



Contribution ID: 361

Type: **Roundtable Member**

## AUSTRALIA'S EXPERIENCE WITH ENGAGING RESEARCHERS OUTSIDE THE TRADITIONAL SAFEGUARDS COMMUNITY

The continuing effectiveness of safeguards is achieved by the combined effort of the IAEA and Member States to keep pace with evolving challenges in verification, as well as opportunities from emerging technologies and analytical techniques. Safeguards is a niche area for research and development but it can benefit from the support of researchers in many technical fields. In recent years, the IAEA has begun pursuing innovation by conducting broad searches for novel technologies developed outside the traditional safeguards community, and then considering how these technologies could be applied to safeguards. For this approach to work, it is necessary to engage effectively with researchers that do not have prior experience servicing safeguards needs. A key challenge is raising awareness of safeguards among these researchers and providing compelling reasons for them to focus their attentions on safeguards R&D needs.

The Australian Safeguards and Non-Proliferation Office (ASNO) helps to bring the IAEA together with R&D leaders in Australian research institutes, universities and other agencies to assist the IAEA to meet its R&D needs. ASNO helped to broker a partnership between the IAEA and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), a broad-based national research organization with limited prior exposure to safeguards. This partnership led to the IAEA introducing the Zebedee 3D hand-held laser mapping device into inspections in 2016, just a few years after CSIRO invented the device. CSIRO went on to host the IAEA's Robotics Challenge in November 2017, which saw robotics experts from around the world build their own robots to assist the IAEA with inspections. University researchers in Australia are also getting involved in safeguards R&D, including research on natural language processing for the IAEA Content Reification Engine (ICORE) and blockchain technology for nuclear material accounting. This paper focuses on the challenge of communicating with R&D leaders that have relevant technical expertise but do not have prior knowledge of safeguards. It will discuss how (and why) research institutes and universities in Australia are getting involved with R&D for safeguards and how Australia is helping to engage support from these non-traditional audiences.

### Which "Key Question" does your Abstract address?

CHA1.1

### Which alternative "Key Question" does your Abstract address? (if any)

### Topics

CHA1

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**Session Classification:** [CHA] Engaging Non-Traditional Sectors in Safeguards

**Track Classification:** Addressing Growing Safeguards Challenges (CHA)