



EHAT Module 1: Explosive Hazards Awareness, Threats and ERW





Terminal Learning Objectives

Students will recognize hazards associated with explosives, explosive threats and common ERW.



Overview

1.1 Explosive Hazard Awareness Overview

1.2 Recognize Explosive Hazards (EH) Threats and Common Explosive Remnants of War (ERW)



Enabling Learning Objectives

- Introduce explosive hazards and discuss awareness of these hazards.
- Define explosive hazard threats.
- Discuss Explosive Remnants of War (ERW).



Definition

Explosive Hazard

An explosive hazard is any hazard containing an explosive component. All explosive hazards encountered can be broken down into the categories: Mines, ERW, IEDs and components and precursor chemicals thereof.



Explosive Hazard Awareness

- A comprehensive set of theory presentations and practical lessons, which may include a written and or practical assessments. It is termed 'EO' as it covers the whole range of ERW, IED and IDF awareness and “actions on”.



Difference Between Assumption and Assessment

- Assessment: A judgment about something based on understanding of the situation
 - This is our goal
- Assumption: Something taken for granted or accepted as true without proof
 - Always ensure we avoid making any assumptions



Common Explosive Hazards

The most common explosive hazards are:

- Explosive Ordnance (EO)
- Explosive Remnants of War (ERW)
- Unexploded Ordnance (UXO)
- Abandoned Ordnance (AXO)
- Improvised Explosive Devices (IEDs)



Explosive Ordnance (EO)





Explosive Remnants of War (ERW)





Unexploded Ordnance (UXO)





Abandoned Ordnance (AXO)





Improvised Explosive Devices (IEDs)





Questions?



Quiz

1. What does ERW stand for?
 - *Explosive Remnants of War*
2. Name two common explosive hazards?
 - *UXO and IEDs*
3. What is a condition where danger exists because explosives are present is called?
 - *Explosive Hazard*



EHAT Module 1: Wrap Up





Module Conclusions

- TLO: Students will understand hazards associated with explosives, explosive threats and common ERW.
- ELO 1: Introduce Explosive Hazards and discuss awareness of these hazards.
- ELO 2: Discuss Explosive Hazard Threats.
- ELO 3: Discuss common Explosive Remnants of War (ERW).

Event Summary:

The concept of this exercise is to allow a student team the opportunity to demonstrate dismounted tactical operations and mission planning. Students should be monitored on their ability to develop a course of action (COA) and plan dismounted tactical operations.

The instructor may opt to call a “training time out” at various points during the exercise. Training Time Outs’ are recommended to be taken during the scenario to discuss the following: 1) safety procedures 2) best practices 3) ways of improvement.

TITLE PAGE

Module Title	Full Dismounted Operation Practical
Course Number	

PREFACE

Purpose: This lesson plan provides Observers/Controllers and Leadership with standardized guidance for the planning and execution of Explosive Hazard Awareness practical exercises.

This training support package will support the following doctrinal tasks:

EHAT Number	Activity
EHA 1.16	Full Dismounted Operation Practical

SECTION I. ADMINISTRATIVE DATA

All Courses Including This Lesson:		
Course Number	Version	Course Title
EHA 1.16		Full Dismounted Operational Practical
Tasks Taught or Supported:		
Task Number	Task Title	
EHA 1.16	Full Dismounted Operation Practical	

Reinforced Tasks:	
Task Number	Task Title
EHA 1.14	Ground Sign Awareness / Combat Indicators
EHA 1.15	Pre and Post Mission Brief
Academic Hours:	
Methods	Hours/Minutes
Classroom	
Practical Exercise	4 Hours
Test	
Test Review	
Total Hours:	4 Hours
Testing:	
Test Title	Test Version
N/A	N/A

References:			
Number	Title	Date	Additional Information
1.	UN IED Threat Mitigation Military and Police Handbook	Dec 2017	
2.	Applicable EHAT Powerpoint Presentations		
3.	Applicable Parent Unit Standard Operating Procedures		

Instructor Requirements:			
Class Ratio	Required Instructor Skills	Special Qualifications	
-1:5 (Practical Exercise)	EHAT Instructor	N/A	
Additional Personnel Requirements:			
Additional Support	Qualifications	Quantity	Ratio
Medical personnel if available	Advanced First Aid or Medical Skills	1	N/A
Equipment Required for Instruction:			
Instructional Aid		Support	Qty
See scenario set-up and execution attachment.		Evaluator/host unit.	N/A
NOTE:			
Material Required:			
See scenario set-up and execution attachment.			
Classroom, Training Area, and Range Requirements:			
Classroom: N/A			
Training Area: See scenario set-up and execution attachment.			
Range Requirements: N/A			
Instructor/Evaluator Guidance:			
Before setting up and evaluating this scenario/lesson, instructors must thoroughly prepare by studying this lesson and the identified reference material.			

SECTION II. Practical Exercises

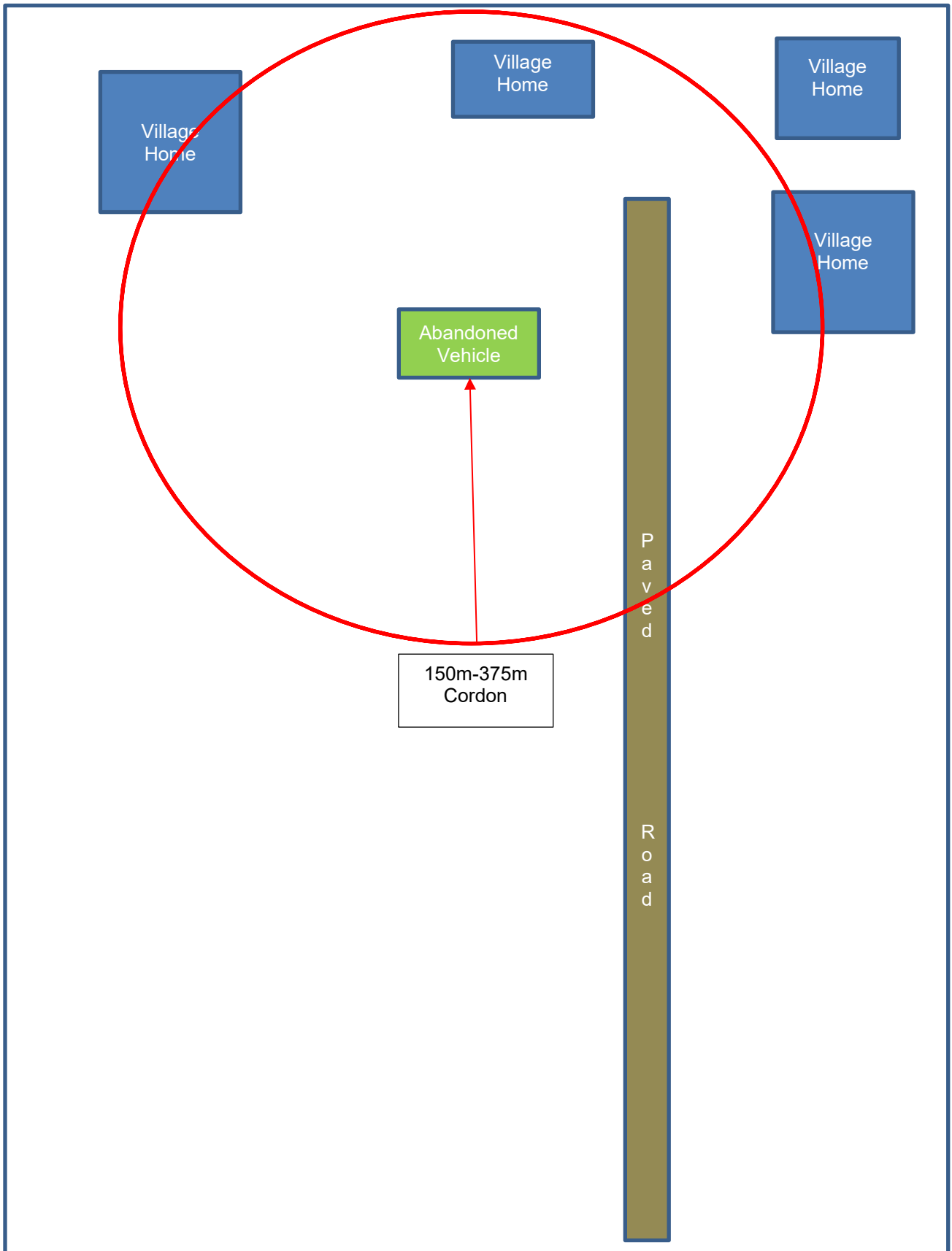
Title: EHA 1.16 Full Dismounted Operation Practical	
Method of Instruction:	Practical Exercise
Technique of Delivery:	Small Group Scenario Exercise
Instructor to Student Ratio:	1:5 for Practice
Time of Instruction:	4 Hours
Media Used:	N/A
Motivator:	
Realistic field training reinforces training, validates SOPs, and enhances mission performance in a post-conflict zone.	
Terminal Learning Objective:	
<i>NOTE: Inform the students of the following terminal learning objective requirements.</i>	
Task	Perform mission planning and dismounted operations.
Condition	In a post-conflict environment with required equipment.
Standard	Demonstrate the ability to safely plan, coordinate and lead a dismounted operation and mission planning.

Resource Requirements	
Requirements:	Evaluator Notes:
<ul style="list-style-type: none"> -Dismounted Patrol loadout. -Rocks to be used as a simulated ground sign. -Abandoned vehicle for target of search. -Inert EO (Hand Grenade or small projectile) 	<ul style="list-style-type: none"> -Verify patrol members have the proper equipment to conduct a routine dismounted patrol in accordance with (IAW) unit standard operating procedures (SOPs). -Provide the student patrol with GPS coordinates of the location they are required to patrol and a map of the area they will be patrolling. -Task patrol leader with planning and conducting a routine dismounted patrol to a reported abandoned vehicle to conduct a search for any hazardous items.
Concept of Setup	
Set-up	Evaluator Notes:
	-The patrol should be informed that an abandoned vehicle has been reported in a nearby area.
Set-up Tasks:	Evaluator Notes:
<ul style="list-style-type: none"> -Stack 3 to 5 rocks on top of one another along route to vehicle to serve as a ground sign. -Emplace EO. 	<ul style="list-style-type: none"> -Place rock pile approximately 50 meters away from abandoned vehicle. -Place EO in glove box of vehicle.
<ul style="list-style-type: none"> -Divide the class into patrol teams IAW Unit SOPs'. 	-The position of patrol leader should be rotated to ensure that all students are provided the opportunity to act as patrol leader.
<ul style="list-style-type: none"> -Generate tasking orders. 	Tasking orders should include: <ul style="list-style-type: none"> -Task objective -Movement timeline -Location of abandoned vehicle
<ul style="list-style-type: none"> -Provide patrol leader with time to formulate plan and deliver necessary briefs. 	
<ul style="list-style-type: none"> -Move teams to the training area as required. 	
Scenario Execution	
<p>-Key Points are annotated in the Evaluator Notes section in bold lettering. Key Points are items that will not only affect the student's score adversely if not addressed but would also pose a potentially life-threatening hazard or violate a major safety if not performed correctly during an operational (non-training) patrol.</p>	

Execution:	Evaluator Notes:
Pre-mission Planning	
-Select Student team for scenario integration.	-Ensure students complete all required pre-mission checks as applicable to patrol equipment.
<p>-Provide patrol team with tasking orders. Give the student team time to read and discuss the information provided.</p> <p>-Receive questions or prompt students to request additional information if they do not begin asking questions on their own.</p>	<p>-Tasking should indicate that the following information was gathered via telephone:</p> <ol style="list-style-type: none"> 1. Local civilians reported an abandoned vehicle at 0700 on the current date. 2. Location is on the outskirts of a village approximately 5 kilometers away. <ul style="list-style-type: none"> -Provide a simulated Lat/Long if requested, prompt student to ask if not. -The route to the incident site is semi-permissive (hostile threats may be encountered). 3. Note any hazards or items of interest encountered during the patrol i.e. ground signs, danger areas or threat indicators.
Pre-Mission Brief	
-The student patrol leader should begin gathering the information required to provide a pre-mission brief.	-Indicate that you (the Instructor) will fulfill the role of any entities or support assets they deem necessary if requested.
-Receive pre-mission brief.	<p>-The following pre-mission briefing points are significant to the scenario and should be provided when asked for (prompt student patrol leader if not):</p> <ul style="list-style-type: none"> -Situation -Mission -Execution -Admin/Logistics -Command and Control
Patrol Execution	
<p>-Student patrol begins mission.</p> <p>-Students encounter rock pile.</p>	<p>-Ensure that patrol tactics are IAW unit SOPs.</p> <p>-Point out ground sign if not discovered by students.</p> <p>-Call a training time out to discuss ground sign awareness and mitigating actions i.e. investigate hazard, call for support or bypass.</p> <p>-Upon completion of discussion, direct student patrol to continue mission.</p>
Arrival at Abandoned Vehicle	
-Patrol leader should direct team members to perform 5/25 m checks , set a security cordon and conduct a proper search of the vehicle.	<p>Search should be conducted in the following manner:</p> <ul style="list-style-type: none"> - Perform 5/25 metre check during halts. -Area surrounding vehicle -Exterior of vehicle -Interior of vehicle

	-Note effectiveness of search techniques.
Discovery of EO	
<p>Upon discovery of EO, patrol leader should take the following actions:</p> <ul style="list-style-type: none"> -Initiate the 5Cs -Confirm item is EO -Clear people out of the area -Call HQ and report findings -Cordon off area and observe proper safety distances (150m – 375m) -Control the area and prepare a meeting point at a safe distance from EO for follow-on response personnel 	<p>-KEY POINT: Patrol leader should ensure that no one touches or moves the item.</p> <p>-Evaluate the effectiveness of the patrol’s actions.</p>
End Scenario	
-The patrol leader is responsible for ensuring that all equipment is accounted for and no gear is left behind.	<p>Conduct on-scene debrief of scenario highlights. Follow a logical sequence.</p> <ul style="list-style-type: none"> -Pre-departure -Patrol tactics -Ground sign awareness -Vehicle search -Actions on find -Implementation of 5Cs <p>Discuss areas that were deemed successful as well as areas that need improvement.</p>
Return to Base (RTB)	
-Prepare mission reports, debrief and conduct gear maintenance in the classroom or an area away from scenario location.	<p>-Ensure proper post-mission maintenance is performed on all equipment in accordance with the manufacturer's specifications and unit SOPs.</p> <p>-Receive debrief from patrol leader.</p> <p>Debrief should highlight:</p> <ul style="list-style-type: none"> -Lessons learned -Areas for improvement -Sustainment
-Collect all scenario training aids and ensure the students have accounted for all equipment and trash.	-Reset scenario for next team.

Event Map (insert site sketch or picture)



Event Summary:

The concept of this exercise is to allow a student team the opportunity to demonstrate mounted tactical operations and mission planning. Students should be monitored on their ability to develop a course of action (COA) and plan mounted tactical operations.

The instructor may opt to call a “training time out” at various points during the exercise. Training Time Outs’ are recommended to be taken during the scenario to discuss the following: 1) safety procedures 2) best practices 3) ways of improvement.

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PREFACE

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This training support package will support the following doctrinal tasks:

EHAT Number	Activity
EHA 1.17	Full Mounted/Convoy Operation Practical

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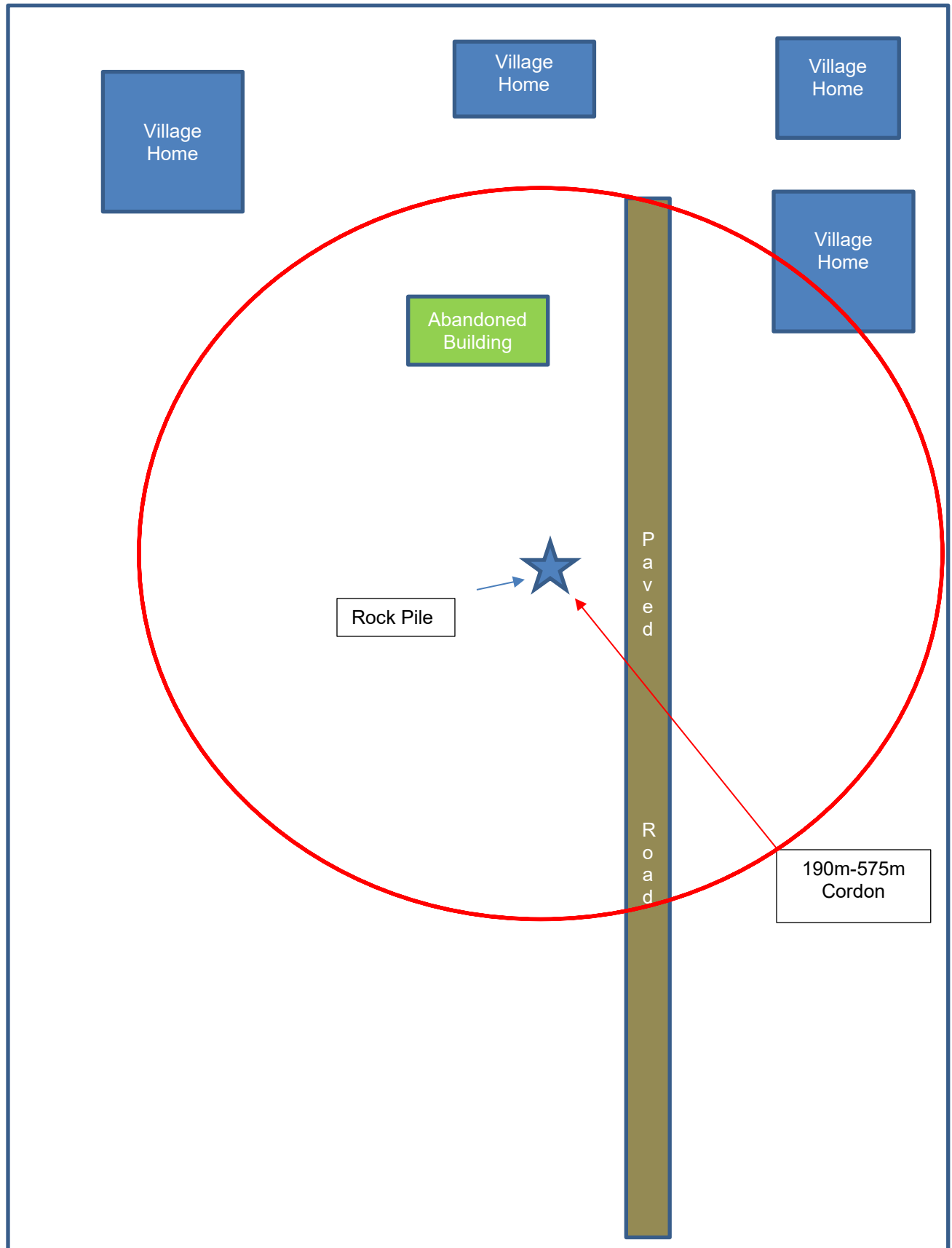
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Task	Perform mission planning and mounted/convoy operations.
Condition	In a post-conflict environment with required equipment.
Standard	Demonstrate the ability to safely plan, coordinate and lead a mounted/convoy operation and mission planning.

Resource Requirements	
Requirements:	Evaluator Notes:
<ul style="list-style-type: none"> -Mounted Patrol loadout. -Patrol vehicles. -Rocks to be used as a simulated ground sign. -Abandoned building for target of search. -Inert EO (Landmine or similar sized small piece of ordnance). 	<ul style="list-style-type: none"> -Verify patrol members have the proper equipment to conduct a routine mounted patrol in accordance with (IAW) unit standard operating procedures (SOPs). -Provide the convoy leader with GPS coordinates of the location they are required to patrol and a map of the area they will be patrolling. -Task patrol leader with planning and conducting a routine mounted patrol to a reported abandoned building to conduct a search for any hazardous items.
Concept of Setup	
Set-up	Evaluator Notes:
	-The patrol should be informed that an abandoned building was reported by a previous patrol as suspicious.
Set-up Tasks:	Evaluator Notes:
<ul style="list-style-type: none"> -Stack 3 to 5 rocks on top of one another along route to abandoned building to serve as a ground sign. -Emplace EO. -Divide the class into patrol teams IAW Unit SOPs'. 	<ul style="list-style-type: none"> -Place rock pile approximately 50 meters away from the abandoned building. -Place EO in a rear room of the building. -The position of patrol leader should be rotated to ensure that all students are provided the opportunity to act as patrol leader.
-Generate tasking orders.	Tasking orders should include: <ul style="list-style-type: none"> -Task objective -Movement timeline -Location of abandoned building
-Provide patrol leader with time to formulate plan and deliver necessary briefs.	
-Move teams to the training area as required.	
Scenario Execution	
<p>-Key Points are annotated in the Evaluator Notes section in bold lettering. Key Points are items that will not only affect the student's score adversely if not addressed but would also pose a potentially life-threatening hazard or violate a major safety if not performed correctly during an operational (non-training) patrol.</p>	

Execution:	Evaluator Notes:
Pre-mission Planning	
-Select Student team for scenario integration.	-Ensure students complete all required pre-mission checks as applicable to patrol equipment and vehicles.
<p>-Provide patrol team with tasking orders. Give the student team time to read and discuss the information provided.</p> <p>-Receive questions or prompt students to request additional information if they do not begin asking questions on their own.</p>	<p>-Tasking should indicate that the following information was gathered via telephone:</p> <ol style="list-style-type: none"> 1. UN convoy reported a suspicious abandoned building at 0700 on the current date. 2. Location is on the outskirts of a village approximately 10 kilometers away. <ul style="list-style-type: none"> -Provide a simulated Lat/Long if requested, prompt student to ask if not. -The route to the abandoned building is semi-permissive (hostile threats may be encountered). 3. Note any hazards or items of interest encountered during the patrol i.e. ground signs, danger areas or threat indicators.
Pre-Mission Brief	
-The student patrol leader should begin gathering the information required to provide a pre-mission brief.	-Indicate that you (the Instructor) will fulfill the role of any entities or support assets they deem necessary if requested.
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Arrival at Abandoned Building	
-Patrol leader should direct team members to perform 5/25s, set a security cordon and conduct a proper search of the building.	<p>Search should be conducted in the following manner:</p> <ul style="list-style-type: none"> - Perform 5/25m checks when halted (top-cover sentry, searchers exit the vehicle, 5 m check and 25 m check) - Area surrounding building - Exterior of building

	<ul style="list-style-type: none"> - Interior of building -Note effectiveness of search techniques.
Discovery of EO	
<p>Upon discovery of EO, patrol leader should take the following actions:</p> <ul style="list-style-type: none"> -Initiate the 5Cs -Confirm item is EO -Clear people out of the area -Call HQ and report findings -Cordon off area and observe proper safety distances (190m – 575m) -Control the area and prepare a meeting point at a safe distance from EO for follow-on response personnel 	<p>-KEY POINT: Patrol leader should ensure that no one touches or moves the item.</p> <ul style="list-style-type: none"> -Evaluate the effectiveness of the patrol’s actions.
End Scenario	
<p>-The patrol leader is responsible for ensuring that all equipment is accounted for and no gear is left behind.</p>	<p>Conduct on-scene debrief of scenario highlights. Follow a logical sequence.</p> <ul style="list-style-type: none"> -Pre-departure -Patrol tactics -Ground sign awareness -Building search -Actions on find -Implementation of 5Cs <p>Discuss areas that were deemed successful as well as areas that need improvement.</p>
Return to Base (RTB)	
<p>-Prepare mission reports, debrief and conduct gear maintenance in the classroom or an area away from scenario location.</p>	<p>-Ensure proper post-mission maintenance is performed on all equipment and vehicles in accordance with the manufacturer's specifications and unit SOPs.</p> <p>-Receive debrief from patrol leader.</p> <p>Debrief should highlight:</p> <ul style="list-style-type: none"> -Lessons learned -Areas for improvement -Sustainment
<p>-Collect all scenario training aids and ensure the students have accounted for all equipment and trash.</p>	<p>-Reset scenario for next team.</p>

Event Map (insert site sketch or picture)





EHAT MODULE 2: IED TYPES, USES AND COMPONENTS





Terminal Learning Objectives

Students will understand IED components, types, emplacement and employment.



Overview

2.1 Components of an IED

2.2 Method of IED
emplacement

2.3 Classification of
employment



2.1 Components of an IED



Enabling Learning Objectives

Define an IED and discuss IED components.

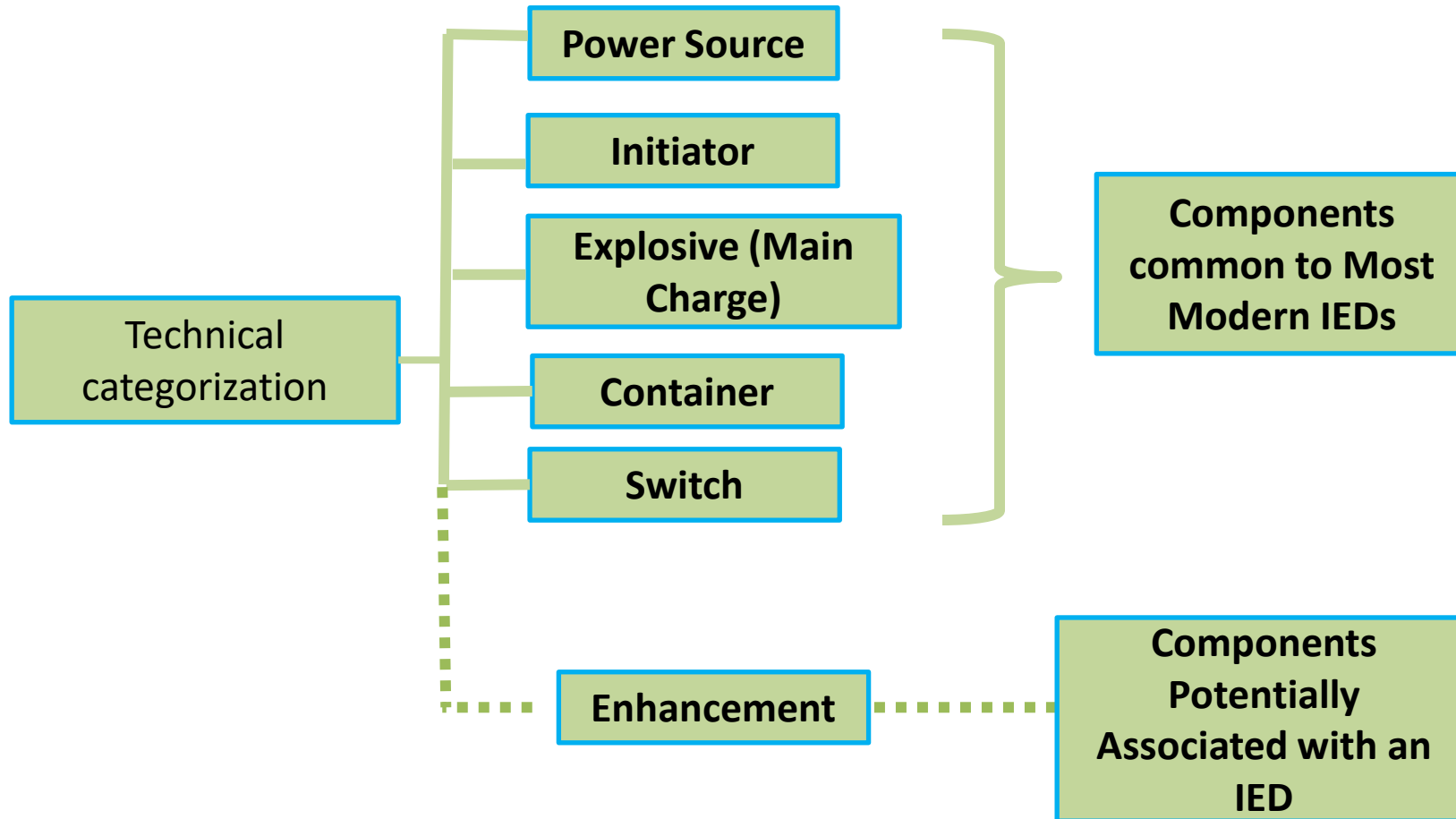


Definition of an IED:

A device placed or fabricated in an improvised manner incorporating *destructive, lethal, noxious, pyrotechnic or incendiary chemicals* and designed to *destroy, incapacitate, harass or distract*. It may incorporate military stores, but is normally devised from non-military components



COMPONENTS OF AN IED:





Associated Components

Components that are:

- Part of an IED or improvised weapon system.
- The tools required to produce the components.
- Precursors to the manufacture of IED components including explosives.



Components of an IED

IEDs normally consist of 5 basic parts: power supply, switch, initiator, main charge and container.

