Australian Government

Australian Radiation Protection and Nuclear Safety Agency

arpansa

Corporate Plan

2019–2023

Acknowledgement of Country

ARPANSA respectfully acknowledges Australia's Aboriginal and Torres Strait Islander communities and their rich culture and pays respect to their Elders past and present. We acknowledge Aboriginal and Torres Strait Islander peoples as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely.

We recognise and value the ongoing contribution of Aboriginal and Torres Strait Islander peoples and communities to Australian life and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

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CEO foreword

I am pleased to present the 2019–2023 Corporate Plan of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). I will, together with ARPANSA's dedicated and highly capable staff, endeavour to deliver according to the targets outlined in this plan, with the aim of protecting the Australian community and environment from the harmful effects of radiation.

Radiation has always been a natural part of our environment. Every day we are exposed to radiation from natural sources as wide-ranging as outer space (cosmic radiation), the sun (ultraviolet radiation), bedrock (including radon gas entering homes and workplaces), and naturally occurring radioactive substances in food and drink.

In addition to natural sources, artificial sources of radiation have been introduced into our environment over the past century. The use of radiation in medical procedures is now the largest source of exposure to the population, and very powerful sources of radiation are used for cancer treatment. Radiation sources are used for a variety of purposes, such as materials testing and density measurement. Radiation is used in research and for production of medicines and for communication (radiofrequency radiation). There are also workplaces with elevated levels of radiation of either natural or artificial origin.

Exposure to radiation from natural sources and the use of radiation for justified and beneficial purposes necessitates actions to protect the health and safety of people and of the environment from the harmful effects of radiation. ARPANSA achieves its protection mission by various means. We regulate Commonwealth entities using radiation, including nuclear installations. We collaborate with the states and territories to develop policies, codes and guidance for national implementation. We engage with a range of stakeholders to enable them to make their own decisions in relation to radiation risks. We are involved in radiation research and provide services such as calibrations, audits and monitoring, for the purpose of protecting the community and environment.

We are looking forward to continuing our delivery of services to the Australian community over the next four years, and to deal with the challenges we may face in doing so.

Statement of preparation

I, Carl-Magnus Larsson, as the accountable authority of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), present the 2019–20 Corporate Plan, as required under paragraph 35(1)(b) of the Public Governance, Performance and Accountability Act 2013. This corporate plan covers the reporting periods of 2019–2020 to 2022–2023.

Carl-Magnus Larsson

CEO of ARPANSA

Purpose

We are the Australian Government's primary authority on **radiation protection** and **nuclear safety**.

Vision

A safe radiation environment for the Australian community.

Mission

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's primary authority on radiation protection and nuclear safety. Our purpose is to protect the Australian people and the environment from the harmful effects of radiation, through understanding risks, best practice regulation, research, policy, services, partnerships and engaging with the community.

Objectives

The ARPANSA program of work entails six key strategic objectives that guide our priorities and contribute to delivering radiation protection and nuclear safety outcomes to the Australian community:

1. Identify, assess and communicate health, safety and environmental risks from radiation.
2. Promote radiological and nuclear safety and security, and emergency preparedness.
3. Promote the safe and effective use of ionising radiation in medicine.
4. Ensure risk informed and effective regulation.
5. Enhance engagement with stakeholders.
6. Enhance organisational innovation, capability and resilience.

Capability

Objectives five and six reflect the important work of our supporting capabilities. ARPANSA will continue to build organisational capability to support delivery of our purpose. Over the next four years key areas of capability improvement include further investment in our people, governance, infrastructure and technology to ensure ARPANSA stays relevant to our stakeholders now and into the future.

Environment

Under the *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act), ARPANSA regulates Commonwealth entities using radiation with the objective of protecting people and the environment from the harmful effects of radiation. Under the Act, ARPANSA also carries out a number of additional functions such as undertaking research and the provision of advice and services, with the aim of promoting radiation safety across all Australian jurisdictions.

ARPANSA works with the medical sector to ensure that radiation doses received by patients are low as reasonably achievable while still delivering clinical objectives. ARPANSA maintains the Australian Primary Standard for absorbed dose and calibrates hospitals' dose detectors against this standard to ensure that the correct amount of dose is being delivered to 60,000+ cancer patients being treated by linear accelerators (linac) in Australia per year. ARPANSA's investment in the establishment of the Roger Allison Radiotherapy Quality Centre in March 2019 will ensure that the agency is well placed to respond to changes in the medical oncology environment, and continue to develop and deliver clinically relevant dose calibration and audit services for Australia

Our operating environment is currently influenced by discussions about final management of radioactive waste, including disposal. The Australian Government has initiated a process to establish a national disposal facility for low level radioactive waste and a storage facility for intermediate level waste held by the Commonwealth, intended only for management of waste of domestic origin. Siting, construction and operation of the facility requires licences issued by ARPANSA. We will continue our engagement with communities that have been identified as potential sites for the national facility.

Skin cancer incidence and mortality rates in Australia are among the highest in the world, posing a significant health burden and economic cost. Caused by ultraviolet (UV) radiation, skin cancer is also one of the most preventable forms of cancer and, if detected early, the vast majority of cases can be treated successfully. ARPANSA works with a number of stakeholders to promote 'sun smart' behaviours, with the aim of providing information and other services that will enhance people's understanding of the risks associated with exposure to UV radiation, thus contributing to prevention of skin cancer.

