The Integrated Review and the risk of AI weapons

A Briefing by the UK Campaign to Stop Killer Robots, April 2021

- **The boom in spending on military AI announced in the [Integrated Review of Security, Defence, Development and Foreign Policy](#) is pressing ahead in an ethical vacuum, without the necessary regulatory, legal and operational controls.**

- **Urgent questions need answering around whether the UK's planned and future weapons systems may be able to target and kill humans autonomously.**

- **Autonomy in weapons systems is drastically and permanently changing the face of armed conflict but the Integrated Review does not include a commitment to upgrade arms control treaties to tackle the threats emanating from such rapid changes.**

- **Prioritising AI development without establishing a robust international framework to prevent the dehumanisation of conflict and automated killing would see the UK locked into an unwinnable arms race, with grave knock-on effects for humanity.**

- **The UK Government should affirm its opposition to all weapons systems capable of targeting people autonomously and build on the Integrated Review with a firm commitment to work towards a new binding international treaty to prohibit the development of lethal autonomous weapons systems as well as develop an ethical code to govern how new military technologies are used by the UK.**

What is in the Integrated Review?

Investment in science and technology to modernise the UK's armed forces is a central theme of the [Integrated Review](#), published on 16 March 2021. The stated ambition is that the UK will become a "*Science and Technology Superpower*", with an emphasis on the need for the UK to "*maintain military advantage.*" This includes significant spending on the creation of a new Advanced Research and Invention Agency (£800 million) and a new Defence Centre to develop artificial intelligence (AI). The UK's investment in AI for the military is therefore set to rapidly expand, with the UK planning to "*accelerate adoption*" of AI - including autonomous technology - "*across the full spectrum*" of the armed forces' capabilities and activities. Beyond the military, these technologies, could also be embedded into a variey of security and law enforcement systems.

This area of the Integrated Review is expanded upon through the [Defence in a competitive age Command Paper,](#) which looks at how the UK's military will evolve over the next ten years. The paper explains that to "*sustain strategic advantage through science and technology*" the Ministry of Defence (MOD) will invest at least £6.6bn in Research and Development (R&D) over the next four years. This spending will support the development of "*next generation*" weapons, with the Royal Air Force receiving more than £2bn for the Future Combat Air System, which will "*deliver an innovative mix of crewed, uncrewed and autonomous platforms including swarming drones.*" In addition, new investment in the Royal Navy is described as focusing on improving its "*lethality*" and making it more "*modern, high-tech and automated.*" The Paper notes that the UK "*will publish an ambitious AI Strategy to drive and cohere efforts across Defence at pace.*"

It is clear that the UK Government sees AI and autonomous systems as indispensable for the military of the future. The key concern this raises is that many of the systems under development by the UK could be weaponised and enabled to operate beyond human control with relatively little difficulty. The UK Chief of Defence Staff, General Sir Nick Carter, stated in an interview with Sky News on 8 November 2020 that the UK "*will absolutely avail ourselves of autonomous platforms and robotics wherever we can and that in the near future I suspect we could have an army of 120,000, of which 30,000 might be robots*".

Given Carter's comments and the content of the Integrated Review and Defence Command Paper, clarity is needed over whether there has been a change in official MOD policy on lethal autonomous weapons given its previous statements, indicating that the UK "*has no intention to develop systems that operate without human intervention in the weapon command and control chain*".

Missing: a commitment to prohibit lethal autonomous weapons

The Integrated Review rightly points out the risks associated with the unscrupulous use of AI by others, but it misses the opportunity to reassure the international community that its own autonomous systems will be developed with corresponding oversight mechanisms to give assurance that UK weapons will not fall short on meaningful human control or be developed or used in other unacceptable ways, such as for the autonomous targeting of people.

The UK Campaign to Stop Killer Robots believes that plans for investment in military AI and autonomy must be accompanied by a commitment to work internationally to upgrade arms control treaties to ensure that human rights, ethical and moral standards are retained. In this regard, we welcome the UK's acknowledgement of the critical importance that the "*UK remains at the forefront of the rapidly-evolving debate on responsible development and use of AI and Autonomy, working with liberal-democratic partners to shape international legal, ethical & regulatory norms & standards*".

We hope this is a signal that the UK will support the UN Secretary-General's appeal for states to develop a new, binding treaty to prohibit the development of lethal autonomous weapons systems. We therefore recommend the Government conducts a thorough consultation process as it develops its upcoming AI Strategy, which should include consideration of how to promote effective international controls on the development and use of autonomous weapons.

Additional information

● Although there is no agreed international treaty governing lethal autonomous weapons, nor even agreed definitions of terms such as "autonomous", it is widely understood that these systems would select (i.e. search for or detect, identify, track) and engage (i.e. use force against, neutralise, damage or destroy) targets with potentially lethal force, without meaningful human control. Whilst many existing weapons systems have a degree of autonomy or automation, technological advances mean that we are on the brink of a new generation of weapons systems capable of being fully autonomous, and able to execute a process to kill or apply force without meaningful human oversight.

● Over the last decade, concerns about the development of lethal autonomous weapons systems, or 'killer robots', have seized the attention of the international community. Since 2014, this issue has been discussed at the United Nations under the auspices of the Convention on Certain Conventional Weapons (CCW), which aims to ban or restrict the use of inhumane weapons.

- Currently the UN Secretary-General, 30 states, 26 Nobel Peace Laureates, and over 4,500 AI scientists worldwide including Stephen Hawking, Barbara Grosz (Harvard) and Demis Hassabis (Google), have called for a ban on fully autonomous weapons.

- The Campaign to Stop Killer Robots is a growing global coalition of 172 international, regional, and national non-governmental organisations (NGOs) in 65 countries working to preemptively ban fully autonomous weapons.

- The Campaign is calling for an international treaty to be agreed which regulates the broad scope of weapons systems that apply force to targets based on processing sensor inputs, following activation by a human. Within this scope of weapons systems, we believe there must be a prohibition on systems that are used to sense and target people, as well as a prohibition on systems that cannot be meaningfully controlled. A treaty must also include positive obligations to maintain meaningful human control in the use of any remaining systems that fall within its scope, in order to comprehensively address the problem at hand.

- In the coming years it is expected that a group of states, with the support of scientists and civil society, will initiate a process to create a new treaty to ban these weapons. While the UK has stated it does not intend to develop these weapons, it nevertheless remains presently unsupportive of initiatives to explicitly prohibit them, thereby suggesting that existing international humanitarian and human rights law is sufficient.

- The UK Campaign to Stop Killer Robots is making the case that the UK Government should support an initiative to preemptively ban these weapons. We are looking to parliamentarians, research centres, tech companies, financial institutions and investors for support.

- The Campaign's submission to the Integrated Review consultation can be found here.