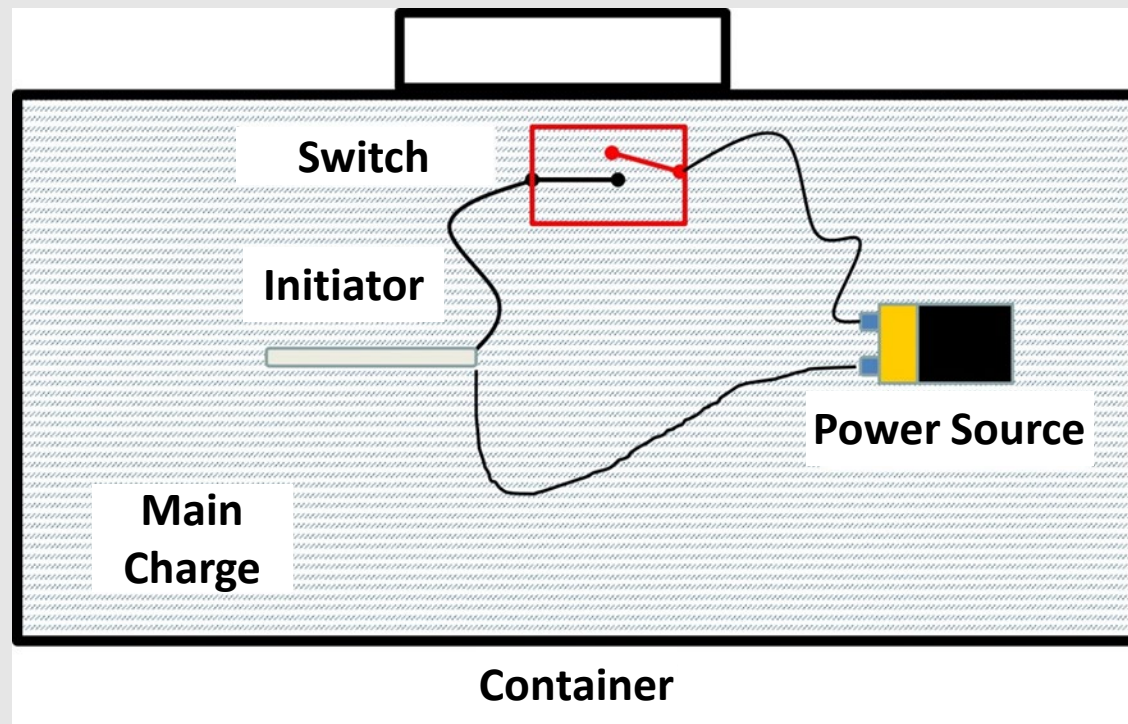
Power source

Switch

Initiator

Main charge

Container





Power Source

A device that stores or releases electrical or mechanical energy. Used to provide power to the electrical initiator.

Common TTPs:-

- ✓ Batteries are deeply buried under the main charge to avoid ease of detection.
- ✓ Switch sometimes taped to the power source and/or Main Charge.
- ✓ Power Sources can be offset from other IED components to either:
 - ✓ Reduce likelihood of detection by metal detectors;
 - ✓ Allow emplacement of all other components without arming and last-minute arming upon approach of a target.



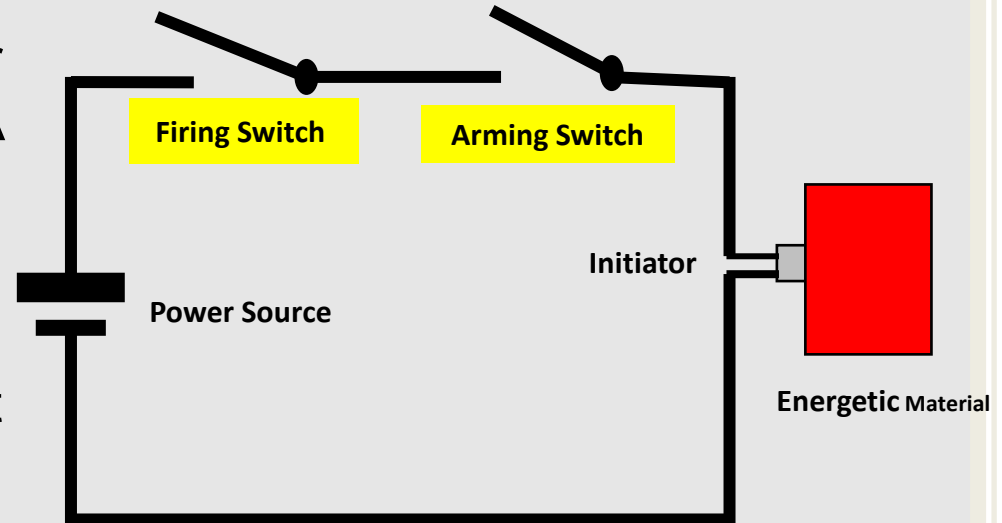


Switches

- A device for making, breaking, or changing a connection in an IED. A single switch can have multiple functions (i.e., firing and arming)

a. **Firing switch-** The component that initiates the explosion train.

b. **Arming switch-** A switch that prevents an IED from arming until an acceptable set of criteria has occurred and subsequently effects arming and allows functioning.

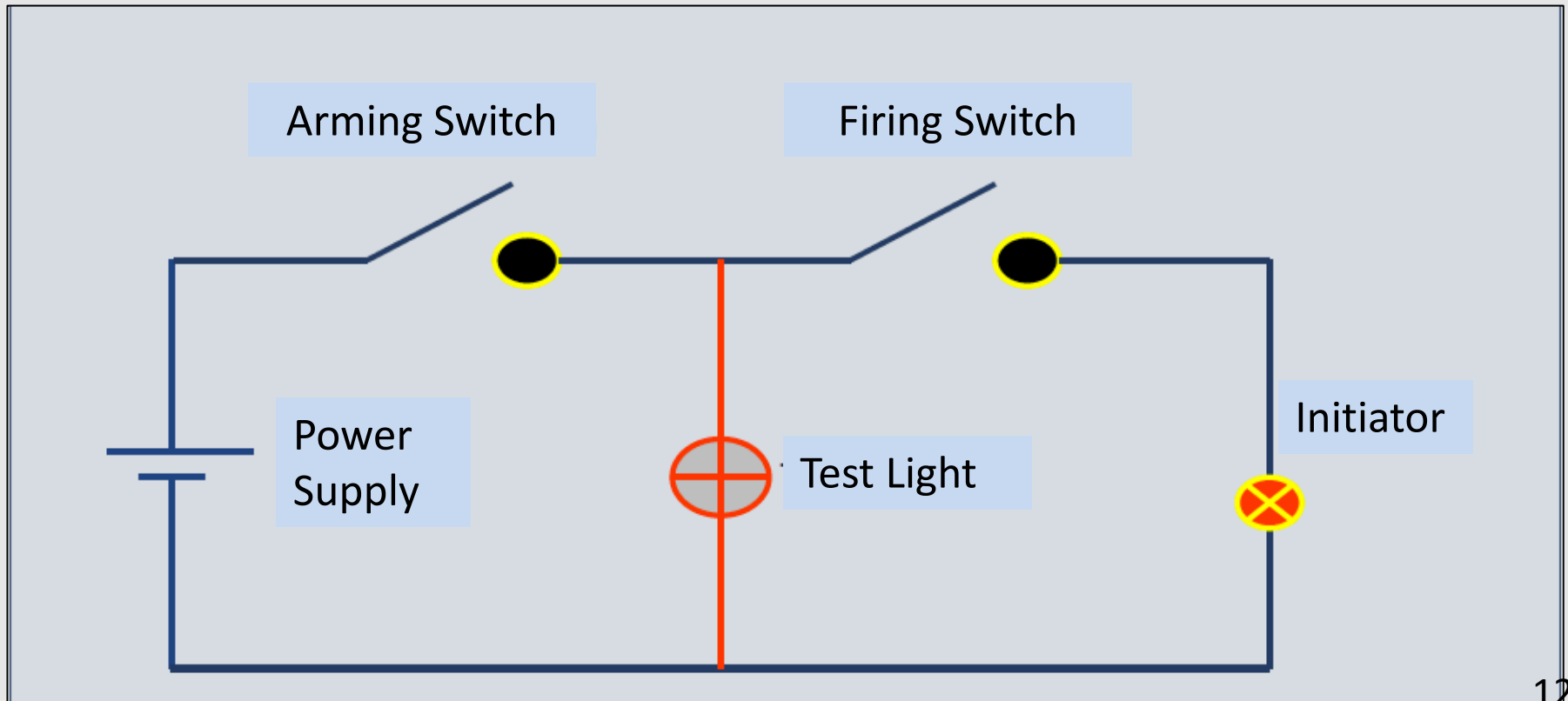


- **Firing Switch** – always present
- **Arming Switch** – may be present as a safety feature



Switches

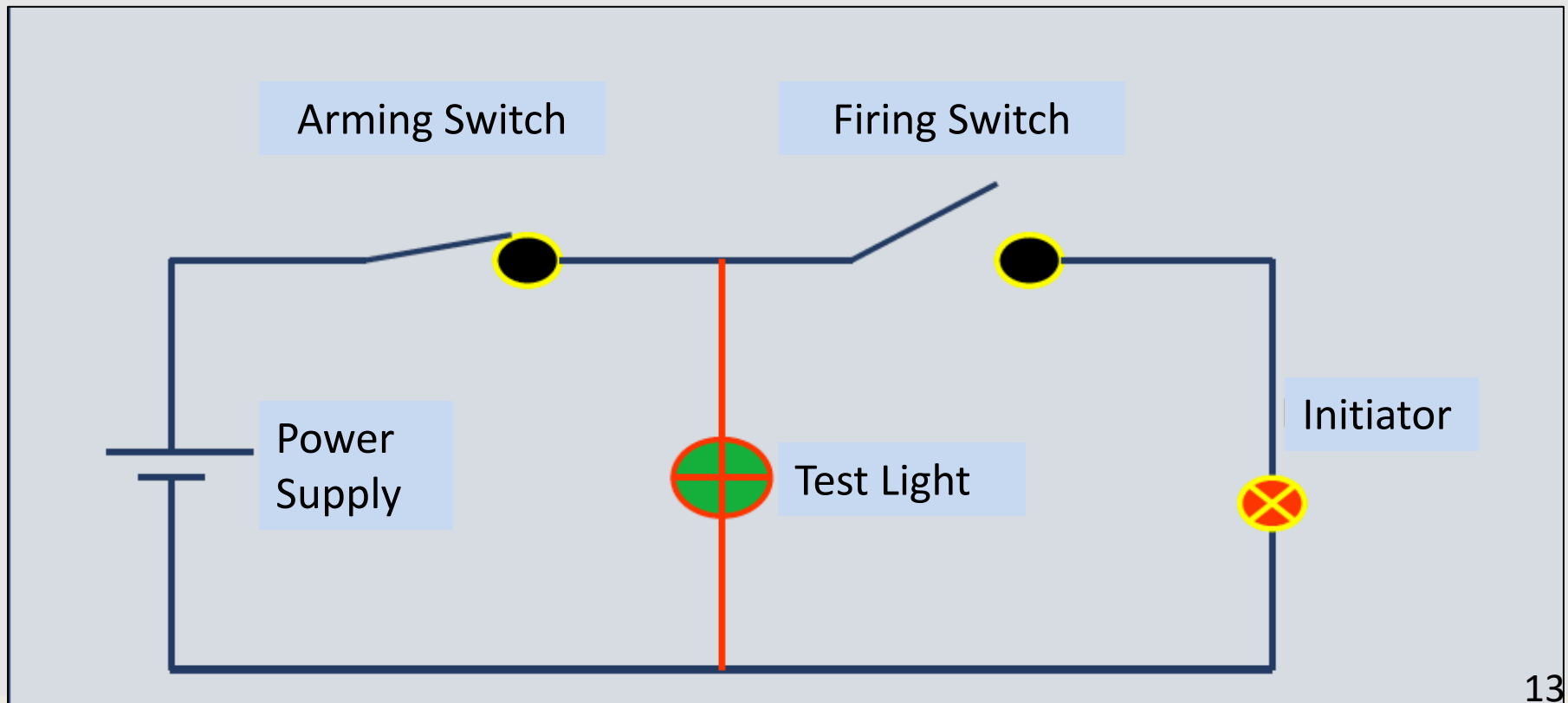
Switch Functioning - Open Circuit





Switches

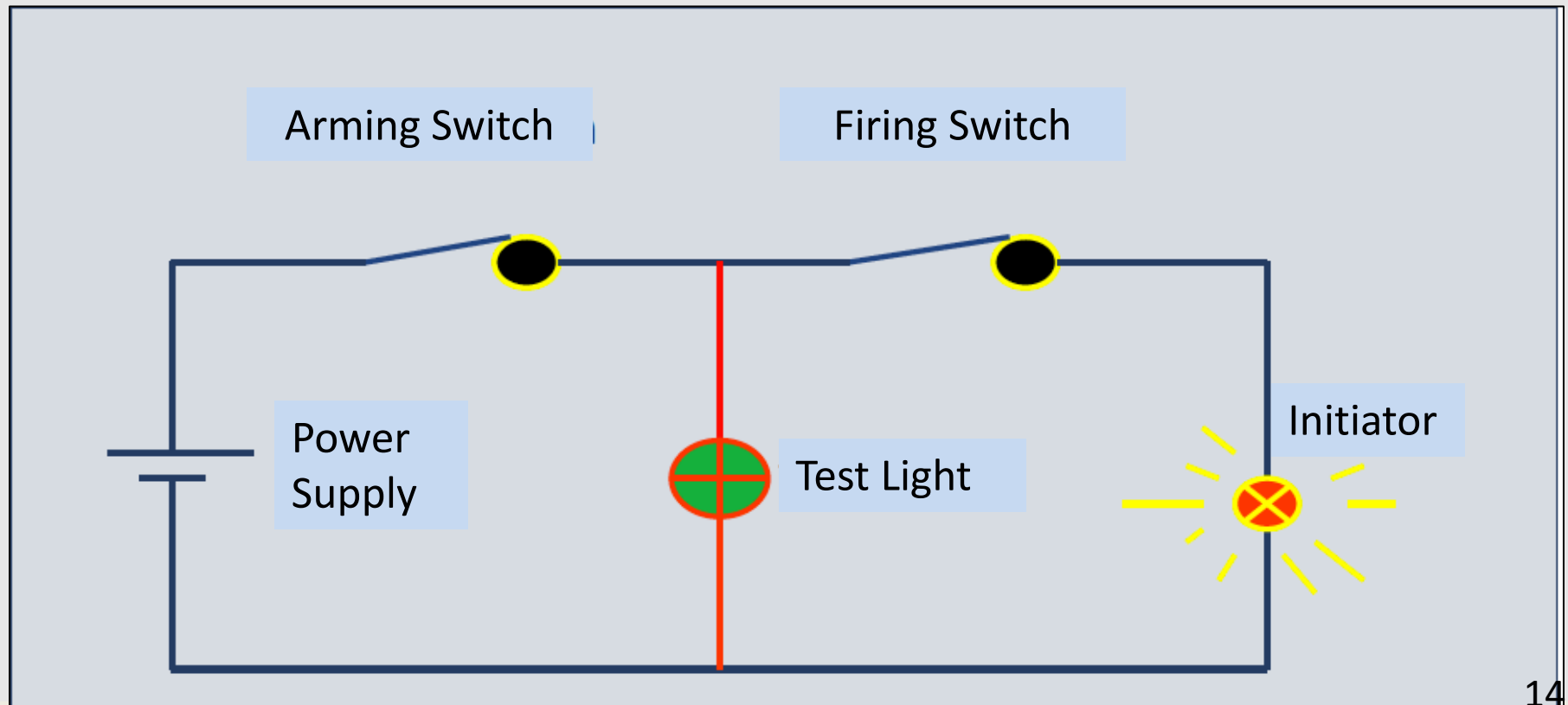
Switch Functioning - Circuit Armed



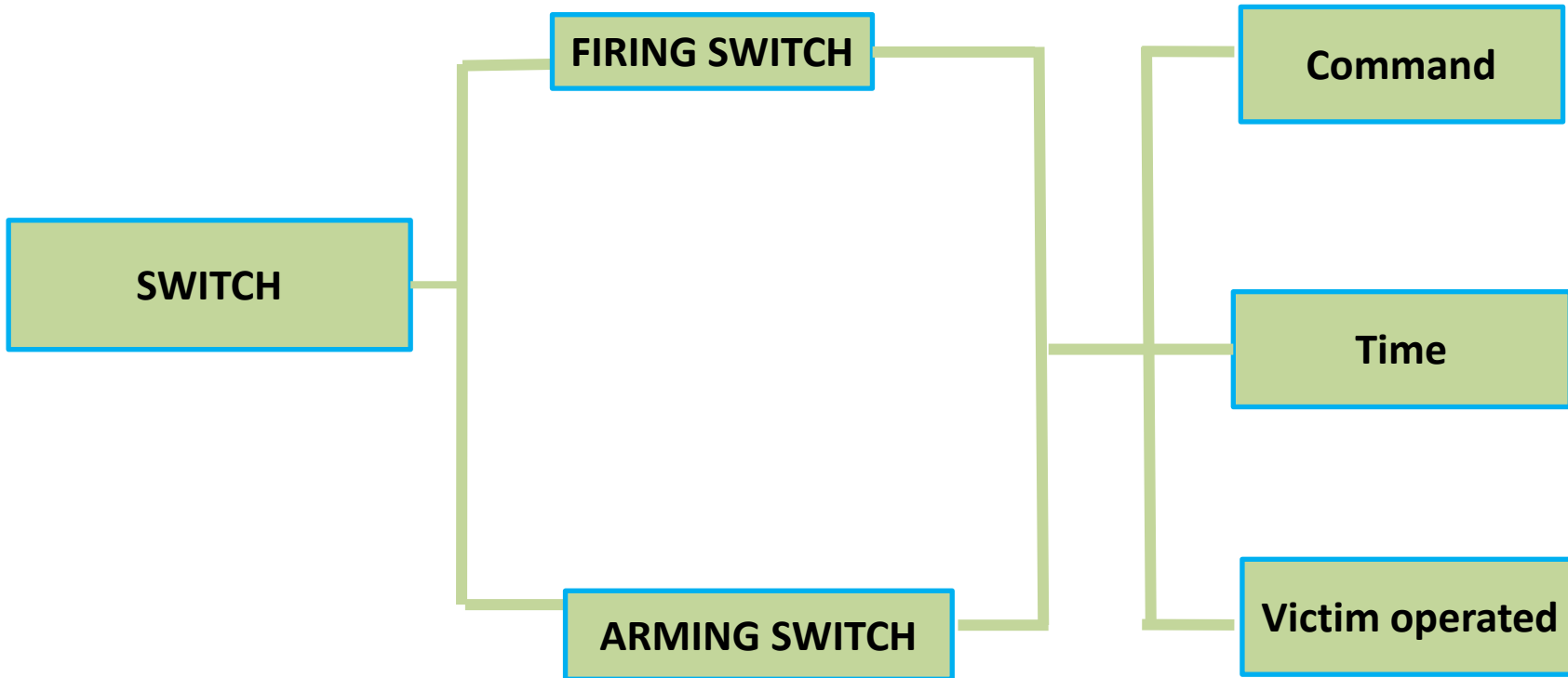


Switches

Switch Functioning - Circuit Live, Initiator Functioned



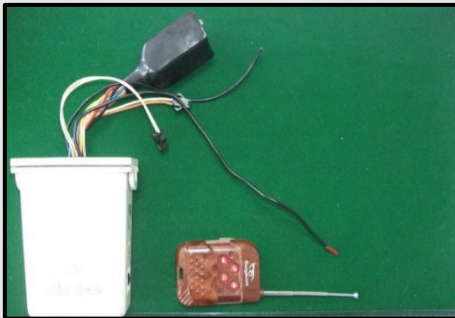
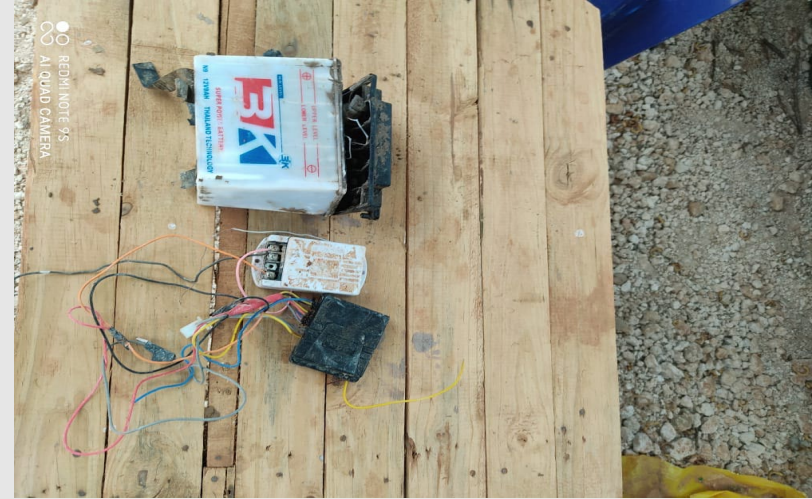
Types of Switches





Command Switch

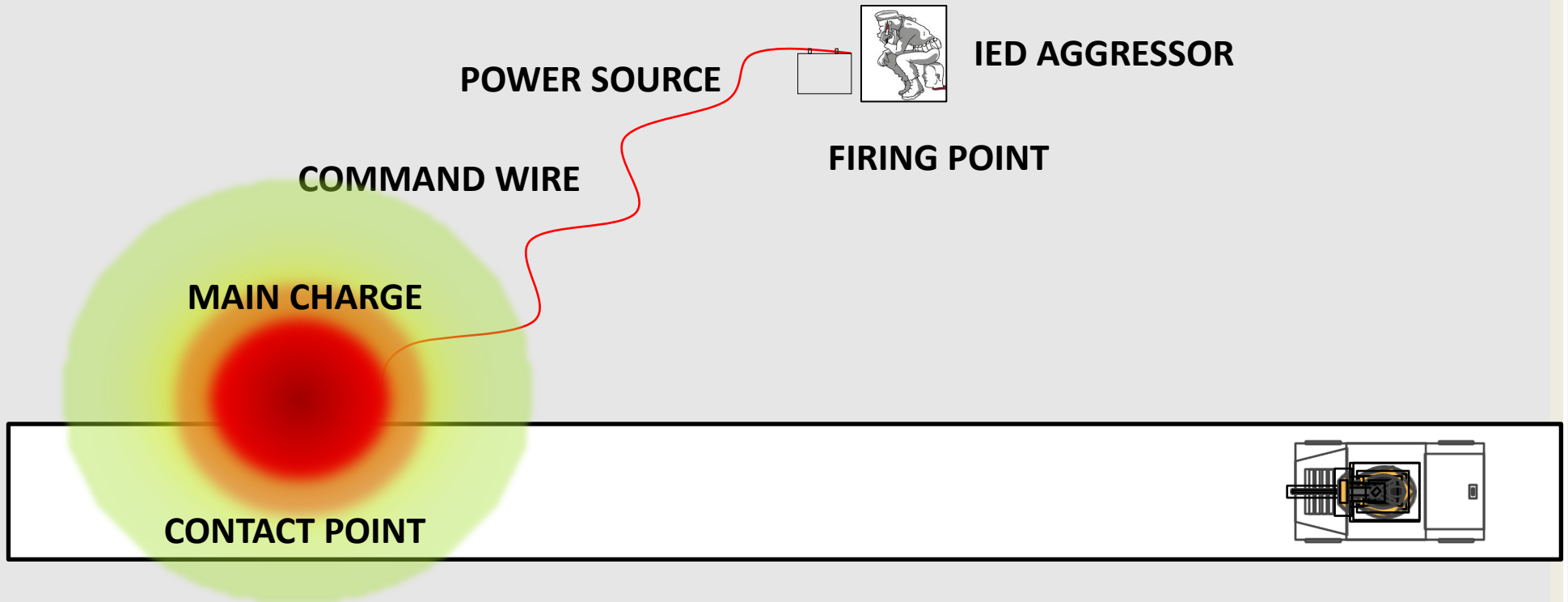
- An IED fired by command gives aggressors the means to attack a specific target from a safe distance at the moment when the explosion will have best effects. Command IEDs are especially suited to attacking moving targets. To implement an attack using a command IED, the aggressors need to be able to select two locations: the **contact point** where the IED will be placed; and the **firing point** from where to command to fire.





