2016

Emergency Services

Foundation Scholarship





Undertake a global study tour to identify, evaluate, and assess initiatives and contribute to the development of a terrorism response capability framework for (non-law enforcement) response agencies.

Commander Darren Conlin Metropolitan Fire Brigade

Melbourne

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Boston;

- Captain, Rescue Specialist, Boston Fire Department, Ryan J. Mc Govern
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New York;

• Lieutenant, Fire Department New York, Terrorism and Disaster Preparedness Centre, Tim Carroll

Birmingham / London;

- Assistant Commissioner, Special Operations Group, London Fire Brigade, Tim Cutbil
- Deputy Assistant Commissioner, Operational Resilience, London Fire Brigade Peter Critchell
- Operational Resilience Planning Manager, Operational Resilience, London Fire Brigade, Katie Devereux

Scholarship Program

Date	Location	Details	Comment
Monday 5/09/16	Melbourne to San Francisco	Travel to San Francisco	
Tuesday- Thursday 6/09/16 – 08/09/16		Meet with Assistant Deputy Chief Shane Francisco, Homeland Security Division, San Francisco Fire Department.	Undertake tour of SFFD facilities. Review and analyze SFFD terrorism preparedness initiatives.
Friday - Monday 9/09/16 - 12/09/16	Pleasanton CA.	Meet with Sheriff Gerald Verbeck Alameda County	Attend exercise Urban Shield. Observe regional core capabilities, interdiction and disruption, on scene security and protection, mass search and rescue, environment response, public health and medical services, operational coordination and operational communication.
Tuesday 13/09/16	San Francisco - Boston	Travel to Boston	
Wednesday - Thursday 14/09/16 – 15/09/16	Boston	Meet with Captain Ryan McGovern, Rescue Specialist, Boston Fire Department	Undertake tour of BFD facilities. Attend Boston Regional Intelligence Centre (BRIC). Observe terrorism preparedness

			initiatives.
Friday 16/09/16	New York	Meet with Lieutenant Tim Carroll, New York Terrorism and Disaster Preparedness Centre	Undertake tour of NYFD facilities. Review and analyze terrorism preparedness initiatives
Saturday 17/09/16	Boston		Review literature
Sunday 18/09/16	Boston		Review literature
Monday 19/09/16	Boston to Birmingham UK.	Travel to United Kingdom	
Tuesday 20/09/16	Birmingham	Meet with Assistant Commissioner Tim Cutbill London Fire Brigade.	Gain an understanding and appreciation of the UK National Intelligence Liaison Officer (NILO) program
Wednesday 21/09/16	Birmingham	Emergency Services Show – Attend Regional Coordinator NILO meeting	Birmingham
Thursday 22/09/16	Birmingham	Provide presentation at NILO CPD event.	Birmingham
Friday 23/09/16	London	Meet with Deputy Assistant Commissioner Peter Critchell, Operational Resilience, London Fire Brigade	Review and analyze LFB terrorism preparedness initiatives
Saturday 24/09/16	London	Travel to Melbourne	

Recommendations:

The development of a terrorism response capability framework for (non-law enforcement) response agencies requires the integration of a number of key elements including:

1. Emergency services and law enforcement leadership require a close working relationship to facilitate a high level of understanding and effective cooperation during the planning phases of response to acts of terrorism. Emergency services

need to fully understand the terrorism environment and to find ways to be innovative in their approach and open to change. New and innovative methods of intelligence sharing with Police and intelligence agencies should take a prominent role in influencing planning, training, budgeting and operational safety through enhanced situational awareness.

- 2. Emergency services would benefit from the development of a cadre of trained and qualified officers, specialists in terrorism preparedness and response, who can advise and support Incident Commanders, police, medical, military and other government agencies on Emergency Services operational capacity and capability to reduce risk and safely resolve high threat incidents.
- 3. Non law enforcement organisations would benefit from the development and delivery of terrorism response training programs that supply responding officers with the strategic and tactical tools to recognise a terrorist act, minimise losses, identify self-protective measures to other arriving units, establish command, mange the incident and direct operations until relieved by a senior ranking officer.
- 4. Non law enforcement organisations would benefit from the development of an integrated all hazards all agencies response model. To address this evolving and growing risk, new response models and increased levels of interoperability are required amongst all emergency response agencies. The traditional linear single agency approach is ineffective as no one agency can manage these events alone. Disciplines must be integrated to allow increased operational capability and capacity. Strategic plans and relationships must be in place, interoperable language and procedures must exist and cross disciplinary training must be completed prior to an event.
- Non law enforcement organisations would benefit from the development of an agreed identifier (signal, code or audible warning) that will enable a move from routine to crisis service delivery and the application of heightened safety principles. In line with the state emergency management priorities, protection and preservation of life is paramount, this includes both the community and emergency responders.
 Introduction

Response to a terrorist event will place great demands on all emergency responders. While individual state level plans stipulate command, control and co-ordination arrangements, and specific agency operational procedures have proven over time to greatly assist Incident Controllers in ensuring maximum use of available resources in an efficient and effective manner. Today's Incident controller must fully comprehend the additional impact a

deliberate criminal event will place on the development and implementation of operational objectives and strategies.

