



Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency



ANNUAL REPORT 2016-17



## Australian Radiation Protection and Nuclear Safety Agency

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### Acknowledgements

Thank you to all ARPANSA employees who have contributed to this report.

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Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency



30 September 2017

The Hon David Gillespie MP  
Assistant Minister for Health  
House of Representatives Parliament House  
CANBERRA ACT 2600

Dear Minister Gillespie

Pursuant to section 59 of the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act), I am pleased to present to you the Annual Report of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) for the period 1 July 2016 to 30 June 2017.

As required by the ARPANS Act, the Annual Report provides details on:

- the operations of the Chief Executive Officer, ARPANSA and the council and committees
- any direction given by the Minister to me under section 16 of the ARPANS Act and any breach of licence conditions by a licensee, of which I am aware
- all reports received from the Radiation Health and Safety Advisory Council on matters related to radiation protection and nuclear safety or the Nuclear Safety Committee on matters related to nuclear safety and the safety of controlled facilities.

I certify that I am satisfied that ARPANSA has in place appropriate fraud risk assessment and fraud control plans, fraud prevention, detection, investigation, reporting and data collection procedures and processes, in accordance with the Australian Government Fraud Control Guidelines. ARPANSA has taken all reasonable measures to minimise the instance of fraud, investigate fraud and recover the proceeds of fraud against it.

Yours sincerely

Carl-Magnus Larsson  
CEO of ARPANSA

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## Reader's guide

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Annual Report 2016–17 has been prepared in accordance with the Department of the Prime Minister and Cabinet's *Resource Management Guide No.135, Annual reports for non-corporate Commonwealth entities* updated in July 2017.

This year's annual report has been prepared to inform Parliament about ARPANSA's performance and activities in 2016–17. The report is available in hard copy and online at [arpansa.gov.au/annual-reports](http://arpansa.gov.au/annual-reports).

The report is divided into seven parts.

### PART 1: CEO foreword

CEO Carl-Magnus Larsson's foreword.

### PART 2: Agency overview

An overview of ARPANSA including its role and functions, organisational structure and outcome and program structure.

### PART 3: Report on performance

ARPANSA's Annual Performance Statement, report on financial performance and key performance highlights.

### PART 4: Management and accountability

Information about ARPANSA's governance, external scrutiny, fraud and risk management arrangements, workforce planning and human resources. Part 4 also contains other annual report requirements including information about workplace health and safety, freedom of information and grant programs.

### PART 5: Financial statements

Contains ARPANSA's audited financial statements and a report by the Auditor-General.

### PART 6: Appendices

This section includes the *Australian Radiation Protection and Nuclear Safety Act 1998* Annual Report requirements and details of our council and committees.

### PART 7: Index

Comprises of an alphabetical index, glossary and abbreviations.

## **Acknowledgement of Country**

ARPANSA proudly acknowledges Australia's Aboriginal and Torres Strait Islander community 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 people 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.

## ARPANSA snapshot

### Stakeholders

Commonwealth state and territory governments

International bodies

Commonwealth licence holders

Members of the public

### Licences

35

facility licences

56

source licences

79

regulatory inspections conducted

### Talk to a Scientist program

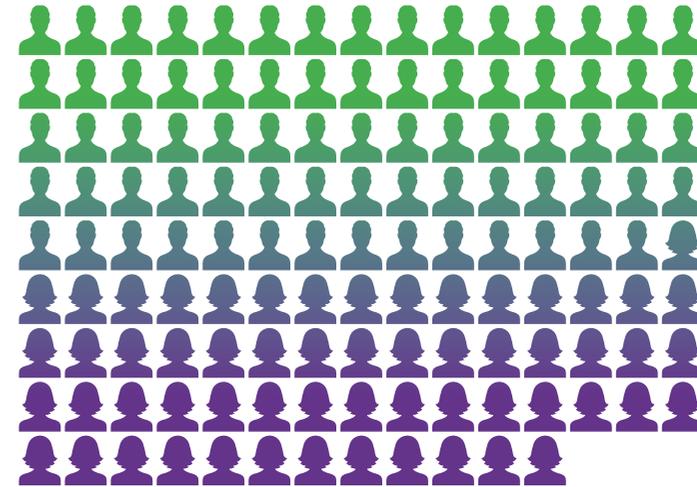


- 335 Electromagnetic radiation
- 70 Ionising radiation
- 50 Ultraviolet radiation



- 235 Electromagnetic radiation
- 48 Ionising radiation
- 158 Ultraviolet radiation

### Workforce



132

Employees

74

Male employees

58

Female employees

### Staff location



110

Yallambie VIC

22

Miranda NSW

97

Australian Clinical Dosimetry Service audits conducted

38 000+

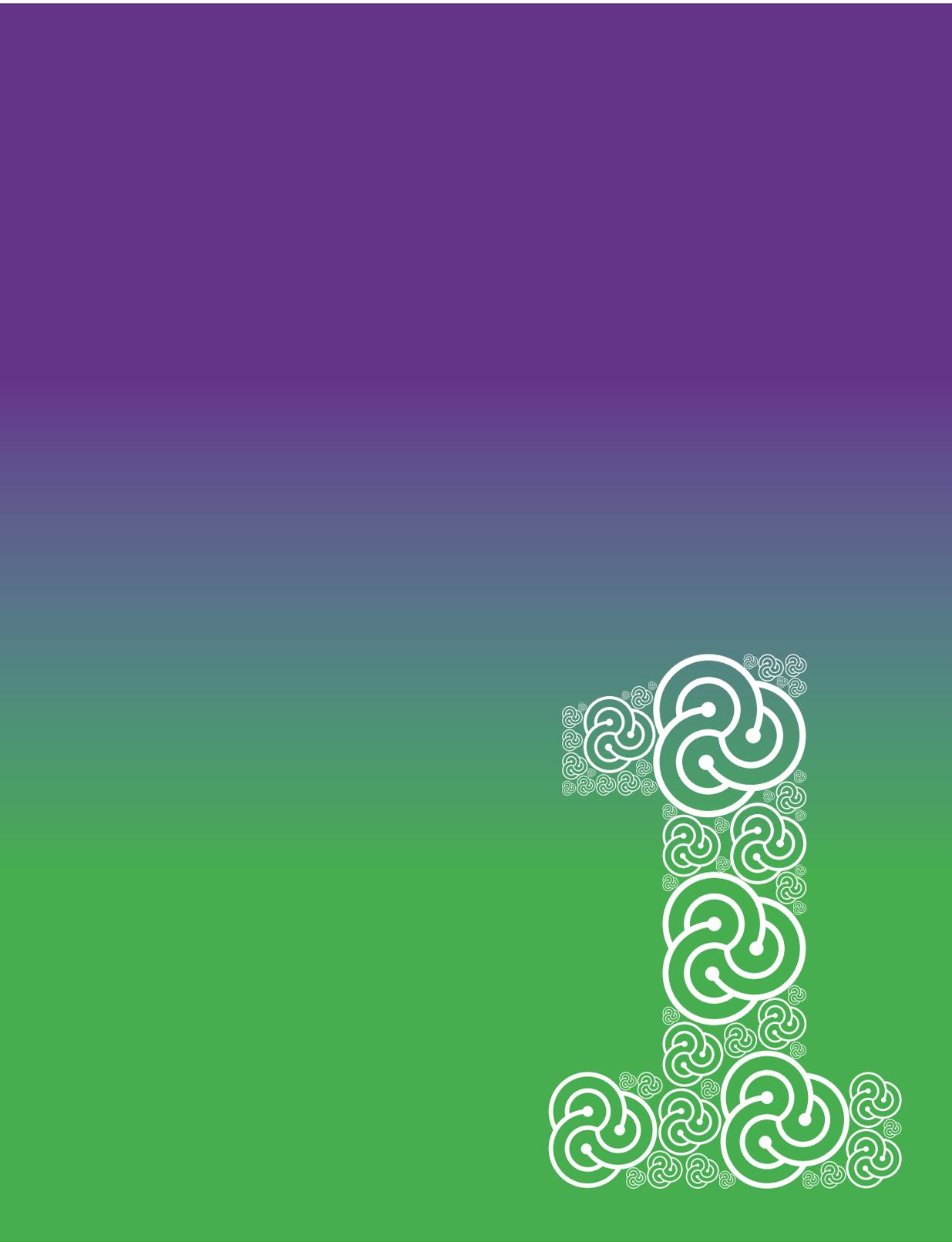
Workers in the Australian National Radiation Dose Register

752

Radiofrequency calibration tests reports

3.1 m

Ultraviolet radiation swing tags issued





**I am pleased to present to you the 2016–17 Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Annual Report.**

This is the eighth report since my appointment and the first that builds on our new brand. The rebrand was undertaken in order to position the agency for the future, and seek to raise greater awareness and understanding of ARPANSA's role and services. The brand was built by staff and represents how we see ourselves and how we want to add value to the Australian community. As part of the rebrand we launched a new visual identity which is most noticeably expressed on our new website.

Plans for a National Radioactive Waste Management Facility (NRWMF) are progressing under the Department of Industry, Innovation and Science. ARPANSA, as the independent

regulator, is responsible for the licensing of any future NRWMF. International experience has demonstrated that early visibility of the regulator in affected communities – before an application for a licence is received – is a prerequisite for establishing trust in the licensing process. During the year, our engagement activities with various community groups and leaders enhanced the visibility of the regulator and made ARPANSA's technical experts and leaders available to answer questions from interested members of the public.

Our invitation for an International Integrated Regulatory Review Service (IRRS) mission, coordinated by the International Atomic Energy Agency (IAEA), demonstrates our commitment to good regulation and transparency. During the year we commenced our self-assessment in preparation for receiving the IRRS Review Team in 2018. It is highly satisfying that we have the commitment from all jurisdictions to participate, making this the first international review of our national system for radiation protection and nuclear safety.

The potential for radiation exposures, incidents and accidents is always present, despite stringent regulatory requirements. We continue to promote good safety culture among our licence holders. Nationally, we have seen an increased reporting of incidents to the Australian Radiation Incidents Register, which I interpret as a response to our encouragement of a good reporting culture, not as an increase in unsafe practices.

Over the course of the year we have successfully promoted radiation protection of workers and the public through our services. Our Radiation Protection Services processed 171 000 optically stimulated dosimeters; tested 2100 sun protective materials; and issued over three million 'swing tags' on consumer products with information on their sun protection properties. Further, the Australian National Radiation Dose Register (ANRDR) now holds dose records for over 38 000 workers. As we move into the next financial year we will pilot an expansion of the ANRDR in to the medical sector.

We have also performed 1550 diagnostic reference level surveys and the Australian Clinical Dosimetry Service has successfully transitioned to a new user-pays service model. These activities support the safe use of radiation in medicine – the largest source of radiation exposure of the Australian population.

ARPANSA's capabilities for responding to radiation and nuclear threats and emergencies were tested through participation in a 36 hour IAEA Convention Exercise, known as ConvEx-3. This was the first full-scale exercise of this type for ARPANSA. Eighty countries, ten international organisations and five Australian federal government agencies and partners participated in the exercise.

We undertake significant international engagement and work closely with international organisations, including as the Competent Authority under several international conventions. This year, ARPANSA led the Australian delegation to the 7<sup>th</sup> Review Meeting under the terms of the Convention on Nuclear Safety.

Looking ahead to the 2017–18 financial year, we will continue our NRWMF engagement activities and expand our reach to communities surrounding two new recently proposed sites. ARPANSA's review of a licence application from the Australian Nuclear Science and Technology Organisation to operate a Nuclear Medicine Facility is well underway and a decision will be made in the first half of the financial year. Finally, a new linear accelerator will be acquired and installed to support ARPANSA's calibrations and dosimetry audits. This will enable ARPANSA to continue its quality assurance for the 50 000 Australians treated for cancer with radiotherapy every year.

The next year thus brings with it significant projects for ARPANSA and I am confident that our dedicated and expert staff will continue to demonstrate that we are Australia's leading authority on radiation protection and nuclear safety.

**Carl-Magnus Larsson**  
CEO of ARPANSA



## ARPANSA at a glance



### Our mission

Protection of people and the environment from the harmful effects of radiation



### Our vision

Radiation safety is appropriately considered in societal decision-making

Radiation safety is addressed uniformly and effectively across Australia

Radiation safety in Australia is current international best practice



### Our purpose

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.

### Authority

Established by the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act), ARPANSA commenced operations on 5 February 1999. ARPANSA replaced the Nuclear Safety Bureau and Australian Radiation Laboratory.

### Responsible ministers and portfolio

ARPANSA sits within the Department of Health portfolio. The CEO, Dr Carl-Magnus Larsson, is the accountable authority of ARPANSA.

As at 30 June 2017, Dr Larsson reported to the Assistant Minister for Health.

### Our outcome

ARPANSA has a single outcome as set out in the portfolio budget statement:

*Protection of people and the environment through radiation protection and nuclear safety research, policy, advice, codes, standards, services and regulation.*

### Our staff

As at 30 June 2017, ARPANSA had 126 ongoing staff, six non-ongoing staff, and one statutory appointment.

### Location

ARPANSA has offices in Victoria (Yallambie) and New South Wales (Miranda). Over 83 per cent of staff are located in the Victorian office.

## Role of ARPANSA

ARPANSA, on behalf of the Australian Government, aims to protect the Australian people and environment from the harmful effects of radiation.

ARPANSA is the independent regulator of Commonwealth entities that use or produce radiation. ARPANSA provides advice and services to the Australian community on radiation protection, nuclear safety, security, and medical exposures to radiation. The agency also undertakes internationally recognised research and promotes both national uniformity and the implementation of international best practice.

The Radiation Protection and Nuclear Safety Program, contained within the portfolio budget statement, describes four program objectives which ARPANSA pursues to protect the Australian people and the environment from the harmful effects of radiation. Two new objectives were developed for the 2017–21 corporate plan to reflect the important work of our supporting capabilities:

- strengthen engagement with community and government
- enhance organisational innovation, capability and resilience.

The 2016–17 strategic objectives are:

1. Protect the public, workers and the environment from radiation exposure
2. Promote radiological and nuclear safety and security, and emergency preparedness
3. Promote the effective use of ionising radiation in medicine
4. Ensure effective and proportionate regulation and enforcement activities

## How we deliver

ARPANSA provides the Australian Government and community with:

### Expertise

We build and maintain expertise in measurement of radiation and assessment of health impacts, including the assessment of risks and responses to radiation emergencies.

### Advice

We provide high quality advice to the government and the community on issues related to exposure and effects of radiation, radiation protection and nuclear safety.

### Regulation

We use our licensing powers and work with Commonwealth entities to ensure the safety of sources, facilities and nuclear installations, using a risk-informed regulatory approach.

### Best practice

We lead the development of codes, standards, guides and advice to support radiation protection and nuclear safety throughout Australia, and play a prominent role in relevant international organisations.

### Services

We offer high quality services for the purpose of protection against the harmful effects of radiation.

### Research

We undertake research and development, and build strategic partnerships with relevant national and international academic and research organisations.

## ARPANSA service charter

Our service charter outlines who ARPANSA is and what we do, the standards of service expected from ARPANSA, and how our stakeholders can help us to improve our service. We review this charter on a regular basis in consultation with clients, stakeholders and staff. The charter is available in full on the ARPANSA website at [arpansa.gov.au/service-charter](http://arpansa.gov.au/service-charter). ARPANSA has developed a complaints management policy and process which includes customer service performance monitoring. We are implementing a customer relationship management system to enable future comprehensive reporting of performance against the charter.

## Organisational structure

### Chief Executive Officer

Dr Carl-Magnus Larsson has held the position of CEO since 2010.

The CEO's functions (as set out in the ARPANS Act) include:

- regulating Commonwealth radiation sources and facilities
- promoting uniformity of radiation protection and nuclear safety policy and practices across jurisdictions of the Commonwealth, the states and the territories
- providing advice on radiation protection, nuclear safety and related issues
- undertaking research in relation to radiation protection, nuclear safety and medical exposures to radiation
- providing services relating to radiation protection, nuclear safety and medical exposures to radiation
- monitoring the operations of ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Radiation Health Committee (RHC) and the Nuclear Safety Committee (NSC)
- reporting on the operations of ARPANSA, the Council, RHC and NSC.

### Executive Group

The CEO is supported by the Executive Group, which is comprised of branch and office heads and the Director, Performance and Governance. This group provides the CEO with high-level policy and strategic advice and reports on matters relating to their individual business groups. Together the CEO and the Executive Group form the leadership team responsible for the day-to-day management of ARPANSA.

In 2016–17 two changes were made to the membership of the Executive Group:

- Dr Gillian Hirth was appointed Chief Radiation Health Scientist in August 2016.
- Mr James Scott was acting as Chief Inspector of Regulatory Services, at 30 June 2017.

### ARPANSA business groups

ARPANSA has six business groups that deliver components of the agency's strategies and services. Figure 1.1 shows ARPANSA's organisational structure at 30 June 2017.

### Office of the CEO

The OCEO facilitates, coordinates and supports the activities of the CEO. The OCEO comprises the Communications section and the Government and International Relations section. The office leads collaboration and communication, coordinates international engagement and provides advice to the agency and Government on emerging and strategic issues.

### Corporate Office

The Corporate Office comprises four sections; Finance, People and Culture, Information Management, and Performance and Governance. The internal systems for maintaining an effective public service that meets the needs and expectations of the community requires a competent and motivated workforce and effective management systems for internal information exchange, accountability and performance reporting. The Corporate Office plays an important role in this regard.

### Office of the General Counsel

The office provides legal advice and strategic support to the agency with regard to all aspects of the agency's operations and assists the CEO to achieve his statutory mandate. The General Counsel also provides legal advice and support to all ARPANSA staff to assist them in performing their functions and to ensure that in doing so they are compliant with relevant government policy and legislation.

### Regulatory Services Branch

Regulatory Services Branch has main carriage of regulation of the safety and security of Commonwealth radiation sources and facilities.

Comprising four sections (Facility Licensing, Source Control, Continuous Improvement and Regulatory Assurance), the branch is ARPANSA's principal driver for promoting a uniform regulatory framework across all jurisdictions. The costs for direct regulatory activities are recovered from application fees and annual licence charges.

### Radiation Health Services Branch<sup>1</sup>

The Radiation Health Services Branch comprises three sections; Monitoring and Emergency Response, Assessment and Advice, and Radiation Protection Services. The branch provides radiation protection advice and assessments to the public and to government. It operates services on a fee-for-service basis including the Personal Radiation Monitoring Service, the ultraviolet radiation fabric testing service and a radiofrequency equipment calibration service. The branch operates a number of national initiatives including an ultraviolet radiation monitoring network, and the Australian National Radiation Dose Register. It also operates a radiation monitoring network established under the terms of the Comprehensive Nuclear-Test-Ban Treaty.

### Medical Radiation Services Branch

The Medical Radiation Services Branch provides safety and quality advice on the use of radiation in medicine to all Australians. The branch has three sections. The Medical Imaging section is responsible for dose data collection and advice on patient safety within diagnostic imaging. The Radiotherapy section maintains the Australian primary standard for absorbed dose and, by calibrating hospitals' radiation monitors against the primary standard, ensures that a provider's equipment is accurate. The Australian Clinical Dosimetry Service audits linear accelerators used by radiotherapy providers in Australia, verifying that the radiation exposure of patients under treatment is correct.

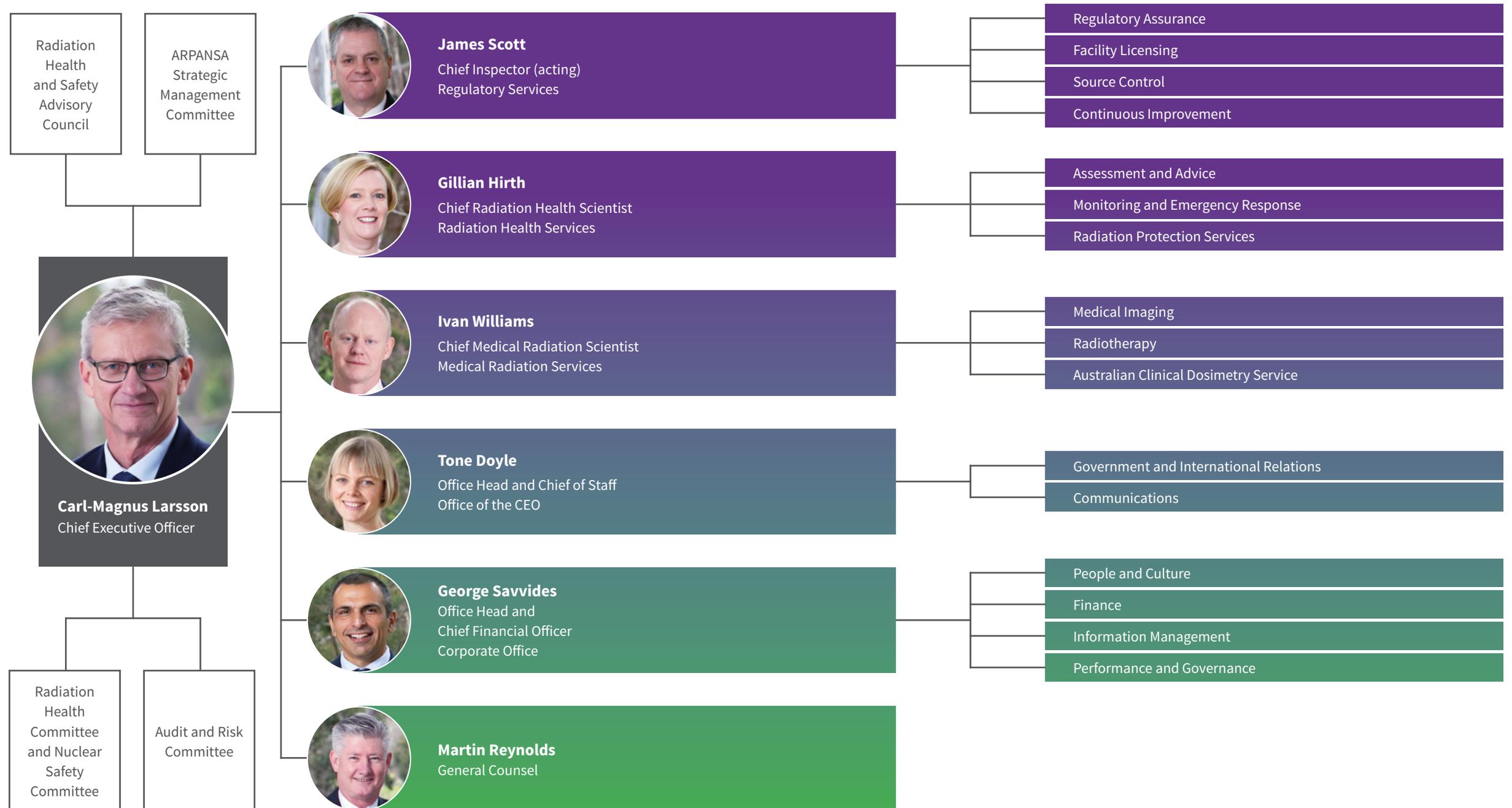
<sup>1</sup> As of 1 September 2016, Dr Stephen Solomon was succeeded by Dr Gillian Hirth as Chief Radiation Health Scientist and Head, Radiation Health Services Branch.

