

# **Design and Monitoring of the National Innovation and Science Agenda**

Department of the Prime Minister and Cabinet  
Department of Industry, Innovation and Science  
Innovation and Science Australia

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ISSN 1036–7632 (Print)

ISSN 2203–0352 (Online)

ISBN978-1-76033-288-4(Print)

ISBN978-1-76033-289-1(Online)

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Canberra ACT  
27 September 2017

Dear Mr President  
Dear Mr Speaker

The Australian National Audit Office has undertaken an independent performance audit in the Department of the Prime Minister and Cabinet, the Department of Industry, Innovation and Science, and Innovation and Science Australia titled *Design and Monitoring of the National Innovation and Science Agenda*. The audit was conducted in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit to the Parliament.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's website—<http://www.anao.gov.au>.

Yours sincerely



Grant Hehir  
Auditor-General

The Honourable the President of the Senate  
The Honourable the Speaker of the House of Representatives  
Parliament House  
Canberra ACT

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# Summary and recommendations

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## Background

1. On 7 December 2015, the Prime Minister and the Minister for Industry, Innovation and Science announced the National Innovation and Science Agenda (NISA)—a policy statement on innovation and science, and a package of 24 measures costed at \$1.1 billion over four years.<sup>1</sup>
2. The announcement of the NISA included the statement that:

Innovation and science are critical for Australia to deliver new sources of growth, maintain high-wage jobs and seize the next wave of economic prosperity.<sup>2</sup>
3. The 24 measures, which include grant programs, tax incentives, funding for research infrastructure, and initiatives to promote science, technology, engineering and mathematics, were framed around four main ‘pillars’: Culture and capital; Collaboration; Talent and skills; and Government as an exemplar.
4. The development of the Agenda was assisted by the Department of the Prime Minister and Cabinet (PM&C) and a Taskforce set up within PM&C, which received input from other entities. Nine portfolios are involved in implementing the Agenda, supported by a governance framework that includes central oversight by a Delivery Unit operating in the Department of Industry, Innovation and Science (Industry) and an interdepartmental implementation committee. An independent body, Innovation and Science Australia (ISA), was established under the NISA to provide strategic advice to government on the broader innovation system.<sup>3</sup>

## Audit objective and criteria

5. The objective of this audit was to assess the effectiveness of the design process and monitoring arrangements for the NISA by the relevant entities.
6. To form a conclusion against this objective, the ANAO adopted three high-level criteria:
  - Was sound and timely policy advice provided to government to help inform the development of the Agenda?
  - Were appropriate planning and governance arrangements established to support the implementation of the Agenda?
  - Is the implementation of the Agenda, and are outcomes to date, being effectively monitored and reported on?

## Conclusion

7. The design process for the National Innovation and Science Agenda allowed the Government to make decisions within short timeframes, and the monitoring arrangements have, in most respects, been effective. The quality of advice to government could have been

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1 The breakdown of funding is provided at Appendix 2.

2 See page 1 of the *National Innovation and Science Agenda*, available from [www.innovation.gov.au](http://www.innovation.gov.au).

3 ISA is supported by the Office of Innovation and Science Australia.

improved by a better articulation of the evidence base and likely impacts of the proposals, including the likely net benefits of the overall \$1.1. billion in proposed expenditure.

8. The design process for the NISA was timely in supporting a government decision-making process. It was aided by active management by PM&C and the Taskforce, and drew on previous reviews and input from a range of entities. In addition to sector level material, some guidance on the development of policy advice was available within PM&C and Industry, but it was not evident how this material was applied to the work of the Taskforce or to the input provided by entities. The ANAO observed variability in the quality of the advice provided. The better developed proposals included a clear articulation of the evidence base and likely impacts of the proposals and also indicated when the proposal would be reviewed or evaluated. However, much of the advice was general in nature and did not present quantitative or in-depth analysis of problems, expected impacts or how outcomes would be measured.

9. Suitable planning and governance arrangements for the Agenda were established early in the post-announcement period to support most aspects of implementation. Some elements of the evaluation framework were delayed, including confirmation that entities had identified baseline data and robust evidence collection systems. Current indications are that impact assessment will be affected by variability in the quality of entities' performance measures and data collection systems. Assessing the impact of the package as a whole is also likely to be challenging.

10. Monitoring and reporting arrangements for the Agenda have, in most respects, been effective. Regular progress reports covering all measures and all responsible entities have been provided to government and other relevant stakeholders. The advice provided drew attention to various implementation risks, including not meeting the publicly announced timeframes. However, in a number of cases, the accompanying 'traffic light' ratings provided a more optimistic view of progress than was supported by the evidence. This included seven measures that did not meet the publicly announced timeframe but were not rated appropriately.

## Supporting findings

### Effectiveness of the policy design process

11. In response to the Prime Minister indicating the importance of innovation to the Government's agenda, PM&C provided policy advice on a new innovation agenda. PM&C was responsive in meeting the timeframes agreed with government for providing advice on the package of proposed measures. In the time available, a number of important matters were not addressed in the advice to government, including implementation risks, governance, and evaluation arrangements.

12. The better developed proposals articulated: the evidence base; the likely impacts of the proposals; and when the proposal would be reviewed or evaluated. The ANAO observed that much of the advice was general in nature and did not present quantitative or in-depth analysis of problems, expected impacts or how outcomes would be measured. A number of the proposals that involved significant expenditure aimed at transforming parts of the innovation system relied on assertions rather than evidence. There was no specific guidance on the standard of evidence required to support individual measures or the package as whole.

13. Consultation in the design phase was adequate given the short timeframes involved and given that a number of the proposed measures had been canvassed in earlier consultation processes.

### **Planning and governance arrangements**

14. An implementation plan was developed for the NISA in the months following the launch of the Agenda. The implementation plan addressed relevant implementation principles, and was prepared in the timeframe set by government (1 March 2016), some four months before the first measures were due to be implemented.

15. Suitable governance arrangements were established to support implementation of the Agenda. Specific oversight bodies were established promptly, and operated within a governance framework for the Government's broader innovation agenda.

16. Oversight arrangements for stakeholder consultation were appropriate. Under the NISA Implementation Plan, the primary responsibility for stakeholder consultation was assigned to the lead entity for each measure. The Delivery Unit explored whether joint consultation sessions would be beneficial, but no specific need for structured consultation was identified. Lead entities have reported measure-specific consultation to the Delivery Unit.

17. An evaluation framework was developed but not in a timely or fully effective manner. Limited advice was provided to government during the design process about the specific impacts of the Agenda, and how or when they were to be measured. While evaluation arrangements were progressively developed post-announcement, there were delays and issues associated with the identification of suitable performance measures and data sources.

### **Monitoring and reporting on progress**

18. Effective monitoring arrangements were established, which covered all relevant entities and all measures agreed by government. The arrangements centred on regular progress reports to government and other stakeholders. The reports were compiled by the Delivery Unit and underpinned by information provided by lead entities for each measure.

19. Progress reporting has been timely and, in most respects, accurate. The oversight bodies provided regular and generally clear advice to government on the status of measures and the risks of not meeting milestones or announced timeframes. In some cases, the 'traffic light' ratings used to signal progress did not appropriately match the level of progress. This included seven measures that did not meet the announced timeframe but were rated as either 'on track with emerging issues' or 'on track'.

20. Efforts have been made by Industry to identify early outcomes for measures that have been implemented. The key finding of the post-commencement review is that it is too early to assess whether intended outcomes are being achieved.

## Recommendations

### Recommendation no.1

#### Paragraph 2.26

The Department of the Prime Minister and Cabinet and the Department of Industry, Innovation and Science review and update their policy development guidance and training materials so that they:

- (a) are fit-for-purpose for the range of activities undertaken, including cross-entity taskforces;
- (b) clearly articulate an acceptable standard of analysis and evidence; and
- (c) include mechanisms to provide assurance that the guidelines are consistently applied.

**Department of the Prime Minister and Cabinet's response:** *Agreed.*

**Department of Industry, Innovation and Science's response:** *Agreed in part.*

### Recommendation no.2

#### Paragraph 3.34

The Department of Industry, Innovation and Science finalise the evaluation strategy for the National Innovation and Science Agenda, and establish formal monitoring arrangements with relevant entities, so that the results of evaluation activities can be used to inform advice to government on future measures and the continuation of existing measures.

**Department of Industry, Innovation and Science's response:** *Agreed.*

## Key learnings and opportunities for improvement for Australian Government entities

21. Below is a summary of key learnings identified in this audit report that may be considered by other Commonwealth entities when designing, or monitoring the implementation of, a major policy or initiative.

### Advice to government

- Accountable authorities should implement a framework that supports the development of quality policy advice to government and clear accountability for the provision of that advice.
- In the design phase (pre-decision), provide clear and objective advice that:
  - contextualises the nature and extent of the problem;
  - sets out the best available evidence for and against the proposal; and
  - provides a clear rationale where intervention is recommended, including identifying the likely net benefits.
- Clearly articulate any gaps or limitations with the available evidence base, and provide advice on whether the risks can be accepted, or propose mitigation measures, such as:
  - deferring consideration until better evidence is obtained;
  - trialling a smaller-scale or more targeted initiative;
  - consulting further on the detailed design of a measure;
  - conducting a post-implementation review or evaluation.
- Good practice is to provide advice on implementation risks, and prepare an implementation plan in the design phase; or if that is not feasible, early in the post-announcement period, prior to actual implementation.
- In setting timeframes for implementation, proposed implementation dates and milestones should be challenging but achievable.

### Review and evaluation

- Good practice is to identify review and evaluation arrangements in the design phase, including baseline data and access to reliable sources of data to help measure or evaluate the intended impact of measures.

### Reporting on progress

- For ‘traffic light’ reporting systems to be useful to decision-makers, they should define the different categories and, when applied, reflect the actual status of implementation.

## Summary of entity responses

22. The summary response from each entity is provided below, with full responses provided at Appendix 1.

### Department of the Prime Minister and Cabinet

The Department of the Prime Minister and Cabinet (PM&C) welcomes the ANAO's willingness to examine the NISA and finding that the NISA design process was timely in supporting the Government's decision-making process and that monitoring and reporting arrangements have, in most respects, been effective.

PM&C strives to provide a consistently high standard of advice to the Government, and has a range of frameworks to assist officials within PM&C and across the Australian Public Service (APS), including, but not limited to: the Cabinet Handbook, the Australian Government Guide to Regulation, the Legislation Handbook and a range of internal PM&C guidance for policy officers, including a disciplined policy design methodology.

While the framework materials managed by PM&C are periodically reviewed and updated to ensure they remain fit for purpose, the ANAO's findings are a valuable reinforcement of the position the Secretary of PM&C has been advancing. There is an ongoing need to test and refine our policy frameworks to ensure they clearly articulate an acceptable standard of analysis and evidence, and we need to continually work to promote good policy development practice within PM&C and across the APS. There is also an opportunity for PM&C to better draw together framework materials and improve their visibility and accessibility across the APS.

### Department of Industry, Innovation and Science

The Department of Industry, Innovation and Science notes the ANAO's audit of the design and monitoring arrangements for the National Innovation and Science Agenda (NISA). We note the audit's findings that departments responded in a timely manner to support decision-making on an area of priority for the Government.

The development of the NISA package built upon a substantial body of advice that had been assembled by agencies and provided to ministers over a substantial period of time in the lead up to the Government's consideration of NISA. The policy development process coordinated by the NISA Taskforce (established within the Department of the Prime Minister and Cabinet) built upon that work and drew on further evidence as necessary to support the Government to launch a package of initiatives to stimulate innovation, invest further in Australia's science capabilities, increase skills in Science, Technology, Engineering and Maths, and foster innovation in government procurement and service delivery. Ministers were closely involved throughout the development of the package and the performance of the public service was publicly commended by the Government. However, noting the audit's findings, we will examine opportunities to further improve our policy guidance and associated training material.

The monitoring and reporting arrangements put in place to support implementation represented a novel and highly effective method of driving implementation across portfolios while also providing assurance to the Government. This approach was strengthened by the establishment of a senior interdepartmental committee led by an Independent Chair, and the formation of a dedicated delivery unit within the Department of Industry, Innovation and Science.

We welcome the audit's acknowledgement that monitoring arrangements were effective and that regular progress reports provided to the Government drew attention to areas of implementation risk. Notwithstanding the ANAO's view that the traffic light ratings were not

sufficiently defined, the process supported ministerial consideration of areas warranting attention and the reports included detailed information through which the Government could satisfy itself of implementation progress. Advice was provided regularly through progress reports, correspondence from the Independent Chair and departmental briefing. Verbal briefing was also a substantial element of reporting arrangements over the first six months. These oversight arrangements also resulted in a coordinated approach to the evaluation of NISA measures.

### **Office of Innovation and Science Australia**

The Office of Innovation and Science Australia provided comments on an extract of the proposed report and requested adjustments to Figure 1.2 *Overview of the governance arrangements for the NISA and Australia's broader innovation system*. The suggested changes included an adjustment to more accurately show the relationship between the Chief Scientist and the Innovation and Science Australia (ISA), as well as removing a reference to the Office of Innovation and Science.



# Audit findings

# 1. Background

## The National Innovation and Science Agenda

1.1 On 7 December 2015, the Prime Minister and the Minister for Industry, Innovation and Science announced the National Innovation and Science Agenda (NISA)—a policy statement on innovation and science, and a package of 24 measures costed at \$1.1 billion over four years.<sup>4</sup> Some \$459 million of this funding was allocated towards research infrastructure.<sup>5</sup>

1.2 The announcement of the Agenda included the following statement:

Innovation and science are critical for Australia to deliver new sources of growth, maintain high-wage jobs and seize the next wave of economic prosperity. Innovation is about new and existing businesses creating new products, processes and business models. It is also about creating a culture that backs good ideas and learns from taking risks and making mistakes.<sup>6</sup>

1.3 The NISA measures—which include grant programs, tax incentives, education initiatives, and data and digital changes—were framed around four main focus areas or ‘pillars’: Culture and capital; Collaboration; Talent and skills; and Government as an exemplar (Figure 1.1).