Command Switch

- Command wire





Command Switch

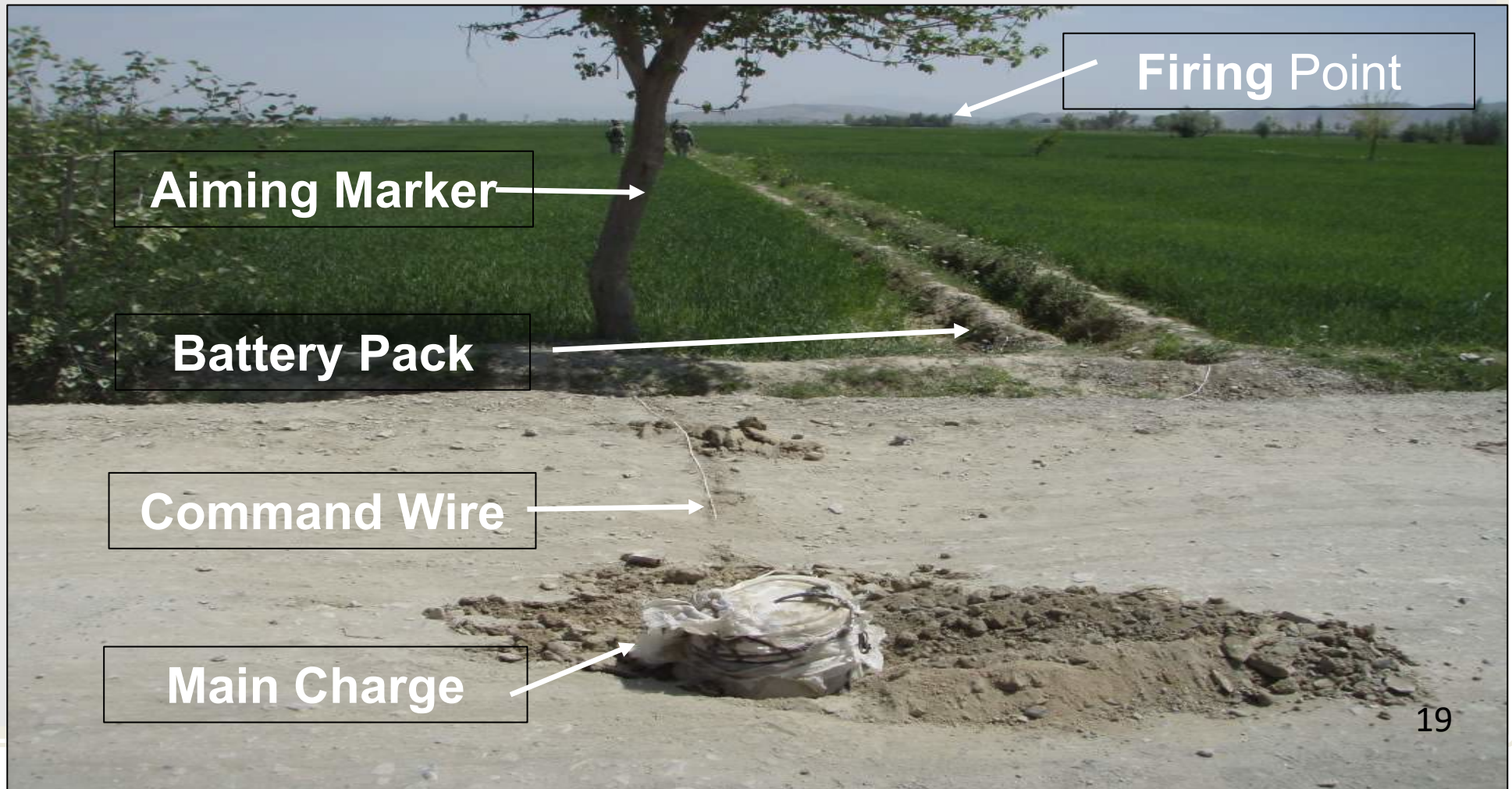
- Command wire





Command Switch

- Command wire





Command Switch

- Command wire





Command Switch

- Command wire



Command Switch

Radio Control IED (RCIED)

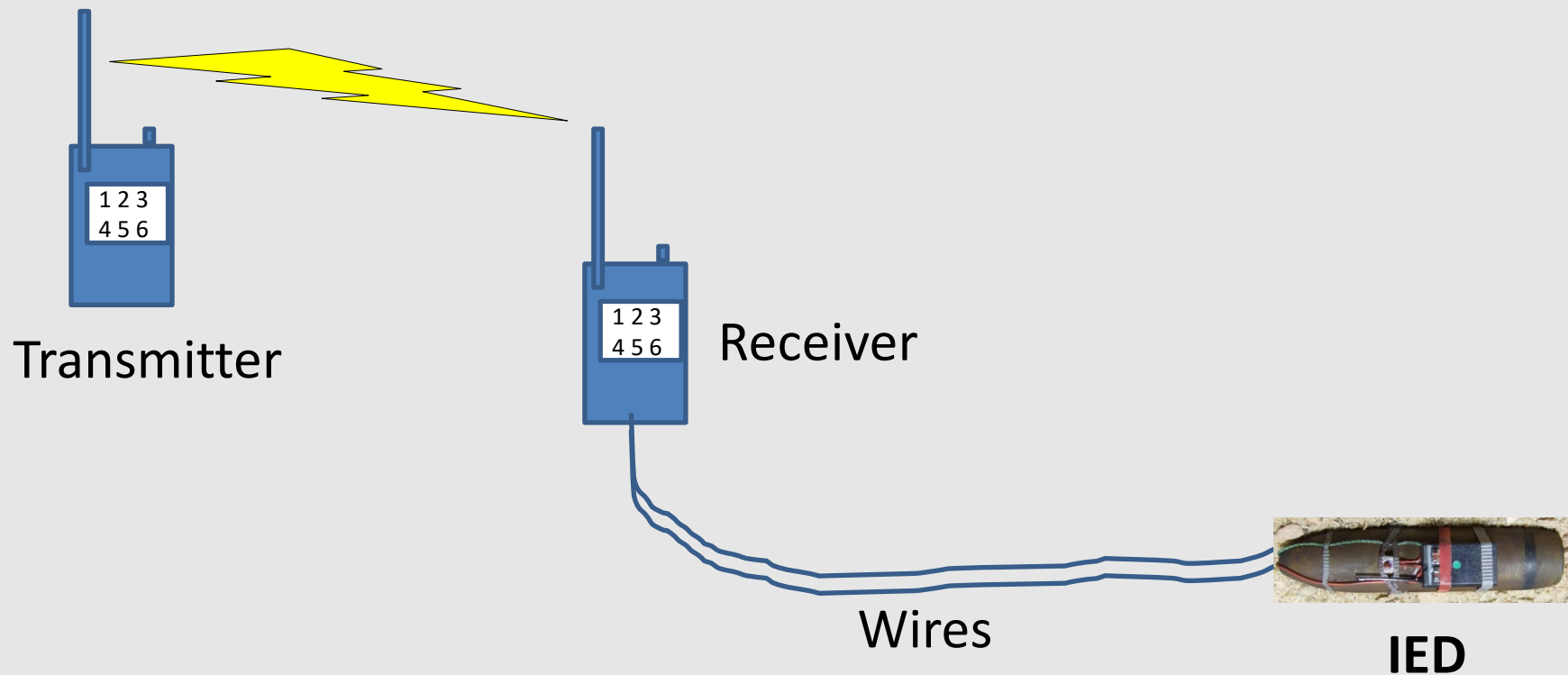




Command Switch

Radio Control IED (RCIED)

Remote Control System





Command Switch

Radio Control IED (RCIED)

- Mobile phones

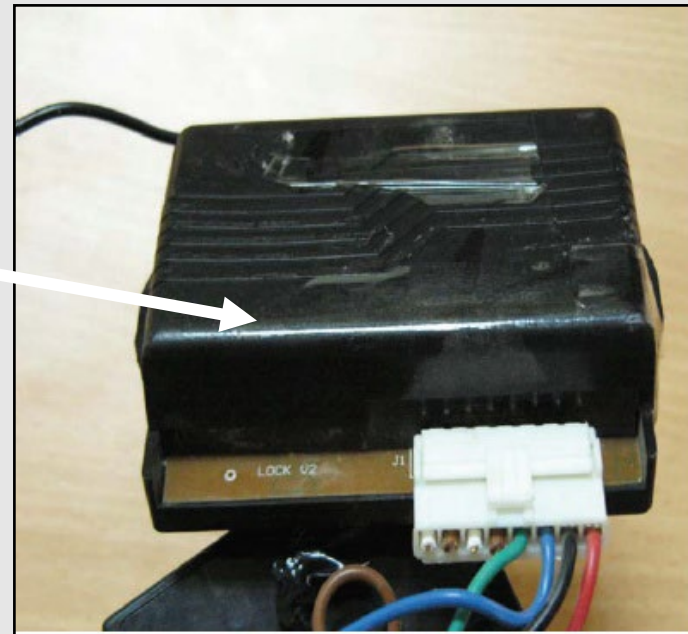




Command Switch

Radio Control IED (RCIED)

- Keyless entry system

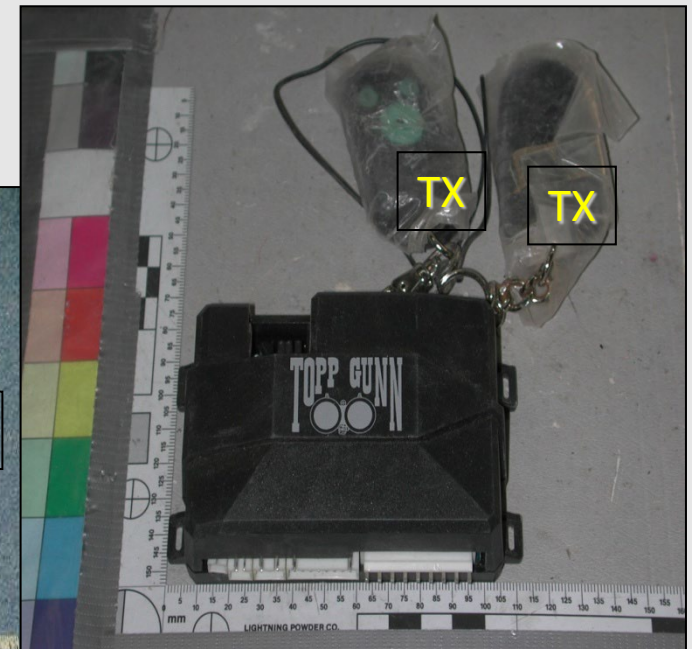




Command Switch

Radio Control IED (RCIED)

- Car alarms

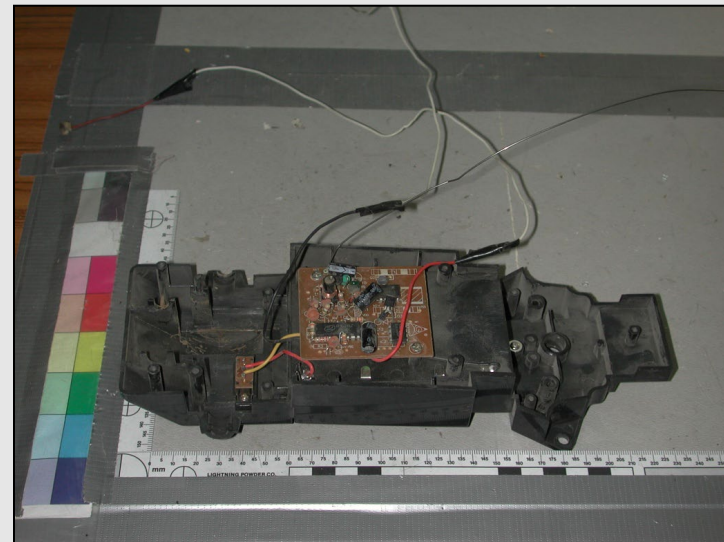




Command Switch

Radio Control IED (RCIED)

- Remote controlled toys





Command Switch

Radio Control IED (RCIED)

- Wireless doorbells





Command Switch

Radio Control IED (RCIED)

- Improvised Rockets





Time Switch

- Time initiated is the method by which an IED self initiates after a predetermined delay. This is achieved through the use of mechanical, electronic and non-electric timers.
- The effectiveness of a time initiated IED relies heavily on accurate predictions by the aggressors of the intended target's time of presence at the emplacement location.
- An IED triggered by time allows insurgents to be at a safe distance from the explosion, and to escape the scene before any security response. The disadvantage of time IEDs is that the intended victims might not be close to the IED when it explodes.





Time Switch

Timed Devices



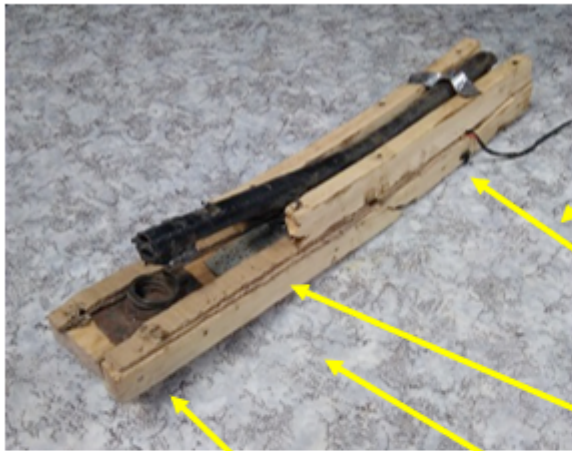
Mechanical Timers



Electrical Timers



Victim operated switches



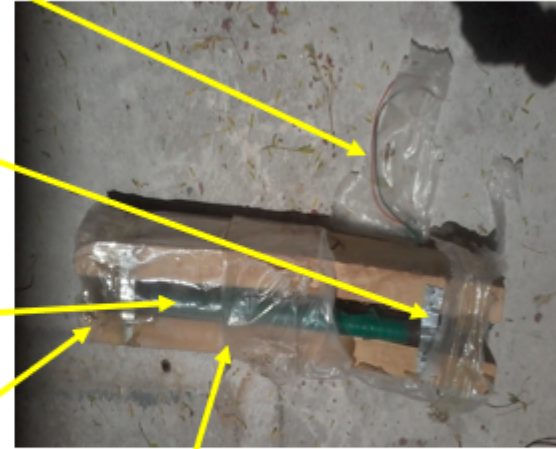
Connection Cables

Securing/joining metal sheets

Insulated conducting lever bar

Wooden Plates

Contact point



Waterproofing polythene

- When pressure is applied on top of the plate, contact of the insulated sheet of metal and spring is established at the end points and hence completion of the electrical circuit which then initiates the device.



Victim operated switches

Victim Operated IED (VOIED)

- Pressure plates

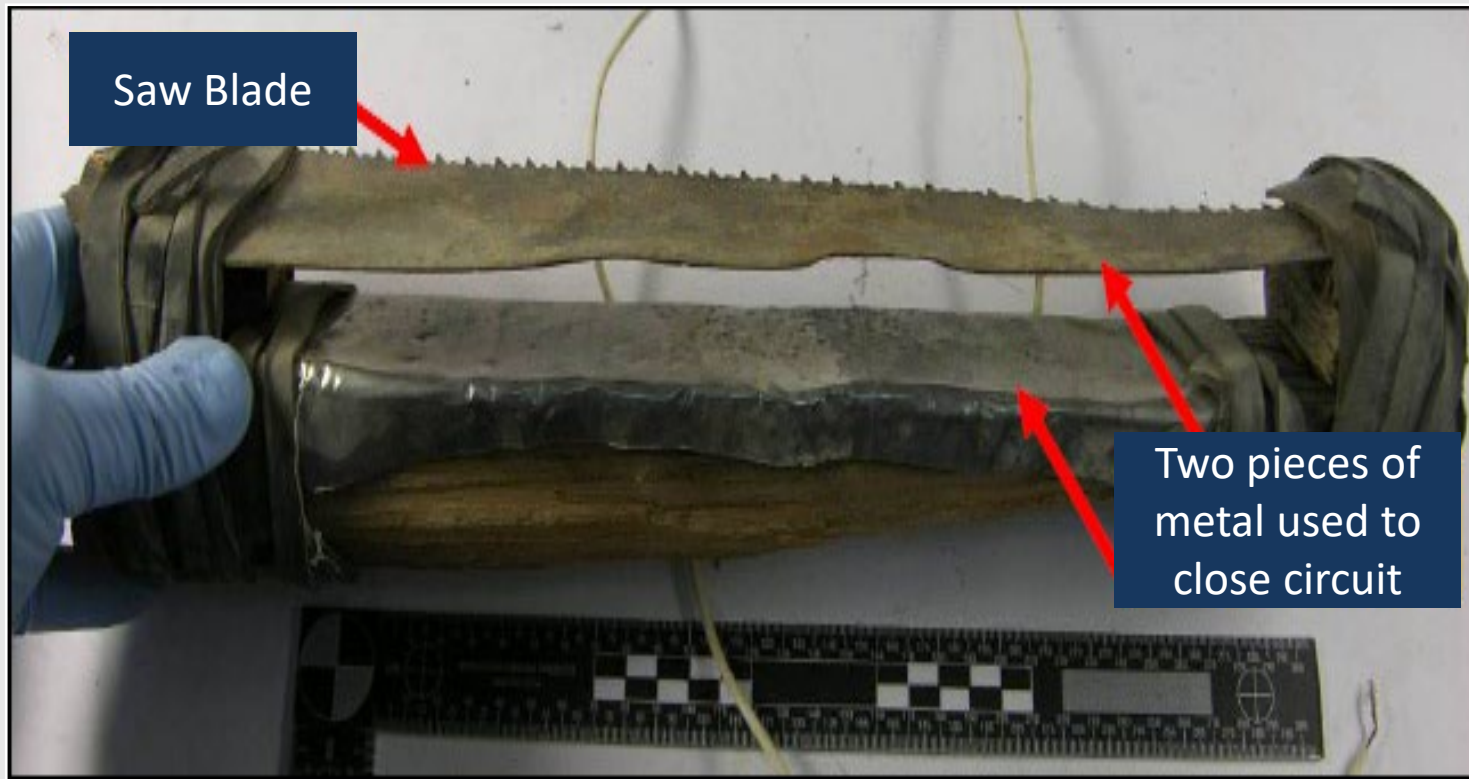




Victim operated switches

Victim Operated IED (VOIED)

- Pressure plates

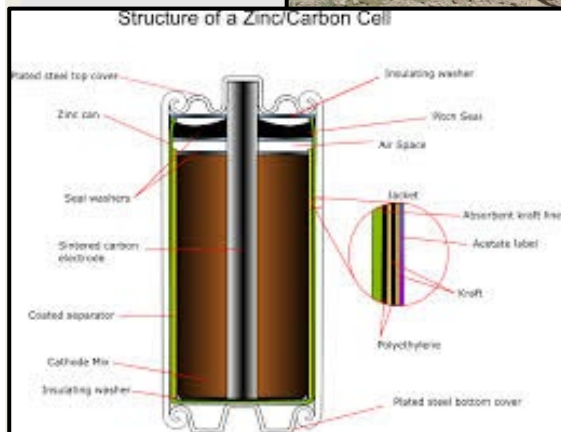




Victim operated switches

Victim Operated IED (VOIED)

- Pressure plates – carbon rod

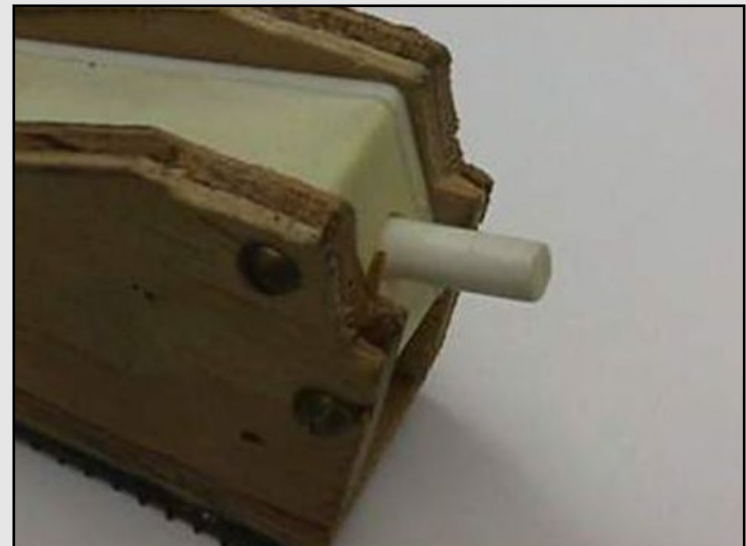
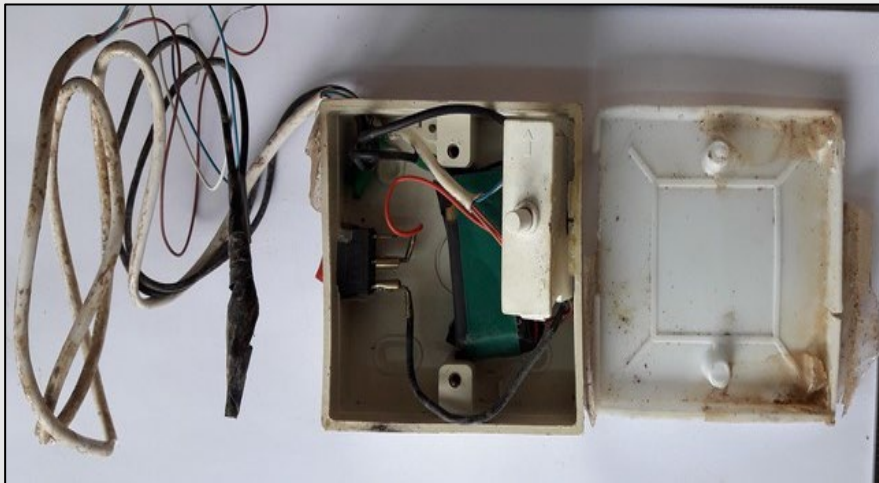




Victim operated switches

Victim Operated IED (VOIED)

- Pressure release

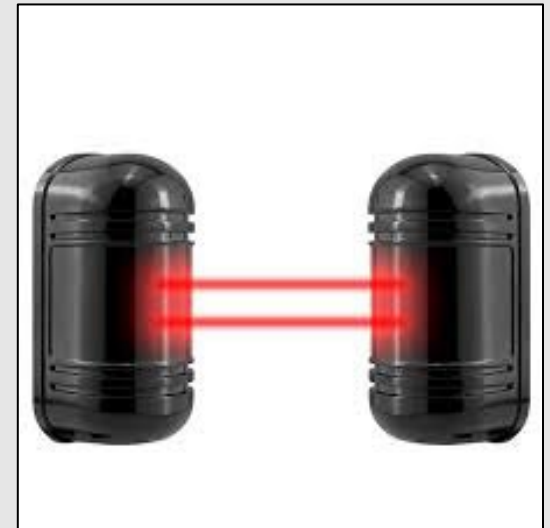
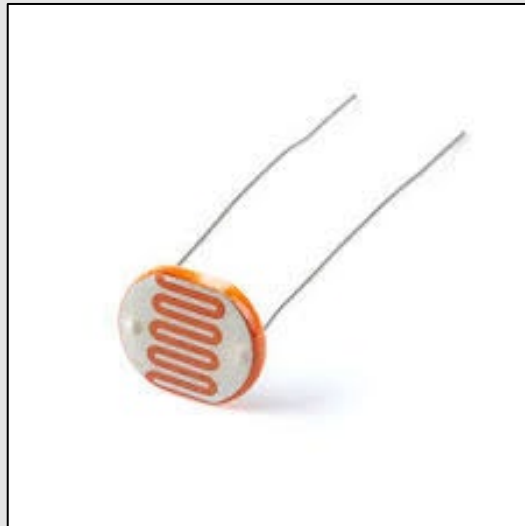




Victim operated switches

Victim Operated IED (VOIED)

- Sensors

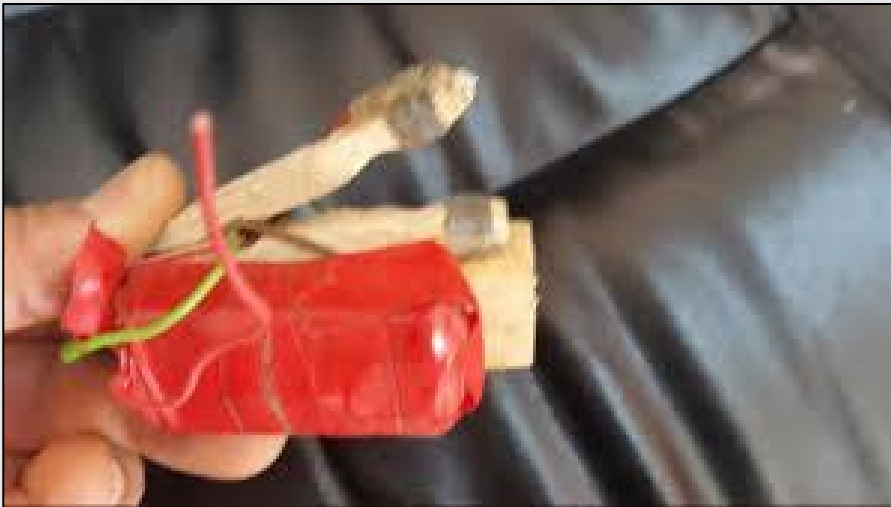




Victim operated switches

Victim Operated IED (VOIED)

- Tension





Victim operated switches

Victim Operated IED (VOIED)

- Tension release





Victim operated switches

Victim Operated IED (VOIED)

- Membrane





Initiators (detonators)

- **Source**
Categorization
 - ✓ Commercial
 - ✓ Military
 - ✓ Improvised
- **Method of function**
 - ✓ Electric
 - ✓ Non-electric



Electric Initiators



Non-Electric Initiators



Electric Initiator



Main Charge

Explosive (main charge) forms the largest component of the IED. The extent of the effect depends on the size of the quantity of main charge used; the larger the component the greater the effect/damage.

There are 3 main sources of high explosives which can be used in making IEDs;

- **Commercial explosive:**
- **Military explosive.**
- **Home Made explosive.**



Military explosive



Commercial explosive



Home Made explosive



Conventional Explosives

Industrial or mass produced explosives intended for use in demolition operations, demining or military applications.

Examples:

- TNT
- Dynamite
- C-4
- RDX





Conventional Explosives

- Military explosives
- Commercial explosives

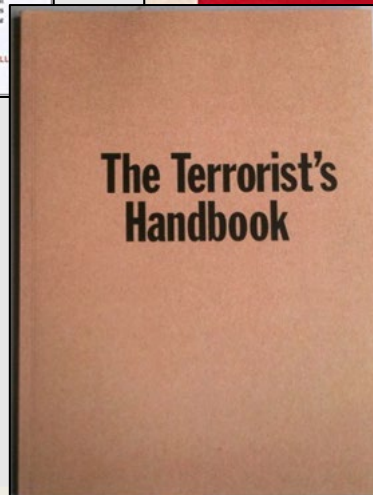
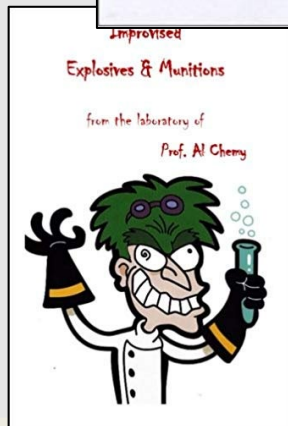
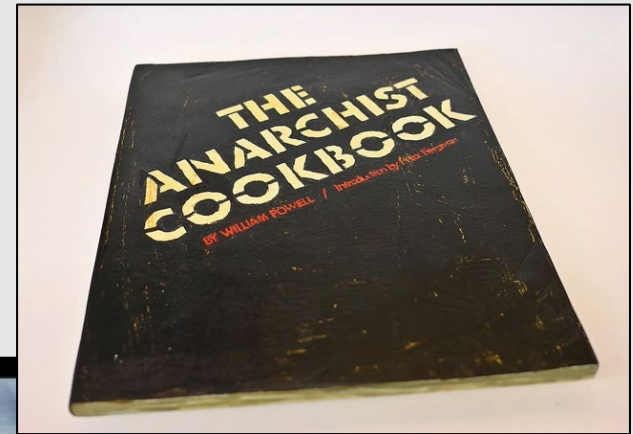
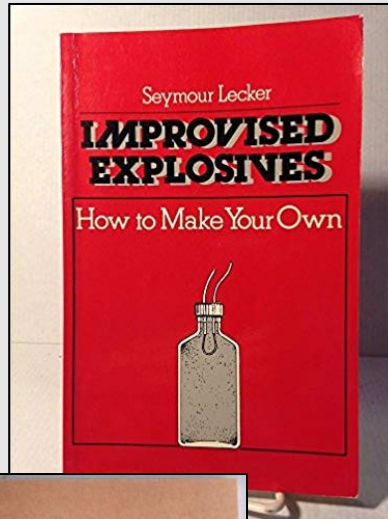
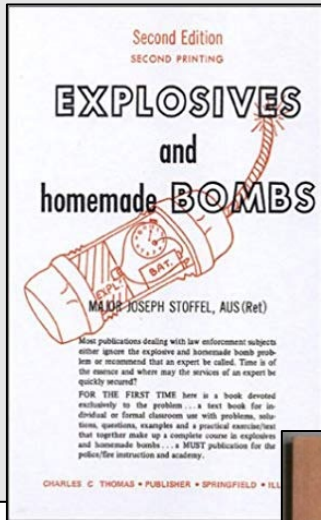


HME in Syria





Homemade Explosives (HME)





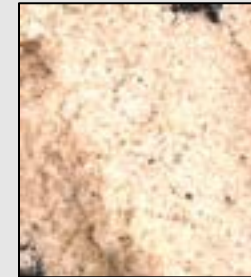
HME Types



Ammonium Nitrate Mixtures



Chlorate/Perchlorate Mixtures



Urea Nitrate



HMTD



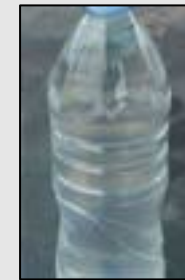
TATP



Pyrotechnics



Black Powder



HP + Nitromethane or Ethanol



HME Types

Hydrogen Peroxide Mixtures



Food Additives
for Citric Acid



Hair Bleach for
Hydrogen Peroxide



Drain Cleaners
for Sulfuric Acid



Nail Polish
Remover for
Acetone

Camp Stove
Fuel Tablets for
Hexamine

Hexamethylene
Triperoxide Diamine
(HMTD)



Triacetone Triperoxide (TATP)



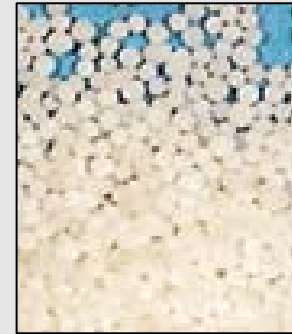
Potential HME Manufacture Indicators

If you notice:

- Dry chemical components
- Granular product
- Grinding equipment
- Simply safety equipment

Review Information on:

- Ammonium Nitrate mixtures
- Black powder
- Chlorate/Perchlorate mixtures



Ammonium Nitrate



Black Powder



Potential HME Manufacture Indicators

If you notice:

- Liquid and some dry chemical components
- Finer, more powdery product
- Pyrex, mason jars, or scientific glassware
- Filters
- Ice water baths
- Eye and Respiratory/Acid-resistant protection

Review information on:

- Hydrogen Peroxide mixtures
- TATP
- HMTD
- Urea Nitrate





Potential HME Manufacture Indicators

If you notice:

- Predominantly liquid chemicals
- Liquid product
- Pyrex, mason jars, or scientific glassware
- Safety eye and respiratory protection
- Acid-resistant skin protection

Review Information on:

- MEKP
- EGDN/NG mixtures
- Hydrogen Peroxide mixtures (some)





HME Precursors

- Most precursors comprise of chemicals easily found in any home or local community, even in large quantities.
- Definition: A substance from which another substance is formed.





Container

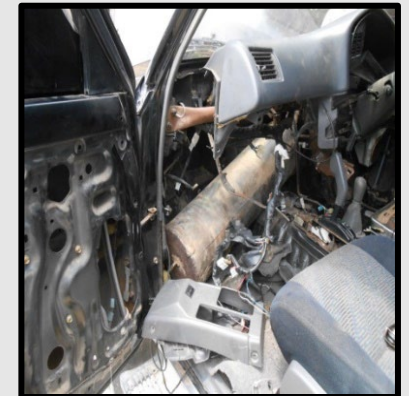
- An **IED Container** is any item with a void within it, into which the other components of an IED are placed. IED containers can simply contain components of an IED or can also act to **conceal** the components and / or **confine** the explosive material of the IED which can produce direction effects.