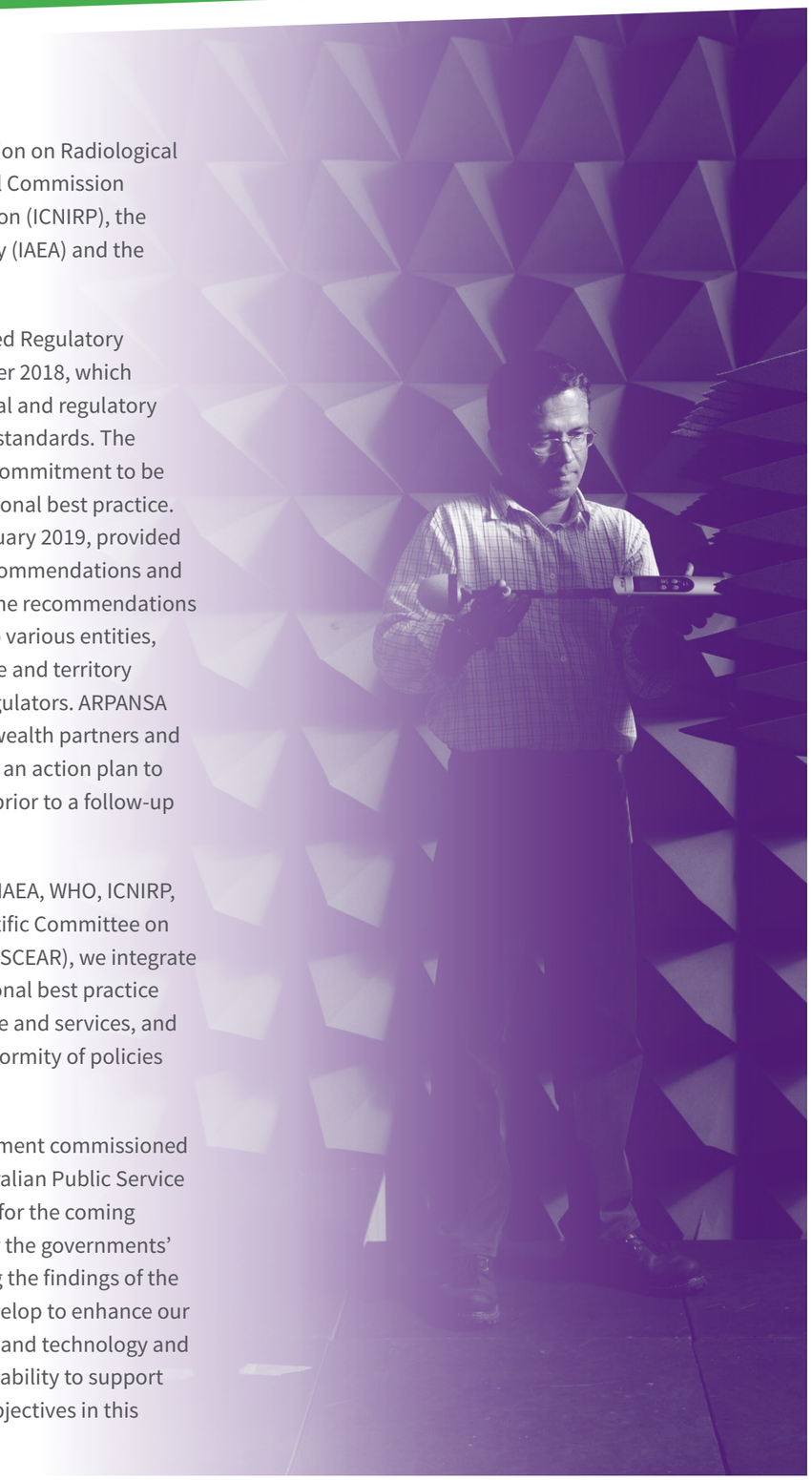
Exposures to other sources of radiation found in our environment are generally low but variable. Their application and purpose, for example in medicine, industry and mobile telephony, is constantly changing. Scientific research is constantly investigating how these exposures may impact our health and the world around us. ARPANSA continually reviews emerging science about risks from ionising and non-ionising radiation and engages with stakeholders, including community groups, to inform about any such risks.

ARPANSA publishes Fundamentals, Codes and Guides in the Radiation Protection Series (RPS), which promote national policies and practices that protect human health and the environment from harmful effects of radiation. ARPANSA develops these publications jointly with state and territory regulators through the Radiation Health Committee (RHC), which oversees the preparation of draft policies and standards with the view of their uniform implementation in all Australian jurisdictions. To the extent possible and relevant for Australian circumstances, the RPS publications give effect in Australia to international standards and guidance. The sources of such standards and guidance include the International Commission on Radiological Protection (ICRP), the International Commission on Non-Ionizing Radiation Protection (ICNIRP), the International Atomic Energy Agency (IAEA) and the World Health Organization (WHO).

Australia received an IAEA Integrated Regulatory Review Service mission in November 2018, which was a peer review of Australia's legal and regulatory framework against the IAEA safety standards. The mission demonstrated Australia's commitment to be an advocate and leader in international best practice. The **IRRS report**, delivered in February 2019, provided four points of good practice, 23 recommendations and 12 suggestions for improvement. The recommendations and suggestions were addressed to various entities, including the Commonwealth, state and territory governments, ARPANSA, and all regulators. ARPANSA is working together with Commonwealth partners and all states and territories to develop an action plan to implement the recommendations prior to a follow-up IRRS mission in 2021–22.

Through our engagement with the IAEA, WHO, ICNIRP, ICRP and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), we integrate scientific knowledge and international best practice into our regulatory activities, advice and services, and into our promotion of national uniformity of policies and practices across Australia.

In May 2018, the Australian Government commissioned an independent review of the Australian Public Service (APS) to ensure it is fit-for-purpose for the coming decades. ARPANSA will help deliver the governments' priorities for change by considering the findings of the APS review in the initiatives we develop to enhance our people, governance, infrastructure and technology and to ensure we have the required capability to support the achievement of our strategic objectives in this operating environment.



