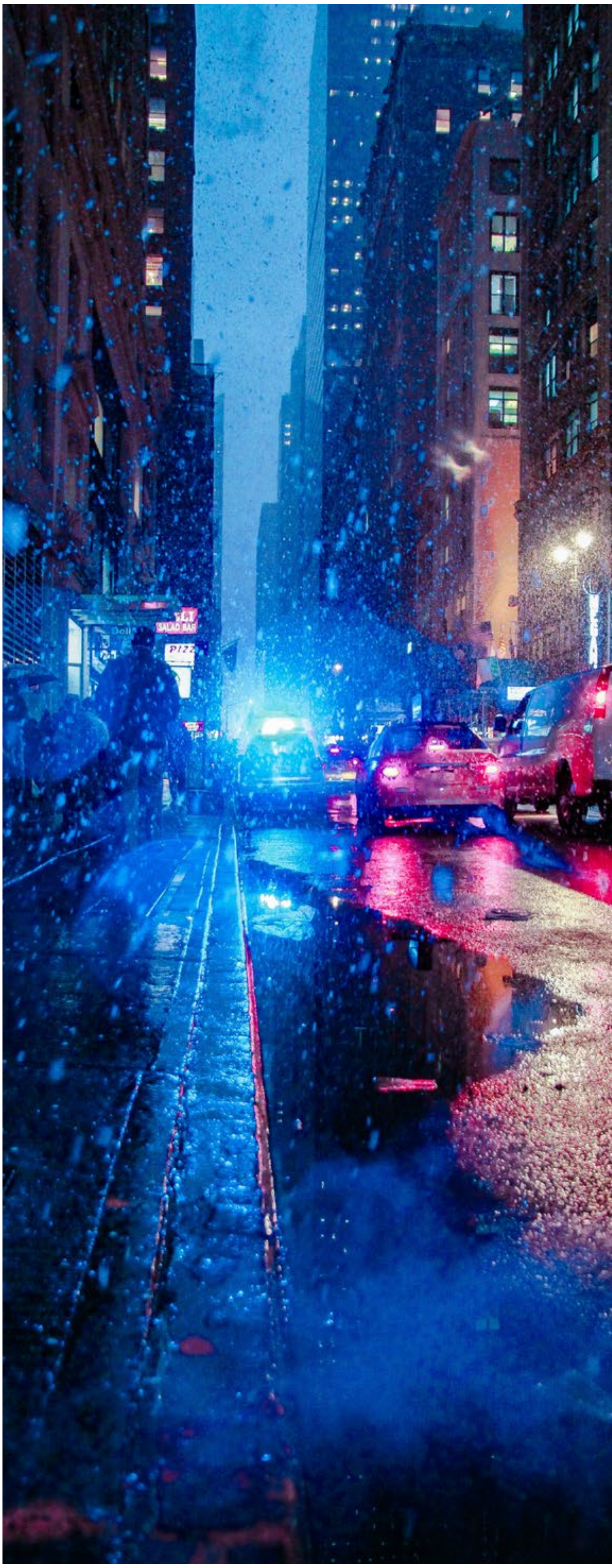
So, if the ICS could be seen as the standard crisis response model for both government and non-government organizations in the U.S, what are other options? This next section will briefly look at the British Gold, Silver, and Bronze command and control model for incident management to determine what, if any difference there may be.

The British GSB model utilizes three different levels of command and control for crisis scenarios, these are the Gold (strategic), Silver (tactical), and Bronze (operational) levels. The College of Policing, (2013) states that this system is a generic command structure which is nationally recognized and used by all emergency services and partners within the U.K., similar to that of the ICS in the U.S. The purpose of the GSB structure is to give command and control to an incident whether spontaneous or a planned operation and can be utilized at the strategic, tactical, or operational levels. This model is also flexible and can be used for both incident response or adapted to non-crises or emergency events, such as large public functions (Aviation Emergency Response Plan Solutions, 2024, 6). The College of Policing goes on to further state that the GSB design is for the purpose of permitting a fluid flow of information through the use of common terminology and SOPs throughout all levels of the structure.

