



POSITION DESCRIPTION

Position Title:	Senior Principal Scientist – Australian Synchrotron
Cluster / Business Unit / Division	Nuclear Science and Technology
Section or Unit:	Australian Synchrotron – Science
Classification:	Band 9
Job Family:	Science
Position Description Number:	PD-1776
Work Contract Type:	Manager
STEMM/NON-STEMM:	STEMM
STEMM CATEGORY:	Science

POSITION PURPOSE

The Senior Principal Scientist – Australian Synchrotron is responsible for leading and managing the science and research operations of the Australian Synchrotron (AS). This function is responsible for the AS user programme, the operation of the facility and the management of staff to ensure a world-class user experience. The role ensures the facility is a centre of research and innovation excellence recognised nationally and internationally. Additionally, the role provides leadership, management and co-ordination to ensure the platform meets associated safety, regulatory and compliance obligations in relation to the AS user programme.

ORGANISATIONAL ENVIRONMENT

ANSTO leverages great science to deliver big outcomes. We partner with scientists and engineers and apply new technologies to provide real-world benefits. Our work improves human health, saves lives, builds our industries and protects the environment. ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

Nuclear Science & Technology (NST) incorporates ANSTO's Research and Technology Groups, Research Infrastructure platforms, Project Management Office, and Stakeholder & Support Services. NST conducts research and development in relation to nuclear science and technology and connects people, transfers knowledge and provides nuclear-based products and services for the benefit of Australia.

The Research Infrastructure portfolio consists of platforms based around scientific infrastructure and capabilities, with a number of the platforms categorised as Landmark Research Infrastructure. The portfolio includes a range of scientific assets, infrastructure, capability development & delivery for multi-decadal, multi-disciplinary, multi-user platforms for a collaborative user community and for internal research and development endeavours. The key performance areas (KPA) of the portfolio include 1) enriching people and quality leadership; 2) excellent research services, support and programmes; 3) best practice facility management, operations and processes and 4) development of world-class capabilities.

The Australian Synchrotron is a landmark research facility that delivers world-leading synchrotron science for Australian and international Users. The facility operates an electron accelerator system and storage ring that delivers light to beamlines that allow research to be undertaken in fields including health and medical, food, environment, biotechnology, nanotechnology, energy, mining, agriculture, advanced materials and heritage and archaeological research. The user programme manages more than 5,000 researcher visits annually with users registered from academia, government research departments, museums, art galleries, publicly funded research agencies, medical research institutes, hospitals and a wide range of industry sectors.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

- Lead and manage the safe, effective and productive operation of the Science function of the Australian Synchrotron including leading and managing the beam line teams to deliver excellence in the user experience as well as excellence in the application of synchrotron X-ray techniques.
- Manage the user programme for the Australian Synchrotron including associated advisory committees so as to meet performance targets and report on the outcomes of beam-time application rounds.
- Monitor and evaluate the science activities of the facility according to overall strategies. Monitor and report on relevant performance metrics as well as research outcomes from the user programme.
- Leadership and management of beamline staff including selection, training, performance management and review, recognition, workforce planning, talent management.
- Develop and mentor the beam line teams to achieve personal career, AS, and NST objectives and foster a culture of high performance that encourages innovation, improves productivity and promotes teamwork and collaboration at AS.
- Ensure effective interactions between the science team and other operational teams within AS and more broadly NST.
- Lead and manage the maintenance and development of beamline and related user capability, keeping the overall status of the facility as world-class, including where appropriate the expansion of research infrastructure such as new beamlines. Participate in the governance of AS capital and project decision making and oversight.
- Develop programmes of research at the AS that are aligned with strategic research programmes of ANSTO and in collaboration with NST research themes.
- Foster excellent strategic and platform research including new technique and capability development as well as pushing the application of techniques and instrumentation.
- Ensure the outputs of AS research (strategic and platform research) are reported and are of a high quality, including the review of publications originating from the science group. Ensure research and infrastructure grant proposals developed by AS staff are reviewed and aligned to NST objectives and ensure co-ordination with the NST grant portfolio.
- Maintain an understanding of the state-of-the-art technologies related to synchrotron science and develop national and international engagement with other synchrotrons, relevant research organisations, networks and research agencies. Support AS and NST stakeholder and industry engagement activities
- Appoint and ensure appropriate operation of various science and operational committees as required. Facilitate the delivery of scientific meetings associated with the facility and related science, including working across NST to deliver the ANSTO User Meeting.
- Being a visible change agent and taking an active role in embedding the NST operating model during a period of significant cultural and organisational change.
- Member of the leadership team of the Australian Synchrotron as established by the Director, Australian Synchrotron.
- Undertake additional duties as required and directed by the Director, Australian Synchrotron.

Decision Making

- The position works within a framework of ANSTO policy, NST strategy, professional standards and resource parameters. Within this framework the position has independence in determining how to achieve objectives of the science operations function, including deciding on methods and approaches, operations, project planning and allocation of resources.
- The ANSTO values, organisational corporate plan, business plan, operational excellence program, the NST/Research Infrastructure strategy and AS objectives provide the context for the position.