The traditional "all hazards" approach has significant appeal for response to unintended or accidental emergencies; however, it may not be suitably effective when responding to a planned and coordinated criminal event. This is in part due to the fact that traditionally, emergency response strategies are built on a collective approach based on best practice. Organisations prepare their responders based on years of analysis of what happened, what worked and what proved to be the best solution, this knowledge materialises in the form of Standard Operational Procedures (SOP's). These SOP's have been created to function in a routine environment and response to a terrorist event is anything but routine, therefore, a routine response may be found to be inflexible and rigid during a terrorist attack.

Terrorist attacks require alternative thinking, as first responders may become primary or secondary targets of a wider event. The challenge for organisational leaders is how to best manage the evolving and contemporary threat of terrorism whilst concurrently maintaining its traditional and routine service delivery capability. This requires alternative thinking and a comprehensive understanding of the nature of the threat and possible risk scenarios that your organisation may be exposed to. It also involves developing capability for command staff to identify the difference between routine and crisis service delivery and an ability to adapt methods and tactics accordingly.

Recent history has witnessed a number of large scale coordinated terrorist attacks in places such as the United States and Europe that have adjusted the way emergence response agencies execute their service delivery models. This report is the result of a three week tour of San Francisco, Pleasanton, Boston, New York, Birmingham and London. The focus was to examine how non- policing emergency responders have evolved their preparedness, response and interagency collaboration activities in the face of the changing and evolving threat of terrorism.

Pre-Planning and Intelligence

According to the National Counter Terrorism Plan, prevention activities and measures are taken to eliminate or reduce the occurrence or severity of a terrorist attack. This is achieved through the collection, analysis and dissemination of intelligence, the conduct of investigations by law enforcement and security agencies, the implementation of strategies to engage and protect the community and potential terrorist targets, and the disruption of a terrorist attack.

Traditionally, access to intelligence products has been regarded as the domain of law enforcement agencies, while fire services have been regarded as a response oriented

discipline. However, firefighters are subject matter experts who, when exposed to relevant intelligence, can assess the likelihood of a threat, embed that understanding into organisational risk assessments, and develop appropriate response strategies. Fire services have long been involved in intelligence gathering for prevention activities. Based on intelligence gathering through fire investigation reports, post incident analysis and understanding of building construction and design techniques, fire services have been able to influence through legislation and advocacy the building design and approval process. A detailed understanding of how a building will then perform during emergencies has impacted on operational training, equipment, planning and resourcing. This has created a safer environment, not just for communities and building occupants, but for firefighters responding to these sites to undertake emergency activities.

Not unlike the lessons learned and initiatives implemented to enhance firefighter and community safety in the field of structural fire safety, fire services need to fully understand the terrorism environment and to find ways to be innovative in their approach and open to change. Intelligence sharing should take a prominent role in influencing planning, training, budgeting and operational safety through enhanced situational awareness.

Some areas of intelligence are appropriately the domain of law enforcement as it is tied to current criminal investigations and release may run the risk of compromising these investigations. When this type of intelligence becomes critical, and potential consequences reach beyond the capabilities of Police, it is often shared with government and other community safety agencies via identified threat assessment teams. The challenge however, is it is often shared at the last minute and does little for response agencies other than to place them on alert and in a defensive position waiting for possible events to occur.

While the receipt of some intelligence to fire services may be restricted in its delivery, there are other intelligence products that present as of significant value to understanding complexities within the current risk environment. Intelligence products that build understanding on terrorism techniques, global trends and target risk awareness are vital to enhancing situational awareness and improving safety of all emergency responders.

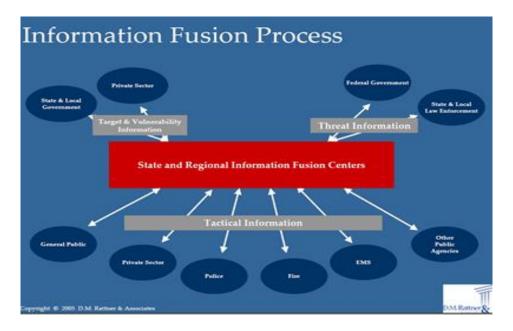
Emergency services and law enforcement leadership require a close working relationship to facilitate a high level of understanding and effective cooperation during the planning phases of response to acts of terrorism. When emergency services understand a threat and embed that knowledge into organisational risk assessments, then address vulnerabilities through effective planning, training, resourcing, operational procedures and budget implications, significant progress can be made to minimise the impact of any current threat. The principle is to gather intelligence and embed those learning's within the Prevention Preparedness Response Recovery (PPRR) service delivery continuum.

Fusion Centre

Fusion centres were developed following the September 11 terrorist event under the U.S. Department of Homeland Security and the Office of Justice Programs in the U.S. Department of Justice. The focus of a fusion centre is to share information and intelligence across a broader emergency services sector. Fusion centres recognise the importance of inclusion of non-policing emergency responders into the information and intelligence sharing cycle, recognising its importance in the development of preparedness and response strategic development.

