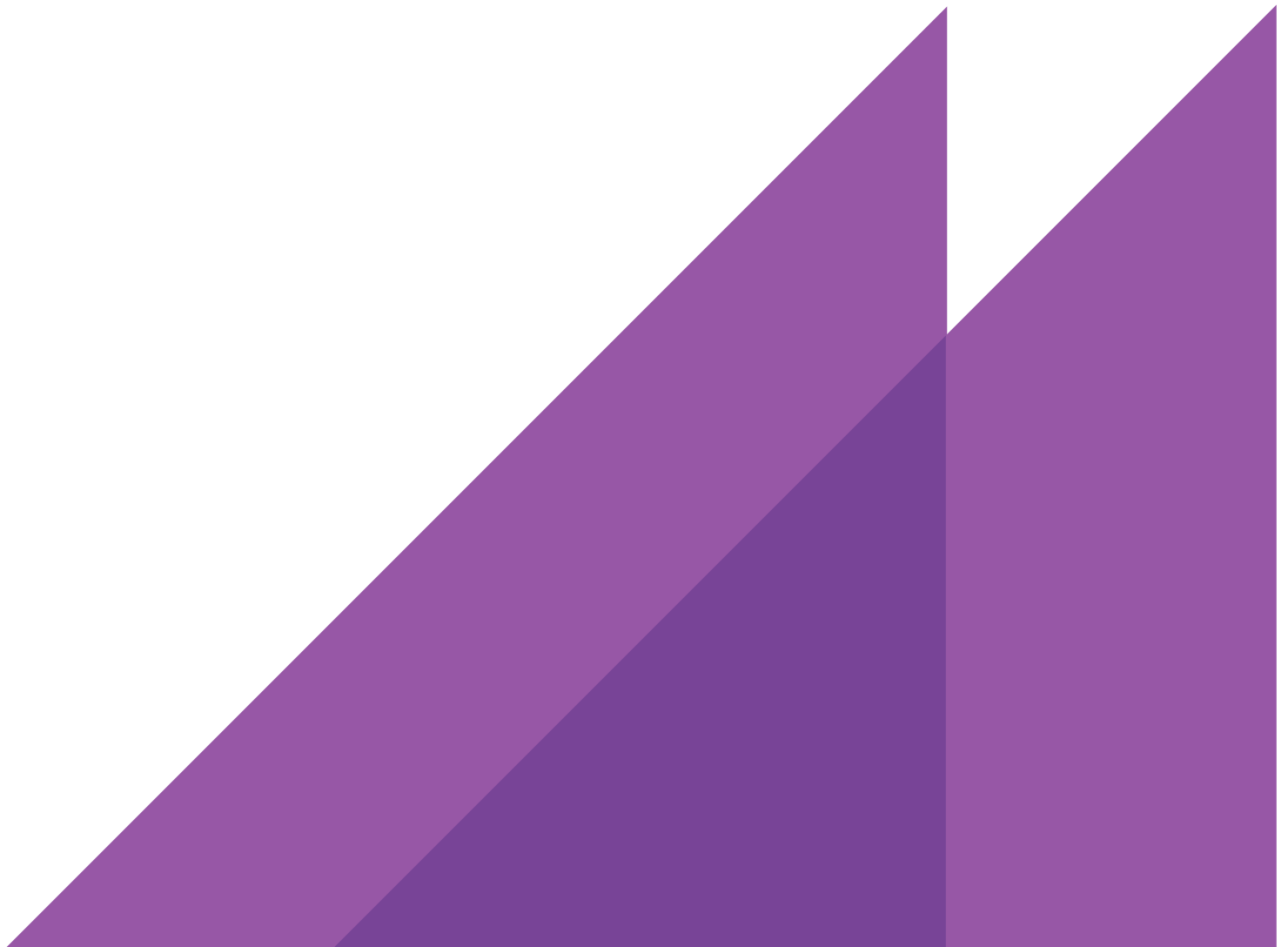


REPORT TO
GRAINS RESEARCH AND DEVELOPMENT CORPORATION
17 JANUARY 2019

INDEPENDENT PERFORMANCE REVIEW



FOR THE PERIOD 2015-19
FINAL REPORT





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C O N T E N T S

EXECUTIVE SUMMARY

I

1

INTRODUCTION

1

1.1 Methodology

2

1.2 Report structure

3

2

REVIEW CONTEXT

5

2.1 Industry and market factors that have influenced performance

5

2.2 Policy, structural and funding factors that have influenced performance

11

2.3 Internal factors that have influenced performance

15

2.4 Key findings

18

3

GOVERNANCE AND ORGANISATIONAL DIMENSIONS

20

3.1 Leadership change

20

3.2 New purpose

22

3.3 Changes to GRDC's governance, management and advisory arrangements

22

3.4 Organisational restructures

25

3.5 Investment in new systems and processes

25

3.6 Impact of changes on efficiency

27

3.7 Impact of changes on effectiveness

29

3.8 Key findings

36

4

STRATEGIES AND INVESTMENTS

38

4.1 Strategy, planning and reporting architecture

38

4.2 Implementation of strategies, plans and investments

40

4.3 Key findings

53

5

INDUSTRY BENEFITS, PROJECT SELECTION AND EVALUATION

54

5.1 Evidence of benefits to industry under the RD&E Plan (2012-17)

54

5.2 Factors that shape the delivery of benefits under the RD&E Plan (2018-23)

56

5.3 Key findings

65

6

STAKEHOLDER ENGAGEMENT AND PARTNERSHIPS

66

6.1 Stakeholder engagement

66

6.3 An assessment of GRDC's stakeholder environment

69

6.4 Reconnecting and re-engaging with stakeholders

71

6.5 Key findings

72

C O N T E N T S

7

	CONCLUSIONS AND RECOMMENDATIONS	74
7.1	Conclusions	74
7.2	Recommendations	78

A

	STAKEHOLDERS CONSULTED	83
--	-------------------------------	-----------

B

	COMPLIANCE WITH OBLIGATIONS	B-1
B.1	Assessment of compliance	B-1
B.2	Key findings	B-13

C

	SUPPORTING INFORMATION	C-1
C.1	Financial information	C-1
C.2	GRDC's investment process	C-3
C.3	GRDC's staffing	C-5
C.4	Research partner survey	C-7

FIGURES

FIGURE 2.1	PRODUCTION OF GRAINS—AUSTRALIA ('000 TONNES)	6
FIGURE 2.2	AREA PLANTED AND YIELD OF COARSE GRAINS ('000 HECTARES)	6
FIGURE 2.3	ANNUAL RAINFALL—AUSTRALIA (MM)	7
FIGURE 2.4	VOLUME OF KEY GRAINS EXPORTS FROM AUSTRALIA ('000 TONNES)	7
FIGURE 2.5	VALUE OF KEY GRAINS EXPORTS FROM AUSTRALIA (\$ MILLION)	8
FIGURE 2.6	VOLUME AND PER UNIT VALUE OF GRAINS, OILSEEDS AND PULSE EXPORTS	9
FIGURE 2.7	PRODUCTIVITY OF THE GRAINS INDUSTRY (BY GROWING REGION)	10
FIGURE 2.8	GRDC'S REVENUES (\$'000)	14
FIGURE 2.9	INDUSTRY CONTRIBUTIONS BY GRAIN (\$'000)	15
FIGURE 2.10	DRIVERS FOR CHANGE OVER THE REVIEW PERIOD	19
FIGURE 3.1	GRDC LEADERSHIP STRUCTURE CHANGE (2016 AND 2018)	21
FIGURE 3.2	GRDC INTERNAL GOVERNANCE STRUCTURE PRE- AND POST-2016-17	24
FIGURE 3.3	GRDC CONTINUOUS INVESTMENT PROCESS	26
FIGURE 3.4	OPERATING EXPENDITURE OVER TIME (\$'000)	28
FIGURE 3.5	SUPPLIERS COSTS (SELECTED CATEGORIES) OVER TIME (\$)	28
FIGURE 3.6	THE DRIVERS FOR AND RESPONSES TO CHANGE OVER THE REVIEW PERIOD	37
FIGURE 4.1	GRDC STRATEGIC, PLANNING AND REPORTING ARCHITECTURE (2012 TO 2018)	38
FIGURE 4.2	RD&E PROJECTS AND VALUE OF RD&E FUNDING	42
FIGURE 5.1	ILLUSTRATION OF GRDC IDEAS CAPTURE PROCESS	57
FIGURE 5.2	ILLUSTRATION OF GRDC PRE-QUALIFICATION AND PRIORITISATION	60
FIGURE 5.3	ILLUSTRATIVE IMPACT FRAMEWORK DIAGRAM	64
FIGURE 6.1	VALUE OF STAKEHOLDER ENGAGEMENT TO ORGANISATIONS	68
FIGURE 6.2	EFFECTIVE STAKEHOLDER ENGAGEMENT PROCESS	69
FIGURE 7.1	ARCHITECTURE OF A L&D ROADMAP FOR GRDC	79

C O N T E N T S

FIGURE C.1	REGIONAL EXPENDITURE OVER TIME RELATIVE TO NATIONAL EXPENDITURE, ON A PER DOLLAR BASIS	C-1
FIGURE C.2	EXPENDITURE ACROSS THE THREE REGIONS OVER TIME ON A PER DOLLAR BASIS	C-2
FIGURE C.3	EXPENDITURE BY RESEARCH THEME (INCLUDING OPERATIONAL EXPENDITURE) ON A PER DOLLAR BASIS OVER TIME	C-3
FIGURE C.4	GRDC INVESTMENT PROCESS DIAGRAM PRE-2016	C-4
FIGURE C.5	RATING OF RELATIONSHIP QUALITY	C-7
FIGURE C.6	EXPERIENCES WITH RESPONSE TO INFORMATION REQUESTS FROM GRDC	C-8

TABLES

TABLE 2.1	COMPARISON OF GRAINS RD&E INVESTMENT (2007-08 AND 2013-14)	12
TABLE 3.1	LEADERSHIP CHANGE BETWEEN 2015 AND 2018	20
TABLE 3.2	ESTIMATED COST OF CORE SYSTEMS REPLACEMENT	27
TABLE 3.3	EMPLOYEE RELATED EXPENSES AND NUMBERS (2014-15 TO 2017-18)	29
TABLE 3.4	ANALYSIS OF ORGANISATIONAL CHARTS (2015 TO 2018)	33
TABLE 3.5	YEARS OF TENURE (2018)	34
TABLE 4.1	GRDC VALUE OF RD&E FUNDING BY THEME ('000)	41
TABLE 4.2	GRDC THEME KPIS ACHIEVED	43
TABLE 4.3	THEME 1 KPI ANALYSIS	44
TABLE 4.4	THEME 2 KPI ANALYSIS	45
TABLE 4.5	THEME 3 KPI ANALYSIS	45
TABLE 4.6	THEME 4 KPI ANALYSIS	46
TABLE 4.7	THEME 5 KPI ANALYSIS	47
TABLE 4.8	THEME 6 KPI ANALYSIS	48
TABLE 4.9	GRDC ORGANISATIONAL PERFORMANCE SURVEY	49
TABLE 5.1	EX-POST BCAS PREPARED FOR 2017 ANNUAL REPORT	54
TABLE 5.2	EX-POST BCAS PREPARED FOR THE 2018 ANNUAL REPORT	55
TABLE A.1	STAKEHOLDERS CONSULTED	83
TABLE B.1	ASSESSMENT OF GRDC'S OBLIGATIONS UNDER THE SFA (2015-19)	B-1
TABLE C.1	REGIONAL OPERATING EXPENDITURE \$ (2014-15 TO 2017-18)	C-2
TABLE C.2	GRDC CASHFLOW STATEMENT (\$'000)	C-2
TABLE C.3	GRDC DELEGATIONS AND AUTHORISATIONS SCHEDULE—R&D EXPENDITURE	C-5

BOXES

BOX 2.1	GRDC BILATERAL AGREEMENTS	13
BOX 2.2	KEY OBSERVATIONS FROM THE 2015 REVIEW OF SYSTEMS AND PROCESSES	17
BOX 3.1	GRDC'S PURPOSE BETWEEN 1989 AND 2016	22
BOX 3.2	EXAMPLE OF ISSUES IDENTIFIED AND DISCUSSED WITH GROWERS ON A BOARD TOUR	31
BOX 3.3	REVISED PANEL MANAGEMENT POLICY	32
BOX 5.1	QUESTIONS CONSIDERED AS PART OF PRE-QUALIFICATION	58
BOX 5.2	THE ADOPT MODEL	62
BOX C.1	CONTINUOUS INVESTMENT PROCESS	C-5



EXECUTIVE SUMMARY

Context

The Grains Research and Development Corporation (GRDC) is one of five Research and Development Corporations (RDCs) which are statutory corporations or authorities owned by the Commonwealth Government. GRDC exists to drive the discovery, development and delivery of world-class innovation to enhance the profitability and sustainability of Australian grain growers and benefit the grains industry and the wider community.

GRDC invests in research, development and extension (RD&E) and related activities across a broad portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of their results.

GRDC does not undertake RD&E itself. Instead, it partners with organisations which have the necessary capabilities to undertake the work.

GRDC is principally funded by a grower levy and Commonwealth Government contributions. The levy is based on the net farm gate value of the annual production of 25 crops. The Commonwealth Government matches the levy up to a limit of 0.5 percent of the three-year rolling average of the gross value of production of the 25 leviable crops.

This report provides the results of an independent review of GRDC between 2015 and 2019. The review is a requirement of the Statutory Funding Agreement (SFA) held between GRDC and the Commonwealth Government. The SFA obliges GRDC to engage an independent organisation (in this instance ACIL Allen Consulting or ACIL Allen) to complete a review prior to the SFA ending.

This is the first independent review of GRDC that has been undertaken. The review's terms of reference (ToR) require consideration of GRDC's compliance against legislation and formal obligations, considerations of its efficiency and effectiveness in developing and executing strategies and plans, and its benefits to industry. A specific requirement of the ToR was to consider the effectiveness of GRDC's regional presence.

Findings

GRDC is a mature and well-managed organisation. GRDC has in place the architecture, systems and processes which make it accountable to levy payers, Government and other stakeholders. GRDC has provided ample evidence and documentation to demonstrate that it meets the requirements of the SFA and related legislation.

