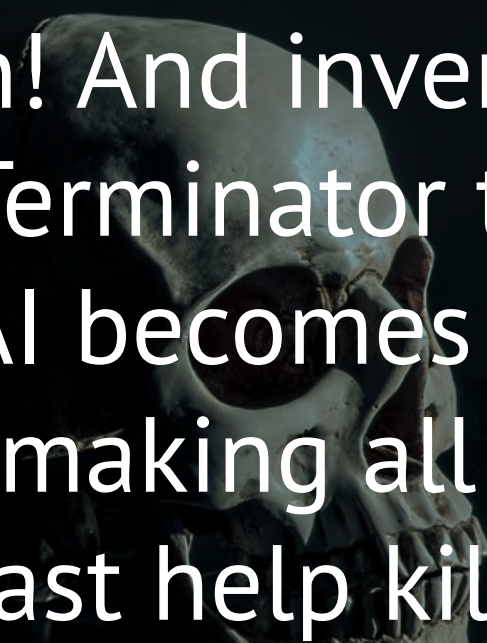


Why, AI?



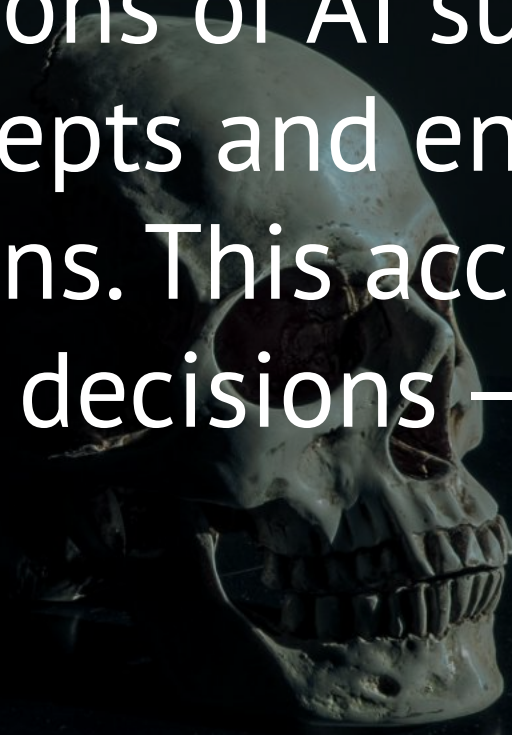
BUSTED
MYTH

AI will kill us all! Killer robots will strive for world domination! And invent time travel! While the Sci-Fi Terminator trope might be a bit over the top, AI becomes an integral part of military decision-making all over the world. Here, AI will at least help killing people.

A human skull is positioned in the center of the image, resting on a dark, reflective surface. The skull is oriented slightly to the right, with its eye sockets and nasal cavity clearly visible. The lighting is dramatic, casting shadows that emphasize the bone structure. The background is a dark, gradient blue-black.

MYTH

Military applications of AI support novel operational concepts and enable autonomous targeting functions. This accelerates warfare and can improve decisions – but also erodes human control.



BUSTED
MYTH

What are Autonomous Weapon Systems?

Autonomous weapon system:

“Any *weapon* system with autonomy in its **critical functions** – that is, a weapon system that can **select** (search for, detect, identify, track or select) and **attack** (use force against, neutralize, damage or destroy) targets **without human intervention**.”

– International Committee of the Red Cross

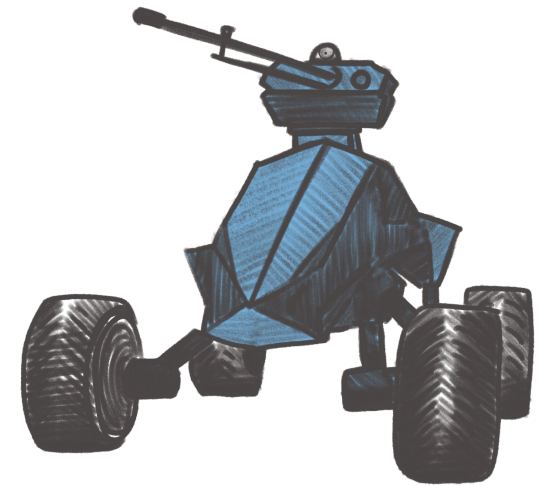


Illustration by Lorna Schütte

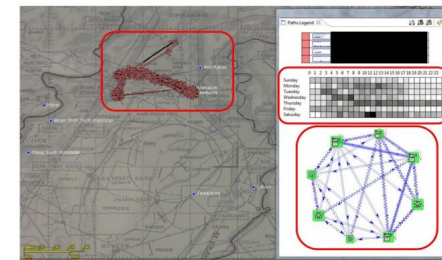
What are Autonomous Weapon Systems?