A fusion centre is an information sharing facility designed to promote information sharing at the federal, state and local levels of government. Within the 50 States, the U.S. Department of Homeland Security recognized at least 72 fusion centres. Fusion centres may also be affiliated with an Emergency Operations Centre that responds in the event of a disaster.

The fusion centre process is designed to manage the flow of information and intelligence across levels and sectors of government to integrate information for analysis. As the collection of assorted material sources spreads, there will be more accurate and robust analysis that can be disseminated as intelligence across a broader audience. This process effectively integrates non-policing agencies into the intelligence sharing cycle.



Fusion Centre Information Sharing Process

When non-policing agencies are embedded into the intelligence sharing cycle they begin to more comprehensively understand the current threat and potential scenarios that they may be exposed to. With this understanding, planning, training, equipment acquisition and budgeting can be coordinated for future capacity and capability development needs.

Incorporating non- law enforcement agencies into the intelligence sharing cycle value adds to the ability of fusion centres to perform its core functions of gathering, processing, analysing, and disseminating terrorism, homeland security, and law enforcement information, while providing the centre with a source of emergency services subject matter experts to aid in achieving a "all crimes, all hazards" capability.

Within the "All Crimes" approach non law enforcement emergency responders in the normal performance of their duty have access to numerous physical and geographical sites while interacting with a broad section of the general community on a daily basis. Like all community members emergency services can contribute to community safety by responsibly employing the "see something say something" principle. Many emergency services organisations throughout the United States have provided appropriate training and protocols for reporting observed suspicious materials and activities in order to provide fusion centres with information on observed criminal acts or potential terrorist activity. This information that would previously go unreported is assisting Police agencies in analysis and investigation of potential nefarious activities.

The "All hazards" approach to emergency management is not new to non-policing agencies. As first responder to all emergency events operational personnel are aware of the various types of threat facing their communities including vulnerabilities within hazardous materials facilities, critical infrastructure sites, places of mass gathering and the potential consequences and impacts on vulnerable communities that may be impacted on by terrorist activity. This perspective provides an important dimension to all hazards risk assessments, preparedness activities and response planning.



Fusion Centre Boston, Massachusetts.

Understanding the threat

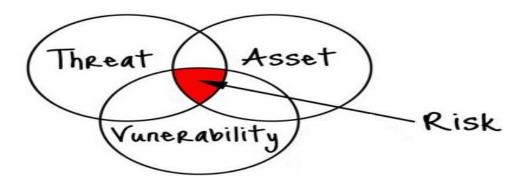
Once non law enforcement agencies have developed closer working relationships with law enforcement and have access to intelligence and information products pertaining to the threat and likely scenarios organisations may be expose to, the next step is to transform knowledge of the threat into knowledge of the risk. Organisations must determine which threats are they most vulnerable to and develop appropriate mitigation strategies.

The first step is to undertake a formal risk assessment armed with the knowledge obtained via closer relationships with law enforcement and intelligence agencies.

A traditional five step approach to risk assessment can be followed to ensure that your risk assessment is carried out correctly, these five steps are:

- 1. Identify the hazards
- 2. Decide who might be harmed and how
- 3. Evaluate the risks and decide on control measures
- 4. Record your findings and implement them
- 5. Review your assessment and update if necessary

Emergency management organisations are well versed at conducting formal risk assessment regarding various exposed threats; the terrorism environment is no different. The goal is to obtain access to intelligence and information not traditionally shared with non-law enforcement agencies and to transform that increased awareness into plans, policies and procedures to address operations within the current terrorism risk environment. Without this knowledge organisations run the risk of guessing about their actual exposure with regard to capability and capacity to respond to the current terrorism environment. Thus potentially placing operational reponders at a higher risk of harm.



Transform knowledge of the threat into knowledge of the risk National Inter Agency Liaison Officers

The realisation and escalation of the emerging threats to the United Kingdom from international terrorism has required emergency services to work more closely together. Beginning in the mid 2000's the London Fire Brigade developed a program that has

significantly developed interagency liaison and intelligence sharing between responder agencies. The National Inter Agency Liaison Officer (NILO) is now a recognised role within the Joint Emergency Services Interoperability Principle's (JESIP), the fire services Incident Command System (ICS) and the police and counter terrorism command structure for dealing with terrorist events.

The selection and training of experienced operational personnel from the emergency services to carry out closer working practices, and sharing of intelligence with a wide range of responding agencies has proven to be an overwhelming success. Across the UK there are now more than 700 emergency services managers qualified as NILO's who are responsible for providing intelligence briefing and tactical advice to operational, tactical and strategic commanders. The NILO is also a key function that supports the UK's national response to any Chemical, Biological, Radiological, or Nuclear (CBRN) incident or Marauding terrorist firearms (MTFA) attack.

A NILO is described as a trained and qualified officer who can advise and support Incident Commanders, police, medical, military and other government agencies on Emergency Services operational capacity and capability to reduce risk and safely resolve incidents. A NILO, though not necessarily an expert in terrorism, is qualified via completion of an internal skills acquisition program. The NILO attends meetings and receives terrorism training and information from law enforcement and other partner agencies in order to maintain a contemporary appreciation of the risk environment. The NILO is a vital link in keeping non law enforcement emergency response agencies aware of current terrorist tactics, techniques and practices.

