National Nuclear Security Administration

Transport Security for Central America, the Caribbean, and Mexico

30 de marzo de 2022

Global Material Security

ORS Office of Radiological Security

Protect · Remove · Reduce

Office of Radiological Security

VISION: A world free from the threat of radiological terrorism

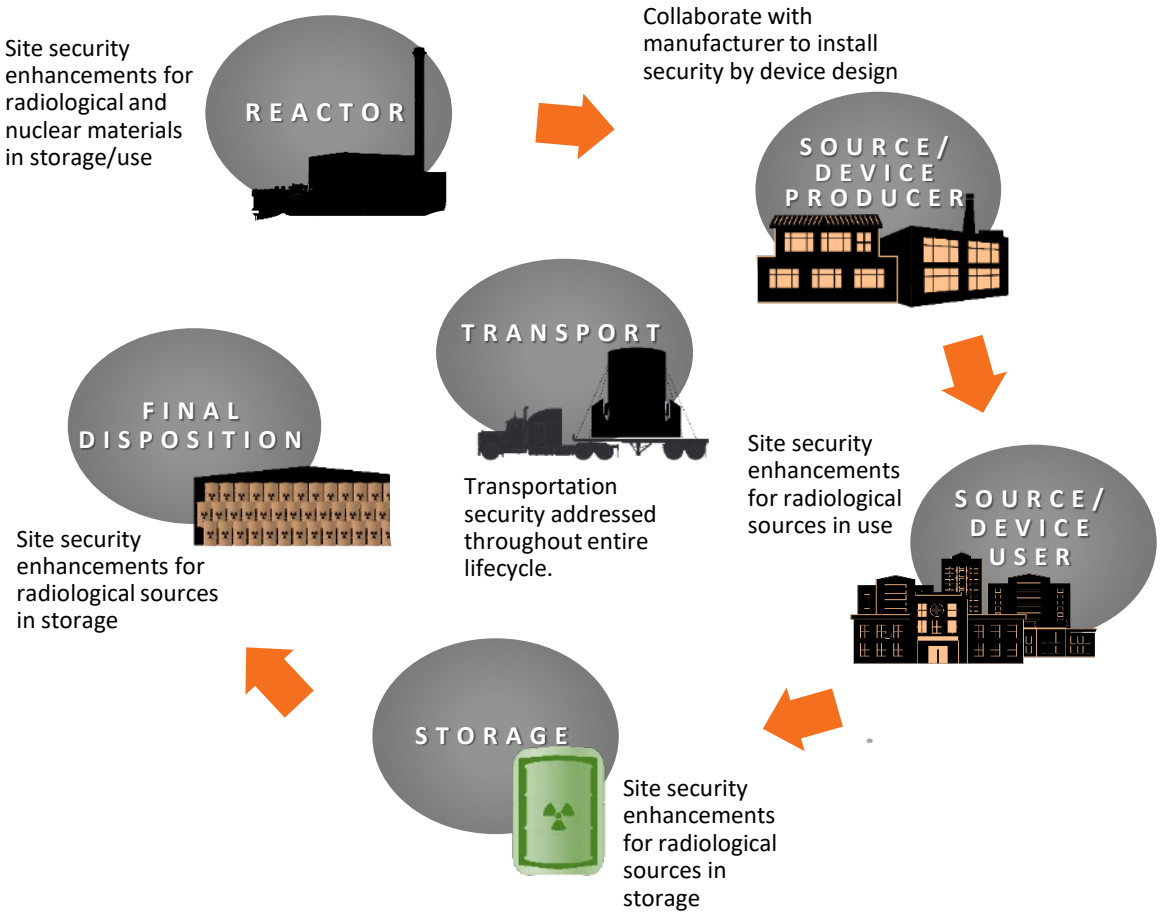
MISSION: To enhance U.S. and global security by preventing high-activity radioactive materials from being used in acts of terrorism.

International Partners and Interagency Coordination

- ORS works with more than 100 global partners
- Intergovernmental Partners include the IAEA, UNICRI, WINS, GICNT, INTERPOL
- Coordination with 11 USG agencies

