

Past, Present & Future of Battlefield Forensics

Improving the Recovery and Identification of Fallen
Servicemen and Women in a Multinational
Environment

Date of Presentation: 18 OCT 2024 – Pretoria, South Africa

Time frame: 2023 – 2026

Lead: Rikke RIETVELD,

PhD Project in collaboration with Cranfield University, Danish Defence and NATO.

Funded by Cranfield University and NATO DAT-POW. Supported by Danish Defence (SOCOM).

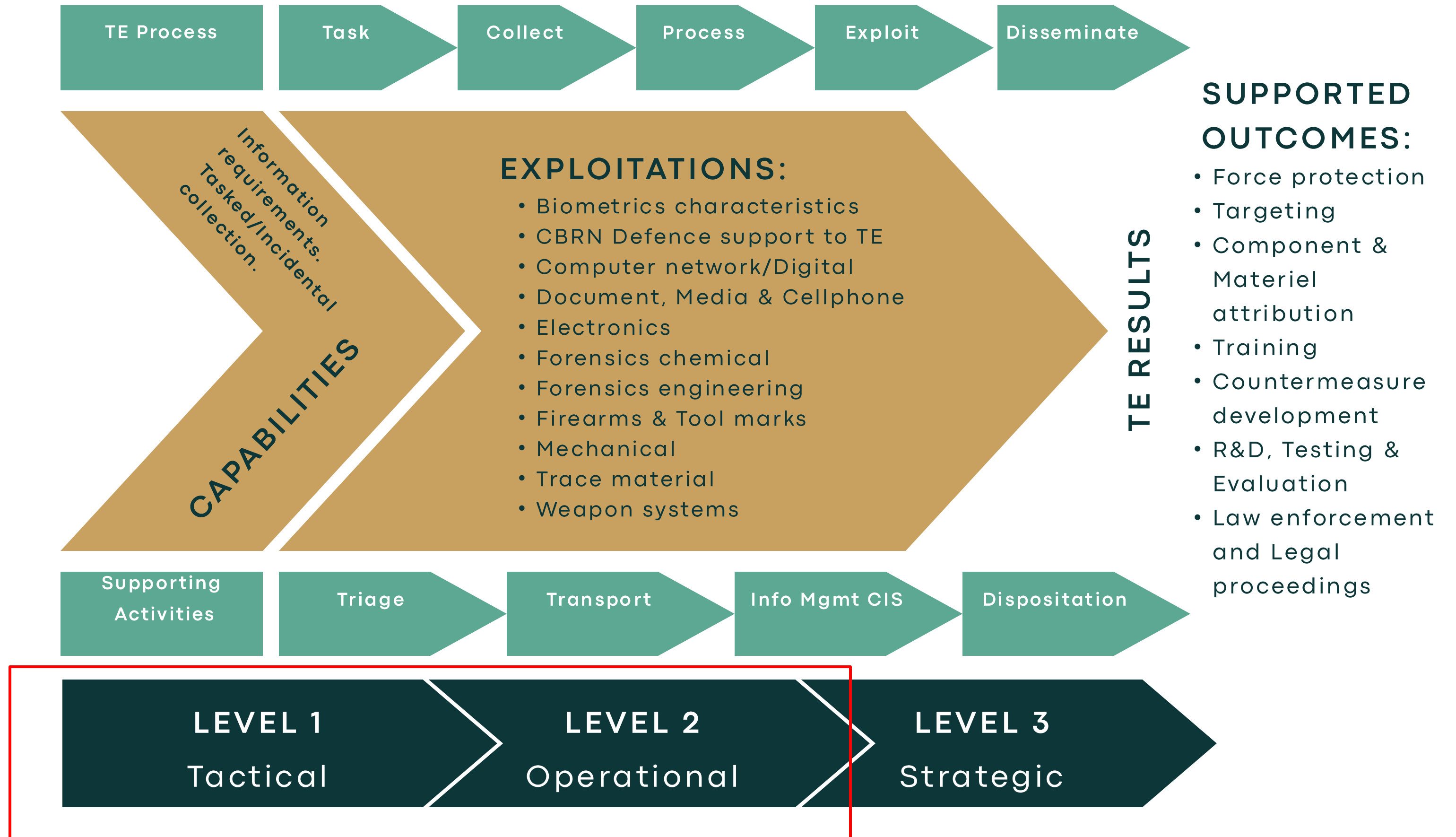


DANISH DEFENCE



Technical exploitation

Process

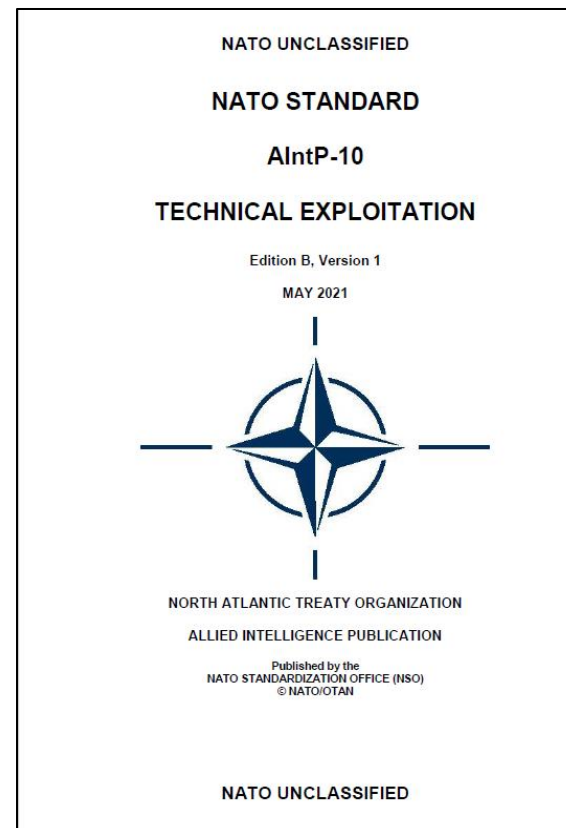


Technical Exploitation Process in a NATO area of operation -> Management?
Capabilities? Coordination with HN and NGOs?

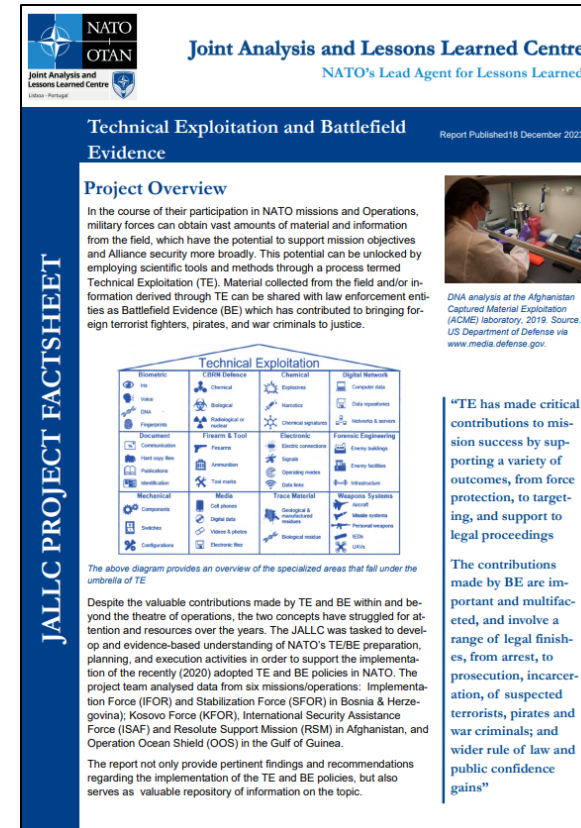
Introduction to the Battlefield Forensics Project



Photo credit: US NAVY



TE AIntp-10 2021



TE and BE Report JALC DEC 2023

The identified gaps underscore the importance of addressing resource limitations, enhancing international collaboration, navigating legal and ethical complexities, and promoting knowledge sharing to overcome operational hurdles and achieve impactful results in complex security environments.



LIMITED UNDERSTANDING – WHAT IS BATTLEFIELD FORENSICS?



COLLECTIVE MEMORY LOSS IN A MILITARY CONTEXT



CHALLENGES OF LIMITED RESOURCES AND CAPACITY



VERY LITTLE PLANNING AND PREPERATION



NEED FOR BETTER INTERNATIONAL COLLABORATION & KNOWLEDGE SHARING

Battlefield Forensics must be recognised as a multifaceted and unique scientific discipline

Current Challenges

Ukraine, Moldova | DG ECHO-funded humanitarian assistance update



"Ukraine's Prosecutor have logged over **126,000 war crime** cases according to Yuriy Belousov, Head of War Crimes Unit in Ukraine's Prosecutors Office." -REUTERS 16 APR 24.