**Figure 1.1: NISA measures and funding by pillar**

1 – Culture and capital	2 – Collaboration
<ul style="list-style-type: none"> <li>• Tax incentives for angel investors</li> <li>• New arrangements for venture capital investment</li> <li>• Access to company losses</li> <li>• Intangible asset depreciation</li> <li>• CSIRO Innovation Fund</li> <li>• Biomedical Translation Fund</li> <li>• Incubator Support Programme</li> <li>• Improve bankruptcy and insolvency laws</li> <li>• Employee Share Scheme</li> </ul>	<ul style="list-style-type: none"> <li>• Critical research infrastructure</li> <li>• Sharper incentives for engagement</li> <li>• Global Innovation Strategy</li> <li>• Cyber Security Growth Centre</li> <li>• Innovation Connections programme</li> <li>• Quantum computing</li> <li>• Measuring impact and engagement in university research</li> <li>• ARC Linkage Projects Scheme</li> </ul>
\$219m	\$679m
3 – Talent and skills	4 – Government as an exemplar
<ul style="list-style-type: none"> <li>• Inspiring all Australians in digital literacy and STEM</li> <li>• Support for innovation through visas</li> </ul>	<ul style="list-style-type: none"> <li>• Data61</li> <li>• Business Research and Innovation Initiative</li> <li>• Digital marketplace</li> <li>• Innovation and Science Australia</li> <li>• Public data strategy</li> </ul>
\$85m	\$117m

Source: ANAO adaption of information from the *National Innovation and Science Agenda*, available from [www.innovation.gov.au](http://www.innovation.gov.au).

4 The breakdown of funding is provided at Appendix 2, and a description of each measure is provided at Appendix 3.

5 That is, towards the Australian Synchrotron, a type of particle accelerator, based in Victoria; and the Square Kilometre Array project, a radio telescope, with its core site in Western Australia.

6 See page 1 of the *National Innovation and Science Agenda*, available from [www.innovation.gov.au](http://www.innovation.gov.au).

1.4 The announcement of the NISA, which had the tag line ‘Welcome to the ideas boom’, was followed by a communications campaign, which ran from 7 December 2015 until 9 May 2016.<sup>7</sup> The campaign aimed to create awareness of the NISA, and drive cultural change.

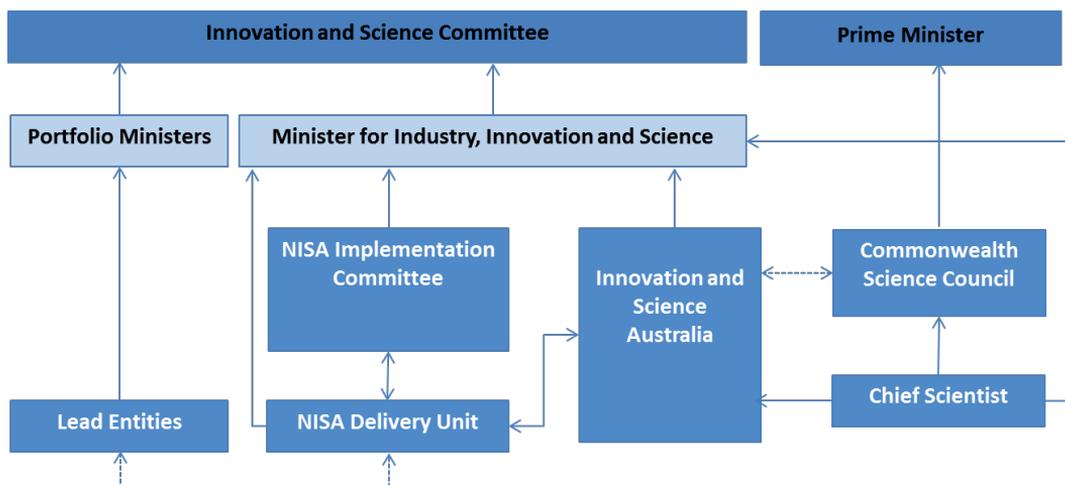
### Design, monitoring and implementation arrangements

1.5 The process to design, monitor and implement the NISA involved multiple Australian Government entities and other stakeholders. At the design stage, advice was provided to government by:

- the Department of the Prime Minister and Cabinet (PM&C) in its capacity as advisor to the Prime Minister;
- a Taskforce established within PM&C, which operated from September to December 2015; and
- a range of other entities that provided proposals for consideration in the NISA package.

1.6 Nine portfolios, with 16 different entities, are involved in implementing the 24 NISA measures<sup>8</sup>—as the ‘lead’, ‘partner’ or ‘engaged’ entity (as listed at Appendix 3). A governance framework was established to oversee implementation of the NISA and Australia’s broader innovation system (Figure 1.2).

**Figure 1.2: Overview of the governance arrangements for the NISA and Australia’s broader innovation system**



Source: ANAO analysis of documents provided by Industry.

1.7 The governance framework includes specific oversight bodies for the NISA—an interdepartmental implementation committee (NISAIC) and a Delivery Unit, which report to the

7 The campaign was originally scheduled to run until 30 June 2017, but did not continue past 9 May 2016. The ANAO conducted a limited scope assurance review of the campaign as reported in a letter from the Auditor-General to Mr Pat Conroy MP, dated 26 April 2016 (available from [www.anao.gov.au](http://www.anao.gov.au)).

8 There were also three additional measures subject to ongoing monitoring and reporting to government that were not included within the \$1.1 billion NISA package—Crowd-sourced equity funding; the NISA Communications Campaign; and Review of the Research and Development Tax Incentive Program.

Minister for Industry, Innovation and Science (Industry Minister).<sup>9</sup> Broader oversight is provided by:

- an independent statutory board, Innovation and Science Australia (ISA)<sup>10</sup>; and
- the Commonwealth Science Council, which is chaired by the Prime Minister and includes Australia's Chief Scientist.

## Related Australian Government initiatives

1.8 The NISA follows on from the 2014 *Industry Innovation and Competitiveness Agenda*<sup>11</sup>, and builds on a number of existing measures and programs including:

- the establishment of Industry Growth Centres to drive innovation, productivity and competitiveness in certain sectors, such as advanced manufacturing; and
- the Entrepreneurs' Programme, which offers businesses a range of support (such as advice and facilitation services) to improve competitiveness and productivity.

1.9 In 2016–17, Australian Government spending on research and development related to innovation and science was expected to exceed \$10.1 billion.<sup>12</sup>

## Reviews of innovation and science programs

1.10 At the time the NISA was developed, there were a number of reviews, inquiries and discussion papers completed or underway on aspects of Australia's innovation system, examining:

- the role of science, technology, engineering and maths (STEM) in boosting productivity, creating jobs, enhancing competitiveness and growing the economy<sup>13</sup>;
- how to boost the commercial returns from research<sup>14</sup>;
- collaboration between business and researchers in the Cooperative Research Centres Programme<sup>15</sup>;
- funding for National Research Infrastructure<sup>16</sup>;
- research policy and funding arrangements<sup>17</sup>; and

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9 The Delivery Unit operates within the Department of Industry, Innovation and Science and provides secretariat support to the NISAIC.

10 The board of Innovation and Science Australia is assisted by the Office of Innovation and Science Australia.

11 Announced in October 2014.

12 Department of Industry, Innovation and Science, *The Australian Government's 2016–17 Science, Research and Innovation Budget Tables*, 18 August 2016, p. 3.

13 Office of the Chief Scientist 2014, *Science, Technology, Engineering and Mathematics: Australia's Future*. Australian Government, Canberra, September 2014.

14 Department of Industry and Department of Education, *Boosting the Commercial Returns from Research*, Australian Government, 29 October 2014.

15 DA Miles, *Growth through Innovation and Collaboration A Review of the Cooperative Research Centres Programme*, 26 March 2015.

16 PM Clark et al., *Research Infrastructure Review Final Report September 2015*, Australian Government, 2015.

17 Dr I Watt, *Review of Research Policy and Funding Arrangements November 2015*, Australian Government, 2015.

- the challenges to Australian industries and jobs posed by increasing global competition.<sup>18</sup>

## Audit approach

### Audit objective and criteria

1.11 The audit objective was to assess the effectiveness of the design process and monitoring arrangements for the NISA by the relevant entities.

1.12 To form a conclusion against this objective, the ANAO adopted three high-level criteria:

- Was sound and timely policy advice provided to government to help inform the development of the Agenda?
- Were appropriate planning and governance arrangements established to support the implementation of the Agenda?
- Is the implementation of the Agenda, and are outcomes to date, being effectively monitored and reported on?

### Scope

1.13 The scope of the audit covered the centralised design and monitoring arrangements for the NISA; that is:

- the role of PM&C and the Taskforce in providing advice to government on the design of the NISA in the period from September to December 2015; and
- the establishment and operation of the specific oversight bodies for the NISA—Interdepartmental Implementation Committee and the Delivery Unit—in relation to monitoring, oversight and reporting arrangements in the period from December 2015 to June 2017.

1.14 The audit also examined the role of Innovation and Science Australia and the Commonwealth Science Council where either of these bodies provided input to the design of the NISA or had a role in monitoring arrangements.

1.15 In relation to the design process, the audit did not examine the policy advice provided to government by other entities, unless such advice was included in the overarching decision-making process for the NISA in the period from September to December 2015.

1.16 The audit examined implementation planning and governance arrangements as well as implementation monitoring and reporting by the oversight bodies. It did not examine the implementation of NISA measures by the relevant entities.

### Methodology

1.17 The methodology applied a clear distinction between the role of government and the role of Australian Public Service entities. Establishing policy is the responsibility of government, and

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18 The Australian Senate Economics References Committee, *Australia's Innovation System, December 2015*, Commonwealth of Australia, 2015.

entities provide advice on it. While policy advising is an important function of entities, governments can seek advice from other sources.

1.18 Entities provide policy advice to Ministers to help ensure that government decisions are appropriately supported and informed. Policy advising outputs include briefing documents and submissions provided to government. This audit focused on policy advice outputs and the processes to deliver them. The audit did not include examination of the merits of a particular policy position or the decisions made by Ministers or the Government.

1.19 Three principal methods were used to collect and analyse audit evidence:

- review of key documents against: requirements set by entities; relevant Commonwealth policies and guidance materials; and recognised best practices;
- testing entity assertions through analysis of primary documents and other relevant material; and
- interviewing key personnel, including on matters involving judgement or where entity records were inadequate.

1.20 The audit was conducted in accordance with the ANAO auditing standards at a cost to the ANAO of approximately \$319,000.

1.21 The team members for this audit were Stephen Cull, Emily Drown, Ruth Cully and Brian Boyd.

## 2. Effectiveness of the policy design process

### Areas examined

This chapter examines whether the Department of the Prime Minister and Cabinet (PM&C) and the Taskforce set up within PM&C provided sound and timely advice to government to help inform the design of the National Innovation and Science Agenda (NISA). The audit does not comment on the policy decisions made by government.

### Conclusion

The design process for the NISA was timely in supporting a government decision-making process. It was aided by active management by PM&C and the Taskforce, and drew on previous reviews and input from a range of entities. In addition to sector level material, some guidance on the development of policy advice was available within PM&C and Industry, but it was not evident how this material was applied to the work of the Taskforce or to the input provided by entities. The ANAO observed variability in the quality of the advice provided. The better developed proposals included a clear articulation of the evidence base and likely impacts of the proposals and also indicated when the proposal would be reviewed or evaluated. However, much of the advice was general in nature and did not present quantitative or in-depth analysis of problems, expected impacts or how outcomes would be measured.

### Area for improvement

The ANAO has recommended that PM&C and Industry review and update their policy development guidance and training materials so that they: are fit-for-purpose for the range of activities undertaken, including cross-entity taskforces; clearly articulate an acceptable standard of analysis and evidence; and include mechanisms to provide assurance that the guidelines are consistently applied.

### Were officers responsive in providing initial advice and options?

In response to the Prime Minister indicating the importance of innovation to the Government's agenda, PM&C provided policy advice on a new innovation agenda. PM&C was responsive in meeting the timeframes agreed with government for providing advice on the package of proposed measures. In the time available, a number of important matters were not addressed in the advice to government, including implementation risks, governance, and evaluation arrangements.

### The origin of the National Innovation and Science Agenda

2.1 The Prime Minister had made statements that innovation was at the centre of the Government's agenda.<sup>19</sup> In response, PM&C proposed the development of a Prime Ministerial statement and a specific innovation package.

19 See, for example: M Turnbull, (Prime Minister), 'Changes to the Ministry', media transcript, Parliament House, Canberra, 20 September 2015, available from [www.malcolmturnbull.com.au](http://www.malcolmturnbull.com.au).

2.2 PM&C recommended that an innovation package be developed for consideration by the end of 2015, stating that such a package could be fundamental in transforming the economy and for addressing risk aversion and business culture. This timeframe was subsequently agreed by government. The Minister for Industry, Innovation and Science (Industry Minister) was tasked by the Prime Minister with developing an innovation statement and package by the end of 2015.

2.3 The rationale for delivering a new innovation agenda in this timeframe was not provided in PM&C's initial advice or in subsequent advice to government. Limited or no advice was provided to government during the design process on a range of implementation matters for the Agenda as a whole including: implementation risks, governance, and evaluation arrangements. It was unclear how the timeframe proposed by PM&C took account of the department's own better practice guidance on the successful implementation of policy initiatives, which emphasises that implementation should be considered at every stage of policy development.<sup>20</sup> Providing advice on these matters during the main decision-making process, before funding was determined, would have aided the management of risks associated with implementing a sizable cross-portfolio program.

2.4 The initial advice provided by PM&C noted that there were several reviews and reports that could be synthesized down to a package of a few key high-impact, pro-growth initiatives. The advice highlighted the four areas PM&C considered to have the biggest problems and where actions could have the biggest impacts, which were broadly endorsed by government and reflected in the four pillars in the NISA. Other than drawing attention to existing information, reports and reviews, the initial advice did not indicate the evidence base to support the changes proposed or provide any further elaboration on how a new agenda would 'transform' the economy, having regard to, for example:

- the effectiveness of existing government expenditure in support of science, research and innovation—which included around \$3 billion in funding<sup>21</sup> to the private sector to encourage investment in new products, services and processes;
- the effectiveness of the 2014 Industry Innovation and Competitiveness Agenda, which included a number of measures intended to foster innovation and entrepreneurship; and
- the broader role of tax and regulatory systems in encouraging or distorting the investment environment for innovation.

### **An iterative process to design the package**

2.5 Following the establishment of the Taskforce to support the Industry Minister to develop a new innovation agenda and help to coordinate efforts across relevant portfolios, options for the Government's consideration were identified, assessed and compared through an iterative process (Figure 2.1). Some targeted consultation was also undertaken during this period.

