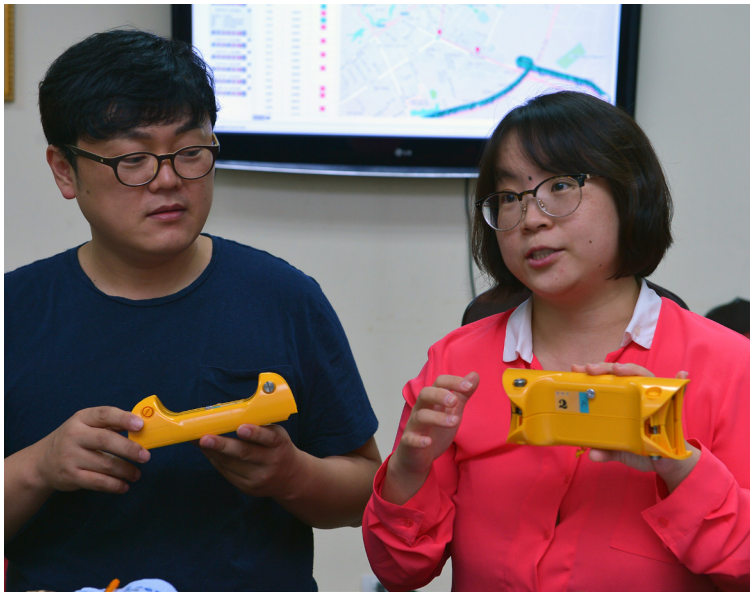
Nuclear security and

1 Outside Hanoi, a steel fabrication plant annually produces over 3000 tonnes of industrial equipment for domestic use and export. The quality of welded pipes and tanks for plants and refineries is integral to getting products to market and ensuring that Viet Nam's industry continues to be a mainstay of its economy.

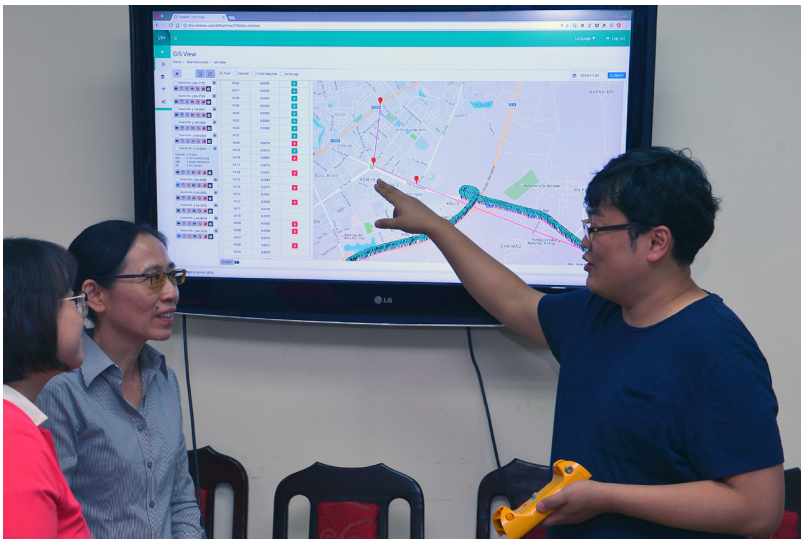
2 In a similar way that X-rays are used to check for cracks in bones, industrial radiography devices are used to check for cracks or flaws in industrial components. These devices contain radioactive sources and are portable, making them vulnerable to loss or theft. Each year, cases of lost or stolen radioactive sources are reported to the IAEA.

3 Nguyen Nu Hoai Vi, from the Vietnam Agency for Radiation and Nuclear Safety explained: "After an incident of a source stolen and later recovered, we implemented enhanced security measures for portable sources. Together with the Republic of Korea, we implemented a tracking system for radioactive sources, which links workers in the field to the regulator, thereby improving security."



4 "Viet Nam's Radioactive Source Location Tracking System — based on the Republic of Korea's Radiation Source Location Tracking, or 'RADLOT', system — enables real-time monitoring of the movements of high-activity radioactive sources, which helps to detect a loss or theft and allows for quick recovery," added Kiwon Jang (right) from the Korea Institute of Nuclear Safety. Because such sources are portable, tracking their location is essential."

d industry in Viet Nam



5 The tracking system is comprised of two parts: a mobile terminal unit that attaches to the device and a central control system. The mobile terminal unit sends information on location and dose rate, reflecting both safety and security considerations in its operation. The regulator receives an alert if suspicious activity occurs.

6 Regulators can access the central control system through a web interface. The mobile terminal units provide information necessary to respond to security related incidents, bringing together technology and regulatory oversight. Being able to quickly locate radioactive sources and regain regulatory control over them ensures that safety and security are maintained.

7 To test the Radioactive Source Location Tracking System, colleagues from the Republic of Korea and Viet Nam perform field tests to verify the tracking system's functionality under various operating conditions. Testing the system ensures that the licensee and regulator are clear about their roles and responsibilities and that, when deployed, it will provide an additional layer of security.

8 "Radiation does not have boundaries," Kiwon Jang concluded. "That is why cooperation in nuclear security is so important." The Radioactive Source Location Tracking System project reinforces how technology, when anchored in a strong regulatory framework, can bolster a national nuclear security regime to the benefit of industry and other peaceful uses of nuclear applications.

Text: Danielle Dahlstrom; Photos: D. Calma/IAEA