"Currently, the Register of Persons Missing under special Circumstances" contains **over 59,000 entries**". - Commissioner for Persons Missing under Special Circumstances, Artur Dobroserdov, SEP 24.

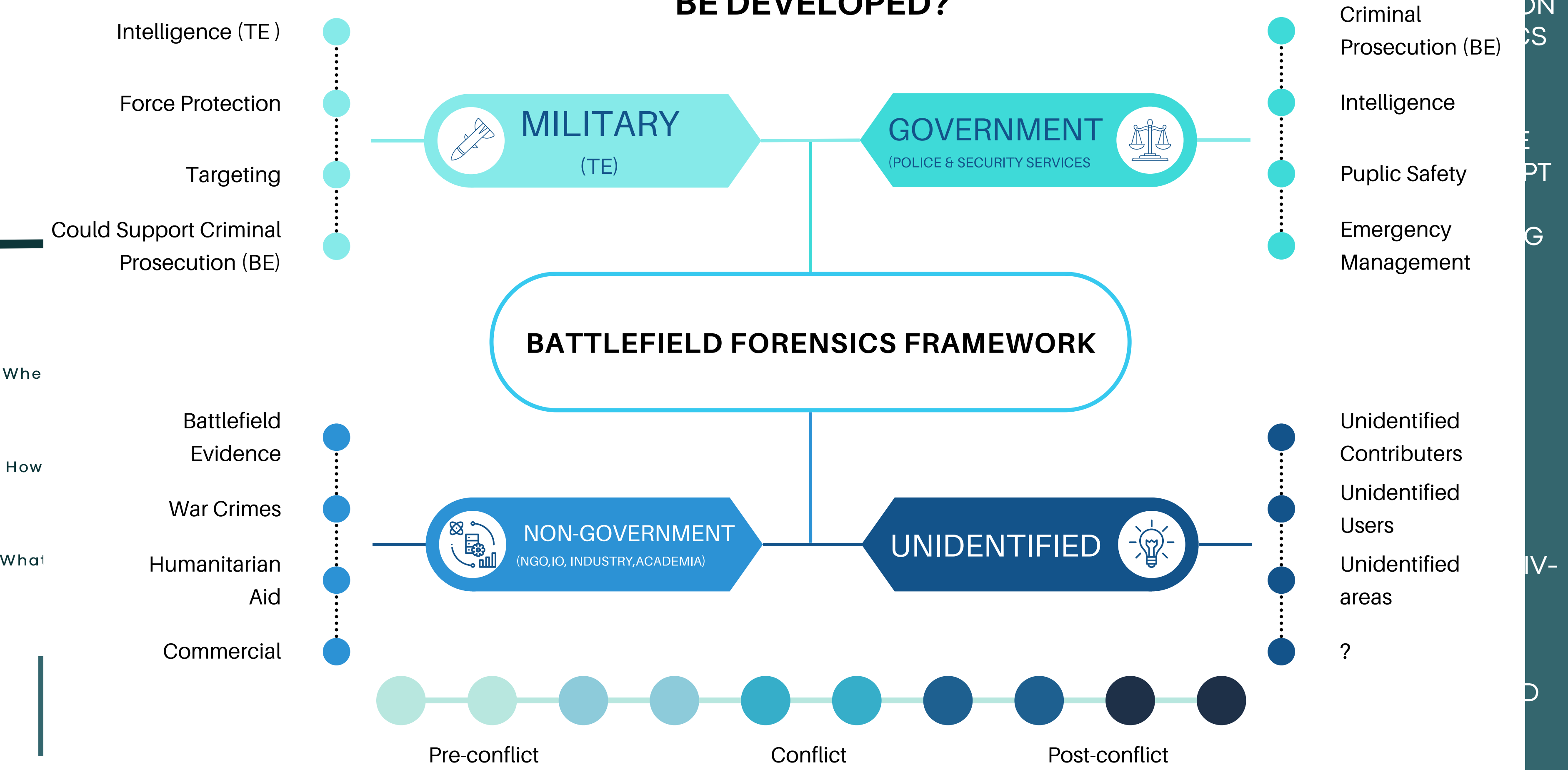
"Human trafficking, which was already on the **increase** because of the country's worsening economic conditions and resultant labor emigration, has been further exacerbated by the war waged by Russia in Ukraine". - Global Organized Crime Index, 2023.