GRDC is also a constantly evolving organisation. Since 2014, GRDC has sought to transition from an inwardly-focused and bureaucratic organisation to one more focused on agility, commercialisation and growers.

With this transition, GRDC has implemented a new purpose—moving from a productivity-agenda early in the review period to a profitability agenda more recently. Also, GRDC has embarked on a process of restructure and systems improvement to enhance its delivery capacity against the new purpose and the needs of growers. This restructure has involved significant staff turnover throughout the review period, and at the time of writing many staff employed by GRDC were relatively new to the organisation.

These reforms position GRDC for a promising future. Most stakeholders consulted are optimistic about GRDC's future, however suggest that it is too early to tell whether GRDC can deliver on its promise of a more outward-facing, grower-focused RDC.

While reforms generate upside opportunities that need to be captured, they also carry downside risk.

Most importantly, reforms are built on the assumption that GRDC's strategic partners and providers can match its appetite for agile project management and commercial outcomes. GRDC requires partners which are agile and industry-focused to deliver its mission.

These partners will work hand-in-hand with GRDC to deliver outcomes not previously achieved for the industry. Not all partners will come from GRDC's existing provider base and in a small research market, like Australia, these partners may be sourced from overseas or non-traditional markets (like the private consulting market). These new partners will require clearly articulated pathways that allow ideas for future investments to be identified and co-developed by all parties involved.

Some of GRDC's existing provider-base is struggling to build relationships that are aligned with its new purpose and approach. GRDC will only be as good as its partners and will have to continue to invest in relationships which are productive but also trusting. Trust will be a key ingredient to its future success.

Recommendations

The review's recommendations have been organised into two key themes. The first theme focuses on recommendations that improve the internal operations of GRDC and covers recommendations 1 to 4.

The second theme focuses on recommendations that improve GRDC's interactions with its external environment. This theme is effectively outward-focused in nature. It covers recommendations 5 to 6.

Recommendation 1—Allow time (up to two years) for GRDC to realise the benefits of internal reforms and investments before making any significant changes to the organisation's purpose, structure, systems and processes.

This recommendation suggests that GRDC should avoid the temptation to undertake additional restructuring in the coming years and focus on bedding down internal reforms already initiated. It should not preclude the ability of GRDC to recognise when processes are not working and make appropriate adjustments.

Recommendation 2—Develop a Learning & Development (L&D) roadmap for GRDC staff that rapidly accelerates the professional and domain knowledge of its workforce. Ideally, the roadmap should be underpinned by a competency framework which provides staff and management with a clear understanding of the L&D needs of staff at all levels.

This recommendation encourages GRDC to build the capabilities and capacities of GRDC's workforce, by investing in the skill base of a staff who are (on average) relatively new to the organisation. These investments should be made using best practice L&D roadmaps/frameworks that are supported by a competency framework.

Recommendation 3—Develop and implement strategies that encourage the retention of staff who are critical to the implementation of the RD&E Plan (2018-23). These strategies could include: career and professional development opportunities; travel opportunities; cultural improvement; and employee recognition schemes and rewards that are consistent with Commonwealth staffing requirements/obligations.

To effectively execute GRDC's new vision and purpose, and to deliver on the promise of a new commercially-focused and agile approach, staff will need time to learn their respective roles and build the trusted relationships with stakeholders. This places a primacy on implementing strategies and approaches that not only encourage the development of staff but also their retention. High staff turnover will present GRDC with a significant barrier to realising the potential of its reforms and two restructures. This recommendation should not prevent GRDC from managing staff who are misaligned with its vision, culture and performance requirements out of the organisation.

Recommendation 4—As a matter of priority develop a feedback loop or protocols for communicating to those stakeholders who are credited in the IMS as the source of an investment idea.

Ideas generation is a critical aspect of the new investment process, where GRDC has implemented processes and systems to improve the quality and consistency of investment proposals that are put to the organisation. Stakeholders are seeking additional feedback from GRDC about the outcomes of investment ideas that are generated through panel activities, regional networks and other interactions. GRDC should look for additional ways to provide stakeholders (who generate ideas that become part of GRDC's formal investment process) with additional feedback. This feedback will help stakeholders to better understand how ideas become investments and thus build trust in GRDC's management of the ideas process.

Recommendation 5—Investigate the feasibility of establishing an open innovation pool that is within GRDC's existing legal structure. GRDC should consider the pool's governance, management, staffing and resourcing arrangements, as well as its performance and accountability arrangements. GRDC should also consider the full range of costs and benefits associated with establishing a pool.

This recommendation encourages GRDC to explore mechanisms which help it to capture the benefits of investment ideas that may not fit neatly with the Key Investment Targets (KITs), but may deliver step change or break through outcomes for the grains industry. The recommendation involves commissioning a feasibility study.

Recommendation 6—GRDC must communicate where it intends to lead and support the grains innovation system which is repeatedly validated and adapted with its partners. GRDC must clarify how it will engage and invest with stakeholders to provide clear and transparent partnership mechanisms.

This recommendation seeks to build capacity in the (domestic) provider-base to ensure providers can support GRDC's investment objectives and form meaningful partnerships with GRDC in the future.

1

INTRODUCTION

The Grains Research and Development Corporation (GRDC) is one of five Research and Development Corporations (RDCs) that are statutory corporations or authorities owned by the Commonwealth Government. GRDC exists to drive the discovery, development and delivery of world-class innovation to enhance the profitability and sustainability of Australian grain growers and benefit the grains industry and the wider community.

GRDC invests in research, development and extension (RD&E) and related activities across a broad portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of their results.

GRDC does not undertake RD&E itself. Instead, it partners with organisations which have the necessary capabilities to undertake the specialised work.

GRDC was established in 1990 under what is now known as the *Primary Industries Research and Development Act 1989* (the PIRD Act). The PIRD Act provides for the funding and administration of RDCs to:¹

- *increase the economic, environmental and social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries*
- *achieve sustainable use and management of natural resources*
- *make more effective use of the resources and skills of the community in general and the scientific community in particular*
- *support the development of scientific and technical capacity*
- *develop the adoptive capacity of primary producers*
- *improve accountability for expenditure on R&D activities in relation to primary industries.*

The PIRD Act establishes the foundations of GRDC's functions and powers and its accountabilities to Government and the Australian grains industry.

GRDC is principally funded by a grower levy and Commonwealth Government contributions. The levy is based on the net farm gate value of the annual production of 25 crops. The Commonwealth Government matches the levy up to a limit of 0.5 percent of the three-year rolling average of the gross value of production of the 25 leviable crops.

This report provides the results of an independent performance review of GRDC's operations between 2015 and 2019. The performance review is a requirement of a Statutory Funding Agreement (SFA) which outlines the obligations placed on GRDC for its receipt and use of levy and Commonwealth Government funding. The SFA obligates GRDC to engage an independent organisation (in this

¹ GRDC 2013-14, 'Annual Report'.

instance ACIL Allen Consulting or ACIL Allen) to complete a review six months prior to the SFA ending. This is the first independent review of the GRDC under the SFA that has been undertaken.

The broad Terms of Reference (ToR) for the performance review are outlined in section 12.3 of the SFA. These ToR were refined following consultation with the Commonwealth Government, and include:

1. An assessment of the performance of GRDC in meeting its obligations under the PIRD Act and the Funding Agreement with the Commonwealth.
2. GRDC's development and implementation of its R&D Plan, Annual Operational Plans, Risk Management Plan, Fraud Control Plan and Intellectual Property Management Plan.
3. An assessment of the efficiency with which GRDC has carried out these plans
4. The efficiency and effectiveness of GRDC's investments.
5. An assessment of the delivery of benefits to the Australian grains industry foreshadowed by those plans, including an assessment of the degree to which GRDC's investments have met the needs of the Australian grain growers.

In addition to the mandatory requirements, the ToR required:

6. An assessment of the contribution to stakeholders, research partners, and the effectiveness of extension and adoption as a result of GRDC's implementation of a regional presence.

The outcomes of this review will be used to inform the development of the next SFA between GRDC and the Commonwealth Government.

1.1 Methodology

The methodology used for this review included data collection, documentary review, stakeholder consultation and analysis. The methodology was underpinned by the application of best practice evaluation principles, which include analysis of GRDC's strategic and operational efficiency, effectiveness and appropriateness, as outlined by the Australasian Evaluation Society's guidance for conducting independent performance reviews.

1.1.1 Document review and data collection

To ensure review findings are evidence-based, ACIL Allen considered numerous resources, documentation and data held by GRDC and other organisations. These documents and data included: foundation or primary documents; plans and reports; governance documents; compliance and financial reports to Government; selected operational documents; previous reviews and evaluations; and other relevant research.

GRDC supported the document review and data collection processes by fulfilling multiple data requests throughout the life of the evaluation.

1.1.2 Stakeholder consultations

As part of the performance review, GRDC's stakeholders were invited to participate in the review process. The approach included consultation with stakeholders internal and external to GRDC to capture data, insights and observations for analysis.

Several discussions were held with GRDC to identify the most important stakeholders for consultation. A decision was taken to use multiple consultation and engagement techniques to provide as much flexibility as possible for stakeholders to participate in the review. These techniques included:

- The offer of one-on-one face-to-face or telephone meetings with stakeholders who are senior and significant to GRDC's performance.
- Focus groups in Brisbane, Sydney, Canberra, Melbourne and Adelaide for stakeholders who are external to the GRDC. Where key stakeholders could not attend focus groups, ACIL Allen undertook one-on-one meetings via telephone.

- Written submissions to those stakeholders who wanted to contribute but were unavailable to attend meetings. These submissions were structured around the consultation guides that were developed for the performance review.

Details of the stakeholders consulted are provided at Appendix A.

1.1.3 Performance against the ToR

Following the document review, data collection and consultation phases, ACIL Allen undertook an analysis of GRDC's performance against the ToR. This analysis involved:

- A review of GRDC's operating and external context. This review considered the multitude of factors that have driven change in GRDC over the review period.
- Analysis of GRDC's governance and operational arrangements, and whether they provide an effective and efficient organisational structure to support GRDC's objectives.
- Consideration of how effectively and efficiently GRDC has implemented its strategic and operational plans and investments over the review period.
- Analysis of GRDC's stakeholder engagement, consultation and partnership processes.
- Consideration of the industry benefits delivered and the use of evaluation techniques to drive investment decisions. For example, ACIL Allen undertook a detailed review of R&D project selection processes and the evaluation framework and its application.
- Consideration of GRDC's regional presence.
- A review of GRDC's compliance with its obligations under the SFA.

1.1.4 Recommendations and reporting

The final phase of the project involved the drafting of a report for GRDC's and the Commonwealth Government's consideration. Preliminary analysis was presented to GRDC's executive and Board for consideration and feedback. A draft report was provided to GRDC's Board and the Commonwealth Government for consideration.

All findings and recommendations presented in the report are ACIL Allen's and represent the independent nature of the review process.

1.2 Report structure

The remaining sections of this report address the ToR set for the independent review.

- *Chapter 2* describes the context within which the analysis of GRDC between 2015 and 2019 has taken place. The chapter considers some of the factors that have shaped changes to GRDC's strategies, governance arrangements, organisational arrangements, systems and processes that were implemented over the review period.
- *Chapter 3* considers the governance and organisational dimensions of GRDC over the review period. This chapter examines the myriad of changes made to GRDC's purpose, governance and organisational arrangements. It discusses why the changes were implemented and considers what impact they had on the efficiency and effectiveness of GRDC's operations.
- *Chapter 4* considers aspects relating to the efficiency and effectiveness of GRDC's strategies, plans and investments. The chapter commences by describing GRDC's strategic planning and reporting architecture before considering a range of evidence about the architecture's efficiency and effectiveness. The chapter then considers the efficiency and effectiveness of GRDC's regional presence and its influence on outcomes.
- *Chapter 5* considers evidence of the benefits generated from GRDC's past investments, and considers how the project selection process and evaluation framework can be used to unlock value into the future.
- *Chapter 6* analyses GRDC's stakeholder engagement and partnership processes as critical aspects of GRDC's future success.
- *Chapter 7* provides conclusions against each ToR and the recommendations arising from the review.

- *Appendix A* identifies the stakeholders who were consulted for this review.
- *Appendix B* considers whether GRDC has been compliant with its SFA and the PIRD Act over the review period.
- *Appendix C* provides a range of information that supports chapters 2 through to 7.



Structural shifts in Australia's grains and agricultural industries which have driven growth in the GRDC's levy-base, changes to Commonwealth Government policy, organisational restructures and the evolution of GRDC's purpose are key contextual factors of the review period. Each of these factors have shaped GRDC's strategies and operations since 2015 and are discussed in detail throughout the remainder of this chapter.

2.1 Industry and market factors that have influenced performance

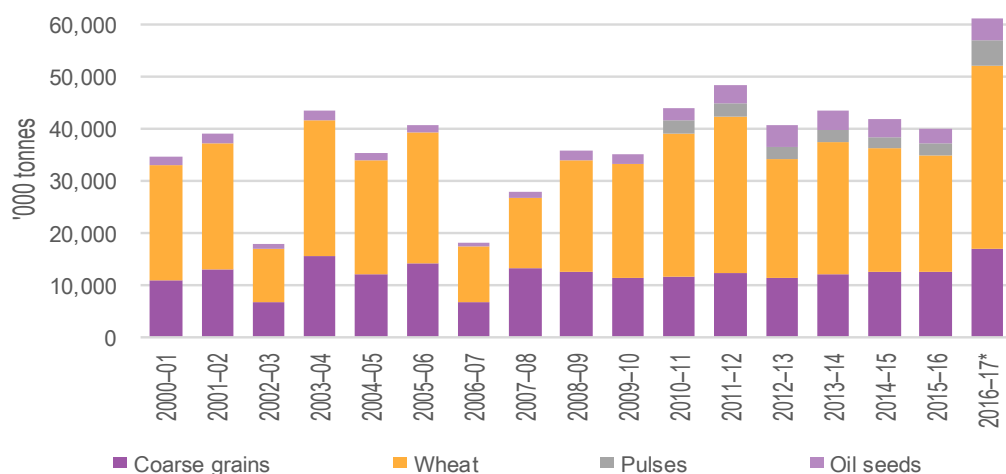
The Australian grains industry is dominated by the production of winter cereals. Grains production occurs on around 22,000 properties in the Western, Southern and Northern grain growing regions of Australia. These regions comprise 13 different agroecological zones and each region has distinct climate, cropping and market characteristics.