A NILO raises the level of prevention and preparedness within the emergency services and better prepares responders to effectively deal with the emerging high threat environment. 1.

The role of a NILO is to:

- Bridge interoperability gaps across the emergency services in extreme or emerging threat environments awareness and response
- Improve inter agency planning , operational preparedness and multi-agency incident command structures high threat complex events
- Improve understanding across agencies on organisational capacity, capability and strategic command.
- Enhance non law enforcement emergency responders situational awareness at Police led events
- Improved safety through risk reduction to operational personnel and the community

The NILO maintains two key functions which are both proactive and reactive.

1. Proactive response

- Facilitate intelligence, information sharing and advisory role across fire, police and other intelligence agencies
- Participate in intelligence led operations where police require non law enforcement emergency services advice or expertise in pre planning for events.

2. Reactive Response

- Response as advisor to Incident Command structure's during high threat hostile events. The NILO will improve organisational cooperation and understanding amongst agencies on matters of organisational posture, capacity, capability, and command. The NILO will support agencies with planning for safe deployment of appropriate resources.
- The NILO, through awareness of interagency strategic and tactical plans will ensure that safe systems of work are implemented and that emergency services resources are utilised appropriately. The primary goal is to enhance responder and community safety via ensuring that non law enforcement emergency responder actions compliment the procedures of law enforcement during high threat hostile events.

The function compliments existing strategic, operational and tactical interagency coordination.

- A NILO maintains appropriate level security clearance and facilitates intelligence, information sharing and advisory role across emergency services
- A NILO can advise and support incident commanders on a wide range of potential high threat environments such as:
- 1. The use of explosives
- 2. Fire as a weapon
- 3. Mass victim rescue
- 4. Vertical terrorism (multi-mode attacks on high rise structures which may incorporate weapons, explosives, fire and smoke).
- 5. Structural collapse
- 6. Deliberate gas or chemical release
- 7. Incidents involving suspect packages
- 8. Mass casualty treatment
- 9. Civil unrest
- 10. Requests for advice for VIP visits or pre planned police raids

Eligibility Criteria

To effectively perform the role of NILO individuals should hold significant experience of risk assessment and risk management, both in operational response and organisational planning policy development. Ideally candidates would hold senior positions within their organisations and possess significant experience at operating within a multi-agency environment and resolving complex critical incidents.

Training

A NILO training program has been developed by the London Fire Brigade that provides officers with the foundation knowledge to bridge the intelligence and interoperability gaps across agencies. The course is delivered through a combination of facilitated discussions, table top exercises, role play and input from subject matter experts.

On completion of the program and as part of the consolidated learning process, it is essential that NILO's engage in regular continuous professional development days as the risk environment is dynamic and ever changing.



London Fire Brigade NILO

Preparedness through awareness

Terrorist attacks require alternative thinking, as first responders may become primary or secondary targets of a wider event. The challenge for organisational leaders is how to best manage the evolving and contemporary threat of terrorism whilst concurrently maintaining

its traditional and routine service delivery capability. This can be a challenge as 99% of workload will still be routine and traditional; however, the 1% response to a potential terrorism event may place responders at higher levels of risk then encountered traditionally.

Non law enforcement organisations would benefit from the development and delivery of terrorism response training programs that supply responding officers with the strategic and tactical tools to recognise a terrorist act, minimise losses, identify self-protective measures to other arriving units, establish command, mange the incident and direct operations until relieved by a senior ranking officer.

While the key to this requires comprehensive understanding of the nature of the threat and possible risk scenarios that your organisation may be exposed to, it also involves developing capability for command staff to identify the difference between routine and crisis service delivery and an ability to adapt methods and tactics accordingly.

This ability to recognize the difference between routine and crisis conditions is a pivotal issue for Incident Controllers in a terrorism environment. Routine service delivery is something prepared for and routinely addressed, regardless of the size and complexity. However, crisis service delivery is something which is neither routine nor prepared for and can evolve or be sudden and unanticipated. Crisis service delivery scenarios expose responders to a higher level of danger and require an alternative approach, one that is centred in the provision of heightened safety principles.

Routine	Crisis
The situation is familiar	The situation is a unique occurrence, probably one not previously experienced by responders
Uses standard operating procedures	Beyond routine service delivery
Has clear objectives	High level of uncertainty
Outcomes are expected and normal	Has serious negative outcomes
The threat level is normal	There are high stakes involved
There are sufficient resources	Problem is beyond existing resources

Metropolitan Fire Brigade Concept of Operations – Signal 55

In recognition of the changed threat environment and in order to enhance responder safety, the MFB has initiated the adoption of a critical radio message. The signal 55 message (hostile act, significant violence or terrorism) is being utilised in addition to the existing signal 83 (patient deceased), signal 27 (critical incident stress team notification), signal 56 (police required) and signal 40 (police required urgently crew under threat)

Signal Pronounced Meaning

27	two seven	Critical Incident Stress Management Team to be notified to contact
		requesting Officer
83	eight three	Deceased Patient
56	five six	VicPol Attendance required
40	four zero	Urgent Vicpol attendance required, crew or patient in trouble
55	five five	Incident may involve a hostile act, significant violence or terrorism

A *Signal 55* message can be sent by responder's or FSCC/ESTA Operator when they believe that an incident may involve a hostile act, significant violence or terrorism. The Signal 55 message will initiate the implementation of a range of strategic actions aimed at protecting and preserving the lives of fire fighters, other emergency services personnel and community members located within the incident area.