"Recent evidence shows early signs that organized arms trafficking is on the rise in Ukraine"- Global Initiative- SEP 24

"The dud rate of Russian munitions is between 10 and 30 percent, with cluster munitions reaching 40%. In 2022 Russia alone fired around 11 million artillery rounds, which might amount **to over 2 million UXO on the territory of Ukraine** left from artillery shells in 2022 only." GLOBSEC 2024

"461 humanitarian partners in Ukraine, including 236 international NGO's, 112 National NGOs" Source: CSIS

CAN A HOLISTIC BATTLEFIELD FORENSICS FRAMEWORK BE DEVELOPED?



WHAT IS BATTLEFIELD FORENSICS?

INTELLIGENCE

TECHNICAL
EXPLOITATION

ATTACK THE
NETWORKS

DEFEAT THE DEVICE

TARGETING

BATTLE DAMAGE
ASSESSMENT

PREPARE THE
FORCE

BATTLEFIELD
EVIDENCE

COUNTER
INSURGENCY

FORCE
PROTECTION

POST-BLAST
ANALYSIS

BIOMETRICS

COUNTER
TERRORISM

PROSECUTION

MILITARY
FORENSICS

GOVERNMENT
FORENSICS

CIVILIAN
FORENSICS

CBRN

C-UAS

BOARDER SECURITY

INNOVATION & SUPPORT

DISASTER VICTIM
IDENTIFICATION

ARMS CONTROL

REVERSED
ENGINEERING

MILITARY
RECOVERY &
IDENTIFICATION

PUBLIC SAFETY

OPEN SOURCE
INTELLIGENCE

SPECIALIST
EXPERTISE

RESEARCH

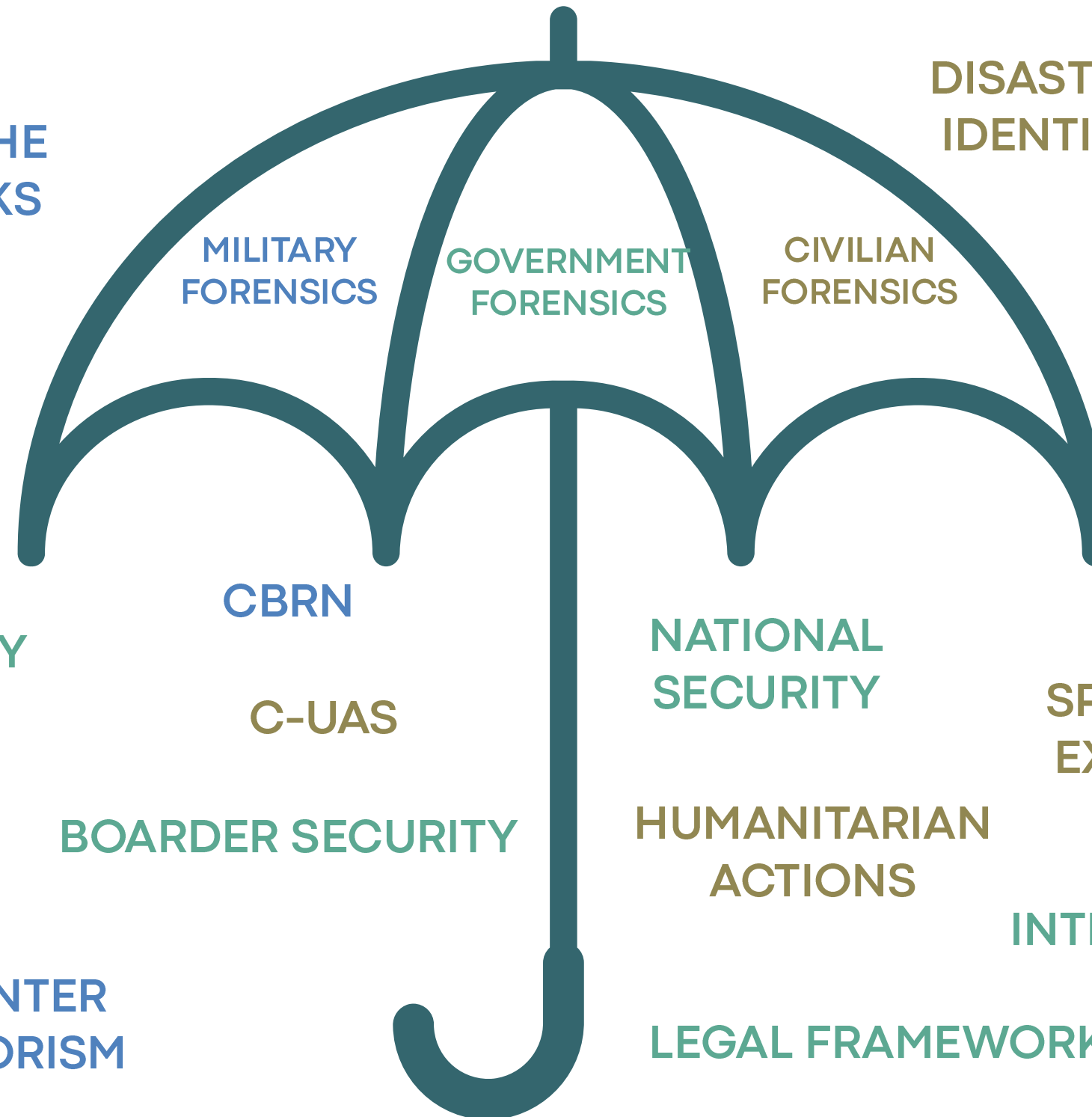
INTERNATIONAL
JUSTICE

INNOVATION

NATIONAL
SECURITY

HUMANITARIAN
ACTIONS

LEGAL FRAMEWORK



Working with NATO

as a Case Study

Provide a real-world framework in which to test current NATO doctrine and concepts within TECHNICAL EXPLOITATION & BATTLEFIELD EVIDENCE and to determine their degree of implementation in the NATO Force Structure, Operational Planning and coordination with Host Nations.

WHAT IS THE PURPOSE?
WHAT IS COLLECTED?
BY WHOM?
WHO OWNS IT?
HOW DO WE SHARE IT?





NATO
OTAN

Multinational
Corps Northeast

Szczecin Poland

MULTINATIONAL CORPS NORTHEAST

Who: A Regional Land Component Command.

When: Stand-by and Ready at any Time.

What: Military Key Guarantor of Peace in the Region.