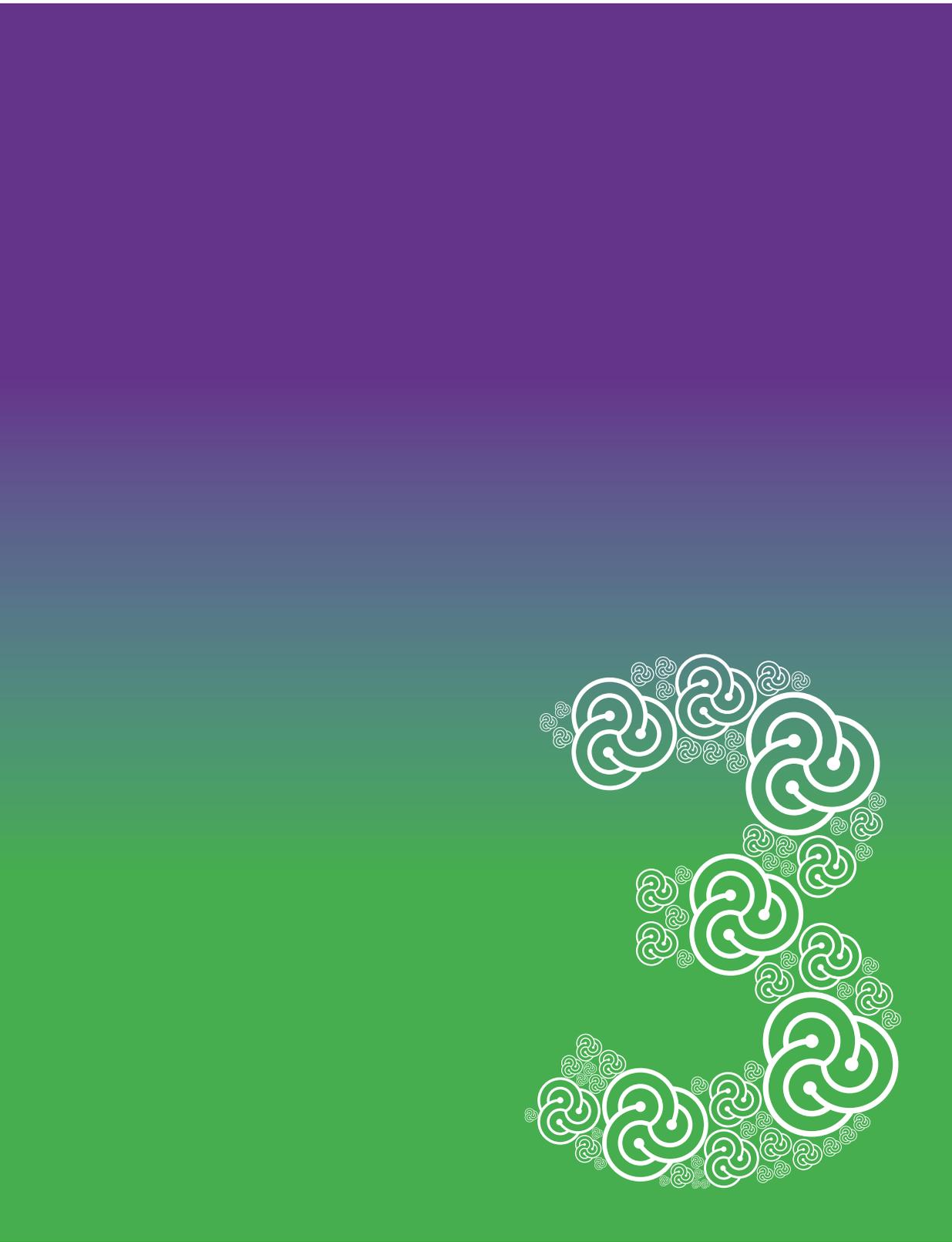


**ARPANSA'S Executive Group (L TO R):** Gillian Hirth, Martin Reynolds, Tone Doyle, Ivan Williams, Carl-Magnus Larsson, George Savvides, Sarsha Collett and James Scott.

## Organisational chart

Figure 1.1





## Annual Performance Statement

### Introductory statement

I, as the accountable authority of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), present the 2016–17 Annual Performance Statement of ARPANSA, as required under paragraph 39(1)(a) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act). In my opinion, this annual performance statement is based on properly maintained records, accurately reflect the performance of the entity, and comply with subsection 39(2) of the PGPA Act.



**Carl-Magnus Larsson**  
Accountable Authority  
21 August 2017

### Purpose - to protect the Australian people and the environment from the harmful effects of radiation

Program – Radiation protection and nuclear safety			
<p><b>Program objectives</b> Program activities intended to benefit the Australian community and the environment will be delivered under the following strategic objectives</p>			
1. Protect the public, workers and the environment from radiation exposure.	2. Promote radiological and nuclear safety and security, and emergency preparedness.	3. Promote the effective use of ionising radiation in medicine.	4. Ensure the effective and proportionate regulation and enforcement activities.
<p><b>Enabling capabilities</b> Delivery against these strategic objectives is supported by whole of entity enabling capabilities</p>			
People	Governance	Infrastructure Technology	Stakeholder engagement

### Overarching analysis of performance against ARPANSA’s purpose

ARPANSA’s *Corporate Plan 2016–2020* provides the underlying framework for this annual performance statement. The corporate plan brings together the measures and projects that support the achievement of our purpose and strategic objectives as well as enhancing our supporting capabilities.

Over the course of the reporting period, ARPANSA achieved or partially achieved all 23 targets. We made many steps forward to contribute to delivering enhanced radiation protection and nuclear safety outcomes to the Australian community and environment. Highlights include:

- eight organisations are now submitting worker exposure records to the Australian National Radiation Dose Register
- emergency preparedness and response plans have been tested through participation in a 36 hour international exercise coordinated by the International Atomic Energy Agency
- over 1500 diagnostic reference level surveys have been completed to promote patient protection through an optimised range of radiation exposures for specific medical imaging protocols
- more efficient and transparent regulation of Commonwealth licence holders under the Regulator Performance Framework.

We have made this progress despite some challenges along the way:

- the continued focus on efficiency dividends and average staffing level ceiling impacts on the agency’s ability to discharge our responsibilities
- the enterprise bargaining has been prolonged and resulted in the agreement being voted down mid-way through the reporting period and a return to the negotiations
- our stakeholder engagement in relation to the proposed establishment of a National Radiation Waste Management Facility is unfunded but is at the very core of our purpose and program objectives
- the Shared and Common Services Program presents challenges for planning of technology investment to avoid duplication with the provider’s service offering.

A summary of performance against the measures and projects outlined in the *ARPANSA Corporate Plan 2016–20* and the analysis of this performance is provided against each strategic objective and supporting capability in the following sections.

#### Key to symbols

-  achieved
-  not achieved
-  partially achieved, criterion changed or removed

## Objective 1

Protecting the public, workers and the environment from radiation exposure				
No.	Measure	Target	Source	Annual Result
1.1	Develop high quality advice for the Australian Government and other stakeholders on radiation protection issues	Relevant, evidence-based advice developed and provided in a timely manner	PBS (portfolio budget statement) 2016–17, page 245 <i>ARPANSA Corporate Plan 2016–20, page 11</i>	✓
1.2	Monitor radiation doses to occupationally exposed workers including uranium mining workers	Annual reporting of trend in radiation doses received by workers determined from quantitative dose measurement provides evidence of optimisation of radiation protection	PBS 2016–17, page 245 <i>ARPANSA Corporate Plan 2016–20, page 11</i>	✓
1.3	Number of organisations submitting worker exposure records to the Australian National Radiation Dose Register	Eight	PBS 2016–17, page 245 <i>ARPANSA Corporate Plan 2016–20, page 11</i>	✓

## Analysis of performance against purpose and program objective

In 2016–17 ARPANSA continued to provide advice, specialised resources, and services to support protection of the public, workers and the environment from the harmful effects of ionising and non-ionising radiation.

ARPANSA achieved this by:

- increasing the number of organisations submitting worker exposure records to the Australian National Radiation Dose Register (ANRDR) from six organisations to eight, with dose records for over 38 000 workers now held
- publishing *ANRDR in Review*, the annual report of the ANRDR (September 2016)
- publishing the Wi-Fi in Schools Study (January 2017)
- responding to 455 ‘Talk to a Scientist’ program phone call enquires during the program hours, and 441 emails within five working days
- reviewing and maintaining 104 frequently asked questions and 36 fact sheets on the ARPANSA website
- transitioning our Personal Radiation Monitoring Service from the reliable but slow thermoluminescent dosimetry technology to the state-of-the-art beryllium oxide Optically Stimulated Luminescence technology (July 2016). In the first year of operation over 171 000 client dosimeters were issued, and 16 800 dose reports were produced

- compiling the final report of the evaluation of the solar ultraviolet radiation (UVR) prevention SunSmart application for mobile devices. This improves the public’s ability to make informed decisions about reducing risk of skin cancer and other diseases related to solar UVR exposure
- modernising the UVR network infrastructure and developing new UVR index graphs published on the updated ARPANSA website. This has enabled expansion of the UVR network and establishment of short-term pop-up monitors during special events in the future
- supporting the World Health Organization (WHO) to publish the advice Artificial-tanning devices: public health invention to manage sunbeds. The guide reflects Australia’s position to ban sunbeds for commercial use as best practice. ARPANSA is a WHO Collaborative Centre in Radiation Protection
- testing, assessing and assigning an ultraviolet protection factor (UPF) rating to 2100 samples of sun protective clothing, hats, sunglasses and other sun protective materials
- issuing over three million UPF swing tags<sup>2</sup> for sun protective products.

<sup>2</sup> Swing tags with UPF ratings of 15, 20, 25, 30, 35, 40, 45, 50 and 50+ are issued by ARPANSA for use on garments or sunglasses tested in our laboratories.

## Objective 2

Promoting radiological and nuclear safety and security, and emergency preparedness				
No.	Measure	Target	Source	Annual Result
2.1	ARPANSA is prepared for a radiological or nuclear incident or emergency	Emergency preparedness and response systems for field, network and laboratory measurements, and information management and decision support systems are available, calibrated, tested and aligned with national planning	PBS 2016–17, page 245  ARPANSA Corporate Plan 2016–20, page 13	

### Analysis of performance against purpose and program objective

ARPANSA’s commitment to test the adequacy of our emergency preparedness arrangements and capability by participating in exercises both internally and with other agencies has remained strong during the 2016–17 reporting period. Our commitment was demonstrated (and our capabilities tested) through participation in a 36 hour IAEA Convention Exercise, known as ConvEx-3. This was the first full-scale exercise of this type for ARPANSA.

Eighty countries, ten international organisations and five Australian federal government agencies and partners participated in the exercise that tested:

- full activation of ARPANSA’s Incident Management Plan
- our modelling and communications capabilities
- interactions with IAEA, WHO and the Australian Government
- interactions between our WHO Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) collaborating centre partners
- sample testing and coordination between laboratories in the Australasian Radioanalytical Laboratory Network (ARLN).

ARPANSA also participated in smaller exercises throughout the reporting period. Various opportunities for improvement, to enhance our preparedness for a radiological or nuclear incident or emergency, were identified during these exercises. The agency aims to ensure these lessons are captured and improvements are incorporated into existing emergency plans.

Other ARPANSA activities that promoted radiological and nuclear safety and security, and emergency preparedness included:

- upgrading the Australian Radiation Incident Register (ARIR) and collaborating with state and territory regulators to ensure that incidents are captured and learnings shared across Australia. In the 2016 calendar year, 378 incidents were reported<sup>3</sup>
- facilitating the final training course for the National Radiation Security Advisor Accreditation Scheme, providing state and territory regulators with a pool of nationally trained security assessors in order to implement ARPANSA’s Radiation Protection Series 11 – *Code of Practice for the Security of Radioactive Sources* (2007), in a nationally consistent manner

- operating seven particulate radionuclide monitoring stations and two noble gas monitoring stations that form part of the Comprehensive Nuclear-Test-Ban Treaty Organization International Monitoring System with > 95 per cent data availability
- integrating safety and security plans and arrangements into the regulatory compliance and enforcement regime to form an integral part of the inspection program
- maintaining 24/7 point of contact for stakeholders with > 95 per cent availability
- providing input into national emergency preparedness and response arrangements
- promoting the ARLN resulting in increased collaboration and methodological harmonisation
- overseeing the import and export of radioactive materials across our borders through the assessment and issuing of permits and providing advice to stakeholders
- meeting performance targets in five proficiency testing programs, designed to assess our performance in conducting radio-analytical test methods against other laboratories that participate worldwide in the same programs.

<sup>3</sup> The ARIR collates and analyses information from Commonwealth, state and territory radiation regulators each calendar year. Internal reporting requirements and processes vary between jurisdictions and consequently there is often a considerable delay between the incident data and the date it is reported to ARPANSA. ARPANSA requests submission of reports no later than six months from the date of occurrence wherever possible.

### Objective 3

Promoting the effective use of ionising radiation in medicine				
No.	Measure	Target	Source	Annual Result
3.1	Number of Diagnostic Reference Level Surveys per annual survey period	> 1000	PBS 2016–17, page 246 ARPANSA Corporate Plan 2016–20, page 15	 1550
3.2	Percentage of Australian Radiotherapy Providers participating in the national dosimetric auditing program provided by the Australian Clinical Dosimetry Service	> 80%	PBS 2016–17, page 246 ARPANSA Corporate Plan 2016–20, page 15	 > 90%
3.3	Percentage of Australian Radiotherapy Providers covered by ARPANSA dose calibration services	> 70%	PBS 2016–17, page 246 ARPANSA Corporate Plan 2016–20, page 15	 73%

### Analysis of performance against purpose and program objective

In 2016–17, ARPANSA promoted the safe and effective use of ionising radiation in medicine through three major programs summarised below, and through interaction and engagement with the medical profession.

#### Diagnostic reference level (DRL) surveys:

- DRL surveys demonstrate to clinics how they compare to equivalent clinics across Australia; if they use more radiation than the majority of clinics, they will feel compelled to optimise their procedures to achieve improved patient protection.
- The engagement from the profession with these surveys exceeded the target by 50 per cent.

- A nuclear medicine DRL program was released in consultation with key professional and clinical stakeholders.
- Engagement with university medical departments is creating more opportunities to educate the Australian medical community about radiation risks and measurement techniques.
- The medical community recognises the positive patient safety benefit of engaging with the DRL program and reducing patient dose.

#### Australian Clinical Dosimetry Service (ACDS):

- At 2016 year-end, over 90 per cent of Australian radiotherapy providers were participating in the national dosimetric auditing program provided by the ACDS.
- Following the transition to a user-pays funding model for the ACDS, more than 50 per cent of clinics across Australia have signed service level agreements and another 20 per cent are in the final negotiations.
- ACDS audits resulted in 22 recommendations to Australian clinics leading to changes in equipment and clinical practices.
- Coverage of clinics by ACDS is pivotal to promote the effective use of ionising radiation in medicine and ensuring the safety of all patients undergoing radiotherapy for cancer treatment.

#### Radiotherapy calibrations:

- Seventy three percent of Australian radiotherapy providers are covered by ARPANSA dose calibration services.
- ARPANSA maintains the Australian primary standards for ionising radiation, including absorbed dose for radiotherapy, and disseminates the standards to clinical practices.
- Dissemination is achieved through ARPANSA's calibration service, which ensures that the equipment used by hospitals to adjust the output of their own therapy equipment is accurate.
- National demand and participation in ARPANSA's calibration services has exceeded the target during the reporting period. The target is based on international recommendations.
- The participation rate demonstrates the national regard for the service, recognising its fundamental contribution to high quality and safe patient treatment.

#### In addition to providing these services, ARPANSA has:

- facilitated an annual Practical Reference Dosimetry Course for external beam radiotherapy for the past three years
- become the recognised national authority on small field dosimetry; this is a key area of expertise with an increasing clinical implementation.

## Objective 4

Ensuring effective and proportionate regulation and enforcement activities				
No.	Measure	Target	Source	Annual Result
4.1	Percentage of licence applications assessed within the time agreed with licence holder	>90%	PBS 2016–17, page 246 <i>ARPANSA Corporate Plan 2016–20</i> , page 17 - Regulator Performance Framework (RPF) KPI 1	 79% <p>A number of factors that affect this indicator are outside the agency's control. The measure was removed from the 2017–18 PBS and 2017–2021 Corporate Plan. The measure was retained in the 2017–18 RPF with a revised target of 75%.</p>
4.2	Number of improvements to the regulatory framework implemented by ARPANSA, identified through self-assessment or external reviews such as the Integrated Regulatory Review Service conducted by the IAEA	Three or more	PBS 2016–17, page 246 <i>ARPANSA Corporate Plan 2016–20</i> , page 17 - RPF KPI 6	 Three

Ensuring effective and proportionate regulation and enforcement activities				
No.	Measure	Target	Source	Annual Result
4.3	Percentage of inspections conducted in accordance with established inspection schedule	>90%	PBS 2016–17, page 246 <i>ARPANSA Corporate Plan 2016–20</i> , page 17 - RPF KPI 1	 86% <p>The agency's performance fell just short of the target because some inspections were not carried out due to factors outside of ARPANSA's control; 92% of the inspections were conducted to schedule when such factors were taken into account. To accommodate for similar occurrences in the future, the target has been adjusted to 85% in the PBS, Corporate Plan and RPF from 2017–2018 and onwards.</p>
4.4	Percentage of stakeholder inspection feedback in which the positive outweighs the negative	>90%	<i>ARPANSA Corporate Plan 2016–20</i> , page 17 - RPF KPI 2	 88% <p>Feedback received from the post-inspection survey was overall positive and performance fell just short of the target. This measure has been amended in the 2017–18 RPF to include a score that can be trended over time and that captures a broader range of feedback methods.</p>
4.5	Number of information sharing meetings with facility licence holders	>20	<i>ARPANSA Corporate Plan 2016–20</i> , page 17 - RPF KPI 2	 32

Ensuring effective and proportionate regulation and enforcement activities				
No.	Measure	Target	Source	Annual Result
4.6	Ratio of performance deficiencies to non-compliances during the inspections	> 25:1	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 3	 16:1 This measure has been replaced in the 2017-18 RPF with one that more accurately reflects a graded and proportionate regulatory approach. The current indicator is strongly affected by only a few non-compliances. The quarterly ratio varied from 12:1 to 43:1 over the reporting period.
4.7	Ratio of site visits (monitoring) to inspections at licensed facilities	> 4:1	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 3	 3:1 This measure has been replaced in the 2017-18 RPF with one that more accurately reflects a graded and proportionate regulatory approach.
4.8	Percentage of inspections of licence holders with a medium to high-risk ranking	> 70%	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 4	 56% The intent of this measure was met as 76% of time spent on direct regulatory activities targeted medium and high risk licences. This measure was replaced in the 2017-18 RPF with one that measures the proportion of effort applied to areas of greatest risk.
4.9	Percentage of time that actions are initiated within three months of the issuance of a performance deficiency	> 50%	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 4	 59%

Ensuring effective and proportionate regulation and enforcement activities				
No.	Measure	Target	Source	Annual Result
4.10	Percentage of regulatory personnel time that is devoted to regulatory activities	> 40%	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 5	 27% This measure was replaced in the 2016-17 RPF as it only reflects direct regulatory work against specific licences carried out by staff in ARPANSA's Regulatory Services Branch. It does not include important indirect activities, which contribute to safety among licence holders and will reduce the need for direct interventions in the longer term.
4.11	Percentage of instances in which licence holders are consulted on the development of guides, codes and standards	> 90%	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 5	 100%
4.12	Percentage of facility inspections in which expertise external to ARPANSA was utilised	> 30%	ARPANSA Corporate Plan 2016-20, page 17 - RPF KPI 6	 20% External expertise can be used to supplement and enhance ARPANSA's depth of knowledge and experience. This was not deemed necessary for many of the inspections conducted in 2016-17. This measure has been replaced in the 2017-18 RPF with a measure that reflects how well the agency contributes to the continuous improvement of regulatory frameworks.

## Analysis of performance against purpose and program objective

We base all the measures and targets reported on above on the RPF, a Commonwealth-wide initiative that helps regulators report objectively on their efforts to administer regulation fairly, effectively and efficiently. As such, it also helps regulators to identify opportunities for improvement and to better target regulatory resources for greater impact. RPF performance indicators cover issues like communication, risk-based and proportionate approaches, transparency, reducing regulatory burden, and continuous improvement.

ARPANSA first obtained ministerial approval and implemented our RPF measures and targets for 2015–16, and subsequently each year performs a self-assessment against the targets. This year ARPANSA met, exceeded or made significant progress toward achieving the targets.

The first RPF self-assessment recommended a review of the RPF measures. We undertook this review in February 2017 and a revised set of measures were subsequently approved by the Minister to take effect from 1 July 2017. This is the last time ARPANSA reports against several of the targets listed above. The revised measures and targets enable ARPANSA to better assess our overall regulatory delivery and impact, and will support our program of continuous improvement.