Wheat accounts for most of Australia's grain production as shown in **Figure 2.1**. In 2016-17, ABARES² reported that Australia produced just over 61 million tonnes of grains of which 35 million tonnes, or 57 per cent of total production, was from the production of wheat. A further 17 million tonnes of coarse grains (such as barley and oats) were produced in 2016-17, while 4.9 million tonnes of pulses and 4.1 million tonnes of oilseeds were produced in that year.

Total grains production in 2016-17 was higher than in previous years due to favourable seasonal conditions across the three growing regions. Average grains production over the ten years to 2016-17 (inclusive) was far lower at 41.9 million tonnes per annum while average production over the five years to 2016-17 (inclusive) was just under 45.5 million tonnes per annum. In 2017-18 and 2018-19, total grains production is forecast to decrease as cropping conditions return to long run averages.³ Further declines in production are likely to be realised due to current unfavourable growing conditions in New South Wales and South Australia however these declines may be partially offset by good production conditions in Western Australia.

² ABARES 2018, 'Agricultural Commodity Statistics 2018', Government of Australia, Canberra.

³ ABARES 2018, 'National Crop Report 2018', Government of Australia, Canberra.

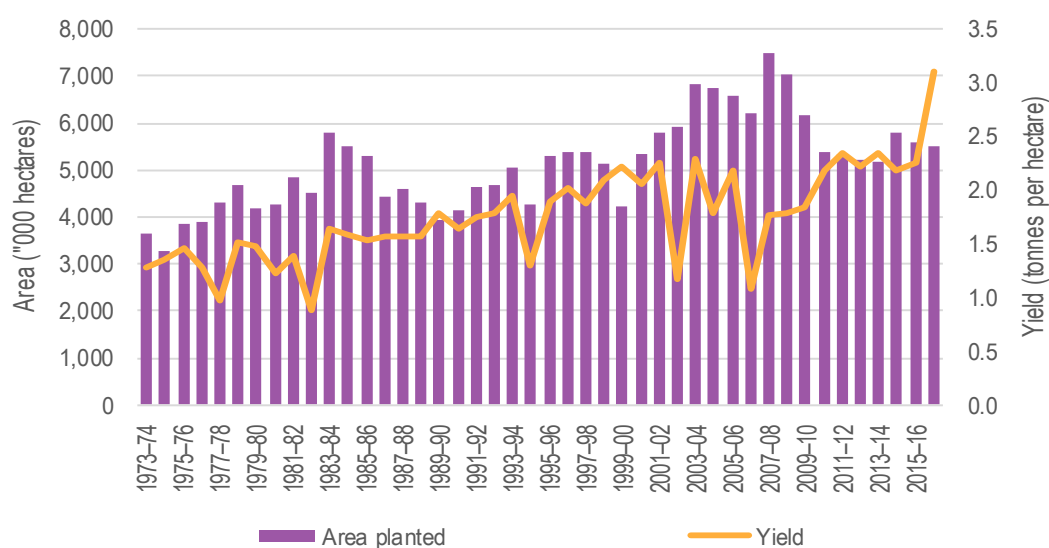
FIGURE 2.1 PRODUCTION OF GRAINS—AUSTRALIA ('000 TONNES)

NOTE: * = ABARES ESTIMATE

SOURCE: ABARES, AGRICULTURAL COMMODITY STATISTICS 2018

The area planted to coarse grains has been variable over the past decade (see **Figure 2.2**) with a peak in 2007-08 at 7.5 million hectares compared to a low in 2013-14 of 5.1 million hectares. Over the ten years to 2015-16, the average area planted was nearly 5.9 million hectares however in the last five years, the average area planted was 5.4 million hectares. The significant declines in the area planted in 2002-03 and 2006-07 were due to drought conditions in both years.

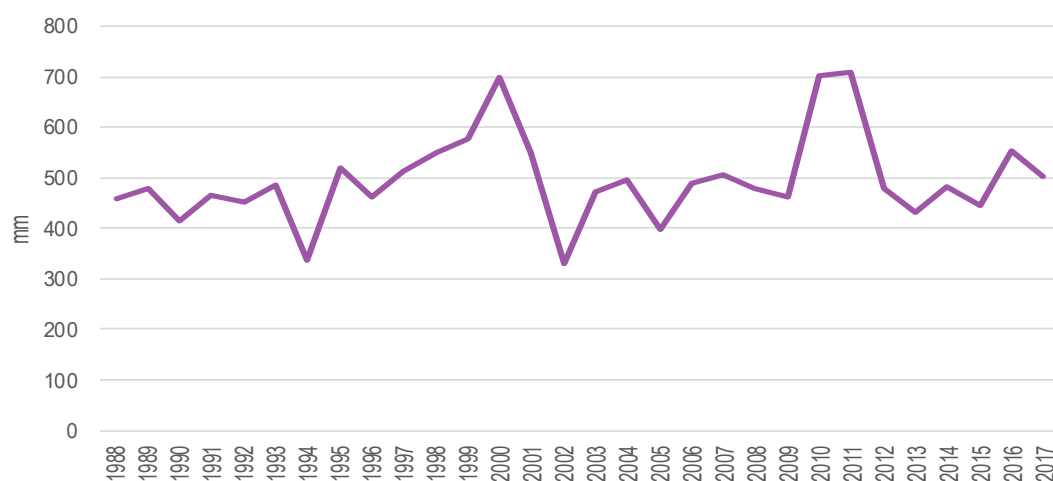
Despite this decline in the area planted, the yield of coarse grains has increased significantly and particularly over the same decade rising from 1.8 tonnes per hectare in 2007-8 and 2008-09 to 3.1 tonnes per hectare in 2015-16. This sharp increase in 2015-16 was due to high rainfall events in all growing regions which resulted in record production of grains.

FIGURE 2.2 AREA PLANTED AND YIELD OF COARSE GRAINS ('000 HECTARES)

SOURCE: ABARES, AGRICULTURAL COMMODITY STATISTICS 2018

Figure 2.3 shows the annual rainfall in Australia to 2017. It highlights the poor rainfall received in 2002 and 2005 and the high rainfall events in 2010 and 2011 that correspond to the yields presented in **Figure 2.2**.

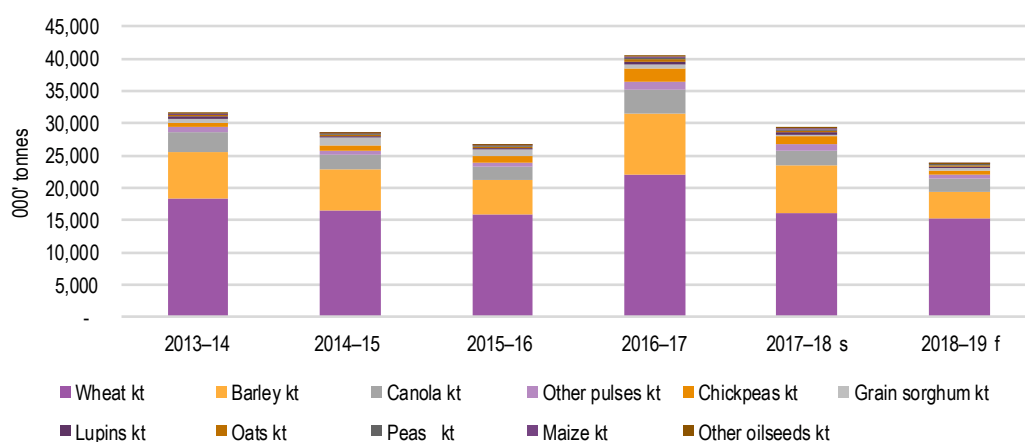
FIGURE 2.3 ANNUAL RAINFALL—AUSTRALIA (MM)



SOURCE: BUREAU OF METEOROLOGY ANNUAL CLIMATE STATEMENT

The grains industry is an important source of export revenue. The most valuable exported crop is wheat, followed by barley, canola and chickpeas. In 2016-17, Australia exported 22 million tonnes of wheat, valued at nearly \$6.1 billion compared to 9.5 million tonnes of barley valued at \$2.4 billion and 2.6 million tonnes of canola worth \$2.1 billion. There were just under 2.0 million tonnes of chickpeas exported in 2016-17, valued at \$1.9 billion as shown in **Figure 2.4** and **Figure 2.5**.

FIGURE 2.4 VOLUME OF KEY GRAINS EXPORTS FROM AUSTRALIA ('000 TONNES)

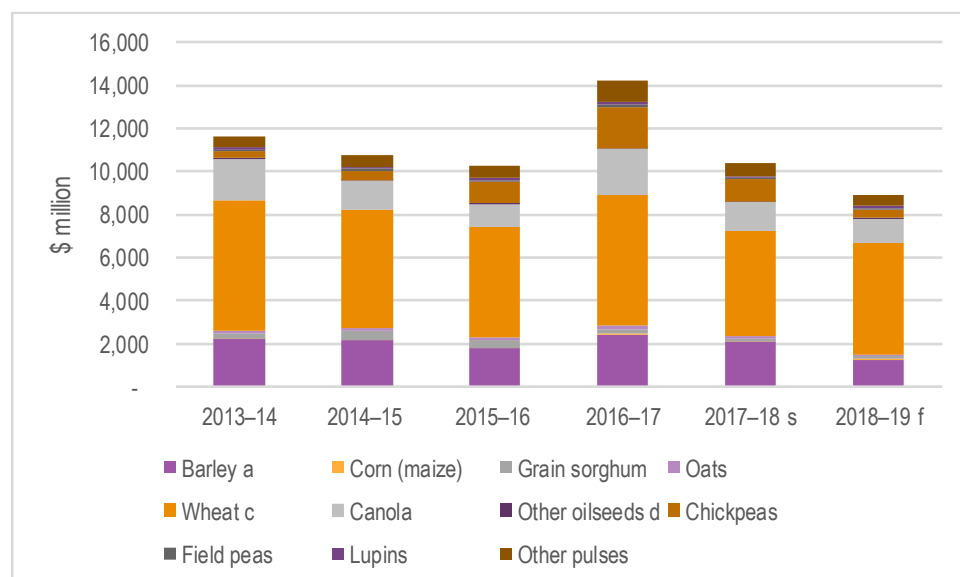


NOTE: S = ABARES ESTIMATE. F = ABARES FORECAST

SOURCE: ABARES, AGRICULTURAL COMMODITY STATISTICS 2018

The volume of grains exports from Australia is dependent on the available supply. For example, the average volume of wheat exported over the period from 2013-14 to 2016-17 (inclusive) was nearly 18.2 million tonnes per annum which is below the 22 million tonnes exported in 2016-17. ABARES has forecast that exports of all grains will decrease in 2017-18 and 2018-19 due to falls in expected production.⁴

FIGURE 2.5 VALUE OF KEY GRAINS EXPORTS FROM AUSTRALIA (\$ MILLION)



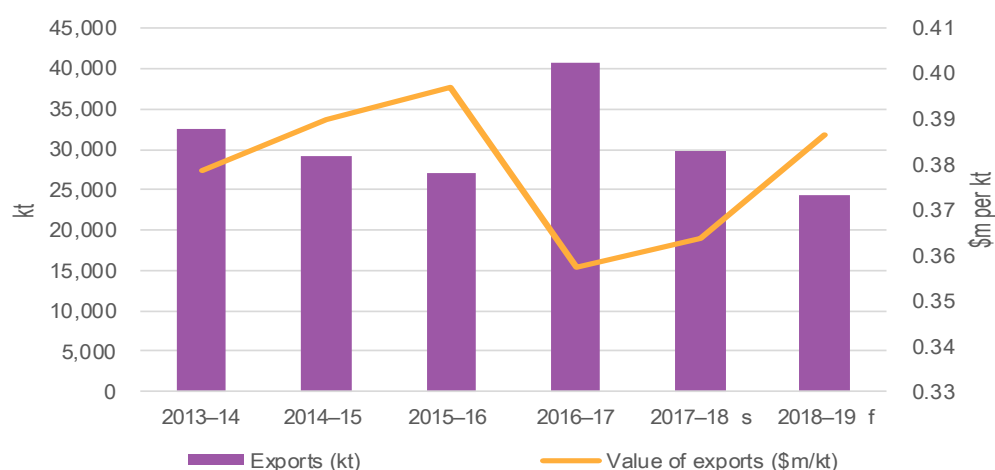
NOTE: S = ABARES ESTIMATE. F = ABARES FORECAST

SOURCE: ABARES, AGRICULTURAL COMMODITY STATISTICS 2018

In summary, production in the grains industry is heavily influenced by seasonal conditions with poor rainfall in 2002-03 and 2006-07 resulting in a reduction in the area planted to grains and a smaller harvest. As a result, average grains production in Australia over the ten years to 2016-17 (inclusive) was 41.9 million tonnes per annum compared to just under 45.5 million tonnes per annum over the five years to 2016-17 (inclusive) when seasonal conditions were more favourable.

Australia is an exporter of grains, and the volume of exports is heavily influenced by the volume of production. A comparison of the volume and value of exports indicates that higher prices are received in years where the production of Australian grains is lower. This trend is evidenced in **Figure 2.6**.

⁴ ABARES 2018, Agricultural Commodity Statistics 2018, Australian Government, Canberra.

FIGURE 2.6 VOLUME AND PER UNIT VALUE OF GRAINS, OILSEEDS AND PULSE EXPORTS

SOURCE: ABARES, AGRICULTURAL COMMODITY STATISTICS 2018

There has been slightly lower rainfall over the 2015 to 2019 review period compared to the ten years to 2017. Despite this, the yield in the review period has been higher than the ten-year average driven by record production during 2016-17 as a result of high rainfall. Drought conditions on the eastern seaboard have significantly impacted crop production in these areas however there have been highly favourable growing conditions in Western Australia which will offset these losses to some extent. The net impact should be a return to long run levels of production and export revenues.