Examples of Container

- **Plastic Containers** – 5 litre Milk Container & Yellow Oil Drums
- **Small Metal Boxes** - UVIED
- **Military Ordnance (MILORD)**
- **Vehicles (VBIED)**
- **Machined containers** for directional effects
 - Directional Fragmentation Charges (DFC)
 - Improvised Claymores (IC)
 - Platter charges
 - Explosive Formed Projectile (EFP)
- **Vests** – used by PBIED





IED Enhancers

- **Fragmentation** such as ball bearings, nuts, bolts, washers, nails, bullets, shell casings, scrap metal, rocks, glass, etc
- **Gas cylinders & containers** – Compressed Propane, Oxygen, Acetylene and other gases, intended to increase blast, thermal and / or fragmentation effects.
- **Liquid Gasoline, diesel and paraffin** in plastic or metal containers could be present as an attempt to give the IED a greater blast and/or thermal effect.





Quiz

1. What are the 5 main parts of an IED?
 - *Power source, initiator, switch, main charge, and container.*
2. What are the 2 types of initiators?
 - *Electric and non-electric.*
3. What are the purposes of IED containers?
 - *Concealment and or confinement.*



Quiz

1. What are the type by function of IED's discussed
 - *Command/Time/Victim Operated*
2. Pressure is an example of what type of IED
 - *Victim Operated*
3. What is one example of a Command IED
 - *Command wire*



HME Types Quiz

What are some examples of commercial explosives?

- *TNT, Dynamite, C-4, RDX.*

Are HME recipes found on the internet safe to use?

- *Even accurate recipes are extremely dangerous to follow, and the explosives created often are highly unstable.*



HME Types Quiz

What actions should be taken if HME is encountered while on patrol?

- *If you are patrolling or searching buildings and you come across precursors, or similar chemicals in bulk, **DO NOT** touch anything, retreat from the area and report suspicions up the command chain.*



Questions?



2.2 Method of emplacement



Enabling Learning Objectives

Discuss and understand the impact of IED use and how they are emplaced.



Impact of IED Use

Impact of IED Use:

- Military and Security Forces Impact
- Humanitarian Impact
- IED Impact Categories
 - Primary
 - Secondary
 - Tertiary





Methods of IED Emplacement

Surface:

- IED is emplaced on the surface of the ground.

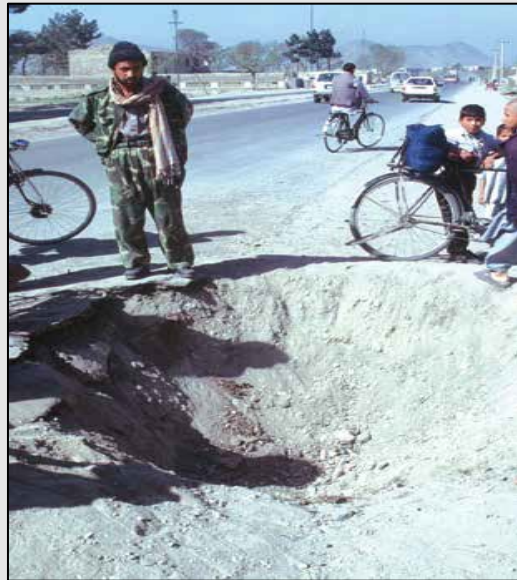




Methods of IED Emplacement

Subsurface:

- The IED is buried beneath the surface of the ground.





Methods of IED Emplacement

Elevated:

- IED emplaced above the surface: hanging from an overpass, on a roof, etc.





2.3 Classification by employment of IEDs



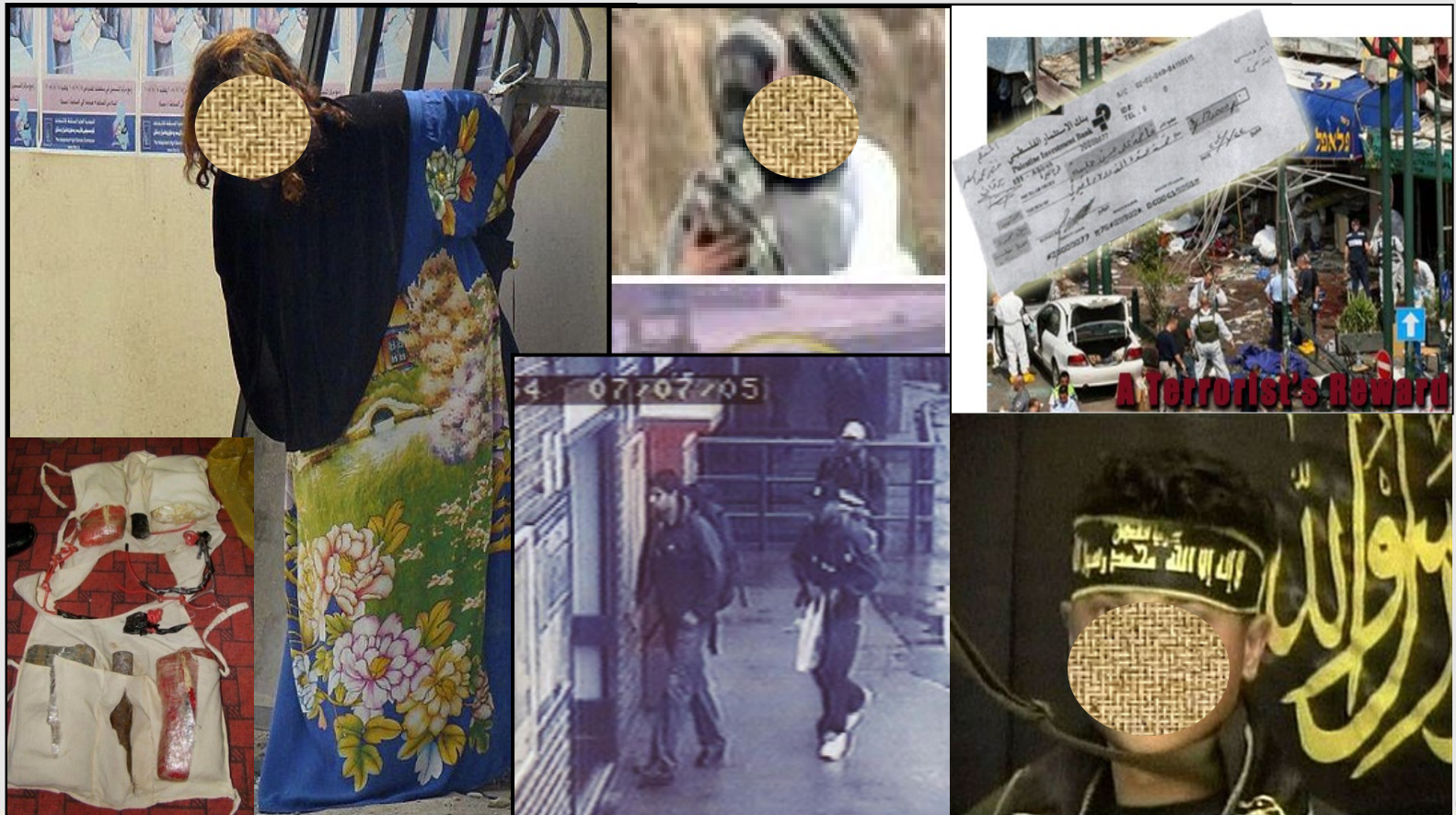
Enabling Learning Objectives

Discuss and understand the how IEDs can be employed



Classification of IEDs by employment

- Person borne IED (PBIED)





Classification of IEDs by employment

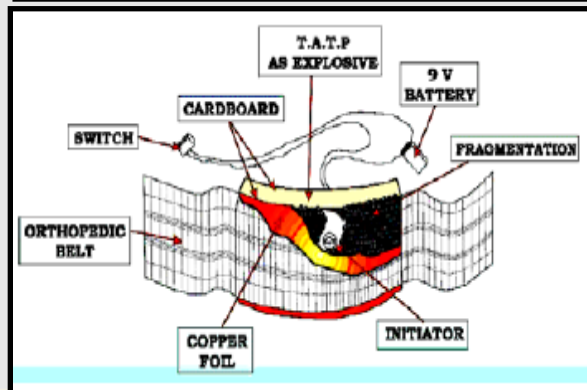
- Person Borne IED (PBIED)





Classification of IEDs by employment

- Person borne IED (PBIED)





Classification of IEDs by employment

- Person borne IED – most common





Classification of IEDs by employment

- Person Borne IED





Classification of IEDs by employment

- Suicide Vehicle borne IED





Classification of IEDs by employment

- Suicide Vehicle borne IED
 - Double (complex) attack
 - Ordnance concealed
 - Normally detonated by driver
 - RC option





Classification of IEDs by employment

Suicide Vehicle Borne IED (SVBIED) – Example of Suicide vehicle borne IED

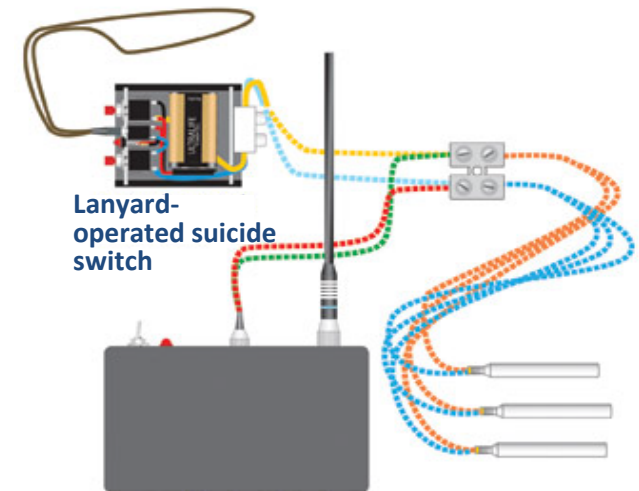
Large Vehicle-Carried IED, U.N. Building, Baghdad 19 August 2003

Device Construction

A Soviet Kamaz military variant flatbed truck (possibly with a civilian paint job) loaded with approx. 454kg of mixed military ordnance, including a 226kg aircraft bomb, covered with a tarpaulin. Plastic explosive with blasting caps would have been placed at various points in the load, probably inserted in the fuze holders of some of the larger items of ammunition.

Device Initiation

A simple switch in the cab is the likely means of initiation, (possibly of the lanyard-operated type recovered from various locations in Iraq). It is also likely that a radio-controlled backup circuit was also present in the cab, incorporating a modified radio control receiver.



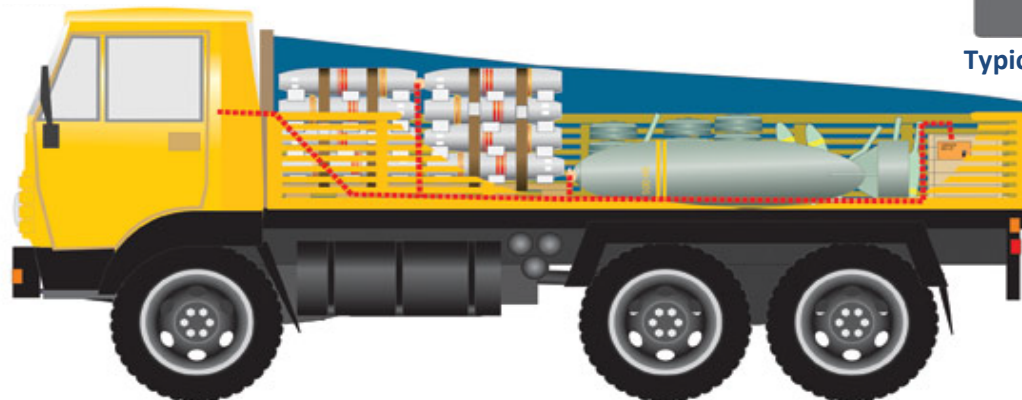
Typical backup RC pack

Notes:

Munitions shown are purely representative.











Not all munitions would have been destroyed in the explosion.

Components are not to scale.





Classification Of IEDs

 UNMAS		Evacuation Distance Guide		
Threats		Explosive Weights Kg/lbs	Min Evacuation Distance M/Ft	Suggested Evacuation Distance M/Ft
Pipe Bomb		2.3kg/5lbs	130m/430ft	375m/1200ft
Suicide Bomber		9kg/20lbs	150m/500ft	525m/1700ft
Briefcase/Backpack		23kg/50lbs	190m/600ft	575m/1900ft
Compact Car		230kg/500lbs	270m/870ft	600m/2100ft
Full Size Car		460kg/1000lbs	300m/1000ft	725m/2400ft
Van/SUV		1800kg/4000lbs	375m/1275ft	1160m/3800ft
Small Truck/Moving Van		4600kg/10000lbs	440m/1450ft	1560m/5100ft
Water Tanker		13600kg/30000lbs	525m/1725ft	2410m/7900ft
Semi Trailer		27200kg/60000lbs	575m/1875ft	2840m/9300ft

CALL EOD AS SOON AS POSSIBLE



Questions?

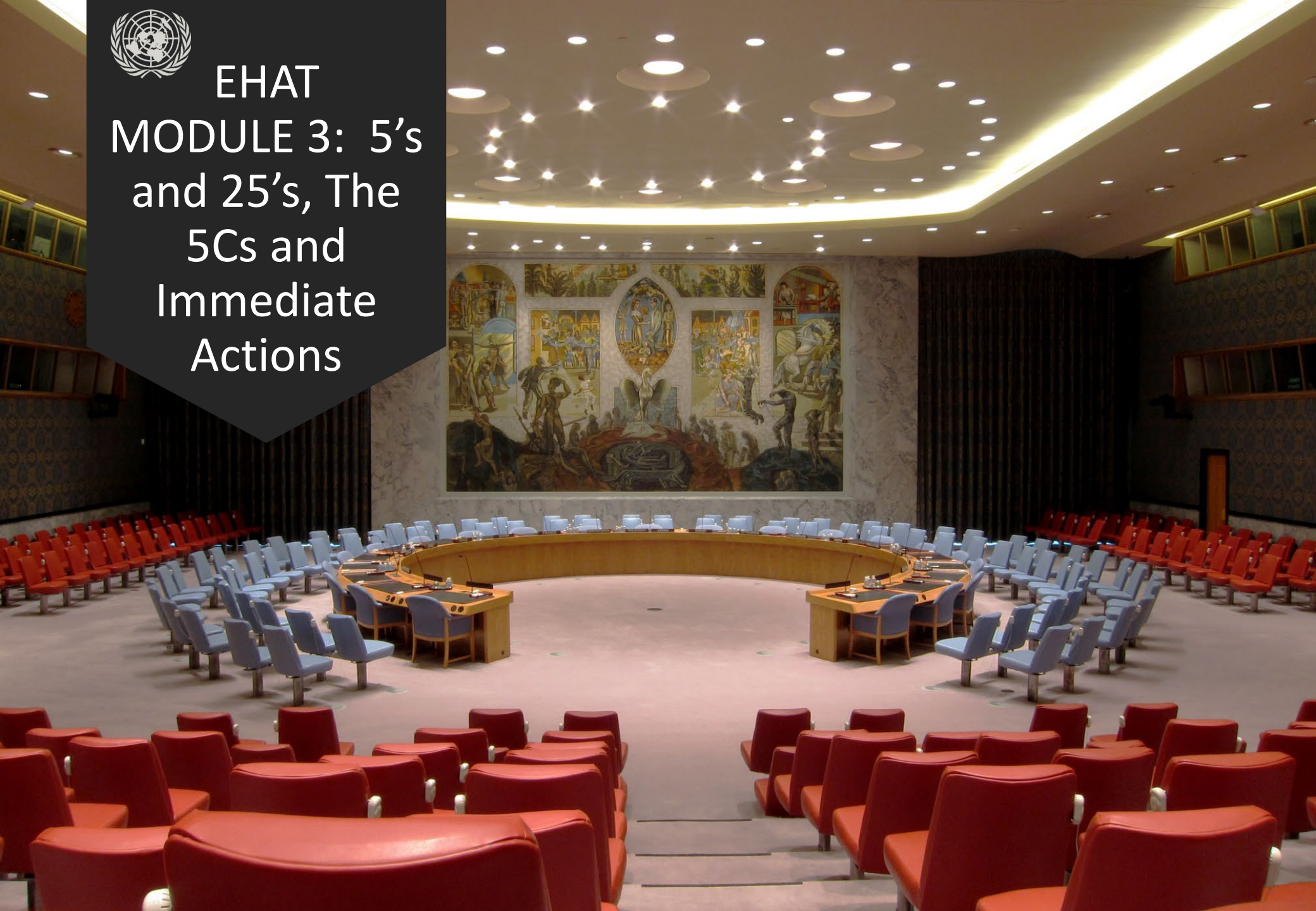


EHAT MODULE 2: IED TYPES, USES AND COMPONENTS Wrap Up





EHAT MODULE 3: 5's and 25's, The 5Cs and Immediate Actions





Terminal Learning Objectives

Students will understand the 5 and 25 drill, the 5Cs and immediate actions as they pertain to UXO, IED, mine strike and vulnerable area/check point.



Overview

3.1 5's and 25's

3.2 Reporting 5Cs

3.3 Local cultures and influences in ERW/IED laden environment

3.4 Response to Unexploded Ordnance from indirect fire or Legacy events

3.5 Response to IED/mine strike

3.6 Vulnerable areas and check points



3.1 5 and 25s metre checks



Enabling Learning Objectives

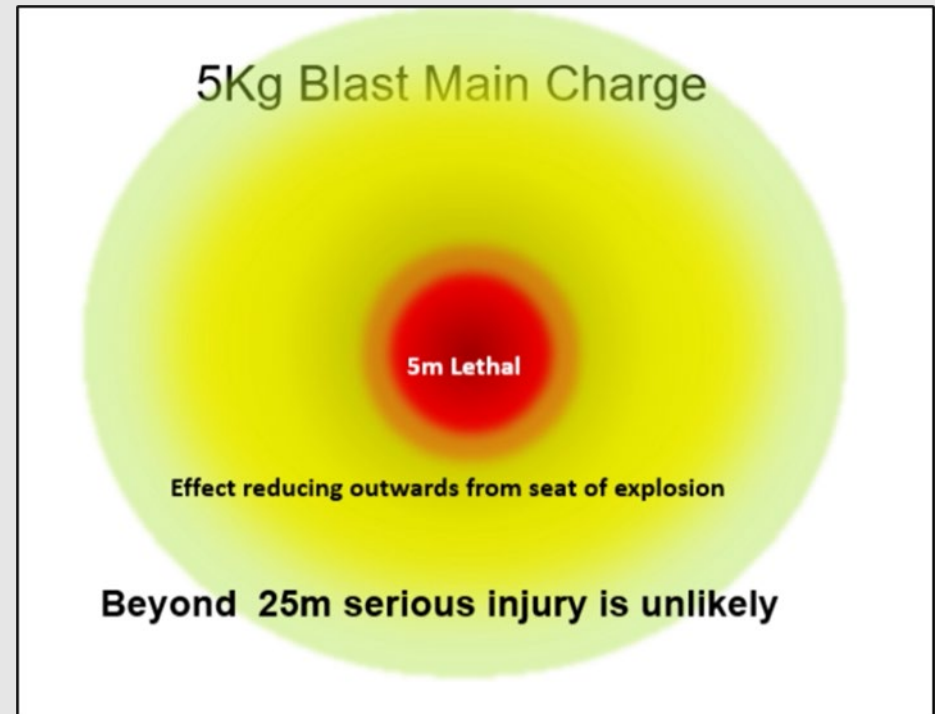
Discuss the 5 and 25 metre check drill and ensure personnel understand the importance of carrying out this drill.



5 & 25m Checks

Explosive effect (full PPE)

- Greatly reduced at 5m
- Further reduced at 25m





5 & 25m Checks





5 & 25m Checks

- Considerations:
 - Number and type of vehicles
 - Number of troops available
 - The ground
 - The threat
- The basic principles remain the same



5 & 25m Checks

Procedure:

- A single vehicle
 - Driver
 - Commander
 - Gunner
 - 4 personnel
- Can be adapted





5 & 25m Checks

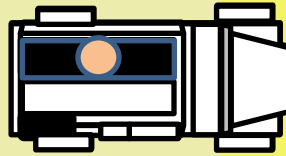
Procedure

- Observe the route
- Select a stop point
- Observation





5 & 25m Checks





5 & 25m Checks

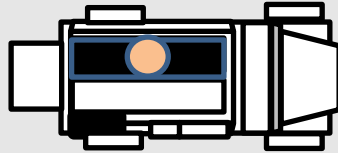
Procedure

- Observe the route
- Selects a stop point
- Observation
- 5m check



5 & 25m Checks

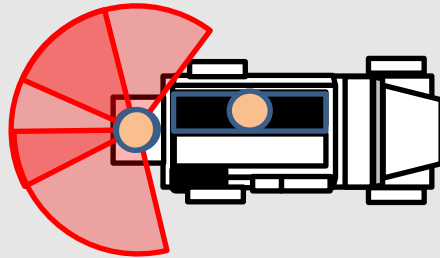
5m Check





5 & 25m Checks

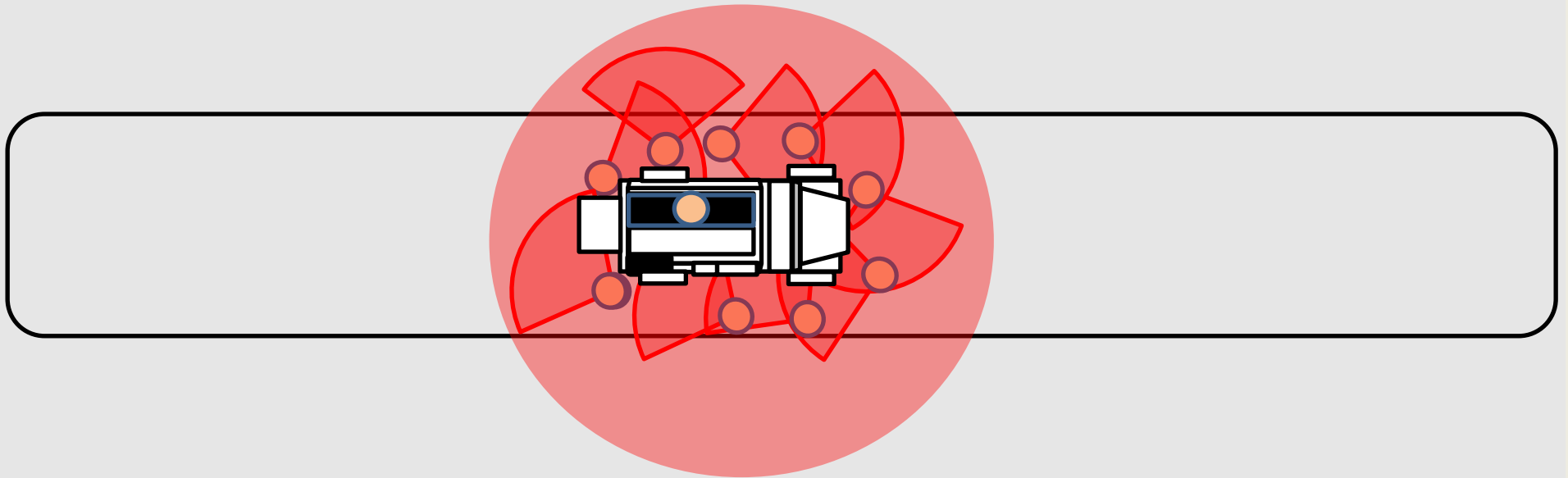
5m Check





5 & 25m Checks

5m Check







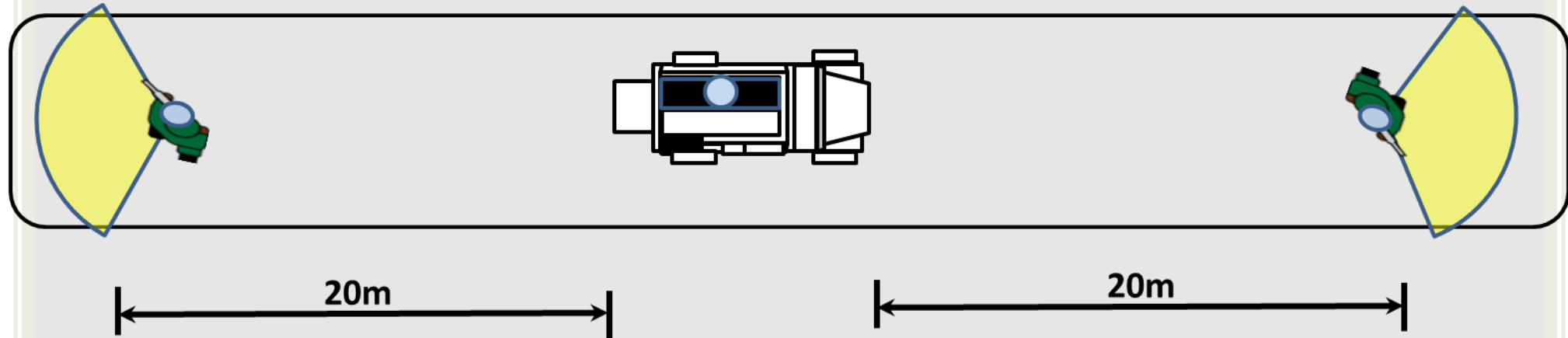
5 & 25m Checks

Procedure

- Commander observe the route
- Commander selects a stop point
- Gunner completes a 360 observation
- 5m check
- 25m check

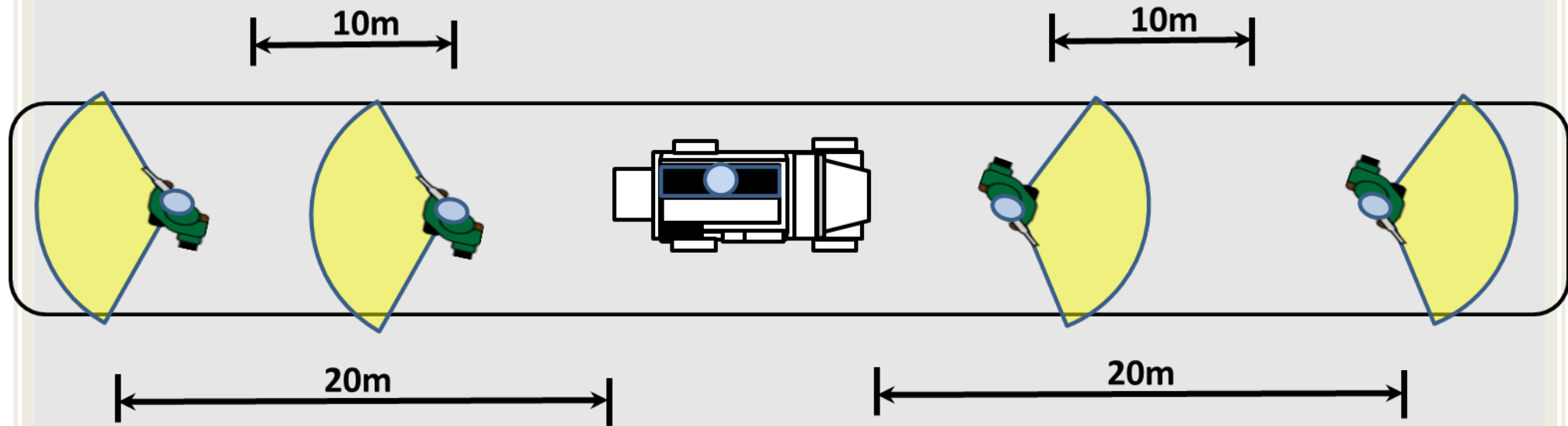


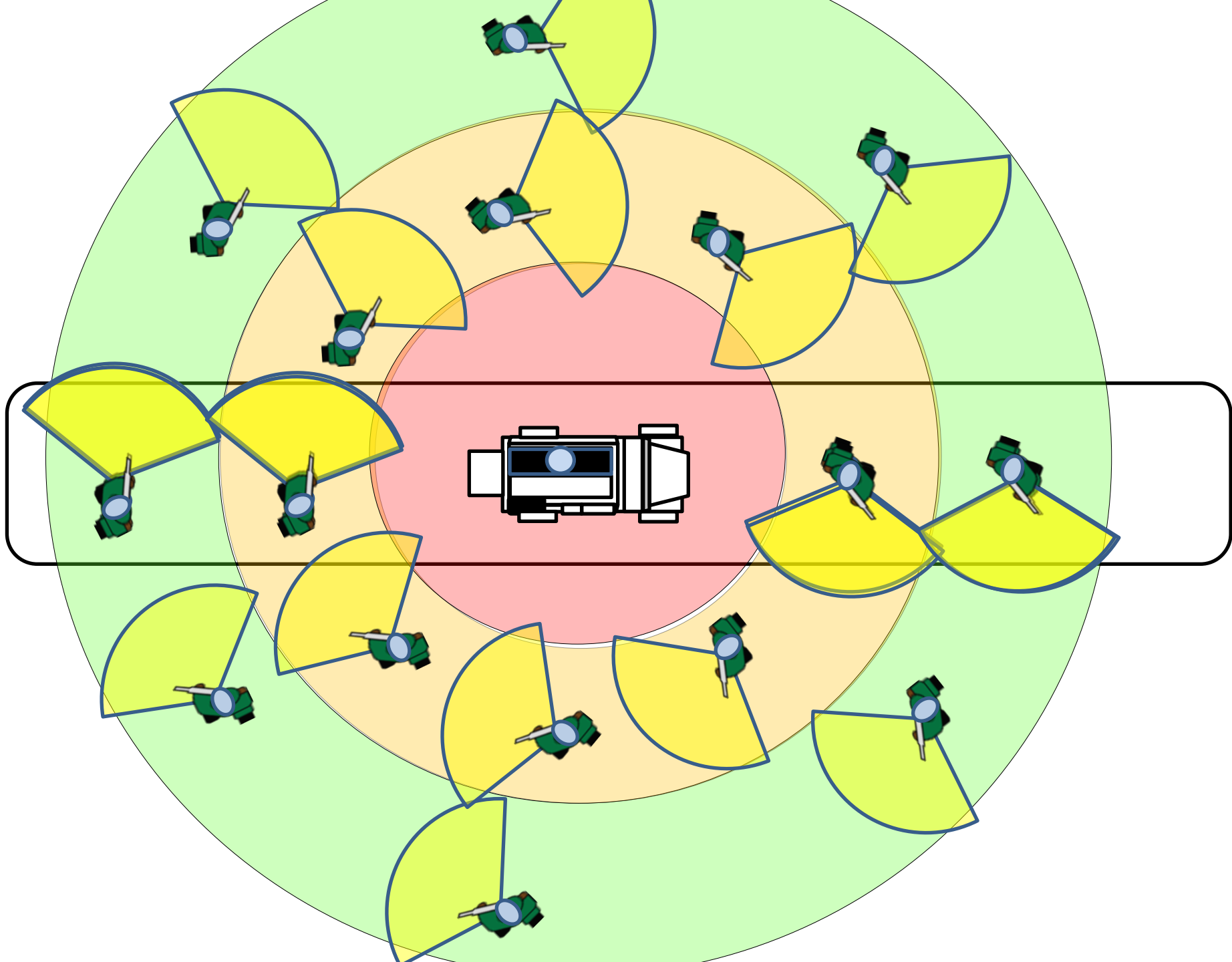
Stage Three – 25m Check





Stage Three – 25m Check







Stage Three – 25m Check





5 & 25m Checks

Procedure - revision

- Commander observe the route
- Commander selects a stop point
- Gunner completes a 360 observation
- 5m check
- 25m visual check



5 & 25m Checks

General points

- Look for ground sign
- Look up as well as down
- Overlap areas
- Communication
- Spacing
- Overwatch
- Actions on a find



5-25 m check

Approved for Public Release



3.2 Reporting 5Cs



Enabling Learning Objectives

Discuss the 5Cs and proper reporting of them.