In addition to routine activities, ARPANSA has undertaken a number of projects and activities that will further improve our performance, including:

- publication of the *Code for Radiation Protection in Planned Exposure Situations* (RPS C-1) and its promotion at events such as the Licence Holder Forum held in Canberra in June 2017
- publication of the *National Directory for Radiation Protection* to include Amendment 7 (June 2017)
- undertaking a cost recovery project to ensure that financial burden on licence holders is proportionate to the cost of regulation and that regulatory services are streamlined, efficient and effective, in accordance with the Australian Government Charging Framework
- providing advice on regulatory requirements to the Department of Industry, Innovation and Science (DIIS) in relation to DIIS' plans to establish a National Radioactive Waste Management Facility (NRWMF), including advice on waste management criteria, and other elements important to the safety case

- publication of two documents outlining the regulatory approach to waste storage and disposal facilities in May 2017; Information for stakeholders and a Regulatory Guide: *Applying for a licence for a radioactive waste storage or disposal facility*
- communicating with stakeholders in South Australia to inform them about ARPANSA's role and assessment criteria in the licensing of a NRWMF, should plans to establish the facility be pursued
- international engagement to take stock of and enhance the development of international risk assessments and standards, and to promote collaboration with regional partners. In 2016–17 this has included:
  - hosting delegations from Mongolia and Singapore
  - working with the safety standards committees of the IAEA on transport, waste and radiation safety, and on emergency preparedness and response; as well as the Commission on Safety Standards
  - activities related to the Convention on Nuclear Safety, the Joint Convention and the Code of Conduct on the Safety of Research Reactors
- Integrated Regulatory Review Service missions to the Czech Republic and Estonia
- participation in the International Commissions on Radiological Protection and Non-Ionizing Radiation Protection; and in activities of the World Health Organization and United Nations Scientific Committee on the Effects of Atomic Radiation
- actively engaging in reviewing and continuously improving our regulatory processes. This includes embarking on a project to bring the inspection processes into line with ISO/IEC 17020
- commencing self-assessment for the IAEA Integrated Regulatory Review Service mission to Australia in 2018, this mission will cover all Australian jurisdictions and ARPANSA has been providing assistance to state and territory radiation regulators.

**Objective 5**

Capability				
No.	Measure	Description and Estimated Completion	Source	Annual Result
5.1	Workforce Planning Strategy	Develop a workforce planning strategy that includes recruitment, succession planning, performance feedback, leadership development, and training requirements. This ensures our workforce has the capability to meet future challenges of our operating environment.  June 2017	ARPANSA Corporate Plan 2016-20, page 20	
5.2	Project Management Framework	Deliver an enhanced project management framework that will contribute to a more effective and efficient allocation of resources through improved governance and management of agency projects.  June 2017	ARPANSA Corporate Plan 2016-20, page 20	
5.3	Digital Strategy	In response to key digital and social trends, create a digital strategy to harness opportunities, build business capability and transition information management and technology to support the agency's vision.  May 2017	ARPANSA Corporate Plan 2016-20, page 20	

Capability				
No.	Measure	Description and Estimated Completion	Source	Annual Result
5.4	Stakeholder Engagement Framework	This project represents ARPANSA's ongoing commitment to work effectively with our stakeholders, learn from experiences and continue to improve performance. We will base the framework on the International Association of Public Participation (IAP2) spectrum and will seek to position stakeholder engagement as a priority across the agency and facilitate effective collaboration and knowledge sharing.  March 2017	ARPANSA Corporate Plan 2016-20, page 20	Although a formal stakeholder engagement framework was not delivered in this reporting period, a complete review of the current stakeholder engagement and communications processes was undertaken and this work will form the basis for the stakeholder engagement framework that will be delivered in 2017-18.

## Analysis of performance against purpose and program objective

The role of our supporting capabilities is to create a dynamic environment that enables and encourages excellence in services, research, advice, regulation and the utilisation of knowledge. Our enabling services work across the agency with all branches and offices to develop our people, governance, infrastructure and technology to ensure our systems and processes provide the appropriate capability to support achievement of our strategic objectives.

In 2016–17, ARPANSA undertook a significant review of its strategic planning framework, which included the development of two new strategic objectives to reflect the important work of our supporting capabilities:

- strengthen engagement with community and government
- enhance organisational innovation, capability and resilience.

These objectives have been included in our Corporate Plan for 2017–2021. We will measure and report on the performance of our supporting capabilities alongside our other four strategic objectives.

ARPANSA's supporting capability assisted in the achievement of the strategic objectives through the following activities:

- development of the ARPANSA Workforce Plan that comprises clear strategies across:
  - succession planning
  - attraction and recruitment
  - learning
  - performance and reward
  - diversity and inclusion
  - health and wellbeing.

This Workforce Plan sets out how ARPANSA can best place our capability to deliver against the agency strategic objectives. We will launch the plan in August 2017.

- In June 2017 a new project management framework was delivered which aims to achieve a more effective allocation of resources through improved governance and management of agency projects. We established a Project Management Advisory Group to lead the implementation of the project management framework in 2017–18. The group will provide a centralised coordination and support function to agency projects.
- In February 2017 the Digital Strategy was delivered which aims to shape and support digital initiatives, guide investment decisions and drive business transformation. We established a Digital Steering Committee to lead the execution of the Digital Strategy.

- ARPANSA continues to progress work on a formal stakeholder engagement framework. The last financial year has seen considerable efforts to ensure that ARPANSA clearly defines the public participation goal for our stakeholder engagement activities, particularly with respect to major licensing decisions and consultation activities for the proposed National Radioactive Waste Management Facility. In 2016–17, ARPANSA underwent a limited assurance review of our current stakeholder engagement and communications processes to assess efficiency and effectiveness. The findings of this review will inform the development of a formal framework for future stakeholder engagement activities.

## Financial performance

For the financial year ending 30 June 2017, ARPANSA reported an operating deficit of \$3.536 million. This deficit relates to depreciation and amortisation expenses not requiring appropriation, the recognition of provisions for rectification and remediation of a legacy radiation site and the settlement of litigation.

Revenue for the year totaled \$24.395 million, of which government appropriated 53 per cent of that total. The remaining 47 per cent related to regulatory licence fees and charges and the sale of goods and provision of services.

ARPANSA's expenses totaled \$27.931 million. Employee benefits account for 61 per cent, supplier's expenses 30 per cent, and depreciation and amortisation expense 9 per cent.

The agency has made progress despite some challenges along the way. It will continue to review the efficiency and effectiveness by which it delivers its programs, to ensure that it is done so within available resourcing.

## Management and accountability

### Assets management

The agency manages non-financial assets totalling \$36.893 million and its asset management strategy emphasises whole-of-life asset management. The major categories include land, buildings, infrastructure, plant maintenance and renovation; equipment purchases and information technology infrastructure upgrades to meet future research and operational requirements.

### Purchasing

The agency's procurement policies and practices reflect the principles set out in the *Commonwealth Procurement Rules* (CPRs), and focus on encouraging competition, value for money, transparency and accountability as well as the efficient, effective and ethical use of Commonwealth resources. During 2016–17, ARPANSA procurement activities complied with the CPRs.

### Consultants

During 2016–17, nine new consultancy contracts were entered into involving total actual expenditure of \$317 815. In addition, five ongoing consultancy contracts were active during the 2016–17 year, involving total actual expenditure of \$79 627.

The agency policy on selection and engaging consultants is in accordance with the CPRs, based on the core rule of value for money and underpinned by:

- encouraging competitive and non-discriminatory processes
- using Commonwealth resources in an efficient, effective, economical and ethical manner that is not inconsistent with the policies of the Commonwealth
- making decisions in an accountable and transparent manner
- considering the risks
- conducting a process commensurate with the scale and scope of the procurement.

ARPANSA engaged consultants where there was a requirement for specialist expertise that was not available within the agency, or where an independent assessment was required. The selection process included selection from a panel or direct engagement of a recognised or pre-eminent expert.

The annual report contains information about actual expenditure on contracts for consultancies. Information on the value of contracts and consultancies is available on the AusTender website [tenders.gov.au](http://tenders.gov.au).

### Procurement initiatives to support small business

ARPANSA supports small business participation in the Commonwealth Government procurement market. Small and Medium Enterprises (SME) and Small Enterprise participation statistics are available on the Department of Finance website: [finance.gov.au/procurement/statistics-on-commonwealth-purchasing-contracts/](http://finance.gov.au/procurement/statistics-on-commonwealth-purchasing-contracts/).

ARPANSA's engagement with SMEs is predicated on communicating in clear, simple language and presenting information in an accessible format. Additionally, ARPANSA has adopted the use of the Commonwealth Contracting Suite for low risk procurements valued under \$200 000 to reduce the burden on SMEs entering into contractual relations with the Commonwealth.

### Advertising and market research

Under section 311A of the *Commonwealth Electoral Act 1918* ARPANSA is required to disclose details of payments of \$13 000 or more (inclusive of GST) relating to advertising and market research.

During 2016–17, expenditure on media advertising and public notices was below the threshold, and ARPANSA did not undertake market research, conduct any advertising campaigns nor purchase any services from creative advertising agencies, polling organisations or direct mail organisations.

## ARPANSA resource statement - 2016–17

	Actual available appropriation for 2016–17 \$'000 (a)	Payments made 2016–17 \$'000 (b)	Balance remaining 2016–17 \$'000 (a)-(b)
<b>Ordinary annual services<sup>1</sup></b>			
<b>Departmental appropriation</b>			
Prior year departmental appropriation <sup>2</sup>	-	-	-
Departmental appropriation <sup>3</sup>	15,173	14,422	751
<b>Total</b>	<b>15,173</b>	<b>14,422</b>	<b>751</b>
<b>Total ordinary annual services</b>	<b>15,173</b>	<b>14,422</b>	
<b>Other services</b>			
<b>Departmental non-operating</b>			
Equity injections	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total other services</b>	<b>-</b>	<b>-</b>	
<b>Special Accounts<sup>4</sup></b>			
Opening balance	1,210		
Appropriation receipts <sup>5</sup>	14,422		
Non-appropriation receipts to Special Accounts	11,842		
Payments made		26,332	
<b>Total Special Account</b>	<b>27,474</b>	<b>26,332</b>	<b>1,142</b>
<b>Total resourcing</b>	<b>42,647</b>	<b>40,754</b>	
Less departmental appropriations and equity injections drawn from the above and credited to special accounts	(14,422)	(14,422)	
<b>Total net resourcing for ARPANSA</b>	<b>28,225</b>	<b>26,332</b>	

1 Appropriation Bill (No.1) 2016–17

2 Balance carried forward from previous year for annual appropriations

3 Includes an amount of \$2.124 million in 2016–17 for Departmental Capital Budget. For accounting purposes this amount has been designated as 'contributions by owners'

4 Does not include 'Special Public Money' held in accounts like Other Trust Monies accounts (OTM). Services for other Government and Non-agency Bodies accounts (SOG), or Services for Other Entities and Trust Moneys Special accounts (SOETM).

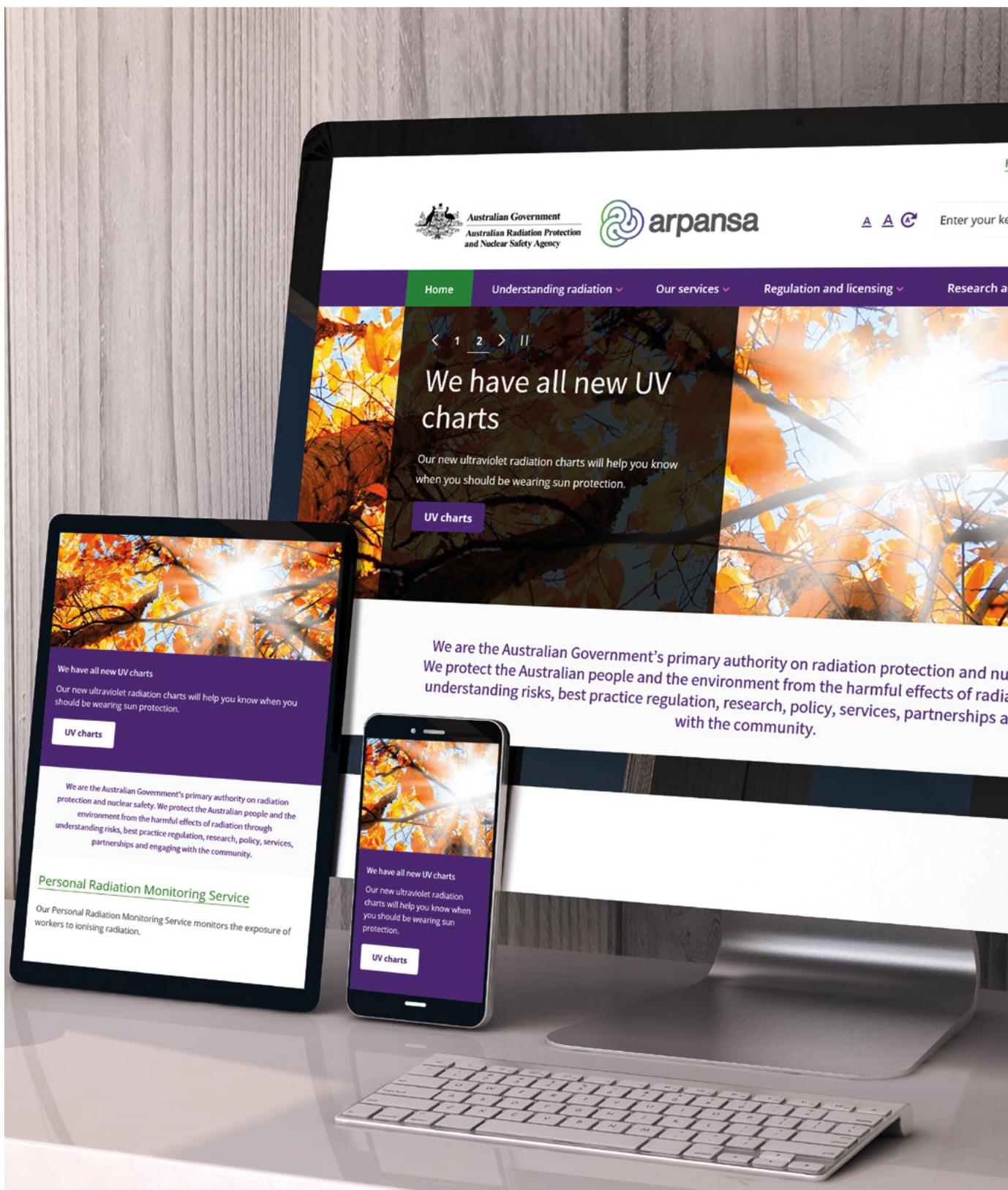
5 Appropriation receipts from ARPANSA's annual and special appropriations for 2016–17 included above.

## ARPANSA expenses for outcome 1

Outcome 1:	Budget* 2016–17 \$'000 (a)	Actual Expenses 2016–17 \$'000 (b)	Variation 2016–17 \$'000 (a)-(b)
<b>Protection of people and the environment through radiation protection and nuclear safety research, policy, advice, codes, standards, services and regulation</b>			
<b>Program 1.1: (Radiation protection and nuclear safety)</b>			
Departmental expense			
Ordinary annual services (Appropriation Bill No. 1) <sup>1</sup>	13,049	13,049	-
Special Accounts	10,046	11,346	(1,300)
Expenses not requiring appropriation in the budget year	2,171	2,626	(455)
Operating loss	-	910	(910)
<b>Subtotal for Program 1.1</b>	<b>25,266</b>	<b>27,931</b>	<b>(2,665)</b>
<b>Total for outcome</b>	<b>25,266</b>	<b>27,931</b>	<b>(2,665)</b>
	2015–16	2016–17	
<b>Average staffing level (number)</b>	<b>135</b>	<b>131</b>	

\* Full year budget including any subsequent adjustment made to the 2016–17 budget

1 Appropriation Bill (No.1) 2016–17



## Case study 1

### ARPANSA's website

In June 2017 we launched a new corporate website. Our website is responsive for mobile and tablet devices so that users can access our website on the go. It is built using govCMS, a Drupal-based open source content management system developed by the Department of Finance.

Our new website implements a number of features to improve our users' experience.

#### A new information architecture

After researching how people use our website, we created a new way to structure information on the website. This improved our website structure and provides users a better browsing experience by structuring information more intuitively.

#### Interactive UVR charts

We have redesigned our ultraviolet radiation (UVR) charts to make them dynamic and interactive. These charts allow users to find out what the UVR index is at our measurement sites and when the UVR index will be at its highest. Our measurement sites are found all around Australia, mostly in each capital city.

The UVR information we maintain on the charts help Australians apply appropriate sun protection measures when needed.

#### Searchable fact sheets and scientific literature

At ARPANSA, we provide advice to the public on many radiation topics: from mobile phone safety to radioactive waste. Visitors to our fact sheets page can use the tailored search function to find the information they need.

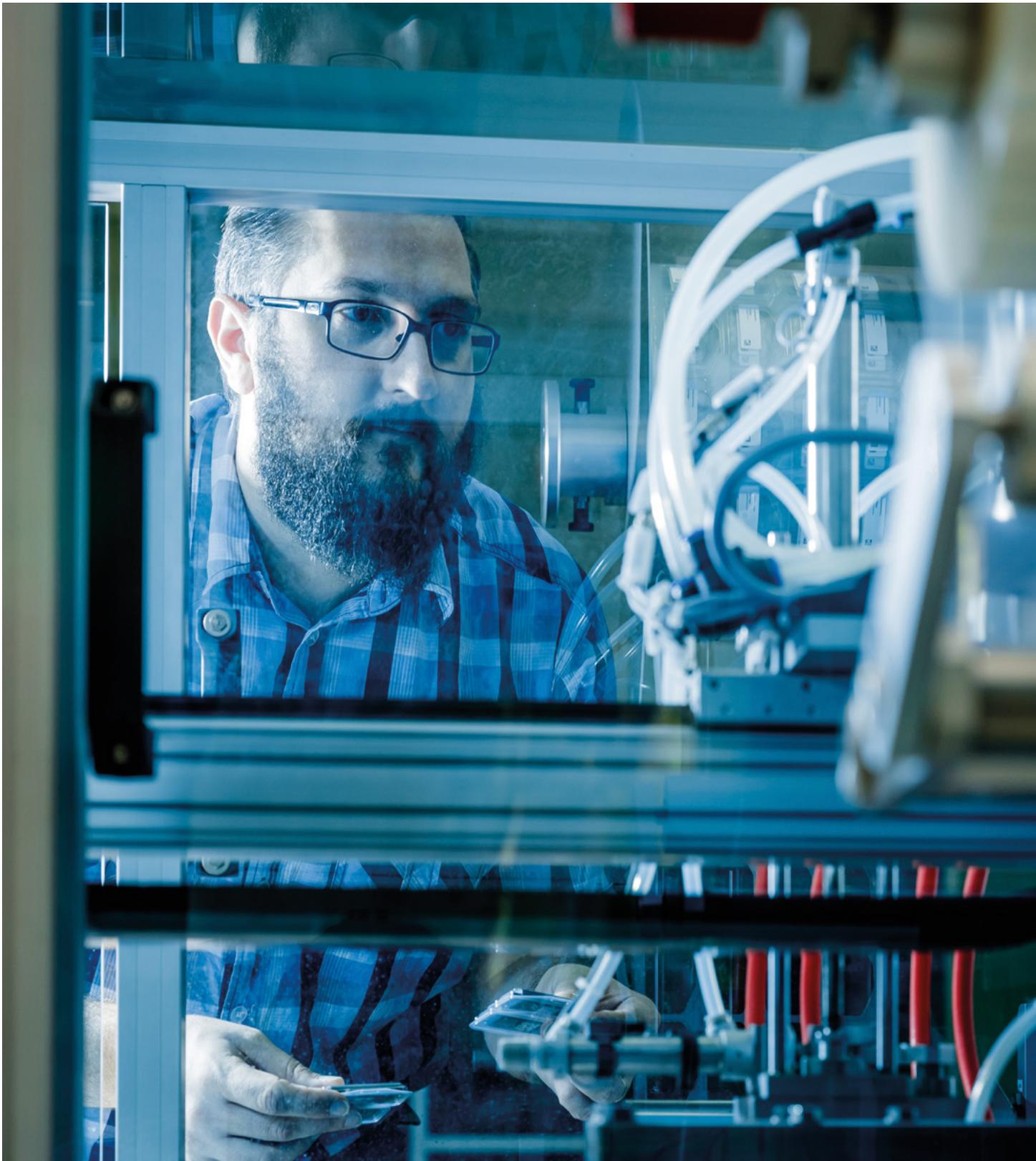
Users can also search our best practice, regularly reviewed scientific literature on radiation protection topics. The in-page search function ensures users can easily find ARPANSA's commentary on the literature published in peer-reviewed scientific journals, scientific body reports, fact sheets and conference proceedings.

#### Have your say hub

We provide opportunity for members of the public and industry to have their say on licensing decisions and the development of regulatory codes and guides. To cater for this, we designed the *Have your say* hub.

The *Have your say* hub is a central place where users can find out what public consultations we are holding. Users can submit their comments on online draft documents and find other users submissions.

To see more of our new and continually evolving website features visit [arpansa.gov.au](http://arpansa.gov.au).



## Case study 2

### Personal Radiation Monitoring Service

ARPANSA's Personal Radiation Monitoring Service (PRMS) is in charge of assessing nearly 700 monitors every day, to help protect thousands of workers from the harmful effects of radiation, through the use of their newly implemented beryllium oxide (BeO) Optically Stimulated Luminescence (OSL) technology.

PRMS commenced operation in 1932, and the service provides radiation workers a way to measure any occupational radiation doses they might receive.

In its eighty-five year history, PRMS has used several technologies to do this. New dosimeter technology is continually emerging and in July 2016 PRMS commissioned the use of this latest dosimetry technology: BeO and OSL.