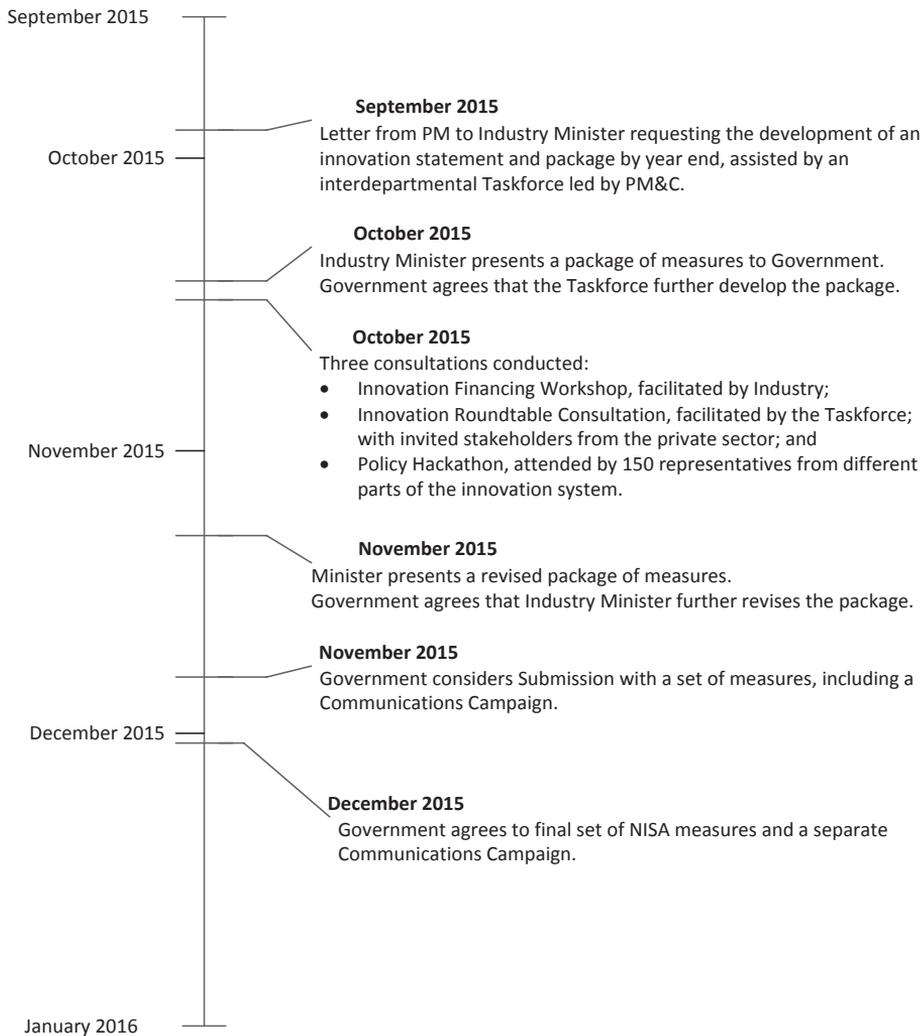
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20 Better Practice Guide on *Successful Implementation of Policy Initiatives*, October 2014, co-written by the Australian National Audit Office and the Department of the Prime Minister and Cabinet, available at [www.anao.gov.au](http://www.anao.gov.au).

21 Under the *Research and Development Tax Incentive*, administered by Industry and the Australian Taxation Office. See: Department of Industry, Innovation and Science, *The Australian Government's 2015-16 Science, Research and Innovation Budget Tables Minister for Industry and Science's foreword 30 July 2015*, available from: <https://industry.gov.au/innovation/reportsandstudies/Pages/SRIBudget.aspx#> [accessed 26 May 2017].

A threshold question asked early in this process was whether the agenda should include science or be limited to innovation. PM&C's advice was that science should be confirmed as part of the agenda, which was accepted.

**Figure 2.1: Timeline of the development process for the NISA**



Source: ANAO analysis of information provided by PM&C.

2.6 The Taskforce sought the Government's approval for a package of measures on three separate occasions prior to the final decision on the NISA. Over a three month period, the Taskforce worked actively with Government to develop the final package of 24 measures.<sup>22</sup> The process established by PM&C to assist the Industry Minister to develop the agenda resulted in the agreed timeframe being met.

## Were policy problems and expected impacts clearly identified and supported by sufficient analysis and evidence?

The better developed proposals articulated: the evidence base; the likely impacts of the proposals; and when the proposal would be reviewed or evaluated. The ANAO observed that much of the advice was general in nature and did not present quantitative or in-depth analysis of problems, expected impacts or how outcomes would be measured. A number of the proposals that involved significant expenditure aimed at transforming parts of the innovation system relied on assertions rather than evidence. There was no specific guidance on the standard of evidence required to support individual measures or the package as whole.

### Framework for providing advice

2.7 The framework that was in place to support the development of policy advice on the NISA included some general requirements and guidance on working with government, as set out in: the APS Values<sup>23</sup> and Directions issued by the APS Commissioner<sup>24</sup>; and in policy manuals, handbooks and circulars.<sup>25</sup> For instance, the APS Value of 'Impartial' requires that advice to government is 'frank, honest, timely and based on the best available evidence'.<sup>26</sup>

2.8 There was also some general guidance (in templates) on the matters to be focussed on by entities in developing policy proposals for government consideration. This included addressing:

- what the policy problem is and why the Commonwealth should intervene;
- what the expected outcome(s) are and how the proposal will achieve them; and
- how the proposal's progress and success in delivering the outcomes will be measured.<sup>27</sup>

2.9 PM&C and Industry have also developed guidance and/or training materials on the development of policy advice. It was not evident, however, how this guidance and training material was applied to the work of the Taskforce or to the policy proposals submitted by the contributing entities.

2.10 The available guidance material did not articulate the standard of analysis and evidence that would be appropriate, having regard to the scale of the expenditure and expected economic

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22 See Appendix 3 for a description of the NISA measures.

23 The Values are set out in section 10 of the *Public Service Act 1999*, and supported by guidance issued by the Australian Public Service Commission.

24 Available at <https://www.legislation.gov.au/Series/F2013L00448>.

25 Some of which are internal to government and not publicly available.

26 See sub-section 10(5) of the *Public Service Act 1999*.

27 The templates provided general headings under which relevant matters are to be addressed. There was no sub-heading, for instance, on the 'Problem'.

impacts.<sup>28</sup> The evidence base was largely a matter of judgement by the responsible entities, as mediated through the iterative decision-making process with government. As well, the roles and responsibilities of PM&C, the Taskforce and entities in respect to the quality of the advice provided to government were not documented.<sup>29</sup>

2.11 The importance of providing quality advice has been highlighted in Professor Peter Shergold's independent review of government processes for implementing large programs and projects.<sup>30</sup> The report observes that 'Good advice is factually accurate and backed by evidence. It presents proposals based upon considered interpretation of alternative viewpoints and often reflects multiple perspectives.'<sup>31</sup> The report concludes that 'Public service advice is vital to good government and, to this end, Secretaries should be held accountable for the quality of advice provided to ministers by their departments'.<sup>32</sup> Effective accountability would usually require an assessment/guidance framework being established setting clear expectations of performance, in this case as to what good quality advice looks like. Such frameworks are the norm in most areas of government activity<sup>33</sup> where sector wide guidance is typically supported by agency specific frameworks.

2.12 An example of a specific framework is that produced by the New Zealand Department of the Prime Minister and Cabinet (see <https://www.dPMC.govt.nz/our-programmes/policy-project/policy-improvement-frameworks/policy-quality>). Its Policy Quality Framework is one of three improvement frameworks co-designed for and by the policy community in New Zealand to help government agencies improve their policy quality and capability. It seeks to help decision makers decide what to do by providing them with advice that is clear about the problem or opportunity, setting out all the available evidence, and presenting options that balance what is desirable, possible and cost-effective. The New Zealand framework describes the key characteristics of quality policy advice, as well as the 'enablers' of great advice. It includes a range of tools to assist practitioners to review and improve policy quality.

2.13 The ANAO examined whether individual proposals addressed the three matters outlined above in paragraph 2.8. The ANAO also examined whether the evidence base presented to government was appropriate and sufficient, taking into account the materiality of the expenditure and the recognised importance of 'evidence-based' approaches to policy development.<sup>34</sup>

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28 In contrast, the guidance issued by PM&C on developing a Regulation Impact Statement outlines the level of analysis that is required depending on the expected impact on the economy and other relevant matters.

29 The ANAO understands that, while the Taskforce had general oversight of the package, the content of individual proposals was the responsibility of the relevant portfolio Minister and lead entity.

30 *Learning from Failure: Why large government policy initiatives have gone so badly in the past and how the chances of success in the future can be improved*, Professor Peter Shergold AC, 12 August 2015, available at [www.apsc.gov.au](http://www.apsc.gov.au).

31 *ibid*, p. iii.

32 *ibid*, p. iv.

33 In areas of public administration such as: regulation; service delivery; procurement; contract management; grants administration; and financial management.

34 See, for instance, Speech to the Australian and New Zealand School of Government, 'Evidence-based policy-making: What is it? How do we get it?' Gary Banks, Chairman of the Productivity Commission, 4 February 2009, available from [www.pc.gov.au](http://www.pc.gov.au).

## Evidence base for the package and the four pillars

2.14 The Taskforce used a model to depict the policy case for change, which showed the relationship between four elements:

- *Context*—the broad imperatives for change and opportunities across the economy;
- *Vision*—how Australia would look after positive change in each of the four identified pillars of the innovation system;
- *Barriers*—to the achievement of the vision (see Box 1); and
- *Initial actions*—that can be taken to address the barriers and achieve the vision.

### Box 1: Barriers identified by the Taskforce (September–October 2015)

1. **Culture and capital**—there is currently a low appetite for risk and early stage capital investment. Australia lags on new-to-market investment.
2. **Collaboration**—there are weak incentives to commercialise research. Australia is ranked last in the Organisation for Economic Cooperation and Development (OECD) for research/industry collaboration.
3. **Talent and skills**—the world is changing, and our workforce and economy need to change with it to reap opportunities.
4. **Government as an exemplar**—Government services can be more efficient and provide better services through innovation.

Source: ANAO analysis of information provided by PM&C.

2.15 The model did not identify the overarching outcomes being sought for the broader economy. These were outlined in the final advice to government and included increasing productivity and diversifying the economy.

2.16 The policy logic that can be inferred from this model is that: if the proposed actions are taken, they will reduce the barriers, which will move Australia towards the vision, which in turn will help achieve the objective of increasing productivity and diversifying the economy.

### *Evidence that the four pillars were the major barriers to innovation*

2.17 The Taskforce’s advice to government provided limited evidence as to why these four areas were the major barriers in Australia’s innovation system. For instance, for ‘Culture and capital’, there was no further evidence presented to support the statement that there is currently a low appetite for risk in Australia.<sup>35</sup> There was also no further analysis on where any specific gaps or problems were across the economy in respect to ‘Talent and skills’.

2.18 Without direct evidence of the nature and size of these barriers, and a defined baseline, it is not clear how success would be measured. For the ‘Collaboration’ barrier, the direction of change was clear: an improvement in Australia’s OECD ranking for research/industry collaboration. Nevertheless, there was no indication of what higher ranking was being sought or the practical implications of a higher ranking on the economy.

35 Innovation and Science Australia’s *Performance review of Australia’s Innovation and Science System* conducted in 2016 found that ‘Although there are common references to Australia’s ‘risk-averse’ culture, no strong evidence of this was found’. See page xii of the *Performance Review of the Australian Innovation, Science and Research System 2016*, available from [www.industry.gov.au](http://www.industry.gov.au).

2.19 Industry advised the ANAO that the barriers identified in the innovation system at the time the NISA was being considered were the summation of extensive research and consultations. PM&C and Industry also advised the ANAO that there had been a long policy development process on innovation and consequently the Government did not come to the development of the NISA without any knowledge. Elaborating on this point, PM&C advised the ANAO that, in some cases over many years, Ministers would have formed views from previous reviews and from discussions with a wide range of stakeholders; and, in addition, departments would have briefed Ministers in more detail over an extended period.

#### *Analysis of expected impacts*

2.20 In June 2017, PM&C advised the ANAO that the size of the NISA package was too small, even in aggregate, for an economy-wide modelling or analytical framework to register an economic impact beyond the materiality thresholds used by the Treasury (which is rounded to the nearest quarter percentage point of Gross Domestic Product). PM&C further advised the ANAO that it is Treasury's advice that it would be hard to come up with an authoritative way of modelling many of the measures given the disparate nature of the measures in the package. The Taskforce's advice to government at the time the NISA was being developed therefore did not include any modelling, forecasting or other analysis on the expected impacts of the NISA with respect to its ultimate purposes of improving the economy, for example, by increasing productivity.

2.21 No advice on the measurement difficulties was provided to government when NISA was being designed. Had this been done, it may have assisted in setting expectations about the NISA's likely impacts.

#### **Evidence base for the measures**

2.22 In the final advice to government, each measure was presented in the prescribed format, which comprised:

- a description of the proposal;
- a policy case;
- implementation and delivery considerations; and
- regulatory impact (where relevant).

2.23 The format did not require explicit identification of the policy problem, expected outcomes, or how they would be measured. Entities had discretion on how to address these matters in the relevant sections of the proposal; and as previously noted (paragraph 2.10) there was no specific guidance on the standard of evidence that would be appropriate. These limitations made it difficult to determine whether policy problems and expected impacts were clearly identified and supported by sufficient analysis and evidence.

2.24 The ANAO observed variability in the quality and depth of the advice provided across the final set of proposals presented to government. The better developed proposals:

- contextualised the nature and extent of the problem, or acknowledged the limitations of the evidence base;

- included specific evidence rather than relying on assertions, including references to previous reviews or inquiries that had been undertaken<sup>36</sup>;
- proposed measures to mitigate identified risks, including ex ante and ex post reviews;
- provided a rationale for government intervention;
- described the linkage to the relevant pillar and high-level outcomes;
- indicated when the proposal would be reviewed or evaluated.

2.25 However, much of the advice provided was general in nature and did not present quantitative or in-depth analysis of problems, expected impacts or how outcomes would be measured. A number of the proposals that involved significant expenditure aimed at transforming parts of the innovation system relied on assertions rather than evidence. In many cases, there was also a lack of specificity in the outcomes or expected impacts being sought, making it difficult to determine how success would be measured.

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36 This includes: the Research Infrastructure Review; Review of Research Policy and Funding Arrangements; and the Productivity Commission's inquiry into *Business Set up, Transfer and Closure*; Office of the Chief Scientist report: *Science, Technology, Engineering and Mathematics –Australia's Future*.

## Recommendation No.1

2.26 The Department of the Prime Minister and Cabinet and the Department of Industry, Innovation and Science review and update their policy development guidance and training materials so that they:

- (a) are fit-for-purpose for the range of activities undertaken, including cross-entirety taskforces;
- (b) clearly articulate an acceptable standard of analysis and evidence; and
- (c) include mechanisms to provide assurance that the guidelines are consistently applied.