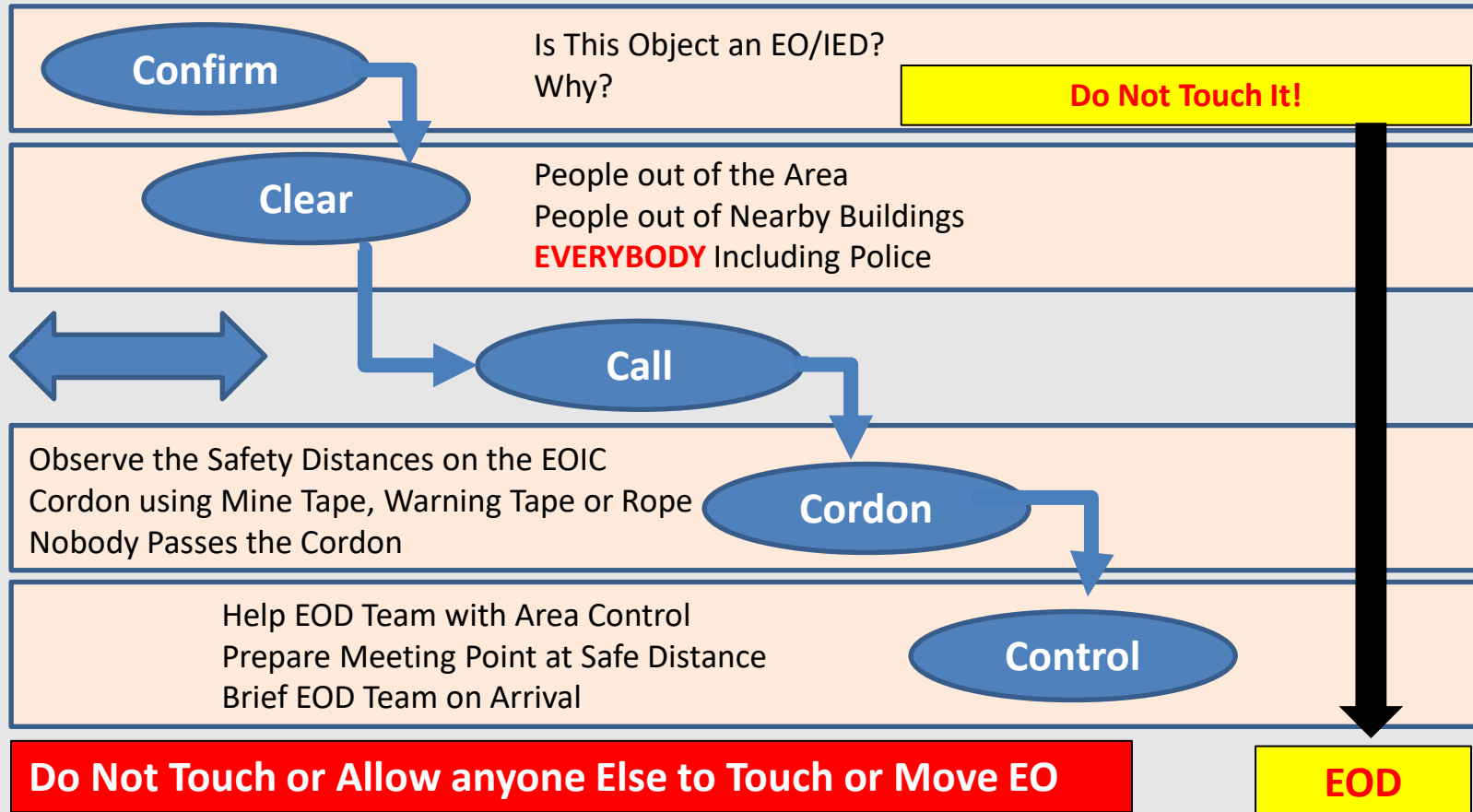
The 5Cs

- Confirm
- Clear
- Call
- Cordon
- Control



The 5Cs

First Response to an EO/IED Call Out





Actions On Scene

Confirm:











- Visual
- Tasking
- Distances
- Secondaries
- Min numbers
- If unsure?
- Reporting





Actions On Scene

Clear: Distance and Evacuation

 UNMAS		Evacuation Distance Guide		
Threats		Explosive Weights Kg/lbs	Min Evacuation Distance M/Ft	Suggested Evacuation Distance M/Ft
Pipe Bomb		2.3kg/5lbs	130m/430ft	375m/1200ft
Suicide Bomber		9kg/20lbs	150m/500ft	525m/1700ft
Briefcase/Backpack		23kg/50lbs	190m/600ft	575m/1900ft
Compact Car		230kg/500lbs	270m/870ft	600m/2100ft
Full Size Car		460kg/1000lbs	300m/1000ft	725m/2400ft
Van/SUV		1800kg/4000lbs	375m/1275ft	1160m/3800ft
Small Truck/Moving Van		4600kg/10000lbs	440m/1450ft	1560m/5100ft
Water Tanker		13600kg/30000lbs	525m/1725ft	2410m/7900ft
Semi Trailer		27200kg/60000lbs	575m/1875ft	2840m/9300ft

CALL EOD AS SOON AS POSSIBLE



Actions on Scene

REPORTING AN EO/IED

INFORM YOUR SUPERIORS THROUGH THE CHAIN OF COMMAND



Call:

A	Priority for requesting unit	Immediate <input type="checkbox"/>	urgent <input type="checkbox"/>	routine <input type="checkbox"/>	no threat <input type="checkbox"/>
B	Priority reported by	1	Rank or position		
		2	Contact name		
		3	Unit identifier/Call sign		
		4	Contact method		
C	POC for further information	1	Rank or position		
		2	Contact name		
		3	Unit identifier/Call sign		
		4	Contact Method		
		5	Rendezvous location for EOR/EOD team		
D	DTG of EO/IED discovery	EO/IED was discovered			
E	Location / area of EO/IED	1	Grid Reference		
		2	Additional location info		
		3	Underwater	Yes <input type="checkbox"/>	No <input type="checkbox"/>
		4	Buried	Yes <input type="checkbox"/>	No <input type="checkbox"/>
F	EOD Identification estimate	What? How many? (use ID Guide codes)			
G	Safety measures undertaken	1	Evacuation distance in meters		
		2	Other protective measures taken		
H	Effect on operation	Totally disrupted <input type="checkbox"/>	major <input type="checkbox"/>	minor <input type="checkbox"/>	nil <input type="checkbox"/>
I	Other significant info				
J	Date and signature				

NEVER



- TOUCH, MOVE OR DISTURB THE EOD/IED
- USE A MOBILE PHONE OR RADIO WITHIN 50 M OF THE EO/IED
- ALLOW **ANYONE** TO RE-ENTER THE CORDON
- GIVE INFORMATION TO CIVILIANS OR TO THE MEDIA



Actions On Scene

Cordon:

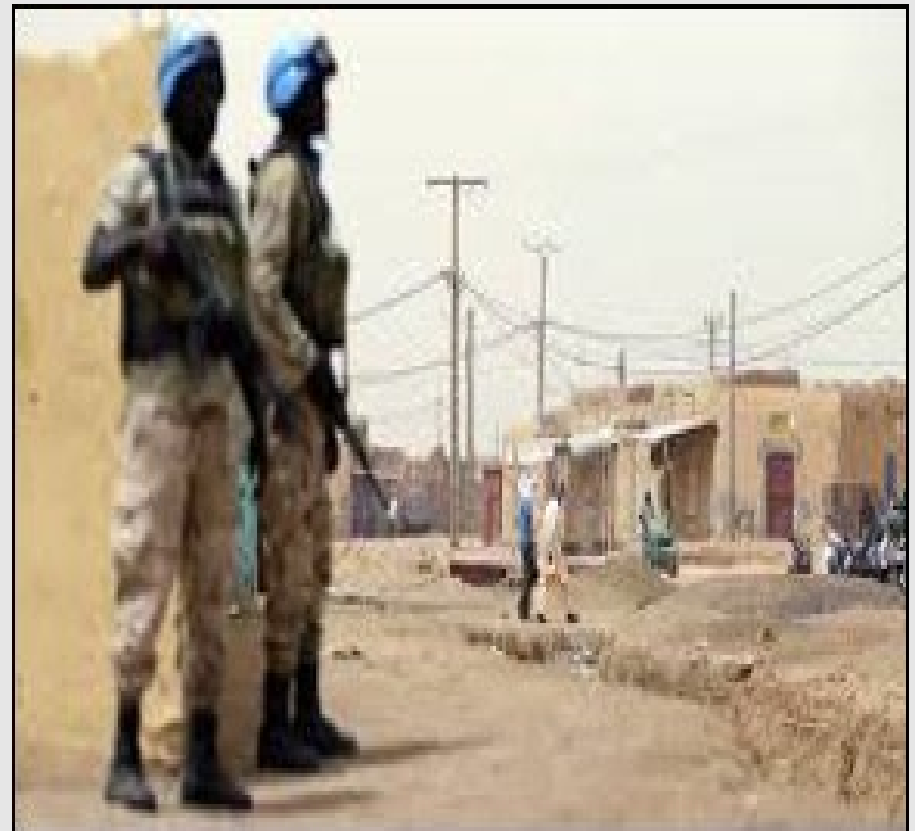
- Robust
- Safety
- Think forensics
- Manpower
- Routes
- Patrols
- Reinforcements





Action On Scene

Control:
Incident Control Point
(ICP)





Actions On Scene

ICP criteria:

- ICP should have line of site to the incident
- ICP should have cover and hard protection if possible
- ICP should be of sufficient size:
 - EOD
 - Additional troops, witnesses
 - Police
 - Medical



Action On Scene

Control:

- ICP
- Cordon control
- Traffic
- Agencies
- Communications





Action On Scene



Check:

- Enduring
- Checks
- Communications



Questions?



Quiz

- What are the 5Cs?

Confirm, clear, call, cordon, control.

- The Incident Control Point should be large enough to accommodate _____?

EOD, additional response assets, witnesses, security, medics.

- A _____ should be performed on all witnesses.

Search



3.3 Local Cultures and Influences in ERW/IED Laden Environment



Enabling Learning Objectives

- Discuss local cultures and influences in ERW/IED laden environment.



Minefield Environmental Indicators



Official Warning Signs



Un-Official Warning Signs



Minefield Environmental Indicators





ERW Environmental Indicators





Behaviour

Local behaviour can give a lot of clues about minefields, UXO-contaminated areas or possible IED attacks.



Environment





Threat Actors

Threat Actor – Causes:

- Intimidation
- International Attention
- Local/Internal Social Standing
- Cultural Tolerance of Violence
- Perceived Illegitimacy of State
- Religious Beliefs
- Nationalism
- Mental Health
- Financial Support for Family





Threat Actors

An open mind and close eye on intelligence reports in your area of operation is needed to ensure safe accomplishment of mission goals.





Threat Actors

Perpetrators:

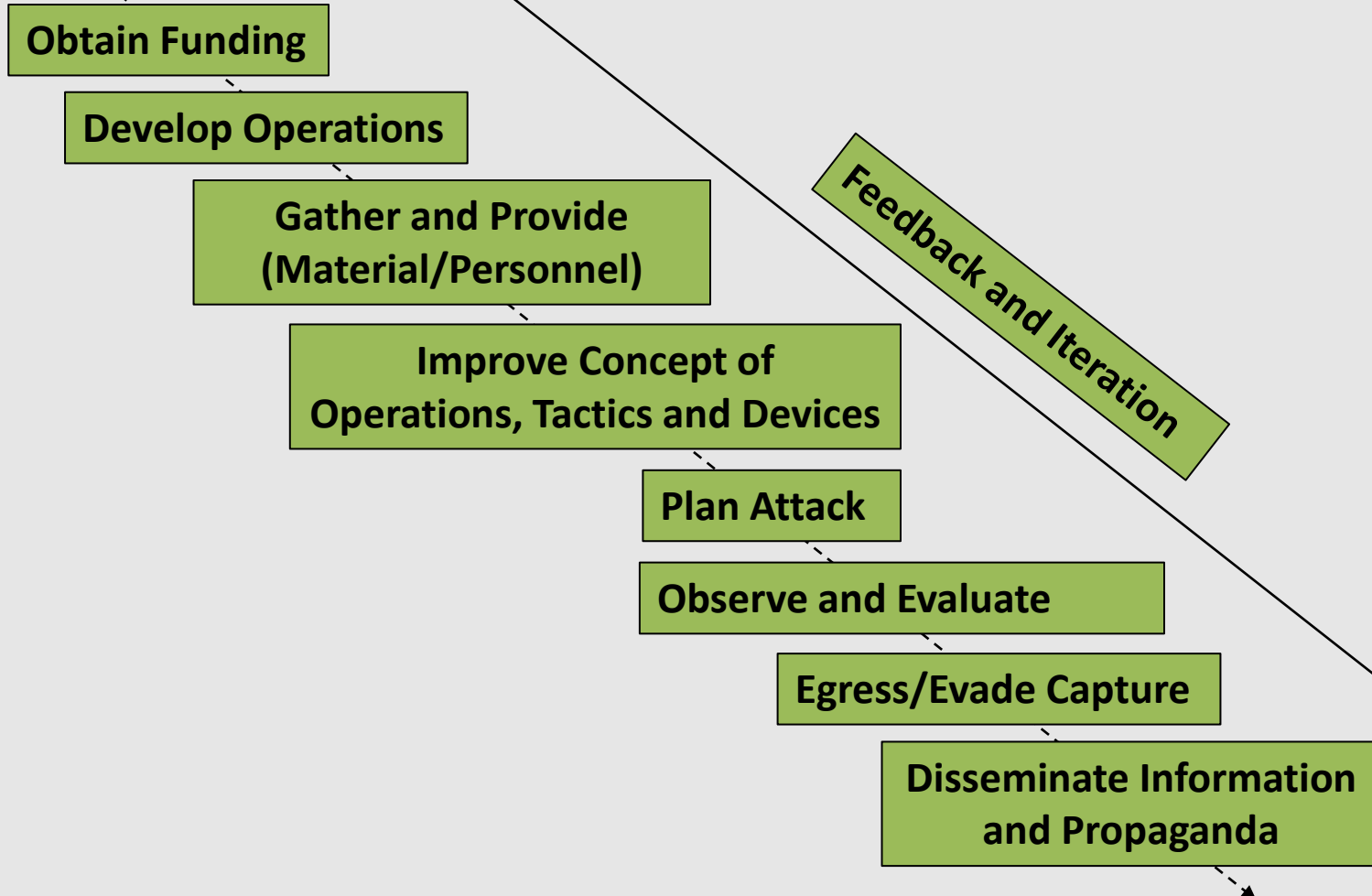
- State Sponsored
- Non-State Groups





Threat Actors

Resourcing:





Operating Environment (OE)

- Mission Commanders must understand OE
- OE impacts all mission aspects
- Consider long-term implications to locals
- Determine acceptable level of risk



Questions?



Quiz

1. Is there a time when IEDs should not be a concern?

An IED attack or an ambush cannot be excluded, at any time.

2. What are two reasons why a group or individual may choose to employ IEDs?

Intimidation, international attention, local/internal social standing, cultural tolerance of violence, perceived illegitimacy of state, religious beliefs, nationalism, Mental health, financial support for family, cost and resources.



Quiz

3. What is the definition of operating environment?

The operating environment is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.



3.4 Response to Unexploded Ordnance (UXO) from Indirect Fire or Legacy Events



Enabling Learning Objectives

Discuss responding to UXO events caused by indirect fire or a legacy event.



UXO Considerations

UXO Considerations:

- Assume UXO is unstable
- Are a serious hazard
- Should only be handled by EOD personnel





Indirect Fire (Motors and Submunitions)





Legacy Events (Trenches)





Legacy Events (Abandoned Vehicles)



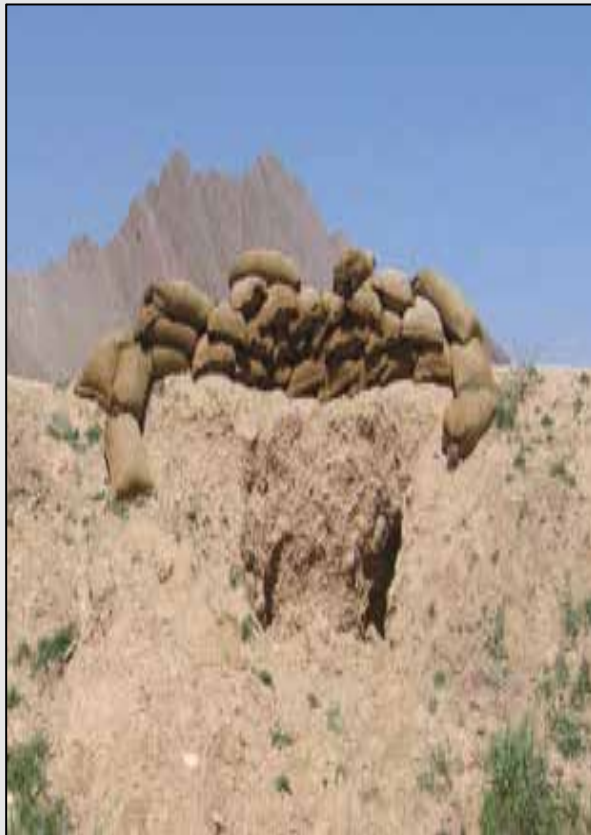
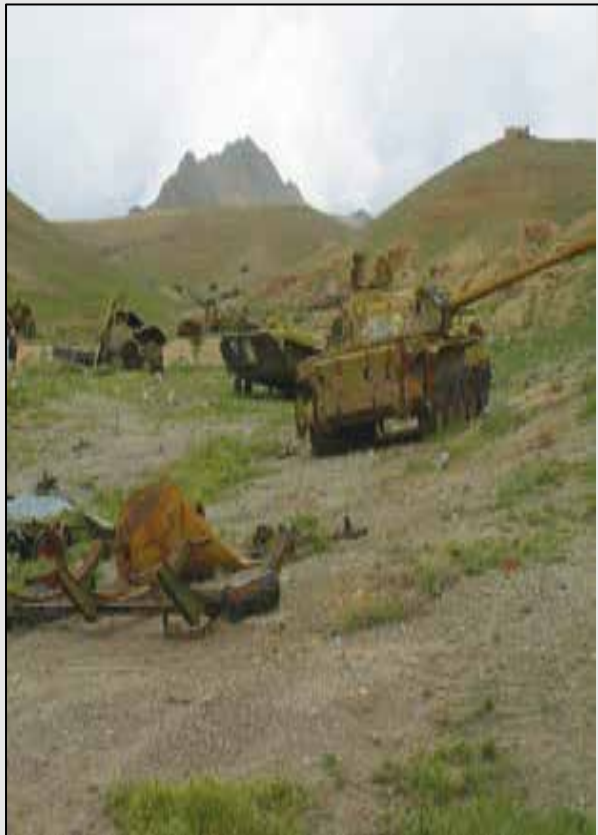


Legacy Events (Discarded Weapons)





Legacy Events (Check Points, Borders)





Legacy Events (Bridges & Roads)





Legacy Events (Airports)





Legacy Events (Power Stations)





Legacy Events (Abandoned Buildings)





Questions?



Quiz

1. Who should handle a UXO?

EOD personnel

2. Where there is one mine, there are usually _____ others.

Several

3. How far away should cell phones and radios be kept from an IED or UXO?

50 meters



3.5 Response to IED/ Mine strike (Mounted and Dismounted)



Enabling Learning Objectives

Discuss the response to an IED/Mine strike event whether mounted or dismounted.



Mission Variables

- Planned v. Emergency Response
- Each mission has different considerations





Mission Variables

Mission variable determine:

- Type of tools required
- Actions on scene
- Support needed to accomplish the mission



Response Considerations

- Response Times
- Dedicated EOD team security
- EOD support to Route Clearance Teams
- Mounted vs. dismounted operations
- Counter-RCIED and robotics
- EOD robotics



IED/UXO Response Requirements

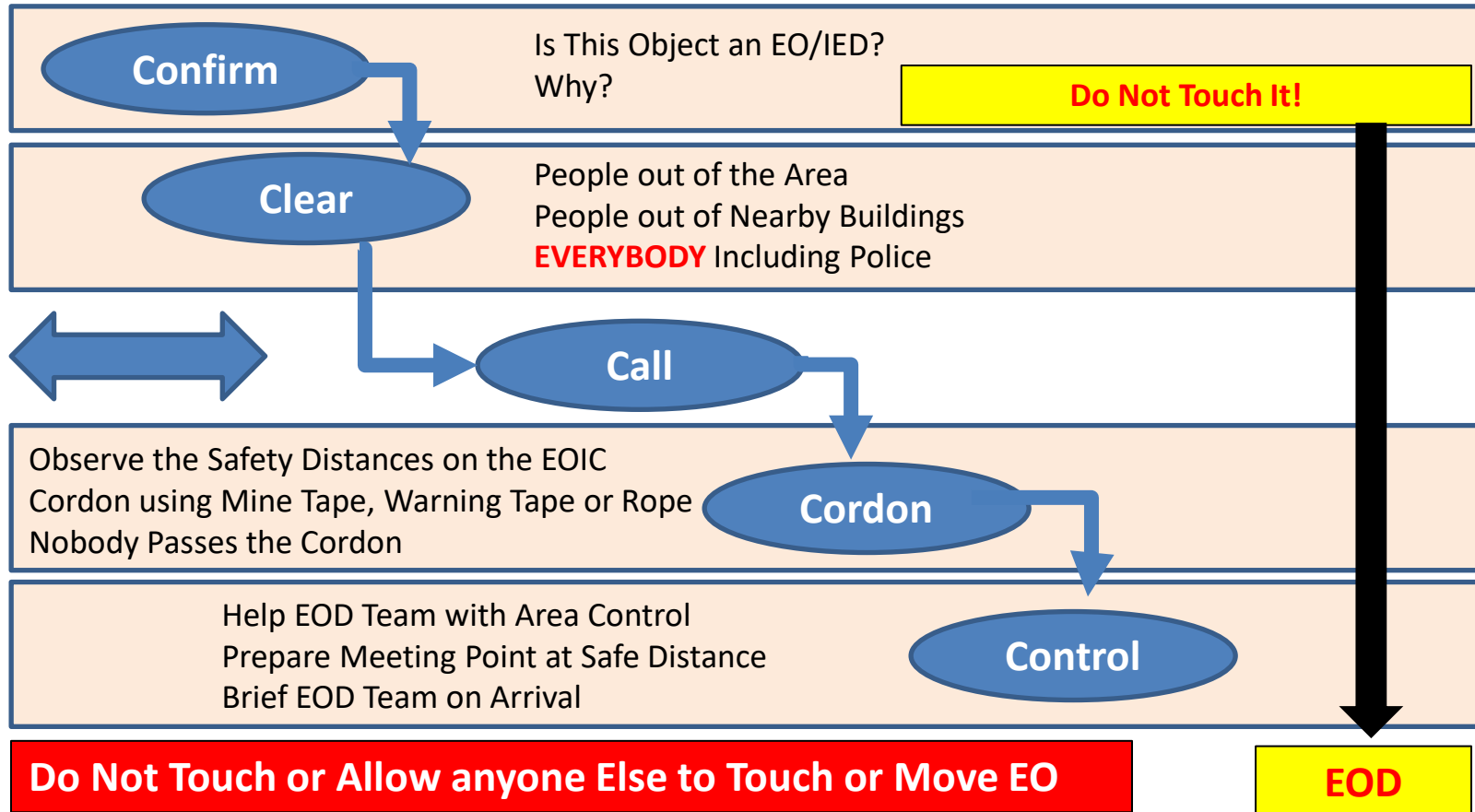
In addition to the 5Cs:

- ICP should have own cordon in place
- Unknown persons escorted
- ID checked and possible search
- All witnesses should be searched
- All baggage and equipment to be checked outside of ICP
- Procedures apply to both mounted and dismounted responses



The 5Cs

First Response to an EO/IED Call Out





IED Emergency Procedures

IED Find





IED Emergency Procedures

IED Explosion





IED Emergency Procedures

IED –Blow Through





IED Emergency Procedures

IED – Immobilization





IED Emergency Procedures

IED – Immobilization

• **SCHEMES**

- **S**ecurity
- **C**asualties
- **H**ostile Element Interdiction
- **E**quipment Recovery or Abandonment
- **M**aximize Concurrent Activity
- **E**xploit the Scene
- **S**ubmit Report



IED Emergency Procedures **S**CHEMES

- **Security**





IED Emergency Procedures SCHEMES

Casualties





IED Emergency Procedures SCHEMES

Hostile Element Interdiction





IED Emergency Procedures SCHEMES

Equipment Recovery or Abandonment





IED Emergency Procedures SCHEMES

Maximize Concurrent Activity





IED Emergency Procedures SCHEMES

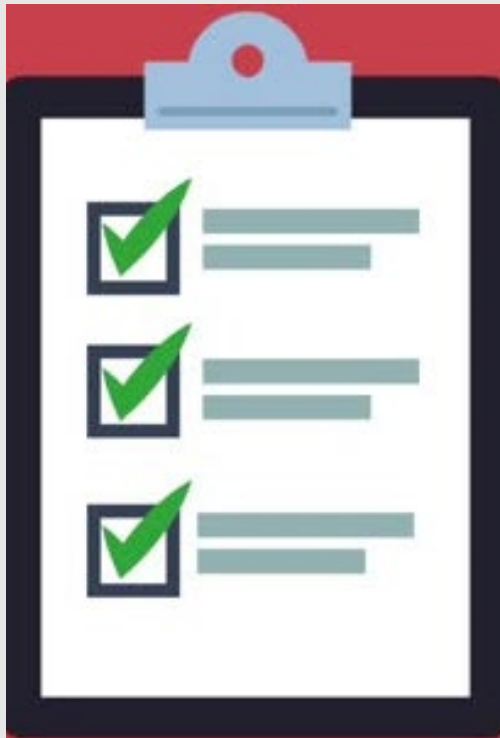
Exploit the Scene





IED Emergency Procedures SCHEMES

Submit Report





Minestrike Response

Mounted:

- **M** Movement stops Immediately
- **I** Inform others
- **N** Note the area
- **E** Evaluate
- **D** Do not move





Questions?