This is important because, as with the organizations who use the ICS, individual organizations coming into it [GSB] for multi-organizational responses will likely still have their own department SOPs, and as with the ICS, this permits these organizations to be on the same page with a common set of language and SOPs (Aviation Emergency Response Plan Solutions, 2024, 8; National Preparedness Commission, 2023). In essence both the ICS and GSB were designed for the purpose of encouraging effective communication and management of an incident and allow for a fluid flow of information (Solecki, 2024). However, the ICS was created to be a on-scene emergency management standard which aids in the management of resources and allows users to match the complexity and demands placed on responding organizations through a common operating picture (ASPCA, 2013; USDA, 2024; Riecker, 2021). Whereas the GSB is more of a command structure designed to be a framework for providing a hierarchal structure with command typically being ‘role’ and not ‘rank’ specific, i.e the most appropriate person from the most appropriate responding organization (Aviation Emergency Response Plan Solutions, 2024, 7). Viewing this structure, it can be seen that although there may be an element of shared authority throughout the command structure, it does appear to be a more top down driven model of command and control. However, this doesn’t mean the GSB system is not acceptable for incident response, just that it is a different way in which to perform command and control.

Whether utilizing the GSB or ICS, regular practice of their use is important to build the requisite skillset to best employ it [GSB] [ICS] by responders, but as previously stated, only real time incident response will allow for those agencies using it to gain the adequate skill and confidence to more effectively use it for subsequent response, and thus building upon the resilience of the responding agencies.

> **"Both the ICS and GSB are very trusted systems with a proven track record and should not be underestimated in their ability."**



Both the ICS and GSB are good incident response models of command and control for incident response and it should ultimately come down to the organizational leadership and organizational culture to determine the appropriate model. Only shared values, organizational buy-in, drills, practice, and real time incident response will strengthen the ability of either structure to function at its most optimum capacity. Both the ICS and GSB are very trusted systems with a proven track record and should not be underestimated in their ability.

CONCLUSION

Although originally designed and established for forest fires in the 1970's, the ICS has proven itself to be a reliable, robust, and flexible framework throughout the past 50 years. This is due to the continual development and agility it has at all levels and for any organisation. **"Achieving favourable results in crises necessitates you to have an incisive command, coordinated operations, and an adaptable strategy. All rooted in the sound principles of the Incident Command System"**. (Team, 2024). Although it does have shortcomings, this framework still has a strong use in the 21st century for organisations responding to and recovering from a crisis event. If the advantages that this framework offers can be utilised and acted upon by organisations who can put aside bureaucracy and political bias, then it will only strengthen in time. But so long as poor organisational culture is inherent throughout any agency involved in a crisis, there will remain limitations to response and recovery. When a crisis occurs and the lives of people are at stake, the ultimate aim should be to respond to and recover from it by supporting the very people in which the organisations are there to assist. Everyone, at all levels must remember that when implementing this framework, it is only as strong and flexible as the very people who implement it. And if the people implementing it continue to develop in their understanding and ability of using it, there is no reason that the ICS cannot continue to be the primary framework for disaster and crisis management into the future.

REFERENCES

ASPCA (2013). Understanding NIMS and ICS. [online] ASPCApro. Available at: https://www.aspcapro.org/resource/understanding-nims-and-ics.

Aviation Emergency Response Plan Solutions. (2024). Aviation Emergency Response Plan Solutions incl. lots of 'free stuff'. [online] Available at: https://aviationemergencyresponseplan.com.

Balfour, B. (2024). Why Private Charity and Local Communities Are More Effective at Disaster Relief Than Government. The JOURNAL of The JAMES MADISON INSTITUTE, (Fall 2024).

Bennet, B. (2011). Effective Emergency Management: A Closer Look at the Incident Command System. Professional safety, 56(11), pp.28–37.