**Department of the Prime Minister and Cabinet response:** *Agreed.*

2.27 The Department of the Prime Minister and Cabinet (PM&C) supports the recommendation and agrees with the need for policy to be based on robust evidence and analysis. There is an ongoing need to test and refine our policy frameworks to ensure they clearly articulate an acceptable standard of analysis and evidence, and we need to continually work to promote good policy development practice within PM&C and across the APS. There is also an opportunity for PM&C to better draw together framework materials and improve their visibility and accessibility across the Australian Public Service.

**Department of Industry, Innovation and Science response:** *Agreed in part.*

2.28 The Department of Industry, Innovation and Science agrees in part with the recommendation. The Department has well-established policy frameworks that provide consistently high quality advice to its ministers and the Government more broadly within robust accountability frameworks. We note that the development of the NISA was undertaken consistent with established policy development practices and built upon and complemented other advice. This process was consistent with many others in that proposals were iterated over the policy development lifecycle, taking into account views of key stakeholders and government decisions.

2.29 The Department's contribution properly reflected expert advice from within this portfolio and drew upon available evidence as necessary to support the Government's decision-making within the required timeframes and process agreed by ministers. The policy process was subject to close ministerial scrutiny, consistent with Cabinet decision-making, and the performance of the public service was publicly commended by the Government. Wherever there are opportunities to improve our processes we seek to do so, and the Department will examine its policy development guidance and associated training materials in the light of the ANAO's findings.

## Was adequate consultation undertaken?

Consultation in the design phase was adequate given the short timeframes involved and given that a number of the proposed measures had been canvassed in earlier consultation processes.

### Targeted consultation

2.30 In PM&C's initial advice to the Prime Minister in September 2015, officers suggested that stakeholder consultation would be important but needed to be well-targeted. This approach was endorsed by government.

2.31 In the period from September to December 2015, when the NISA was being developed, some targeted consultation was undertaken. Three consultations occurred in October 2015:

- an innovation financing workshop facilitated by Industry, in which participants from government and industry discussed a range of topics including: equity co-investment initiatives; encouraging angel investment; encouraging corporate support and investment; and encouraging institutional finance investment, particularly superannuation;
- an Innovation Roundtable held in Sydney involving business groups and the tertiary education sector, its purpose to hear the views and concerns of invitees about improving innovation in Australia; and
- a 'Policy Hackathon' in which around 150 representatives from different parts of the innovation system developed ideas in 10 policy areas (for example, Corporate Innovation), which were made publicly available on the PolicyHack website ([www.policyhack.com.au](http://www.policyhack.com.au)).

2.32 The views of the Commonwealth Science Council were also sought on the NISA at its meeting on 21 October 2015. The Prime Minister and Industry Minister outlined the Government's position on innovation and science, and described key themes being examined in the proposed innovation and science agenda. The Chief Scientist was invited to outline potential elements in that agenda. The Council agreed that the themes described by the Industry Minister were consistent with the elements presented by the Chief Scientist and recommended that the Government urgently develop a comprehensive and whole-of-government National Innovation and Science Agenda.<sup>37</sup>

2.33 The final decision-making material prepared for government outlined a range of stakeholder views, including key issues raised during the Innovation Roundtable.<sup>38</sup> The advice stated that there had been a positive reaction across the community and industry to the Government's focus on innovation and science.

2.34 The need for further stakeholder consultation during the implementation process was identified in a number of the proposed NISA measures. Some additional consultation occurred for

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37 See the official meeting record published at [www.chiefscientist.gov.au](http://www.chiefscientist.gov.au).

38 These were reported as: access to finance; STEM workforce skills; attracting entrepreneurial talent to Australia; and better collaboration across sectors and increased commercialisation of research.

specific measures, including several tax measures.<sup>39</sup> In some cases, these consultation processes indicate that earlier engagement of particular stakeholder groups may have been beneficial in identifying sector-specific implementation issues and setting more appropriate timeframes for implementation.

### Previous consultation processes

2.35 Some of the NISA measures had been canvassed in previous consultation processes led by the relevant entities. These included: the Business Tax Working Group 2012 review; Boosting the Commercial Returns from Research, October 2014; the Tax Discussion Paper, *Re:think*, March 2015; the Research Infrastructure Review 2015; and STEM–Vision for a Science Nation consultation in June 2015.

2.36 In addition, PM&C advised the ANAO that the three NISA education measures were developed in response to the Review of Research Policy and Funding Arrangements (November 2015), which consulted widely with the university and business sector. PM&C also advised the ANAO that the head of the Taskforce<sup>40</sup> had indicated that she and a senior taskforce official had met with a wide range of stakeholders during the course of the Taskforce process.

2.37 Drawing on previous and relevant consultation processes is appropriate and consistent with consultation principles aimed at reducing the burden on stakeholder groups. In providing advice it is also important to transparently link the views provided by stakeholders and the proposed measures—noting that several of the proposed NISA measures were not those that had been recommended through earlier review processes.

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39 That is: *Tax incentives for angel investors; Improve Bankruptcy and insolvency laws; and Employee share schemes.*

40 A Deputy Secretary at PM&C.

## 3. Planning and governance arrangements

### Areas examined

This chapter examines whether appropriate planning and governance arrangements were established to support the timely and effective implementation of the National Innovation and Science Agenda (NISA). This included an examination of the evaluation framework for the Agenda.

### Conclusion

Suitable planning and governance arrangements for the Agenda were established early in the post-announcement period to support most aspects of implementation. Some elements of the evaluation framework were delayed, including confirmation that entities had identified baseline data and robust evidence collection systems. Current indications are that impact assessment will be affected by variability in the quality of entities' performance measures and data collection systems. Assessing the impact of the package as a whole is also likely to be challenging.

### Areas for improvement

The ANAO has recommended that Industry finalise the NISA evaluation strategy and establish formal monitoring arrangements with relevant entities so that the results of evaluation activities can be used to inform advice to government on future measures and the continuation of existing measures.

## Was implementation planned effectively?

An implementation plan was developed for the NISA in the months following the launch of the Agenda. The implementation plan addressed relevant implementation principles and was prepared in the timeframe set by government (1 March 2016), some four months before the first measures were due to be implemented.

### Implementation planning

3.1 Successful implementation of government policy initiatives is one of the key responsibilities of public sector entities. Effective implementation planning helps to support the delivery of initiatives on time, within budget and to an acceptable level of quality.<sup>41</sup>

3.2 During the development of the NISA and in the final advice provided to government, officers from PM&C or the Taskforce did not prepare an implementation plan for the Agenda or provide advice on the challenges and risks of implementing a sizeable cross-portfolio package. Some implementation details were included for the individual measures that were proposed for the NISA, but this information did not provide a 'whole-of-Agenda' perspective on matters that

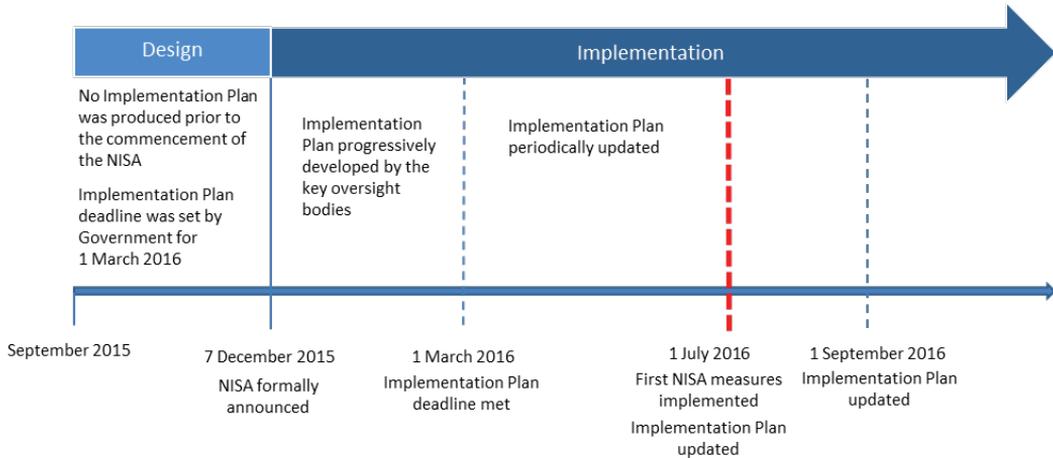
41 Better Practice Guide on *Successful Implementation of Policy Initiatives*, October 2014, co-written by the Australian National Audit Office and the Department of the Prime Minister and Cabinet, available at [www.anao.gov.au](http://www.anao.gov.au), p. 3.

would typically be included in an implementation plan: an implementation schedule; governance arrangements; monitoring, review and evaluation; and risk management.

3.3 As part of its decision on the NISA in December 2015, the Government required that an implementation plan be prepared by 1 March 2016, for approval by the Prime Minister.

3.4 The timeframe and requirements set by government were met (Figure 3.1). An implementation plan for the NISA was provided to the Prime Minister in late February 2016, via the Industry Minister.

**Figure 3.1: Timeline for the development of the Implementation Plan for the NISA**



Source: ANAO analysis of information provided by Industry.

3.5 The Implementation Plan was developed by the Delivery Unit in consultation with appropriate stakeholders and was underpinned by measure-specific implementation plans prepared by the lead entities. Members of the interdepartmental implementation committee (NISAIC) were provided an opportunity to comment and provide input on the draft plan.

3.6 The March 2016 Implementation Plan addressed key areas, including:

- governance arrangements—and an overview of the roles and responsibilities of the various oversight bodies and the participating entities;
- the implementation schedule for the 24 measures (which reflected the timeframes publicly announced on 7 December 2015);
- the approach to engaging stakeholders, along with detail of proposed consultation arrangements for each measure;
- the risk management framework; and
- review and evaluation arrangements—including a proposed evaluation strategy.

3.7 The Implementation Plan was reviewed as implementation of the NISA progressed. Although the Plan itself was not publicly released, the progress of initiatives has been reported on the innovation website ([www.innovation.gov.au](http://www.innovation.gov.au)).

## Were suitable governance arrangements established?

Suitable governance arrangements were established to support implementation of the Agenda. Specific oversight bodies were established promptly, and operated within a governance framework for the Government's broader innovation agenda.

### Specific oversight bodies for the NISA

3.8 Although the Taskforce's advice to government did not address proposed governance arrangements for the NISA, specific oversight bodies began operating in December 2015 following the announcement of the Agenda, namely:

- an interdepartmental implementation committee (known as NISAIC), headed by an independent chair<sup>42</sup> who reported directly to the Industry Minister; and
- a NISA Delivery Unit, operating out of Industry.

3.9 The establishment of both bodies was foreshadowed by the Industry Minister during the official launch of the NISA, in which he outlined the governance framework to support the innovation agenda and its importance to government.<sup>43</sup> Industry advised the ANAO that advice had been provided to the Industry Minister at senior levels within the department on proposed arrangements, although no documentation was provided to demonstrate the nature and timing of the advice provided.

3.10 The NISAIC held its first meeting on 18 December 2015. The meetings were attended by representatives (at Deputy Secretary or equivalent level) from 11 entities, and were initially held on a monthly basis.<sup>44</sup> The Delivery Unit also started operating in December 2015, initially through the secondment of a senior public servant (division head level) to Industry, with other staff recruited as needed.<sup>45</sup> The respective roles of the NISAIC and Delivery Unit were formalised in the NISA Implementation Plan that was provided to the Prime Minister in late February 2016. Both bodies had complementary roles to drive implementation of the Agenda (as described in Figure 3.2).

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42 Dr Ian Watt AC PSM, former secretary of the Department of the Prime Minister and Cabinet.

43 Transcript of Launch of the National Innovation and Science Agenda <https://www.malcolmturnbull.com.au/media/launch-of-the-national-innovation-and-science-agenda1> [accessed 27 April 2017].

44 From July 2016, meetings were held less frequently on the basis that implementation of the Agenda was considered by the Chair of NISAIC to be "overwhelmingly on track".

45 The number of staff peaked at 11 in early-mid 2016.

**Figure 3.2: Roles of the specific oversight bodies for the NISA**

Interdepartmental committee (NISAIC)	NISA Delivery Unit
<ul style="list-style-type: none"> <li>• Strategic oversight of implementation of the Agenda</li> <li>• Resolution of any problems or risks</li> <li>• Coordination of progress reporting to the Minister for Industry, Innovation and Science</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination and project management to assist the NISAIC and Minister drive implementation</li> <li>• Proactively assess the delivery, monitoring and reporting across the NISA initiatives, including coordination and preparation of traffic light reports</li> <li>• Develop and implement a NISA risk management framework</li> <li>• Identify issues or risks early, providing advice and assistance to agencies and proactively resolving problems</li> </ul>

Source: ANAO presentation of information provided by Industry.

3.11 The documentation examined by the ANAO indicated that the Delivery Unit has met its assigned roles and responsibilities. In supporting the NISAIC to drive implementation of the Agenda, the Delivery Unit’s work centred around two main tasks:

- working with the participating entities on a range of implementation matters: input to the overarching Implementation Plans; progress updates; planned review and evaluation activities and timeframe; and
- preparing reports to government, via the NISAIC.<sup>46</sup>

3.12 One of the Delivery Unit’s specific tasks was to develop and implement a risk management framework for the Agenda. A framework was developed based on Industry’s existing model and outlined in the Implementation Plan. A number of risks were identified to the successful implementation of the Plan, and one of these risks was highlighted in the Implementation Plan: ‘...NISA measures fail to be seen as part of a positive agenda to achieve economic reform’. No other risks were included in the Plan.

3.13 Most aspects of the governance arrangements for the NISA were favourably reviewed by the Delivery Unit in a ‘lesson learned’ paper provided to the NISAIC in March 2017. In particular, the interaction of the oversight bodies with policy leads across different entities was considered to have provided a ‘whole-of-government’ perspective that would not otherwise have been available.

**Oversight of the broader innovation and science system**

3.14 While the NISAIC and Delivery Unit are responsible for monitoring and reporting on the NISA, two advisory bodies have a wider remit over the innovation and science system:

- Innovation and Science Australia (ISA); and
- the Commonwealth Science Council.<sup>47</sup>

46 Monitoring and reporting arrangements are discussed further in Chapter 4.

47 The Commonwealth Science Council was established in October 2014.

3.15 The establishment of ISA was one of the 24 measures in the NISA. Legislation to establish ISA was originally scheduled to be in place by 1 July 2016 but was delayed due to the caretaker period for the 2016 federal election. The legislation was passed by the Parliament on 20 October 2016. ISA and the Commonwealth Science Council were established to provide strategic advice to government, and to consider issues from a system-wide perspective. ISA is also responsible for oversight of a number of Australian Government programs, including the R&D Tax Incentive. ISA advised the ANAO that it is not responsible for evaluating individual NISA measures.