Potential Signal 55

The FSCC/ESTA Operator may upon receipt of information either from members of the community or partner agencies respond MFB resources for a *Potential Signal 55* emergency call for assistance.

An emergency despatch by the FSCC/ESTA Operator for a *Potential Signal 55* would indicate that information has been received that is out of the ordinary and may indicate that the incident may involve a hostile act, significant violence or terrorism.

The issuing of a *Potential Signal 55* will allow responding OIC's to implement heightened safety principles on route and when initially on scene. The OIC, once on scene, must then undertake a dynamic risk assessment and either confirm or reject the requirements for the issuing of a *Signal 55*.

The issuing of a Potential Signal 55 by the FSCC/ESTA Operator does not require notification to Senior Officers via the pager or to MFB stations via the STO (notifications would not occur unless the OIC once on scene confirms the requirement for a Signal 55 to be sent)

However upon issuing a Potential Signal 55 the FSCC/ESTA Operator must phone the SAC or Duty ACFO to provide situational awareness.

Actions upon the receipt or issuing of a Signal 55

NB. Signal 55 is for use at both large and smaller scale events. Its application is relative to the risk assessment conducted by the OIC.

Role:	Actions:	
FSCC/ESTA:	The FSCC/ESTA Operator upon receipt of a Signal 55 will:	
	 Notify all responding appliances of the Signal 55 	
	Request urgent attendance of Victoria Police -	
	 Immediately send a page to all senior operational staff as notification 	
	Phone SAC/Duty ACFO to ensure situational awareness	
	 Send a message via the STO to all stations informing them of the Signal 55 and area affected 	
	• Ensure that further turnouts within the MFD include further notification of the Signal 55 (including on call, returning, drill etc.)	
	 Send page to all senior operational staff and notification via STO to all stations when confirmation is received from the OIC that the Signal 55 is no longer required 	
	 Notify any appliances not in station (on call, returning, drill etc.) of confirmation that Signal 55 is no longer required 	
MFB State	The MFB State Agency Commander (SAC) or on call Duty ACFO will	
Agency	upon notification of a Signal 55 evaluate and consider the following:	
Commander	 Scale, complexity and level of life risk 	
or	Current incident management structure	
On call Duty		
ACFO	 MFB Complex incident management structure options/requirements 	
	options/requirements	
	- as per the Weekly Operational Readiness Arrangements	
	• Expected duration of the incident and impact on capacity,	
	including standard service delivery requirements	

	• MFB Hostile Act Alert Level Considerations - as per the Weekly Operational Readiness Arrangements	
Assistant Chief	Assistant Chief Fire Officers and Commendation of a	
Assistant Chief Fire Officers/	Assistant Chief Fire Officers and Commanders upon notification of a Signal 55 will:	
Commanders	• Be aware of the Signal 55 event (scale, complexity, life risk)	
(Business Hours)		
EOCRR	 Prepare/Standby for dispatch to incident or Command Centre if required (Burnley, SCC, Liaison role) 	
Operations Commanders	required (Burniey, SCC, Liaison role)	
(After Hours)		
Responders	 Implement heightened safety principles Which may include but not limited to: 	
	On route	
	 Prior to responding Command staff will request information 	
	from VKN8/ESTA Operator regarding Police attendance, scene	
	risks, safety considerations, staging and rendezvous points.	
	 Undertake ongoing risk assessment and react accordingly. 	
	On scene	
	The OIC must assess whether it is safe for crews to commence	
	operations or whether he/she should withdraw personnel and	
	resources to a safe rendezvous/staging point and await Police	
	arrival.	
	Exercise extreme caution at all times.	
	Ensure crews do not work in isolation.	
	Identify an escape route for use should the risk on scene	
	deteriorate (ensure appliances are positioned in a manner to execute a rapid exit if required)	
	• Ensure Agency Commander involvement in IMT/EMT meetings.	
	• A joint risk assessment is necessary to ensure that all emergency	
	responders are aware of the nature of the threat and risk.	

 (develop and communicate common operating picture) Implement crew accountability and communications strategies Continually evaluate the risk via a joined up approach with Victoria Police.
It is the responsibility of the OIC to notify FSCC/ESTA Operator when situation is under control and Signal 55 is no longer required

Victoria Police are the control agency for hostile events, however, only MFB Agency Commanders are responsible for deployment of on scene MFB resources.

The application of Signal 55 and its associated response and actions will enable a move from routine to crisis service delivery and the application of heightened safety principles. In line with the state emergency management priorities, protection and preservation of life is paramount, this includes both the community and emergency responders.