Planning

Our Corporate Plan is a central part of our business planning, budgeting and reporting process and will support planning activities across the agency. The plan spans four annual reporting periods and will be updated each period. The plan is expected to evolve over coming years as the agency works toward its vision and adapts to emerging priorities.

This plan is directly aligned to the relevant outcomes and programs set out in the Department of Health 2019–20 Portfolio Budget Statements; specifically:

- Program 5.1: Protect the health and safety of the community through regulation.

The Department of Health has strategic regulatory policy and national leadership responsibility for radiation protection and nuclear safety with particular regard to the regulatory framework. This includes best practice for health technologies related to radiation and nuclear safety.

This plan is aligned with the six strategic objectives that will assist ARPANSA to protect the Australian people and the environment from the harmful effects of radiation. The 2019–20 agency business plans and individual performance agreements are also aligned with this plan.

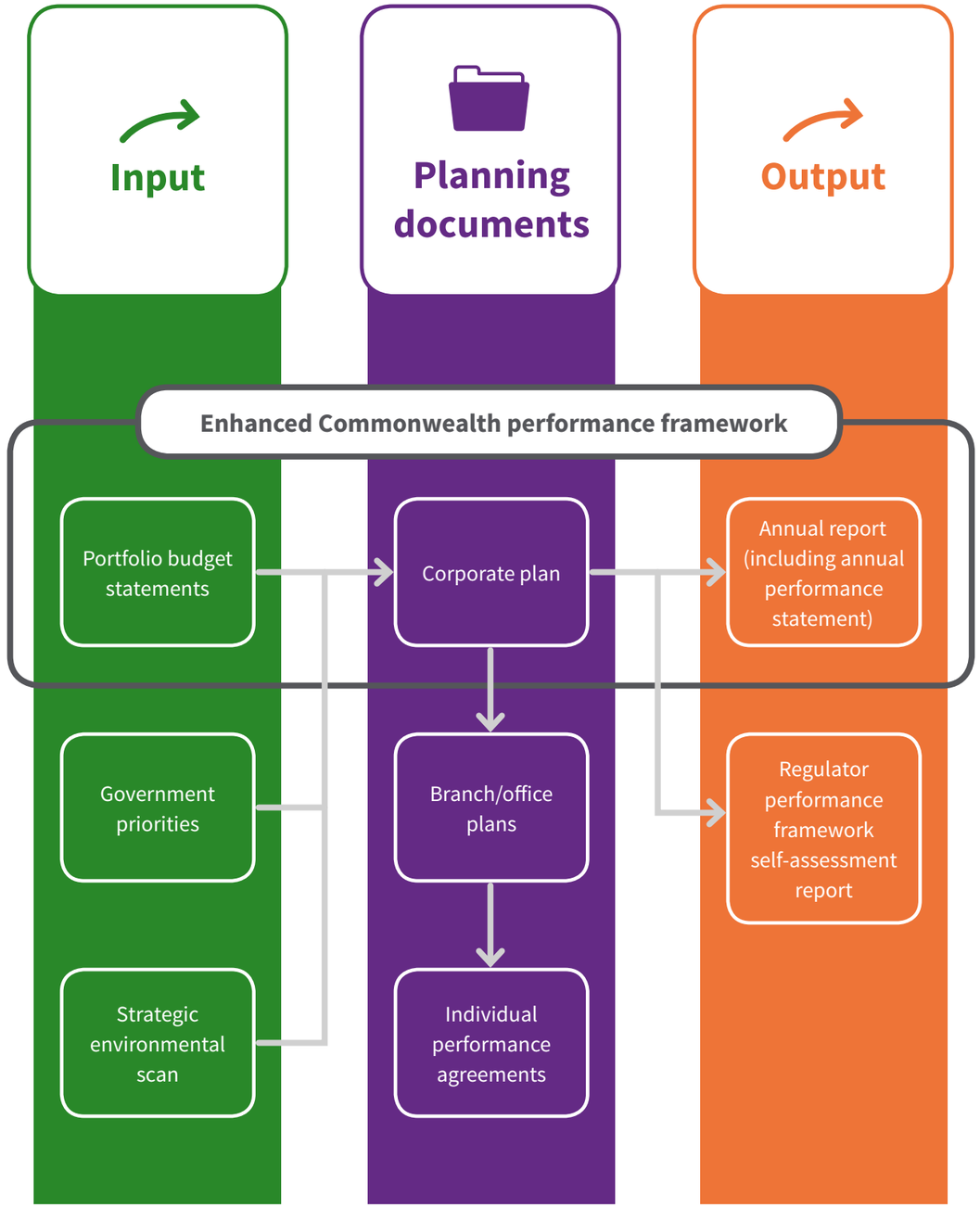


Figure 1: Overview of ARPANSA's planning and performance framework

Performance

We recognise the importance of measuring our performance, and continue to improve the way that we measure success. Every year we undertake a comprehensive review of our non-financial performance measures with the aim to embed best practice performance management, leading to more meaningful and reliable reporting on our achievements against our purpose.

ARPANSA's planned performance for the next four years is contained in the **2019–20 Portfolio Budget Statements**, as performance measures (performance criteria). These performance measures set out the high-level activities we will undertake in order to achieve our purpose, to protect the Australian people and the environment from the harmful effects of radiation through understanding risks, best practice regulation, research, policy, services, partnerships and engaging with the community.

Our performance information in the corporate plan is presented under six objectives, the strategies we will employ to deliver on these, and the activities and projects that will aid in this delivery. This includes an outcome-based key performance indicator as required by the Commonwealth's Regulator Performance Framework[1], which encourages regulators to undertake their functions with the minimum impact necessary to achieve regulatory objectives and to effect positive ongoing and lasting cultural change within regulators.