3.16 In February 2016, ISA published a *Performance Review of Australia's Innovation, Science and Research System*.<sup>48</sup> The review provided a baseline from which to develop a key deliverable, the 2030 Strategic Plan, which is expected to be provided to government in late 2017. The Performance Review concluded that: 'The findings in the ISR System Review make one thing very clear: we need to significantly lift our game if we want to be a top tier innovation nation.'<sup>49</sup> Key findings are listed in Box 2.

**Box 2: Key findings of the *Performance Review of the Australian Innovation, Science and Research System (2016)***

The review assessed performance against three activities—knowledge creation, knowledge transfer and knowledge application—as well as outputs and outcomes.

**Knowledge creation**—Australia is above average, including good levels of collaboration among researchers and world-class research infrastructure assets.

**Knowledge transfer**—needs to be improved, including limited collaboration between researchers and businesses.

**Knowledge application**—Australia's knowledge application does not currently match its strength in knowledge creation.

**Outputs**—Australia has innovative small and medium-sized enterprises and some highly innovative sectors, however Australia's innovations are not that novel. In many sectors innovations are new to the business only and reflect a low degree of novelty.

**Outcomes**—Australia's economic performance has been strong compared to other nations and Australia has performed well on a number of indices of social outcomes, however there has been a slowdown in productivity growth.

The strengths and weaknesses of system-wide issues were also assessed.

Source: ANAO presentation of Innovation and Science Australia's published report, available at [www.innovation.gov.au](http://www.innovation.gov.au).

3.17 There was coordination between the specific oversight bodies for the NISA and with ISA (which is supported by the Office of Innovation and Science Australia). Representatives from these bodies attended some NISAIC meetings. Progress reports on the NISA were shared with the Chair and Deputy Chair of ISA, as was the evaluation strategy for the Agenda.

48 Available from <<https://industry.gov.au/Innovation-and-Science-Australia/Documents/ISA-system-review/index.html>>.

49 *ibid.* See Foreword to the report.

## Was there appropriate oversight of stakeholder consultation?

Oversight arrangements for stakeholder consultation were appropriate. Under the NISA Implementation Plan, the primary responsibility for stakeholder consultation was assigned to the lead entity for each measure. The Delivery Unit explored whether joint consultation sessions would be beneficial, but no specific need for structured consultation was identified. Lead entities have reported measure-specific consultation to the Delivery Unit.

### Engaging with stakeholders

3.18 In the NISA Implementation Plan, responsibility for stakeholder consultation was principally assigned to the lead entity for each measure. Details of stakeholder consultations, including planned dates, were required to be included in the Implementation Plan Overviews for each measure developed by the lead entity. In turn, key consultation milestones and events were listed against each measure in the NISA Implementation Plan.

3.19 The NISA Delivery Unit had a role to coordinate aspects of consultation. This included identifying and facilitating joint sessions for stakeholders involved in more than one measure. Though some initial efforts were made to deliver on this role, no specific opportunities were identified, and no structured consultation of this kind was undertaken. According to the Delivery Unit, this was largely due to the different implementation timeframes for the NISA measures.

#### *Consultation on individual measures*

3.20 The progress reports for the NISA indicate that consultation occurred for some individual measures, particularly those that required legislation. For instance, for the tax measures, some public and/or targeted consultation occurred, including discussion papers and draft legislation being exposed for comment. In one case (*Tax incentives for angel investors*), the announced implementation timeframe put pressure on the level of consultation that was undertaken.

## Was an effective evaluation framework developed?

An evaluation framework was developed but not in a timely or fully effective manner. Limited advice was provided to government during the design process about the specific impacts of the Agenda, and how or when they were to be measured. While evaluation arrangements were progressively developed post-announcement, there were delays and issues associated with the identification of suitable performance measures and data sources.

### Developing the framework

3.21 As indicated in Chapter 2 (paragraph 2.3), officers from PM&C or the Taskforce did not provide advice to government in the design phase to indicate how or when the impacts of the Agenda were to be reviewed and evaluated. An evaluation schedule considered by NISAIC in September 2016 indicated that much of the evaluation of outcomes will occur in the years after 2019. This timeframe is not unexpected; it reflects the time required for the measures to have an impact on business activity, as well as time lags in obtaining data on which to base an evaluation (especially for the tax measures).

3.22 Efforts to develop an evaluation framework for the NISA commenced shortly after the announcement of the Agenda. In late January 2016, the Chief Economist from Industry provided a paper to NISAIC on measuring the impact of NISA. The paper emphasised a number of key points including the need for:

- identification of meaningful and measurable outcomes, to be articulated and agreed in advance of measure launches and arrangements put in place to capture the necessary data;
- clear governance arrangements across agencies, with the establishment of a working group to represent all lead departments; and
- active collaboration between responsible parties.

3.23 Around the same time, the chair of NISAIC separately raised concerns in a letter to the Minister about the quality of the performance metrics being prepared for some measures—pointing to a widespread failure to indicate how they might be measured.

#### *Implementation Plan*

3.24 The process for developing the evaluation framework, including roles and responsibilities, were articulated in the NISA Implementation Plan (first developed in March 2016). The agreed approach was that lead entities would be responsible for their own evaluation activities, while the NISAIC would work collaboratively on NISA measures. As intended, a working group, chaired by the Chief Economist, was established to represent and assist in the evaluation of the individual measures. A stated goal of the cross-entity collaboration was to improve the collection and use of data to measure impact. To assist with this goal, a template was developed by Industry and provided to all participating entities.

3.25 The Implementation Plan set a requirement, agreed by lead entities, that each initiative would have a program logic<sup>50</sup> in place and be ‘evaluation-ready’ prior to 1 July 2016. The Plan required lead entities to:

- clearly articulate what the measure is intended to achieve and how it will do this;
- identify appropriate performance measures;
- identify or initiate necessary data sources; and
- schedule evaluation activities into the future.

3.26 The 1 July 2016 evaluation-ready deadline was not met. It was initially extended to 1 August and then to 30 September 2016, where the NISAIC was advised that all lead entities had met the requirements and provided supporting documentation to Industry. This included a draft schedule of evaluation activities planned by the lead entities. The schedule indicates that much of the more substantial evaluation activity is planned three to five years post implementation.

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50 Industry’s Evaluation Strategy 2015–19 notes that program logic is used at the policy and program development stage to clarify the intent of a program and assist in the development of performance measures, key evaluation questions and data sources, including establishing baseline data.

3.27 The ANAO examined a sample of evaluation plans prepared by entities, and identified a number of common issues including:

- necessary data is not always available or reliable – for example, due to privacy constraints and limited access to measure specific data;
- reliance on anecdotal evidence, rather than better qualitative or quantitative evidence, for early indications of impact; and
- difficulties in attributing cause and effect—given other factors also contribute to the broader outcomes being sought, for instance job creation and economic growth.

In addition, few of the entities used the evaluation template developed by Industry to assist the lead entities to meet evaluation-ready requirements.

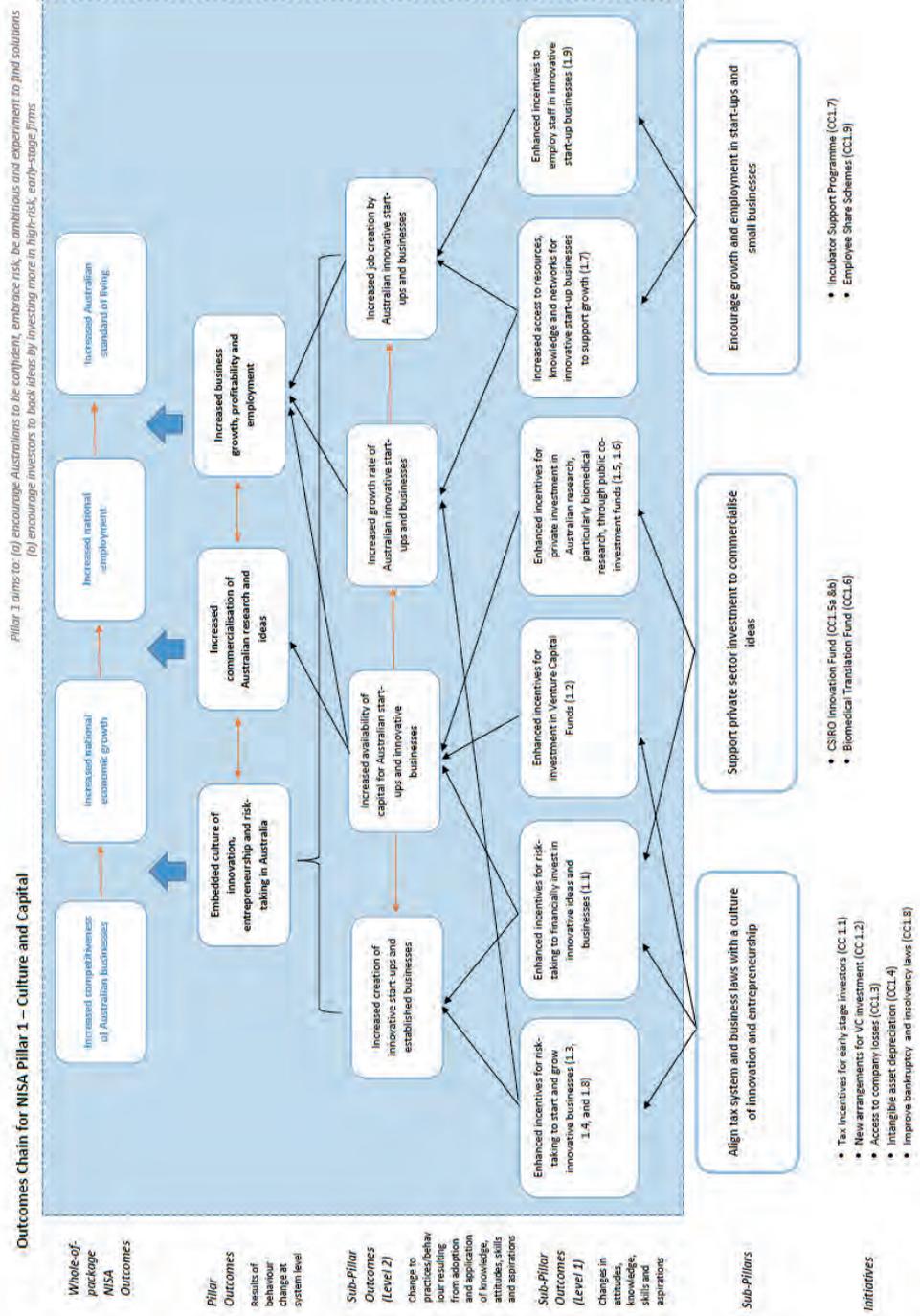
3.28 The adequacy of entities' evaluation ready arrangements was subsequently followed up by Industry in early-mid 2017 through a scheduled post-commencement review, as discussed further in Chapter 4 (paragraphs 4.19 to 4.21).

*Whole of Agenda outcomes framework*

3.29 In September 2016, an approach to evaluating the NISA package as a whole was provided by Industry's evaluation unit to the NISIAC. The framework shows the links from individual measures through pillar-level outcomes to whole-of-agenda outcomes. This included the development of detailed 'outcome chains' for each of the four pillars (see example in Figure 3.3). The outcome chains aim to show the expected links between the individual initiatives and the whole-of-package outcomes, moving through three intermediate layers:

- sub-pillar outcomes (Level 1)—changes in attitudes, knowledge, skills and aspirations;
- sub-pillar outcomes (Level 2)—changes to practices/behaviours resulting from adoption and application of knowledge, attitudes, skills and aspirations; and
- pillar outcomes—results of behaviour changes at system level.

**Figure 3.3: Outcomes chain for Pillar One of the National Innovation and Science Agenda – Culture and Capital**



Source: ANAO reproduction of information provided by Industry.

3.30 These complicated links are considerably more detailed than was considered during the design process for the NISA, where only broad statements were made about the intended outcomes to be achieved. For the Culture and Capital pillar, some possible metrics have been identified for each of the three intermediate layers and the whole-of-Agenda outcomes. However, these measures have not yet been formally approved by the NISAIC; nor have metrics yet been developed or agreed for the other three pillars.

3.31 Industry acknowledged to the ANAO in April 2017 that there are significant challenges in evaluating the contribution of the NISA to the broader innovation landscape and the changes sought by government. Industry has commented to the ANAO that many of the measures and effects are relatively small, and are unlikely to be captured at a whole-of-economy (macro) level. Moreover, there are many other activities that influence the broader outcomes being sought, and it will be difficult to isolate the contribution of particular measures of the Agenda as a whole.

3.32 In March 2017, the Delivery Unit identified and reported a ‘Lessons learned’ to the NISAIC, noting that, in relation to the design phase:

Implementation and evaluation readiness might have been improved if clearer descriptions of each measure’s objectives, particularly outcomes and outputs, had been developed as part of the NISA.

This would have enabled earlier development of evaluation material and in some case provided greater clarity on deliverables.

3.33 The importance of formalising evaluation strategies early has been raised in earlier ANAO reports.<sup>51</sup>

## Recommendation No.2

3.34 The Department of Industry, Innovation and Science finalise the evaluation strategy for the National Innovation and Science Agenda, and establish formal monitoring arrangements with relevant entities, so that the results of evaluation activities can be used to inform advice to government on future measures and the continuation of existing measures.

**Department of Industry, Innovation and Science response: *Agreed.***

3.35 The Department of Industry, Innovation and Science agrees with the recommendation, noting that responsibility for evaluating programs rests with the agencies responsible for their implementation. The Department has already undertaken a coordination role of evaluation activities associated with the NISA. Subject to ministerial agreement, we will work with other agencies to establish formal monitoring arrangements to provide advice to the Government on the impact of NISA measures.

51 A recent example is ANAO Report No.35 2016–17 *Indigenous Advancement Strategy*.

## 4. Monitoring and reporting on progress

### Areas examined

This chapter examines whether the implementation of the National Innovation and Science Agenda, and the outcomes to date, have been effectively monitored and reported on by the specific oversight bodies—the interdepartmental implementation committee (NISAIC) and the NISA Delivery Unit.