- The position is fully accountable for the accuracy, integrity and quality of the content of advice provided, and is required to ensure that decisions are based on sound evidence, but at times may be required to make effective judgements under pressure or in the absence of complete information or expert advice.
- Determines objectives and plans for the science group within the context of AS objectives and will consult with the Director, Australian Synchrotron on complex, sensitive and major issues that have a significant impact on the function.
- The levels of authority delegated to this position are those approved and issued by the Chief Executive Officer. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

Key Challenges

- Managing multi-disciplinary units and teams, which may have conflicting priorities
- Ensure adherence and compliance to all relevant regulations
- Ensuring the successful implementation of objectives and project completion whilst managing conflicting priorities and deadlines
- Keeping abreast of recent developments in field, ensuring continual improvement and implementation of best practise.
- Improving operational effectiveness, service, response times and delivery efficiencies.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Director, Australian Synchrotron	<ul style="list-style-type: none"> • Receive guidance and direction • Provide expert, authoritative and evidence based advice • Staff engagement and quality recruitment • Negotiate and report on budgets and resources consistent with strategic plans and goals • Recommend and gain endorsement for plans and goals and other initiatives
Direct Reports	<ul style="list-style-type: none"> • Provide leadership, guidance and support • Set performance requirements and manage performance and development • Engage to monitor trends, performance and progress against the strategic plan and evaluate further support which may be required to ensure delivery against the plan
AS Project Governance Group	<ul style="list-style-type: none"> • Provide inputs to governance and oversight for AS major projects, including capital projects
AS Project Management Office	<ul style="list-style-type: none"> • Engage in coordination with project managers, particularly around planning of longer term projects such as new beamlines • Provide expert advice and guidance on science issues to project management staff
AS Staff	<ul style="list-style-type: none"> • Provide expert advice and analysis on a full range of matters • Contribute to group decision making processes, planning and goals • Collaborate and share accountability • Negotiate and resolve conflicts
NST Leaders and departments	<ul style="list-style-type: none"> • Reporting outcomes research activities at the Australian Synchrotron as part of the NST research portfolio to the Head of Research • Development of strategic research programmes in collaboration with Research Themes

	<ul style="list-style-type: none"> Group contact in relation to cross-cluster projects and programs affecting the science programme
ANSTO business units & divisions	<ul style="list-style-type: none"> Engage and negotiate provision of support and services to the AS to support User and Research programmes
External	
National & international bodies, forums and taskforces	<ul style="list-style-type: none"> Actively contribute and represent ANSTO and the Australian Government position
Universities, Business, Industry, Scientific Institutions	<ul style="list-style-type: none"> Develop and maintain collaborative user relationships Provide expert, authoritative and evidence based advice
International synchrotrons and research organisations	<ul style="list-style-type: none"> Participate in expert review and scientific advisory roles Develop and maintain international linkages around synchrotron scientific operations and research

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the Director, Australian Synchrotron
Direct Reports	Science Operations Manager, 6 Beamline Group Managers
Indirect Reports	~ 58 x beamline staff, as well as postdoctoral researchers ~ 5 x User Office, 1 Administration Officer, and 2 Laboratory Support staff

Financial Data (2024/2025)

Revenue / Grants	
Operating Budget	
Staffing Budget	>\$6.5m
Capital Budget	
Assets	

Special / Physical Requirements

Location:	Clayton Working in different areas of designated site/campus as needed
Travel:	May be required travel to Lucas Heights from time to time Infrequent travel both internationally and nationally
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Public speaking
Radiation areas:	May be required to work in radiation areas under tightly regulated conditions
Hours:	Willingness to work extended and varied hours based on operational requirements After hours work may be required for short and infrequent periods Required to participate on an on-call roster
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements

Workplace Health & Safety

	All Workers Officer (definitions found in appendix A of AP-2362)
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Specific role/s as specified in AP-2362 of the ANSTO WHS Management System Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties

KNOWLEDGE, SKILLS AND EXPERIENCE

PhD in a relevant field of science with strong competencies and publication record in scattering and synchrotron sciences

1. Significant experience leading, managing and operating within large-scale, multi-user research infrastructure
2. Comprehensive understanding of the scientific and technical functions of the Australian Synchrotron
3. Experience contributing to science strategy formulation and ability to interpret strategy into operational objectives and plans.
4. Proven success leading and managing teams to achieve excellence, desired organisational outcomes and achieving optimal work performance.
5. Experience guiding, developing and mentoring staff to deliver optimal operational outcomes.
6. Sound experience leading and managing safety and regulatory compliance activities within a unit or department.
7. Demonstrated ability to initiate and manage change, allocate resources effectively and identify and manage risks
8. Excellent communication, interpersonal skills, negotiation and influencing skills.
9. Ability to operate within an business excellence framework.
10. Demonstrated experience in managing effective relationships with key stakeholders and clients
11. Demonstrated strategic thinking and planning skills and experience and the capacity to develop solutions to complex, multi-faceted issues and problems.
12. Project management experience, including a sound understanding of the principals and practice of effective resource management to achieve a successful outcome.

VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position.

Line Manager		Delegated Authority	
Name:	Michael James	Name:	Andrew Peele
Title:	Director, Australian Synchrotron	Title:	Group Executive, Nuclear, Science and Technology
Signature:	As per original on file	Signature:	As per original on file
Date:		Date:	