Bigley, G.A. and Roberts, K.H. (2001). THE INCIDENT COMMAND SYSTEM: HIGH-RELIABILITY ORGANIZING FOR COMPLEX AND VOLATILE TASK ENVIRONMENTS. Academy of Management Journal, 44(6), pp.1281–1299. doi:https://doi.org/10.2307/3069401.

Birkland, T.A. (2009). Disasters, Catastrophes, and Policy Failure in the Homeland Security Era1. Review of Policy Research, 26(4), pp.423–438. doi:https://doi.org/10.1111/j.1541-1338.2009.00393.x.

Bowman, E. (2024). FEMA worker fired for telling hurricane responders to avoid homes with pro-Trump signs. [online] NPR. Available at: https://www.npr.org/2024/11/09/g-s1-33601/fema-worker-hurricane-trump-signs-florida.

Bresnen, M., Edelman, L., Newell, S., Scarbrough, H. and Swan, J. (2003). Social practices and the management of knowledge in project environments. International Journal of Project Management, 21(3), pp.157–166. doi:https://doi.org/10.1016/s0263-7863(02)00090-x.

College of Policing (2013). Command Structures. [online] College of Policing. Available at: https://www.college.police.uk/app/operations/command-and-control/command-structures.

Comfort, L. (1994). Self-Organization in Complex Systems. Journal of Public Administration Research and Theory. doi:https://doi.org/10.1093/oxfordjournals.jpart.a037220.

Comfort, L. (2007). Crisis management in hindsight: Cognition, communication, coordination, and control. Public Administration Review, 67(1), pp.189–197. doi:https://doi.org/10.1111/j.1540-6210.2007.00827.x.

FEMA (2018). ICS Review Document EXTRACTED FROM -E/L/G 0300 INTERMEDIATE INCIDENT COMMAND SYSTEM FOR EXPANDING INCIDENTS, ICS 300. [online] Available at: https://training.fema.gov/emiweb/is/icsresource/assets/ics%20review%20document.pdf.

Gozlan, A., Abuhasira, R., Dreiher, J., Peleg, S., Sebbag, G., Schwarzfuchs, D., Slutsky, T., Dolfin, D., Frenkel, A. and Codish, S. (2024). October 7th 2023 mass casualty incident in southern Israel: lessons for emergency preparedness and management. Israel Journal of Health Policy Research, 13(1). doi:https://doi.org/10.1186/s13584-024-00651-7.

Hardy, K. (2023). Resilience and Emergency Response in Extreme Wildfire Events: The Case of the 2023 Maui Wildfires.

HM Government (2025). National Risk Register 2025 edition Contents. [online] Available at: https://assets.publishing.service.gov.uk/media/67b5f85732b2aab18314bbe4/National_Risk_Register_2025.pdf.

Howitt, A.M. and Leonard, H.B. (2006). Beyond Katrina: Improving Disaster Response Capabilities.

ICS Review Document. (2018). EXTRACTED FROM - E/L/G 0300 INTERMEDIATE INCIDENT COMMAND SYSTEM FOR EXPANDING INCIDENTS, ICS 300, pp.1–34.

Kendra, J.M. and Wachtendorf, T. (2003). Elements of Resilience After the World Trade Center Disaster: Reconstituting New York City's Emergency Operations Centre. Disasters, 27(1), pp.37–53. doi:https://doi.org/10.1111/1467-7717.00218.

Kerslake, B. (2018). The Kerslake Report: an Independent Review into the Preparedness for, and Emergency Response to, the Manchester Arena Attack on 22nd May 2017. [online] JESIP. Available at: https://www.jesip.org.uk/uploads/media/Documents%20Products/Kerslake_Report_Manchester_Are.pdf.

Krausburg, T., Bordini, R. and Dix, J. (2023). Modelling a chain of command in the incident command system using sequential characteristic function games. Annals of mathematics and artificial intelligence, pp.925–951. doi:https://doi.org/10.1007/s10472-023-09878-7.