Progress against the measures and other commitments outlined in our corporate plan and agency business plans will be monitored and reported to our Strategic Management Committee and the Audit and Risk Committee on a quarterly basis. Our results for the year against the performance criteria detailed the 2019–20 Portfolio Budget Statements and this corporate plan will be published in our annual performance statement, as part of the 2019–2020 ARPANSA Annual Report.

[1] *Visit our website for more information on our **annual self-assessment of regulatory performance**.*

1 Identify, assess and communicate health, safety and environmental risks from radiation

ARPANSA will gather scientific knowledge to inform its regulatory activities and provide evidence-based, risk-informed advice to the Australian Government and community. We will deliver this by providing expertise, specialised resources and services to support the protection of the public, workers and the environment from the hazards of both ionising and non-ionising radiation.

ARPANSA will build partnerships with a range of stakeholders in targeted areas of scientific research, and will continue to support the implementation of a national skin cancer prevention program, with the aim to raise awareness and influence the behaviour of the Australian public and workers in order to reduce the incidence of skin cancer in Australia.

Strategies

The strategies we will employ to achieve this objective are:

- conduct hazard identification and exposure analysis of radiation sources
- evaluate the health risks to public, workers and the environment
- mitigate the health, safety and environmental risks from radiation.

Performance measures

We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
1.1	Percentage of time that UV monitoring network data is available to the public	>95%	>95%	>95%	>95%
1.2	Monitor radiation doses to occupationally exposed workers	Annual reporting of trend in radiation doses received by workers, determined from quantitative dose measurement, provides evidence of optimisation of radiation protection	★	★	★
1.3	Percentage of time the 'Talk to a Scientist' call centre is made available to the public as advertised	>95%	>95%	>95%	>95%

★ *indicates reporting periods where qualitative KPI will be measured against unchanged target*

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
1.4	National radon action plan	Publication and implementation of the National Radon Action Plan for hazard identification and risk mitigation to reduce radon-induced lung cancer in Australia	June 2020
1.5	Radiation Protection Standard for Radiofrequency Fields (RPS-3)	Radiation Protection Standard for Radiofrequency Fields (RPS-3) published following finalisation of updated guidelines from the International Commission on Non-Ionizing Radiation Protection (ICNIRP)	June 2020

2 Promote radiological and nuclear safety and security, and emergency preparedness

ARPANSA will support a national approach to the secure and safe management of radiation sources, radiation facilities and nuclear installations. We will deliver this by supporting national and regional arrangements for preventing accidents and security events that may lead to radiation exposure and maintaining effective emergency response systems that protect the Australian community in the case of a radiological or nuclear event.

ARPANSA will also work collaboratively across government and all jurisdictions to implement Australia's National Action Plan for Health Security 2019–2023, developed to address the recommendations made in regard to radiological emergencies, by the WHO in Australia's Joint External Evaluation Report. The plan to address recommendations made by the IAEA in Australia's International Regulatory Review Service mission report related to emergency preparedness and response will also be developed.

Strategies

The strategies we will employ to achieve this objective are:

- prevent a nuclear or radiological event with safety or security implications
- prepare for a nuclear or radiological event
- respond to a nuclear or radiological event
- recover from a nuclear or radiological event.

Performance measures

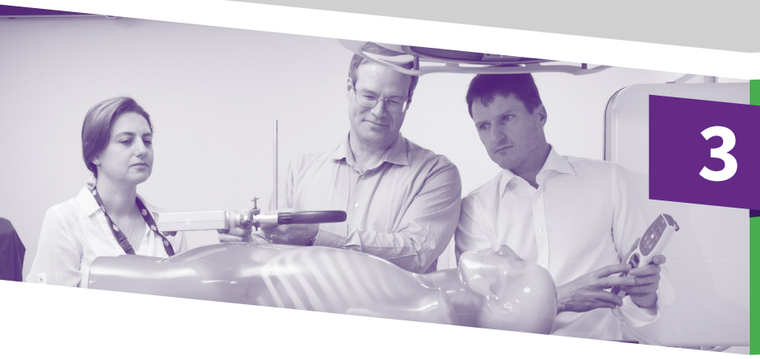
We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
2.1	Data availability of ARPANSA operated CTBTO IMS[2] Radionuclide stations	>95%	>95%	>95%	>95%

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
2.2	Australian Radiation Monitoring System (ARMS)	ARMS network deployed and fully operational at identified sites of major radiological hazards.	June 2020
2.3	Reference Accident for nuclear powered vessels	Publish a review of the Reference Accident for nuclear powered vessels as part of the implementation of Emergency Exposure Guide.	December 2020
2.4	CTBTO IMS monitoring station upgrades	Integrate the Fiji and Kiribati radionuclide monitoring stations into ARPANSA's network operations. Deliver, in cooperation with the CTBTO, upgrades to the Macquarie Island, Darwin and Townsville radionuclide monitoring stations.	June 2020 June 2021

[2] *The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) monitors for nuclear explosions on the Earth's surface, in the atmosphere, underwater and underground through a network of waveform stations (seismic, hydroacoustic and infrasound) and radionuclide (particulate and noble gas) stations that form part of the CTBTO International Monitoring System (IMS). ARPANSA operates nine radionuclide and two noble gas stations that are part of the CTBTO IMS.*



3 Promote the safe and effective use of ionising radiation in medicine

Medical procedures in diagnosis, intervention and therapy are the largest source of ionising radiation exposure to the Australian population. ARPANSA seeks to ensure that the use of radiation is justified and takes patient safety into account. We engage with this aim through calibration, auditing, education and a diagnostic survey program.

Strategies

The strategies we will employ to achieve this objective are:

- ensure accurate delivery of radiotherapy in Australia
- encourage justification and optimisation of diagnostic procedures
- enhance medical professionals' knowledge of ionising radiation.

