



**The human element  
in decisions about  
the use of force**

## INTRODUCTION

Since governments began expert meetings on lethal autonomous weapons systems (LAWS) in the context of the Convention on Certain Conventional Weapons in 2014, maintaining control over emerging technologies in the area of LAWS has been one of the main shared objectives. States have suggested maintaining human control over weapons, the critical functions of weapons, attacks, the targeting process, and (final) decisions to use force. Although most agree that human control should be more meaningful than the mere possibility of aborting an attack at the final moment, the international community is struggling to determine how the human role in the use of (lethal) force should be defined and implemented.

This infographic offers a framework of the human role in military decision-making – at the strategic, operational and tactical levels – that may guide deeper discussion on the military and legal aspects of human control within the LAWS debate. The purpose of this infographic is two-fold: 1) it demonstrates how critical decisions about the use of force are taken at various levels and how they may influence one another; 2) it provides some key legal considerations for decision-makers at various stages in the process.

## LEVELS OF COMMAND

While the terminology used in this infographic is, to an extent, derived from Western military doctrines, the underlying concepts can be applied to military decision-making more broadly. Most major military forces agree that there are three main levels of command:

- **Strategic command**, which translates the political aim into military objectives.
- **Operational command**, which translates broad strategic-level objectives and guidance into concrete tasks for tactical forces.
- **Tactical command**, which directs the specific use of military forces in operations to implement the operational-level plan. Tactical command involves the deployment of units, platforms, individual personnel and weapons systems that may come into direct contact with the parties to the conflict.

These levels guide military decision-making in contemporary operations and can be used as a framework to map the different steps of the targeting process.

## LEGAL CONSIDERATIONS

This infographic illustrates which specific legal considerations should be taken into account at different stages of decision-making. Generally, decisions at the political and strategic level must comply with customary international law including the UN Charter prohibition against the use of force amongst States other than in self-defense and other principles of *jus ad bellum*. At the strategic, operational and tactical levels, all guidance, objectives, targets and decisions to use force must comply with the mandate or other authorization, the rules of engagement and international law including international humanitarian law and the principles of *jus in bello*: military necessity, distinction, proportionality and precautions (referred to in the infographic as the applicable law).

## HUMANS IN DECISION-MAKING

The decision-making process that leads to the use of force in military operations is complex and involves different types of actors. Between the political leadership that makes the decision that a military intervention is required and the operator or system that carries out an attack, the military command structure is responsible for determining the rules, conditions and parameters that shape an operation or mission. In ensuring that all decisions are made in respect of political guidance, legal obligations and other factors, specialist advisers can be involved throughout the military decision-making process at all levels. For example, Article 82 of the First Additional Protocol to the Geneva Conventions provides that *“The High Contracting Parties at all times, and the Parties to the conflict in time of armed conflict, shall ensure that legal advisers are available, when necessary, to advise military commanders at the appropriate level on the application of the Conventions and this Protocol and on the appropriate instruction to be given to the armed forces on this subject.”* In practice, the role of legal and other advisers in military operations will depend on several factors, including the adviser’s training, the nature and type of the operation, the structure of the State’s military, and the military culture.





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## DELIBERATE AND DYNAMIC TARGETING

This infographic concerns both deliberate and dynamic targeting. While both types of targeting are guided by processes that largely consist of the same steps, there are some important differences. Dynamic targeting is compressed in time. It is a process typically used to prosecute targets that are identified too late to go through the deliberate targeting process. Dynamic targeting provides the opportunity to act in a responsive and timely manner to evolving situations, providing the opportunity to exploit enemy vulnerability that may be of limited duration. Deliberate targeting, in contrast, allows forces to think more strategically; because there is more time available, deliberate targeting may allow for more rigorous analysis of information.

## CONTEXTUAL FACTORS

The contexts relevant for discussions about human control extend beyond the differences between deliberate and dynamic targeting. They include differences between types of mission (e.g. close air support, time-sensitive targeting), environments (e.g. urban, naval) and circumstances (e.g. weather conditions, time constraints, contested battlespace). All these contextual factors may prevent, limit or otherwise influence targeting activities at all levels of decision-making.

