Access ANSTO

What is Access ANSTO?
Access ANSTO is the commercial interface for industry to interact with ANSTO’s nuclear science expertise, technology and unique research capabilities. This valuable portal provides organisations with a comprehensive view of the depth of specialist services and diversity of research undertaken at ANSTO, the many benefits of working with ANSTO, and how to utilise its renowned science and technology.

How does industry benefit?
Access ANSTO can assist companies and organisations solve industrial problems and turn ideas into products and services.
Its efficient, practical and holistic approach means dealing with all aspects of industry-science engagement and providing a wide range of services for companies and organisations including:

- **Specialised technical services** – materials processing, development and characterisation, structural integrity and remaining life assessment, uranium and mineral processing, NORM management, environmental analytical services, irradiation and validations, radiopharmaceutical and radiolabelling development and assessment, radiation surveying, systems safety and reliability and instrument calibration.

- **Contract and collaborative research** – ANSTO has numerous linkages and research projects involving national and international companies, research organisations and industry associations. ANSTO is a Recognised Research Agency (RRA) for the AusIndustry R&D tax concessions.

- **Large strategic partnerships** – ANSTO values the mutual benefits of strategic partnerships with like-minded organisations. Some of the organisation’s major partnerships are with Worley Parsons, CSIRO, Defence Science and Technology Organisation (DSTO), Nexia Solutions and other major listed organisations.

- **Technology transfer** – ‘Bench-to-business’ technology transfer for the benefit of industry, for example, synrocANSTO has successfully demonstrated to a UK-based organisation that plutonium waste could be locked up in a tailored glass-ceramic waste form that performed better than their baseline glass. Currently, a full-scale technology demonstration line is being constructed in the UK. This process will result in substantial cost savings to the UK government and can be applied to other plutonium waste streams.

- **Training** – access to ANSTO’s suite of training courses, for all aspects of radiological safety training and national security.

- **Facilities and businesses** – industry can access ANSTO’s specialised nuclear-based technology facilities and its business units focused on the commercialisation of scientific products and services:
  - ANSTO Minerals
  - ANSTO Radiopharmaceuticals and Industrials (ARI)
  - synrocANSTO
  - CeramiSphere™ Pty Ltd
  - Australian Membrane Technologies Pty Ltd (AMT)
  - ANSTO Technology Park – offers companies and organisations a secure, hi-tech and fully-serviced base with the added advantage of on-site proximity to ANSTO’s scientific expertise.

During the past year, Access ANSTO has been instrumental in supporting a number of new opportunities that support the strategic directions of ANSTO and will lead to increasing new relationships with industry. There has been a continued strong interaction with industry, with 2,149 new projects being commenced with industry commencing during the year, an increase of 23% over the previous year.

Examples of technical and consulting services provided to industry include:

- **Irradiation of silicon** – ANSTO provides neutron transmutation doping (NTD) irradiation of silicon ingots for major electronics companies in Europe and Asia.
• Extraction, processing and handling of uranium ore and other mineral products containing radioactivity – With 25 years of experience in the field, ANSTO Minerals has provided consulting and R&D services to all of Australia’s, and many international, uranium mining projects. These services have included flowsheet development and testing for new mines, process improvements for changing ore bodies during mining, including water recycling, and ultimately at and beyond the mine’s closure.

• Residual life and stress analysis – This ongoing work is focused mostly in the power generation area, on the life of large engineering structures. Recent work has included assessment of remaining life extension on all the boiler stop valves at a major Victorian power station, and high temperature-combined creep-fatigue defect assessments in NSW, Victorian and South Australian generation plants.

• Materials processing, development, characterisation and testing for the biomedical/orthopaedic and other industries – In partnership with several Australian manufacturers of prosthetic devices, ANSTO is using hot isostatic pressing (HIP) to process knee joints for Australian and overseas markets. The HIP process improves the strength, flexibility and fatigue life of artificial knee joints made from cobalt-chrome alloys by simultaneously and uniformly applying heat (up to 2 000 ºC) and high pressure in all directions to the joints.

• Radiation safety and occupational health training – ANSTO is the most advanced radiological safety and training facility in Australia. Recently ANSTO has run a series of radiation safety training courses for NSW Fire Brigade, Australian Customs, hazardous materials (Hazmat) teams, bomb disposal squads, hospitals, and private companies.

• Ambient air particulate analysis (PM 2.5 and PM10) – ANSTO provides local councils and industry with quantification and characterisation of air quality and fine particle air pollution using accelerator-based ion beam analysis techniques. ANSTO has also assisted mining, and manufacturing companies to demonstrate environmental compliance with air quality requirements.

Innovation at ANSTO

The Access ANSTO team works closely with the research groups and the operational areas to identify their specific unique skills and ways in which potential industry partners can take up developments at an early stage. The team proactively seeks to identify industry partners who are interested in collaborating with its leading researchers and utilising the specialist analytical services available at ANSTO.

Where innovative ideas arise outside the normal project-based approach, Access ANSTO sponsors a new concept called the Innovation Forum under which it funds innovative ideas through the ‘proof-of-concept’ phase and supports the transition through to industry adoption.

At the Innovation Forum, new ideas are presented each month to a gathering of scientific and business peers for feedback and guidance on the most appropriate pathway for development of the idea. New ideas may be developed within the ANSTO project system if core to ANSTO’s business, or developed with funding from the Innovation Forum if it has more external industry relevance.

To find out more about ANSTO’s technologies, capabilities and services contact:
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