Multi- agency Integrated Response

To address this evolving and growing risk, new response models and increased levels of interoperability are required amongst all emergency response agencies. The traditional linear single agency approach is ineffective as no one agency can manage these events alone. Disciplines must be integrated to allow increased operational capability and capacity. Strategic plans and relationships must be in place, interoperable language and procedures must exist and cross disciplinary training must be completed prior to an event.

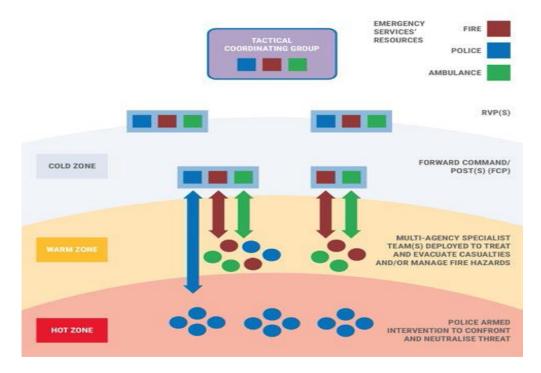
Historically it has been common practise at an active shooter / violent intruder incident for fire and ambulances services to stage at a safe distance while police specialist teams attempted to supress the threat and secure the incident location. This strategy has been proven internationally as time consuming resulting in the delayed provision of medical treatment to victims and ultimately increased fatalities.

A new approach is required where agencies capability, capacity and organisational posture are recognised and effectively integrated to afford world's best services delivery standards to both emergency responders and the community alike. National and International incidents have shown that the risk of terrorist or hostile acts being carried out by committed individuals or groups is real. When these events are of significant scale and complexity it has been very challenging for responder agencies. This is primarily due to the myriad of hazards and risks that need to be managed concurrently. In additional to casualty management the likelihood of significant hazards including fire, structural instability or collapse, smoke, or extrication from vehicles (train, bus, truck or car) is probable. Effective mitigation of these hazards requires the application of specialist skill sets provided by individual agencies working within a collaborative and integrated framework.

The model would ideally focus on an approach that facilitates the provision of life saving medical assistance to those affected in a safe and timely manner. This may include factoring in safety elements that allow extrication of victims from high threat and medium threat areas into controlled and secure areas where effective medical treatment and transport to hospital can be facilitated. A highly effective integrated model is cognisant of the individual capabilities provided by single agencies and combines them to ensure optimal services delivery, i.e.; security, rescue, and medical skill sets.

Recently emergency services agencies in both the United States and the United Kingdom have identified and implemented a new risk based approach incorporating Hot/Cold and Warm Zones with a focus of increasing responder safety and expediting medical treatment for those affected. This is a process the emergency management sector is familiar with having utilised it in its Hazardous Material Response Strategy for some time now.

While the initial focus of the Integrated Response Model for Police and Emergency Services was for active shooter events, the process can be effectively applied at a range of 'hostile events" including: active violence, explosives, USAR/structural collapse operations (class 3 event), fire suppression (class 3 events), civil disturbance, mass causality rescue as well as response to a CBRN incident.



Integrated Response Model (diagram from United Kingdom model)

Principles within an Integrated Response Model

Application of Hot/Warm/Cold Zones

Hot Zone

Hot Zones are areas wherein a direct and immediate threat exists. A direct and immediate threat is very dynamic and is determined by complexity and circumstances of the incident. Examples of direct and immediate threat are active shooters and unexploded ordinances. These areas are where Police has deployed <u>contact teams</u> to isolate or neutralize the threat. Fire and Ambulance personnel will not operate in a Hot Zone.

Contact Teams: A team of Police Officers deployed at an active shooter event to immediately engage the shooter to supress or eliminate the threat and prevent further injury or loss of life.

Warm Zone

Warm Zones are areas that have been cleared by Police where the threat is minimal or can be mitigated. These areas can be considered clear but not secure. These areas are where Integrated Rescue Teams (IRT) and Casualty Extraction Teams (CET) deploy. IRTs rapidly stabilize life threating injuries where victims are found. CETs evacuate victims to treatment or transport areas.

Cold Zone

This is the area immediately surrounding the warm zone. It is the support zone area where access is limited to support agencies' personnel and equipment. This zone contains the Incident Control, Triage, Casualty Clearing Station, and Staging areas.

Incident Command and Control

Response to high risk or hostile events requires a fundamental shift in the mission space for all operational disciplines. Disciplines must be seamlessly integrated to prevent exploiting operational boundaries. Strategic plans and relationships must be in place, interoperable language and procedures must exist, and cross disciplinary training must be completed prior to an event.

Events of this nature will require a large amount of resources. Therefore a request for multi-agency response should be considered in the early stages of any event. A joint tactical approach should be developed at the earliest opportunity.

When victims are located in a hazardous area or warm zone the objective is to provide rapid lifesaving care and evacuation utilizing protection from Police. <u>Police protection may also</u> <u>be used when fire suppression, rescue or other actions are required in a hazardous area of a violent incident.</u>

These incidents are under the command of **Police** and will require close coordination with Fire and Ambulance via an integrated Command approach.

Police protection in this sense is the actions taken by Police to prevent or mitigate hostile actions against personnel, resources, and facilities. These actions conserve the operational ability of fire and ambulance resources so they can be applied as needed.