OSL dosimeters are made up of two BeO ceramic chips on a tongue. The tongue is inserted into case. The case is inserted into a labelled 'blister pack' for protection against dirt and possible tampering.

Unlike the previous thermoluminescent dosimeter technology, BeO is near tissue equivalent and has a flat energy response. It directly measures doses for shallow or 'skin dose',  $H_p(0.07)$ , and to a deep tissue or 'whole body' dose,  $H_p(10)$ . In summary, BeO technology is making our occupational doses simpler to calculate without compromising the accuracy of the measurement while increasing the efficiency of our services. One year after OSL went live PRMS is seeing great results.

#### Statistics on reports for 2016–17

The results speak for themselves:

- PRMS has produced 281 batches of OSLs between 30 June 2016 – 12 July 2017.
- One batch on average has about 60 centres and each centre receives their own dose report.
- PRMS has produced 16 860 dose reports in one year. This equates to approximately 82 reports produced per working day.
- Each report on average has eight dosimeters.
- Each day for the past 12 months PRMS reported on 656 dosimeters which a qualified staff member assessed individually, ensuring measurement quality.



### Case study 3

#### Ultraviolet Radiation Services

Between 95 and 99 per cent of skin cancers are caused by exposure to the sun, and more than 2000 Australians die from skin cancer every year.

This is why ARPANSA maintains a network of solar ultraviolet radiation (UVR) sensors in major population centres around the country. Information gathered by this network is displayed in near real time on our website to allow the public to better manage solar UVR exposure.

ARPANSA works in collaboration with partners at the Cancer Councils and Bureau of Meteorology. The UVR monitoring network provides data directly to the Cancer Council Victoria's SunSmart app, a highly visible tool designed to assist in reducing the impact and burden of disease caused by over-exposure to solar UVR.

In 2016–17 ARPANSA began upgrading the UVR monitoring network to improve its reliability, efficiency and flexibility. The result is reduced ongoing maintenance costs, the potential for expansion of the network and the provision of enhanced access to UVR data.

Every aspect of the UVR monitoring network was revised, including the detection of solar UVR, data acquisition, storage and dissemination of information to our partners. The previous system was limited, relying on outdated and difficult to maintain hardware and software. The major upgrade of the UVR monitoring network uses advanced technology to design a cheaper and simpler system that continues to provide high quality measurements.

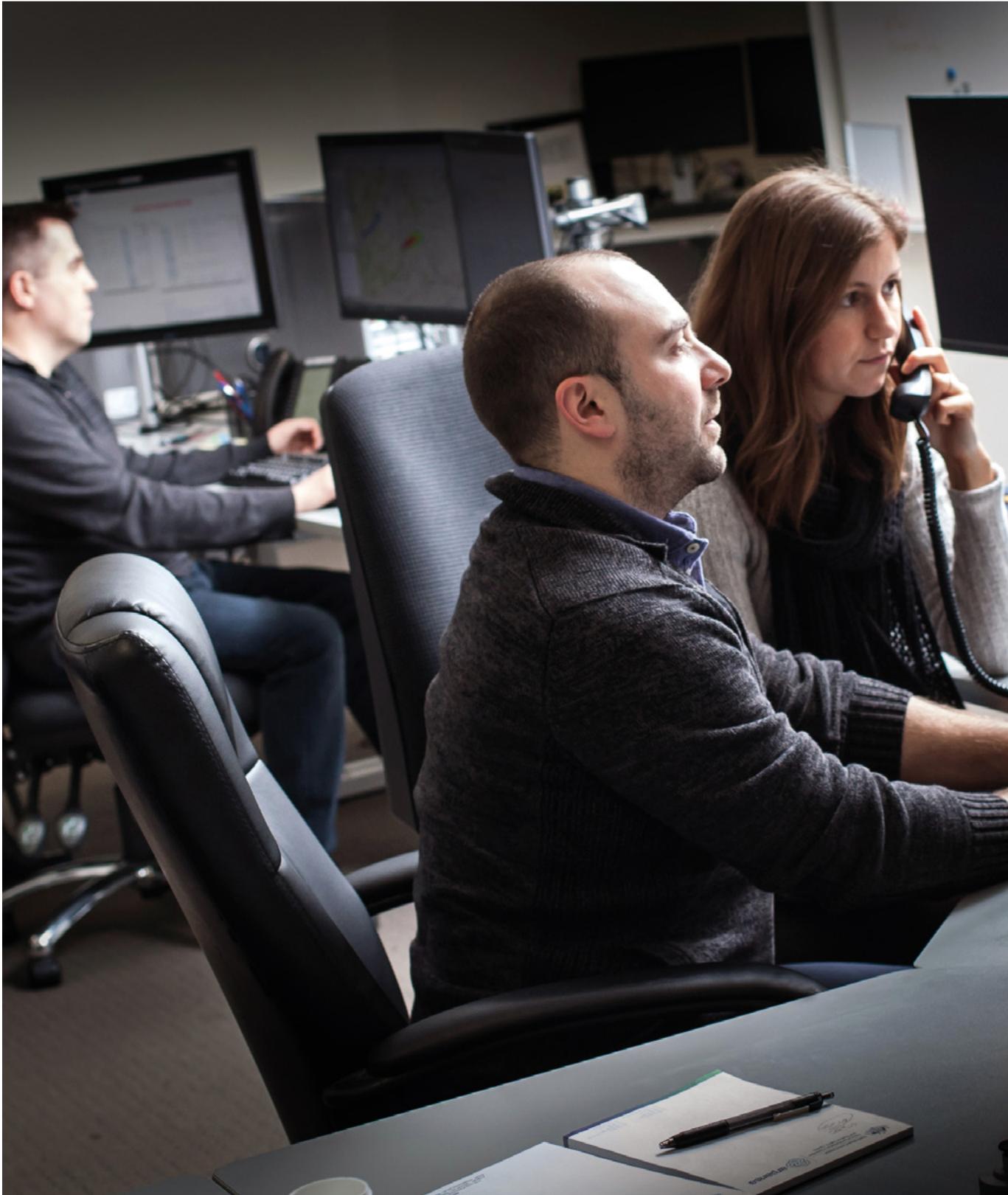
The process of evaluating, assembling and refining all the elements of the network equipment was a huge task requiring a major collaborative effort across ARPANSA. Areas involved and their contributions included:

- Monitoring and Emergency Response Section trialled and evaluated new UVR sensors as well as built data acquisition systems.
- Information Technology team ensured dedicated data storage servers and configured the 4G modems.
- Information Management Section assisted with database and website development.
- Engineering Support Services helped with the construction of detector and electronics housings.

The refreshed ARPANSA UVR monitoring network provides a much more flexible platform from which we can deliver services. It is now more reliable, cheaper to run, easier to maintain, simpler to reconfigure and has enhanced security features.

This enables future network expansion and increased automation of data handling and analysis. The improvements will help us better meet the needs of the public and our partners, including providing high quality sun protection advice for the Australian community.

Visit [arpansa.gov.au/uvindex/realtime](https://arpansa.gov.au/uvindex/realtime) to see our UVR charts.



## Case study 4

### ConvEx-3: ARPANSA's part in an international nuclear emergency exercise

Over the past decade, many international exercises simulating a nuclear emergency have taken place, and much knowledge and experience has been gained in the important fields of emergency preparedness and response.

On 21 June 2017, ARPANSA participated in an International Atomic Energy Agency (IAEA) Convention Exercise (ConvEx), also known as ConvEx-3.

ARPANSA participated in the exercise in order to test its own emergency arrangements in a severe international nuclear accident scenario. This exercise gave ARPANSA an opportunity to verify that we apply good practices, and also find out where we might need to improve: such as testing the effectiveness of our recently updated *Incident Management Plan* (IMP).

ConvEx-3 simulated a Fukushima-like emergency release from a nuclear reactor in Hungary and was the largest exercise ARPANSA has participated in to date. Around 35 ARPANSA staff members, from both Sydney and Melbourne offices, participated in the 36 hour emergency exercise.

Hungary played the role as the 'accident state' and the IAEA Incident and Emergency Centre coordinated information exchange and requests for assistance between Hungary and other Member States, such as Australia.

In order to test the whole of government response arrangements, Australian agencies worked collectively — bringing ARPANSA together with the Attorney General's Department, Department of Foreign Affairs and Trade and the Department of Health.

Due to the 36 hour exercise duration, ARPANSA implemented rotating shifts around the clock to ensure a continuous response. Participation came from all ARPANSA IMP component groups, including:

- analysis and assessment
- laboratory support
- nuclear safety
- communications
- business continuity
- logistics support.

The exercise included national and international interactions, monitoring the reactor status, production of atmospheric modelling maps, providing advice for Australians abroad, attending media briefings, helping to create talking points for leaders, as well as notionally posting updates on Twitter and Facebook.

The ConvEx-3 exercise has been invaluable in dissecting ARPANSA's plans, depth and response to such an international nuclear accident, highlighting what we did well and understanding opportunities for improvement.



## Corporate governance

ARPANSA's corporate governance framework is comprised of the agency's enabling legislation, the *Australian Radiation Protection and Nuclear Safety Act 1998* (the ARPANS Act), and the *Public Governance, Performance and Accountability Act 2013* (PGPA Act).

Our corporate governance structure framework enables effective strategic planning, risk management and performance monitoring to support achievement of our strategic objectives.

### Advisory bodies

The ARPANS Act establishes the Radiation Health and Safety Advisory Council (the Council), the Radiation Health Committee (RHC) and the Nuclear Safety Committee (NSC) to advise the CEO of ARPANSA. The PGPA Act requires Commonwealth entities to establish an audit committee.

#### Radiation Health and Safety Advisory Council

The Council advises the CEO on emerging issues and matters of major public concern relating to radiation protection and nuclear safety. During 2016–17, the Council met on three occasions: 17–18 November 2016, 15–16 March 2017 and 5–6 June 2017.

#### Radiation Health Committee

The RHC advises the CEO and the Council on matters relating to radiation protection, including formulating draft national policies, codes and standards for the promotion of uniform national standards of radiation protection. During 2016–17, the RHC met on three occasions: 16 November 2016, 15 March 2017 and 7 June 2017.

#### Nuclear Safety Committee

The NSC advises the CEO on matters relating to nuclear safety and the safety of controlled facilities. This advice includes developing and assessing the effectiveness of standards, codes, practices and procedures. During 2016–17, the NSC met on three occasions: 4 November 2016, 10 March 2017 and 30 June 2017.

#### Audit and Risk Committee

The Audit and Risk Committee provides independent assurance and advice to the CEO on the agency's financial and performance reporting, and systems of risk oversight and internal control.

The Audit and Risk Committee comprises four members; three of whom are independent external members, including the Chair, and one ARPANSA member. Representatives from the Australian National Audit Office and the agency's internal auditor, RSM Australia Pty Ltd, also attend meetings. The CEO is an observer on the committee and other senior managers may attend meetings as observers when required to report on particular matters.

The committee met four times during 2016–17 and reported directly to the Strategic Management Committee after each meeting.

## Management committees

ARPANSA has in place a number of management committees to ensure effective decision-making, management and oversight of the agency's operations and performance.

### Strategic Management Committee

The Strategic Management Committee (SMC) provides advice and recommendations to help inform the CEO to make decisions relating to the direction, strategies and priorities for the agency.

The SMC met six times in 2016–17 and comprises the CEO (Chair), branch and office heads, the Director, Performance and Governance and two external members appointed by the CEO. During 2016–17, the external SMC members were Ms Megan Morris and Mr Michael Perry (Chair, Audit and Risk Committee).

### Executive Group

The Executive Group (EG) is ARPANSA's operational management forum. The EG is responsible for monitoring the key tactics and activities used to implement agency business plans.

The EG met ten times in 2016–17 and comprises the CEO (Chair), branch and office heads, and the Director, Performance and Governance.

## Work Health and Safety Committee

The Work Health and Safety (WHS) Committee provides the agency with a consultative mechanism to enable management and worker contributions to WHS improvements across all operations.

The committee comprises the CEO (Chair), Health and Safety Representatives, management representatives, the WHS Advisor/Radiation Safety Officer and other subject matter experts may participate in meetings as required. The WHS Committee met four times in 2016–17.

### The Radiation Safety Committee

The Radiation Safety Committee operates as a sub committee to the WHS Committee and is chaired by the Radiation Safety Officer and comprises of Radiation Protection Advisors from across the agency. The committee provides the agency with a mechanism to monitor, review and improve practices in relation to the safe management of radiation sources and associated activities. The Radiation Safety Committee met five times in 2016–17.

### Agency Security Group

The Agency Security Group (ASG) oversees the development and implementation of a protective security program across ARPANSA to ensure our policies, procedures and practices comply with the Commonwealth's *Protective Security Policy Framework*.

The ASG met five times in 2016–17, and comprises the Security Executive (Chair), the Agency Security Adviser, the Chief Information Officer, the IT Security Adviser, the Facilities Manager and other subject matter experts may participate in meetings as required.

### Staff Consultative Forum

ARPANSA's enterprise agreement continues to provide for a Staff Consultative Forum (SCF) as the key employee consultative body. The SCF comprises the CEO, nine employees elected by staff and a representative from each of the unions supporting ARPANSA staff. The SCF met on six occasions in 2016–17 to discuss a range of issues relating to management of the agency.

### Project Management Advisory Group

In September 2016 the Project Management Advisory Group (PMAG) was established to lead the development of an enhanced project management framework for the agency and provide a centralised coordination and support function to agency projects. The PMAG comprises the Director of Performance and Governance (Chair) and five staff with project management expertise. The PMAG met eleven times in 2016–17.

### Digital Steering Committee

In February 2017 the Digital Steering Committee (DSC) was established to lead the execution of ARPANSA's Digital Strategy which aims to shape and support digital initiatives, guide investment decisions and drive business transformation. The DSC comprises the Branch Head of Medical Radiation Services (Chair), Branch Head of Radiation Health Services, Chief of Staff, Head of Corporate Office and the Chief Information Officer. The DSC met once in 2016–17 and discussed the focus area framework that will support the implementation of the digital strategy.

## Accountability and risk management

### Accountable authority

As a Commonwealth entity, ARPANSA's operations and governance arrangements are subject to the provisions of the PGPA Act. The CEO of ARPANSA is the accountable authority under the PGPA Act.

### Planning

During 2016–17 the agency established a more integrated planning approach to combine business planning with budgeting, risk management, and performance monitoring and reporting. This approach has contributed to better alignment of our strategic priorities, operational activities, resource allocation and performance measures and has resulted in clear linkages between our key planning documents, including the corporate plan, portfolio budget statement and agency business plans.

Furthermore, the agency undertook a significant review of its strategic planning framework, which included the development of two new strategic objectives to reflect the important work of our supporting capabilities:

- strengthen engagement with community and government
- enhance organisational innovation, capability and resilience.

These objectives will be included in our corporate plan for 2017–2021 and the performance of our supporting capabilities will be measured and reported alongside our other four strategic objectives.

The Strategic Management Committee oversees the planning process and preparation of the corporate plan. Progress against the measures and other commitments outlined in our key planning documents is monitored and reported to management and the Audit and Risk Committee.

### Risk management

ARPANSA has a comprehensive *Risk Management Framework* that aligns responsibility and accountability for risk across the agency. Risk management is integrated into our business planning processes which enables effective identification and management of risks that could impact on the agency achieving its outcomes or otherwise cause it harm.

ARPANSA's *Risk Management Framework* aligns with broader requirements such as the *Commonwealth Risk Management Policy 2014* and the international standard on risk management (AS/NZS ISO 31000), and meets the requirements of Section 16 of the PGPA Act.

We use Comcover's *Risk Management Maturity Model* to identify our priorities when planning our risk strategy and improving our risk maturity. In 2016–17, ARPANSA achieved an 'integrated' level of maturity in the *Comcover Risk Management Benchmarking Survey*. In the next reporting period the agency will focus on enhancing our risk management culture through revision of our *Risk Management Framework* and improving our risk management training program to ensure staff are actively undertaking and understanding their roles and responsibilities under the PGPA Act.

### Performance reporting

Our non-financial performance measures are detailed in both our corporate plan and portfolio budget statement. They include several measures that meet our performance reporting obligations under the *Regulator Performance Framework*. We produce quarterly internal reports on our non-financial performance. These reports are presented to management and the Audit and Risk Committee at the end of each quarter.

Financial performance is reported separately through monthly internal financial reports to management, and to the Audit and Risk Committee at the end of each quarter. Our performance reporting culminates in the publication of our annual report, inclusive of the annual performance statement (at part 3) and financial statements (at part 5), and our *Regulator Performance Framework* externally-validated self-assessment report available on the ARPANSA website.

## Audit and fraud control

### External audits

ARPANSA has seven laboratories that maintain National Association of Testing Authorities (NATA) accreditation. During 2016–17, NATA conducted reassessments of the following services:

- Ultraviolet protection factor services
- Radiofrequency calibrations
- Radioanalytical services
- CTBTO Radionuclide Laboratory
- Ionising radiation calibrations
- Personal Radiation Monitoring Service.

These reassessment audits monitored the services continuing compliance with the requirements for accreditation against ISO/IEC 17025. This included a review of the services technical competence and management requirements. All audit findings were responded to, and deemed acceptable by NATA and accreditation of all six services was continued.

### Internal audits

Primary responsibility for internal audit arrangements within the agency rests with the Corporate Office under the broad direction of the agency's Audit and Risk Committee. ARPANSA has a robust internal governance and control framework to establish and maintain appropriate systems and internal controls for the oversight and management of risk.

In 2016–17 ARPANSA's internal auditors, RSM Australia Pty Ltd, completed five audits to assess the adequacy of processes and controls in place for the following areas:

- emergency preparedness and response arrangements
- compliance with the PGPA Act
- regulatory delivery model
- stakeholder engagement and communication processes
- tendering, contract management and procurement processes.

### Significant non-compliance issues

ARPANSA management acknowledges their responsibility for ensuring compliance with the provisions of the PGPA Act and requirements related to finance law.

We have complied with the provisions and requirements of the:

- PGPA Act
- *Public Governance, Performance and Accountability Rule 2014*
- Appropriation Acts
- other instruments defined as finance law including relevant ministerial directions.

ARPANSA did not have any significant non-compliance issues with finance law during the reporting period.

All instances of non-compliance are reported to the Audit and Risk Committee. Where insignificant non-compliances were identified, they were managed in accordance with our policies and procedures.

## Fraud minimisation strategies

During 2016–17, the agency continued a rolling program to assess fraud risks embedded in ARPANSA's overarching risk management framework. Treatment strategies are developed and monitored as part of that process. Results of the fraud risk assessment process are used to inform the development of the internal audit schedule. No instances of fraud were identified during 2016–17.

### Disability reporting mechanisms

Since 1994, non-corporate Commonwealth entities have reported on their performance as policy adviser, purchaser, employer, regulator and provider under the Commonwealth Disability Strategy. In 2007–08, reporting on the employer role was transferred to the Australian Public Service Commission's *State of the Service* reports and the *APS Statistical Bulletin*. These reports are available at [apsc.gov.au](http://apsc.gov.au). From 2010–11, entities have no longer been required to report on these functions.

The *Commonwealth Disability Strategy* has been overtaken by the *National Disability Strategy 2010–2020*, which sets out a 10 year national policy framework to improve the lives of people with disability, promote participation and create a more inclusive society. A high-level, two-yearly report will track progress against each of the six outcome areas of the strategy and present a picture of how people with disability are faring. The first of these progress reports was published in 2014, and can be found at [dss.gov.au](http://dss.gov.au).

## Work health and safety

ARPANSA's commitment to safety through protecting the Australian people and the environment from the harmful effect of radiation, is second to none and we are equally committed to utilising our expertise to develop a leading work health and safety (WHS) framework within the agency. Throughout 2016–17 ARPANSA continued to work through agreed corrective actions associated with the Comcare audit of our safety management system, which involved a significant body of work and stakeholder engagement. The agency also continued to foster a positive safety reporting culture, which has highlighted an increased appetite amongst staff, contractors and managers to actively participate in improvements to safety.

Key WHS activities undertaken in 2016–17 include:

- development and implementation of sustainable compliance and improvements to safety in line with the *Comcare Corrective Action Plan*
- establishment of an online WHS training package
- implementation of the WHS report card system to identify opportunities for improvement and recording of good safety practice
- promotion of WHS information via monthly safety topics
- introduction of safety and security moments as part of agenda items at key meetings to promote key learnings and opportunities
- establishment and benchmarking of annual WHS objectives and targets.

### Hazard and incident reporting

During 2016–17 the agency saw an increase in the number of reported hazards as a result of the implementation of the report card system, which has created an open and inclusive reporting mechanism that allows for the reporting of positive safety observations. A total of 27 report cards were submitted for the 2016–17 period.

There were a total of fourteen incident reports submitted and actioned during 2016–17, which included: five hazards, eight minor incidents and one dangerous incident notified to Comcare with respect to the agency's statutory obligation under section 35 of the *Work Health and Safety Act 2011*.

The agency has also introduced an integrated Issue Management Register, which enables the capture of hazard/incident data and the tracking of the progression of corrective actions that are visible across the agency. This approach creates accountability, transparency and shared learnings associated with hazard and incident reporting.

### Workers compensation

One workers compensation claim was made during the reporting period for a total of less than one day.

### Investigations or notices given

There were no investigations initiated or notices given in 2016–17.

## Accountability

### External scrutiny

#### Judicial review

During 2016–17, the agency was involved in one matter before the Federal Court and no matters before the Full Federal Court or the Administrative Appeals Tribunal.

#### Reports by the Auditor-General, Parliamentary Committees or Commonwealth Ombudsman

As at 30 June 2017, no reports were made by the Auditor-General or a Parliamentary Committee regarding ARPANSA for the year 2016–17.

During 2016–17, there were no complaints made to the Commonwealth Ombudsman against the agency. There are no earlier complaints which remain open.

### Freedom of Information

Agencies subject to the *Freedom of Information Act 1982* (FOI Act) are required to publish information to the public as part of the *Information Publication Scheme*. This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. Each agency must display on its website a plan showing what information it publishes in accordance with the *Information Publication Scheme* requirements.

