Chair agenda item: Further consideration of the human element in the use of lethal force; aspects of human-machine interaction in the development, deployment and use of emerging technologies in the area of lethal autonomous weapons systems.

- In Canada’s Defence Policy Document, *Strong, Secure, Engaged*, the Government of Canada has committed to “maintain appropriate human involvement in the use of military capabilities that can exert lethal force.”

- We continue to examine the policy and legal implications of maintaining such “appropriate human involvement.”

- As has been raised by others yesterday, we see these systems as nascent technologies, and want to ensure that our examinations do not pre-empt or pre-judge outcome that may be overly restricting, or, on the other hand, not enough.
• Therefore, in efforts intended to be both innovative and transparent, in partnership with military, commercial, and academic stakeholders, Canada continues to examine the implications of human-machine teams.

• For example, through international collaboration, simulations, and trials, Canada is currently studying the implications of technologies that permit a single operator to control multiple autonomous systems.

• Canada seeks to better understand the relationship between machines and human operators.

• Canada is studying adaptive software tools to help operators follow standard operating procedures, rules of engagement, and International Humanitarian Law when engaging a target.

• Another example: Canada is currently studying methods of developing what we call “trusted autonomy” through industrial/academic research networks.

• Canada hopes to better understand how best to ensure autonomous systems’ reliability and trustworthy behaviour through consultations with a diverse research network.

• Finally, we are actively tracking how governments are addressing AI development in civilian sectors and related challenges to use of AI with interest.
• The contexts of these AI applications are clearly quite different; nevertheless, there are ethical questions from which lessons can be learned and best practices identified.