

Reducing the Threat of Ukrainian Expertise Proliferating to U.S. Adversaries

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Proliferation Challenge:

The Russian invasion of Ukraine has resulted in millions evacuating Ukraine, including the exodus of highly capable technical experts from Ukrainian facilities that produce missile components and advanced conventional weapons (ACW), as well as those with expertise that could be redirected and exploited by others for a chemical, biological, radiological, or nuclear (CBRN) weapon. The most senior and experienced of these dual-use scientists, technicians, and engineers (STEs), estimated at 1,000-4,000 total (see Attachment), will find themselves in conditions of financial and professional hardship that render them vulnerable to exploitation by proliferator states or others to advance illicit WMD, missile, and ACW programs.

Proposed Solution:

This non-paper proposes that U.S. Party and USG Partner organizations including ISN (CTR, NDF, WMDT, ECC), NNSA, DTRA, NAS, and others should fund and implement a new effort through the Science and Technology Center in Ukraine (STCU) to engage a Ukraine's most at-risk STE with proliferation-sensitive expertise under the three lines of effort outlined below. For nearly three decades, the STCU has successfully facilitated and implemented just over \$350 million dollars' worth of peaceful scientific and commercial collaboration between Ukrainian STEs with dual-use expertise and international partners from both the public and private sectors in the U.S., the European Union, and beyond. As an intergovernmental organization with diplomatic status designed to facilitate scientific cooperation to mitigate the threat of dual-use expertise proliferation from the former Soviet Union, the STCU's unique pedigree, credibility, networks, and experience render it uniquely qualified to mitigate this new proliferation threat.

Potential Lines of Effort:

1. Professional Matchmaking for Ukrainian Dual-Use Experts: This line of effort leverages STCU's deep networks across the Ukrainian, U.S., and EU scientific community to provide a clearinghouse, central repository of available expertise, and expert facilitation for Ukrainian dual-use experts seeking grant opportunities, scientific collaboration, and/or employment for peaceful civilian work with international partners. Anticipated activities include searchable database development and maintenance, in-person and virtual symposia and conferences that permit Ukrainian experts to showcase their talents, travel grants for Ukrainian experts to participate and present in international events for targeted networking and meet with potential employers and collaborators, and peer-review of non-sensitive publications that highlight their abilities for employment purposes.
2. Personal and Professional Security Training for Ukraine's Dual-Use Experts: This line of effort builds upon prior STCU experience providing sustainability support to dual-use scientists by developing skills needed by scientists but sometimes lacking such as responsible science, scientific ethics, and protection of sensitive dual-use information, cybersecurity and cyber

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hygiene for scientists, risk assessment, mitigation, and vetting of potential partners and opportunities; intellectual property rights and protection.

3. Intensive Collaboration and Partnership Grants for Ukrainian Dual-Use Experts: This line of effort leverages decades of STCU experience in grant administration to provide one-time, limited-term research and development grants on a peer-reviewed, competitive basis for meritorious civilian research proposals from Ukrainian experts with especially sensitive WMD-applicable expertise. Grants may support labor, approved travel, research materials such as reagents and personal protective equipment, equipment such as laptop computers, and limited-term subscriptions to scientific publications and databases. Grants will be administered by the STCU leveraging the organization's performance monitoring and auditing infrastructure. A unique element of this program is STCU support in locating suitable research facilities for displaced scientists to conduct their work.

Priority Community for Engagement:

This programming is focused only on the subset of the Ukrainian technical community most vulnerable to exploitation by a proliferator state that have significant experience in fields applicable to the development of CBRN weapons, ACW and missiles, and who left Ukraine in 2022.

Preliminary Estimate of USG Resources Needed and Not Yet Identified

FY22: Program Development and Implementation: \$12M

FY23: Program Implementation: \$10M

FY24: Program Conclusion and Sunsetting: \$9M

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