Performance measures

We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
3.1	Number of Diagnostic Reference Level (DRL) surveys per category are sufficient to infer national characteristics per annual survey period	2400	2400	2400	2400
3.2	Percentage of Australian radiotherapy providers subscribing in the national dosimetric auditing program provided by the Australian Clinical Dosimetry Service	95%	95%	95%	95%
3.3	Number of hospital radiotherapy local dosimetry standards calibrated by ARPANSA against the national primary standard	15	15	15	15
3.4	Peer reviewed publications demonstrating improvements in medical radiation safety	3	3	3	3

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
3.5	New DRL for image-guided interventional procedures	Develop new DRL for image-guided interventional procedures in conjunction with relevant professional bodies.	June 2020
3.6	Development of new audit techniques for emerging brain cancer treatments	Using ARPANSA's newly commissioned linear accelerator, develop audit techniques for stereo tactic radiosurgery (SRS) brain cancer treatments.	June 2021
3.7	Proton radiotherapy dosimetry and advice	Providing guidance, informed through research, to professional organisations and governments.	June 2023

4 Ensure risk informed and effective regulation

ARPANSA is committed to the effective and efficient regulation of radiation sources, radiation facilities and nuclear installations across the full lifecycle. Using review and analysis we will continually improve ARPANSA's regulatory processes for the benefit of Commonwealth licence holders, applicants and the Australian community. ARPANSA will work with state and territory jurisdictions to promote national uniformity in radiation protection policies and practices throughout Australia.

Strategies

The strategies we will employ to achieve this objective are:

- ensure compliance of Commonwealth entities with regulatory requirements
- ensure regulatory actions are proportionate to the risk
- provide timely and evidence based assessment of applications
- promote international best practice in regulatory policy and practices
- communication with regulated entities is clear, targeted and effective
- contribute to the continuous improvement of regulatory framework and processes.

Performance measures

We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
4.1	Percentage of Regulator Performance Framework (RPF) KPIs met or exceeded per reporting period.	>75%	>75%	>75%	>75%
4.2	Maintain an appropriate risk-informed approach to regulation and compliance	Annual Regulator Performance Framework self-assessment is published on ARPANSA website and overall self-assessed rating of performance indicates continued strong performance.	★	★	★
4.3	Monitor doses to radiation workers at licensed Commonwealth facilities and influence the doses in a downward manner	The radiation doses of the 100 most exposed workers at licenced Commonwealth facilities trend downwards over time.	★	★	★

★ *indicates reporting periods where qualitative KPI will be measured against unchanged target*

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
4.4	National uniformity promotion program	Ongoing development and implementation of a four year national uniformity promotion program through coordinated engagement with the Radiation Health Committee (RHC) and Radiation Regulators Network (RRN). Ongoing support to strategic activities for national uniformity initiatives by the Environmental Health Standing Committee (enHealth) within the Australian Health Protection Principal Committee (AHPPC).	June 2020

5 Enhance engagement with stakeholders

ARPANSA is the Australian Government's primary authority on radiation protection and nuclear safety. We provide accessible, evidence-based and risk-informed advice to the Australian Government, industry and the public. To aid us in the delivery of this objective we strive to understand our stakeholder's needs and meaningfully communicate and engage on topics of interest.

We will continue to enhance our relationships and profile across government, including to assist with national uniformity outcomes. Effective international relations will also play an important role in our ability to deliver against this objective, particularly as we support meeting Australia's international obligations for radiation protection and nuclear safety. We will continue to focus on securing valued international partnerships and building our reputation with key international stakeholders.

Strategies

The strategies we will employ to achieve this objective are:

- ensure Australia's obligations for radiation protection and nuclear safety are met
- influence and collaborate with domestic and international partner organisations
- ensure effective stakeholder engagement
- communicate health risks and mitigation strategies for the public, workers and the environment.

Performance measures

We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
5.1	Compliance with international agreements and treaties.	Compliance with international conventions and codes through submitting national reports to review meetings as per schedule.	★	★	★
5.2	Facilitate stakeholder engagement in decision making processes for major licence applications such as arranging public forums and community consultation meetings.	Stakeholders are consulted when major licence applications are received.	★	★	★

★ *indicates reporting periods where qualitative KPI will be measured against unchanged target*

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
5.3	National Radioactive Waste Management Facility (NRWMF) stakeholder engagement	Undertake stakeholder engagement activities for the proposed NRWMF prior to the receipt of a potential licence application. This will include community visits as needed and ongoing communication with interested parties via written correspondence and telephone. Additional activities may include the provision of new fact sheets and guidance material	If, and when, a licence application to site a NRWMF is received

6 Enhance organisational innovation, capability and resilience

ARPANSA continues to invest in projects that build capability, increase agility and focus on future needs. Over the four year planning period we will build on the work completed as part of the sustainability and funding initiative, specifically focusing on excellence in service delivery. The agency will continue to implement our Integrated Management System and deliver a comprehensive high quality research program to support radiation protection, nuclear safety and regulatory activities.

Strategies

The strategies we will employ to achieve this objective are:

- strengthen existing capabilities and identify new capabilities required now and into the future
- continually improve governance arrangements, systems and processes
- use technology, information and data to improve the service delivery
- build financial resilience through data driven business insights
- further develop our integrated safety and security programs.