2.1.1 Agricultural total factor productivity growth has plateaued

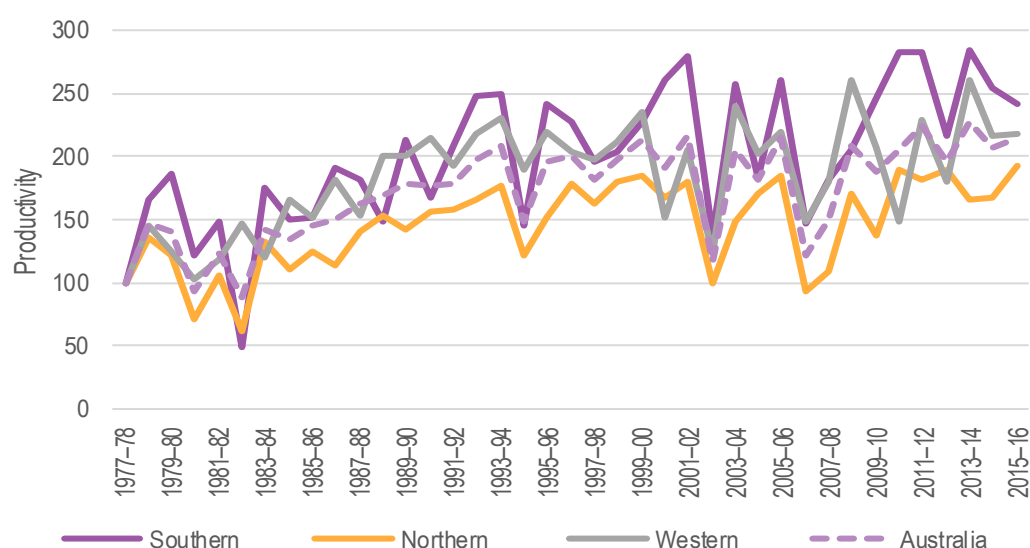
Since the 1970s, the grains industry has been characterised by an increase in the size of farms with ABARES reporting that the average area sown to crops increasing by nearly three-fold during this time. In addition, the use of inputs (such as seed, chemicals, fertilisers, and fuel) has increased by 4.1 per cent per annum over this time. This increase is partly due to improvements in the knowledge of soil fertility and plant physiology.

As a result of these changes, Australian industry experienced greater productivity growth than any other agricultural industry since the 1970s, recording an average of 1.5 per cent growth each year between 1977-78 and 2014-15.⁵ Figure 2.7 shows the productivity of the grains industry by region. The Figure shows that there has been overall growth in productivity in the industry since 1977-78. In the past decade, there have been two notable declines in productivity. These events (in 2002-03 and 2006-07) were caused by declines in area planted and production as a result of drought conditions. In 2006-07, the Australian Bureau of Statistics (ABS) recorded that the area sown to wheat decreased by 15 per cent (716,000 ha) and 18 per cent (140,000 ha) in Queensland.⁶

An analysis of the three grain growing regions in shows that the Southern region has the highest productivity of any of the regions. Despite this, it has recorded declining productivity since 2014-15 due to unfavourable growing conditions in the region. Productivity in the Western region is now comparable with the Southern region, but it has experienced significant variability since 2000 mainly due to variability in growing conditions. The Northern region has the lowest productivity of the regions but, on average, has experienced consistent productivity growth since 2005-16.

⁵ ABARES 2018, (<http://www.agriculture.gov.au/abares/research-topics/productivity/agricultural-productivity-estimates#cropping>).

⁶ Australian Bureau of Statistics 20007, 'Agricultural Commodities Australia 2006-07', Cat. 7121.0, Government of Australia, Canberra.

FIGURE 2.7 PRODUCTIVITY OF THE GRAINS INDUSTRY (BY GROWING REGION)

SOURCE: [HTTP://WWW.AGRICULTURE.GOV.AU/ABARES/RESEARCH-TOPICS/PRODUCTIVITY/AGRICULTURAL-PRODUCTIVITY-ESTIMATES#CROPPING](http://www.agriculture.gov.au/abares/research-topics/productivity/agricultural-productivity-estimates#cropping)

Between 1980 and late-1990, productivity growth was led by improvements in technology and farming techniques including the adoption of no-till farming systems, new crop varieties and other technologies. However, from the late-1990s, growth in productivity has slowed with the long-term growth in productivity in the broadacre cropping and livestock industries falling from 2.1 per cent per annum between 1978 and 1999, to 1.5 per cent between 1978 and 2007.⁷

ABARES reports that climate variability (fluctuations in temperature, rainfall and other conditions) is a key determinant of farm productivity. It noted that, above average rainfall between the late-1970s and mid-1990s increased cropping yields and pasture growth, boosting productivity growth. In contrast, adverse seasonal conditions during the 2000s contributed to a slowdown in productivity growth.⁸

A report by Sheng et al (2011) found that there was a significant structural break in agricultural productivity in the mid-1990s, and these results are robust across different broadacre industries and states. However, whilst unfavourable growing conditions have had an impact, the slowdown in productivity growth is more likely to be driven by a long-term decline in public R&D investment than climate variability.⁹ This finding is supported by an ABARES report which adjusted the productivity of broadacre cropping farms for climate change. The report found that after removing the effect of climate change, farm productivity was shown to have slowed in the 1990s to just 0.2 per cent per annum but recovered in the 2000s to record growth of 1.5 per cent per annum. Climate was found to have a significant negative effect on the productivity of Australian cropping farms, particularly in south western Australia and south eastern Australia. For example, in Western Australia, productivity growth fell by an average of 7.7 per cent due to adverse climate conditions between 2000-01 and 2014-15. However, adaptation to changes in climate by growers has led to improvements in productivity growth.¹⁰

The overall impact of climatic, yield, export and productivity factors has been a growth in the value of Australian grains, which has in turn led to a growth in levy revenues for GRDC.

⁷ Sheng Y, Mullen JD and Zhao S. 2011, 'Has Growth in Productivity in Australian Broadacre Agriculture Slowed? A Historical View', *Ann Agric Crop Sci.* 2016; 1(3): 1011. ISSN:2573-3583.

⁸ ABARES 2018, (<http://www.agriculture.gov.au/abares/research-topics/productivity/productivity-drivers#seasonal-conditions>).

⁹ Sheng Y, Mullen JD and Zhao S. 2011, 'Has Growth in Productivity in Australian Broadacre Agriculture Slowed? A Historical View', *Ann Agric Crop Sci.* 2016; 1(3): 1011. ISSN:2573-3583.

¹⁰ Hughes, N, Lawson, K & Valle, H 2017, 'Farm performance and climate: Climate-adjusted productivity for broadacre cropping farms', Canberra, April. CC BY 3.0.

2.2 Policy, structural and funding factors that have influenced performance

ACIL Allen has identified numerous factors that have influenced GRDC's strategies and operations over the review period. A summary of each factor is provided below.

2.2.1 Commonwealth Government RDC decentralisation strategy

Between 2014 and 2015, the Commonwealth Minister for Agriculture (the Minister), announced/discussed the Government's plans for a decentralisation policy for RDCs. In May 2015, the Minister sent a letter to GRDC requesting it consider relocating its Canberra office to Wagga Wagga. The policy intent behind the letter was to:

- increase investment in regional centres
- contribute to improvements in delivery of services with research being conducted in the grain growing regions
- further build understanding of industry needs.

Prior to the announcement all GRDC staff except for three regional managers representing the North, South and West were based in Canberra. GRDC would engage growers locally through the three Regional Panels (north, south, west), Regional Cropping Solutions Network (RCSN), Grower Solutions Groups, GRDC Updates, field day events and social media.¹¹

Following the Commonwealth Government's policy, GRDC developed a strategy for relocating staff regionally based on a 'hub and spoke model'.¹² This model retained all corporate services and national research programs in Canberra. Regional research and development, extension and communication program and project manager staff would be based regionally and supported locally by administrative staff.¹³

Staff were consulted on the proposed changes and significant concerns were raised by staff and industry on the potential disruption by loss of corporate knowledge from staff who would not relocate. Industry was also concerned about the costs of relocation and the additional resources needed to establish offices in Perth, Adelaide, Dubbo and Toowoomba. There were also concerns that the strategy had political motivations which did not translate into better research outcomes for growers. Although some growers identified concerns that levy funds were invested in cities and not locally, GRDC does not conduct research, which highlighted that moving staff would not influence research outcomes.

The Minister accepted the strategy to move to a 'hub and spoke model' in February 2016 and offices opened in Dubbo, Adelaide, Perth and Toowoomba that year.¹⁴

2.2.2 Change in grains R&D landscape

Grains RD&E has changed significantly since the GRDC's inception in 1990. Historically, state governments were a major funder of grains RD&E in Australia, with industry levies contributing to the large proportion of projects lead by state agriculture departments.¹⁵ Table 2.1 compares the RD&E investment between the public sector departments and the private sector over time. Between 2007-08 there was a 12 per cent decline in the share of grains RD&E investment by state departments from \$123 million to \$95 million. Over the same period, GRDC increased investment from \$88 million to \$164 million, at the time accounting from 11 per cent increased in grains RD&E market share to

¹¹ GRDC 2015, 'Annual Report 2014-15', Grower Engagement.

¹² Hybrid Option for GRDC Move (<https://www.farmonline.com.au/story/3377963/hybrid-option-for-grdc-move/>)

¹³ GRDC n.d., 'Decentralised Hub and Spoke Model' (Source: 1 Decentralised Hub and Spoke Staff Profile Including Regional.docx).

¹⁴ (<https://www.smh.com.au/public-service/barnaby-joyce-relocates-three-research-organisations-from-canberra-to-regional-australia-20160210-gmq2c7.html>).

¹⁵ Sheng, Y, Mullen, JD and Zhao, S 2011, 'A turning point in agricultural productivity: consideration of the causes', ABARES research report 11.4 for the Grains Research and Development Corporation, Canberra, May. Sheng et al (2011) suggest that productivity growth has slowed since the 1970's due to contributing factors including a changing climate and stagnating real public investment in agricultural R&D. It is understood that agricultural R&D has a long lag effect on broadacre productivity growth, with total observed effects accumulating over decades. As a result of the reduction in public investment in agricultural RD&E since the 1970's, since the inception of the RDC model in 1989, industry has been expected to play a greater role funding RD&E.

34 per cent. Similarly, universities increased their market share to 15 per cent in 2013-4 at the expense of CSIRO and private investment (estimated).¹⁶

TABLE 2.1 COMPARISON OF GRAINS RD&E INVESTMENT (2007-08 AND 2013-14)

Organisations	2013-14 (\$ m)	2013-14 (%)	2007-08 (\$ m)	2007-08 (%)
State departments	95	20	123	32
CSIRO	51	11	45	12
Universities	69	15	39	10
GRDC	164	34	88	23
Private Investment (estimate)	97	20	90	23
<i>Total</i>	<i>476</i>	<i>100</i>	<i>385</i>	<i>100</i>

SOURCE: GRAINS INDUSTRY NATIONAL RESEARCH, DEVELOPMENT AND EXTENSION STRATEGY 2017

Due to the rationalisation of investment from state departments (particularly in extension services in the 1990's) and greater focus on essential services and applied research areas, GRDC has become a significant funder of Australia's grains RD&E sector. This rationalisation in extension services was accompanied by increased provision of private sector service delivery.¹⁷

Whilst GRDC levy income increased significantly throughout the 2000s, the capacity and expectation to fund a greater proportion of basic and applied research became apparent. As a strategy of maintaining investment from research partners in essential research capacity and infrastructure, GRDC pursued five-year bilateral agreements which would leverage industry levies (as shown in **Box 2.1**).

¹⁶ Grains Industry National Research 2017, 'Development and Extension Strategy 2017', (<https://www.npirdet.org/content/75/7afad8b6/Grains-Industry-National-RD-E-Strategy-2017.pdf>).

¹⁷ Sheng, Y, Gray, EM, Mullen, JD and Davidson, A 2011, 'Public investment in agricultural R&D and extension: an analysis of the static and dynamic effects on Australian broadacre productivity', ABARES, Canberra, September.

BOX 2.1 GRDC BILATERAL AGREEMENTS**What are bilateral agreements?**

Bilateral agreements are formed between GRDC and a research partner to secure funding for a specified time period (5 years). The agreements are intended to create continuity of investment in research infrastructure, build research capacity, training and retention of skilled scientists and move away from a project-to-project approach. In recent years, due to uncertain funding arrangements from state governments, loss of research capacity and poor technical staff retention research partners have explored alternative avenues to maintain staff and infrastructure.

Key features:

- Efficient RD&E delivery
- Access to strategic capability through research organisations with specialist expertise
- To build and maintain capability and capacity
- To leverage key capabilities
- To streamline project contracting process and reduce transaction costs
- To ensure researchers are responsive and flexible in responding to industry needs

Which research partners does GRDC have bilateral agreements with?**Curtin University**

- Creation of the Centre for Crop and Disease Management (five year), under the agreement GRDC and Curtin University will contribute funding for research projects. Curtin University committed \$68 million in infrastructure and funds.

DEDJTR

- \$10.4 million (per year)
- programs funded included graduate agronomy program, technology upgrades to the Grains Innovation Park in Horsham, Australian Grains Genebank and pulse pre-breeding program.

NSW DPI

- ten-year agreement (\$130 million)
- Support and expand R&D in agronomy, pathology, plant breeding, pre-breeding, farming systems, nutrition, soils and grain quality.
- Secure research capacity at Tamworth, Wagga Wagga, Condobolin, Yanco and Trangie Research Stations.

SARDI

- \$25 million (staff, equipment and resources) commitment from SARDI matched by GRDC
- Six new regional agronomy positions

SOURCE: GRAINS INDUSTRY NATIONAL RESEARCH, DEVELOPMENT AND EXTENSION STRATEGY 2017. CURTIN BILATERAL (<https://grdc.com.au/resources-and-publications/groundcover/GC110/NEW-GRAINS-RESEARCH-DEAL>), DEDJTR BILATERAL (<https://www.weeklytimesnow.com.au/agribusiness/cropping/grdc-and-victorian-government-research-deal-renewed/news-story/8629b53ff4e46e292905b4bbd8fc392d>), (<https://grdc.com.au/resources-and-publications/groundcover/groundcover-july-august-2018/program-drives-generational-change-for-crop-management>)

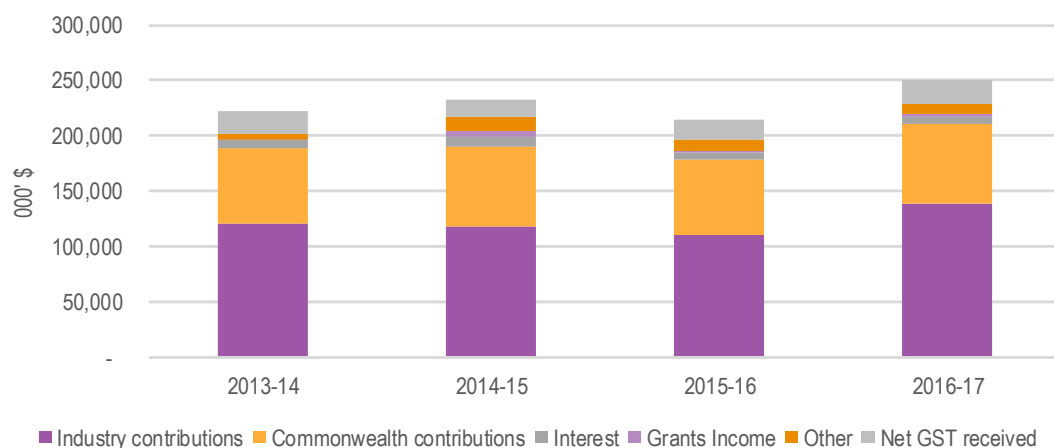
By negotiating long-term bilateral agreements with major research partners, a significant proportion of GRDC's expenditure has been committed long-term. While this approach provides funding certainty to traditional research partners, it has delivered GRDC with variable results over the review period. Analysis of these partnerships is provided in section 4.2.5.