Where: NATO's North-Eastern Flank

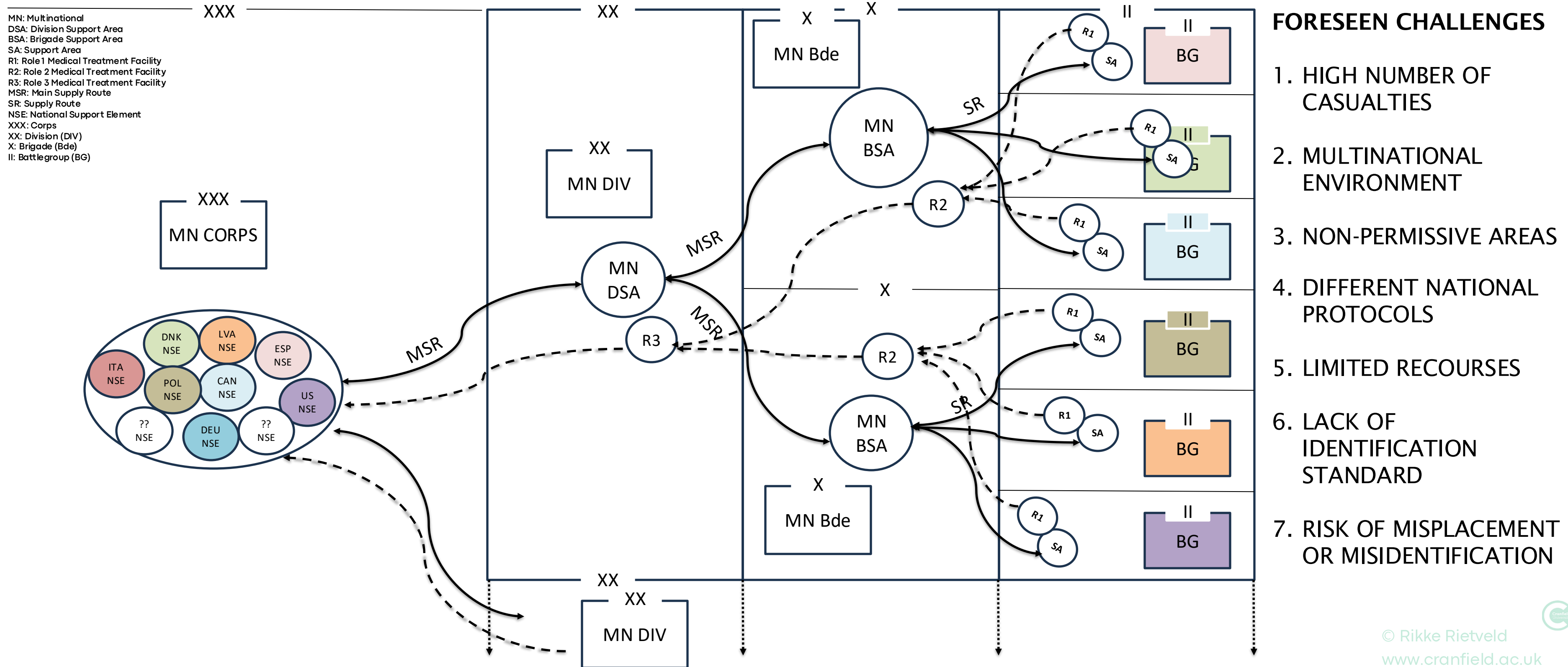
Why: To Protect and Defend our Security, our Freedom and our common Values.

ONE MISSION - ONE AOO - ONE PLAN - ONE TEAM

Source: Multinational Corps Northeast, Szczecin, Poland.

Ready to “Fight Tonight”

Identification and Recovery in a Multinational Environment



Challenges with Military Victim Identification



DOCTRINE DEFICIANCY:

- DOCTRINES NEEDS TO BE FIT FOR PURPOSE (ARTICLE V VS COIN)
- REQUIREMENT FOR OPTIMISED HARMONISATION (HN, CIV FORENSICS)
- LEGAL FRAMEWORK
- NATIONAL CAPABILITIES & CAVEATS?



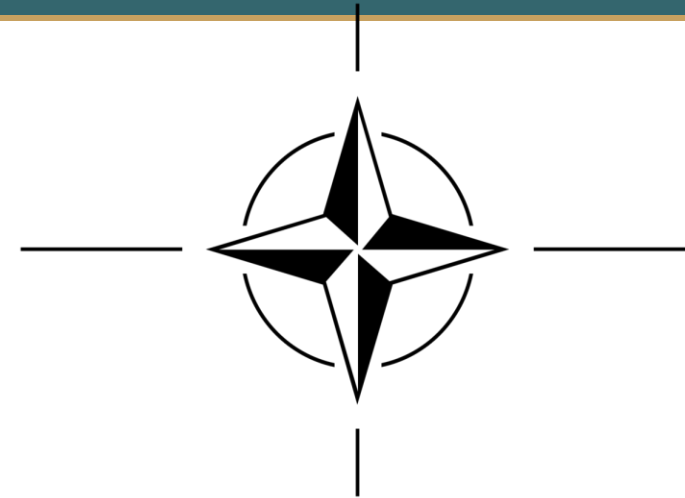
DISPARITY IN IDENTIFICATION PROTOCOLS:

- NATIONS WILL FOLLOW THEIR OWN IDENTIFICATION PROTOCOLS FOR MILITARY PERSONNEL
- RECOVERY, TRANSPORTATION AND IDENTIFICATION IS A NATIONAL RESPONSIBILITY.



DIFFICULT CONDITIONS FOR SEARCH & RECOVERY:

- HIGH-INTENSITY CONFLICTS WITH LIMITED MOBILITY
- URBAN WARFARE OR CONTESTED RURAL AREAS
- LIMITED FREEDOM OF MOVEMENT: ACTIVE FIGHTING, CONTAMINATED AREAS, OCCUPIED AREAS ETC
- DRONES



What are the challenges when operating in an international environment like a NATO Multinational Deterrence and Defence Mission?