[3] *Employee engagement is measured by the Australian Public Service Commission (APSC) using the APS Employee Engagement Model. This model measures the relationship employees have with four dimensions of their work: the job they do each day, the team they work with, their immediate supervisor, and the agency they work for. For the 2017–18 reporting period the ARPANSA employee engagement score was 73%, compared with the APS overall average of 71%.*

[4] *Breaches identified under the ARPANS Act and Protective Security Policy Framework (PSPF).*

Performance measures

We will demonstrate our performance through the following measures:

No	KPI	2019–2020 target	2020–21	2021–22	2022–23
6.1	Employee engagement score achieved in annual APS employee census[3].	>APS average	★	★	★
6.2	Number of ARPANSA breaches[4] identified in radiation safety and security compliance assessments.	0	0	0	0

★ *indicates reporting periods where qualitative KPI will be measured against unchanged target*

We will also demonstrate our performance through delivery of the following projects:

No	Project	Description	Estimated completion date
6.3	Workforce Plan	Develop and implement further initiatives and activities under the ARPANSA Workforce Plan 2017–2021, including the: • Health and Wellbeing Strategy • Attraction and Recruitment Strategy • Learning Strategy • Diversity and Inclusion Strategy.	June 2020
6.4	ARPANSA Service Model – Pilot Implementation	During 2018–19 ARPANSA implemented approved recommendations from the sustainability and funding review, this included the development of a service model blueprint. Improvements to service delivery models through implementation of the blueprint was identified as the next key deliverable to ensure excellence and sustainability in delivery of ARPANSA services. This will embed cross-agency efficiencies in business management, customer service and inform future enabling system requirements.	December 2020

Risk oversight and management

ARPANSA's risk management framework and guidelines are aligned with better practice methodologies and consistent with the international standard on risk management (AS/NZS ISO 310000:2009) and the Commonwealth Risk Management Policy 2014. Our risk management framework deals with three main types of risks:

- risks to our ability to carry out our statutory functions (such as funding, legal, government, policy, staffing level and competence obligations)
- risks to our people and assets (such as a safe work environment and practices, protective security, and asset management)
- radiation risks to the Australian people and environment (such as risks to workers, the public, patients undergoing medical procedures, and the environment).

Building on the identification of risks, preventive controls (preventing undesired events from occurring), and mitigating controls (that will mitigate consequences should the undesired event occur) are identified for the strategic risks. Some of these risks are shared and ARPANSA is engaging with other agencies in their management.

In 2019–20, ARPANSA will continue to enhance our risk management culture by improving our risk management training program for staff, further building our risk informed approach to effective regulation of radiation and nuclear facilities and practices, and identifying key events we want to prevent from occurring. We will continue to invest in our people, governance, infrastructure and technology to ensure we have the required capability to address current and emerging risks and challenges in our operating environment.

Risks are continually monitored and reported to the Audit and Risk Committee. The strategic risks currently being monitored and their preventive controls are listed below.

Security or safety event at ARPANSA

Risk description

ARPANSA maintains and operates a number of assets, which require special attention to both the safety of ARPANSA's workers and the agency's security arrangements. ARPANSA's laboratories use chemicals, pressurised gases, high-voltage appliances and radiation sources; all of them utilised for the purpose of carrying out core functions of the agency. Assets also include data and information where some may be of a sensitive nature. Safety and security are at the forefront of the agency's management of activities with implications for safety and security, of which a significant number are carried out in the field or at the premises of licensees and clients. Consequences range from personal injury to damage/loss of assets, potentially caused by acts with malicious intent including threat aimed at third parties, and loss or corruption of data and information.

Prevention

ARPANSA has controls in place to manage and mitigate risks to ensure a safe and secure work environment. Preventive risk management activities are based on the relevant frameworks, which include the Protective Security Policy and Plan, the Work Health and Safety Policy and arrangements, and the Radiation Safety Framework. Critical controls based on these policies include: security vetting and annual security health checks; induction and annual security and safety refresher courses and awareness raising; safety and security inspections; threat analyses and safety issue reporting; and safety culture surveys.

Ownership and responsibilities

Work Health and Safety (WHS) and security is owned by all ARPANSA staff. Special functions are carried out by the Agency Security Advisor, WHS Advisor and Radiation Safety Officer. The Chief Security Officer, Chief Information Officer, Chief Information Security Officer and the CEO (who also chairs the WHS Committee) have the overarching responsibilities for agency safety and security.

Risk oversight and management

Nuclear or radiation event in a licensed entity

Risk description

ARPANSA develops requirements on licensed entities to implement stringent nuclear and radiation safety (including security) measures. The requirements aim at optimising protection so that activities that are considered justified can be carried out without undue risks to the health and safety of people (workers and the public) and with due attention to environmental protection. A life-cycle perspective is applied so that decommissioning and waste management is appropriately considered. ARPANSA recognises that a nuclear or radiation event in a licensed entity has the potential to cause significant harm to workers' health and may, depending on circumstances, lead to public exposure, contamination, and generation of significant amounts of waste. The occurrence of such events prevail in an environment where regulatory activities are ineffective, or where the licensed entity has a poor safety culture or lack of organisational capability or capacity to meet compliance obligations. The agency must ensure it is able to respond effectively as a regulator and competent authority for radiological and nuclear events and maintains and exercises an Incident Management Plan that outlines the coordinating arrangements for ARPANSA to effectively respond to any incident of concern at a licensed entity.

Prevention

ARPANSA's regulatory activities are carried out in accordance with the Policy for ARPANSA's Regulatory Activities. A core trait is the integrity, supported by a strong safety culture, among ARPANSA's staff. The safety culture is periodically surveyed. The responsibility for safety lies with the operator of licensed facilities and activities; however, the regulatory framework constitutes a key control in preventing safety/security events that may lead to harmful effects of radiation. The framework includes: implementation of international best practice; risk-informed compliance monitoring; site visits and inspections; inspector rotation; a graded approach to enforcement; openness and transparency including effective stakeholder engagement; observation of multi-agency exercises of emergency preparedness and response plans for major nuclear installations; and third party oversight of self-regulation of own radiation sources and facilities.