2.2.3 Changes in income

GRDC is largely funded through grower levies and matched funding from the Commonwealth Government, which comprise approximately 83 per cent of income in 2016-17.

GRDC also raises revenue from royalties, grants and the receipt of interest and GST payments.

A breakdown of GRDC's revenue by source is provided in **Figure 2.8**.

FIGURE 2.8 GRDC'S REVENUES (\$'000)

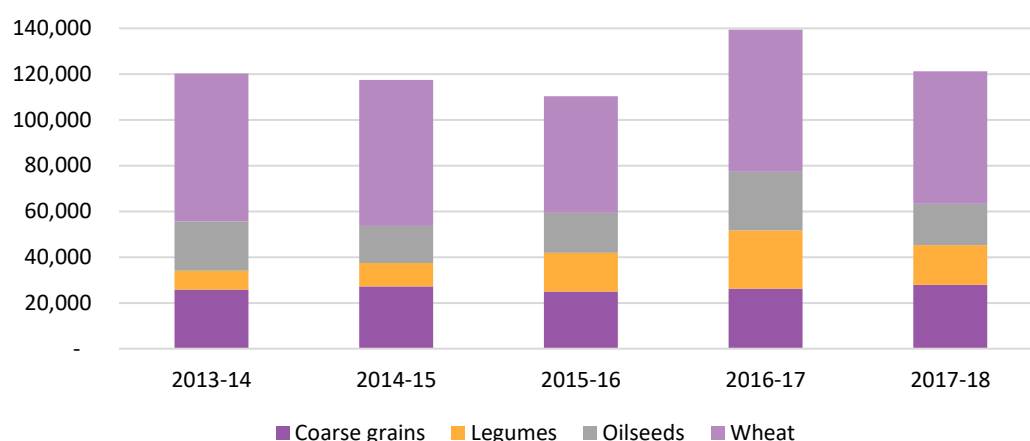
NOTE: CORPORATION CASHFLOW STATEMENT NUMBERS HAVE BEEN USED 2015-17, 2014 DOES NOT DIFFERENTIATE BETWEEN THE TWO
 SOURCE: GRDC ANNUAL REPORT 2014-15 TO 2016-17

Grain growers contribute through a producer levy that is based on the net farm gate value of the annual production of 25 crops including:

- wheat
- coarse grains—barley, oats, sorghum, maize, triticale, millets/panicums, cereal rye and canary seed
- pulses—lupins, field peas, chickpeas, faba beans, vetch, peanuts, mung beans, navy beans, pigeon peas, cowpeas and lentils, and
- oilseeds—canola, sunflower, soybean, safflower and linseed.

Because the levy is based on the net farm gate value, the total receipts received vary from year to year depending on the size of the Australian yield from these crops and the net revenue received for them. Over the years 2013-14 to 2016-17, the average total industry contribution was \$121.7 million per annum with a peak of \$138.8 million in 2016-17 before declining again in 2017-18 (see **Figure 2.8**).

Most levies are collected from the production of wheat. In 2017-18, \$58 million or 48 per cent of industry contributions came from wheat followed by coarse grains (23 per cent of contributions) while the remainder were relatively evenly distributed between pulses and oil seeds.

FIGURE 2.9 INDUSTRY CONTRIBUTIONS BY GRAIN (\$'000)

SOURCE: GRDC ANNUAL REPORTS WITH 2017-18 DATA FROM THE DEPARTMENT OF AGRICULTURE AND WATER RESOURCES

The Commonwealth Government's contribution is based on a limit of up to 0.5 per cent of the three-year rolling average of the gross value of production of the leviable crops. It also therefore varies from year to year. The average Commonwealth contribution over the period from 2013-14 to 2016-17, was just under 7.1 million per annum with a peak in 2014-15 of \$72.9 million.

Levies are also used to fund the National Residue Service (NRS) and Plant Health Australia (PHA) for the purposes of residue requirements for export market access and biosecurity respectively. In 2017-18 the GRDC was disbursed 85 per cent of the total levy collected which was down from about 90 per cent over the previous four financial years.¹⁸

GRDC's revenue has increased significantly in the last 15 to 20 years. This growth has improved GRDC's ability to fund more R&D which has risen from approximately \$100 million worth of expenditure in 2004-05 to more than \$200 million in 2016-17.¹⁹

Revenue growth has also allowed GRDC to absorb more of the costs associated with divestment by state governments in grains RD&E, noting that GRDC itself does not undertake these services but contracts and partners with others to deliver them.

2.3 Internal factors that have influenced performance

There are numerous internal factors that have influenced GRDC's strategies and operations. The most important of these factors are discussed below.

2.3.1 GRDC Strategic Governance Review

In 2014, Grain Producers Australia (GPA) and the GRDC commissioned a review of GRDC's governance structure. The review arose from industry's concern that the then structure constrained GRDC's opportunity to take a commercial approach to R&D investment and deliver world-class innovation outcomes to the grains industry, which included GRDC's inability to negotiate commercial workplace arrangements due to public service enterprise agreements, inability to draw down on financial reserves and establish new commercial subsidiaries.

The review's scope of the review included examination of:²⁰

1. The strengths and weaknesses of other RDC structures and other non RDC organisations;

¹⁸ DAWR 2018, 'Report to Levies Stakeholders 2017-18', October 2018.

¹⁹ GRDC 2017, 'Research, Development and Extension Plan 2018-23' (https://grdc.com.au/_data/assets/pdf_file/0020/363053/Grains-Research-and-Development-Corporation-Research-Development-and-Extension-Plan-2018-23.pdf).

²⁰ Marsden Jacobs and Associates 2014, 'Grains Research and Development Corporation: Independent Strategic Governance Review', GRDC.

2. Whether potential changes to the PIERD and CAC Acts, or structural change, including but not limited to an industry owned company, are necessary to address impediments identified in (1);
3. Assess whether alternate models have the potential to improve the RDE outcomes and profitability of the grains industry; and
4. Identify costs associated with change, both transactional and operating impact.

The review identified a range of issues that should be addressed regardless of GRDC's corporate form. The introduction of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) had seen GRDC place greater levels of accountability requirements for reporting to government, including the development of a funding agreement. Industry stakeholders felt that a rebalancing of GRDC's accountabilities to the levy payer was necessary to better align the organisation's actions with its obligations to growers.²¹

The review also made a strong case for GRDC to adopt the principles and practices of agility and commerciality. To achieve this, GRDC would need to be able to better partner with private organisations and internationally whilst maintaining a high standard of corporate governance which GRDC's reputation is dependent on. The review found that GRDC's status as a statutory body was a key inhibitor to the adoption of a more agile and commercial approach. The review recommended two alternate models as preferable to its existing corporate form: 1) Hybrid model—this model draws components of an Industry Owned Corporation (IOC) into the current statutory corporation structure; and or 2) Industry Owned Corporation.²²

Option 1, the Hybrid model, was identified as the preferred model and a roadmap to implement the reforms was provided in the review report. Key steps associated with the Hybrid model (such as, seeking exemptions from the Commonwealth to improve the GRDC Board's autonomy for decision making on utilisation of financial reserves, workplace arrangements and have similar autonomy to existing IOC's; establishing a grower levy payer database to effectively engage with stakeholders and increase accountability to growers; and establishing Annual General Meeting (AGM) style regional meetings to facilitate more personal engagements and improve accountability (both Board and levy paying growers) to the decisions of the GRDC; the development a grains industry led vision and strategy for RD&E) have to this date only been partially implemented. A key finding of the review is that such steps should be implemented within the current statutory body structure, to support the longer-term goal of transitioning to an IOC.

2.3.2 Review of GRDC's systems and processes

In 2014-15, GRDC's Board commissioned its Executive to review investment processes, system requirements and structure.²³ The review considered GRDC's annual investment cycle from issue identification through to contracting, managing, reporting and evaluation (as shown in C.2), and highlighted some key issues that constrained GRDC's ability to deliver value to growers. The review identified that the:

- annual cycle took approximately 18 months (from issue conception through to contracting a new research project) to complete
- annual call for tenders gave research partners a short time frame to develop responses to the investment plan
- annual mandatory reporting for all projects in March and September was a one-size fits all approach and did not reflect the changing needs of individual projects
- annual payment process created risk for both parties
- fixed investment process provided limited opportunities to leverage opportunities as they arose or respond to the changing industry conditions.

²¹ Marsden Jacobs and Associates 2014, 'Grains Research and Development Corporation: Independent Strategic Governance Review', GRDC.

²² Marsden Jacobs and Associates 2014, 'Grains Research and Development Corporation: Independent Strategic Governance Review', GRDC.

²³ GRDC 2015, 'Annual Report 2014-15', GRDC.

In 2015, GRDC commissioned another review to assess the state of its systems and processes.²⁴ The review identified numerous areas where GRDC's systems exposed the organisation to operational risk and required updating. An example of the observations about the state of GRDC's key internal systems and processes at 2015 is provided in **Box 2.2**.

BOX 2.2 KEY OBSERVATIONS FROM THE 2015 REVIEW OF SYSTEMS AND PROCESSES

- ICT systems had not matured in line with the growth of the Corporation and were no longer deemed to be fit-for-purpose at that time.
- There was a lack of clear ICT strategy to guide the management of ICT systems to support the key processes of the GRDC.
- Knowledge management practices were inadequate and inefficient across the Corporation
- Communication silos had developed which inhibited the effective and transparent passage of key information across the GRDC.
- Due to the lack of confidence and capacity of key ICT systems, there was a high level of reliance on highly manual processes across the GRDC.

SOURCE: PWC 2015, 'GRDC REVIEW OF KEY BUSINESS SYSTEMS AND PROCESSES'.

2.3.3 Review of GRDC's strategy and purpose

Between 2014 and 2016, GRDC's Board commissioned an overarching review of the organisation's strategy, which incorporated aspects of its investment process and all systems and processes including project, financial and accounting systems.

The review was motivated by internal and external perceptions that GRDC's investment process and organisational structure was sub-optimal for scoping, contracting and managing projects, as well as effectively identifying new opportunities to pursue.

Similarly, GRDC's RD&E investment strategy was reviewed, taking into consideration that a new internal operating environment would need to align with the RD&E strategy. As a result, a new Managing Director was chosen to renew GRDC's strategy and purpose, whilst implementing organisational changes to the systems and process, people and culture.

Prior to officially starting as Managing Director in July 2016, Dr Steve Jefferies AM, consulted internal and external stakeholders about GRDC's performance (April-July 2016). The purpose of the consultation was to identify stakeholder views about GRDC's strengths and areas for improvement. The key issues identified during consultation included:²⁵

- a lack of transparency in GRDC's operations and a tendency towards being overly bureaucratic
- a perception that GRDC did not effectively and equitably invest levy funding in local research opportunities, rather focusing its research investments in certain metropolitan-based research facilities
- a lack of appreciation and understanding of GRDC's contribution to investment outcomes (such as growers not being aware of GRDC investment in commonly grown crop varieties etc.)
- concern about a lack of leadership within GRDC
- a lack of clarity in the roles and responsibilities/position descriptions of staff
- concern that the role of Regional Panels had grown beyond their ToR. Some stakeholders felt that Panel members were acting as de facto GRDC staff and project managers (i.e. writing project specs, but not responsible for delivery or management), as opposed to providing advice that staff could act upon
- concern that teams or offices were operating in silos and not an integrated organisation
- concern that GRDC did not fund investments that benefit high-performing growers

²⁴ PwC 2015, 'GRDC Review of Key Business Systems and Processes', GRDC.

²⁵ Dr Steve Jefferies AM (<http://www.ausgrainsconf.com/sites/default/files/files/Steve%20Jefferies.pdf>).

- a perception that researchers and GRDC staff were not held accountable for poor performance (e.g. projects not meeting objectives, timelines and delivering benefits)
- a view that staff were overworked (e.g. staff had too many projects and not enough time to ‘actively manage’ projects)
- a lack of objective information for effective decision making
- poorly managed Intellectual Property (IP) and commercial acumen.

