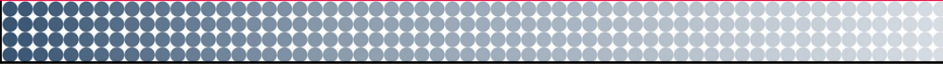


Mapping autonomy: current developments in the military sphere

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New SIPRI project on LAWS

- **Objective:** produce an evidence-based picture of current developments of autonomy in military sphere
- **Purpose:** bring clarity to CCW discussion with empirical findings on automated and autonomous technologies: what they are, what they do or may do in the future, where they are available or are being developed and how states intend to use them
- **Outputs:** a series of short publications, a publicly available searchable dataset of key autonomous/automated weapon systems, a side-event at the CCW Review Conference
- **Timeline.** Started Feb. 2016 ; conclusions to be presented in December 2016

State of play: unmanned systems

- Nearly all unmanned systems require active control of their operation and behaviour → manpower intensive
- UAV for ISR. Provide raw information. Require off-board data processing by human analysts → manpower intensive
- Tele-operation – Limited reach, vulnerability to jamming / cyber-attacks

Key development areas

Self-Mobility

- Reduce cognitive burden on human operators

Multi-agents collaboration (swarming)

- Improve manpower efficiency, new operational concepts

Situational awareness

- Support decision making process

Hurdles to further use of autonomy in unmanned systems

Technological

- Limitations for use in complex and dynamic conditions

Cultural

- Lack of trust: will the autonomous function always perform as intended?

Bureaucratic

- Inappropriate acquisition process

Testing

- No reliable methodology to test performance of complex, non-linear, adaptive systems