Internal Security Strategy Consultation Feedback

We commend the Commission for this initiative to develop a European Internal Security Strategy. We recommend:

1. **A new CBRN Action Plan: Addressing Biosecurity Vulnerabilities**

We propose a new CBRN action plan to address increasingly dual-use synthetic biology advances. Technological progress in areas like synthetic biology has enabled major medical breakthroughs—including new therapies, vaccines, and diagnostics (OECD, 2025). At the same time, these innovations present new security challenges due to the **dual-use** nature of biological research (Engineering Biology Research Consortium, 2025).

For example, the WHO noted that “a skilled lab technician or undergraduates working with viruses in a simple lab could reassemble variola virus (smallpox)” if they had access to the correct DNA sequences (WHO, 2015). Recent studies show that AI is only a few percentage points below experts on multiple biological tasks and can actually outperform expert virologists on complex virology assignments (Dev et al., 2025; Götting et al., 2025). AI can perform sophisticated experiments and be used to design novel biological materials (Baker et al., 2024), including entire new genomes (Marrogi & McCarty, 2025).

In light of these challenges, geopolitical developments have only amplified the necessity of a European CBRN action plan. Crucially, while AI model developers have accelerated the capabilities of advanced AI models, the EU remains the only jurisdiction to adopt a comprehensive AI regulation (the AI Act). To protect European citizens from harms spilling over from other unregulated jurisdictions, it is pertinent that the Commission addresses CBRN risks when developing its Internal Security Strategy.

We recommend:

a. **Establishing a permanent expert group** within the EU Commission to continuously monitor and address emerging biosecurity challenges
b. **Including nucleic acid synthesis screening** in the CBRN action plan by developing EU-wide compliance standards for **Know-Your-Customer (KYC)** and **Know-Your-Order (KYO)** regarding potentially dangerous genetic sequences
c. **Ensuring mandatory external assessments of CBRN capabilities for General Purpose AI and specialized purpose models** with systemic risk

2. **EU-wide "Know-Your-Order" Framework for Biological Materials**

We recommend adopting an EU-wide KYO framework for biological materials. Despite broad awareness of bioterrorism risks, there is currently no consistent EU-wide requirement for verifying orders of genetic materials or sensitive lab equipment.

Experts from the Community for European Research and Innovation for Security have identified the possibility of bioterrorism attacks among the top ten security priorities (CERIS, 2024). Unlike high-risk chemicals that require strict verification, potentially dangerous

biological materials and lab equipment can be ordered online without proper controls. While complete DNA sequences of known select agents (such as anthrax) are regulated, fragments of these same sequences typically escape oversight. AI-assisted engineering tools can create synthetic versions of dangerous biological agents that evade current screening methods, emphasizing the urgency of measures like Nucleic Acid Synthesis Screening to mitigate CBRN risks effectively (Wittmann et al.,2024).

We recommend:

1. **Developing mandatory KYO requirements** for all providers of nucleic acid synthesis services operating in the EU
2. **Developing standards for KYC verification**
3. **Establishing reporting procedures for suspicious orders** with international coordination and Europol involvement

Finally, there is mutual willingness to tackle CBRN security risks. The synthetic biology industry has already demonstrated its commitment to responsible innovation. Over 40 companies are part of the International Gene Synthesis Consortium (IGSC), applying uniform screening protocols for both customers and DNA sequence orders (IGSC, 2020).

Recent EU initiatives – such as the Niinistö report's emphasis on robust dual-use research and risk assessments – underscore the critical importance of biosecurity (Niinistö, 2024). In synergy, the Internal Security Strategy can benefit from existing systemic risk identification and mitigation measures listed in the Code of Practice on General-Purpose AI, which already includes CBRN risks in AI model development (Code of Practice, 2024).

A new CBRN Action Plan should leverage these frameworks to enhance security while fostering responsible innovation.

We stand ready to contribute input on evidence-based policies in this critical area of European security for a resilient Europe.

We thank you for the opportunity to submit feedback.

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