Lovaco, J.L., Munjulury, R.C., Staack, I. and Krus, P. (2024). LARGE LANGUAGE MODEL-DRIVEN SIMULATIONS FOR SYSTEM OF SYSTEMS ANALYSIS IN FIREFIGHTING AIRCRAFT CONCEPTUAL DESIGN. Congress of the International Council of the Aeronautical Science.

Lutz, L.D. and Lindell, M.K. (2008). Incident Command System as a Response Model Within Emergency Operation Centers during Hurricane Rita. Journal of Contingencies and Crisis Management, 16(3), pp.122–134. doi:https://doi.org/10.1111/j.1468-5973.2008.00541.x.

Maui Strong. (2023). MAUI WILDFIRES OF AUGUST 8, 2023 MAUI POLICE DEPARTMENT PRELIMINARY AFTER-ACTION REPORT.

McCarrolla, A.S. and Lambert, S. (2024). General further education colleges: the continuing dilemma of organisational culture. JOURNAL OF FURTHER AND HIGHER EDUCATION, 48(1), pp.1–13. doi:https://doi.org/10.1080/0309877X.2023.2250730.

Melis, S. (n.d.). Key messages Navigating the earthquake response amid post-conflict statebuilding. [online] Available at: https://www.iss.nl/en/media/2019-04-earthquake-response-nepal.

Moran, S.C., Neal, C.A. and Murray, T.L. (2024). The U.S. Geological Survey Volcano Science Center Response Plan for Significant Volcanic Events. Moffett Field Publishing Service Center.

Moynihan, D.P. (2005). Learning Under Uncertainty: Networks in Crisis Management. SSRN Electronic Journal. doi:https://doi.org/10.2139/ssrn.868712.

National Preparedness Commission. (2023). The buck stops here: building capability and leadership in multi-agency gold incident commanders - National Preparedness Commission. [online] Available at: https://nationalpreparednesscommission.uk/publications/the-buck-stops-here-building-capability-and-leadership-in-multi-agency-gold-incident-commanders/.

Otal, H., Stern, E. and Canbaz, A. (2024). LLM-Assisted Crisis Management: Building Advanced LLM Platforms for Effective Emergency Response and Public Collaboration. doi:https://doi.org/10.1109/cai59869.2024.00159.

RIECKER, T. (2021). A Re-Framing of Incident Management Structures. [online] The Contrarian Emergency Manager. Available at: https://timothyriecker.com/2021/01/08/a-re-framing-of-incident-management-structures/ [Accessed 9 Oct. 2025].

Solecki, G. (2024). Global Incident Management Systems - GoCrisis. [online] GoCrisis. Available at: https://gocrisis.com/article/global-incident-management-systems/.

Team, R. (2024). Incident Command System for More Effective Crisis Management. [online] Restrata. Available at: https://www.restrata.com/blog/incident-command-system-for-more-effective-crisis-management/.

USDA (2024). ICS 100 -incident command system. [online] Available at: https://www.usda.gov/sites/default/files/documents/ICS100.pdf.

Vylund, L., Frykmer, T., McNamee, M. and Eriksson, K. (2024). Understanding Fire and Rescue Service Practices Through Problems and Problem-Solving Networks: An Analysis of a Critical Incident. Fire technology. doi:https://doi.org/10.1007/s10694-024-01582-0.

ISRM

ABOUT
THE INSTITUTE OF STRATEGIC RISK MANAGEMENT

The Institute of Strategic Risk Management (ISRM) is a leading global centre for the promotion and sharing of best-practice strategic risk and crisis management capabilities and thought leadership amongst practitioners, academics and policy makers. Across the Institute's global chapter network, our Members and Fellows help progress and promote the underlying understanding and capabilities associated with strategic risk and crisis management, alongside developing their own personal and professional networks.

The ISRM provides best-practice training, hosts leading events across its global and local networks, and provides strategic advice to support organisations' management of complex risks.

www.theisrm.org

info@theisrm.org