Image : Interpol



HIGH CASUALTY RATES AND LIMITED RESOURCES:

- MASS CASUALTIES DURING A SINGLE OPERATION CAN OVERWHELM EXISTING IDENTIFICATION RESOURCES: MORTUARY SERVICES, FORENSICS EXPERTS, BIOMETRIC DATABASES
- LACK OF MULTINATIONAL COORDINATION
- CIVL AND MIL CASUALTIES MIXED TOGETHER



UNIFORMS AND EQUIPMENT:

- MULTINATIONAL FORCES USING THE SAME PATTERN IN UNIFORMS
- SAME TYPE OF EQUIPMENT
- FAST-MOVING AND CHAOTIC SITUATIONS = MISIDENTIFICATION

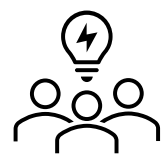


LACK OF NATIONAL MILITARY ID DATABASE

- NO STANDARD FOR "MILITARY DATABASE" WITH DNA, DENTAL, FINGERPRINTS..
- COLLECTING INFORMATION ACROSS NATIONAL LINES = DELAYS IN CONFIRMING IDENTITIES
- LACK OF NATIONAL AND INTERNATIONAL AGREEMENTS
- WHAT IS NATO'S ROLE?

How could we improve?

UPDATED NATO DOCTRINE AND NATIONAL PROTOCOLS



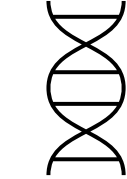
- WORKING GROUPS AND INTERAGENCY CONFERENCES ✓
- INTERNATIONAL GUIDELINES ✓

NATIONAL MILITARY ID DATABASES



- LEGAL FRAMEWORK (NATIONALLY AND FOR COLLABORATION)
- COORDINATED EFFORT BETWEEN NATIONS
- UP TO DATE IDENTIFICATION STANDARDS

NATO DNA DATABASE?



