



Minerals



Science. Ingenuity. Sustainability.

Over
45
YEARS
Industry
Experience



Process development and consultancy

ANSTO's Minerals business unit has specialised knowledge in novel flowsheet design and process development for critical and strategic minerals, which allows us to provide tailored and innovative solutions for our clients. We have a proven track record of applying our technical expertise to particularly challenging ores with complex mineralogy, and to multi-commodity resources where circuit interdependence can be high and difficult to manage.

Mineralogy and characterisation



24/7 Continuous piloting



Flowsheet development



Desktop studies and due diligence



Techno-economic analysis



ANSTO's Minerals Group

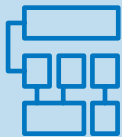
For 45+ years, ANSTO has provided consulting services and process development services to the mining and minerals processing industries. We're an experienced team of 70+ engineers, metallurgists, mineralogists, chemists and scientists, with a proven track record of working with our clients in Australia and globally to design and evaluate novel flowsheets and improve established processes.

We're committed to providing practical solutions and innovative technologies in ways that deliver financial and environmental benefits to our clients.

Our award-winning team has the required experience and fundamental understanding to develop new and improved processes for the treatment of ores containing uranium, rare earths, lithium and other speciality metals.

We're committed to developing the technologies of the future for the mining and mineral processing industries.

Consultancy services



Flowsheet development for U, rare earths, Zr/Nb/Hf, base metals, Li, graphite, high purity quartz, tungsten and other speciality metals



Process modelling and scoping engineering studies for techno-economic analysis



Desktop and due diligence studies – green and brown field projects



Control of radioactivity in hydro- and pyrometallurgical flowsheets



Pilot and demonstration plant design, construction and operation

Facilities and capabilities

Mineralogy – QEMSCAN / XRD / TEM



XRF, ICP, LECO, ISE, TGA-DSC, DNA and NAA



α , β and γ spectrometry



Autoclave, column and cyanide leaching



IX, RIP and multi-stage SX equipment



Nanofiltration / membrane equipment – lab and pilot scale



Directly and indirectly heated rotary kilns – up to 100 kg/h



Multi-tank circuits, thickeners and filters (pressure and vacuum)



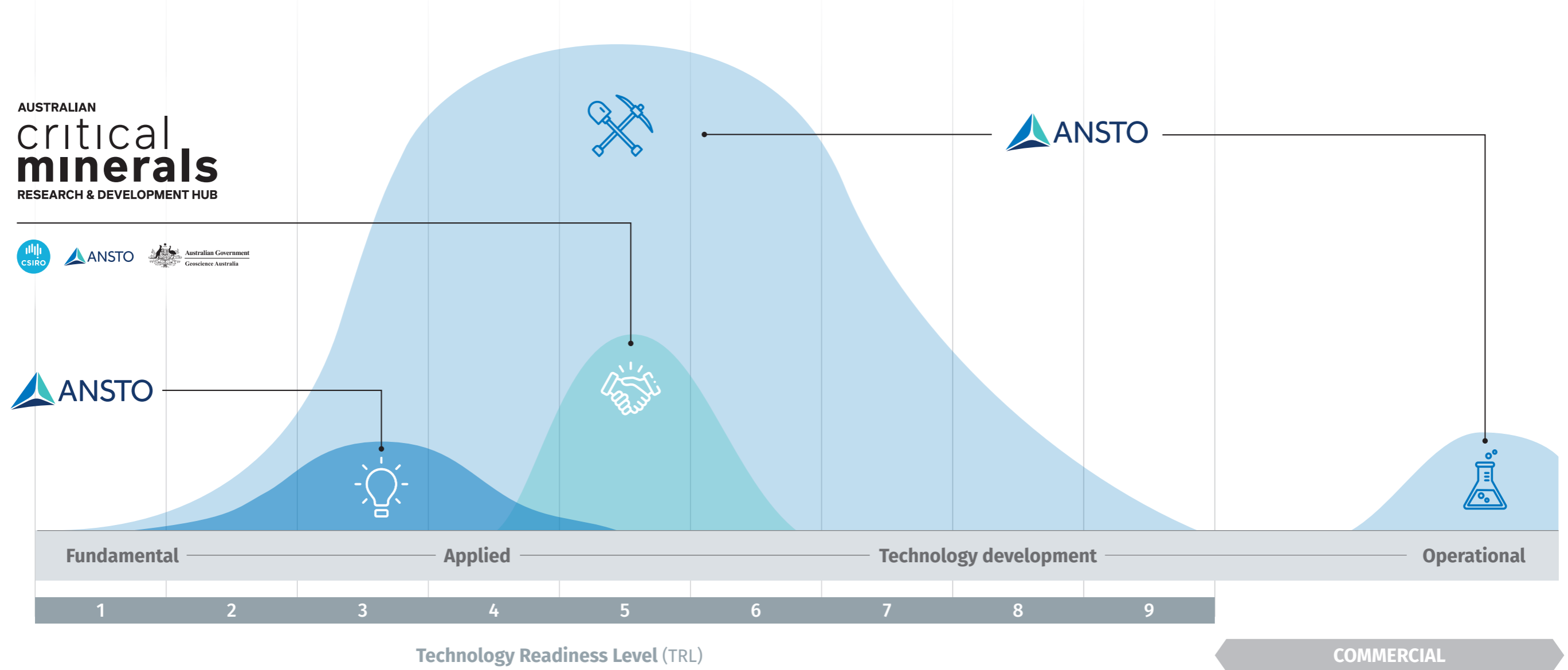
Process modelling including IX and SX design / operation models



ARPANSA and ASNO licensed to handle radioactive materials



Your process development partner



Our expertise

ANSTO has world-leading expertise in the processing of critical and strategic minerals, including;

- uranium
- rare earths
- zirconium/niobium/hafnium
- base metals
- lithium processing (brines and hardrock)
- graphite
- High Purity Quartz (HPQ)
- germanium / gallium
- tungsten
- radioactivity control and management

Site work, including surveys, audits and plant trials, is also an important feature of our support to industry.

Integration with our clients' operations continues to be an important conduit for transferring the results of our process development studies to industry, and we have directly supported numerous preliminary, definitive and bankable feasibility studies of Australian and overseas critical and strategic mineral project developers.



**Talk to us about
commercial projects,
consultancy and research.**

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