### Conclusion

Monitoring and reporting arrangements for the Agenda have, in most respects, been effective. Regular progress reports covering all measures and all responsible entities have been provided to government and other relevant stakeholders. The advice provided drew attention to various implementation risks, including not meeting the publicly announced timeframes. However, in a number of cases, the accompanying ‘traffic light’ ratings provided a more optimistic view of progress than was supported by the evidence. This included seven measures that did not meet the publicly announced timeframe but were not rated appropriately.

### Areas for improvement

Since the implementation of the NISA is substantially complete, the ANAO has not made a recommendation on the monitoring and reporting arrangements. A clear area for improvement would be to establish a better defined rating system to reduce ambiguity and provide stronger assurance to government on the state of implementation.

### Were effective monitoring arrangements established?

Effective monitoring arrangements were established, which covered all relevant entities and all measures agreed by government. The arrangements centred on regular progress reports to government and other stakeholders. The reports were compiled by the Delivery Unit and underpinned by information provided by lead entities for each measure.

### Implementation schedule

4.1 When the Agenda was announced planned implementation timeframes were provided on ‘fact sheets’ for individual measures. The fact sheets were initially posted on the NISA website ([www.innovation.gov.au](http://www.innovation.gov.au)) on 7 December 2015. They were removed on 20 April 2016 and replaced by a webpage with updates for relevant measures.

4.2 For the 34 measures listed in the fact sheets<sup>52</sup>, implementation was spread over an approximately three-year period from December 2015 until the end of 2018. The bulk of measures were to be implemented, or to take effect, from 1 July 2016. The implementation schedule, as per the announced timeframes, is presented at Appendix 4. The timeframes generally fit into one of the following categories:

52 The progress reports compiled by the Delivery Unit also advised government of the progress of three measures that were not included in the \$1.1 billion Agenda. These were: Crowd Sourced Equity Funding; the NISA Communications Campaign; and review of the R&D Tax Incentive program.

- defined start dates or months—for example, funding will commence on 1 July 2016 for *Data61*; or
- defined but broader time periods—for example, funding will commence in 2016–17 for *Quantum computing*; or
- expected start dates or periods, subject to the passage of legislation—for example, *Tax incentives for angel investors* will apply from the date of Royal Assent and is expected to commence from 1 July 2016.

4.3 From 5 February 2016, the announced implementation timeframes were included in progress reports to government.

### Progress reports

4.4 Following their establishment in December 2015, the NISAIC and the Delivery Unit moved quickly to establish arrangements for monitoring and reporting on the progress of the Agenda. In the initial period, this involved developing a reporting template, based on information provided by the participating entities and vetted by the oversight bodies.

4.5 The reporting format evolved as the NISA progressed. The reports generally provided information on the key milestones achieved during the reporting period, potential issues for the implementation of specific measures and advised corresponding ministerial announcements.

4.6 The first progress report was provided to the Industry Minister on 8 January 2016. Progress reports were also provided to government and were shared with other internal stakeholders, including the Chair and Deputy Chair of Innovation and Science Australia. Progress reports were typically accompanied by a brief to the Industry Minister prepared by Industry as well as a letter to the Industry Minister prepared by the Independent Chair of NISAIC. These letters provided candid advice on a range of matters, including concerns with aspects of implementation.

4.7 Progress reports were initially provided on a fortnightly basis.<sup>53</sup> From August 2016, progress was reported on a monthly basis, reflecting the Independent Chair's view that good progress had been made in implementing the Agenda.

#### *Traffic light ratings*

4.8 The progress reports used 'traffic light' categories to indicate the implementation status of measures and to support the Delivery Unit's comments on progress. Initially, the standard categories of Red, Amber and Green were used. In July 2016, when the first measures were due to be implemented, a fourth category of Blue was added. In the progress reports, traffic light categories were applied in three contexts:

- to indicate what had happened in the previous period (fortnight or month);
- to forecast the next steps; and
- to provide a summary of overall progress of the NISA.<sup>54</sup>

53 Progress reports were suspended during the caretaker period for the 2016 Federal election from 29 April to 1 July 2016.

54 This particular form of summary was first included in the September 2016 progress report.

Across these three contexts, there was some variation in definition of the Amber rating (Box 3).

<b>Box 3: Traffic light definitions in the NISA Implementation Progress Reports</b>		
<u>Summary</u>	<u>What's happened</u>	<u>Next steps</u>
<b>Blue</b> – 'Implemented and now part of business as usual'	 'Implemented – business as usual'	 'Implemented – business as usual'
<b>Green</b> – 'On track for delivery'	 'On track'	 'On track'
<b>Amber</b> – 'Issues affecting delivery'	 'Shows emerging issues'	 'On track with emerging issues'
<b>Red</b> – 'Significant risk of delivery failure'	 'Off track'	 'Significant risk of delivery failure'

Source: ANAO presentation of information provided by Industry.

4.9 The definitions used to distinguish between the implementation categories were broad and were not further defined in the progress reports to aid judgement and reduce ambiguity. In particular, the progress reports did not indicate what circumstances would constitute 'a significant risk of delivery failure'. The Blue category was further defined when it was introduced, but the expanded definition was not included in the progress reports:

A measure is rated blue when it forms part of business-as-usual administration on the basis that delivery:

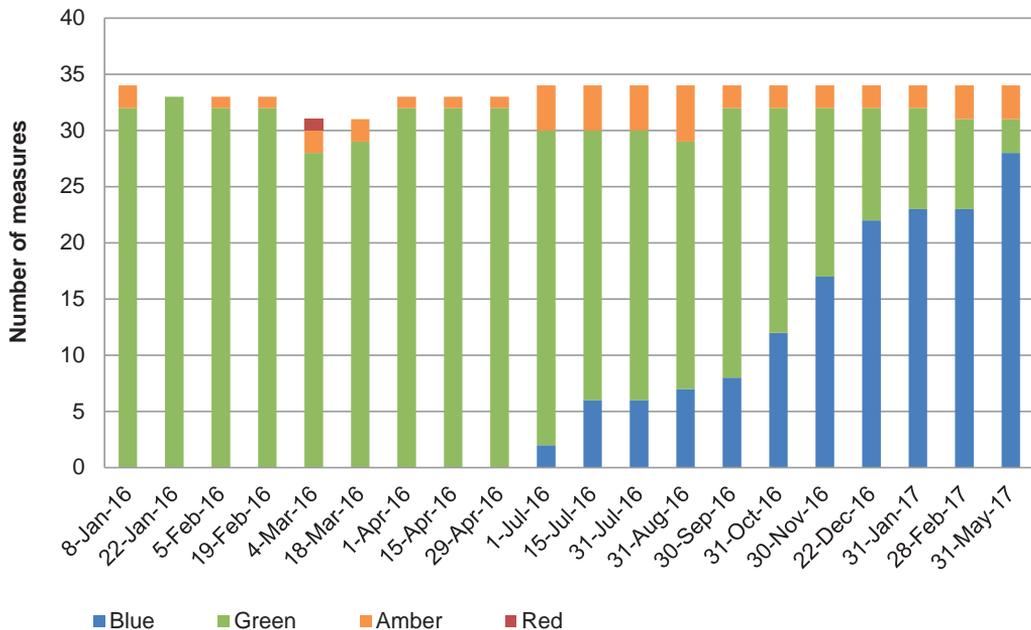
- has commenced, with intended users having access;
- is underpinned by sustainable legal and administrative frameworks; and
- is subject to appropriate ongoing oversight, governance and adjustment.

## Has progress reporting been timely and accurate?

Progress reporting has been timely and, in most respects, accurate. The oversight bodies provided regular and generally clear advice to government on the status of measures and the risks of not meeting milestones or announced timeframes. In some cases, the 'traffic light' ratings used to signal progress did not appropriately match the level of progress. This included seven measures that did not meet the announced timeframe but were rated as either 'on track with emerging issues' or 'on track'.

### Assessment of progress

4.10 As shown in Figure 4.1, the overwhelming majority of measures were rated by the Delivery Unit as Green, signifying they were 'on track'. Increasing Blue ratings occurred from July 2016 as measures were implemented.

**Figure 4.1: Traffic light ratings in NISA Implementation Progress Reports**

Note: The number of measures varies due to several factors including the addition or removal of measures as well as some measures not being rated for some reports.

Source: ANAO analysis of information provided by Industry.

4.11 Since monitoring began, some ten of the 34 measures have been rated Amber, with the majority of issues occurring in July and August 2016 following the caretaker period for the 2016 Federal election. Only one measure, *Tax incentives for angel investors*, was ever rated as Red, following concerns raised by the lead entity (Treasury) that limited consultation would affect the design of the measure. This measure was implemented by the announced timeframe.

#### *Changes to the implementation schedule*

4.12 The progress report considered by the NISAIC on 23 June 2017 (for the period to 31 May 2017) showed that 28 of the 34 sub-measures were implemented and part of business as usual activities. The progress report advised that delivery was ‘...overwhelmingly on track’ and ‘limited slippages do not impact on the integrity of the Agenda’.

4.13 Of the remaining six tracked items, three were categorised as ‘issues affecting delivery’ by the announced timeframe; and three were on track to meet the announced timeframe. The three measures with issues affecting delivery all involve legislation being passed in the Australian Parliament, namely:

- *Access to company losses;*
- *Intangible asset depreciation; and*
- *Improve bankruptcy and insolvency laws.*

### *Announced timeframes not met*

4.14 Although the majority of NISA measures are categorised as ‘implemented’, some seven measures were not implemented by the publicly announced timeframe. The progress reports typically included a statement indicating that the timeframe was at risk or had passed. In all seven cases, measures were rated as ‘on track’ in the period leading up to the implementation deadline being exceeded. Following the deadlines being passed, four of the measures were rated ‘on track with delivery issues’. In two cases, the measures were continually rated as ‘on track’ following the timeframe being missed.

4.15 In addition, there were two broader limitations in the monitoring process:

- the progress reports did not include a category to signify that announced timeframes had not been met; and
- there is no evidence that the timeframes were reset, to guide ongoing monitoring of progress.

4.16 Four of the seven measures that did not meet their original timeframes have since been implemented. The other three measures—*Access to company losses*, *Intangible asset depreciation*, and *Incubator Support Programme*—are not yet implemented some twelve months later than their original implementation timeframe. In the first two cases, this was due the legislative process; and in the latter case no specific reason was provided in the progress reports. In the most recent progress report (May 2017) the first two measures (*Access to company losses* and *Intangible asset depreciation*) were rated as Amber reflecting the issues affecting delivery and *Incubator Support Programme* was rated as ‘on track’.

4.17 Arrangements to monitor the implementation of measures necessarily involve a degree of judgement about the stage of implementation, and the relative complexity and timing involved. To provide stronger assurance to stakeholders on progress and where progress may be at risk, there would be merit in including, and applying, more defined traffic light ratings. This would include defining what constitutes a ‘significant risk’ of delivery failure and whether this risk includes not meeting the publicly announced timeframe.

### *Some measures brought forward*

4.18 The Government requested that entities accelerate the implementation of four measures (*Tax Incentives for angel investors*, *Incubator Support Programme*, *Support for innovation through Visas* and *Improve bankruptcy and insolvency laws*). The Delivery Unit and the NISAIC consulted with the lead entities and advice was provided to government that three of the four measures could be expedited (all but *Improve bankruptcy and insolvency laws*). However, due to changes in timeframes as a result of the caretaker period for the 2016 Federal election, *Support for innovation through Visas* was the only measure implemented before the announced timeframe. The implementation of this measure was brought forward from November 2016 to September 2016.

## Are early outcomes being monitored and reported on?

Efforts have been made by Industry to identify early outcomes for measures that have been implemented. The key finding of the post-commencement review is that it is too early to assess whether intended outcomes are being achieved.

### Focus of monitoring activities

4.19 From January 2015 to May 2017, the focus of monitoring and reporting arrangements has been on implementation milestones and related activity. Some data on ‘outputs’ has been captured and recorded in progress reports.

4.20 In accordance with planned evaluation activities for the NISA, a post-commencement review was conducted by Industry in the first half of 2017, and reported to the NISAIC for its June 2017 meeting. The main purpose of the review was to confirm that arrangements are on track within lead entities for evaluation activities to occur as planned (for example, that necessary data sources have been identified or established). The review was also to look for any lead indicators from initial outputs and early outcomes.

4.21 The post-commencement review found that it is generally too early to assess whether measures are having an impact on their desired outcomes. Datasets for many of the measures were said to be at an early stage of development, although initial program outputs for some measures were able to be identified (for example, the number of grants provided). Other key findings and recommendations of the review are listed in Box 4.

#### Box 4: Key findings and recommendations of the post-commencement review

- All measures have a clear articulation of their intended outcomes. Where applicable, all measures and tracked items provided a theory of change outlining how their outcomes will be achieved.
- All the evaluations planned for 2016–17 have been completed.
- All current measures and tracked items have scheduled future evaluation activities.
- Where applicable, all measures and tracked items have appropriate key performance indicators.
- All measure leads have identified the sources of data that will be used for their planned evaluation activities. However, some lead agencies provided only a general outline of their data sources (e.g., administrative data).
- Data is being collected against most measures. However, some measure leads are unable to collect data at present, as the programme outcomes are anticipated to take longer to be realised.
- On the information provided, initial data and program information indicates early outcomes in respect of eleven tracked items.

Source: ANAO presentation of information provided by Industry.

## Ongoing role of the NISAIC

4.22 Industry advised the ANAO in July 2017 that the NISAIC is unlikely to meet again after its final planned meeting on 23 June, unless there is a clear need for further meetings, as determined by the independent chair in consultation with the Industry Minister. Although the NISAIC meetings have ceased, the ANAO understands that Industry will continue to provide regular progress reports to the Minister. The independent chair will retain his role and remain available for further work required on the NISA until the end of 2017, as well as to assist in the development of a further NISA package or its implementation.

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Grant Hehir  
Auditor-General

Canberra ACT  
27 September 2017

# Appendices

## Appendix 1 Entity responses

### Department of the Prime Minister and Cabinet



**Australian Government**  
**Department of the Prime Minister and Cabinet**

SECRETARY

Ref: EC17-0001232

Mr Grant Hehir  
Auditor-General  
Australian National Audit Office  
GPO Box 707  
CANBERRA ACT 2601

Dear ~~Auditor-General~~ <sup>Grant</sup>

Thank you for your email of 11 September 2017, issued pursuant to section 19 of the *Auditor-General Act 1997*, enclosing the proposed audit report on the *Design and Monitoring of the National Innovation and Science Agenda (NISA)*.

As you know, I support the ANAO as a critical component of the Parliament's quality and integrity arrangements. As such, I welcome the ANAO's willingness to examine the NISA and finding that the NISA design process was timely in supporting the Government's decision-making process and that monitoring and reporting arrangements have, in most respects, been effective.