Quiz

1. How can EOD team's response times be reduced?

Provide them with a dedicated security element

2. Where should bags found during an incident response be inspected?

Away from the ICP

3. Should vehicles move to the side of the road after a minestrike?

No



3.6 Vulnerable Points and Vulnerable Areas



Enabling Learning Objectives

Discuss vulnerable areas and check points.



Vulnerable / Check Point Requirements





Operational Level Support

- Understanding
- Pursuing
- Preventing





Tactical Level Support

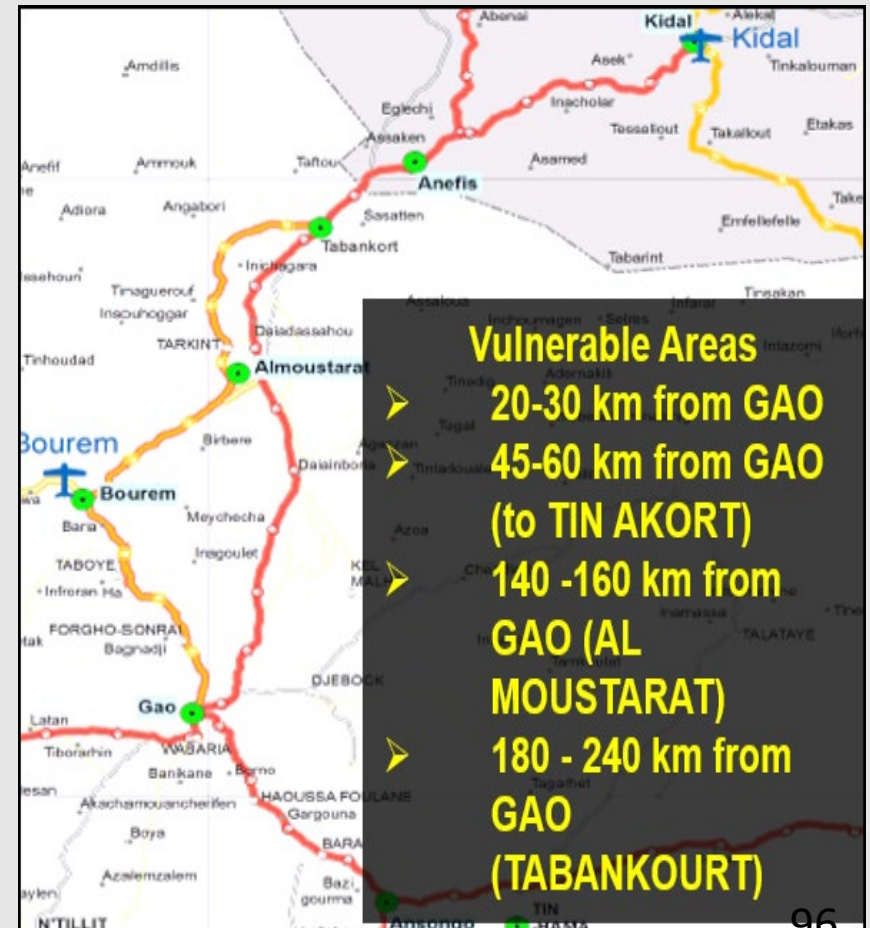
- Protecting
- Preparing





Mission Planning

- Check previous routes used
- Map reconnaissance
- Include the time to check
- Include extra time
- Remember to vary your timings





IED Indicators

CAGE (C.A.G.E)

- Channelling
- Aiming Markers
- Ground
- Environment





Vulnerable Points

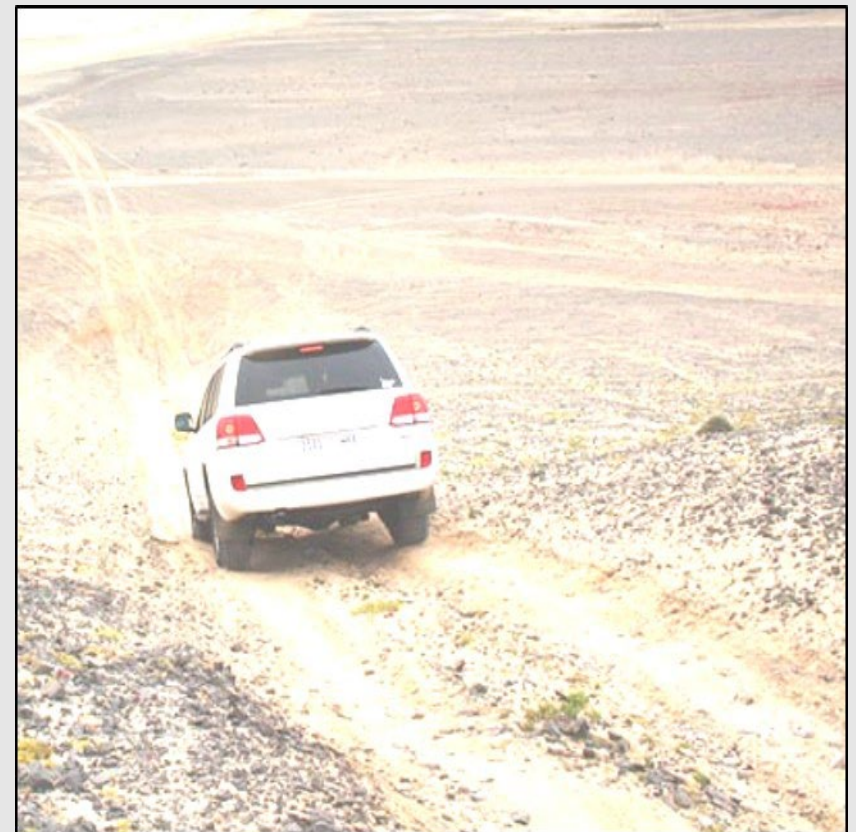


- We are vulnerable when we are forced to use a predictable route
- We are vulnerable when we are forced to slow down making us an easier target for command devices
- We are vulnerable in areas of previous attacks



Vulnerable Points

- Uphill / Downhill Slopes
- Corners





Vulnerable Points

Bridges





Vulnerable Points

Culverts





Vulnerable Points

Road Junctions





Vulnerable Points

Soft ground





Vulnerable Points

Linear features





Vulnerable Points

Previous attack areas





Basic Principles

- Plan the route in advance using all available information:
 - Maps
 - Imagery
 - Previous patrol reports
 - Previous incident Reports
- If possible identify VPs in advance and plan accordingly





Basic Principles

Units must vary:

- Their timings
- Routes/destinations
- Information security
- Record routes of mission





Basic Principles

Dispersal:

- Ensure there is space between vehicles to react to incidents (Approx 25m)
- Ensure any specialist equipment (mine detectors etc) is dispersed among the convoy
- Do not overload vehicles





Basic Principles

- Ensure all equipment is fitted securely
- Use Personal Protective Equipment (including seat belts)
- Ensure crew served weapons are manned
- Check communications before deployment
- Understand emergency procedures





Questions?



Quiz

1. What forms of information should be used when planning a route?

Maps, imagery, previous patrol reports, previous incident reports

2. If possible, how much distance should be between vehicles in a convoy?

25 meters



Quiz

3. Special equipment should be _____ in a convoy.

Dispersed



EHAT
MODULE 3: 5-25
m checks, 5 C'S
and Immediate
Actions
Wrap Up





Module Conclusions

- TLO 3: Students will understand the 5s and 25s and are capable of carrying out the drill, they understand the 5 C's and immediate actions as they pertain to UXO, IED, Mine Strike and Vulnerable area/Check point.



Module Conclusions

- ELO 1: Discuss the 5C's and proper reporting of them.
- ELO 2: Discuss local cultures and influences in ERW/IED Laden environment.
- ELO 3: Discuss responding to UXO events caused by indirect fire or a legacy event.
- ELO 4: Discuss the response to an IED/Mine strike event whether mounted or dismounted.
- ELO 5: Discuss vulnerable areas and check points.



EHAT Module 4: Situation Awareness and Threat Assessment





Terminal Learning Objectives

The student will understand and explain situational awareness by conducting a threat assessment through decision making process.



Overview

4.1 Basic Vehicle and Personnel Search

4.2 Threat Assessment and Briefing/ Role of IED's in Complex Attack

4.3 Use of Electronic Countermeasures (ECM)

4.4 Pre and Post Mission Brief



4.1 Basic Vehicle and Personnel Search



Enabling Learning Objectives

Explain the proper procedures for conducting a basic vehicle and personnel search.



Definition

Search:

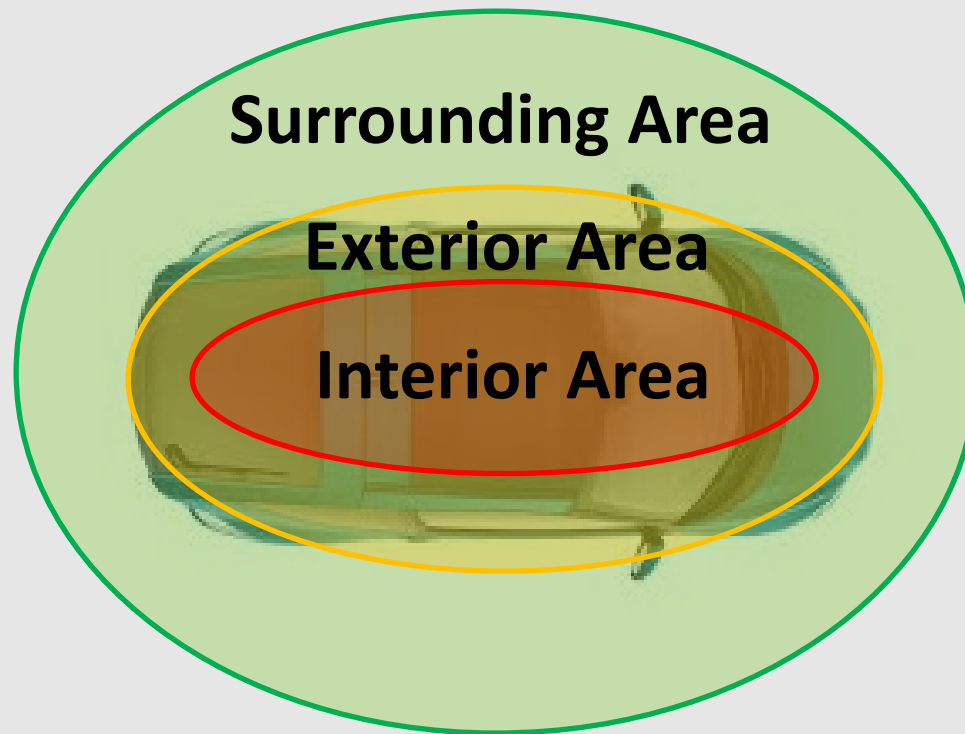
- The capability to locate specific targets using intelligence assessments, systematic procedures and appropriate detection techniques.





Vehicle Search Procedures

The search should be divided into three main areas:





Surrounding Areas

- Signs of activity
- Something unusual
- Additional threats





Exterior of Vehicle

Can be broken down into four areas:

- Front
- Side
- Rear
- Underside





Exterior of Vehicle

Front:

- Grill
- Hood Release
- Bumper





Exterior of Vehicle

Sides:

- Under/ Behind tires
- Tires
- Wheel wells
- Windows





Exterior of Vehicle

Sides:

- Door latches
- Weather stripping
- Fuel cap





Exterior of Vehicle

Rear:

- Exhaust pipe
- Bumper

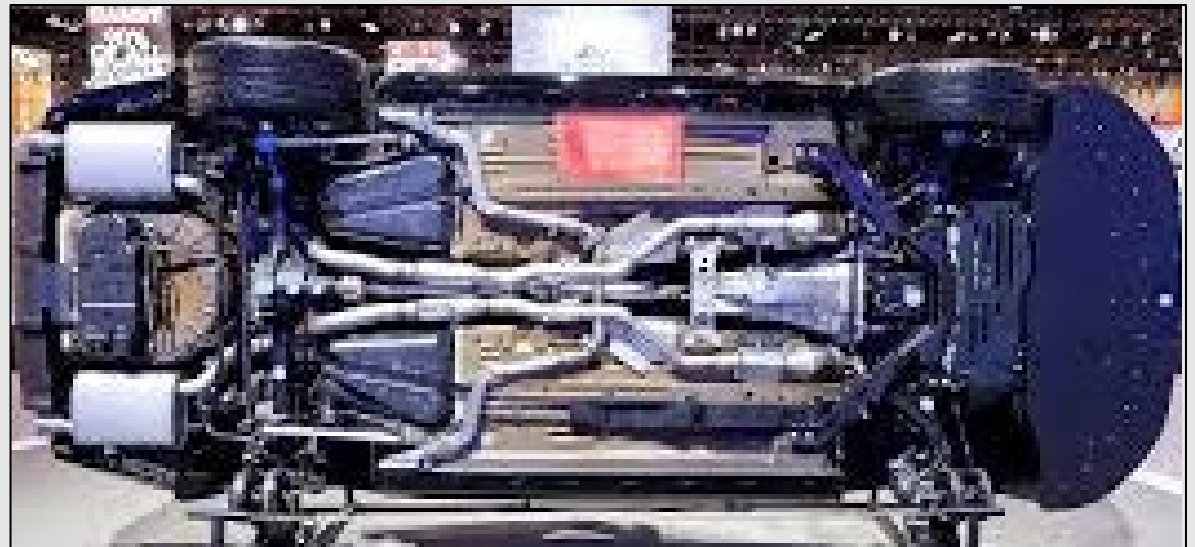




Exterior of Vehicle

Underside:

- Exhaust pipe
- Bumper
- Drive train
- Fuel tank





Interior of Vehicle

Interior:

- Under dash
- Under seat
- Engine compartment
- Boot





Interior of Vehicle

Things to look for:

- False or modified ceiling
- Non factory components





Interior of Vehicle

Things to look for:

- New or damaged or scratched screws
- Non factory components
- False compartments





Interior of Vehicle

Things to look for:

- Plugged air vents
- Broken or missing blower
- Blinking components when car is off





Interior of Vehicle

Things to look for:

- Wires out of place
- Unusual bumps or bulges
- Suspicious packages
- Unusually thick floor





Discovery of an Explosive Hazard

If an Explosive Hazard is found:

- Implement the 5Cs
- Report findings to HQ



Questions?



Quiz

1. What search areas should be divided into three main areas?
 - *The surrounding area.*
 - *The exterior of the vehicle.*
 - *The interior of the vehicle.*



Quiz

2. What four areas can the exterior of the vehicle be broken down into?

- *Front*
- *Side*
- *Rear*
- *Underside*



Quiz

3. What are some areas of the underside of the vehicle that should be checked?

- *Exhaust pipe*
- *Bumper*
- *Chassis*
- *Drive train*
- *Fuel tank*



Quiz

4. What are some areas of the interior of the vehicle that should be checked?

- *Under dash*
- *Under seat*
- *Under baggage*
- *Engine compartment*
- *Boot*



Personnel Search Procedures





Vehicle Search Procedures

Conduct Vehicle Search Practical Exercise



Definition

- A body search is a safety measure carried out by any security officer checking over a person who is detained or arrested, in order to detect any dangerous or illicit items.



Personnel Search Procedures

- Concealed weapons
- Same sex
- Violence or resistance
 - Physical restraint



Personnel Search Procedures

Standard:

Search an individual to locate weapons and/or contraband while maintaining control of the individual throughout the search.





Personnel Search Procedures

Special Condition:

Males should search males and females should search females whenever possible.





Personnel Search Procedures

WARNING

The searcher must avoid crossing the line of sight or fire of the overwatch during the person search.





Personnel Search Procedures

CAUTION

Searching a person requires two searchers working together.





Performance Steps

Determine which type of search to perform based on the situation:

- Stand-up search without hand restraints
- Frisk search



Conduct a Stand-Up Search

Note:

The decision to place hand restraints on the subject before searching must be based on the situation and according to the local directives.





Conduct a Stand-Up Search

Position yourself behind the subject and remain balanced, with your front foot forward and rear foot to the outside of the subject's feet.





Conduct a Stand-Up Search

Direct the subject to:

- (1) Raise arms above their head and spread fingers with palms facing you.
- (2) Turn so that their back is toward you.
- (3) Spread their feet apart with toes pointed out.
- (4) Interlock fingers and place their hands on the crown of their head.



Conduct a Stand-Up Search

Search the subject's headgear:

- Carefully remove the headgear.
- Bend the seams of the headgear before crushing to detect contraband.
- Complete the search of the headgear, and place it on the ground.



Conduct a Stand-Up Search

Search the subject using the pat-and-crush method in the following sequence:

- Grasp two fingers of the subject's right hand, or both of the interlocked hands with your left hand.
- The head and hair.
- The selected side from arm to shoulder.



Conduct a Stand-Up Search

- The neck and collar.
- The selected side of the back to the waist.
- The selected side of the chest to the waist.



Conduct a Stand-Up Search

Note:

When searching females, check the bra by pulling out the center far enough to allow concealed weapons or contraband to fall out.



Conduct a Stand-Up Search

- The waistband, from the front to the middle of the back
 - Bend the material and then crush it to detect contraband
 - Check between the belt and the pants
- The selected side of the buttocks



Conduct a Stand-Up Search

Note:

Squat when searching the lower half of the subject's body so you are not placed in an unbalanced position.



Conduct a Stand-Up Search

- The selected side hip, abdomen, and crotch
- The selected side leg from the crotch to the top of the shoe
- The selected side shoe



Conduct a Stand-Up Search

Reverse the search to the subject's opposite side:

- Grasp two fingers of the subject's left hand
- Reverse the position of your feet
- Search the opposite side of the subject



Questions?



Conducting a Frisk Search

Direct the subject to:

- Raise his arms above his head
- Turn so that his back is toward you.
- Spread his feet apart
- Interlock his fingers



Conducting a Frisk Search

Note:

Although the main intent of a frisk is to ensure that the subject is not carrying a weapon, other contraband found can still be used against the subject.



Conducting a Frisk Search

- Search the outside of the garments only.
- Search of pockets or waistband
- Ask permission
- Stop the search if a weapon is found



Questions?



4.2 Threat Assessment and Briefing/ Role of IEDs in Complex Attacks



Enabling Learning Objectives

Outline how a threat assessment is undertaken and briefing on the assessed threat is delivered.

Understand what a complex attack is the actions to take during a complex attack.



Threat Assessment Definition

Threat assessment:

The practice of determining the credibility and seriousness of a potential threat, as well as the probability that the threat will become a reality.



Threat Assessment

Your role ... your own safety

- Be alert to the threat.
- Be aware of your surroundings.
- Report suspicious activity.
- Make security your norm.
- Avoid predictable routines.
- Don't be a target.



Threat Briefing

Threat Briefing:

- Factors to consider about the threat.
- How attackers select targets.
- How the attacker identifies targets.



Threat Factors



Threat Groups

Are there any attack groups in my area?



Potential for Violence

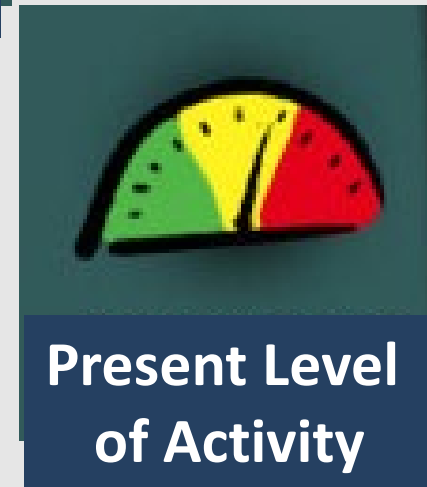
Are they violent?

Do they attack Foreigners?



Victim Nationalities

How active are they?



Present Level of Activity



Threat Factors



Level of Sophistication

How sophisticated are they?



Method of Operation

How do they operate—are they predictable?

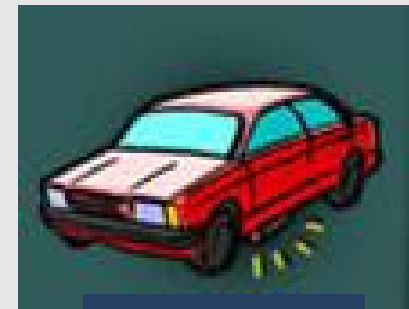
Will the local population warn Foreigners?



Level of Popular Support

**What tactics?
What weapons?**

What type of attacks?



Common Tactics



Target Selection



Victim by Location



Victim by Association



Victim by Opportunity



Target Identification



**Large,
Vulnerable Groups**



Name



**Appearance of
Importance**



Threat Awareness Themes

Be Anonymous



➔ **Blend in, don't be an easily identified target**

Plan Ahead



➔ **Think ahead and choose safer options**

Be Aware



➔ **Look for suspicious persons/activities**



Threat Awareness Themes

Control Access



➔ **Prevent crime,
maintain security**

Be Unpredictable



➔ **Change routines, routes,
times, and speeds**

Be a Team Player



➔ **Cooperate with local
security measures**



Complex Attack





Complex Attack

Command IED:

- Destroy the Target
- Block Extraction Route
- Fix a Convoy/Patrol in Kill Zone



Complex Attack

Types of Complex Attacks:

- Harassing Attacks
- Probing
- Raiding Attacks
- Overrun Attacks



Complex Attack

Complex attacks using small arms and light weapons (SALW) systems and IEDs:

- Raiding action on a static position.
- overrun a targeted movement or static position



Complex Attack

- Obstacle Creation
- Breaching



Complex Attack

Actions of Complex Attack:

- IED Blow-Through
- Immobilization



Questions?



Quiz

1. Which will do the most to reduce vulnerability?
 - *Be alert, avoid the appearance of importance, blend in with the local population*
2. What are the six Threat Assessment Themes?
 - *Be Anonymous, Plan Ahead, Be Aware, Control Access, Be Unpredictable, Be a Team Player*



4.3 Use of Electronic Countermeasures (ECM)



Enabling Learning Objectives

Describe the use of Electronic Countermeasures.



Electronic Counter Measures (ECM) Definition

Electronic Counter Measures (ECM):

- The disruption of the operation of an enemy's equipment (as by jamming radio or radar signals).
- It is also equipment used to produce the disruption.



ECM

- We refer to the techniques of introducing noise on the spectrum as Electronic Counter Measures.
- ECM provides us with:
 - Safe working area.
 - Prevent targetable actions.





ECM

If you or any members of your force observe anyone acting suspicious near the cordon and looking into the target area carrying radio equipment, remote key fobs or multiple mobile phones, have security forces or local police detain them.





ECM

The primary purpose of ECM systems is to provide jamming capabilities to troops moving throughout the battlefield protecting them from RCIEDs, and to protect high value fixed locations.





ECM AND RCIED

- Radio control provides the enemy positive control over the Improvised Explosive Devices (IEDs).
- The enemy can initiate the explosive charge at the precise moment to cause maximum casualties and damage.





Questions?



Quiz

1. ECM provides us with?

- *Safe working area.*
- *Prevent targetable actions.*

2. What should be done if you observe anyone acting suspicious?

- *Detain them.*



Quiz

3. ECM produces a magic bubble of protection. True/False

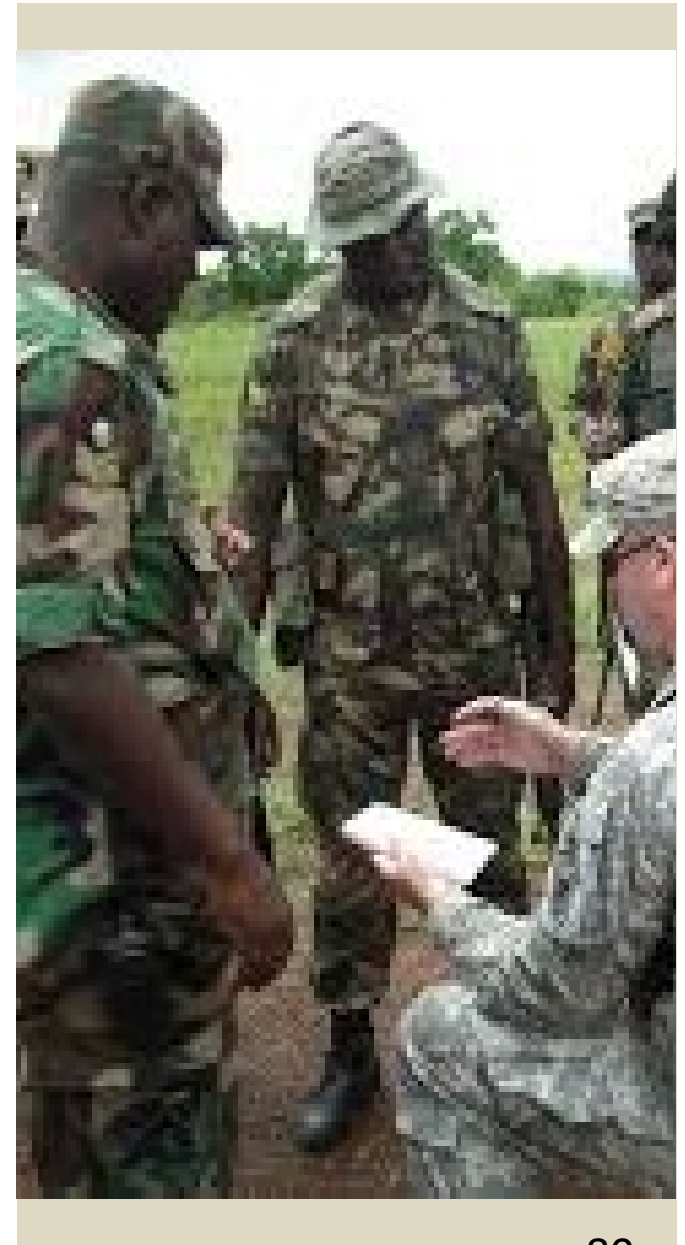
- *False.*

4. Explosive charge can be any available explosive, to include:

- *Artillery rounds, antitank mines, fuel cans, rockets, or mortar rounds.*



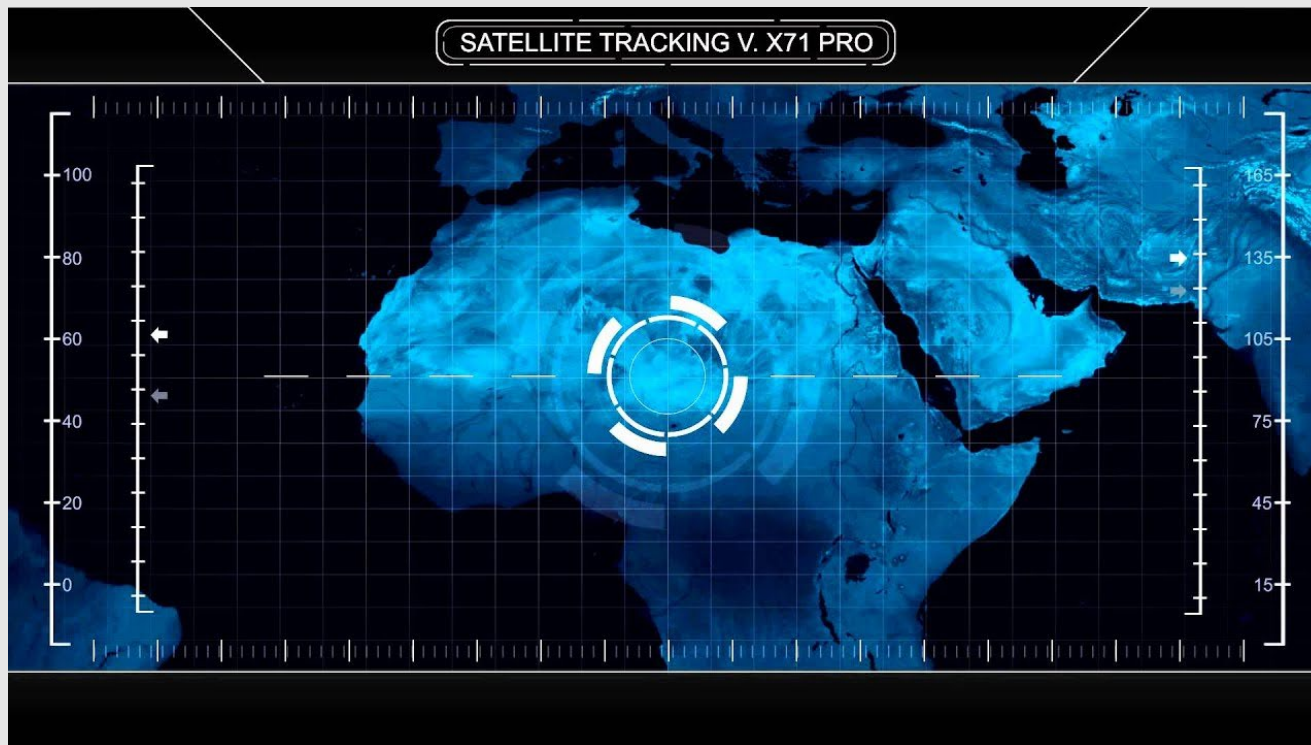
4.4 Pre and Post Mission Brief





Enabling Learning Objectives

Demonstrate an understanding of Pre and Post Missions





Definition

Briefing:

Information given to someone just before the person does something, or a meeting where information is given





MATT-TC

Introduction:

MATT-TC is abbreviated to:

“Mat-Tee-See”



MATT-TC

MATT-TC Outline:

- M** – Mission
- A** – Adversary
- T** – Terrain and weather
- T** – Troops and support available
- T** – Time available
- C** – Civil considerations



MATT-TC

Mission

Offensive operations:

- Movement to contact
- Attack
- Exploitation
- Pursuit





MATT-TC

Mission

Defensive Operations:

- Mobile defense
- Area defense
- Retrograde





MATT-TC

Mission

Stability operations:

- Civil security
- Civil control
- Restore essential services
- Support to governance
- Support to economic and infrastructure development



MATT-TC

Mission

Civil Support Operations:

- Provide support in response to disaster or terrorist attack
- Support civil law enforcement
- Provide other support as required



MATT-TC

Adversary:

- Enemy
- Adversary
- Supporter
- Neutral





MATT-TC

Terrain and Weather

Military Aspects of Terrain:

This area is covered by an acronym (OAKOC)

- Observation and Fields of Fire
- Avenues of Approach
- Key and Decisive Terrain
- Obstacles
- Cover and Concealment



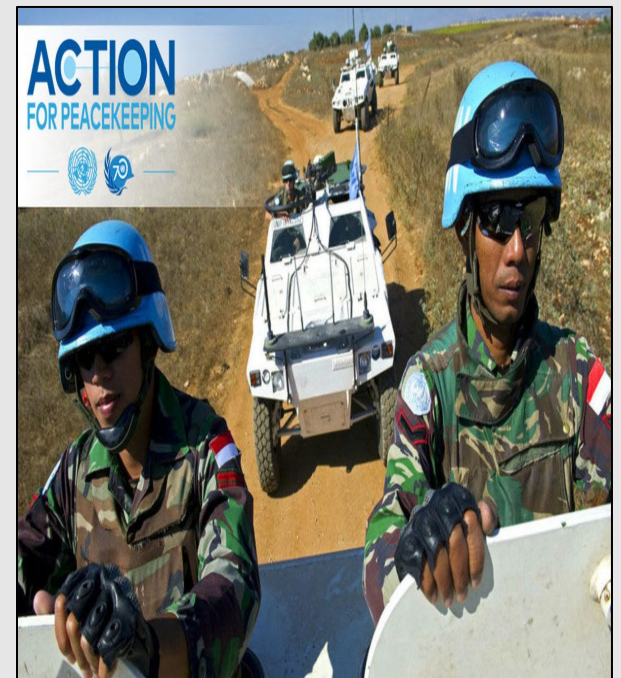


MATT-TC

Terrain and Weather

Military Aspects of Weather:

- Visibility
- Wind
- Rain
- Cloud Cover
- Temperature
- Humidity



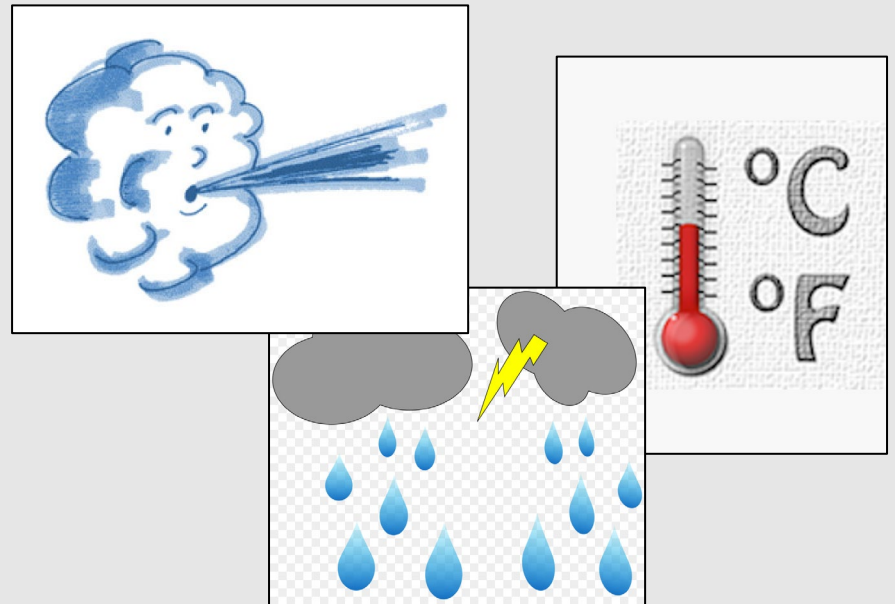


MATT-TC

Terrain and Weather

Military aspects of Climate and Weather:

- Temperature
- Wind velocity
- Precipitation





MATT-TC

Troops and Support Available

Friendly troops:

- Number
- Type
- Capabilities
- Condition

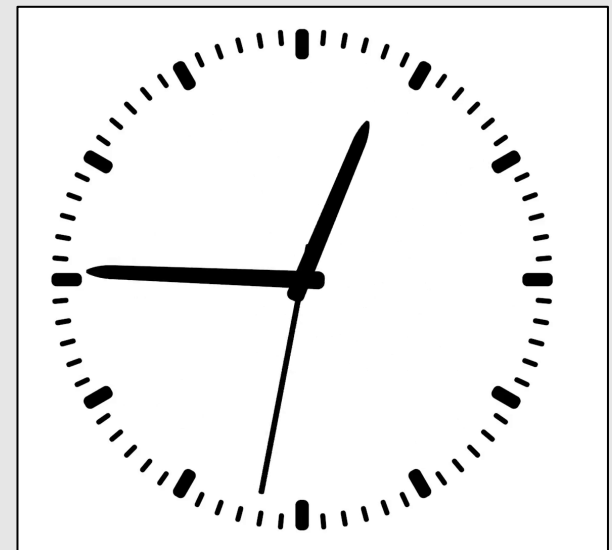




MATT-TC

Time available:

- 1/3 – Planning, 2/3 – execution
- Plan, prepare & execute operations
- Assemble, deploy, move
- Enemy's ability
- Unit size and mission





MATT-TC

Civil Considerations

Areas/structures:

- Buildings
- Blue prints
- Street patterns
- Urban patterns
- Criminal/terrorist enclaves





MATT-TC

Civil Considerations

Areas/structures (Continued)

- Underlying terrain
- Construction materials
- Key Commercial zones
- Subterranean passages
- Political precincts/districts



MATT-TC

Civil Considerations

Capabilities:

- Fuel
- Fire/rescue
- Electrical power
- Water supply
- Transportation
- Communications
- Health services





MATT-TC

Civil Considerations

Organizations/people/events:

- NGOs (Non-Government Organization)
- Media
- Culture
- Loyalties
- Authority(s)
- Perceptions





MATT-TC

Civil Considerations

Organizations/people/events (Continued)

- Relationships
- Labor unions
- Demographics
- Groups & sub-groups
- Religious holidays



Questions?



Definition

Post mission:

Post mission simply means after the mission is completed.





Post Mission Brief

Military Debriefing:

Debriefings originated in the military. This type of debriefing is used to receive information from a pilot or soldier after a mission, and to instruct the individual as to what information can be released to the public and what information is classified.



Post Mission Brief

Here are a few ways to cover a post mission brief:

- Lessons Learned
- Improvements
- Sustainment





Post Mission Brief

Lessons Learned:

Lessons learned are experiences distilled from a mission that should be actively taken into account during future missions.

- What happened
- Threat assessment
- Main/Other recommendations





Post Mission Brief

Improvements:

Improvement is the process of a thing moving from one state to a state considered to be better, usually through some action intended to bring about that better state.

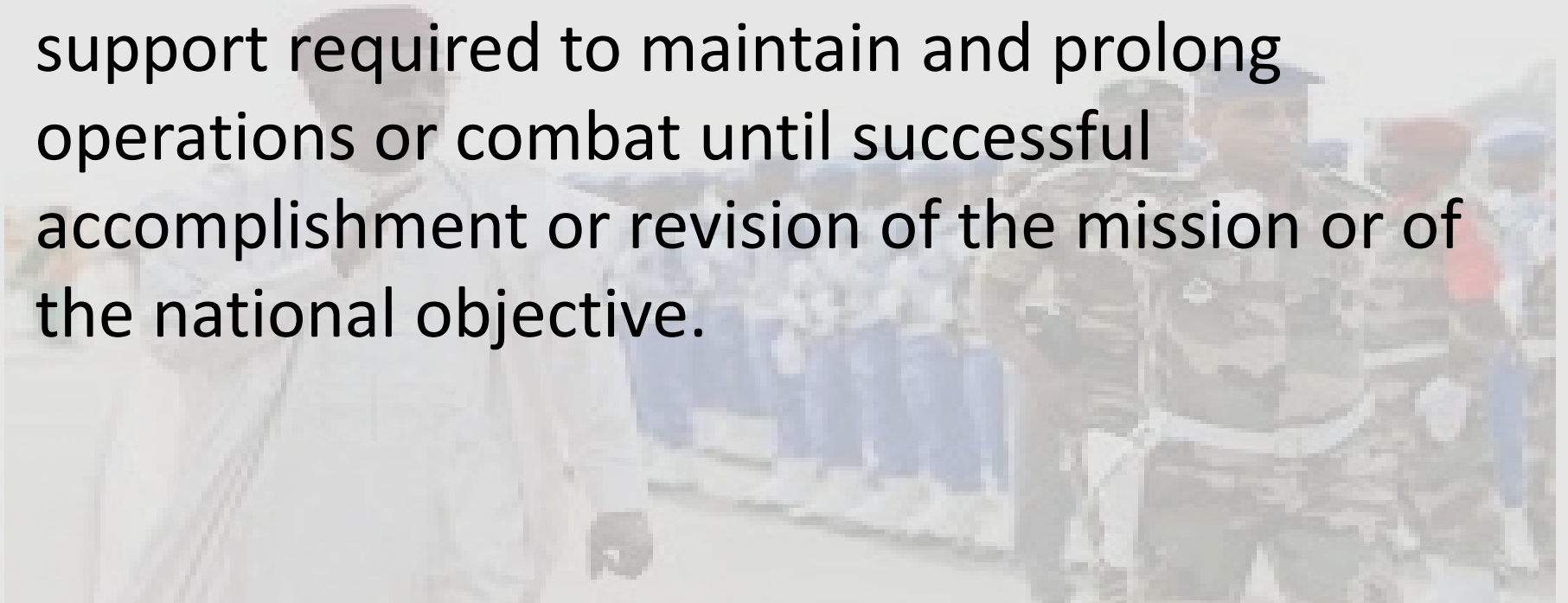




Post Mission Brief

Sustainment:

The provision of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective.





Questions?



Quiz

1. What are five phases that need to be established while conducting a brief?

- *Situation*
- *Mission*
- *Execution*
- *Administration/ Logistics*
- *Command and Control*



Quiz

2. What are some things that we look for in a Situation?

- *Hostile Forces*
- *Composition, Disposition, Strength*
- *Capabilities & Limitations:(DRAW-DG) Defend, Reinforce, Attack, Withdraw, Delay, Gas*
- *Most Likely Course Of Action (MLCOA)*
- *Most Dangerous Course of Action*



Quiz

3. Under signal, what four course of actions (COAs) should we be aware of?

- *Primary*
- *Alternate*
- *Contingency*
- *Emergency*



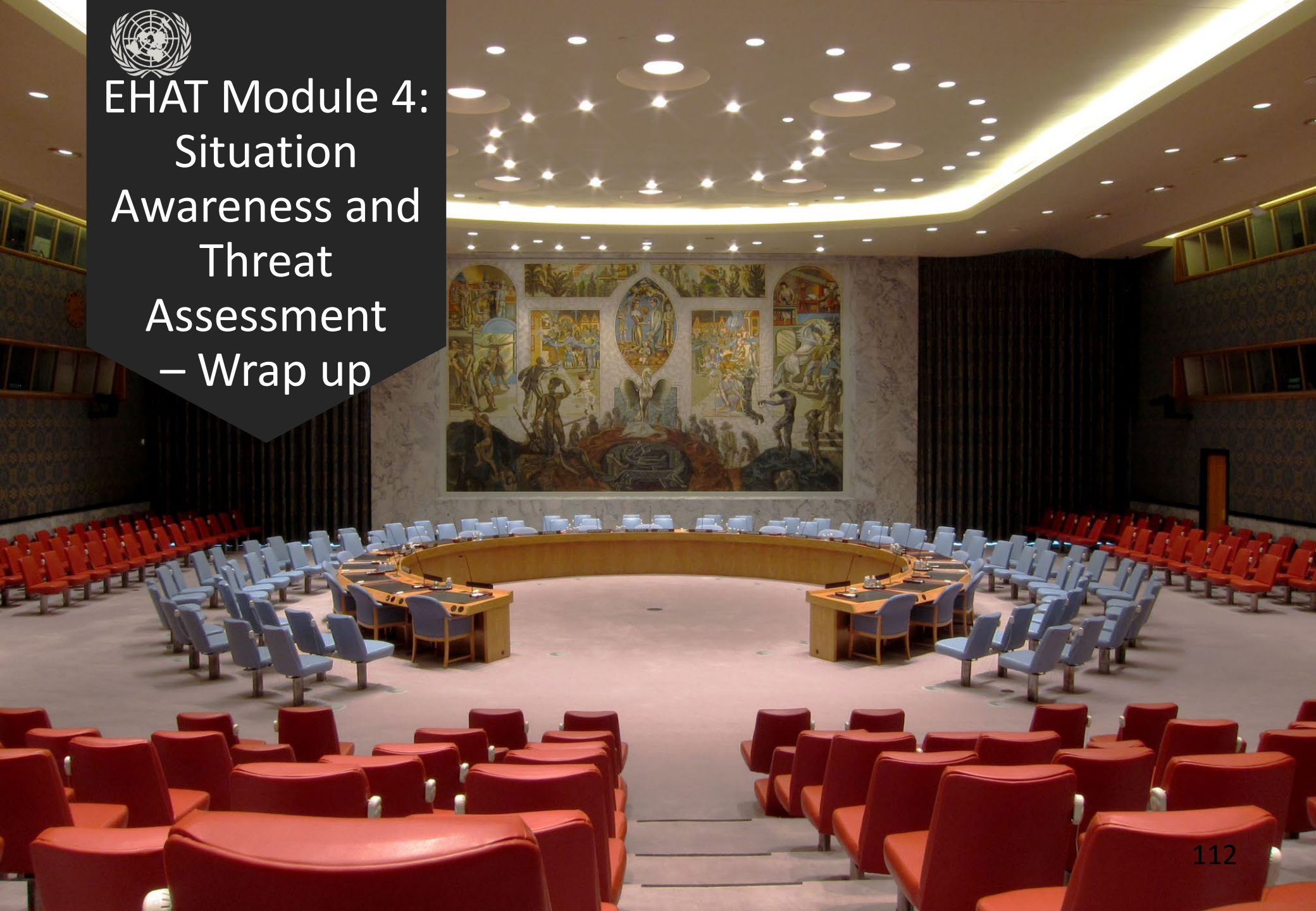
Quiz

4. Lessons learned are experiences distilled from what?
 - *A mission that should be actively taken into account in future missions.*

5. What is a sustainment?
 - *Provisions of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective.*



EHAT Module 4: Situation Awareness and Threat Assessment – Wrap up





Module Conclusions

- TLO: The student will understand and explain situational awareness by conducting a threat assessment through decision making process.



Module Conclusions

- ELO 1: Basic vehicle and personal search.
- ELO 2: Threat assessment and briefing/ role of IED's in complex attack.
- ELO 3: Use of electronic countermeasures (ECM).
- ELO 4: Demonstrate an understanding of Pre and Post Missions.



EHAT Module 5: Roles of EOD, IEDD, and First Responders





Terminal Learning Objectives

The students will understand the important roles of EOD, IEDD and First Responders.



Overview

5.1 The roles of EOD, IEDD, and First Responders



The roles of Explosive Ordnance Disposal (EOD), Improvised Explosive Device Disposal (IEDD), and First Responders



Enabling Learning Objectives

Describe the roles of Explosive Ordnance Disposal (EOD), Improvised Explosive Device Disposal (IEDD), and First Responders.



Role of Explosive Ordnance Disposal (EOD) Units

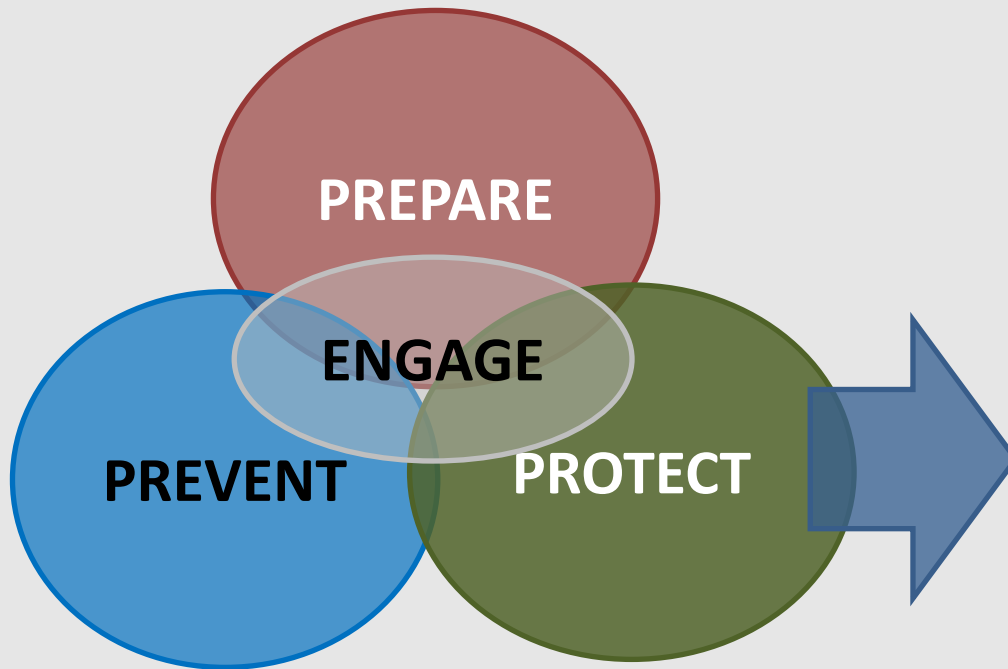
Role of EOD Units:

As an integral part of a UN force, the fundamental role of EOD units is to counter EO threats in support of peacekeeping operations.





Role of Explosive Ordnance Disposal (EOD)



Outputs of Activities

- Synchronized actions in support of the mission
- Intelligence/Operations Analysis and Fusion
- Standardizing & Monitoring EOD capability
- Comprehensive Approach



Role of Explosive Ordnance Disposal (EOD)

Prepare:

UN civilian and military personnel to operate in explosive threat environments.





Role of Explosive Ordnance Disposal (EOD)

Prevent:

The use of these EO by facilitating the disruption of threat networks and the ability to construct and employ explosive devices.





Role of Explosive Ordnance Disposal (EOD)

Protect:

By detecting and rendering safe EO threats and mitigating their effects. This line requires optimization and integration of suitable technology solutions.





Role of Explosive Ordnance Disposal (EOD)

Engage:

With stakeholders and partners in a comprehensive approach to develop their counter explosive threat capabilities.





Role of Explosive Ordnance Disposal (EOD)

Deployment of EOD units on peacekeeping missions aims to defeat or to mitigate the effects of EO, in order to:

- Contribute to the force protection (FP) of UN personnel and partner agency personnel
- Protect civilians
- Allow freedom of action and movement in the Area of Operations (AO)



Role of Explosive Ordnance Disposal (EOD)

- Increase the UN troops confidence and effectiveness.
- Contribute to stabilization initiatives as part of post conflict or emerging societies through the removal of EO threats which can impact economic development and act as source of energetic material for use in IEDs.
- Contribute to the degradation of IED networks by recording and recovery of EO components.



Role of Explosive Ordnance Disposal (EOD)

- EOD and in particular IEDD are important functions contributing to these goals.
- EOD activities are in direct support to enhance operational effectiveness and efficiency, and improve peacekeeper safety and security in the field in support of the UN mission mandate.



Role of Explosive Ordnance Disposal (EOD)

- The requirement for deploying this capability depends on the threat assessment for the specific mission environment.
- The level of threat must be considered both in terms of EO that is assessed to have been utilized in a given AO and/or a potential or actual aggressor's IED capability.



EOD Philosophy

The UN EOD philosophy is:

- Save life
- Preservation of property
- Removal of the threat
- Recording and recovery of EO components
- Return to normality



EOD Philosophy

The prioritization of the five parts of the EOD philosophy depends of the key operational actions defined by the UN force commander. In every case, ***preservation of life*** is always the priority in all EOD activities.





EOD Principles

The following EOD principles have been devised from the EOD philosophy and are to be observed in all EOD operations and tasks.





EOD Principles

These EOD principles are:

- The preferred Render Safe Procedure (RSP) should utilize remote means.
- Manual render-safe actions shall be carried out only as a last resort.
- The operator shall be exposed to an EO item for the minimum time.



EOD Principles

- Mandatory safe waiting periods shall be observed.
- Operations shall be planned.
- In IEDD, the preferred RSP should utilize remote neutralization through disruption.
- The operator shall revert to remote means whenever possible.



Questions?



Quiz

1. What are four interrelated Lines Of Operation?

Prepare, Protect, Prevent, Engage

2. What are the five UN EOD Philosophies?

- *Save a life*
- *Preservation of property*
- *Removal of the threat*
- *Recording and recovery of EO components*
- *Return to normality*



IED Disposal (IEDDD) Activities

IED Disposal (IEDDD) Activities :

- IEDDD is a specialist skill requiring specific training and equipment preferably including the use of remote control / operated vehicles (RCV / ROV).
- IEDDD personnel should not be put under pressure to operate outside their EOD capabilities except in extreme circumstances.



Capabilities of Improvised Explosive Device Disposal (IEDDD)

The capabilities of an IEDDD unit will determine the tasks to which they are appropriately qualified and equipped to efficiently, effectively and safely respond to.





Capabilities of Improvised Explosive Device Disposal (IEDDD)

One illustrative example of an IEDDD unit's capabilities being driven by the assessed IED threat is the assessment on the presence of a RCIED threat in a UN mission.





Capabilities of Improvised Explosive Device Disposal (IEDDD)

If an assessment is made that a RCIED threat is likely or actually present, mission planning must then decide upon CREW assets and what type is required and how this will be:

- Employed
- Deployed
- Maintained
- Sustained





IEDD Philosophy

The UN IEDD philosophy is:

- Save Life
- Preservation of Property
- Removal of the Threat
- Recording and Recovery of EO Components
- Return to Normality



IEDD Principles

The guiding principles of IEDD are as follows:

- Remote means are to be used whenever possible within the tactical situation of the task.
- Manual render safe action is only to be carried out as a last resort, where all other possible means have been exhausted.



IEDD Principles

- One-person risk.
- The operator is to spend the minimum amount of time in the target area and is to return to the use of remote means whenever practicable.
- Prior to making a manual approach, safe waiting periods are observed.



IEDD Principles

- Neutralization through disruption of an IED is the primary option.
- No positive EOD action is to be undertaken until the cordon and evacuation is in place.
- Operations shall be properly planned.



Planning IEDD Capability Requirements

The decision to establish IEDD capabilities is determined by available contamination information received from the national government, designated IEDD authority or the United Nations.





Assessment of:
IED Threat
Aggressor intent, Capability & Opportunity
Operating Environment
Available Resources
Legal Considerations

Feeds into

Determines

Incident Information
Management

IED Organization Capabilities
Management Structure
Competencies of IEDD Personnel
IEDD Equipment Available
External Support the IEDD Team

Lessons Learned

Feeds into

Plan and Tasks

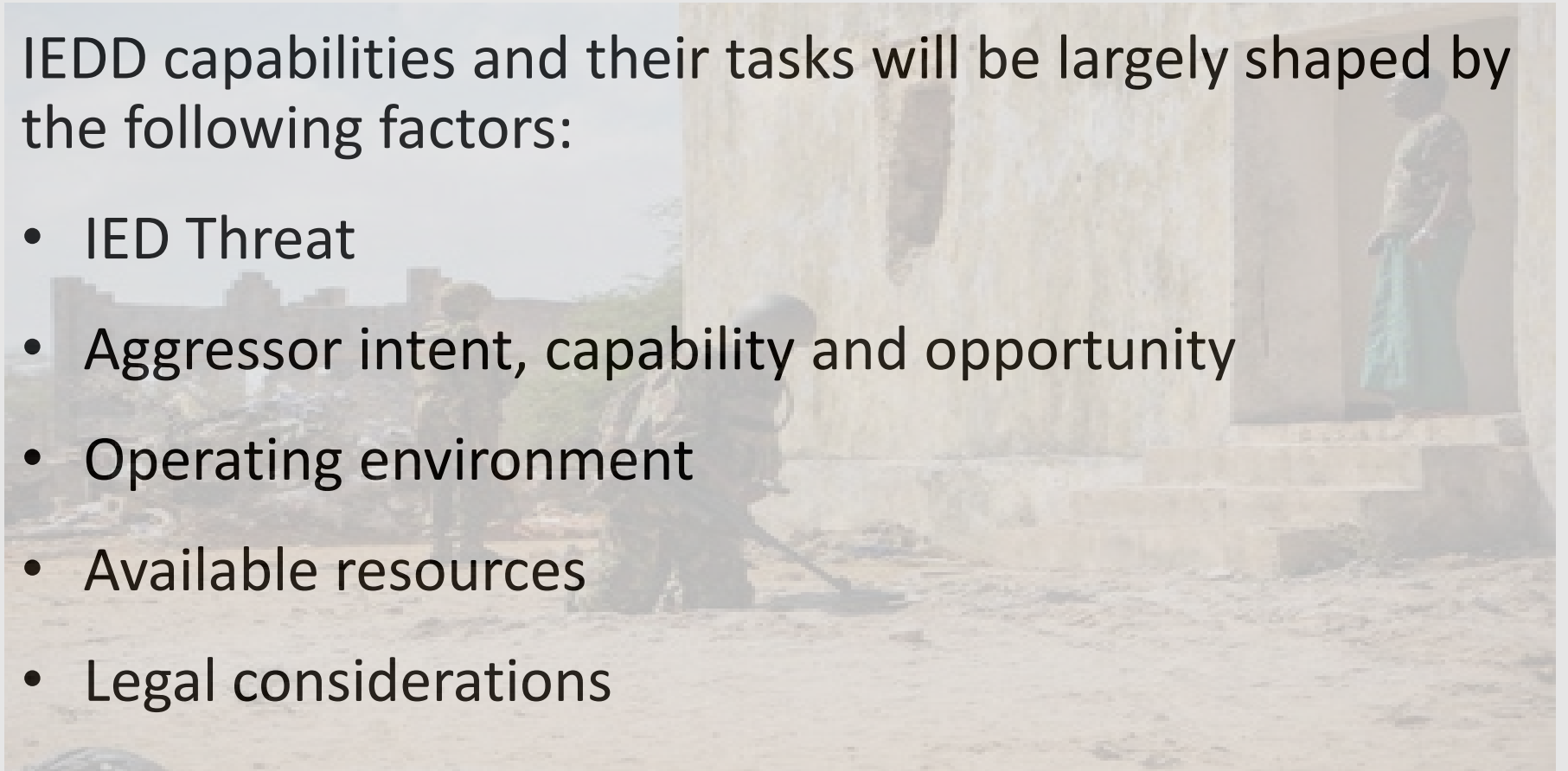
Execution in IEDD in defined role



Planning IEDD Capability Requirements

IEDD capabilities and their tasks will be largely shaped by the following factors:

- IED Threat
- Aggressor intent, capability and opportunity
- Operating environment
- Available resources
- Legal considerations





Planning IEDD Capability Requirements

IED threat:

IEDD requires a thorough understanding of IED construction and their methods of use in a given area of operations.