ARPANSA, as an Australian Government agency, is subject to the FOI Act and is required to comply with the *Information Publication Scheme* provisions. ARPANSA has developed an agency plan describing ARPANSA's compliance with *Information Publication Scheme* provisions as required by section 8(1) of the FOI Act.

Feedback on this plan can be provided by contacting the Freedom of Information (FOI) Coordinator at:

#### The FOI Coordinator ARPANSA

PO Box 655  
MIRANDA NSW 1490  
foi@arpansa.gov  
(03) 9433 2211

Documents released by ARPANSA in response to FOI requests can be found on the Disclosure Log at [arpansa.gov.au/disclosure](http://arpansa.gov.au/disclosure).

### Statistics

ARPANSA received two FOI requests during the reporting period.

## Human resources

ARPANSA's People and Culture section is responsible for the delivery of a wide range of people services including workforce planning, recruitment, pay and conditions, performance management, learning and development and workplace diversity.

During 2016–17, the section:

- developed the *ARPANSA Workforce Plan 2017–2021* to enable ARPANSA to achieve its purpose through its people
- launched the *ARPANSA Workplace Diversity & Inclusion Plan 2017–19*, with themes around respect, inclusion and commitment.

## Workforce planning

### Workforce Plan 2017–2021

The agency has developed the *ARPANSA Workforce Plan 2017–2021* (the Plan) to enable ARPANSA achieve its objectives through its people. In developing the Plan, the agency considered global workforce management trends, Australian Public Service (APS) change drivers, and analyses of our staff cohort, including APS Census results. The objectives of the Plan are based around:

- our people: a workforce of high performing professionals
- our managers: leaders of engaged and agile teams
- our employee experience: a collaborative and innovative culture
- our strategic alignment: leading practice services which deliver on ARPANSA's purpose.

The Plan outlines six people management strategies, four supporting frameworks, and a range of innovative and leading practice initiatives to be implemented over the life of the Plan. The agency adopted an 'open source' approach to finalising the Plan, obtaining feedback on the draft through staff focus groups, an executive level 1 reference group, branch and office leadership groups, and inviting all staff to comment on the draft plan.

### Employee life cycle

In early 2017, the agency undertook a review of activities at all stages of the employee life cycle, identifying a range of recommendations, all of which are being addressed by the Plan.

## Workforce and succession planning

ARPANSA's vision for workforce and succession planning is to deliver activities that identify the capability and capacity required to deliver on ARPANSA's future strategic agenda, and respond to internal and external change drivers.

During June 2017, the agency implemented a succession planning exercise with the objective of ensuring the supply of ongoing human resource capability. The vacancy risk of all roles was assessed, and potential future successors were identified. This process will form a part of the annual workforce planning cycle for the agency.

### Attraction and recruitment

ARPANSA has undertaken to deliver a standardised, effective and objective approach to recruitment that attracts and recruits high performing people with capabilities which enable the agency to deliver on its strategic objectives.

In 2016–17, the agency streamlined recruitment processes, cutting red tape, and broadening candidate attraction reach through identifying external talent pools, as well as the characteristics of roles that would appeal to potential applicants.

### Diversity and inclusion

ARPANSA's approach to diversity and inclusion is focused on enabling all staff to contribute their diverse voices to discussions and ideas for new ways of working, and being intentionally inclusive in our interactions.

During the year extensive work was undertaken to deliver the agency's *Diversity and Inclusion Plan 2017–19*, which will come into effect on 1 July 2017, and sets out initiatives across the six key areas of inclusion, gender equity, flexibility, LGBTIQ+, people with a disability, and Indigenous Australians, with each having a branch or office head champion.

Key activities include supporting applicants to the Superstars of STEM program, supporting the 'Panel Pledge' to enable gender balance at every forum, and participation in the Stepping Into internship program for students with a disability.

### Health and wellbeing

ARPANSA's approach to health and wellbeing enables an experience of working with the agency, which supports staff wellbeing across multiple aspects of health including psycho-social, relationships, financial, and physical protection.

ARPANSA's Employee Assistance Program provides for a counsellor on site in Yallambie and Miranda each week.

### Learning and development

ARPANSA's vision for learning is that our employees have access to capability development programs that clearly link to ARPANSA's strategic objectives, represent a good investment, and are leveraged through pre and post training workplace activities.

During 2016–17, staff were provided a range of learning and development opportunities covering corporate compliance responsibilities, targeted agency-wide activities and training to meet the specific developmental needs of individuals.

During the June 2017 succession planning exercise, the development needs of identified potential successors were identified, in addition to knowledge sharing activities and opportunities for current incumbents of roles.

The Plan also sets out the people manager and all-staff capabilities needed to achieve ARPANSA's strategic objectives, which provide focus to our learning activities:

#### Our people

- leverage emerging technologies
- collaborate with purpose
- demonstrate agility
- engage people to build positive relationships
- create solutions
- accountable for quality outcomes

#### Our managers

- inspire direction and purpose
- manage and develop people
- optimise business outcomes
- manage reform and change

### Employment arrangements

The agency's practices for making employment arrangements with its staff are consistent with the requirements of the *Workplace Bargaining Policy 2015* and the *Fair Work Act 2009*.

The types and main features of employment arrangements in operation or available to agency staff during 2016–17 are outlined on the next page.

### Enterprise Agreement

The terms and conditions of employment for non-SES staff are provided through the *ARPANSA Agreement 2011–14* (the Agreement).

The Agreement contains an individual flexibility arrangement term, which enables the Agency to vary the operation of specified terms and conditions provided under the Agreement for individual non-SES staff where necessary and appropriate. At 30 June 2017 ten such arrangements were in place.

Bargaining for the *ARPANSA Agreement 2017–20* was underway at 30 June and the new agreement will come in to effect on 31 August 2017.

In accordance with the Government's Workplace Bargaining Policy 2015, the salary increases delivered to staff by the new agreement will be funded by a range of productivity improvements, with the majority of savings achieved through corporate initiatives, and the removal of restrictive and/or inefficient work practices.

### Individual determinations under the Public Service Act 1999

Comprehensive terms and conditions of employment for agency SES staff are provided via individual determinations made under section 24(1) of the *Public Service Act 1999*. The determinations are made following negotiations between the staff member and the agency.

### Australian workplace agreements

The agency does not have any Australian workplace agreements in place.

### Common law contracts

There are three common law contracts in place for the agency's SES staff.

### Remuneration for senior officials

The agency maintained a remuneration position consistent with equivalent public sector entities during 2016–17. Base salaries and inclusions, such as the allowance paid in lieu of a motor vehicle, complied with Government policy and guidelines. Total remuneration for SES staff may have included non-monetary inclusions or reimbursements for mobile phones and laptops/tablets.

### APS census

Eighty-nine per cent of staff participated in the APS State of the Service Employee Census 2017.

The results show employee engagement at 78 per cent, four per cent higher than the APS average. Following the 2016 census and our continued work in developing effective people management capabilities, there were positive improvements including performance feedback and creating a diverse workforce. Over 90 per cent of employees believe their colleagues in their immediate work area act in accordance with the APS Values in their everyday work and 90 per cent of employees are happy to 'go the extra mile at work'.

Over the next 12 months, we will focus on three key hotspots: change management and innovation, people leader performance effectiveness and recruitment capabilities and decision making. This includes developing supervisor capabilities and the implementation of a learning strategy for all employees.

### Performance and rewards

The agency's approach to performance and reward is to create a culture of ongoing feedback to support continuous development to perform even more effectively in the future, focus on those activities most critical to realising ARPANSA's strategic objectives, and provide recognition of achievements, innovative approaches and enterprise contributions.

There is no provision for the payment of performance pay in ARPANSA's EA or Common Law Contracts.

### ARPANSA award

The ARPANSA Award was first instituted in 2001 to recognise and celebrate significant contributions to the work of ARPANSA by an individual or team. Since then it has been established as an annual event with the presentation being made in conjunction with Australia Day.

The 2016 recipient of the annual ARPANSA Award was **Chris Oliver** - for metrological excellence and originality while organising and conducting the first Australian comparison of small field output factors for radiotherapy.

In addition to the 2016 ARPANSA Award recipient, the following staff were recognised and celebrated for their significant contributions to the work of ARPANSA:

- **The Optically Stimulated Luminescence (OSL) Project Team** - Michael Litwin, Donovan Ryan, Janaka Madamperuma, Tony Ainsworth, Gordon Gee, Robyn Lawler and Sasha Michaels - for their outstanding performance and team work to ensure the successful 'Go Live' of the OSL Solution in July 2016
- **The Wi-Fi in Schools Study Team** - Lydia Tjong, Ken Karipidis and Stuart Henderson (Leading), Don Wijayasinghe, Chen Li, Pubudini Munasinghe, and Rick Tinker (Team) - for their outstanding performance in ensuring the Australian community is informed about the potential health effects from radiofrequency (RF) electromagnetic energy (EME) from mobile phones and Wi-Fi devices.

### The ARPANSA Social Club

The ARPANSA Social Club endeavours to create a healthy workplace and provide a range of social functions to allow all staff to be involved in events throughout the year. The social events are an opportunity for staff from different sections to meet and mingle.

The social club hosts a range of events, including BBQ's and fundraising activities. None of the events would happen without the hard work of those staff who volunteer their time and effort to be a part of the social club committee to ultimately benefit all staff.

## Staffing statistics

As at 30 June 2017 ARPANSA employed 132 staff (not including the CEO). No employee identified themselves as indigenous.

Table 2.1 sets out the salary ranges as at 30 June 2017.

Table 2.2 sets out employees by location, gender and APS classification. The table shows that 83 per cent of staff are located in the Victorian office.

**Table 2.1:** salary ranges as at 30 June 2017

Classification	Salary range (\$)
ARPANSA Graduate	58 524 – 76 221
APS Level 1	43 901 – 49 901
APS Level 2	51 398 – 56 424
APS Level 3	58 524 – 65 484
APS Level 4	67 449 – 70 481
APS Level 5	72 596 – 76 221
APS Level 6	78 507 – 89 800
Executive Level 1	96 987 – 111 593
Executive Level 2 lower	118 512 – 134 581
Executive Level 2 upper	139 963 – 150 329

**Table 2.2:** staff by location, gender and APS classification

Classification	SES		EL 2		EL 1	
	2016	2017	2016	2017	2016	2017
<b>New South Wales</b>						
Female	0	0	0	0	3	3
Male	1	2	5	5	7	6
<b>Total</b>	1	2	5	5	10	9
<b>Victoria</b>						
Female	0	1	6	5	7	10
Male	2	1	10	10	23	24
<b>Total</b>	2	2	16	15	30	34
<b>Total</b>						
Female	0	1	6	5	10	13
Male	3	3	15	15	30	30
<b>Total</b>	3	4	21	20	40	43

APS 6		APS 5		APS 4		APS 3		APS 2		APS 1		Graduate		Total	
2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
0	0	0	0	1	1	3	1	0	2	0	0	0	0	7	7
1	1	0	0	0	0	1	1	0	0	0	0	0	0	15	15
1	1	0	0	1	1	4	2	0	2	0	0	0	0	22	22
11	11	10	7	5	5	10	9	5	3	0	0	0	0	54	51
16	14	6	8	0	0	0	2	0	0	0	0	0	0	57	59
27	25	16	15	5	5	10	11	5	3	0	0	0	0	111	110
11	11	10	7	6	6	13	10	5	5	0	0	0	0	61	58
17	15	6	8	0	0	1	3	0	0	0	0	0	0	72	74
28	26	16	15	6	6	14	13	5	5	0	0	0	0	133	132

Table 2.3 shows that of the 132 employees (not including the CEO), 126 are ongoing and six are non-ongoing. Nine ongoing staff are part-time and one non-ongoing employee is part time.

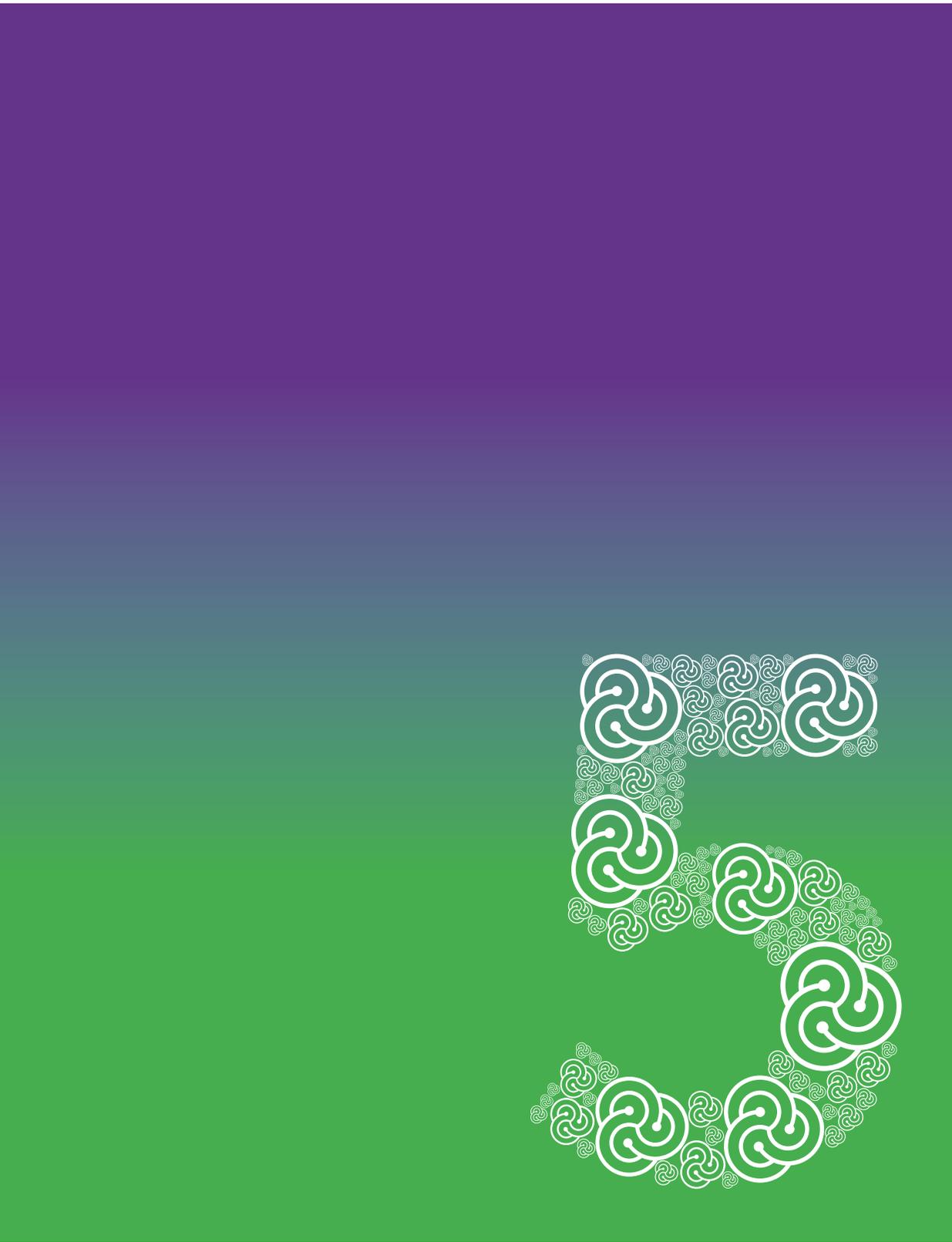
Table 2.4 shows that as at 30 June 2017 Radiation Health Services is the largest branch with 42 staff, followed by the Corporate Office (38), Regulatory Services (23), Medical Radiation Services (18), Office of the CEO (10) and Legal Office (1).

**Table 2.3:** distribution of staff by full or part-time status

	Full-time ongoing		Full-time non-ongoing		Part-time ongoing		Part-time non-ongoing		Total	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Female	45	46	6	3	9	8	1	1	61	58
Male	70	71	2	2	0	1	0	0	72	74
Total	115	117	8	5	9	9	1	1	133	132

**Table 2.4:** distribution of staff by branch/office

	Ongoing		Non-ongoing		Ongoing		Non-ongoing		Ongoing		Non-ongoing	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Branch	Female				Male				Total			
Office of the CEO	5	4	0	0	3	6	0	0	8	10	0	0
Corporate Office	24	25	2	1	12	12	0	0	36	37	2	1
Legal Office	0	0	0	0	1	1	0	0	1	1	0	0
Medical Radiation Services	4	4	3	2	11	10	2	2	15	14	5	4
Radiation Health Services	14	14	2	1	27	27	0	0	41	41	2	1
Regulatory Services	7	7	0	0	16	16	0	0	23	23	0	0
Total	54	54	7	4	70	72	2	2	124	126	9	6





## INDEPENDENT AUDITOR'S REPORT

### To the Minister for Health

#### Opinion

In my opinion, the financial statements of the Australian Radiation Protection and Nuclear Safety Agency for the year ended 30 June 2017:

- comply with Australian Accounting Standards – Reduced Disclosure Requirements and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- present fairly the financial position of the Australian Radiation Protection and Nuclear Safety Agency as at 30 June 2017 and its financial performance and cash flows for the year then ended.

The financial statements of the Australian Radiation Protection and Nuclear Safety Agency, which I have audited, comprise the following statements as at 30 June 2017 and for the year then ended:

- Statement by the Accountable Authority and Chief Financial Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement; and
- Notes to the financial statements, comprising a summary of significant accounting policies and other explanatory information.

#### Basis for Opinion

I conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Australian Radiation Protection and Nuclear Safety Agency in accordance with the relevant ethical requirements for financial statement audits conducted by the Auditor-General and his delegates. These include the relevant independence requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* to the extent that they are not in conflict with the *Auditor-General Act 1997* (the Code). I have also fulfilled my other responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Accountable Authority's Responsibility for the Financial Statements

As the Accountable Authority of the Australian Radiation Protection and Nuclear Safety Agency the Chief Executive Officer is responsible under the *Public Governance, Performance and Accountability Act 2013* for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Reduced Disclosure Requirements and the rules made under that Act. The Chief Executive Officer is also responsible for such internal control as the Chief Executive Officer determines is necessary to enable the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Chief Executive Officer is responsible for assessing the Australian Radiation Protection and Nuclear Safety Agency's ability to continue as a going concern, taking into account whether the entity's operations will cease as a result of an administrative restructure or for any other reason. The Chief Executive Officer is also responsible for disclosing matters related to going concern as applicable and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

#### Auditor's Responsibilities for the Audit of the Financial Statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance

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with the Australian National Audit Office Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with the Australian National Audit Office Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Accountable Authority;
- conclude on the appropriateness of the Accountable Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern; and
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Australian National Audit Office

Mark Vial  
Senior Director  
Delegate of the Auditor-General  
Canberra  
6 September 2017

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## Statement by the Accountable Authority and Chief Financial Officer

In our opinion, the attached financial statements for the year ended 30 June 2017 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Australian Radiation Protection and Nuclear Safety Agency will be able to pay its debts as and when they fall due.



Carl-Magnus Larsson  
Accountable Authority  
6 September 2017



George Savvides  
Chief Financial Officer  
6 September 2017

## Statement of comprehensive income

for the period ended 30 June 2017

	Notes	2017 \$	Original budget 2017 \$	2016 \$
<b>Net cost of services</b>				
<b>Expenses</b>				
Employee benefits	1.1A	16,907,750	16,502,000	16,186,659
Suppliers	1.1B	8,377,116	6,593,000	8,199,893
Depreciation and amortisation	2.2A	2,625,505	2,171,000	2,570,036
Write-down and impairment of assets	1.1C	20,601	-	565,177
Foreign exchange loss	1.1D	11	-	306
<b>Total expenses</b>		<b>27,930,983</b>	25,266,000	27,522,071
<b>Own source income</b>				
<b>Own-source revenue</b>				
Sale of goods and rendering of services	1.2A	6,909,690	5,275,000	6,708,476
Licence fees	1.2B	4,342,224	4,771,000	4,607,286
Other revenue	1.2C	54,000	-	57,000
<b>Total own-source revenue</b>		<b>11,305,914</b>	10,046,000	11,372,762
<b>Gains</b>				
Reversal of write-downs	1.2D	39,810	-	-
<b>Total gains</b>		<b>39,810</b>	-	-
<b>Total own-source income</b>		<b>11,345,724</b>	10,046,000	11,372,762
<b>Net cost of services</b>		<b>16,585,259</b>	15,220,000	16,149,309
Revenue from Government	1.2E	13,049,000	13,049,000	13,056,000
<b>Deficit attributable to the Australian Government</b>		<b>(3,536,259)</b>	(2,171,000)	(3,093,309)
<b>Other comprehensive income</b>				
<b>Items not subject to subsequent reclassification to net cost of services</b>				
Changes in asset revaluation surplus		2,576,857	-	964,987
<b>Total other comprehensive income</b>		<b>2,576,857</b>	-	964,987
<b>Total comprehensive income attributable to the Australian Government</b>		<b>(959,402)</b>	(2,171,000)	(2,128,322)

The above statement should be read in conjunction with the accompanying notes.

## Statement of comprehensive income (continued)

for the period ended 30 June 2017

### Budget variances commentary

The above table provides a comparison between the 2016–17 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2016–17 financial statements. The budget is not audited and does not reflect additional budget estimates provided in the 2016–17 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2017–18 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total income or expense unless the movement is clearly trivial.

### Departmental major budget variances for 2017

#### Explanations of major variances

#### Affected line items (and statement)

##### Suppliers

Increase in suppliers expense relates in part to the rectification and remediation of a legacy radiation site. Additionally the continuation of the Australian Clinical Dosimetry Service was not included in the budget estimate. This increase in expense is offset by the related increase in revenue

Suppliers expense and total own source revenue (statement of comprehensive income), operating cash used - suppliers (cash flow statement).

##### Depreciation

Increase in building depreciation expense is a result of an increase in building valuation, not estimated at budget.

Depreciation expense (statement of comprehensive income), land and building (statement of financial position).

##### Own source revenue

##### Sale of good and services and licence fees.

Overall, the increase in Sale of goods and rendering of services revenue relates to the Australian Clinical Dosimetry Service. This increase in revenue is offset by the related increase in suppliers expense. In relation to licence fees, actual income was lower than that estimated at budget.