## COMBAT ENGAGEMENT AND DEFENSIVE FIRES

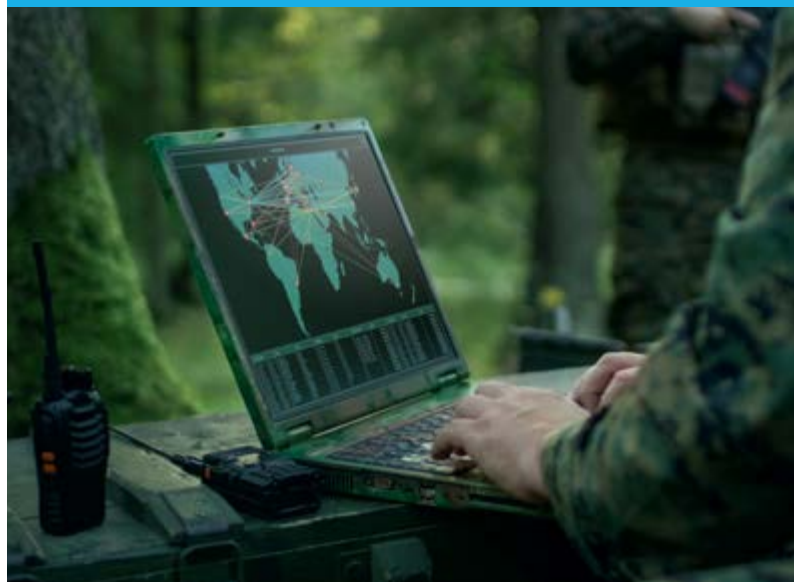
This infographic focuses on military conduct and decision-making within the context of targeting operations. As such, it does not consider situations that may be referred to as combat engagement or self-defence. These situations could be described as “direct contact” (e.g. between enemy forces) and involve targets that emerge during the conduct of an operation. All engagements should comply with relevant international law and rules of engagement.

## HOW TO READ THE INFOGRAPHIC

This infographic provides a simplified overview of military and legal considerations that are prominent in contemporary targeting practice and illustrates the decision-making process that leads to the use of force. The analogy of the iceberg, both conceptually and visually, helps to illustrate that critical decisions exist well in advance the moment a weapon system, autonomous or otherwise, is deployed (and becomes ‘visible’).

The infographic should be read as follows: all decisions, tasks and actions that lead to the use of force are listed in order inside the iceberg, starting with the higher political level at the bottom; for each decision/task/action, on the left side the infographic provides a narrative explanation of their military implications and significance while, on the right side, applicable legal considerations.

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**DESCRIPTION OF MILITARY TASK**

**TASK, DECISION OR ACTION**

**DESCRIPTION OF LEGAL TASK**

Assessments include an evaluation of the effectiveness of the attack and guide future operations (e.g. identify whether re-attack is necessary and under what conditions).

In this phase, the attack may be ordered, transmitted, monitored and executed. This may include weapons release. The attack may also be suspended or cancelled.

ROE may be considered, and collateral damage issues or probabilities – as well as the risk to own forces – may be assessed in the target phase.

The target may be tracked to update information about the target and the environment and to maintain a PID.

Once the target is detected, sensors may be focused to determine the location and the time available and to obtain a PID of the target.

To find the target, information and intelligence about the battlefield and target are collected.

- Assess and, if needed, re-attack
- Engage, including weapons release and, if needed, suspension or cancellation of attack
- Target
- Track
- Fix, including a positive identification (PID)
- Find

Assessments of the executed operations should include success in achieving a legitimate military objective and proportionality of civilian losses to military advantage. Assessment should also verify compliance with ROE and the applicable law in the conduct of the attack.

The situation may require the attack to be suspended or cancelled to comply with the ROE and applicable law.

Use of force must comply with ROE and applicable law including principles of military necessity, distinction, proportionality, and precautions.

Changes in situation identified during tracking may require a new assessment of the lawfulness of the attack.

Obtaining and verifying a PID of the military target is a fundamental requirement under the ROE and applicable law.

Ongoing real-time assessment of the situation on the ground to ensure compliance with applicable law including necessity, distinction, proportionality and precautions.

**TACTICAL LEVEL: MISSION EXECUTION**

These may be extremely detailed (deliberate targeting) or less detailed (dynamic targeting) and may include a recap of the ROE and special instructions.

Before deployment, equipment may need to be assessed and modified to comply with applicable requirements and environmental conditions in battlespace.

Contingency planning considers unexpected outcomes, such as loss of a tanker, failure to service all planned targets, or communication loss.

Planning may include weapon capabilities and effects (including CDE), civilian patterns of life, time of attack, munition fragmentation patterns, and secondary explosions.

Tactical-level planners perform detailed mission planning for the execution of operations. This may include the location, type, size and material of the target.

- Mission briefing
- Assessment, preparation and modification of equipment
- Mission planning: Contingency planning
- Mission planning: Weapon use and weapon effects
- Mission planning: Details of the target

Mission briefings should include a recap of the salient ROE and applicable law as well as any special instructions.

Assessment and potential modification of equipment may require legal review.

Consideration of unexpected outcomes may necessitate a re-assessment of lawfulness of planned attack.

Planners should consider proportionality and take precautionary measures as appropriate and feasible. This assessment may result in the elimination or need to modify equipment which do not comply with international law.

Tactical-level planners are required to consider the applicable law, including military distinction, proportionality and precautions.

**TACTICAL LEVEL: PLANNING**

Prepared targets are briefed to the authorized commander, who may consult functional advisers and decide to approve (with or without constraints), suspend or disapprove the targets or to forward the decision to the appropriate engagement authority.