I note that relevant requirements, including for development of new policy proposals and Regulation Impact Statements, were met for all measures that made up the NISA package. Senior official and Ministerial Taskforce oversight and scrutiny was also applied to all proposed elements of the NISA package.

PM&C strives to provide a consistently high standard of advice to the Government, and has a range of frameworks to assist officials within PM&C and across the Australian Public Service (APS), including, but not limited to:

- the Cabinet Handbook, which sets out the procedures for whole of Government decision-making and, along with the Cabinet submission template, provides guidance on the advice that should be presented to the Cabinet (including that documents be concise and manageable for decision makers);
- the Australian Government Guide to Regulation, which provides a rigorous framework for developing policy advice to Government, with a particular focus on regulatory proposals. The Guide mandates a Regulation Impact Statement for all matters going to Cabinet;

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Telephone: +61 2 6271 5111 Fax: +61 2 6271 5414 [www.pmc.gov.au](http://www.pmc.gov.au) ABN: 18 108 001 191

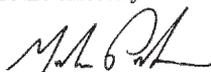
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- the Department of Finance ensures consistency and quality in spending decisions via strict guidelines for developing New Policy Proposals and for costings associated with these;
- the Legislation handbook describes the procedures involved in developing new legislation;
- PM&C also has a range of internal frameworks available to staff to assist with developing and informing new policy, including a disciplined policy design methodology and associated in-house training.

That said, I am strongly of the belief that PM&C, and indeed the entire APS, needs to do better at policy development and implementation, a position I have made clear in numerous public presentations since becoming Secretary of PM&C and head of the APS in January 2016. In particular, there is a need to be rigorous in basing policy on a foundation of strong evidence, to be open to different perspectives, to question our ideas and to consider the challenges of implementation in policy design.

While the framework materials managed by PM&C are periodically reviewed and updated to ensure they remain fit for purpose, the ANAO's findings are a valuable reinforcement of the position I have been advancing. I support the recommendations and agree that there is an ongoing need to test and refine our policy frameworks to ensure they clearly articulate an acceptable standard of analysis and evidence, and we need to continually work to promote good policy development practice within PM&C and across the APS. There is also an opportunity for PM&C to better draw together framework materials and improve their visibility and accessibility across the APS.

Yours sincerely



Martin Parkinson AC PSM  
15 September 2017

## Department of Industry, Innovation and Science



**Australian Government**  
**Department of Industry,  
Innovation and Science**

Secretary

Mr Grant Hehir  
Auditor-General  
Australian National Audit Office  
19 National Circuit  
BARTON ACT 2600

Dear Auditor-General *Grant,*

The Department of Industry, Innovation and Science notes the ANAO's audit of the design and monitoring arrangements for the National Innovation and Science Agenda (NISA). We note the audit's findings that departments responded in a timely manner to support decision-making on an area of priority for the Government, that monitoring arrangements were effective and that regular progress reports brought to ministers' attention implementation risks.

The development of the NISA package built upon a substantial body of advice that had been provided to ministers over an extended period of time in the lead up to the Government's consideration of NISA. My department's policy proposals were also informed by consultations with key stakeholders, both in respect of particular initiatives and more generally as part of routine policy considerations. The policy development process coordinated by the Taskforce built upon that work and drew upon evidence as necessary to support the Government to launch a package of initiatives under the NISA. Ministers were closely involved throughout the development of the package and the performance of the public service in this regard was publicly commended by the Government.

As we have indicated, the Department uses well-established policy frameworks to provide consistently high quality advice to its ministers and the Government within our accountability frameworks. The Department's contribution to the NISA development process properly reflected expert advice from within this portfolio and drew upon available evidence as necessary to support decision-making within the required timeframe and process agreed by ministers. The development of the NISA was undertaken consistent with established policy development practices and built upon and complemented other advice, some of which had been developed over longer periods of time. However, noting the audit's findings we will examine opportunities to further strengthen our policy guidance and associated training materials.

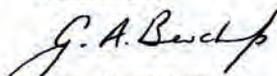
Phone: (02) 6213 8650 Fax: (02) 6213 8657 Email: [Glenys.Beauchamp@industry.gov.au](mailto:Glenys.Beauchamp@industry.gov.au)  
Industry House - 10 Binara Street, Canberra City, ACT 2601 - GPO Box 2013 Canberra ACT 2601 - [www.industry.gov.au](http://www.industry.gov.au) - ABN: 74 599 608 295

The monitoring and reporting arrangements put in place to support implementation represented a novel and highly effective method of coordinating and driving implementation across a number of portfolios and providing assurance to the Government. This approach was strengthened by the establishment of a senior interdepartmental committee led by an independent chair, and the formation of a dedicated delivery unit within the Department. We welcome the audit's acknowledgement that monitoring arrangements were effective and that regular progress reports provided to the Government drew attention to areas of implementation risk.

Notwithstanding the ANAO's view that the traffic light ratings were not sufficiently defined, the process supported ministerial consideration of areas warranting attention and the reports included detailed information on which the Government could be satisfied of implementation progress. Advice was provided regularly through progress reports, correspondence from the independent chair and departmental briefing. Verbal briefing was also a substantial element of reporting arrangements over the first six months. However, acknowledging the concerns identified in the report, we will have regard to the audit's findings when considering any similar reporting process in future.

These oversight arrangements also resulted in a coordinated approach to the evaluation of NISA measures. The Department will examine opportunities to establish formal monitoring arrangements to provide advice to the Government on the impact of NISA measures, noting that responsibility for evaluating programs rests with the agencies responsible for their implementation.

Yours sincerely



Glenys Beauchamp

15 September 2017



Innovation and  
Science Australia

CEO

Mr Grant Hehir  
Auditor-General  
Australian National Audit Office  
GPO Box 707  
CANBERRA ACT 2601

**DESIGN AND MONITORING OF THE NATIONAL INNOVATION AND SCIENCE  
AGENDA**

Dear Auditor-General,

Thank you for the opportunity to comment on the extract of the proposed report on the Design and Monitoring of the National Innovation and Science Agenda, prepared by the Australian National Audit Office (ANAO).

I would like to comment on Figure 1.2 *Overview of the governance arrangements for the NISA and Australia's broader innovation system*.

Figure 1.2 shows the Chief Scientist inputting into the Office of Innovation and Science Australia (rather than Innovation and Science Australia (ISA)). I would like to suggest that this figure be adjusted to directly show a relationship between the Chief Scientist and the ISA. As the Chief Scientist, Dr Alan Finkel AO, is Deputy Chair of the ISA and I propose that the boxes be modified to be adjacent and connected in some way to represent this relationship. Attached is a proposed revised figure 1.2 for your reference and amendment as required.

I would like to further suggest that the box that represents the Office of Innovation and Science Australia (OISA) be removed from the diagram. OISA is the office that exists to support the ISA Board and to that end, could be removed from the diagram altogether. This would then be consistent with the Office of the Chief Scientist (OCS); the OCS is not represented in this diagram and exists to support the Chief Scientist.

2

Please do not hesitate to contact me should you wish to discuss these comments.

Yours sincerely



Dr Charles Day  
Chief Executive Officer  
Office of Innovation and Science Australia

1 September 2017

**Dr Ian Watt AC – Independent Chair of the Interdepartmental Implementation Committee for the National Innovation and Science Agenda**

Dr I J Watt AC  
O'Connell Street Associates Pty Ltd  
Level 12  
Aurora Place  
88 Phillip Street  
SYDNEY NSW 2000

13 September 2017

Ms Lisa Rauter  
Group Executive Director  
Performance Audit Services Group  
Australian National Audit Office  
GPO Box 707  
CANBERRA ACT 2601

Dear Ms Rauter

Thank you for your letter of 4 August 2017, the attached extract and the opportunity to comment on it.

My apologies for not responding as quickly as I had intended. As a one person entity I find that, sometimes, other things get in the way of good intentions.

I have not shared my comments with DIIS.

My response is as follows.

1. Letter of Reply

My comment is as follows.

"I would like to thank the ANAO for the opportunity to comment on the limited part of the Report that relates to the NISAIC and my role as Independent Chair. Accordingly, I have provided some detailed comments to the ANAO. I have no further comment to make."

2. Summary Response

My comment is as follows:

"No comment".

Yours sincerely



I J Watt

## Appendix 2 Breakdown of funding, by measure, for the National Innovation and Science Agenda, 2015–16 to 2018–19

Culture and Capital	2015–16	2016–17	2017–18	2018–19	Total
Tax incentives for angel investors	\$0m	\$3m	\$51m	\$51m	<b>\$106m</b>
New arrangements for venture capital investment	\$0m	\$0m	*	*	*
Access to company losses	\$0m	*	*	*	*
Intangible asset depreciation	\$0m	\$0m	\$20m	\$60m	<b>\$80m</b>
CSIRO Innovation Fund	\$0m	\$5m	\$5m	\$5m	<b>\$15m</b>
Biomedical Translation Fund	\$2m	\$6m	\$1m	\$1m	<b>\$10m</b>
Incubator Support Programme	\$0m	\$3m	\$3m	\$3m	<b>\$8m</b>
Improve bankruptcy and insolvency laws	\$0m	\$0m	\$0m	\$0m	<b>\$0m</b>
Employee Share Scheme	\$0m	\$0m	\$0m	\$0m	<b>\$0m</b>
Collaboration	2015–16	2016–17	2017–18	2018–19	Total
Critical research infrastructure	\$0m	\$15m	\$198m	\$245m	<b>\$459m</b>
Sharper incentives for engagement	\$0m	\$25m	\$51m	\$52m	<b>\$127m</b>
Global Innovation Strategy	\$0m	\$7m	\$9m	\$10m	<b>\$26m</b>
Cyber Security Growth Centre	\$0m	\$4m	\$7m	\$11m	<b>\$22m</b>
Innovation Connections programme	\$0m	\$3m	\$7m	\$8m	<b>\$18m</b>
Quantum computing	\$0m	\$5m	\$5m	\$5m	<b>\$15m</b>
Measuring impact and engagement in university research	\$2m	\$3m	\$2m	\$2m	<b>\$9m</b>
ARC Linkage Projects Scheme	\$0m	\$0m	\$0m	\$0m	<b>\$0m</b>
Talent and skills	2015–16	2016–17	2017–18	2018–19	Total
Inspiring all Australians in digital literacy and STEM	\$0m	\$26m	\$25m	\$33m	<b>\$84m</b>
Support for innovation through visas	\$1m	\$1m	\$0m	\$0m	<b>\$1m</b>
Government as an exemplar	2015–16	2016–17	2017–18	2018–19	Total
Data61	\$0m	\$25m	\$25m	\$25m	<b>\$75m</b>
Business Research and Innovative Initiative	\$0m	\$4m	\$10m	\$5m	<b>\$19m</b>
Digital marketplace	\$3m	\$5m	\$4m	\$4m	<b>\$15m</b>
Innovation and Science Australia	\$1m	\$2m	\$3m	\$2m	<b>\$8m</b>
Public data strategy	\$0m	\$0m	\$0m	\$0m	<b>\$0m</b>
TOTAL	2015–16	2016–17	2017–18	2018–19	Total
Nation Innovation and Science Agenda	\$9m	\$143m	\$424m	\$521m	<b>\$1,097m</b>

Note: Measures marked by an asterisk (\*) were classified as 'unquantifiable'.

Source: ANAO reproduced from the *National Innovation and Science Agenda*, available at [www.innovation.gov.au](http://www.innovation.gov.au).

## Appendix 3 Description of measures and list of entities involved in the implementation of the National Innovation and Science Agenda

	Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
Culture and capital	Tax incentives for angel Investors	Up front tax incentive: 20% non-refundable tax offset capped at \$200,000 per investor per year. Capital gains tax exemption: 10 year CGT exemption for equity held in the start-up venture for more than twelve months.	<b>Lead: Treasury</b> Partner(s): Australian Taxation Office Engaged: Industry
	New arrangements for venture capital investment	Changes to the tax treatment of VCLP/ESVCLP. New Arrangements: <ul style="list-style-type: none"> <li>partners in a new ESVCLP will receive a 10% non-refundable tax offset on capital invested during the year;</li> <li>the maximum fund size for new and existing ESVCLPs will be increased from \$100 million to \$200 million; and</li> <li>ESVCLPs will no longer be required to divest from a company when its value exceeds \$250 million.</li> </ul>	<b>Lead: Treasury</b> Partner(s): Industry; Australian Taxation Office
	Access to company losses	Replacing the 'same business test' that denies tax losses if a company changes its business activities, and replacing it with a more flexible 'predominately similar business test'.	<b>Lead: Treasury</b> Partner(s): Australian Taxation Office Engaged: Industry
	Intangible asset depreciation	Removal of rules that limit depreciation deductions for some intangible assets (like patents) to a statutory life and instead allow them to be depreciated over their economic life as with other assets.	<b>Lead: Treasury</b> Partner(s): Australian Taxation Office Engaged: Industry
	CSIRO Innovation Fund	Establish a new \$200 million CSIRO Innovation Fund to co-invest in new spin-off companies and existing start-ups engaged in translation of research.	<b>Lead: CSIRO</b> Engaged: Industry
	CSIRO Accelerator program	Provide \$20 million to CSIRO to expand its accelerator program 'ON' to include regional universities.	<b>Lead: CSIRO</b> Engaged: Industry; Department of Education and Training
	Biomedical Translation Fund	Establish a new \$500 million Biomedical Translation Fund to co-invest \$250 million with the private sector to increase the capital available for commercialising medical research.	<b>Lead: Health</b> Partner(s): Industry, Treasury, Finance

	Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
	Incubator Support programme	Provide \$8 million to support incubators, including: <ul style="list-style-type: none"> <li>establishing incubators in regional Australia; and</li> <li>developing an online information portal - the Australian Innovation Network (AIN) - for coordination and promotion of entrepreneur activities and events.</li> </ul> (During the 2016 election campaign the Coalition announced a further \$15 million for this programme, in addition to the initial \$8 million announced in December 2015.)	<b>Lead: Industry</b>
	Improve bankruptcy and insolvency laws	Reform insolvency laws: <ul style="list-style-type: none"> <li>Reduce the default bankruptcy period from 3 years to 1 year;</li> <li>Introduce a 'safe harbour' for directors from personal liability for insolvent trading if they appoint a professional restructuring advisor to turnaround a struggling company; and</li> <li>Ban 'ipso facto' contractual clauses that allow an agreement to be terminated solely due to an insolvency event if a company is undertaking a restructure.</li> </ul>	<b>Lead: Treasury;</b> <b>Attorney-General's Department</b> Partner(s): Australian Securities and Investments Commission; Australian Financial Security Authority Engaged: Department of Education and Training
	Employee Share Scheme	Changes to disclosure requirements.	<b>Lead: Treasury</b> Partner(s): Australian Securities and Investments Commission Engaged: Industry
Collaboration	Critical research infrastructure - NCRIS	\$1.5 billion for the National Collaborative Research Infrastructure Strategy (NCRIS) to ensure continued collaboration between 35,000 researchers, government and industry to delivery practical outcomes.	<b>Lead: Department of Education and Training</b> Partner(s): Industry; Health
	Critical research infrastructure - Synchrotron/SKA	\$520 million set-aside for the Australian Synchrotron facility, used by around 4,000 researchers per annum for diverse scientific and industrial applications. \$294 million set-aside for Australia's commitment to the Square Kilometre Array (SKA).	<b>Lead: Industry</b> Partner(s): Department of Education and Training
	Sharper incentives for engagement	Streamlining and refocusing a greater proportion of research block grant funding toward collaboration.	<b>Lead: Department of Education and Training</b> Engaged: Industry

Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
Global Innovation Strategy	Overarching strategy document to advance Australia's international science and innovation engagement.	
Global Innovation Strategy - international collaborations	Funding for Australian businesses, SMEs and researchers through two initiatives to improve Australia's international innovation and science collaborations, focusing on the Australian Government's key growth sectors and science and research priorities.	<b>Lead: Industry</b> Partner(s): Department of Foreign Affairs and Trade/Australian Trade Commission  Engaged: Department of Education and Training
Global Innovation Strategy - regional collaborations	Funding to support innovative solutions to regional challenges in Asia-Pacific through: <ul style="list-style-type: none"> <li>• multi-partner projects featuring workshops and mobility support for researchers and businesses; and</li> <li>• workshops that showcase collaborative science, research and innovation engagement on shared regional challenges of national interest.</li> </ul>	<b>Lead: Industry</b> Partner(s): Department of Foreign Affairs and Trade/Australian Trade Commission Engaged: Department of Education and Training
Global Innovation Strategy - landing pads	Helping Australian business to build linkages with key economies by providing access for entrepreneurial Australian's to landing pads in San Francisco, Tel Aviv, Shanghai, Berlin and Singapore.	<b>Lead: Australian Trade Commission</b> Partner(s): Industry
Cyber Security Growth Centre	Establish a new Cyber Security Growth Centre.	<b>Lead: Industry</b> Partner(s): Department of the Prime Minister and Cabinet
Innovation Connections Programme	Expanding and relaunching the Research Connections programme.	<b>Lead: Industry</b> Engaged: Department of Education and Training
Quantum computing	Investing \$26 million towards building a silicon quantum circuit.	<b>Lead: Industry</b> Partner(s): Department of Education and Training; Australian Research Council

	Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
	Measuring impact and engagement in university research	Australian Research Council pilot (in 2017) to introduce clear measures of non-academic impact and industry and end-user engagement in a national assessment of university research performance.	<b>Lead: Department of Education and Training; Australian Research Council</b> Engaged: Industry
	ARC linkage projects Scheme	Move to a continuous application process to support timely research and industry/end-user collaboration.	<b>Lead: Australian Research Council</b> Engaged: Department of Education and Training; Industry
Talent and Skills	STEM literacy - PM's prize for science	Expanding the Prime Minister's Prizes for Science to recognise the efforts of young Australians and early career research in excellence in STEM.	<b>Lead: Industry</b> Partner(s): Office of the Chief Scientist Engaged: Questacon
	STEM literacy - Student's in international competitions	Supporting the participation of Australian youth students in competitions including: <ul style="list-style-type: none"> <li>• The National Youth Science Forum;</li> <li>• Asian Physics Olympiad;</li> <li>• Science and Mathematics Olympiads; and</li> <li>• International Science and Innovation Competitions</li> </ul>	<b>Lead: Industry</b> Partner(s): Department of Education and Training
	STEM literacy - Play-based learning apps	Developing play-based learning apps and science and mathematics resources for early childhood educators to engage preschool age children to engage with STEM. Comprises: <ul style="list-style-type: none"> <li>• Little Scientists;</li> <li>• Let's Count; and</li> <li>• Early Learning STEM Australia (ELSA).</li> </ul>	<b>Lead: Department of Education and Training</b> Partner(s): Industry
	STEM literacy - Community engagement	Supporting and expanding community engagement initiatives, including existing and new Inspiring Australia and citizen science projects. New community engagement elements: <ul style="list-style-type: none"> <li>• Maker clubs;</li> <li>• Enhanced Citizen Science projects; and</li> <li>• Science Engagement.</li> </ul>	<b>Lead: Industry</b> Partner(s): Department of Education and Training Engaged: Questacon

	Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
	Equipping students to create and use digital technologies	<p>Seven initiatives to increase participation of all school students in STEM and improve digital literacy.</p> <ul style="list-style-type: none"> <li>• Online computing challenge (Yrs 5/7);</li> <li>• ICT Summer Schools (Yrs 9/10);</li> <li>• Cracking the Code competition (Yrs 4–12);</li> <li>• Support Teachers to implement Digital Technologies curriculum;</li> <li>• Support school leaders to drive digital literacy by bringing scientists and ICT professionals into classrooms;</li> <li>• Expand the University of Adelaide Massive Open Online Course (MOOC); and</li> <li>• Travelling ICT teachers.</li> </ul>	<p><b>Lead: Department of Education and Training</b></p> <p>Partner(s): Industry</p>
	Opportunities for women in STEM	<p>Encourage more women to embark on, and remain in STEM. Comprises:</p> <ul style="list-style-type: none"> <li>• Expansion of the Science in Australia Gender Equity (SAGE) pilot to cover more Australian science and research institutions;</li> <li>• Establishing a new Male Champions of Change group for STEM; and</li> <li>• Grant funding programme.</li> </ul>	<p><b>Lead: Industry</b></p> <p>Partner(s): Department of Education and Training; Office of Chief Scientist</p>
	Supporting innovation through visas	<ul style="list-style-type: none"> <li>• Pathways to residency for STEM postgraduate research graduates;</li> <li>• A new Entrepreneur Visa; and</li> <li>• Overseas network leveraged to promote Australia.</li> </ul>	<p><b>Lead: Department of Immigration and Border Protection</b></p> <p>Partner(s): Department of Education and Training; Department of Foreign Affairs and Trade; Industry</p>
Government as an Exemplar	Data61	<p>Support for digital innovation research through Data61 with a focus on four areas:</p> <ul style="list-style-type: none"> <li>• Platforms for open data;</li> <li>• Cybersecurity;</li> <li>• Developing a research data network; and</li> <li>• Data skilling industry.</li> </ul>	<p><b>Lead: CSIRO</b></p> <p>Engaged: Industry; Department of the Prime Minister and Cabinet</p>
	Business Research and Innovation Initiative	<p>The Government will work with ISA to identify five national policy and service delivery challenges:</p> <ul style="list-style-type: none"> <li>• \$100,000 grants to SMEs for 3–6 month testing of the ideas; and</li> <li>• May go on to access \$1 million to develop prototype or Proof of Concept.</li> </ul>	<p><b>Lead: Industry</b></p>

	Measure	Definition (NISA - Implementation Plan, September 2016)	Responsible Entities
	Digital marketplace	The Australian Government will create a Digital Marketplace to make it easier for innovative SMEs to do business with Government.	<b>Lead: Digital Transformation Office</b> Partner(s): Finance
	Innovation and Science Australia	Establish a new independent statutory board, Innovation and Science Australia (ISA).	<b>Lead: Industry</b> Engaged: Department of Education and Training
	Public data strategy	Promoting innovation through publishing and sharing public data.	<b>Lead: Department of the Prime Minister and Cabinet</b>
Misc.	Crowd Sourced Equity	Introduction of new laws that enable companies to access crowd-sourced equity funding (CSEF). Eligible businesses can raise up to \$5 million per 12-month period.	<b>Lead: Treasury</b> Engaged: Industry
	I&S Agenda Communication Strategy	Delivery of whole-of-government communications for NISA.	<b>Lead: Industry</b>
	R&D Tax review	Review of the R&D tax incentive identifying opportunities to improve the effectiveness and integrity of the programme, including how the programme's focus can be sharpened to encourage additional R&D.	<b>Lead: Industry</b> Engaged: Treasury; Australian Taxation Office

Source: ANAO based on documents provided by Industry.

## Appendix 4 Progress against the implementation schedule for the NISA as at 31 May 2017

	Measure	Announced timeframe (as per the NISA Fact Sheets)	Announced timeframe met?	Date implemented (31 May 2017 Progress Report)
Culture and capital	Tax incentives for angel investors	The new arrangements will apply from the date of Royal Assent and are expected to commence <b>from 1 July 2016</b> .	<b>Yes</b>	1 July 2016
	New arrangements for venture capital investment	The new arrangements will apply from the date of Royal Assent and are expected to commence <b>from 1 July 2016</b> .	<b>Yes</b>	1 July 2016
	Access to company losses	Legislation is expected to be introduced in the <b>first half of 2016</b> .	<b>No</b>	n/a
	Intangible asset depreciation	The new arrangements will apply to assets acquired <b>from 1 July 2016</b> .	<b>No</b>	n/a
	CSIRO Innovation Fund	The early stage fund will be implemented by CSIRO in <b>2016</b> .	<b>Yes</b>	December 2016
	CSIRO Accelerator program	Expansion of the CSIRO's existing accelerator programme will commence in <b>2016–2017</b> .	<b>Yes</b>	August 2016
	Biomedical Translation Fund	A new Commonwealth body for the Biomedical Translation Fund will be established in <b>2016</b> . Investments in biomedical businesses will commence once the new body is established.	<b>Yes</b>	December 2016
	Incubator Support Programme	Support for new and high performing incubators will start <b>from 1 July 2016</b> .	<b>No</b>	n/a
	Improve bankruptcy and insolvency laws	The Government will release a proposal paper in the first half of 2016 with a view to the introduction and passage of legislation in <b>mid-2017</b> .	Not yet due	n/a
	Employee Share Scheme	Legislation is expected to be introduced in the <b>first half of 2016</b> .	<b>No</b>	May 2017
Collaboration	Critical research infrastructure - NCRIS	NCRIS funding is ongoing <b>from 2017–2018</b> .	<b>Yes</b>	May 2017
	Critical research infrastructure - Synchrotron/SKA	Synchrotron and SKA funding commences in <b>2016–17</b> .	Not yet due	n/a
	Sharper incentives for engagement	New arrangements will commence <b>1 January 2017</b> .	<b>Yes</b>	December 2016

	Measure	Announced timeframe (as per the NISA Fact Sheets)	Announced timeframe met?	Date implemented (31 May 2017 Progress Report)
	Global Innovation Strategy	The Government will begin implementation of these initiatives in 2016 with funding available <b>from 1 July 2016</b> .	<b>Yes</b>	November 2016
	Global Innovation Strategy - international collaborations	The Government will begin implementation of these initiatives in 2016 with funding available <b>from 1 July 2016</b> .	<b>Yes</b>	December 2016
	Global Innovation Strategy - regional collaborations	The Government will begin implementation of these initiatives in 2016 with funding available <b>from 1 July 2016</b> .	<b>Yes</b>	November 2016
	Global Innovation Strategy - landing pads	The Government will begin implementation of these initiatives in 2016 with funding available <b>from 1 July 2016</b> .	<b>Yes</b>	January 2017
	Cyber Security Growth Centre	The Growth Centre will be delivered in line with the established Industry Growth Centre model and be operational by <b>mid-2016</b> .	<b>No</b>	December 2016
	Innovation Connections Programme	The Entrepreneurs' Programme is currently running and will expand <b>from 1 January 2016</b> to progressively offer these expanded services.	<b>Yes</b>	1 July 2016
	Quantum computing	Funding will commence in <b>2016–17</b> .	<b>Yes</b>	May 2017
	Measuring impact and engagement in university research	A pilot assessment will be undertaken in <b>2017</b> . The first national assessment and report will be in 2018.	Not yet due	n/a
	ARC Linkages Projects Scheme	Continuous rounds will open <b>from 1 July 2016</b> .	<b>Yes</b>	1 July 2016
Talent and Skills	STEM literacy - PM's prize for science	The Government will begin implementation of these initiatives in <b>2016–17</b> .	<b>Yes</b>	15 July 2016
	STEM literacy - Student's in international competitions	The Government will begin implementation of these initiatives in <b>2016–17</b> .	<b>Yes</b>	October 2016
	STEM literacy - Play-based learning apps	The Government will begin implementation of these initiatives in 2016–17.	<b>Yes</b>	October 2016
	STEM literacy - Community engagement	The Government will begin implementation of these initiatives in <b>2016–17</b> .	<b>Yes</b>	May 2017

	Measure	Announced timeframe (as per the NISA Fact Sheets)	Announced timeframe met?	Date implemented (31 May 2017 Progress Report)
	Equipping students to create and use digital technologies	New initiatives commence <b>from 1 July 2016</b> .	<b>Yes</b>	November 2016
	Opportunities for women in STEM	The Government will begin implementation of these initiatives in <b>2016–17</b> .	<b>Yes</b>	October 2016
	Supporting innovation through visas	The Entrepreneur Visa will be introduced in <b>November 2016</b> . The enhanced pathway to permanent residency will be implemented in December 2016.	<b>Yes</b>	September 2016
Government as an Exemplar	Data61	Funding will commence on <b>1 July 2016</b> .	<b>Yes</b>	May 2017
	Business Research and Innovation Initiative	The Business Research and Innovation Initiative will launch on <b>1 July 2016</b> .	<b>No</b>	November 2016
	Digital marketplace	The Digital Marketplace will be designed and built by the Digital Transformation Office over 12 months, to go live in <b>January 2017</b> .	<b>Yes</b>	November 2016
	Innovation and Science Australia	Legislation will be introduced to establish the new ISA effective <b>from 1 July 2016</b> .	<b>No</b>	October 2016
	Public Data	Release of the Australian Government Public Data Policy Statement in <b>December 2015</b> .	<b>Yes</b>	15 July 2016
Misc.	Crowd Sourced Equity	The CSEF scheme will commence within six months of the legislation receiving Royal Assent.	<b>Yes</b>	May 2017
	I&S Agenda Communication Strategy	No Required Timeframe.	<b>Yes</b>	September 2016
	R&D Tax review	No Required Timeframe.	<b>Yes</b>	1 July 2016

Source: ANAO based on documents provided by Industry.