Total own source revenue and suppliers expense (statement of comprehensive income), operating cash received - sale of goods and rendering of services (cash flow statement).

##### Total other comprehensive income.

The variance of \$2,576,857 relates to the unbudgeted independent revaluation of land and buildings, leasehold improvements and plant and equipment

Total other comprehensive income (statement of comprehensive income), land and building (statement of financial position).

## Statement of financial position

as at 30 June 2017

	Notes	2017 \$	Original budget 2017 \$	2016 \$
<b>Assets</b>				
<b>Financial assets</b>				
Cash and cash equivalents	2.1A	1,142,627	1,757,000	1,210,302
Trade and other receivables	2.1B	1,924,699	3,147,000	932,522
Other financial assets	2.1C	82,593	48,000	83,067
<b>Total financial assets</b>		<b>3,149,919</b>	4,952,000	2,225,891
<b>Non-financial assets</b>				
Land and buildings	2.2A	26,760,433	24,727,000	24,600,000
Leasehold improvements	2.2A	233,675	-	280,863
Plant and equipment	2.2A	6,489,230	5,150,000	6,917,410
Intangibles	2.2A	1,351,980	802,000	863,731
Inventories	2.2B	1,480,107	1,471,000	1,532,976
Other non-financial assets	2.2C	578,328	403,000	435,115
<b>Total non-financial assets</b>		<b>36,893,753</b>	32,553,000	34,630,095
<b>Total assets</b>		<b>40,043,672</b>	37,505,000	36,855,986
<b>Liabilities</b>				
<b>Payables</b>				
Suppliers	2.3A	1,306,761	-	928,587
Other payables	2.3B	1,670,398	1,705,000	328,642
<b>Total payables</b>		<b>2,977,159</b>	1,705,000	1,257,229
<b>Provisions</b>				
Employee provisions	4.1	4,750,474	5,381,000	4,447,316
<b>Total provisions</b>		<b>4,750,474</b>	5,381,000	4,447,316
<b>Total liabilities</b>		<b>7,727,633</b>	7,086,000	5,704,545
<b>Net assets</b>		<b>32,316,039</b>	30,419,000	31,151,441
<b>Equity</b>				
Contributed equity		21,606,000	21,606,000	19,482,000
Reserves		17,186,283	13,644,000	14,609,426
Retained surplus/(accumulated deficit)		(6,476,244)	(4,831,000)	(2,939,985)
<b>Total equity</b>		<b>32,316,039</b>	30,419,000	31,151,441

The above statement should be read in conjunction with the accompanying notes.

## Statement of financial position (continued)

as at 30 June 2017

### Budget variances commentary

The above table provides a comparison between the 2016–17 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2016–17 financial statements. The budget is not audited and does not reflect additional budget estimates provided in the 2016–17 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2017–18 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total assets or liabilities unless the movement is clearly trivial.

### Departmental major budget variances for 2017

Explanations of major variances	Affected line items (and statement)
<p><b>Land and buildings</b></p> <p>The variance relates to the independent revaluation of land and buildings in 2017 and 2016, since the budget was prepared.</p>	<p><i>Land and buildings and reserves (statement of financial position).</i></p>
<p><b>Leasehold improvements</b></p> <p>The variance relates to the independent revaluation of leasehold improvements in the current year.</p>	<p><i>Leasehold improvements, trade and other receivables (statement of financial position) and investing cash used - purchase of property plant and equipment financing cash received - contributed equity (cash flow statement).</i></p>
<p><b>Plant and equipment</b></p> <p>The variance relates to the independent revaluation of plant and equipment in the current year.</p>	<p><i>Plant and equipment and trade and other receivables (statement of financial position) and investing cash used - purchase of property plant and equipment and financing cash received - contributed equity (cash flow statement).</i></p>
<p><b>Other non-financial assets</b></p> <p>Actual prepaid expenses were higher than those forecast, and specifically relate to software support.</p>	<p><i>Non-financial assets (statement of financial position).</i></p>
<p><b>Payables</b></p> <p><b>Suppliers and other payables</b></p> <p>The increase in payables relates in part to the rectification and remediation of a legacy radiation site, and to unearned revenue associated with the Australian Clinical Dosimetry Service.</p>	<p><i>Payables (statement of financial position). Suppliers expense and total own source revenue (statement of comprehensive income)</i></p>
<p><b>Employee provisions</b></p> <p>Employee provisions are lower than budgeted due to the departure of long serving APS employees.</p>	<p><i>Employee provisions and cash and cash equivalents (statement of financial position). Payments to employees (cash flow statement).</i></p>

## Statement of changes in equity

for the period ended 30 June 2017

	2017	Original budget 2017	2016
	\$	\$	\$
<b>Contributed equity</b>			
<b>Opening balance</b>			
Opening balance	19,482,000	19,482,000	17,503,000
<b>Adjusted opening balance</b>	<b>19,482,000</b>	<b>19,482,000</b>	<b>17,503,000</b>
<b>Transactions with owners</b>			
<b>Contributions by owners</b>			
Departmental capital budget	2,124,000	2,124,000	1,979,000
<b>Total transactions with owners</b>	<b>2,124,000</b>	<b>2,124,000</b>	<b>1,979,000</b>
<b>Closing balance as at 30 June</b>	<b>21,606,000</b>	<b>21,606,000</b>	<b>19,482,000</b>
<b>Retained earnings</b>			
<b>Opening balance</b>			
Balance carried forward from previous period	(2,939,985)	(2,660,000)	153,324
<b>Adjusted opening balance</b>	<b>(2,939,985)</b>	<b>(2,660,000)</b>	<b>153,324</b>
<b>Comprehensive income</b>			
Deficit for the period	(3,536,259)	(2,171,000)	(3,093,309)
<b>Total comprehensive income</b>	<b>(3,536,259)</b>	<b>(2,171,000)</b>	<b>(3,093,309)</b>
<b>Closing balance as at 30 June</b>	<b>(6,476,244)</b>	<b>(4,831,000)</b>	<b>(2,939,985)</b>
<b>Asset revaluation reserve</b>			
<b>Opening balance</b>			
Balance carried forward from previous period	14,609,426	13,644,000	13,644,439
<b>Adjusted opening balance</b>	<b>14,609,426</b>	<b>13,644,000</b>	<b>13,644,439</b>
<b>Comprehensive income</b>			
Other comprehensive income	2,576,857	-	964,987
<b>Total comprehensive income</b>	<b>2,576,857</b>	<b>-</b>	<b>964,987</b>
<b>Closing balance as at 30 June</b>	<b>17,186,283</b>	<b>13,644,000</b>	<b>14,609,426</b>

## Statement of changes in equity (continued)

for the period ended 30 June 2017

	2017	Original budget 2017	2016
	\$	\$	\$
<b>Total equity</b>			
<b>Opening balance</b>			
Balance carried forward from previous period	31,151,441	30,466,000	31,300,763
<b>Adjusted opening balance</b>	<b>31,151,441</b>	<b>30,466,000</b>	<b>31,300,763</b>
<b>Comprehensive income</b>			
Other comprehensive income	2,576,857	-	964,987
Deficit for the period	(3,536,259)	(2,171,000)	(3,093,309)
<b>Total comprehensive income</b>	<b>(959,402)</b>	<b>(2,171,000)</b>	<b>(2,128,322)</b>
<b>Transactions with owners</b>			
<b>Contributions by owners</b>			
Departmental capital budget	2,124,000	2,124,000	1,979,000
<b>Total transactions with owners</b>	<b>2,124,000</b>	<b>2,124,000</b>	<b>1,979,000</b>
<b>Closing balance as at 30 June</b>	<b>32,316,039</b>	<b>30,419,000</b>	<b>31,151,441</b>

The above statement should be read in conjunction with the accompanying notes.

### Accounting policy

#### Equity injections

Amounts appropriated which are designated as 'equity injections' for a year (less any formal reductions) and departmental capital budgets (DCBs) are recognised directly in contributed equity in that year.

#### Restructuring of administrative arrangements

Net assets received from or relinquished to another government entity under a restructuring of administrative arrangements are adjusted at their book value directly against contributed equity.

## Statement of changes in equity (continued)

for the period ended 30 June 2017

### Budget variances commentary

The above table provides a comparison between the 2016–17 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2016–17 financial statements. The budget is not audited and does not reflect additional budget estimates provided in the 2016–17 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2017–18 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

### Departmental major budget variances for 2017

#### Explanations of major variances

#### Affected line items (and statement)

##### Retained earnings

The variance in relation to retained earnings mainly reflects the increase in expenses as detailed in the budget variance commentary of the statement of comprehensive income.

*Other comprehensive income (statement of comprehensive income).*

##### Asset Revaluation Reserves

Increase relates to the actual independent revaluation of land and buildings in 2017 and 2016, and leasehold improvements and plant and equipment in 2017, since the budget was prepared.

*Land and buildings, leasehold improvements and plant and equipment and reserves (statement of financial position).*

## Cash flow statement

for the period ended 30 June 2017

	Notes	2017 \$	Original budget 2017 \$	2016 \$
<b>Operating activities</b>				
<b>Cash received</b>				
Appropriations		13,049,000	13,049,000	14,342,000
Sales of goods and rendering of services		7,398,691	4,790,000	7,079,701
Other cash received		4,342,224	4,771,000	4,607,286
Net GST received		100,988	485,000	516,264
<b>Total cash received</b>		<b>24,890,903</b>	23,095,000	26,545,251
<b>Cash used</b>				
Employees		(16,127,761)	(16,503,000)	(17,024,289)
Suppliers		(8,213,497)	(5,891,000)	(10,087,893)
Net GST paid		-	(701,000)	-
<b>Total cash used</b>		<b>(24,341,258)</b>	(23,095,000)	(27,112,182)
<b>Net cash (used by)/from operating activities</b>		<b>549,645</b>	-	(566,931)
<b>Investing activities</b>				
<b>Cash used</b>				
Purchase of property, plant, equipment and intangibles		(1,990,320)	(2,124,000)	(3,365,604)
<b>Total cash used</b>		<b>(1,990,320)</b>	(2,124,000)	(3,365,604)
<b>Net cash (used by) investing activities</b>		<b>(1,990,320)</b>	(2,124,000)	(3,365,604)
<b>Financing activities</b>				
<b>Cash received</b>				
Contributed equity		1,373,000	2,124,000	3,632,000
<b>Total cash received</b>		<b>1,373,000</b>	2,124,000	3,632,000
<b>Net cash from financing activities</b>		<b>1,373,000</b>	2,124,000	3,632,000
<b>Net (decrease)/increase in cash held</b>		<b>(67,675)</b>	-	(300,535)
Cash and cash equivalents at the beginning of the reporting period		1,210,302	1,757,000	1,510,837
<b>Cash and cash equivalents at the end of the reporting period</b>	2.1A	<b>1,142,627</b>	1,757,000	1,210,302

The above statement should be read in conjunction with the accompanying notes.

## Cash flow statement

for the period ended 30 June 2017

### Budget variances commentary

The above table provides a comparison between the 2016–17 *Portfolio Budget Statements* (PBS) budget and the final financial outcome in the 2016–17 financial statements. The budget is not audited and does not reflect additional budget estimates provided in the 2016–17 *Portfolio Additional Estimates Statements* (PAES) or the revised budget provided as part of the 2017–18 *Portfolio Budget Statements* (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total cash received or used unless the movement is clearly trivial.

### Departmental major budget variances for 2017

#### Explanations of major variances

Variances relating to cash flows occur because of the factors detailed under expenses, own source income, assets or liabilities.

#### Contributed equity

Variance of \$751,000 relates to the undrawn departmental capital budget (DCB)

#### Affected line items (and statement)

*Operating, investing, financing activities (cash flow statement)*

*Financing activities (cash flow statement), trade and other receivables (statement of financial position)*

## Overview

### Objectives of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

ARPANSA is an Australian Government controlled not-for-profit entity. It is a non-corporate Commonwealth Entity under the *Public Governance Performance and Accountability Act 2013*. The objectives of ARPANSA are to: *protect people and the environment from the harmful effects of radiation.*

The entity is structured to meet one outcome:

"Protection of people and the environment through radiation protection and nuclear safety research, policy, advice, codes, standards, services and regulation."

The continued existence of the entity in its present form and with its present programs is dependent on government policy and on continuing funding by Parliament for the entity's administration and programs.

ARPANSA's activities contributing toward the outcome are classified as departmental. Departmental activities involve the use of assets, liabilities, income and expenses controlled or incurred by the entity in its own right.

### Basis of preparation of the financial report

The financial statements are general purpose financial statements and are required by section 42 of the *Public Governance Performance and Accountability Act 2013*.

The financial statements and notes have been prepared in accordance with:

- Public Governance, Performance and Accountability (Financial Reporting) Rule 2015* (FRR) for reporting periods ending on or after 1 July 2015
- Australian Accounting Standards and Interpretations - Reduced Disclosure Requirements issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and are in accordance with historical cost convention, except for certain assets and liabilities at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position. The financial statements are presented in Australian dollars.

### Accounting judgements and estimates

In the process of applying the accounting policies listed in this note, ARPANSA have made the following judgements that have the most significant impact on the amounts recorded in the financial statements:

- The fair value of land and buildings is taken to be the market value and depreciated replacement cost respectively as determined by an independent valuer.
- The long service leave liability is calculated using the shorthand method developed by the Australian Government Actuary. This method is impacted by fluctuations in the Commonwealth Government 10-year Treasury Bond rate and the entity's estimated salary growth rates.

No accounting assumptions or estimates have been identified that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next accounting period.

### Future Australian Accounting Standard requirements

The following new standards, revised or amending standards and interpretations that were issued prior to the signing of the statement by the Accountable Authority and Chief Financial Officer and are applicable to the future reporting period are expected to have an effect on the entity's financial statements.

Standard/ Interpretation	Application date for entity	Nature of impending changes in accounting policy and likely impact on initial application
AASB 9 <i>Financial Instruments</i>	1 July 2018	Incorporates the final requirements for all three phases of the financial instruments project: classification and measurement, impairments and hedge accounting. Likely impact - the classification of financial assets.
AASB 15 <i>revenue from contracts with customers</i>	1 July 2019	Specifies the accounting treatment for all revenue arising from contracts with customers. Likely impact - the timing of revenue recognition
AASB 16 <i>leases</i>	1 July 2019	Requires lessees to recognise almost all leases as assets and liabilities. Likely impact - recognition of lease on the statement of financial position

### Taxation

The entity is exempt from all forms of taxation except Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST).

Revenues, expenses and assets are recognised net of GST, except:

- where the amount of GST incurred is not recoverable from the Australian Taxation Office
- for receivables and payables.

### Events after the Reporting Period

There have been no significant subsequent events after the reporting period that impact on the financial statement for the year ended 30 June 2017.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Financial performance

This section analyses the financial performance of ARPANSA for the year ended 2017

2017	2016
\$	\$

### NOTE 1.1 EXPENSES

#### Note 1.1A: Employee benefits

Wages and salaries	12,019,559	11,729,103
Superannuation - defined contribution	1,890,724	1,745,099
Superannuation - defined benefit	464,577	408,643
Leave and other entitlements	2,303,767	1,884,931
Separation and redundancies	229,123	418,883
<b>Total employee benefits</b>	<b>16,907,750</b>	<b>16,186,659</b>

### Accounting policy

Accounting policies for employee related expenses are contained in the people and relationships section.

**Notes to and forming part of the financial statements**

for the period ended 30 June 2017

	2017	2016
	\$	\$
<b>Note 1.1B: Suppliers</b>		
<b>Goods and services supplied or rendered</b>		
Audit fees - ANAO	54,000	57,000
Audit fees - outsourced	116,426	112,561
Advisory council and committees	101,789	127,906
Communications	450,991	355,998
Construction and maintenance - Comprehensive nuclear test ban treaty	601,719	601,815
Contractors/Consultants	1,081,764	1,142,575
Demolition and remediation	698,105	-
Information technology	806,620	854,821
Postage and freight	189,808	182,833
Reference material & subscriptions	320,454	307,518
Repair and maintenance	599,530	556,692
Training and conferences	332,105	363,055
Travel	1,163,179	1,286,801
Utilities	436,541	477,773
Other goods and services	1,145,000	1,321,290
<b>Total goods and services supplied or rendered</b>	<b>8,098,031</b>	<b>7,748,638</b>
Goods supplied	1,821,560	1,501,531
Services rendered	6,276,471	6,247,107
<b>Total goods and services supplied or rendered</b>	<b>8,098,031</b>	<b>7,748,638</b>
<b>Other supplier expenses</b>		
Operating lease rentals	246,161	391,224
Workers compensation premiums	32,924	60,031
<b>Total other supplier expenses</b>	<b>279,085</b>	<b>451,255</b>
<b>Total supplier expenses</b>	<b>8,377,116</b>	<b>8,199,893</b>

**Notes to and forming part of the financial statements**

for the period ended 30 June 2017

	2017	2016
	\$	\$
<b>Leasing commitments</b>		
ARPANSA in its capacity as lessee:		
<b>Lease for office accommodation</b>		
- Four year office accommodation lease with two further extension options of two years each. Lease payments are subject to an annual CPI increase.		
<b>Agreement for the provision of motor vehicle to senior executive officers.</b>		
- No contingent rentals exist. There are no renewal or purchase options available to the agency		
<b>Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:</b>		
Within 1 year	243,622	240,807
Between 1 to 5 years	390,542	623,115
<b>Total operating lease commitments</b>	<b>634,164</b>	<b>863,922</b>

**Accounting policy**

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased assets. An operating lease is a lease that is not a finance lease. In operating leases, the lessor effectively retains substantially all such risks and benefits.

Operating lease payments are expensed on a straight-line basis which is representative of the pattern of benefits derived from the leased assets.

**Note 1.1C: Write-down and impairment of assets**

Impairment on financial assets	1,173	546
Property, plant and equipment - write-off	18,468	16,515
Computer software - write-off		-
Inventories - write-off	960	548,116
<b>Total write-down and impairment of assets</b>	<b>20,601</b>	<b>565,177</b>

**Note 1.1D: Foreign exchange losses**

Non-speculative	11	306
<b>Total foreign exchange losses</b>	<b>11</b>	<b>306</b>

**Accounting policy**

Gains and losses from foreign currency are recognised when incurred.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

	2017	2016
	\$	\$

### NOTE 1.2 OWN-SOURCE REVENUE AND GAINS

#### Note 1.2A: Sale of goods and rendering of services

Scientific services - Personal Radiation Monitoring Service	2,284,252	2,285,618
Construction and maintenance - Comprehensive Nuclear-Test-Ban Treaty	1,769,831	1,720,854
Australian Clinical Dosimetry Service	1,468,514	1,198,874
Other scientific services	1,387,093	1,503,130
<b>Total sale of goods and rendering of services</b>	<b>6,909,690</b>	<b>6,708,476</b>

#### Accounting policy

Revenue from the sale of goods is recognised when:

- the risks and rewards of ownership have been transferred to the buyer
- the entity retains no managerial involvement nor effective control over the goods
- the revenue and transaction costs incurred can be reliably measured
- it is probable that the economic benefits associated with the transaction will flow to the entity.

Revenue from rendering of services is recognised by reference to the stage of completion of contracts at the reporting date.

The revenue is recognised when:

- the amount of revenue, stage of completion and transaction costs incurred can be reliably measured
- the probable economic benefits associated with the transaction will flow to the entity.

The stage of completion of contracts at the reporting date is determined by reference to the proportion that costs incurred to date bear to the estimated total costs of the transaction.

Receivables for goods and services, which have 30 day terms, are recognised at the nominal amounts due less any impairment allowance account. Collectability of debts is reviewed at end of reporting period. Allowances are made when collectability of the debt is no longer probable.

#### Note 1.2B: Licence fees

Application fees	150,704	43,429
Annual charges	4,191,520	4,563,857
<b>Total licence fees</b>	<b>4,342,224</b>	<b>4,607,286</b>

#### Accounting policy

Under paragraph 34(b) of the *Australian Radiation Protection and Nuclear Safety Act 1998*, an application for a licence must be accompanied by a fee prescribed in the regulations. Revenue for licence applications is recognised when an application for a licence is received.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

	2017	2016
	\$	\$

### Note 1.2C: Other revenue

Resources received free of charge	54,000	57,000
<b>Total other revenue</b>	<b>54,000</b>	<b>57,000</b>

#### Accounting policy

Resources received free of charge are recognised as revenue when and only when a fair value can be reliably determined and the services would have been purchased if they had not been donated. Use of those resources is recognised as an expense.

Resources received free of charge are recorded as either revenue or gains depending on their nature.

### Gains

#### Note 1.2D: Reversal of write-downs

Revaluation increments	39,810	-
<b>Total gains</b>	<b>39,810</b>	<b>-</b>

#### Accounting policy

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reverse a previous revaluation increment for that class (note 2.2 refers)

### Revenue from Government

#### Note 1.2E: Revenue from government

##### Appropriation:

Departmental appropriation	13,049,000	13,056,000
<b>Total revenue from government</b>	<b>13,049,000</b>	<b>13,056,000</b>

#### Accounting policy

Amounts appropriated for departmental appropriations for the year (adjusted for any formal additions and reductions) are recognised as revenue from government when the entity gains control of the appropriation, except for certain amounts that relate to activities that are reciprocal in nature, in which case revenue is recognised only when it has been earned.

Section 56 (3) of the *Australian Radiation Protection and Nuclear Safety Act 1998*, requires that money appropriated by the Parliament be transferred to the special account (notes 2.1A and 3.2 refer).

Appropriations receivable are recognised at their nominal amounts.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Financial position

This section analyses ARPANSA's assets used to conduct its operations and the operating liabilities incurred as a result, for the year ended 2017. Employee related information is disclosed in the People and relationships section.

	2017	2016
	\$	\$

### NOTE 2.1 FINANCIAL ASSETS

#### Note 2.1A: Cash and cash equivalents

Cash in special accounts	1,132,041	1,190,489
Cash on hand or on deposit	10,586	19,813
<b>Total cash and cash equivalents</b>	<b>1,142,627</b>	<b>1,210,302</b>

#### Accounting policy

Cash is recognised at its nominal amount. Cash and cash equivalents includes:

- cash on hand
- cash at bank
- cash in special accounts.