Predecessors



U.S. SKYNET Program

From GSM metadata, we can measure aspects of each selector's pattern-of-life, social network, and travel behavior



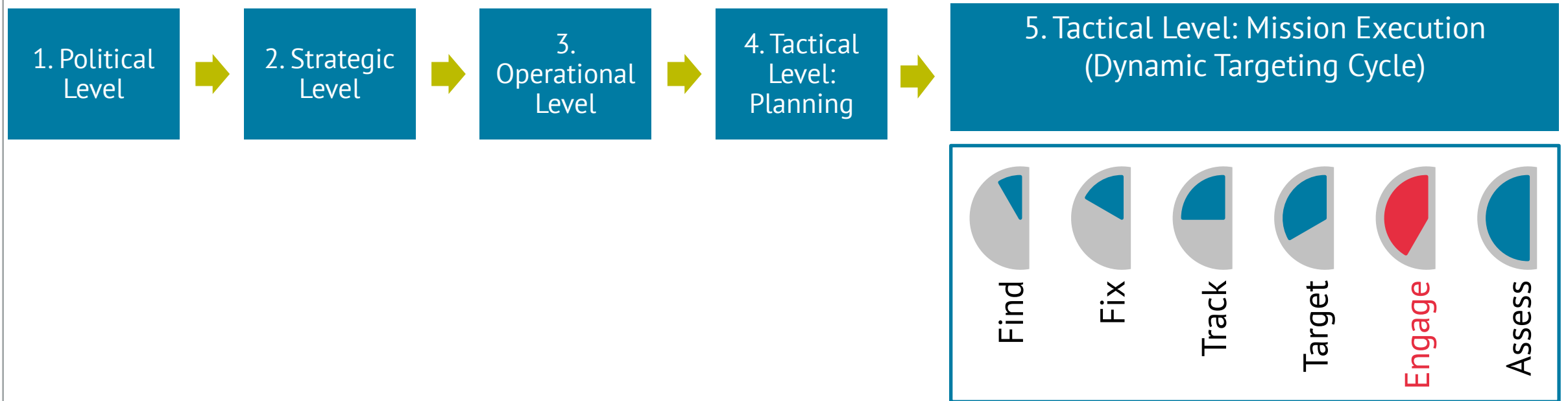
Yes, seriously.

Current Developments



Pictures: **Phalanx**: <https://www.flickr.com/photos/143457098@N07/44313475435/in/dateposted-public/>; **Skynet**: <https://arstechnica.com/information-technology/2016/02/the-nas-skynet-program-may-be-killing-thousands-of-innocent-people/>; **Udar**: https://www.armyrecognition.com/defense_news_february_2021_global_security_army_industry/russian_udar_uav_to_learn_to_interact_with_drones.html; **Skyborg**: Boeing; **FCAS**: Airbus; **JADC2**: US Department of Defense.

The Targeting Process



Based on: UNIDIR (2020), The Human Element in Decisions about the Use of Force.

Potential Challenges from AI techniques & Automated Decision-Making

Human-Machine Interaction

- Data driven computational methods are opaque and unpredictable to a certain extent -> Explainable AI
- Automation bias of humans

Law

- Principles of IHL
- Human Rights
- Responsibility & accountability

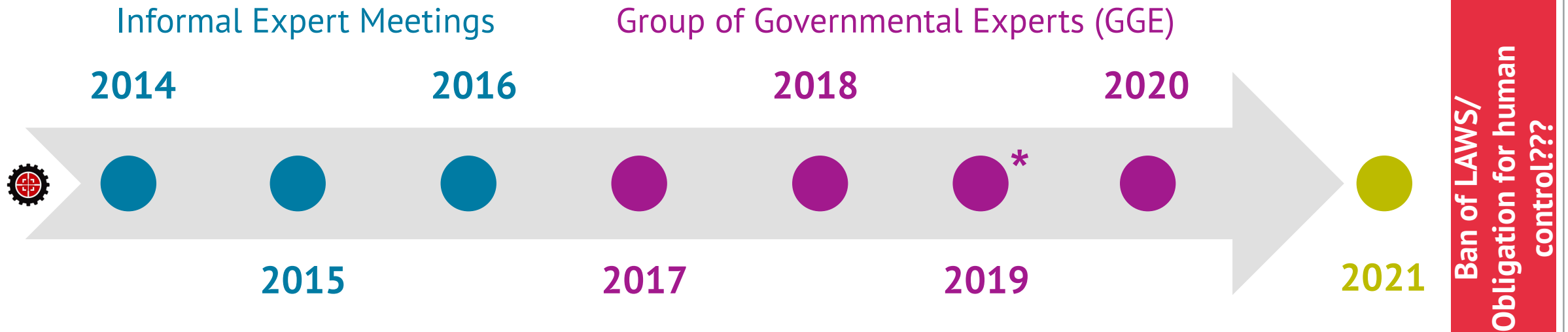
Ethics

- Moral agency & human dignity
- Link to human conscience

Security

- destabilization via arms races and threat perceptions
- escalation in conflicts
- Proliferation

Convention on Certain Conventional Weapons (CCW) – Process on LAWS



* = Endorsement of 11 Guiding Principles; Mandate to proceed with work on “clarification, consideration and development of aspects of the normative and operational framework” on LAWS

Conclusion: Will AI kill us all? It will at least help killing people.

- Many military applications and advantages
- Some of them create novel challenges and serious concerns
- Normative framework underway – while technology and use is evolving
- **Stakeholders: Keep human control!**
- Don't combine AI with nuclear weapons. Seriously, don't.