- DATA FROM UNIDENTIFIED FALLEN SOLDIERS
- MEMBER NATIONS CAN SUBMIT PROFILES

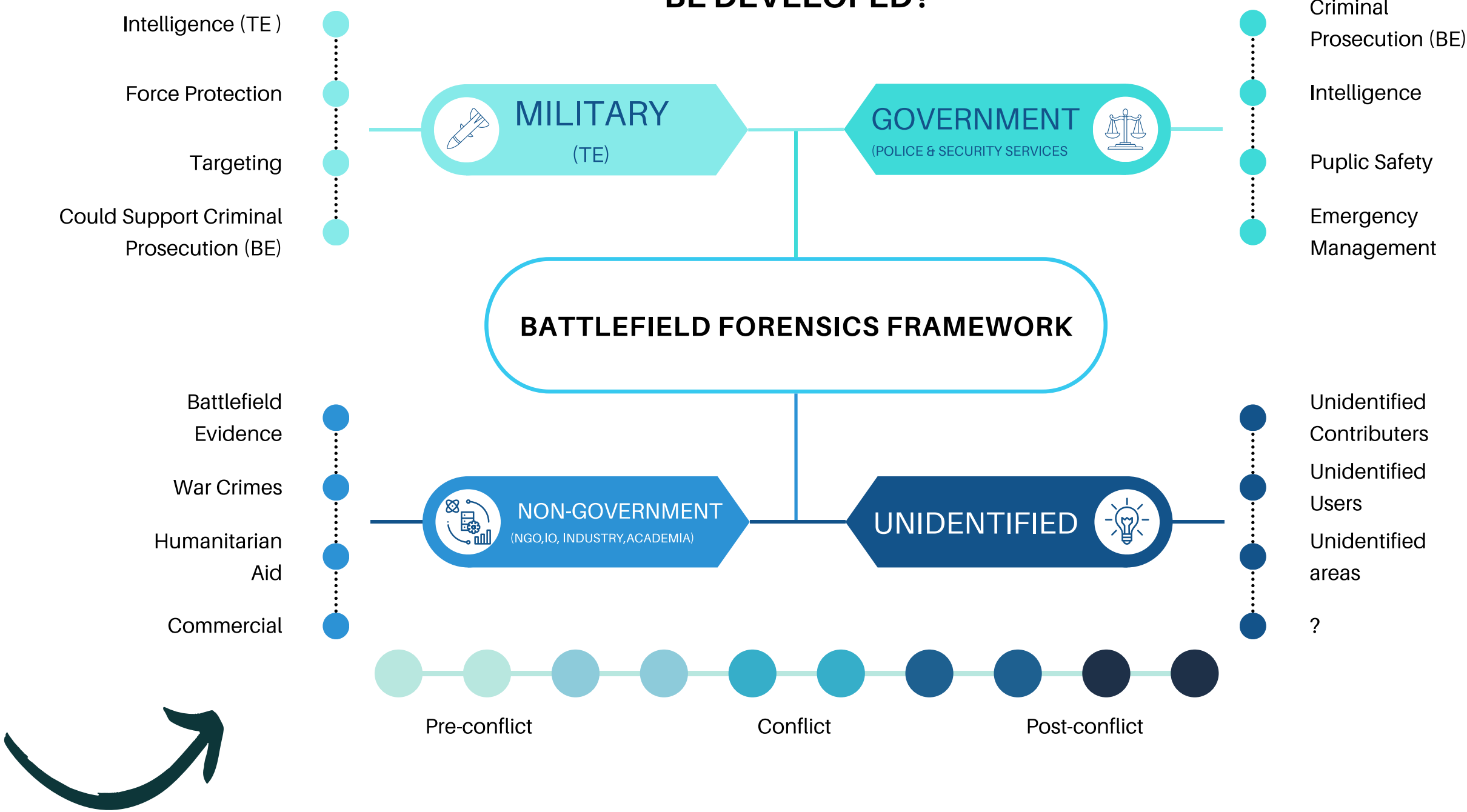
COLLABORATION WITH GOV/CIV AGENCIES AND



ORGANISATIONS

- INTERNATIONAL ORGANISATIONS AND NGOS
- SPECIALISED DVI AGENCIES
- ACADEMIA

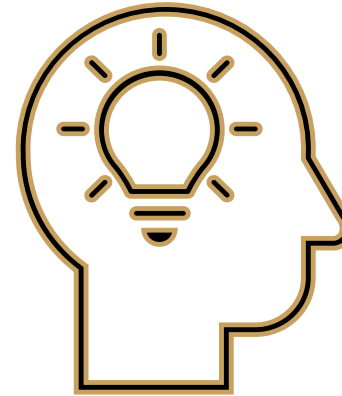
CAN A HOLISTIC BATTLEFIELD FORENSICS FRAMEWORK BE DEVELOPED?



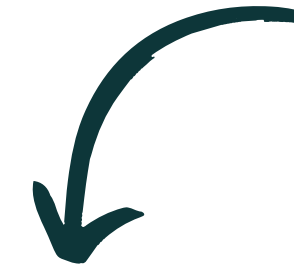
Call to Action



HOW IS YOUR NATION
CONTRIBUTING TO BATTLEFIELD
FORENSICS?



WHAT CHALLENGES ARE YOU
DEALING WITH?



SOLUTIONS AND COLLABORATIONS?



WHAT IS YOUR NATIONS
FORENSICS STRATEGIES?



Rikke.rietveld.365@cranfield.ac.uk

Rikke.Rietveld@reach.nato.int

Battlefield Forensics Survey – 15 minutes

Rikke.Rietveld@cranfield.ac.uk

www.cranfield.ac.uk





www.cranfield.ac.uk

Thank you!

WO Rikke Michelle RIETVELD (DNK Army)
NATO Multinational Division North (Latvia)

Phd Student Cranfield Defence and Security

OCT 2024

Let's connect!

Rikke.rietveld.365@cranfield.ac.uk
Rikke.rietveld@reach.nato.int



DSPACE

<https://dspace.org/>

**Past, present, and future of battlefield forensics:
improving the recovery and identification of fallen
servicemen and women in a multinational environment -
Presentation**

Rietveld, Rikke

2024-10-18

International Committee of the Red Cross

<https://www.icrc.org/en/article/South-Africa-Global-military-Personnel-Identification-Conference>

Rietveld R. (2024) Past, present, and future of battlefield forensics: improving the recovery and identification of fallen servicemen and women in a multinational environment - Presentation. Presented at: ICRC Global Military Personnel Identification Conference, 15-18 October 2024, Pretoria, South Africa