Risk Assessment

A joint assessment of risk is necessary primarily to ensure that all attending emergency responders are aware of the nature of the threat and risks they may face on entering the Warm Zone. The Police Commander will lead the risk assessment process taking into account all available information, including: if, when and where to deploy. However, while this process will be led by Police, each emergency service will be responsible for deploying its respective resources.

Incident Management

The management and response to a complex Hostile Event is inherently challenging. The overwhelming nature of response to a deliberate criminal act resulting in mass casualties will require application of principles outside of our typical operational response including a different command structure, a cooperative communications plan across police, fire and ambulance and an adaptable accountability system.

Command, coordination and control may prove to be very challenging at these types of events. Traditional components of our incident command structure may need to be adjusted to meet the following requirements:

- No one agency can manage these events alone, close multi-agency collaboration is required in the command structure to meet the needs of an integrated response into the warm zone
- A new functional cell within the incident command structure is required to manage warm zone operations and allow the Incident Controller to maintain a strategic focus.
- An adaptable accountability system is required to effectively track groups of police, fire and ambulance deployed into the warm zone.

An integrated communications model is needed across all responding agencies working in the warm zone.

Functional Cell for Warm Zone Management

The management of resources deployed into the warm zone may necessitate the implementation of an additional functional cell into the command structure. This is to delegate the task of victim rescue to a sector commander and allow the incident controller to focus on the strategic elements of the event.

The health cell will be preparing to manage the large number of casualties including transport to hospital facilities. The fire cell could be managing associated fires, chemical release, or structural collapse from the incident, while Police have overall responsibility for the entire event including all security and law enforcement elements. The "Warm Zone Management" cell could organise and deploy the Integrated Rescue Teams (IRT) and Casualty Extraction Team's (CET) into the warm zone to treat and rescue casualties. The Warm Zone Management cell would be a sub function of Operations.

The sector Commander would be a senior Police Officer (control agency) assisted by senior Fire and Ambulance members acting as Deputy Sector Commanders. The objective of this cell is to enhance integration of agency resources and to ensure safe and effective deployment, communication and accountability of teams deployed and the transition of patients from the warm to cold zone for treatment and transport

Transition of Control

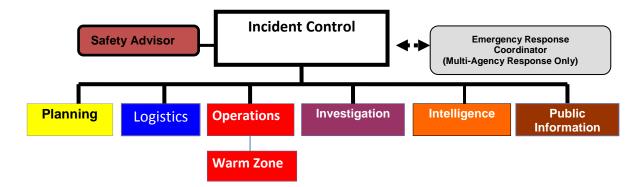
As stated earlier this process can be utilised at a range of 'hostile events" including: active violence, explosives, fire as a weapon or as a result of an active criminal event, civil disturbance, mass causality rescue as well as response to a CBRN incident. When responding to these types of events it may not always be readily identifiable that it is hostile or a deliberate act of terrorism. Therefore the initial control agency may be those identified in part 7 of the Emergency Management Manual of Victoria (EMMV).

The outlined structure below is adaptable and meets the requirements for transition of control. Example – if the initial response was for mass casualty event due to an explosion and fire, part 7 of the EMMV identifies "fire" as the control agency. However as event progression continues intelligence may indicate that it was a deliberate act and control would then transition to Police.

Staging

As with any incident response where there are significant hazards present, it will be necessary to locate staging areas in safe locations. Staging areas will be positioned in the cold zone a safe distance from the inicent location in considerations of the nature of the event and risks at hand. The location should allow rapid deployment of resources to the scene of operations.

Incident Command Strucuture



Warm Zone Management- (new functional cell)

The Warm Management Cell will organise and deploy the Integrated Rescue Teams (IRT) and Casualty Extraction Team's (CET) into the warm zone to treat and rescue casualties. The sector will also provide oversight and management of Casualty Collection Points.

Definitions:

Integrated Rescue Team

Integrated Rescue Teams (IRT) deploys in the Warm Zone only, under this model nonpolicing responders will not deploy into the Hot Zone. IRTs rapidly stabilize life threating injuries where victims are found. An IRT is comprised of Police personnel providing protection and ambulance and fire personnel providing medical care and assistance. The IRT is comprised of one Police officer, one ambulance officer and two firefighters. The Team Leader will be the Police Officer as a member of the control agency. Once treatment is complete, IRT units may assist with patient extraction. However, consideration must be given to the most effective utilisation of ambulance officers as this is a finite capability and the focus must remain on patient treatment and transport.

Casualty Extraction Team

Casualty Extraction Teams (CET) deploy in the warm zone. The CET's will rapidly extract victims from the warm zone to treatment areas or Casualty Collection Points, following treatment by IRT personnel or in lieu of IRT deployment. A CET is comprised of Police personnel providing protection and fire personnel performing victim evacuation. A CET is comprised of a minimum of one Police Officer and two firefighters. The Team Leader will be the Police Officer as a member of the control agency.



Integrated Rescue Team- Santa Clara CA

NB. Where the health Commander deems the risk acceptable for deployment of Ambulance staff into the warm Zone IRT's will be deployed. Where Ambulance staff is not to be deployed into a Warm Zone then either Rescue Teams (Police only) or Casualty Extraction Teams (Police and Fire) will be deployed to rescue the injured.