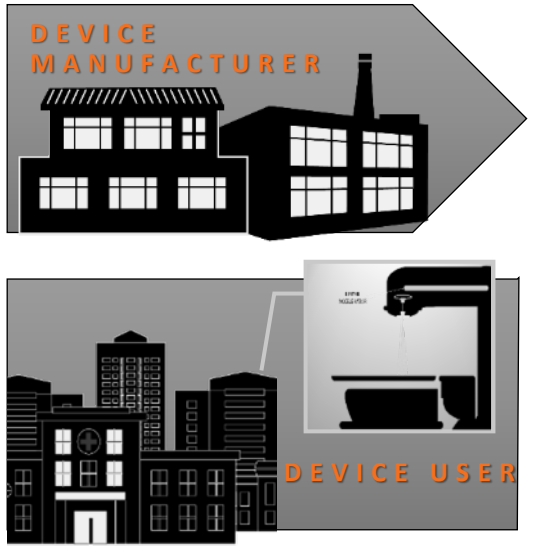
Holistic Approach to Source Security

SECURITY THROUGHOUT RADIOLOGICAL SOURCE LIFECYCLE



ALTERNATIVE NON-RADIOISOTOPIC TECHNOLOGIES

The use of non-isotopic technologies negates the need for security and disposal requirements and eliminates the risk that radioactive sources will become orphaned



High Activity Sources

Radionuclide	Normal Device Activity (Ci)
^{60}Co	1,000 – 1,000,000+
^{241}Am	8 – 20
^{192}Ir	10 - 100
^{137}Cs	1,000 – 50,000



Co-60:
Teletherapy and Gamma Knife units (cancer treatment), self-shielded and panoramic irradiators (research and sterilization)


Ir-192:
Radiography (industrial imaging)


Cs-137:
Self-shielded irradiators (research and blood processing), and calibrators (dosimeter and detector calibration)


Am-241:
Oil well logging (industrial imaging)

