



Kingdom of the Netherlands

Statement by the Netherlands

2018 Group of Governmental Experts on LAWS

Human Machine Interaction

Thank you Mr. Chair.

The Netherlands believes that autonomous weapon systems should remain under meaningful human control. Under international law, humans are ultimately responsible for the deployment of any weapon system, including autonomous weapon systems. Military personnel needs to be able to meaningfully carry out this responsibility with regard to the weapon systems they use.

In our view this meaningful human control relates to the complete targeting cycle: determination of end state and objectives, target selection, weapon selection and implementation planning, including an assessment of potential collateral damage and the assessment after deployment.

In practice this means that humans decide, based upon the assessment of the operational context and other factors, whether deployment of a weapon system with some degree of autonomy in critical functions is allowed under international law. Also, humans define the weapon system's goal, in accordance with international law. This could, for example be on the level of specific identified targets or on the level of the type of targets. Either way, an autonomous weapon system should *not* be able to change its goal-function, or desired effect, which was set by a human operator. Would it be able to do so, humans would not be in control anymore because the

outcome of the deployment of the autonomous weapon system would become unpredictable.

More generally speaking, autonomous weapon systems should be programmed to operate within certain pre-programmed conditions and parameters that cannot be altered by the weapon system itself.

The Netherlands considers *fully* autonomous weapon systems, which can change their goal-function themselves or alter pre-programmed conditions and parameters, not to be under meaningful human control and considers them therefore prohibited under international law.

Like all weapon systems, autonomous weapon systems need to be reliable and predictable, regardless their level of sophistication. Given the fact that most autonomous weapon systems involve a high level of complexity, the Netherlands believes that the following elements are of importance:

- (1) 'Responsible innovation' during the design phase. As an example, a design requirement should be that the human operator is always able to understand why the autonomous weapon system is behaving the way it does. Systems with a high degrees of autonomy should explain themselves in understandable terms. An autonomous weapon system should not be a black box.
- (2) Realistic and rigorous testing during the test phase.
- (3) The execution of legal weapon reviews that pay sufficient attention to the autonomy aspect of the autonomous weapon system. If needed, boundaries could be placed on the deployment of the system.
- (4) Extensive training of military personnel (operators, commanders, legal officers, etc.) on how to use the autonomous weapon system.

Finally, the Netherlands is of the view that autonomous weapon systems under meaningful human control may provide key military advantages. For example, computers often respond faster and more accurately than humans, which can reduce risks to friendly units and the civilian population. The Netherlands does not expect, however, that autonomous weapon systems will entirely or substantially take over the role of humans on the battlefield. The nature of modern conflicts, which often take place in predominantly civilian areas, complicates the deployment of these weapon systems. It is likely that autonomous weapon systems under meaningful human control will be deployed for specific tasks under the supervision of and alongside military personnel and will complement existing weapon systems and other military and civilian technology.

Thank you Mr. Chair.