Weaponeeing is the process of determining the quantity of a specific type of lethal or non-lethal means required to generate the desired effect on a given target. CDE estimates the collateral damage that may occur from using a weapon on a particular target.

Final clearances take place. The result is a list of legally scrutinized, risk-assessed, validated and prioritized targets including proposed means of prosecution and those responsible for engaging the targets.

Targets are nominated by components (air, land, maritime, special operations) for approval and inclusion on target lists. Targets may not yet be fully mature with applicable requirements and environmental conditions in battlespace.

This involves an assessment of the intelligence and aims to ensure that targets are in line with the defined objectives and desired effect and ROE.

This is a foundational process in identifying the most relevant targets. A target's importance is perceived in its relationship with other targets; target analysis focuses on identifying these interdependencies and vulnerabilities.

Strategic-level guidance is translated into operational-level objectives, guidance and intent. These form the cornerstone of the targeting process at the operational and tactical levels.

- Target approval, including determination of operational constraints and parameters
- Weaponeeing and collateral damage estimation (CDE)
- Target prioritization
- Target nomination
- Target vetting and validation
- Target analysis
- Operational-level objectives, guidance and intent

The authorized commander should consult legal (and other) advisers to ensure that targets and operational parameters are consistent with ROE and applicable law including military necessity, distinction, proportionality and precautions.

These processes may assist in avoiding, or at least minimizing, harm to civilians and damage to civilian objects by informing decisions about precautions to be taken and to assess the proportionality of an attack.

All prioritized targets should be militarily necessary to achieve a legitimate military objective in compliance with the ROE and applicable law.

Only legitimate military targets necessary to achieve a legitimate military objective can be engaged in compliance with ROE and applicable law; a no-strike list should be drawn up to identify prohibited targets.

Possible targets must be vetted and validated to comply with applicable – in particular the principles of military necessity, distinction, proportionality and precautions.

Early in the process, each potential target must be assessed for its value and necessity in achieving a legitimate military objective.

All objectives, guidance and intent must comply with applicable law.

**OPERATIONAL LEVEL**

NCV refers to the number of civilian casualties that a military operation may – in the view of the political authorities – sustain without seeking approval at the highest levels.

Target sets contain the types of target that may be prosecuted. They are groups of interrelated target categories, such as "transportation" or "lines of communication and electric power".

ROE define the circumstances, conditions, degree and manner in which force may be applied. ROE guide operations at all levels and apply throughout the mission.

A military strategy typically includes the formulation of specific objectives, including means to accomplish those objectives, as well as a desired end state that signifies success.

- Non-combatant casualty cut-off value (NCV)
- Target sets, including restricted targets, no-strike entities and time-sensitive targets
- Rules of engagement (ROE), including delegation, permissions and authorities
- Overarching military objectives and desired end state of the campaign

The NCV should not be confused with the proportionality principle; the former determines the required level of approval and the latter assesses the proportionality of civilian losses to the concrete and direct military advantage anticipated.

Target must be a necessary and legitimate military target and must comply with ROE and applicable law including the principles of military necessity, distinction proportionality and precautions.

ROE specify the legitimate military objective as well as the parameters for lawful and permissible use of force in accordance with applicable law; ROE may be stricter but not more permissive than the applicable law.

The strategy for any military operation must comply with applicable law including a legitimate military objective which can be successfully achieved through legitimate military means without excessive incidental civilian losses.

**STRATEGIC LEVEL**

Political guidance and objectives are issued by political leadership and shape all levels of decision-making. They will be translated into military strategic- and operational-level guidance and objectives.

This is the exclusive responsibility of a government, when acting unilaterally or in an *ad hoc* coalition, the UN Security Council, a military alliance such as NATO or regional organizations/agencies as described in Chapter VIII of the UN Charter.

- Political guidance and objectives, including mandate (if provided)
- Decision that military intervention is required

Political guidance and objectives must take into account relevant UN or other intergovernmental mandates or enforcement measures and comply with applicable law.

Decisions must comply with customary international law including the UN Charter prohibition against the use of force amongst States other than in self-defense and other principles of *ius ad bellum*.

**POLITICAL LEVEL**

**THE PROCESS STARTS HERE**

**THE HUMAN ELEMENT IN DECISIONS ABOUT THE USE OF FORCE**

**Why the Iceberg?**


The final stages of a military operation requiring the use of force are notably the most visible ones as they result in the engagement of a target. With the tactical execution of a mission at its tip, the iceberg illustrates the complex decision-making process that shapes the use of force in military operations before a weapon system is deployed, starting at the political level.

## About UNIDIR


The United Nations Institute for Disarmament Research (UNIDIR) is a voluntarily funded, autonomous institute within the United Nations. One of the few policy institutes worldwide focusing on disarmament, UNIDIR generates knowledge and promotes dialogue and action on disarmament and security. Based in Geneva, UNIDIR assists the international community to develop the practical, innovative ideas needed to find solutions to critical security problems.

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