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AREVA



CANBERRA

**The role of the nuclear industry in
advancing nuclear security instrumentation**

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- ▶ **Developments of nuclear security instrumentation for IAEA**
 - ◆ Support technological and policy-related advances
 - ◆ Collaboration Private sector / IAEA / R&D institutions
 - ◆ Developments and services over the lifecycle
 - ▶ **How the private sector can support the current and future enhancement of nuclear security**
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- ▶ **Two examples of technological developments**
 - ▶ **Mechanisms and considerations by the private sector**
 - ▶ **Recommendations for stimulating the cooperation between IAEA-NSS and the private sector**

Example 1: Developments for IAEA

Long-term developments of a surveillance system

▶ Off-the-shelf systems Specific developments

- ◆ Obsolescence
- ◆ Specific features

▶ Safeguards systems Security applications

- ◆ Similar functionalities + Real-time capabilities

▶ Phases mechanisms:

- ◆ Initiation of the program
- ◆ Developments and challenges
- ◆ Support and maintenance



Film



MIVS



DCM-14



NGSS



CVS

Example 2: Developments for Government Agencies

Development of the Advanced Spectroscopic Portal (ASP)

▶ Program funded by US DHS

- ◆ Reducing nuisance alarms at ports and borders
- ◆ Phase 1: technologies evaluation
- ◆ Phase 2: developments funding and acquisition of systems

▶ Commercial deployment by Belgian Customs

- ◆ Germanium Spectroscopy Portal (GSP)
- ◆ Secondary screening at the Port of Antwerp

Specific developments to address limitations of existing systems

Significant contribution to technological advances



Comparisons and lessons learnt

▶ Safeguards and Security, two different environments...

	Safeguards	Security
Size	Niche market	Large with a broad range of users
Competition	Few trusted partners	Many industrial suppliers
Maturity	Mature	Dynamic and less mature

▶ ...but a converging approach

- ◆ Shared technologies (surveillance, SNM...)
- ◆ Synergistic Safeguards/Safety/Security concept
- ◆ Programmatic developments

Strengthening the role of IAEA-NSS

- ▶ A unique positioning prompting a more active role in developing new systems
- ▶ Increasing its influence by identifying and recognizing the interests of its partners
- ▶ Creating a virtuous cycle