#### Note 2.1B: Trade and other receivables

##### Goods and services receivables

Goods and services	1,039,796	884,523
<b>Total goods and services receivables</b>	<b>1,039,796</b>	<b>884,523</b>

##### Appropriations receivable:

For existing program	751,000	-
<b>Total appropriations receivables</b>	<b>751,000</b>	<b>-</b>

##### Other receivables

Statutory receivables - GST	148,363	45,238
Other - leave liability transfer and bond advance	-	18,337
<b>Total other receivables</b>	<b>148,363</b>	<b>63,575</b>
<b>Total trade and other receivables (gross)</b>	<b>1,939,159</b>	<b>948,098</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

	2017	2016
	\$	\$

### Less impairment allowance account

Goods and services	(14,460)	(15,576)
<b>Total trade and other receivables (net)</b>	<b>1,924,699</b>	<b>932,522</b>

Goods and services receivable was with entities external to the Australian Government.

Credit terms are net 30 days (2016: 30 days)

### Accounting policy

#### Receivables

Trade receivables, and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'receivables'. Receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

### Reconciliation of impairment allowance

#### Goods and services

<b>Opening balance</b>	<b>15,576</b>	17,503
Amounts written off	(2,289)	(2,473)
Increase/decrease recognised in net cost of services	1,173	546
<b>Closing balance</b>	<b>14,460</b>	15,576

#### Note 2.1C: Other financial assets

Accrued revenue	82,593	83,067
<b>Total other financial assets</b>	<b>82,593</b>	<b>83,067</b>

Total other financial assets are expected to be recovered in no more than 12 months.

### Accounting policy

Financial assets are assessed for impairment at the end of each reporting period.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### NOTE 2.2 NON-FINANCIAL ASSETS

#### Note 2.2A: Reconciliation of the opening and closing balances of property, plant and equipment

Reconciliation of the opening and closing balances of property, plant and equipment for 2017

	Land \$	Buildings \$	Leasehold improvements \$	PP & E \$	Computer software <sup>1</sup> \$	Other intangibles - trademarks \$	Total \$
<b>As at 1 July 2016</b>							
Gross book value	7,500,000	17,100,000	306,396	11,662,191	3,168,671	4,620	39,741,878
Accumulated depreciation and impairment	-	-	(25,533)	(4,744,781)	(2,304,940)	(4,620)	(7,079,874)
<b>Net book value 1 July 2016</b>	<b>7,500,000</b>	<b>17,100,000</b>	<b>280,863</b>	<b>6,917,410</b>	<b>863,731</b>	<b>-</b>	<b>32,662,004</b>
Additions:							
By purchase	-	876,475	-	474,136	639,709	-	1,990,320
Revaluations and impairments recognised in other comprehensive income	1,500,000	738,133	29,411	309,313	-	-	2,576,857
Revaluations recognised in net cost of services				39,810			39,810
Depreciation and amortisation	-	(954,175)	(76,599)	(1,421,091)	(173,640)	-	(2,625,505)
Other movements							
Reclassification	-	-	-	(22,180)	22,180	-	-
Initial recognition	-	-	-	210,300			210,300
Disposals:							
Write-offs	-	-	-	(18,468)	-	-	(18,468)
<b>Net book value 30 June 2017</b>	<b>9,000,000</b>	<b>17,760,433</b>	<b>233,675</b>	<b>6,489,230</b>	<b>1,351,980</b>	<b>-</b>	<b>34,835,318</b>
<b>Net book value as of 30 June 2017 represented by:</b>							
Gross book value	9,000,000	17,760,433	233,675	6,489,230	3,820,976	4,620	37,308,934
Accumulated depreciation and impairment	-	-	-		(2,468,996)	(4,620)	(2,473,616)
<b>Net book value 30 June 2017</b>	<b>9,000,000</b>	<b>17,760,433</b>	<b>233,675</b>	<b>6,489,230</b>	<b>1,351,980</b>	<b>-</b>	<b>34,835,318</b>

1 The carrying amount of computer software included \$568,259 purchased software and \$783,721 internally developed software.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

There were no indicators of impairment found for property, plant and equipment.

No property plant and equipment or intangibles are expected to be sold or disposed of within the next 12 months.

### Revaluations of non-financial assets

All revaluation were conducted in accordance with the revaluation policy as stated in this note. On 30 June 2017, an independent valuer conducted the revaluations.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Accounting policy

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor's accounts immediately prior to the restructuring.

### Asset recognition threshold

Purchases of property, plant and equipment are recognised initially at cost in the statement of financial position, except for purchases costing less than \$2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

### Revaluations

Following initial recognition at cost, property plant and equipment is carried at fair value. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reverse a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

Fair values for each class of asset are determined as shown below:

Asset class	Fair value measures at:
Land	Market value
Buildings exc. leasehold improvement	Depreciated replacement cost
Leasehold improvements	Depreciated replacement cost
Plant and equipment	Market value

On 30 June 2017 independent valuers from the *Jones Lang LaSalle Advisory Services Pty Ltd* conducted a valuation of land and buildings, leasehold improvements and plant and equipment.

Revaluation increments of \$1,500,000 for land (2016: nil), \$738,133 for buildings on freehold land (2016: \$964,987), \$29,411 for leasehold improvements (2016: nil) and \$309,313 for plant and equipment (2016: nil) were transferred to the asset revaluation reserve surplus by asset class and included in the equity section of the statement of financial position

A revaluation increment of \$39,810 for plant and equipment reversed a revaluation decrement of \$39,810 previously recognised in the surplus/deficit.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Depreciation

Depreciable property plant and equipment assets, are written-off to their estimated residual values over their estimated useful lives to ARPANSA, using the straight-line method of depreciation. Leasehold improvements are depreciated using the straight line method over the lesser of the estimated useful life of the leasehold improvements or the unexpired period of the lease.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2017	2016
Buildings on freehold land	18 years	18 years
Leasehold improvements	Lease term - 4 years	Lease term - 4 years
Plant and equipment	1 to 45 years	1 to 27 years

### Impairment

All assets were assessed for impairment at 30 June 2017. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if ARPANSA were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

### Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

### Intangibles

ARPANSA's intangibles comprise purchased software, internally developed software for internal use and trade marks. These assets are carried at cost less accumulated amortisation and accumulated impairment losses.

Intangibles are amortised on a straight-line basis over their anticipated useful life. The useful lives of ARPANSA's intangibles are 5 to 15.5 years (2015-16: 5 to 15.5 years).

All intangibles assets were assessed for indications of impairment as at 30 June 2017.

**Notes to and forming part of the financial statements***for the period ended 30 June 2017*

	2017	2016
	\$	\$

**Note 2.2B: Inventories**

Inventories held for sale

Finished goods	16,439	24,469
<b>Total Inventories held for sale</b>	<b>16,439</b>	<b>24,469</b>
Inventories held for distribution	1,463,668	1,508,507
<b>Total inventories</b>	<b>1,480,107</b>	<b>1,532,976</b>

During 2016–17, \$45,729 of inventory held for sale was recognised as an expense (2015–16: \$37,745).

During 2016–17, \$65,679 of inventory held for distribution was recognised as an expense (2015–16: \$3,902).

All inventory is expected to be sold or distributed in the next 12 months.

**Accounting Policy**

Inventories held for sale are valued at the lower of cost and net realisable value.

Inventories held for distribution are valued at cost, adjusted for any loss of service potential.

**Note 2.2C: Other non-financial assets**

Prepayments	578,328	435,115
<b>Total other non-financial assets</b>	<b>578,328</b>	<b>435,115</b>

No indicators of impairment were found for other non-financial assets.

**Notes to and forming part of the financial statements***for the period ended 30 June 2017*

	2017	2016
	\$	\$

**NOTE 2.3: PAYABLES****Note 2.3A: Suppliers**

Trade creditors and accruals	1,306,761	928,587
<b>Total suppliers</b>	<b>1,306,761</b>	<b>928,587</b>

Settlement is usually made within 30 days.

	2017	2016
	\$	\$

**Note 2.3B: Other payables**

Salaries and wages	418,127	89,896
Superannuation	31,986	8,386
Separation and redundancies	125,000	-
Unearned income	319,783	213,547
Demolition and remediation	767,916	-
Other	7,586	16,813
<b>Total other payables</b>	<b>1,670,398</b>	<b>328,642</b>

**Accounting policy****Parental leave payments scheme**

All amounts received by the entity under the parental leave payments scheme have been paid to employees. The total amount received under this scheme was \$24,214 (2016: \$26,305).

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Funding

This section identifies ARPANSA's funding structure.

#### NOTE 3.1: APPROPRIATIONS

In accordance with section 56 of the *Australian Radiation Protection and Nuclear Safety Act 1998*, all monies received by ARPANSA are to be paid into the ARPANSA Special Account. Pursuant to this section, all monies paid into this account are automatically appropriated for the use of ARPANSA.

#### Note 3.1A: Annual appropriations ('recoverable GST exclusive')

##### Annual Appropriations for 2017

	Annual appropriation <sup>1</sup> \$	Adjustments to appropriation <sup>2</sup> \$	Total appropriation \$	Appropriation applied in 2017 (current and prior years) \$	Variance <sup>3</sup> \$
<b>Departmental</b>					
<b>Ordinary annual services</b>	13,049,000	-	13,049,000	13,049,000	-
<b>Capital budget<sup>4</sup></b>	2,124,000		2,124,000	1,373,000	751,000
<b>Other services</b>					
Equity	-	-	-	-	-
<b>Total departmental</b>	<b>15,173,000</b>	<b>-</b>	<b>15,173,000</b>	<b>14,422,000</b>	<b>751,000</b>

#### Notes

- No funds have been withheld (Section 51 of the PGPA Act) or quarantined for administrative purposes.
- No adjustments have been applied to appropriations.
- The variance of \$751,000 reflects the appropriation receivable amount at 30 June 2017.
- Departmental capital budgets are appropriated through appropriation acts (No.1, 3, 5). They form part of ordinary annual services, and are not separately identified in the appropriation acts.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

#### Annual appropriations for 2016

	Annual appropriation <sup>1</sup> \$	Adjustments to appropriation <sup>2</sup> \$	Total appropriation \$	Appropriation applied in 2016 (current and prior years) \$	Variance <sup>3</sup> \$
<b>Departmental</b>					
<b>Ordinary annual services</b>	13,064,000	-	13,064,000	14,342,000	(1,278,000)
<b>Capital budget<sup>4</sup></b>	1,979,000		1,979,000	3,632,000	(1,653,000)
<b>Other services</b>					
Equity	-	-	-	-	-
<b>Total departmental</b>	<b>15,043,000</b>	<b>-</b>	<b>15,043,000</b>	<b>17,974,000</b>	<b>(2,931,000)</b>

#### Notes

- A Section 51 determination has resulted in the permanent loss of control of \$8,000.
- No adjustments have been applied to appropriations.
- The variance of \$2,931,000 for departmental ordinary annual services reflects the quarantined amount of \$8,000 and movement in appropriation receivable of \$2,939,000.
- Departmental capital budgets are appropriated through appropriation acts (No.1, 3, 5). They form part of ordinary annual services, and are not separately identified in the appropriation acts.

#### Note 3.1B: Unspent departmental annual appropriations ('recoverable GST exclusive')

	2017 \$	2016 \$
<b>Authority</b>		
<b>Departmental</b>		
<i>Appropriation Act (No. 1) 2016-17</i>	761,586	-
<i>Appropriation Act (No. 1) 2015-16</i>	-	19,813
<b>Total departmental</b>	<b>761,586</b>	<b>19,813</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

2017  
\$

2016  
\$

### NOTE 3.2: SPECIAL ACCOUNTS

#### ARPANSA Special Account (departmental)

Establishing Instrument: *Australian Radiation Protection and Nuclear Safety Act 1998; s56(4)*

Appropriation: *Public Governance, Performance and Accountability Act 2013; s80*

Purpose: The purpose of the Special Account is set out in the *Australian Radiation Protection and Nuclear Safety Act 1998* at section 56(4):

"The purposes of the Special Account are to make payments

(a) to further the object of this act (as set out in section 3)

(b) otherwise in connection with the performance of the CEO's functions under this Act or the Regulations."

<b>Balance brought forward from previous period</b>	<b>1,210,302</b>	1,510,837
<b>Increases</b>		
Departmental	<b>26,263,903</b>	30,177,251
<b>Total increase</b>	<b>26,263,903</b>	30,177,251
<b>Available for payments</b>	<b>27,474,205</b>	31,688,088
<b>Decreases</b>		
Departmental	<b>(26,331,578)</b>	(30,477,786)
<b>Total decrease</b>	<b>(26,331,578)</b>	(30,477,786)
<b>Total balance carried to next period</b>	<b>1,142,627</b>	1,210,302
<b>Balance represented by:</b>		
Cash held in entity bank accounts	<b>1,142,627</b>	1,210,302
<b>Total balance carried to next period</b>	<b>1,142,627</b>	1,210,302

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### People and relationships

This section identifies a range of employment and post employment benefits provided to our people and our relationships with other key people.

2017  
\$

2016  
\$

### NOTE 4.1: PROVISIONS

#### Employee provisions

<b>Leave</b>	<b>4,750,474</b>	4,447,316
Total employee provisions	<b>4,750,474</b>	4,447,316

#### Accounting Policy

Liabilities for 'short-term employee benefits' and termination benefits expected to be settled within twelve months of the end of the reporting period are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

Other long-term employee benefit liabilities are measured as net total of the present value of the defined benefit obligation at the end of the reporting period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

#### Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the entity is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will be applied at the time the leave is taken, including the Entity's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave is recognised and measured at the present value of the estimated future cash flows to be made in respect of employees as at 30 June 2017. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

#### Separation and Redundancy

Provision is made for separation and redundancy benefit payments. The Entity recognises a provision for termination when it has developed a detailed plan for terminations and has informed those employees affected that it will carry out the terminations.

#### Superannuation

The majority of staff of ARPANSA are members of the *Commonwealth Superannuation Scheme (CSS)*, the *Public Sector Superannuation Scheme (PSS)* or the *PSS accumulation plan (PSSap)*, and the *Australian Government Employee Superannuation Trust (AGEST)*. There are a small number of staff covered under various other superannuation schemes.

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap is a defined contribution scheme. The AGEST Superannuation Trust is an industry fund which was previously the Australian Government Default Superannuation fund for non-ongoing employees.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported in the Department of Finance's administered schedules and notes.

ARPANSA makes employer contributions to the employees' superannuation scheme at rates determined by an actuary to be sufficient to meet the current cost to the Government. ARPANSA accounts for the contributions as if they were contributions to defined contribution plans.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the final fortnight of the year.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### NOTE 4.2: KEY MANAGEMENT PERSONNEL REMUNERATION

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. ARPANSA has determined the key management personnel to be the Chief Executive and four branch and office heads. Key management personnel remuneration is reported in the table below:

	2017 \$
Short-term employee benefits	964,503
Post-employment benefits	140,596
Other long-term employee benefits	97,895
<b>Total key management personnel remuneration expenses<sup>1</sup></b>	<b>1,202,994</b>

The total number of key management personnel that are included in the above table are 5 individuals.

- The above key management personnel remuneration excludes the remuneration and other benefits of the Portfolio Minister. The Portfolio Minister's remuneration and other benefits are set by the Remuneration Tribunal and are not paid by the entity.

### NOTE 4.3: RELATED PARTY DISCLOSURES

#### Related party relationships:

The entity is an Australian Government controlled entity. Related parties to this entity are key management personnel including the Portfolio Minister and Executive, and other Australian Government entities.

#### Transactions with related parties:

Given the breadth of Government activities, related parties may transact with the government sector in the same capacity as ordinary citizens. Such transactions include the payment or refund of taxes, receipt of a Medicare rebate or higher education loans. These transactions have not been separately disclosed in this note.

Giving consideration to relationships with related entities, and transactions entered into during the reporting period by the entity, it has been determined that there are no related party transactions to be separately disclosed.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### Managing uncertainties

This section analyses how ARPANSA manages financial risks within its operating environment.

### NOTE 5.1: CONTINGENT LIABILITIES AND ASSETS

As at 30 June 2017 ARPANSA had no quantifiable or unquantifiable contingencies. (2016: Nil)

### Accounting policy

Contingent liabilities and contingent assets are not recognised in the statement of financial position but are reported in the notes. They may arise from uncertainty as to the existence of a liability or asset, or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

2017  
\$

2016  
\$

### NOTE 5.2: FINANCIAL INSTRUMENTS

#### Note 5.2A: Categories of financial instruments

##### Financial assets

##### Receivables

Cash and cash equivalents	1,142,627	1,210,302
Trade and other receivables	1,025,336	887,284
Other financial assets	82,593	83,067
<b>Total receivables</b>	<b>2,250,556</b>	<b>2,180,653</b>
<b>Total financial assets</b>	<b>2,250,556</b>	<b>2,180,653</b>

##### Financial liabilities

##### Financial liabilities measured at amortised cost

Trade creditors	1,306,761	928,587
<b>Total financial liabilities measured at amortised cost</b>	<b>1,306,761</b>	<b>928,587</b>
<b>Total financial liabilities</b>	<b>1,306,761</b>	<b>928,587</b>

There was no interest income from financial assets nor interest expense from financial liabilities in the year ending 30 June 2017 (2016: Nil)

#### Accounting policy

##### Financial assets

ARPANSA only holds financial assets that are classified as "receivables". The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Financial assets are recognised and derecognised upon trade date.

##### Impairment of financial assets

Financial assets are assessed for impairment at the end of each reporting period.

*Financial assets held at amortised cost* - if there is objective evidence that an impairment loss has been incurred for receivables held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the statement of comprehensive income.

##### Financial liabilities

Financial liabilities are classified as either financial liabilities other liabilities. Financial liabilities are recognised and derecognised upon 'trade date'.

##### Other financial liabilities

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

## Notes to and forming part of the financial statements

for the period ended 30 June 2017

### NOTE 5.3: FAIR VALUE MEASUREMENTS

The following tables provide an analysis of assets and liabilities that are measured at fair value.

#### Accounting policy

When an asset or liability, financial or non-financial, is measured at fair value for recognition or disclosure purposes, the fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date; and assumes that the transaction will take place either: in the principle market; or in the absence of a principal market, in the most advantageous market.

Fair value is measured using the assumptions that market participants would use when pricing the asset or liability, assuming they act in their economic best interest. For non-financial assets, the fair value measurement is based on its highest and best use. Valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, are used, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

For recurring and non-recurring fair value measurements, external valuers may be used when internal expertise is either not available or when the valuation is deemed to be significant. External valuers are selected based on market knowledge and reputation. Where there is a significant change in fair value of an asset or liability from one period to another, an analysis is undertaken, which includes a verification of the major inputs applied in the latest valuation and a comparison, where applicable, with external sources of data.

#### Fair value measurements at the end of the reporting period

2017  
\$

2016  
\$

##### Non-financial assets

Land	9,000,000	7,500,000
Buildings on freehold land	17,760,433	17,100,000
Leasehold Improvements	233,675	280,863
Plant and equipment	6,489,230	6,917,410
<b>Total non-financial assets</b>	<b>33,483,338</b>	<b>31,798,273</b>



## Appendix 1

### ARPANSA licensing activities

#### Details of any breach of licence conditions by a licensee during the financial year of which the CEO is aware

#### Breaches with significant safety implications during the year

The CEO was made aware of two breaches with significant safety implications during the year:

- Australian Nuclear Science and Technology Organisation (ANSTO) was found in breach of subsection 30(2) of the ARPANS Act. The breach related to the Open Pool Australian Lightwater reactor for failing to comply with a licence condition required by Regulation 50(1). This licence condition requires the licence holder to review and update its plans and arrangements at least once every three years.
- The National Gallery of Australia was found in breach of paragraph 31(1)(a) of the ARPANS Act for the unauthorised possession of a hand held X-ray fluorescence analyser.

#### Breaches with no or minor safety implications during the year

The CEO was made aware of eight breaches with no or minor safety implications:

- A licence holder exceeded its activity holding limit. This occurred on two separate occasions by the same licence holder, resulting in two non-compliances.
- Two licence holders did not maintain an accurate inventory.
- A licence holder did not test their radiation monitors as required by their operational limits and conditions.
- A licence holder did not have warning lights and interlocks on low hazard X-ray analysis equipment in accordance with the relevant code of practice.
- A licence holder did not have its security plan endorsed by an accredited assessor.
- A licence holder did not conduct a structural survey which was required by their plans and arrangements.

In all cases appropriate corrective actions were undertaken by the licence holder.

#### Details of any improvement notices or directions issued during the year

One improvement notice regarding inventory management and storage of radioactive material was issued by an ARPANSA inspector to the Commonwealth Scientific and Industrial Research Organisation under section 80A of the ARPANS Act.

There were no directions issued under section 41 of the ARPANS Act.