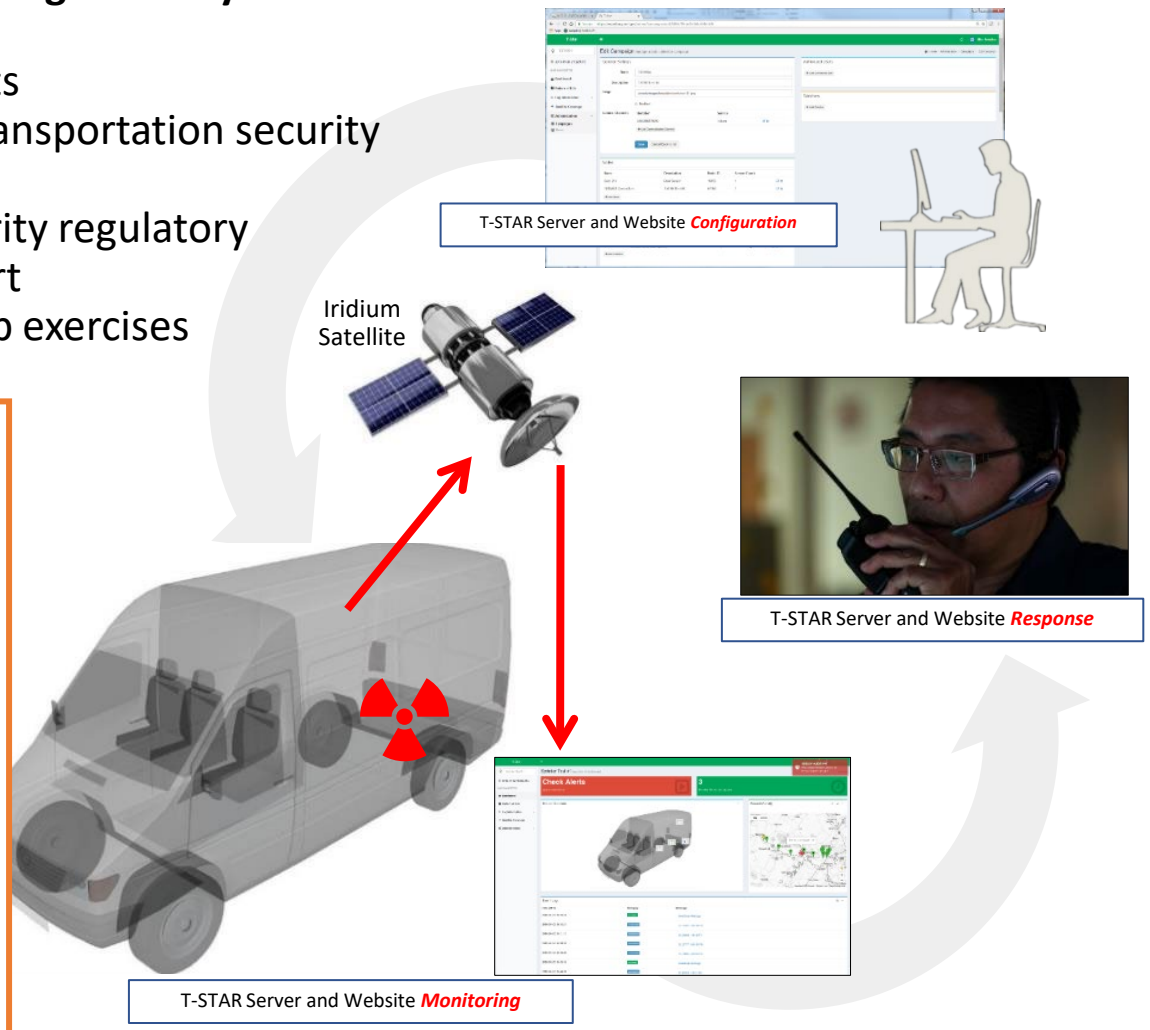
PROTECT: Transportation Security

ORS supports the security of high activity sources in transit

- National assessments
- Secure trucks and transportation security enhancements
- Transportation security regulatory development support
- Training and tabletop exercises

ORS developed T-Star - sustainable transportation security tracking and reporting system

- Near-real-time tracking of shipments
- Intrusion detection systems designed for conveyance compartments
- Modular wireless sensor system to provide intrusion detection and cargo removal detection on a wide variety of conveyances



Protect: Mobile Source Security

Mobile sources are vulnerable to theft, especially while in the field.

ORS collaborated with industry partners to develop and deploy Mobile Source Transit Security (MSTS) system to enhance the security of mobile radioactive sources for radiography and well-logging.

- Partnering with major radiography and oil service companies to design and field systems
- Pilot systems completed
- Initial international deployments underway

The MSTS system enables radioactive sources to be monitored as they move from base of operation to the field and back

National Nuclear Security Administration

Office of International Nuclear Security

National Nuclear Security Administration

U.S. Department of Energy

INS International Nuclear Security

Reducing Risk of Nuclear Terrorism

INS Vision

A world in which effective security prevents nuclear theft, sabotage, and terrorism

INS Mission

Lead U.S. international efforts to prevent theft and sabotage of nuclear materials and facilities worldwide

INS strategy and implementation

STRATEGY

Partner
Advocate for global nuclear security norms and standards that address existing and emerging threats through U.S. leadership and partnerships

Secure
Support the development of partner country capabilities to prevent theft, sabotage, and the illicit use of nuclear materials through effective nuclear security practices, systems, and infrastructure

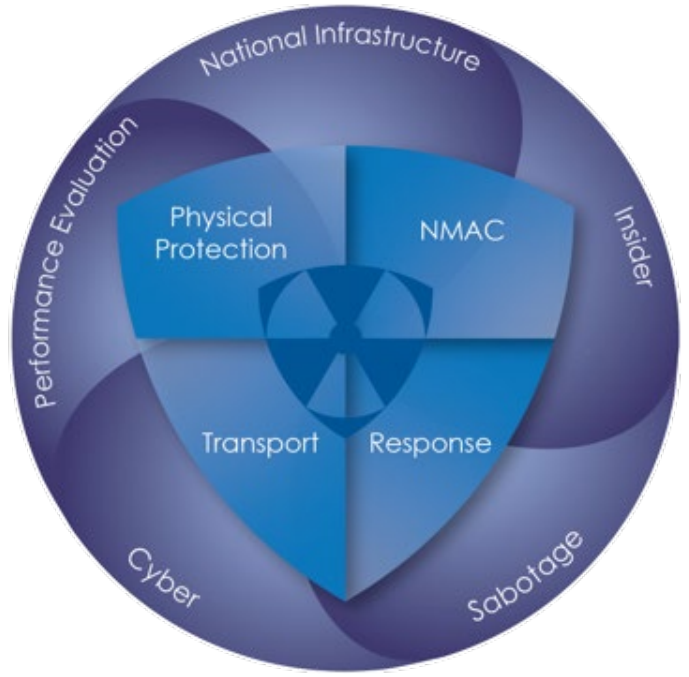
Innovate
Advance novel and innovative scientific solutions that address rapidly changing nuclear security threats and risks

IMPLEMENTATION

Address **4** Risk Areas:

- Weapons-Usable Nuclear Materials
- Power and Non-Power Reactors
- Fuel Cycle Facilities
- Materials in Transit

Partner with countries in **9** Nuclear Security Functional Areas:



THEFT AND SABOTAGE

INS engages around the world

Bilateral partnerships

- Implement effective nuclear security practices
- Identify nuclear security needs
- Support security enhancements
- Develop programs that build nuclear security capacity

Multilateral partnerships

- Support strong norms and standards
- Share best practices
- Promote global awareness of key nuclear security issues