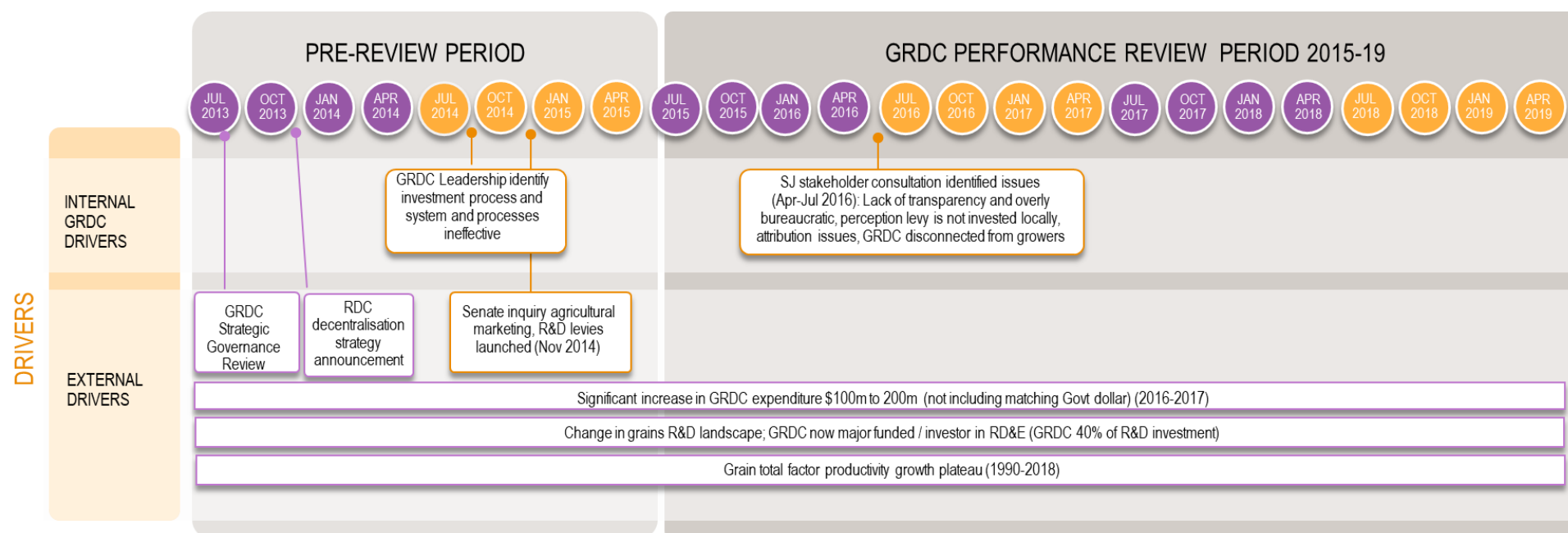
These issues presented GRDC with the opportunity to address them strategically through a refined purpose, which would also later inform a new RD&E Plan (2018-23).

2.4 Key findings

This chapter has highlighted numerous factors that have influenced GRDC’s performance over the review period. **Figure 2.10** plots the sequence of factors, some of which pre-date pre-review period in 2013-14, that are important to understanding GRDC’s actions since 2014. The Figure shows that the most significant factors are:

- a mature sector that is focused on exploiting marginal gains from improvements in productivity and markets
- gradual expansion of GRDC’s revenue base, at the same time that traditional providers are retreating from the funding landscape, has placed GRDC at the centre of grains RD&E investments in Australia
- the desire and requirement to implement a decentralisation strategy which enhanced GRDC’s regional presence
- the perception that GRDC’s purpose, governance arrangements and organisational structures are not fit-for-purpose and require renewal to ensure the organisational is accountable and high-performing
- the views held by stakeholders that GRDC’s systems and processes are outdated and inefficient which constrains the annual investment process’s effectiveness.

FIGURE 2.10 DRIVERS FOR CHANGE OVER THE REVIEW PERIOD



NOTES: REGIONAL PANELS HAVE BOTH GOVERNANCE AND ADVISORY ROLES, FOR THIS TIMELINE THEY ARE CONSIDERED A GOVERNANCE FUNCTION, CHECK AND BALANCE FUNCTION FOR THE ORGANISATION.

SOURCE: ACIL ALLEN CONSULTING



3

GOVERNANCE AND ORGANISATIONAL DIMENSIONS

Chapter 2 outlined the key contextual factors that influenced GRDC's strategy and organisational performance for the review period. This Chapter outlines the changes made by GRDC which are in direct response to the contextual factors. These changes span GRDC's leadership, its purpose, its governance and organisational structure, systems, staffing and processes, as shown in **Figure 3.6**. These changes have implications for all aspects of GRDC's culture, performance, accountability and transparency throughout the review period. The key themes of change are discussed before they are analysed against the principles of efficiency and effectiveness (as is generally inferred by ToR 1—4).

3.1 Leadership change

Change in GRDC's leadership has been a key theme of the review period. Change has occurred at both the Board and Executive levels and is reflective of the shift in GRDC's strategy, purpose and priorities over the review period.

Table 3.1 outlines the positional and personal change at the Board and Executive levels between 2015 and 2018. The Table shows that approximately 80 per cent of Board positions have turned over during the review period, while 60 per cent of the Executive are new to the organisation since 2016-17. In the last two years new regional panel chairs have been appointed in all three regions.

TABLE 3.1 LEADERSHIP CHANGE BETWEEN 2015 AND 2018

	Position	Personnel
Board	Chairman	John Woods (appointed 2016) Richard Clark (term expired 2016)
	Board Members	Richard Heath, Prof Steve Powles, Dr Chris Blanchard, Dianne Angus (appointed 2017) Dr Jeremy Burdon, Kim Halbert, Dr Andrew Barr, David Shannon (term expired) Sue Middleton (left 2017)
	Managing Director	Dr Steve Jefferies AM Dr John Harvey (term expired 2016)
Executive	Grower Extension and Communications Group (formerly Regional Grower Services)	Names withheld (appointed 2017) Names withheld (appointed 2017 and contract expired 2017) Names withheld (redundant 2016)
	Operations Group (formerly Corporate Services)	Names withheld (appointed 2017) Names withheld (redundant 2017)

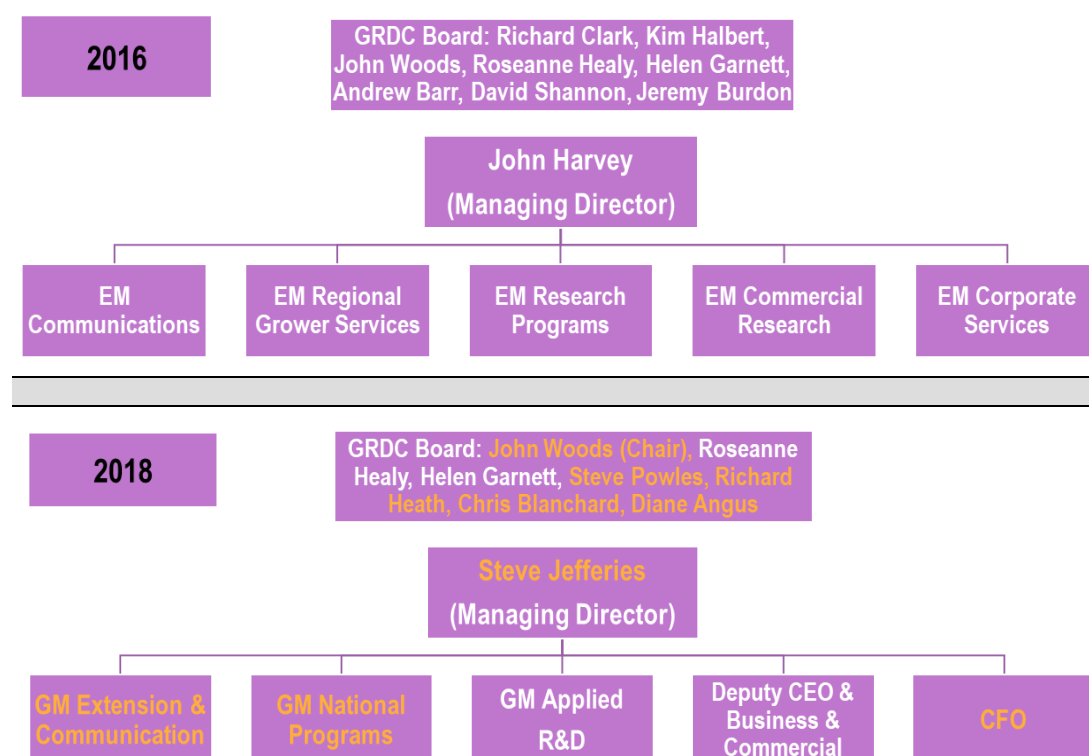
Position		Personnel
National Programs		Names withheld (appointed 2017) Names withheld (new role 2017)
Panel Chairs	North	John Minogue (appointed 2016) James Clark (term expired 2016)
	South	John Bennett (appointed 2018) Keith Pengilley (term expired 2018)
	West	Darrin Lee (appointed 2018) Peter Roberts (term expired 2018)

SOURCE: GRDC

Dr Steve Jefferies AM replaced Dr John Harvey as Managing Director in July 2016. The new Managing Director consulted internal and external stakeholders and formed a new organisational purpose that would align GRDC's strategy, culture, people and R&D Investments.

Following an initial consultation period, a restructure of the Executive Management Team was carried out in December 2016. The Regional Grower Services and Communication business groups were combined. To streamline the reporting and operational efficiency of the business Corporate Services was restructured, as shown in **Figure 3.1**.

FIGURE 3.1 GRDC LEADERSHIP STRUCTURE CHANGE (2016 AND 2018)



NOTE: THOSE POSITIONS MARKED ORANGE IN THE 2018 ORGANISATIONAL CHART ARE NEW TO THE POSITION OR ORGANISATION
SOURCE: BASED ON ORGANISATIONAL CHARTS PROVIDED BY GRDC

Figure 3.1 shows the most recent organisational chart in October 2018 (new personnel are in orange). New General Manager positions replaced the executive positions for the business groups Extension and Communication, National Programs and the Chief Financial Officer were all hired to deliver of the renewed purpose and build a commercial and business-like culture in GRDC.

3.2 New purpose

Since 1989 GRDC's purpose was focused on delivering, amongst other things, productivity and sustainability to the Australian grains industry. This purpose was a constant feature which had driven all aspects of GRDC's strategies and operations since its establishment.²⁶

BOX 3.1 GRDC'S PURPOSE BETWEEN 1989 AND 2016

Between 1989 and 2016, GRDC's purpose was to:

- increase economic, environmental and social benefits to members of primary industries and to the community in general by improving production, processing, storage, transport or marketing of grain
- achieving sustainable use and management of natural resources
- making more effective use of resources and skills of the community in general and the scientific community in particular
- improving accountability for expenditure on R&D activities.

SOURCE: GRDC 2012, 'ANNUAL PLAN', GRDC.

By 2016, this purpose was viewed as out-dated and in need of renewal. The new Managing Director brought different perspectives about the need to focus on GRDC's primary stakeholder—the grower. He argued that GRDC's focus had gradually drifted towards stakeholders who were secondary to the needs of growers and this required correcting. This perspective was also supported by perceptions that GRDC's long-held focus on productivity was limiting the industry's ability to realise benefits beyond the farm gate and throughout the supply chain.

A renewed purpose was co-developed with stakeholders to reposition GRDC around a new strategy, structure and a renewed focus on the primary stakeholder the Australian grain grower.²⁷ The GRDC Board approved the purpose to "*Invest in grains research, development and extension to create enduring profitability for Australian grain growers*".^{28 29} The significant change from the past, was a shift in focus from productivity to profit. Although, GRDC would continue to deliver on government objectives, the primary focus for the new RD&E Plan (2018-23) would be on profitability and the new investments that would need to reflect this approach.

The renewed purpose was used as the foundation for the organisation's second round of restructuring and the development of the new Grains RD&E Strategic Plan 2018-2023. This response is related to the issue's stakeholders expressed about GRDC (see section 2.3) and the plateau in Total Factor Productivity growth (see Section 2.1.1).

Alongside the new purpose, GRDC renewed the future vision for the organisation to be: 1) regarded as the grower's R&D arm (a valued grower asset); 2) open, transparent and trusted; 3) a true research partner; 4) an investor not a funder; and 5) agile and business like.³⁰

3.3 Changes to GRDC's governance, management and advisory arrangements

The operations, planning and reporting of GRDC are governed by requirements that are set out in legislation and funding agreements. These include:

- the PIRD Act
- the PGPA Act, which sets out the governance and accountability responsibilities of the GRDC
- the SFA between GRDC and the Commonwealth Government which, among other things, sets out the conditions underpinning the use of levies.

²⁶ GRDC 2012, 'Strategic Plan 2012-17' (http://strategicplan.grdc.com.au/pdf/GRDC_strategic_plan_2012-17.pdf).

²⁷ Based on feedback provided during consultation with past and present stakeholders from GRDC.

²⁸ GRDC, 2016, 'Board Minutes', 178th Meeting, GRDC.

²⁹ GRDC 2017, 'Annual Report 2016-17', GRDC.

³⁰ GRDC 2017, 'Research Partner Briefing, February 2017', Dr Steve Jefferies AM, Managing Director GRDC.

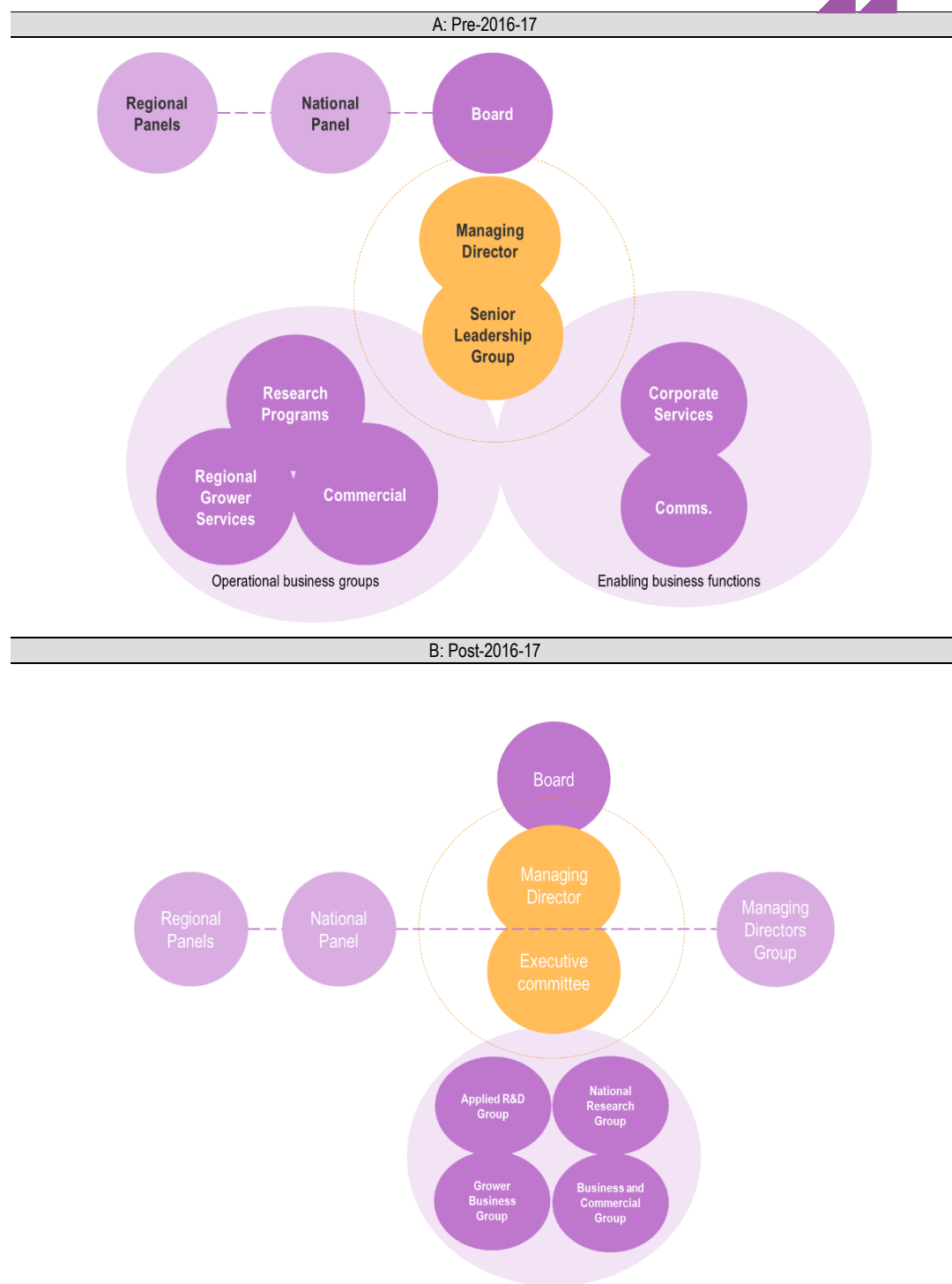
The GRDC Board has between seven and nine directors. The Chairman is selected and appointed by the Minister. The Managing Director is appointed by the GRDC Board.