### Facility licences as at 30 June 2017

Commonwealth entity	Licences held
Australian National University	3
Australian Nuclear Science and Technology Organisation	22
Australian Radiation Protection and Nuclear Safety Agency	1
Department of Defence/Australian Defence Forces	4
Department of Immigration and Border Protection	4
Department of the Environment and Energy	1
<b>Total</b>	<b>35</b>

### Source licences as at 30 June 2017

Commonwealth entity	Licences held
ASC Pty Ltd and ASC AWD Shipbuilder Pty Ltd	1
Attorney-General's Department	1
Australian Transaction Reports and Analysis Centre	1
Austrade	1
Australian Criminal Intelligence Commission	1
Australian Federal Police	1
Australian Institute of Marine Science	1

Commonwealth entity	Licences held
Australian National University	2
Australian Nuclear Science and Technology Organisation	3
Australian Postal Corporation	1
Australian Radiation Protection and Nuclear Safety Agency	2
Australian Securities and Investments Commission	1
Australian Sports Commission	1
Australian War Memorial	1
Commonwealth Bureau of Meteorology	1
Commonwealth Scientific and Industrial Research Organisation	9
Decipha Pty Ltd	1
Department of Agriculture and Water Resources	1
Department of Defence/Australian Defence Forces	1
Department of Foreign Affairs and Trade	1
Department of Immigration and Border Protection	3
Department of Industry, Innovation and Science	4
Department of Infrastructure and Regional Development	1
Department of Parliamentary Services	1

Commonwealth entity	Licences held
Department of the Environment and Energy	3
Department of the Prime Minister and Cabinet	1
Federal Court of Australia	1
High Court of Australia	1
Indian Ocean Territory Health Service	1
Law Courts Limited	1
National Archives of Australia	1
National Gallery of Australia	1
National Museum of Australia	1
Note Printing Australia	1
Reserve Bank of Australia	1
Royal Australian Mint	1
Silex Systems Limited	1
<b>Total</b>	<b>56</b>

## Appendix 2

### Operations of the Radiation Health and Safety Advisory Council and Committees

#### Operations of the Radiation Health and Safety Advisory Council

During 2016–17, the Radiation Health and Safety Advisory Council (the Council) met on three occasions. Summaries of the meetings can be found at: [arpansa.gov.au/rhsac-minutes](http://arpansa.gov.au/rhsac-minutes).

The membership of the Council as at 30 June 2017 was:

- **Chair**  
Dr Roger Allison (QLD), Executive Director Cancer Care Services, Royal Brisbane and Women's Hospital
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (Commonwealth)
- **Radiation Control Officers:**
  - Mr Keith Baldry (SA), Director, Regulation and Compliance, SA Environment Protection Authority
  - Mr Simon Critchley (QLD), Director, Radiation Health, Queensland Health
- **Nominee of the Chief Minister of NT**  
Dr Hugh Heggie (NT), Chief Health Officer, Department of Health of the NT

- **Person to represent the interests of the general public**  
Ms Geraldine Robertson (ACT), an experienced consumer advocate with a working knowledge of the consumer-related radiation protection issues addressed by the Council
- **Other Members:**
  - Mr Niall Byrne (VIC), Creative Director of Science in Public
  - Dr Jane Canestra (VIC), Medical practitioner and emergency physician with expertise in the health aspects of radiological emergencies
  - Professor Adele Green (QLD), Head, Cancer and Population Studies Group, Queensland Institute of Medical Research
  - Mr Frank Harris (QLD), Chief Adviser Radiation Governance and Product Stewardship, Rio Tinto Uranium (reappointed 1 April 2017)
  - Ms Melissa Holzberger (QLD), Director and Principal – Sloan Holzberger Lawyers (reappointed 1 April 2017)
  - Professor Pamela Sykes (SA), Professor Preventive Cancer Biology, Flinders University
  - Dr Melanie Taylor (NSW), Senior Lecturer Organisational Psychology, Macquarie University.

During 2016–17, Council considered and discussed:

- new and emerging technologies in the prevention of skin cancer, and new research on the health impacts of UVR exposure, including preventable melanoma. The Council acknowledged the opportunity for cost savings from investing in prevention rather than treating skin cancer. ARPANSA's UVR strategy was also presented for consideration, highlighting priority areas such as a sunscreen testing service and noting that ARPANSA is investigating new technology to incorporate into its UVR monitoring network
- ARPANSA's role in emergency preparedness and response during a radiological emergency
- appropriate referrals for diagnostic imaging. The Council heard from the President of the Royal Australian and New Zealand College of Radiologists about options for guidelines and decision support tools in this field
- how ARPANSA uses and communicates data, including the agency's digital strategies
- the regulation of naturally occurring radioactive material
- the role of ARPANSA in a national context of emergency exposure situations
- ARPANSA's options to influence behavioural change in news media perceptions of radiation issues.

The Council provided advice to the CEO of ARPANSA, at the CEO's earlier request, on the appropriate level at which to set the national 'reference level' for radiation exposure in emergency situations.

Council also issued a position statement to the CEO of ARPANSA supporting the continued use of the linear no-threshold model as a regulatory tool for ionising radiation protection, in situations where radiation is below levels for which there is established evidence of harm.

Throughout the course of the year, ARPANSA's Minister (the Assistant Minister for Health) the Honourable Dr David Gillespie MP addressed the Council and outlined the vital role of its independent advice to the CEO of ARPANSA.

Members of Council were welcomed to the Victorian State Control Centre by Victoria's State Emergency Management Commissioner Craig Lapsley. Council toured the facilities and was informed of the roles and functions of the State Control Centre.

Council also visited the Peter MacCallum Cancer Centre at the new Victorian Comprehensive Cancer Centre.

### Operations of the Radiation Health Committee

During 2016–17, the Radiation Health Committee (RHC) met on three occasions. The meeting minutes are available at:

[arpansa.gov.au/rhc-minutes](http://arpansa.gov.au/rhc-minutes).

The RHC is appointed on a three year term, which commenced on 1 January 2015. The chair and members for the 2015–17 triennium are:

- **Chair**  
Dr Roslyn Drummond (VIC), Deputy Director of Radiation Oncology and Cancer Imaging, Peter MacCallum Cancer Centre
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (Commonwealth)
- **Radiation Control Officers** (each state and territory):
  - Mr Bradley Feldtman (NT), Manager Radiation Protection, Department of Health
  - Mr Keith Baldry (SA), Director, Regulation and Compliance, SA Environment Protection Authority
  - Ms Penny Hill (ACT), Senior Radiation Safety Officer, Health Protection Service, ACT Health
  - Mr Noel Cleaves (VIC), Manager, Environmental Health Regulation & Compliance, Health Protection Branch, Department of Health and Human Services
- Mr Simon Critchley (QLD), Director, Radiation Health, Queensland Health
- Ms Hazel Upton (WA), Radiation Control Officer, Radiation Health Unit, Department of Health
- Dr Stephen Newbury (TAS), Senior Health Physicist, Department of Health and Human Services
- Mr Len Potapof (NSW), Manager Radiation Regulation Unit, NSW Environment Protection Authority

- **Nuclear Safety Committee representative**  
Mr Robert Lyon (QLD), nuclear safety expert, formerly with Atomic Energy of Canada Limited and the IAEA
- **Person to represent the interests of the general public**  
Dr Peter Karamoskos (VIC), radiologist and nuclear medicine specialist
- **Other members**
  - Dr Bruce Hocking, consulting specialist in occupational medicine.

During 2016–17, the committee considered and discussed:

#### Matters of public interest

An item of public interest reported to the committee was related to unauthorised personnel requesting diagnostic imaging. It was noted that the practice in some hospitals had developed that, when the medical practitioner caring for a patient is not on-site they may, over the telephone, request that a nurse (or clerk) submit a request for a diagnostic radiological procedure. The request may not contain the necessary clinical information that radiologists need to be satisfied that the procedure is appropriate or justified. There may be an expectation to accept such a request, to avoid delaying the patient's treatment. It appears that this procedure is becoming more widespread and needs to be managed. The Committee noted that the *Code of Practice for Radiation Protection in the Medical applications of Ionizing Radiation (RPS 14)* (the Medical Code) clearly defines the responsibilities of the referring medical practitioner and the radiologist. This practice appears to be contrary to the requirements of the Medical Code. RHC considered it to be a matter for state regulators to ensure compliance with the Medical Code.

ARPANSA developed a national uniform approach to providing information to the public on radiation protection. For example, to disseminate information to a targeted audience ARPANSA circulated advisory notes in the following areas:

- New Radon Progeny Dose Conversion Factors: Implications for the radiation protection of workers in the uranium mining industry
- New Radon Progeny Dose Conversion Factors: Implications for the radiation protection of workers in Australian show caves.

Members noted and commended the ARPANSA advisory notes on issues related to the implications arising from the International Commission of Radiological Protection's expected changes to the dose coefficients for radon and radon progeny.

#### International Atomic Energy Commission (IAEA) Integrated Regulatory Review Service (IRRS) Mission

Members noted that all state and territory regulators confirmed their participation in the IAEA IRRS mission to Australia in 2018.

### Development of regulatory codes and standards

During the year the *National Directory for Radiation Protection* (NDRP) was republished. This edition incorporated requirements and limits for the disposal of radioactive waste by the user (Amendment 7).

Members noted that despite the existence of the NDRP there are still factors that adversely impact businesses and individuals who operate radiation practices in multiple jurisdictions in Australia. Members agreed to further develop the options to redesign Australia's radiation regulatory system and endorsed the vision for national uniformity, which is: *Seamless experience for business and individuals conducting safe radiation practices across Australia*. The redesigned options include but are not limited to:

- making the NDRP more effective
- harmonised laws (model or template legislation)
- single law and regulatory system delivered by Commonwealth, state and territory regulators
- a single national regulator.

During the year ARPANSA published the *Code for Radiation Protection in Planned Exposure Situations (RPS C-1)*. The Code is based on the relevant requirements of the IAEA's *Radiation Protection and safety of Radioactive Sources: International Basis Safety Standards General Safety Requirements Part 3, GSR Part 3* (IAEA 2014) and ICRP's *Publication 103, The 2007 Recommendations of the International Commission on Radiological Protection*.

The Guide for Radiation Protection in Existing Exposure Situations, Radiation Protection Series G-2 had been recommended for publication.

The draft Medical Exposure Code is in the process of revision taking into account the feedback from relevant jurisdictions. The Guide for Radiation Protection in Emergency Exposure situations is being revised and will be released for public consultation. The guidance document on intense pulsed light and laser use in the cosmetics industry is being finalised and is under assessment in terms of any compliance requirement for clearance by the Office of Best Practice Regulation. This document will provide a common framework for terminology, education, training, equipment, patient care and injury reporting.

At the end of the year the Committee was working on the following documents:

- Code for Industrial Radiography Licence Conditions
- Code for Near-surface Disposal of Radioactive Waste in Australia
- Code for Security of radioactive Sources
- Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz (RPS 3).

### Australian Radiation Incident Register (ARIR)

ARPANSA published an overview of the 2015 incident reports to the ARIR in December 2016. The number of incident reports indicated generally improved reporting levels. This is in all likelihood a reflection of improved reporting, not an increase in the number of incidents. ARPANSA implemented a new digital database with direct access for the states and territories. This allows for more effective analysis of incident trends and offers a more valuable source of information that can be used to promote best practices.

### Operations of the Nuclear Safety Committee

During 2016–17, the Nuclear Safety Committee (NSC) met on three occasions. Summaries of the meetings can be found on the ARPANSA website at [arpansa.gov.au/nsc-minutes](http://arpansa.gov.au/nsc-minutes).

The NSC is appointed on a three year term ending December 2017.

The chair and members for the 2015–17 triennium are:

- **Chair**  
Dr Tamie Weaver (VIC), Technical Director  
– Hydrogeology, environmental resources management consultancy
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (Commonwealth)
- **Radiation Health Committee representative (RHC)**  
Dr Barbara Shields represented the RHC up until October 2016 when she retired from the committee. Dr Peter Karamoskos, now represents the RHC.
- **Local Government representative**  
Mr Ian Drinnan (NSW) Principal Environmental Scientist, Sutherland Shire Council
- **Person to represent the interests of the general public**  
Mr Christopher Tola (NSW) Grants Officer, local government authority
- **Other members:**
  - Ms Kerrie Christian (NSW), metallurgist with background in governance, safety and reliability
  - Mr Tony Irwin (NSW), engineer with experience in nuclear power and research reactor operations; commissioning; training and regulatory interaction
  - Dr Rob Lee (ACT), human factors, systems safety and risk management expert with experience of aviation and other high technology industries
  - Mr Robert Lyon (QLD), nuclear safety expert, formerly with Atomic Energy of Canada Limited and the IAEA
  - Mr Don Macnab (NSW), former Director, Regulatory and Policy Branch, ARPANSA
  - Mr Peter Wilkinson (ACT), consultant in safety management and safety culture in hazardous industries
  - Dr Peter Karamoskos (VIC), practicing radiologist and nuclear medicine specialist.

During 2016–17, the committee considered and discussed:

#### Regulatory Performance Framework self-assessment

ARPANSA conducted an annual self-assessment of its regulatory effectiveness against six RPF key performance indicators in July 2016. This self-assessment is a requirement of the RPF. The NSC was tasked to review and validate the self-assessment report. The NSC was satisfied with the approach and methodology, and considered the use of stakeholders as part of the review team as a positive initiative. The NSC provided valuable feedback on the report which was incorporated into the final version. This report is published on both the ARPANSA and Department of Health websites.

In March 2017 the NSC endorsed the proposed new measures to be used from 1 July 2017 against the key performance indicators used for the Government Regulator Performance Framework. The NSC supported the updates including a balance of quantitative and qualitative indicators.

### National Radioactive Waste Management Facility

ARPANSA kept the NSC updated on activities relating to the planned National Radioactive Waste Management Facility. ARPANSA is continuing to work with the community near the identified site. This is completely separate to the formal public consultation which would commence once an application is received. The NSC provided valuable feedback on the documentation and guides published this financial year.

The NSC wrote to the CEO of ARPANSA under paragraph 26(1)(d) of the ARPANSA Act regarding the resourcing for the National Radioactive Waste Management Facility ongoing stakeholder engagement plan (4 November 2016).

#### Update on controlled facilities

ARPANSA kept the NSC informed on developments associated with controlled facilities. This included the operation of the ANSTO OPAL reactor, the construction of the new ANSTO Nuclear Medicine facility, and recent works relating to the radiological characterisation of the shutdown High Flux Australian Reactor.



## Abbreviations

ACDS	Australian Clinical Dosimetry Service
ANAO	Australian National Audit Office
ANRDR	Australian National Radiation Dose Register
ANSTO	Australian Nuclear Science and Technology Organisation
APS	Australian Public Service
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
CEO	Chief Executive Officer
CPRs	Commonwealth Procurement Rules
CTBT	Comprehensive Nuclear-Test-Ban Treaty
DCB	departmental capital budgets
DRLs	diagnostic reference levels
EA	Enterprise Agreement
FOI	Freedom of Information
IAEA	International Atomic Energy Agency
IPL	intense pulsed light
IRRS	Integrated Regulatory Review Service (IAEA)
KPIs	key performance indicators
NATA	National Association of Testing Authorities
NDRP	National Directory for Radiation Protection
NRWMF	National Radioactive Waste Management Facility
NSC	Nuclear Safety Committee
OCEO	Office of the Chief Executive Officer
OPAL	Open Pool Australian Lightwater reactor
PAES	portfolio additional estimates statements
PBS	portfolio budget statement
PGPA Act	<i>Public Governance, Performance and Accountability Act 2013</i>
PRMS	Personal Radiation Monitoring Service
RHC	Radiation Health Committee
RPS	Radiation Protection Series
SES	Senior Executive Service
SMC	Strategic Management Committee
SME	small and medium enterprises
UPF	Ultraviolet Protection Factor
UVR	ultraviolet radiation
WHS	work health and safety

## Glossary

### *accident*

An unintended event which causes, or has the potential to cause, employees or members of the public to be exposed to radiation from which the individual doses or collective doses received do not lie within the range of variation which is acceptable for normal operation. An accident may result from human error, equipment failure or other mishap; it may require emergency action to save life or to safeguard health, property or the environment; it requires investigation of its causes and consequences and, possibly, corrective action within the program for control of radiation; and it may require remedial action to mitigate its consequences.

### *activity*

The measure of quantity of radioactive decay.

### *Australian National Radiation Dose Register*

A centralised repository for the radiation dose records of workers as supplied by the employers, maintained by ARPANSA. It is currently limited to those engaged in the uranium mining and milling industry in Australia.

### *Australian Clinical Dosimetry Service (ACDS)*

The ACDS is a national independent dosimetry auditing program, providing quality assurance for radiation oncology facilities and patients.

### *Australian Radiation Incident Register (ARIR)*

The ARIR is Australia's national database of incidents and events, where radiation or radioactivity was implicated. The purpose of the ARIR is to raise awareness on where, how and why incidents and events occur, and how they can be best prevented.

### *Beryllium Oxide (BeO) Optically Stimulated Luminescence (OSL)*

A dosimetric system using OSL of BeO developed by the radiation physics group in Dresden. Blue light LED stimulation and reading of luminescence light with an enclosed photo sensor module are performed from opposite detector sides. A software controls stimulation, records the amplified and digitised photo sensor signal and generates a unified OSL signal. With the help of calibration these OSL signals can be used to specify dose.

### *ConvEx-3*

International Atomic Agency Convention Exercise. This is a full-scale exercise designed to evaluate international emergency response arrangements and capabilities for a severe nuclear or radiological emergency over several days, regardless of its cause.

***CTBTO Radionuclide Laboratory***

A Comprehensive Nuclear-Test-Ban Treaty Organization established laboratory. Each laboratory supports the 80-station radionuclide monitoring network and hosts expertise in environmental monitoring. Each provides independent additional analysis of international monitoring system (IMS) samples.

The IMS consists of 321 monitoring stations and 16 laboratories built worldwide. These 337 facilities monitor the planet for any sign of a nuclear explosion.

***diagnostic reference levels (DRLs)***

Dose levels for medical exposures in medical radio-diagnostic practices, or levels of activity in the case of radiopharmaceuticals, applied to groups of standard-sized patients or standard phantoms for common types of diagnostic examination and broadly defined types of equipment. These levels are expected not to be consistently exceeded for standard procedures when good and normal practice regarding diagnostic and technical performance is applied. DRLs will be set by relevant professional bodies and published by ARPANSA or the relevant regulatory authority from time to time.

***dose***

A generic term which may mean absorbed dose, equivalent dose or effective dose depending on context.

***dosimetry***

The theory and application of the principles and techniques involved in the measurement, calculation and recording of radiation doses.

***exposure***

The circumstance of being exposed to radiation.

***Electromagnetic energy***

A form of energy that is reflected or emitted from objects in the form of electrical and magnetic waves that can travel through space. There are many forms of electromagnetic energy including gamma rays, x rays, ultraviolet radiation, visible light, infrared radiation, microwaves and radio waves.

***International Atomic Energy Agency (IAEA)***

The IAEA is the international centre for cooperation in the nuclear field. The Agency works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.

***incident***

An event which causes, or has the potential to cause, abnormal exposure of employees or of members of the public and which requires investigation of its causes and consequences and may require corrective action within the program for control of radiation, but which is not of such scale as to be classified as an accident.

***Integrated Regulatory Review Service***

A peer review and appraisal service offered by the IAEA to strengthen and enhance the effectiveness of a national regulatory system in nuclear, radiation, radioactive waste, transport safety and nuclear security.

***Intense Pulsed Light Devices (IPLs)***

Instruments that use a full spectrum (noncoherent), non-laser, broadband, filtered Xenon flash lamps. Flash lamps emit in the UVR, visible and IR region of the electromagnetic spectrum. The UVR and IR wavelength components of the emissions are blocked using specific cut-off filters. These properties allow for variability in selecting individual treatment parameters and adapting to different skin types. Cosmetic uses of IPLs include hair removal, removal of skin pigmentation, wrinkles and the treatment of certain skin disorders by dermatologists.

***ionisation***

The process by which one or more electrons are removed from, or sometimes added to, an atom leaving the atom in a charged state.

***ionising radiation***

Radiation which is capable of causing ionisation.

***licence***

A written authorisation issued to an operator which allows the operator to carry out an operation legally.

***medical exposure***

Exposure of a person to radiation received as a patient undergoing medical diagnosis or therapy, or as a volunteer in medical research, or non-occupational exposure received as a consequence of assisting an exposed patient.

***non-ionising radiation***

Ranges from extremely low frequency radiation, through the radiofrequency, microwave, and visible portions of the spectrum into the ultraviolet range.

***occupational exposure***

Exposure of a person to radiation which occurs in the course of that person's work and excludes the component of exposure that arises from natural background radiation.

***optimisation***

The process of determining what level of radiation protection and safety makes exposures, and the probability and magnitude of potential exposures, as low as reasonably achievable with economic and societal factors being taken into account.

***National Radioactive Waste Management Facility (NRWMF)***

The proposed NRWMF will only manage waste generated in Australia. It will be designed to permanently dispose of low-level waste and potentially store intermediate-level waste on a temporary basis. The facility will only manage immobilised solid waste. Find out more at [arpansa.gov.au/NRWMF-radioactive-waste](http://arpansa.gov.au/NRWMF-radioactive-waste).

**radiation**

Electromagnetic waves or quanta, and atomic or sub-atomic particles, propagated through space or through a material medium.

**radioactive material**

Material which spontaneously emits ionising radiation as a consequence of radioactive decay.

**radioactive waste**

In Australia, radioactive waste is left after the production of nuclear medicine, research at universities, advanced industrial manufacturing and testing. Other low and intermediate waste types include soil, fire, alarms, exit signs, paper, plastic, glassware and pieces of equipment from radioisotope-producing operations. This waste emits radiation as it decays.

**radiofrequency**

Electromagnetic energy with frequencies in the range 3 kHz to 300 GHz.

**Radiotherapy calibration**

Calibration is the process of configuring an instrument to provide a result for a sample within an acceptable range. ARPANSA provides calibration services for radiotherapy dosimeters. These dosimeters are used by radiotherapy providers to calibrate the output of linear accelerators and kilovoltage X-ray tubes for patient treatment.

**radiofrequency field**

A physical field, which specifies the electric and magnetic states of a medium or free space, quantified by vectors representing the electric field strength and the magnetic field strength.

**radiological or nuclear emergency**

An emergency in which there is, or is perceived to be, a hazard due to:

- (a) the energy resulting from a nuclear chain reaction or from the decay of the products of a chain reaction, or
- (b) radiation exposure.

**radionuclide**

A species of atomic nucleus which undergoes radioactive decay.

**Solar ultraviolet radiation (UVR)**

Solar UVR is invisible energy produced by the sun. It's made up of three wavelengths, UVA, UVB and UVC. Both UVA and UVB can reach the earth's surface and are classified as human carcinogens. This means they cause cancer.

**Wi-Fi**

Wi-Fi is the name of a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections.

**X-ray**

Ionising electromagnetic radiation emitted during the transition of an atomic electron to a lower energy state or during the rapid deceleration of a charged particle.

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