Casualty Collection Point

The Casualty Collection Point (CCP) is a forward location where victims can be assembled for movement from areas of high risk to the triage/treatment areas. It is a temporary location to stage patients while awaiting further treatment. Based on incident dynamics, multiple CCPs may be required. Police Officers may evacuate patients out of the Hot Zone to the Warm Zone border for IRT management or, IRTs and CETs may evacuate patients to the Warm/Cold zone border for transport to treatment area(s).

Ambulance Services

Ambulance Services retain the lead responsibility for the management of patients during a hostile event. However, decisions on whether to deploy staff into warm zones will be made as part of a joint assessment of risk.

Where ambulance personnel are present with other emergency services in a warm zone, they will direct and co-ordinate the casualty management process, including the use of nonambulance emergency responders to deliver lifesaving care.

However, Police assume the role of Team Leader, responsible for team's safety, accountability and communication with the sector Commander. This will allow ambulance personnel to focus on patient care.

Safety

The primary incident objective is civilian and responder safety. Since the incident is dynamic and may change rapidly responders shall maintain a 360 horizontal and vertical awareness

at all times. Additionally an **evacuation strategy** comprising of a signal or sound will need to be developed to ensure immediate evacuation of the warm zone should the risk environment deteriorate or change.

Accountability

All IRT's and CET's entering the warm zone will need to be identified via a numerical system example: IRT 1, IRT 2, CET 1, CET 2 etc. Team Leaders shall identify their team at a designated entry/exit point. The teams make up (members) entry time, task and geographical designation will be recorded. Team Leaders will again report to the entry/exit point upon leaving the warm zone for safety, recording and accountability purposes.

Communications

A simple and concise communications plan for IRT's and CET's via the sector Commander is required. The identified Team Leader will be responsible for establishing communication via their agencies portable radios.

Example, if Police are undertaking the role of Team Leader then they will establish communications via a designated Police radio channel.

Sectors

In some instances, dependant on the complexity and scale of the event or geographical area and features (underground rail network, multiple stories within a high-rise building or over a large geographical area) sectoring may be required within the warm zone.

Structural orientation includes both exterior and interior identification:

Exterior sectoring identifies the street address (front) as sector 1. Other sides of the structure moving clockwise are Sector 2, Sector 3 and Sector 4.



Exterior Sectors

Interior sectoring has the structure divided into Quadrants. The quadrants are identified alphabetically in a clockwise direction starting at the corner where sector 1 meets sector 2.

Quad B	Quad
Quad A	Quad D

Interior structure sectoring



High rise/ Low rise sectors

Multi story buildings sectors begin with the "Ground Floor" and move upwards to "Level 1" and beyond. The street address on level 1 would be identified as Level 1 Sector 1 and moving in a clockwise direction, Level 1 Sector 2 and so on. Conversely the first floor below ground would be basement 1, the second basement 2 and so on.

Hot, Warm and Cold Zone boundaries must be frequently reviewed

On scene Commanders from all agencies need to ensure that there is clear understanding in relation to the agreed boundaries of hot, warm and cold zones.

Continuous assessment and review of the zones should be a priority. Where practical and as soon as safe to do so, consideration should be given to re-zoning the warm zone into a cold zone in order to allow larger numbers of responders to deploy and provide assistance.

Early Intervention Saves Lives

Early intervention saves lives, however basic. The joint assessment of risk process should be undertaken to inform decisions on deployment into the Warm Zone for Mass Casualty events. International response models advocate that the most effective process for mass victim rescue at a hostile event is via an integrated response team (Police, Fire, and Ambulance) and the application of hot, warm, cold zone risk management principles. These teams need to exercise and train together. They should also develop joint operating procedures so that structure, accountability and communications are clearly established and understood.



Exercise Urban Shield San Francisco. Commander Conlin (report author) 2nd from right

Conclusion

Recent activities such as the Orlando shooting and attack at Turkey's Ataturk International Airport indicate that the terrorism threat continues to grow globally and shows no signs of subsiding. This is particularly evident with the rise of Islamic State of Iraq and the Levant (ISIS) and its ongoing threats against the West. In 2014 there were 19 ISIS- linked plots against the West, in 2015 the figure more than doubled to 48 (US House Committee of Homeland Security, 2016). While more than one third of the terror linked plots were aimed at United States interests, recent activity has proven that Australia is not exempt from extremist behaviour. Australian intelligence agencies indicate that the threat on our shores is real and prevalent and that terrorist activities will continue for the foreseeable future. Strategies will evolve and change as extremist groups identify new ways to disrupt and incur fear on western ideologies (Australian Government, 2014).

This new operating environment has a significant impact on emergency response organisations and the wellbeing and safety of their staff. After all, emergency responders

will be on scene within minutes of any terrorist event. This increased and changing risk environment has meant that those responsible for crisis and consequence management in Australia will need to continually evaluate and understand the climate to effectively prepare for a wider range of responses around multiple incidents and politically motivated violence. Emergency Management organisations are compelled to understand the environmental complexities in order to be appropriately prepared for a call to action.