The Board Charter sets out the responsibilities and processes of the GRDC Board, including the code of conduct for directors. Board Directors can be appointed for up to two consecutive terms. A list of the Board members whose term expired, who left or were appointed during the review period is provided in **Table 3.1**. The Table shows several members have been appointed to GRDC's Board in the past 18 months.

GRDC's Board is supported by a national panel and three regional panels. The operations of the GRDC are managed by a Managing Director and a Senior Leadership Group, as shown in **Figure 3.2, B**.

The Board is supported by the national advisory panel comprising the Managing Director, the executive managers of GRDC, and the chairs of three regional panels. There are three regional panels that represent the Northern, Western and Southern grain growing regions of Australia. The members of the panels comprise of grain growers, agribusiness practitioners, scientists and GRDC executive managers, with provision for other industry experts to participate as appropriate. The panels aim to provide a local approach and to interact at an industry body, grower and advisor level.

In late-2016, the internal governance structure of the GRDC was evaluated. The evaluation recommended changes to the reporting structures to better reflect their ToR and their advisory role in GRDC's governance arrangements.

FIGURE 3.2 GRDC INTERNAL GOVERNANCE STRUCTURE PRE- AND POST-2016-17

SOURCE: ACIL ALLEN CONSULTING

The recommendation was accepted and the National Panel and Regional Panels reporting lines were changed in late-2016 to be directly accountable to the Managing Director and not the Board (as shown in **Figure 3.2**).

3.4 Organisational restructures

The review period is characterised by a two-phase organisational restructure of GRDC. The first round of restructure was initiated in April 2016, although a draft of the new organisational structure had been developed and discussed at the Executive level in May 2015.

This phase was focused on implementation of the 'hub and spoke' office model. The model was partly in response to the Commonwealth Government decentralisation of RDC's from Canberra policy (see section 2.2.1), and partly in response to its existing investments which had seen it employ one regional manager for each of the three regions to manage extension and communication projects, engage with growers, advisers, researchers and regional panels since 2012. Office's in the western region (Perth), southern region (Adelaide) and northern region (Dubbo and Toowoomba) were established to position regionally focused project staff closer to industry and research. Under this phase five key business units were established, rationalised from seven key business units, with each unit reporting directly to the Managing Director, Dr John Harvey. Most roles within the organisation were either re-scoped, recruited or filled through a 'spill and fill' process.³¹

The second round of organisational restructure occurred between December 2016 and December 2017. This process involved a full organisational restructure, which included the recruitment of Dr Steve Jefferies AM (July 2017), re-alignment with business groups, to reflect the grower, applied R&D, commercial/business and national R&D business groups (refer to **Figure 3.2**).

Following the second stage of organisational restructure in 2017, each regional office was resourced to have a senior manager R&D, project staff, a business manager, grower relations manager and commercial business development managers. This responded to concerns by growers and the government that levies were not being spent locally or that a significant amount of levy funds were invested in research conducted in major cities rather than regionally (see section 2.3). It also acknowledged the importance of the different soil, climatic and farming systems of the three regions. Furthermore, the aim was to increase engagement with grower, adviser and researcher stakeholders, which would encourage a new focus on developing multi-disciplinary teams that actively managed research projects.

Consultations with GRDC identify that the second organisational restructure was required to help transition the organisation to a new purpose and to ensure that its ambitions to become more agile, more commercially-focused and grower-focused could be realised. In the realignment of business groups, the Corporate Communication and Regional Grower Services business groups were merged to reflect the close linkage between the groups. Realignment of the Corporate Services Business Group occurred to improve its effective and efficient operation.

The operational changes also included the discontinuation of the Time to Delivery ((TTD) 1-3, 3-8, 8+ year) research management approach. The TTD approach undervalued the linkages between research discovery, applied development and extension and communication which are important to effective and efficient research design and delivery.

3.5 Investment in new systems and processes

In 2015, GRDC's leadership commissioned a review of all investment systems and processes. The review's objective was to implement an enhanced set of systems and processes for the 2016-17 investment cycle that supported GRDC's fundamental purpose.³²

The review highlighted that GRDC had outdated and ineffective systems and processes which inhibited the organisations ability to be agile, actively manage projects and track what research had been funded in the past (see section 2.3.2). These findings were presented to the Board for consideration in 2015.

Following this presentation, the executive developed a continuous investment process which aimed to reduce the amount of time from idea conception through to project contracting from 18 months, to contract projects four times per year. A continuous investment process was also seen to have

³¹ GRDC 2015, 'Draft Organisational Chart', June.

³² GRDC (2015) Board paper GRDC Internal Investment Process Review, Feb 2015

resource management advantages for staff who manage investments activities (such as procurement and contracting) by smoothing their workloads throughout the entire year.

The outcome was the design of the continuous investment process and the idea/information management system (IMS) to manage the process. New financial and accounting systems were implemented at a later stage to complement the suite of changes endorsed by the Board.

3.5.1 Continuous investment process

Figure 3.3 shows the continuous investment process that was implemented during 2017. Under the process, all potential investment ideas that address either a 'constraint' or an 'opportunity' facing growers are entered by managers into an Idea Capture Portal component of the IMS. These investment ideas are identified by growers, researchers and GRDC through the interactions of regional panels, GRDC staff, GRDC's executive and the Board, grower solutions (or similar) networks, the research community, state governments, levy payers and other industry stakeholders. Idea capture through the Idea Capture Portal was designed to ensure greater discipline in the idea generation process as well as maintain the integrity of the procurement process.

When enough information regarding the specific research question (or investment idea) is recorded, a gap analysis is conducted to assess whether the idea corresponds to current research being conducted, how significant the issue is, whether it affects multiple regions or is of national significance. Some economic assumptions of potential cost or benefit related to the idea at hand and what research has been conducted in the past to address the issue identified, are also part of the assessment.

Following this process, the specifications for project may be scoped up or a variation to a current project which may address the issue is conducted. The continuous investment process provides opportunities for regional panel members to deliver input to allow regional specificity and context to shape the investment idea. Following the outcome of the gap analysis a new procurement or partnership may be developed or no action taken. Feedback is required to be provided to the source of the idea originally entered into the IMS.

FIGURE 3.3 GRDC CONTINUOUS INVESTMENT PROCESS



SOURCE: GRDC RESEARCH PARTNER PRESENTATION 2017

Further detail regarding the idea management process can be found in Chapter 6.

3.5.2 Information management systems

Following review of internal systems and processes (as discussed in Section 2.3.2) GRDC invested heavily in its information platforms and systems to support the introduction of a continuous investment process. GRDC estimated it would need to replace up to three data bases and the financial management system. Cost estimates were presented to the board and based on assumptions a forecast of costs for the period 2014-15 to 2016-17 were outlined.

TABLE 3.2 ESTIMATED COST OF CORE SYSTEMS REPLACEMENT

Item	2014-15 (\$ million)	2015-16 (\$ million)	2016-17 (\$ million)	Total (\$ million)
Financial management system	\$0.6	—	—	0.6
Database 1	—	0.3	—	0.3
Database 2	0.1	0.9 -1.9	—	1-2
Database 3	0.2	0.5	0.1	0.8
Database 4	—	—	—	—
<i>Total</i>	<i>0.9</i>	<i>1.7-2.7</i>	<i>0.1</i>	<i>2.7-3.7</i>

SOURCE: GRDC INVESTMENT PROCESS REVIEW—BOARD PAPER 2015

Table 3.2 shows the cost estimates for the core systems replacement, with an approximate range of \$2.7—3.7 million between 2014-15 and 2016-17.

Implementation of the new systems is ongoing. At the time of writing this report, it is unclear whether the software chosen will enhance the operational efficiency and effectiveness of GRDC's operations.

The design intent is to overlay the continuous investment process with a financial system that enables GRDC to use business data to drive decision making, interaction with research partners and for extension and communication purposes. These new systems should also enhance GRDC's ability to extend and improve collaboration between KIT teams, regional panels and evaluators.³³

3.6 Impact of changes on efficiency

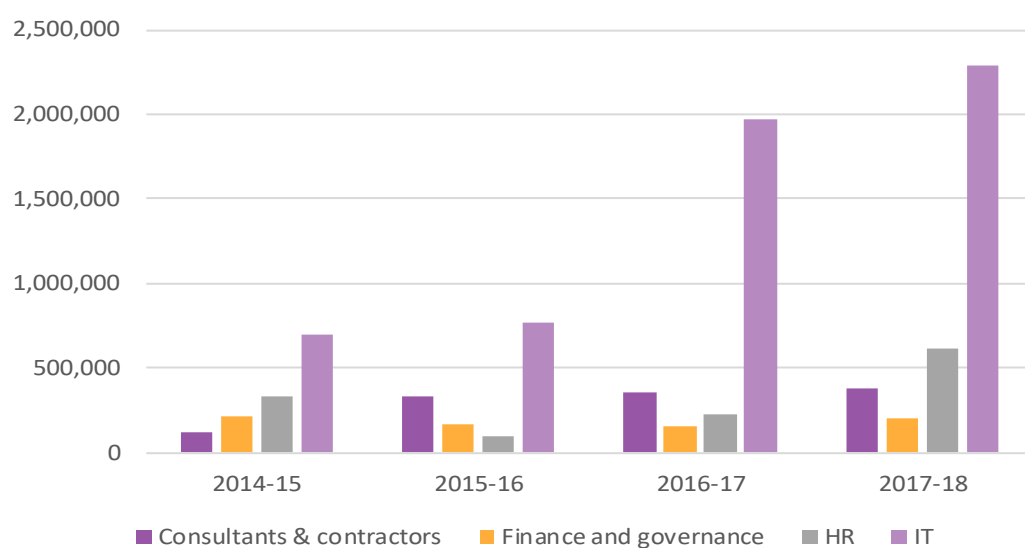
ACIL Allen examined GRDC's finances to understand whether its operations have become more-or-less efficient over the review period. Since 2014-15 GRDC's operational expenditure has increased for suppliers which would account for the costs of new systems and finance/governance arrangements.

Figure 3.4 charts GRDC's operating expenditure by employee-related expenses and suppliers over time and **Figure 3.5** provides selected suppliers costs.

³³ GRDC (2018) August Meeting – Business Systems presentation

FIGURE 3.4 OPERATING EXPENDITURE OVER TIME (\$'000)

SOURCE: GRDC, OPERATING EXPENDITURE SUMMARY, 2018

FIGURE 3.5 SUPPLIERS COSTS (SELECTED CATEGORIES) OVER TIME (\$)

SOURCE: GRDC, OPERATING EXPENDITURE SUMMARY, 2018

These figures show that expenditure on Human Resources (HR), ICT, consultants, contractors and finance/governance have increased by 43 per cent between 2014-15 and 2017-18.³⁴ ICT costs have risen from \$692,873 to \$2.3 million over the four year period, an increase of 70 per cent, HR costs have increased by 47 per cent over the same period, noting there was a decline in HR costs in 2015-16 from \$326,217 in 2014-15 down to \$93,021 in 2015-16, reflecting the use of temporary staff and contractors to fill the positions left vacant from the restructure processes.

³⁴ GRDC 2018, 'Operating expenditure summary', GRDC.

In terms of employee related expenses over the review period, there has been an 18 per cent increase in wages and salaries and subsequently superannuation (increased by 5 per cent) and leave costs (annual leave costs have increased 80 per cent and long service leave costs by 143 per cent). **Table 3.3** presents the year-on-year costs per category, as well as GRDC's staffing numbers in Full Time Equivalent (FTE).

TABLE 3.3 EMPLOYEE RELATED EXPENSES AND NUMBERS (2014-15 TO 2017-18)

Category	2014-15	2015-16	2016-17	2017-18
Employee expenses (\$)				
Wages & Salaries	9,557,542	9,491,947	10,061,619	11,653,714
Superannuation	1,185,380	1,088,678	1,150,931	1,242,605
Annual Leave	34,571	-44,317	-98,787	171,555
Long Service Leave	-35,943	-46,728	-187,598	82,938
<i>Total</i>	<i>\$10,741,551</i>	<i>\$10,489,580</i>	<i>\$10,926,165</i>	<i>\$13,150,813</i>
Staffing numbers (FTE)				
<i>Total</i>	<i>75</i>	<i>67</i>	<i>57</i>	<i>79</i>

SOURCE: GRDC OPERATING EXPENDITURE SUMMARY, 2018, SELECTED ANNUAL REPORTS AND INTERNAL DATA

Analysis of GRDC's costs demonstrates that significant and sustained organisational reform has increased its operational costs. Some of these costs will be one-off (such as, consultancies and purchase of software) in nature and can now be viewed as sunk costs to the business. Other costs will be ongoing (such as, the additional wages and salaries associated with a growth in staff numbers) and are likely to be carried forward into the next review cycle. It is highly likely that GRDC will experience higher operating costs into the future (than it has demonstrated traditionally) as it continues to bed down investments in systems, processes and staff.