Ownership and responsibilities

ARPANSA staff involved in regulatory activities must be mindful of the integrity of the regulatory processes and decisions. The Chief Regulatory Officer is accountable to the CEO for ARPANSA's regulatory policies and their implementation in practice, for the purpose of preventing safety/security events among licensed entities, while recognising that the prime responsibility for safety and security rests with the licensed entity. The Chief Radiation Health Scientist and the Chief Medical Radiation Scientist are responsible for the safe operations of ARPANSA's own licensed sources and facilities, which includes maintaining emergency preparedness and response plans and capability in the event a radiation incident occurs at ARPANSA.

Reduced workforce capability or capacity

Risk description

ARPANSA has a highly skilled and technically proficient workforce and our people are at the heart of our capability and capacity to deliver organisational objectives, now and into the future. External factors may impact on the capability and capacity, and internal processes may not support the necessary agility and innovation capability. Failure to make decisions that take into account the workforce capacity and capability may impact our ability to attract and retain people with the necessary skills and experience, manage competing resource demands, fulfil statutory functions and government requirements, be innovative, and deliver successful business outcomes.

Prevention

ARPANSA manages risks associated with investing in our people through our workforce planning process which is incorporated into the agency's integrated business and budget planning process. ARPANSA has developed a Workforce Plan 2017-2021 which outlines how we can best place our people's capability, performance and productivity to enable achievement of ARPANSA's strategic objectives. The plan sets out the six key people management strategies that we intend to implement over the life of the ARPANSA Corporate Plan 2019–2023 to build on current knowledge and prepare for future challenges. These strategies include succession planning, attraction and recruitment, learning, performance and reward, diversity and inclusion, and health and wellbeing.

Ownership and responsibilities

ARPANSA's Executive Group has responsibilities to analyse and sustain capability and capacity of the workforce to deliver on statutory functions and organisational objectives. Every ARPANSA staff member has a role in achieving the objectives in the Workforce Plan, supported by managers, with co-ordination of initiatives by the People and Culture Section.

Substandard service delivery

Risk description

ARPANSA as an agency of the Australian Public Service serves the Australian Government, Parliament and public. It includes delivering quality products and services to all interested parties; including members of the public, governments, Commonwealth licence holders, hospitals and radiotherapy centres, fee-paying customers, and other organisations, including international organisations under contractual treaty obligations. Without an agency-wide comprehensive approach to delivering excellent customer service there is a risk of stakeholder dissatisfaction, increased service costs and reputational damage and ultimately, loss of sustainability and public value attributed to ARPANSA's delivery.

Risk oversight and management

Prevention

ARPANSA manages risks associated with service delivery though various mechanisms, including service charter, quality management processes, accreditation of scientific services, customer surveys, stakeholder forums, parliamentary and government processes, and integrated business and financial planning process. Accreditation of certain services provides a third-party control that prevents deterioration of services due to erosion of processes or adherence to processes, and that promotes regular interaction with stakeholders and measurement of stakeholder satisfaction.

Ownership and responsibilities

ARPANSA's Executive Group must understand the needs of our interested parties. The Chief of Staff has special responsibility for maintaining the government and parliamentary interactions. All staff have responsibilities for ensuring that the services we deliver meet the needs and expectations of our stakeholders, operates under appropriate regimes for generating revenue, and remain relevant now and into the future.

Disruption or degradation of technology or infrastructure

Risk description

ARPANSA manages and maintains a number of business critical digital technology systems and infrastructure, including buildings, laboratories, instrumentation and mobile assets. The agency must ensure this environment is robust and resilient enough to sustain any disruption which may challenge our business continuity and avoid degradation to our property, facilities and digital technology systems. Consequences may include loss of productivity, reputational damage, loss of resources both financial and non-financial, inability to meet Government requirements and deliver strategic objectives.

Prevention

ARPANSA manages disruption or degradation to technology and infrastructure through testing of business continuity and disaster recovery plans asset management practices, security of IT networks, and integrated business and budget planning process. The asset management includes scientific equipment and mobile resources maintained for the purpose of using in a nuclear or radiological emergency. External valuation of certain assets are performed regularly. The maintenance of buildings and property is supported through whole-of-government arrangements.

Ownership and responsibilities

The Chief Information Officer has the overarching responsibilities for managing ARPANSA's digital technology and infrastructure, with support from the Digital Technology Section and the Agency Security Group. The Facilities Manager has responsibility for ARPANSA's property and facilities infrastructure. The Chief Radiation Health and Medical Radiation Scientists oversee maintenance of laboratory equipment and infrastructure within their areas of responsibility, in collaboration with the Chief Financial Officer.

Fraud, corruption, or maladministration

Risk description

ARPANSA recognises that fraud, corruption and maladministration have the potential to cause significant financial loss and non-financial harm in the form of reputational damage. Such events also have significant impact on staff morale and engagement. The occurrence of such event will prevail in an environment where opportunities exist for abuse or malpractices due to varied reasons, including lack of internal controls, lack of appropriate systems and procedures, or lack of appropriate oversight or lack of awareness by the management.

Prevention

ARPANSA has created a robust internal control environment in the form of policies and procedures, appropriate delegations, close oversight by management and regular reporting on business performance. The agency also benefits from the significant oversight from internal and external auditors, Audit and Risk Committee and regular reporting to the Department of Health and Department of Finance. ARPANSA believes that the most effective way to prevent the occurrence of fraud and corruption is to promote an ethical environment in which internal control mechanisms have been implemented. ARPANSA uses various means to promote an ethical environment including through job descriptions, APS Code of Conduct and Values, education and awareness of relevant policies and procedures.

Ownership and responsibilities

Every staff member has a significant role to play in managing this risk and the Executive Group must lead by example. All staff assist in preventing these risk events by understanding the responsibilities of their position and familiarising themselves with the agency's policies and procedures and adhering to them at all times. ARPANSA's General Counsel and Chief Financial Officer have specific responsibilities for prevention of fraud, corruption and maladministration, and for ARPANSA's financial performance.

Governance

Our governance structure enables consideration of risk in all core business decisions and supports informed decision making.