Planning IEDD Capability Requirements

Aggressor intent, capability and opportunity:

An IED aggressor refers to any person or group of persons or organization that has the intent and capacity to inflict or threaten physical violence through the use or threatened use of IEDs.





Planning IEDD Capability Requirements

Operating environment:

The environment in which the IEDD capability will be deployed must be considered from a physical environmental perspective and a social perspective.

- H** - Human terrain
- A** - Allied Locations
- T** - Topography and areas of interest
- E** - Electronic Terrain.





Planning IEDD Capability Requirements

Available resources:

All resources that are required, directly or in support of an IEDD capability, need to be considered in relation to the constraints associated with the maintenance or lack of equipment.





Planning IEDD Capability Requirements

Legal considerations:

Legal considerations to be incorporated can have a major influence on the ability of an IEDD organization to develop, maintain and sustain a stated IEDD capability.





Questions?



Quiz

1. What factor(s) will largely shape the capabilities and tasks of IEDD?
 - *IED Threat*
 - *Aggressor intent, capability and opportunity*
 - *Operating environment*
 - *Available resources*
 - *Legal considerations*



Quiz

2. What refers to any person or group of persons or organization that has the intent and capacity to inflict or threaten physical violence through the use or threatened use of IEDs?
 - *IED Aggressor*



Quiz

3. What environment in which the IEDD capability will be deployed must be considered from a physical environmental perspective and a social perspective?
 - *Operating environment*



First Responders

First responders typically include paramedics, emergency medical technicians, police officers, firefighters, rescuers, and other trained members of organisations connected with this type of work.





First Responders

First responders must be trained to deal with a wide array of potential medical emergencies.

NOTE UN Personnel– All UN personnel must be prepared to assist or work for a first responder element as required during an emergency.





Roles of First Responders

Definition:

A first responder is a person with specialized training who is among the first to arrive and provide assistance at the scene of an emergency, such as an accident, natural disaster, or terrorist attack.





Roles of First Responders

Operational Level:

-At the **operational levels**, the IED activity for military/police staff primarily revolves around understanding the threat and pursuing and preventing it.



Roles of First Responders

Operational Level:

- **Understanding.** Understanding the IED threat and mitigation tasks underpins all actions at all levels.



Roles of First Responders

Operational Level:

- **Pursuing.** This involves the full spectrum of actions in support of peacekeeping efforts inside and outside the mission area in order to degrade the aggressor's IED capabilities and capacities.



Roles of First Responders

Operational Level:

- **Preventing.** These activities both inside and outside the mission area involve influencing aggressors to reject involvement in the IED network.



Roles of First Responders

Tactical Level:

- At the **tactical level**, staff has the responsibility for protecting and preparing the force.



Roles of First Responders

Tactical Level:

- **Protecting.** This is ensured by tactical measures to provide freedom of movement to the force and the locals.



Roles of First Responders

Tactical Level:

- **Preparing.** This involves building the capabilities of the force according to the IED threat environment and is, necessary to carry out the mission's mandate.



Questions?

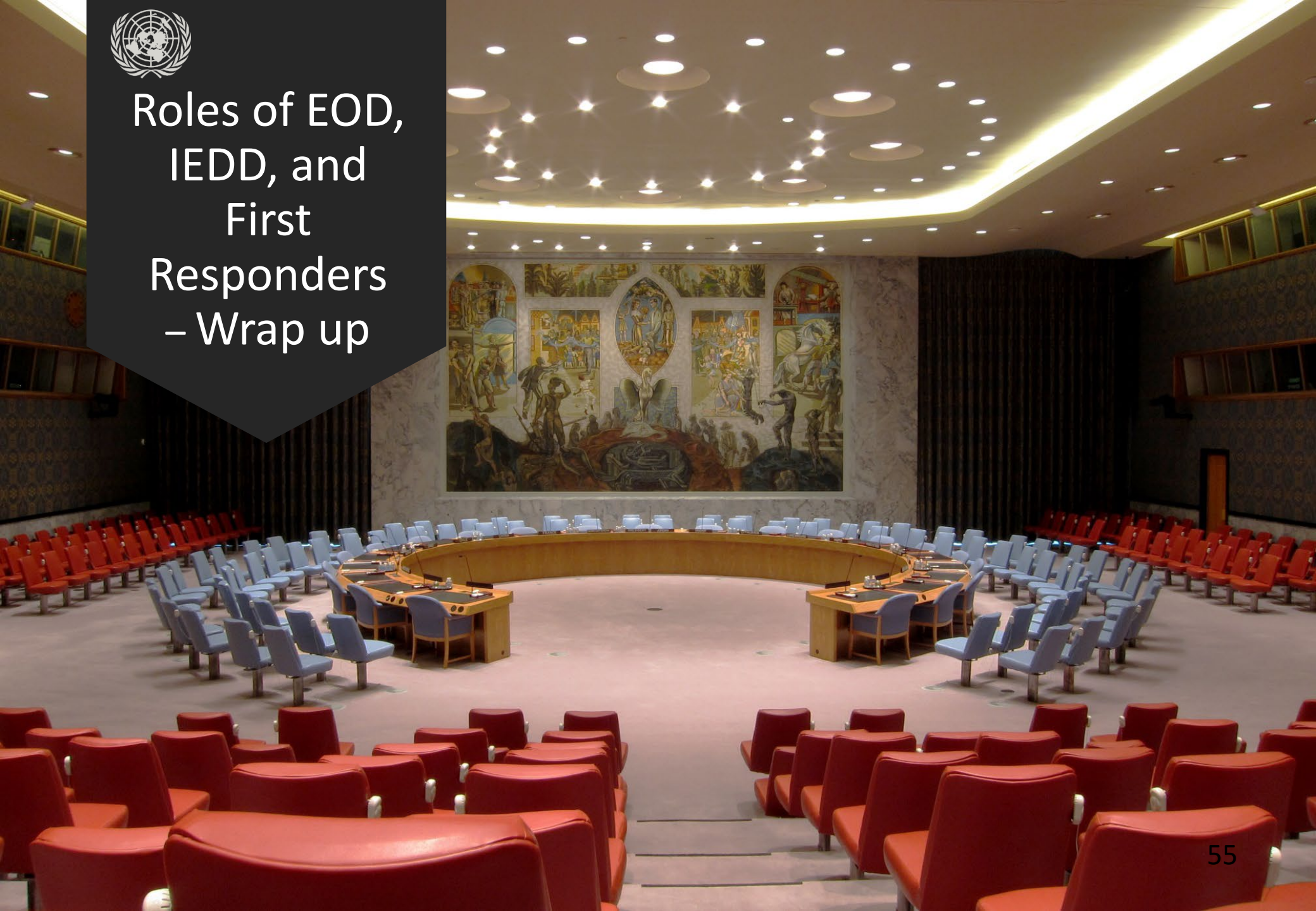


Quiz

1. What do first responders typically include?
 - *Paramedics, emergency medical technicians, police officers, firefighters, rescuers*
2. Who is among the first to arrive and provide assistance at the scene of an emergency, such as an accident, natural disaster, or terrorist attack?
 - *First Responder*



Roles of EOD, IEDD, and First Responders – Wrap up





Module Conclusions

- TLO: The students will understand the important roles of EOD, IEDD and First Responders.
- ELO 1: Describe the roles of Explosive Ordnance Disposal (EOD), Improvised Explosive Device Disposal (IEDD), and First Responders.



EHAT Module 6: Ground Sign Awareness (GSA) and Patrol Techniques





Terminal Learning Objectives

The student will be able to understand how to identify, locate and maneuver past dangerous and vulnerable areas using ground sign awareness.



Overview

6.1 Ground Sign Awareness and Combat Indicators



6.1 Ground Sign Awareness and Combat Indicators





Enabling Learning Objectives

Enumerate the characteristics of ground signs and combat indicators.





Ground Sign Awareness (GSA)

What is GSA?

The ability to recognize evolving threats within a hostile environment by observing, analyzing and understanding indicators (sign) left by nature and human activity, thus making logical deductions and assumptions in order to react/ inform at the tactical and operational levels.



Ground Sign Awareness (GSA)

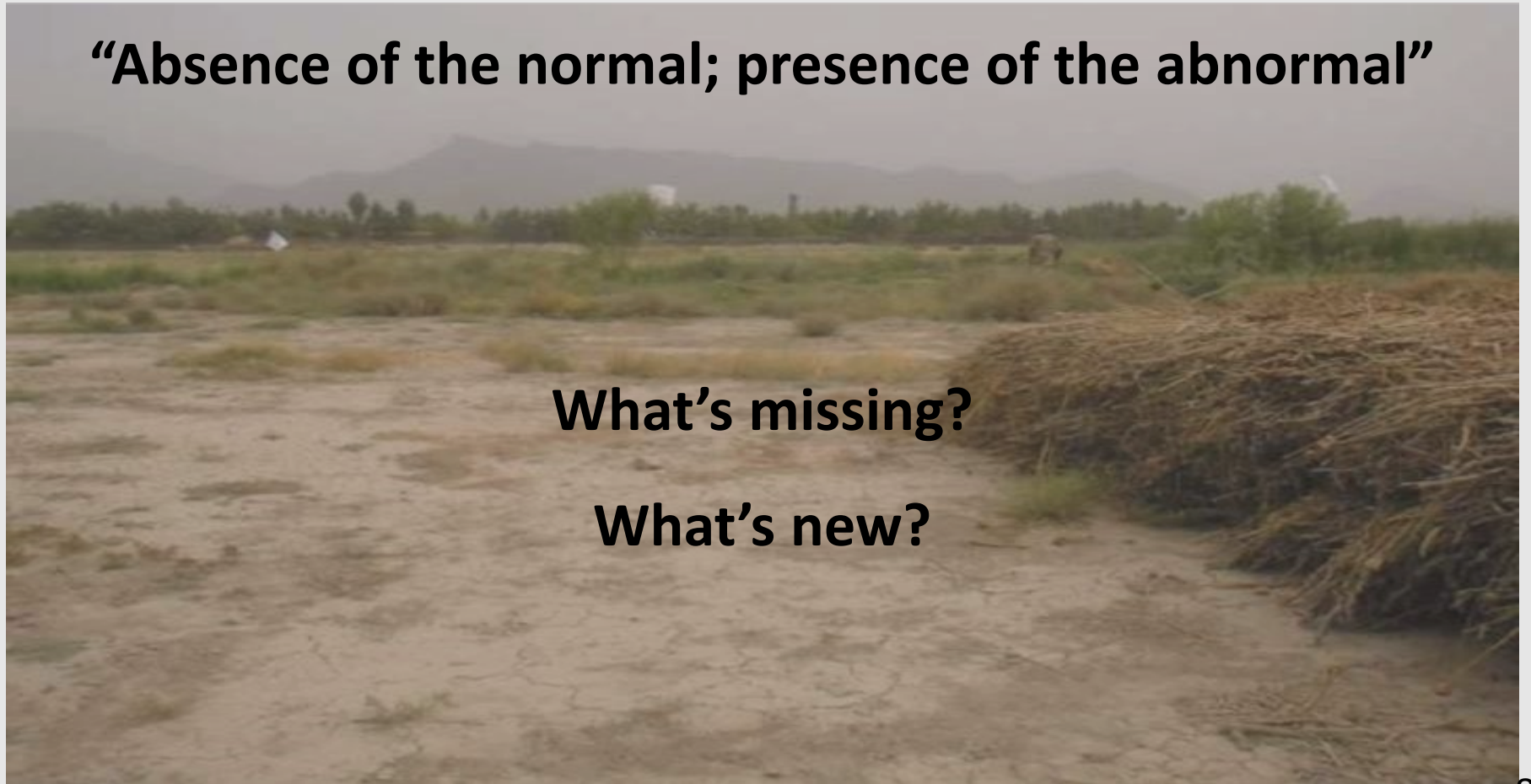
Wire laid for a command wire improvised explosive device (CWIED), poorly camouflaged IED components, and ground signs may all be discovered when the area is investigated by a thorough visual and equipment search.





Ground Sign Awareness (GSA)

“Absence of the normal; presence of the abnormal”



What's missing?

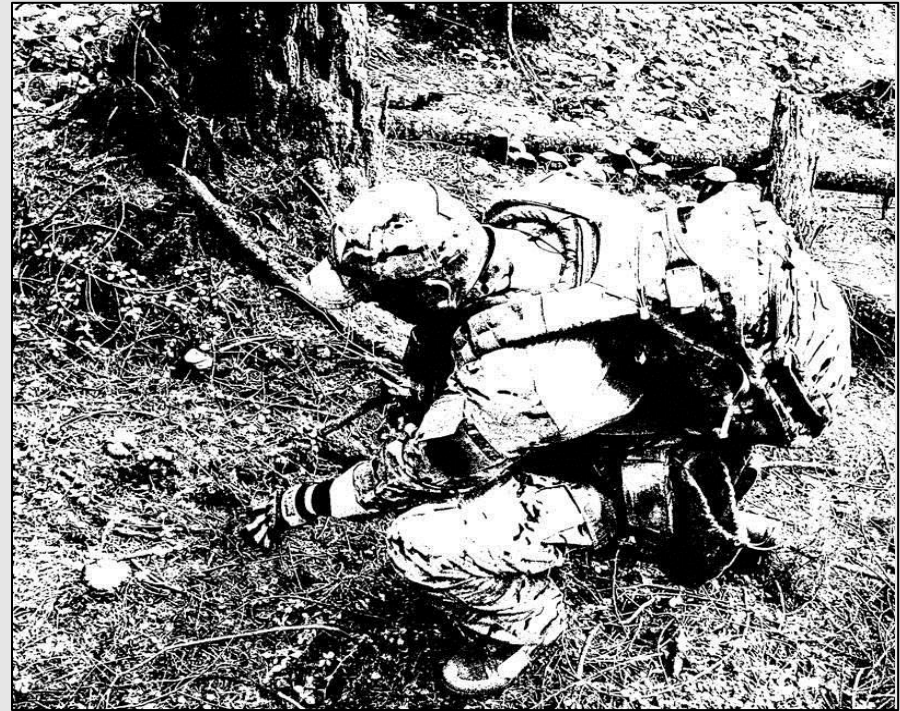
What's new?



Ground Sign Awareness (GSA)

Look out for the following indicators:

- Sign
- Regularity
- Flattening
- Transference
- Colour Change
- Foreign Material





Ground Sign Awareness (GSA)

Sign:

Sign is a disturbance of the earth created by man, animal or machine.





Ground Sign Awareness (GSA)

Warning!

If it looks out of place, it was probably put there
for a reason.

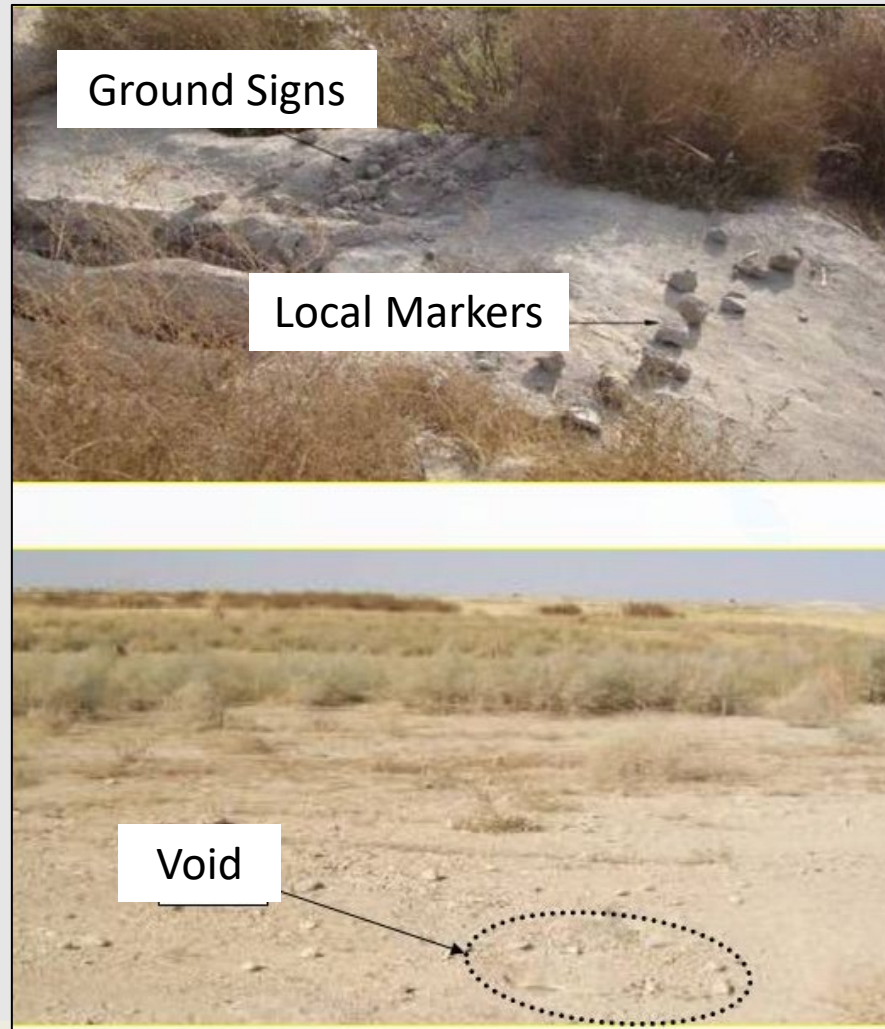
To target you!



Ground Sign Awareness (GSA)

Regularity:

Geometric or repeated patterns not normally found in nature.





Ground Sign Awareness (GSA)

Flattening:

The general levelling or depression creating a disturbance from its natural state.





Ground Sign Awareness (GSA)

Transference:

Transference is the displacement of one medium to another.

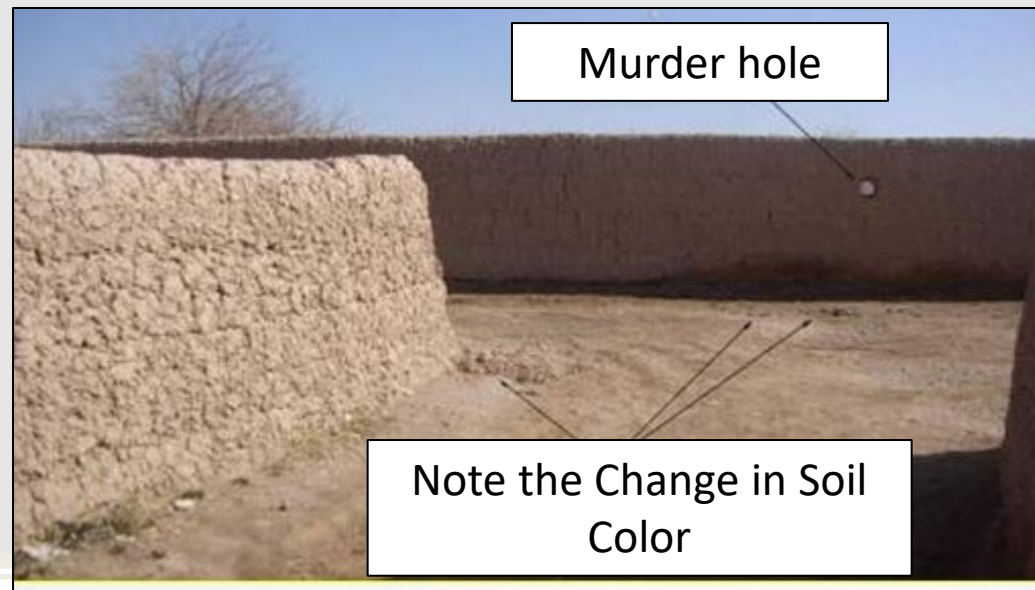




Ground Sign Awareness (GSA)

Colour Change:

Colour change occurs when something is altered from its natural state causing light to interact differently than the surrounding area.





Ground Sign Awareness (GSA)

Foreign Material:

Any material not present in the environment in its normal state.





Ground Sign Awareness (GSA)



What do you see?



What do you see?



Ground Sign Awareness (GSA)



Pressure plate

Flattening
Disturbance
Colour change

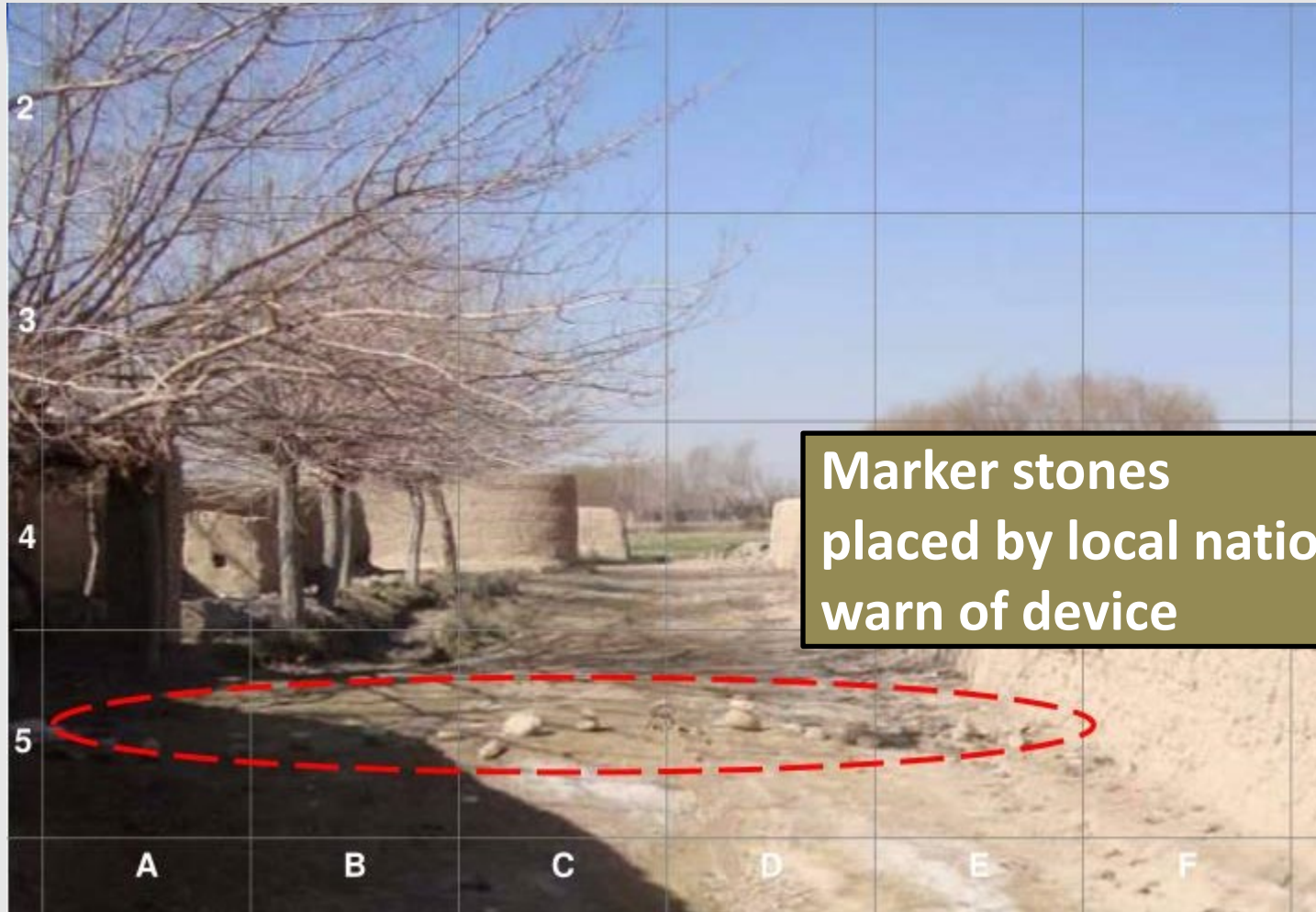


Stone markers

Regularity



Ground Sign Awareness (GSA)



**Marker stones
placed by local nationals to
warn of device**



Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)



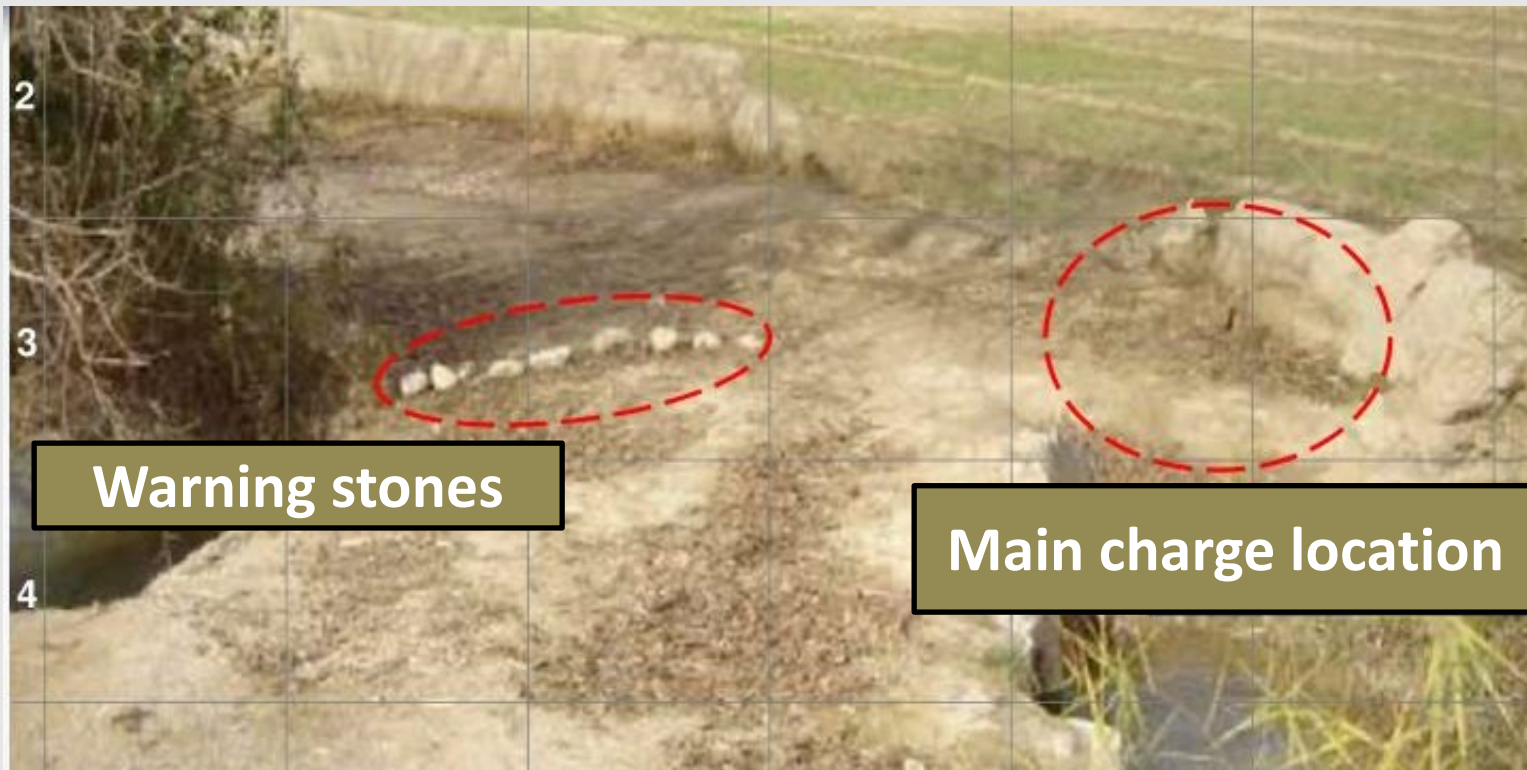


Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Ground Sign Awareness (GSA)





Questions?



Quiz

1. What are some indicators in GSA?

- *Regularity*
- *Disturbance*
- *Flattening*
- *Colour change*
- *Transference*
- *Foreign material*



Quiz

2. What is a sign?

- *Sign is a disturbance of the earth created by man, animal or machine*

3. What is Transference?

- *Transference is the displacement of one medium to another*



Quiz

4. What is colour change?

Colour change occurs when something is altered from its natural state causing light to interact differently than the surrounding area.



Ground Sign Awareness (GSA) – Wrap up





Module Conclusions

- TLO: The student will perform practical drills to potentially identify, locate and maneuver past danger and vulnerable areas using ground sign awareness and patrol techniques.



Module Conclusions

- ELO 1: Ground sign awareness and combat indicators.