The CEO is advised by three statutory advisory bodies established by the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act):

- **Radiation Health and Safety Advisory Council (Council)**

  The role of Council in relation to radiation protection and nuclear safety is to: identify emerging issues; examine matters of major concern to the community; consider the adoption of recommendations, policies, codes and standards; advise and report to the CEO, at the CEO's request or as Council considers appropriate, on the above and any other matters.

- **Radiation Health Committee (RHC)**

  The role of RHC in relation to radiation protection is to: advise the CEO and the Council; develop policies and to prepare draft publications for the promotion of uniform national standards; formulate draft national policies, codes and standards for consideration by the Commonwealth, the states and the territories; from time to time, to review national policies, codes and standards to ensure that they continue to substantially reflect world best practice; and consult publicly in the development and review of such policies, codes and standards.

- **Nuclear Safety Committee (NSC)**

  The role of NSC in relation to nuclear safety and the safety of controlled facilities is to: advise the CEO and the Council; review and assess the effectiveness of standards, codes, practices and procedures; develop detailed policies and prepare draft publications to promote uniform national standards; and report to the CEO.

At the strategic level the CEO is advised by two key committees:

- **Strategic Management Committee (SMC)**

  The SMC is strategically focused and looks forward to the medium and long term future of the agency rather than ongoing day-to-day business. The SMC considers the threats and opportunities that may influence the strategic direction of the agency and contributes at key times throughout the year to ARPANSA's planning and performance framework.

- **Audit & Risk Committee**

  The *Public Governance, Performance and Accountability Act 2013* requires Commonwealth entities to establish an audit committee. ARPANSA's Audit and Risk Committee provides independent assurance and advice to the CEO on the agency's financial reporting, performance reporting, system of risk oversight and management and system of internal control.

The relationship between the statutory advisory bodies and ARPANSA's senior governance committees is illustrated in Figure 2.

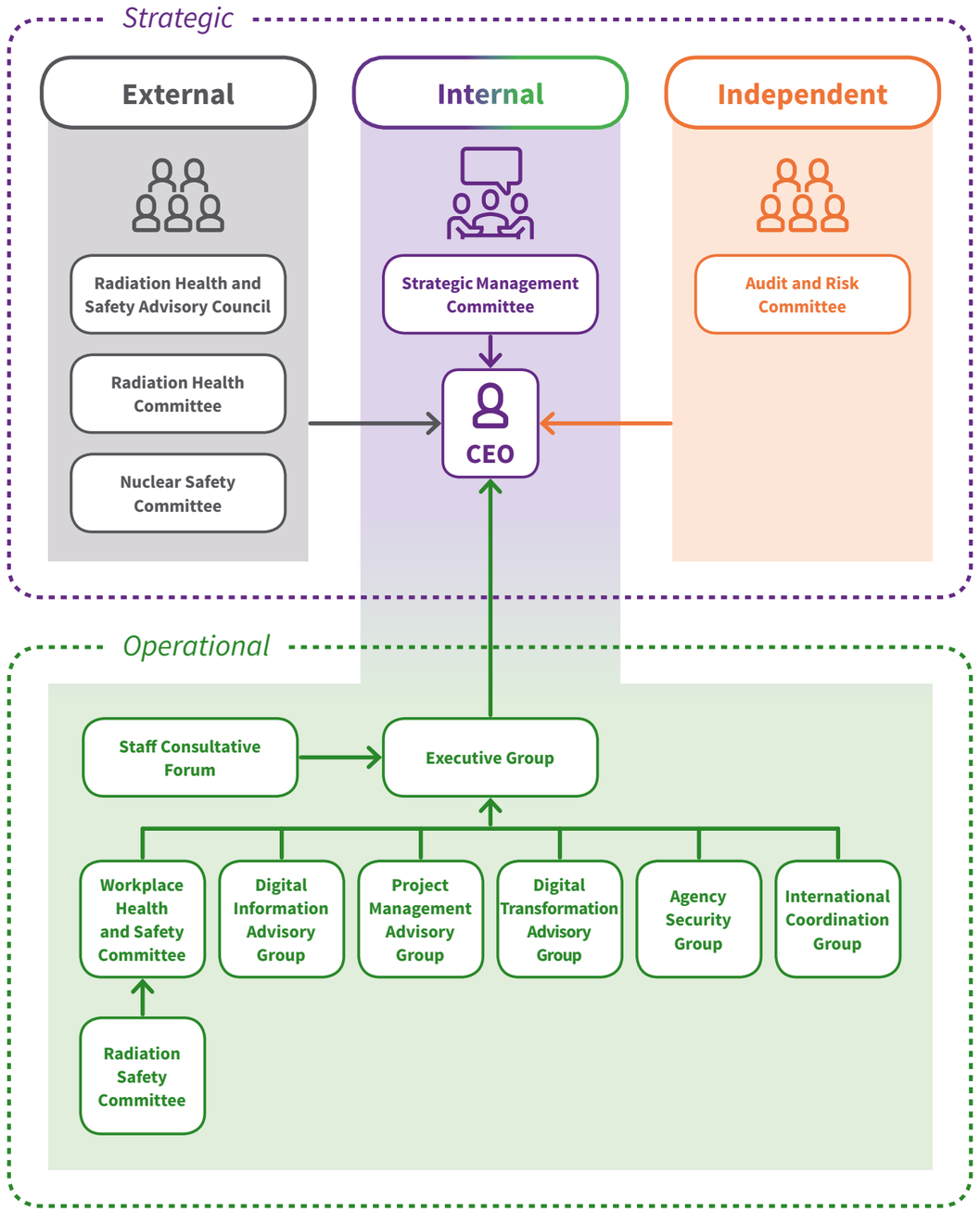


Figure 2: ARPANSA governance structure