However, the desire to improve GRDC's performance was the core rationale for initiating the reform process. Efficiency was not an explicit objective of the reforms and it is misguided to evaluate GRDC's performance on this basis. The reforms were intended to improve the effectiveness and ultimately the impact of GRDC and it is these criteria upon which GRDC should be evaluated into the future.

One aspect of effectiveness, which interacts with concepts of efficiency, was the objective to improve the timeliness of GRDC's investment decision making. Historically, it would take on average 18 months for an idea to become a contracted investment.³⁵ At this point in time it is too early to tell whether GRDC's reforms and its move to a continuous investment process have improved timeliness. Future analysis should be undertaken to determine if reforms have improved the timeliness of GRDC's procurement as promised by the new systems and processes.

3.7 Impact of changes on effectiveness

3.7.1 Limitations of corporate structure

GRDC's ability to operate as an agile and commercially-focused organisational is limited by its current corporate form. The statutory corporation structure restricts GRDC's ability to exercise flexibility and unlock the value of its new purpose.

These limitations impact every aspect of GRDC's operations, and performance were a consistent theme (and source of frustration) of consultations with senior members (past and present) of the organisation.

In 2014, Marsden Jacobs (Section 2.3.1) undertook independent analysis of GRDC's corporate form and considered the change from a statutory corporation to an IOC. The review provided ample evidence to support what stakeholders told ACIL Allen during consultations.

³⁵ Statement based on feedback provided in submissions to the review and feedback gained from stakeholders during focus groups.

In consideration of stakeholder feedback and the Marsden Jacobs report, ACIL Allen supports the recommendation that GRDC should move to an IOC. In order to move from an a statutory corporation to an IOC, the grains industry would be required to make a submission to Government for consideration. If this submission was accepted by Government and GRDC transitioned to an IOC, GRDC would be better positioned to capture the benefits of the new purpose and support its ambitions to become more agile and commercially-focused.

3.7.2 Evidence of board performance

No independent review of GRDC's Board appears to have been undertaken for the initial years of the evaluation period, 2015 or 2016. This is a significant omission by GRDC and runs counter to good practice corporate governance which suggests that a board should be independently reviewed on a regular basis.³⁶

In 2017, Directors Australia was commissioned to provide an independent review of the Board and this document provides a strong synopsis of Board performance from 2017 onwards. The overall assessment provided by Directors Australia was that the board was performing its functions well.

The clear view expressed to us [Directors Australia] in consultation by directors was that, overall, they feel the board in its current composition is performing its functions well. The GRDC has been through a period of fairly significant change recently including two organisational restructures, a new Managing Director being appointed in mid 2016 as well as a Chair in late 2016. However, a clear theme in consultation was that this change is welcome and that the board, and wider organisation, is now much better positioned to enter a new strategic phase.

Directors Australia 2017, Report on a Board Performance Evaluation.

Directors Australia also noted that the Board has a 'positive dynamic' under the new Chair and that it is developing a constructive relationship with GRDC's senior management. Directors Australia further noted that the Board is 'effective in performing many of its compliance functions, including monitoring financial performance'.

Feedback from a selection of current and recently retired members provided during consultations is consistent with the overall assessment of Directors Australia. Consultations identified a relatively united Board, with a clear and consistent vision, a healthy working relationship with GRDC's management, an effectively functioning committee system and a focus on ensuring GRDC has in place sound structures, systems and processes to meet its performance and accountability obligations to levy payers and government. Regularly held Board tours also provide opportunities for Directors to meet with growers in regional areas and to identify and discuss issues important to stakeholders (see **Box 3.2**). The minutes of several Board meetings identify there are 'benefits of tours held before Board meetings' as they are important for identifying 'areas for improvement'.³⁷

³⁶ ASX 2014, 'Corporate Governance Principles and Recommendations', ASX.

³⁷ GRDC 2017, 'Minutes of the 183rd Board Meeting, section. 21.2.

BOX 3.2 EXAMPLE OF ISSUES IDENTIFIED AND DISCUSSED WITH GROWERS ON A BOARD TOUR

The following issues were raised by growers during the Board visits in June 2017, which included:

- Improvements on RCNSs
- Connectivity to the internet
- Lack of a suitable legume
- Technology ideas made more widely known
- Need for greater investment in blue sky to get the next big improvement in profitability
- Access to historical research
- Response to climate change
- Business Management
- Visibility of research program
- Market research in terms of price differential
- Panels perceived as elite
- Board and Panels being accessible
- Board tours appreciated
- Capacity of partners, collaborators and research providers to meet GRDC obligations/requirements

SOURCE: GRDC 2017, 'MINUTES OF THE 183RD BOARD MEETING, SECTION. 21.2

Past and present Board members consulted by ACIL Allen identified a level of satisfaction with GRDC's support for Board meetings, activities and need for information.

This satisfaction extended to the induction training and support provided by GRDC for new Board members, claims which can be substantiated by ACIL Allen's review of board induction policies and processes which appear to be sound. There was however, one stakeholder who identified a concern with the level of induction support provided to a more recent appointee. This stakeholder suggested that induction was conducted via teleconference and not in person and was not thorough enough to provide the appointee with a solid understanding of Board practices and processes. While ACIL Allen could not find evidence that Board member induction was a systematic issue for GRDC, it should ensure that induction processes and practices (as contained in its policies) are followed for all future appointees to the Board.

3.7.3 Regional panel performance

The three panels, covering northern, southern and western regions, are a significant feature of GRDC's governance arrangements. According to official guidance about the roles and responsibilities of panel members, the main functions of regional panels are:

- *provide advice to the GRDC board, through the National Panel (which includes the three regional panel chairs), on regional investment priorities*
- *make recommendations to the board, through the National Panel, on the allocation of R&D investment budgets, and*
- *provide an interface with key stakeholders to facilitate awareness of GRDC's investments and research outcomes and gather crucial feedback from industry on priorities for each region.*

Directors Australia 2017, Report on a Board Performance Evaluation.

Panel members are appointed by the Board following an expression of interest and are engaged under a consultancy agreement.

While the stated roles and responsibilities of panels make it clear they have a direct link to the Board several issues emerged between review years 2015 and 2016 which led to Board-approved changes in 2016 and 2017.³⁸ The most significant of these issues centred on the way panel chairs were engaging with research providers and GRDC staff. There was concern that selected panel members

³⁸ GRDC 2017, 'Minutes of the 183rd Board Meeting, section. 14.

were effectively operating as GRDC employees, not consultants and advisors, which constituted a significant overreach in the roles and responsibilities of panels. These concerns were documented in Directors Australia's independent review of Board performance in 2017, and identified during consultations undertaken by ACIL Allen.

In response to these concerns the Board approved changes to the governance and management of panels. The governance changes included that the panel chairs report directly to the Managing Director, although the Board agreed that the panel chairs would present to the Board on a regular basis. The management changes included the revision of GRDC's Panel Management Policy to 'ensure direct industry input' is provided into the prioritisation, selection, monitoring and review of RD&E activities through the establishment and management of skills-based regional panels representing industry in each region is achieved in practice. The key aspects of GRDC's Panel Management Policy are outlined in **Box 3.3**.

BOX 3.3 REVISED PANEL MANAGEMENT POLICY

Policy statements and principles of the Panel Management Policy

- Section 88 of the PIRD Act allows the GRDC to 'engage persons having suitable qualifications and experience as consultants to the corporation.'
- GRDC establishes three Regional Panels representing the principal cropping zones – northern, southern and western regions.
- Each Panel is made up of grain growers, agribusiness practitioners, scientists and the GRDC's executive managers, with provision for other industry experts to participate as appropriate.
- The combined skills and experience of panel members provide the Board with a valuable network to draw out local, regional and national grains industry issues.
- The Panels work with GRDC management to develop the research, development and extension portfolio.
- Panel members provide a 'face' to the GRDC representing the corporation and promoting its regional investments.
- Each regional panel:
 - identifies and monitors regional and national grains industry issues that are relevant to the region
 - interacts with growers, advisors, industry groups, research organisations and other interested parties in the region to exchange information
 - identifies and develops priorities for RD&E investment and recommends these to the National Panel
 - keeps growers and advisers in the region informed about the GRDC's strategic direction, investment portfolio and research projects
 - assists staff in monitoring the effectiveness of the investment portfolio.
- Regional secretariat support is provided to develop and maximise the effectiveness of the Northern, Southern and Western Panels
- Where Panels are involved in a particular decision making process, such as idea prioritisation or project selection, they will be provided with sufficient information by the relevant GRDC business group to make informed decisions.
- Individual panel members are managed in accordance with Regional Panel Appointment Agreements and their associated Roles and Responsibilities.
- The collective performance of each Panel is managed through a performance evaluation process including 'key result areas'.

Scope of the Panel Management Policy

SOURCE: GRDC, N.D., PANEL MANAGEMENT POLICY, INTERNAL DOCUMENT.

Consultation with selected Board members, GRDC staff and other stakeholders identified strong support for the role of regional panels and a desire to ensure they operate as effectively as possible. Regional panels provide important linkages to growers, farming systems groups, research providers which help GRDC to shape and make investments decisions (see Chapter 5). These linkages are recognised and appreciated by many of the stakeholders consulted.

To improve the effectiveness of the panels, Directors Australia recommended:

The induction program for regional panel members and board members should specifically cover the role and lines of accountability of the regional panels

Directors Australia 2017, Report on a Board Performance Evaluation, Recommendation 1 (Regional Panels).

This recommendation was endorsed by the Board during 2017 and appears a sensible investment to ensure the benefits of panel members are captured by GRDC, while their appropriate role as advisors to GRDC's Board (through the Managing Director) are maintained.

Moreover, many of the changes made to the way panels operate have been implemented more recently in the review period. While stakeholders consulted are optimistic that the changes will deliver benefits to GRDC, the commonly-held view is that it is too early to form a judgement about their impact on panel effectiveness.

3.7.4 Staff performance and effectiveness

Analysis of "staffing performance" was undertaken by ACIL Allen to better understand the impact of two significant restructures on the ability of GRDC to meet its obligations to growers and other stakeholders. To understand staffing performance ACIL Allen analysed six organisational charts covering the review period, as shown in **Table 3.4**. The organisational charts covered the period prior the first significant organisational restructure (January to June 2015), the period of the first restructure between July 2015 and December 2016, and the final period of restructure between January 2017 and mid-2018.

TABLE 3.4 ANALYSIS OF ORGANISATIONAL CHARTS (2015 TO 2018)

Element considered	May 2015	August 2015	January 2016	January 2017	June 2017	October 2018
Senior Executive level staff						
# of Senior Executive level positions (inc. MD)	7	6	6	6	5	6
Change of personnel at the Senior Executive level (inc. MD) compared to the number of positions at that level	—	1/6	0/6	4/6	2/5	3/6
# of Senior Executives new to GRDC (inc. MD)	—	-1	0	1	1	3
All staff						
# of roles on the organisational chart	79	78	76	78	96	110
# of vacancies, temporary roles or roles to be filled by recruitment	6 (7.5% of roles)	29 (37% of roles)	17 (22% of roles)	13 (16% of roles)	43 (45% of roles)	19 (17% of roles)
Regional offices and focus						
# of roles (N/S/W) to support GRDC's grower communications, services and extension functions	—	6 (N=2 / S=2 / W=2)	6 (N=2 / S=2 / W=2)	6 (N=2 / S=2 / W=2)	6 (N=2 / S=2 / W=2)	11 (N=3 / S=4 / W=4)
# of roles (N/S/W) to support GRDC's the research programs and functions	—	9 (N=3 / S=3 / W=3)	9 (N=3 / S=3 / W=3)	9 (N=3 / S=3 / W=3)	21* (N=7 / S=7 / W=7)	21* (N=7 / S=7 / W=7)
# of roles (N/S/W) to support GRDC's business and commercialisation functions	—	—	—	—	3 (N=1 / S=1 / W=1)	3 (N=1 / S=1 / W=1)

NOTE: N = NORTHERN REGION, S = SOUTHERN REGION; W = WESTERN REGION. * = NUMBERS INCLUDE ROLES DEDICATED TO CROP PROTECTION ACTIVITIES.

SOURCE: GRDC'S ORGANISATIONAL CHARTS MAY 2015—OCTOBER 2018

These charts provide the basis for several observations about GRDC's effectiveness; some of which were also identified during stakeholder consultations.

First, GRDC has experienced growth in the number of roles (31 in total) recorded on the organisational chart over the review period. All of this growth has occurred over the period 2017 and 2018, which is consistent with the organisation's concerted recent efforts to fill key roles that were left vacant from the second phase of the restructure.

Importantly the large proportion of these additional 31 roles have been used to support GRDC's regional offices. **Table 3.4** shows that between January 2017 and October 2018 the number of roles established by GRDC to support its: (1) grower communications, services and extension functions; (2) the research programs and functions; and (3) business and commercialisation functions, have grown by 5 roles, 12 roles and 3 roles respectively. These regionally-focused roles account for approximately 65 per cent of the additional roles generated across the review period. These roles are spread evenly across the northern, southern and western regions to ensure that equal coverage of the regions (see **Table 3.4**). This suggests that GRDC has explicitly focused on staffing its regional office and functions.

Second, GRDC has experienced both leadership continuity and change over the review period. For the period from early-2015 through to 2016, there was very little movement amongst the senior ranks of GRDC. During this time, only one of the seven Senior Executive level positions changed, with one member of the Senior Executive taking an unfilled role in the area of commercialisation and research, thus leaving another unfilled role (Chief Operations Officer) that was abolished under the new organisational structure approved by the Board in mid-2015. Between January 2017 and October 2018, GRDC undertook significant renewal of its Senior leadership ranks. Initially this renewal focused on the appointment of a new Managing Director, with most of the existing Senior Executives taking newly established roles within the organisation. Over the next 18 months, this renewal included the appointment of four new staff to senior executive levels, which constitutes a 66 per cent renewal rate of the senior executive.

Third, GRDC has had a high number of vacancies at times throughout the review period. **Table 3.4** shows that vacancies accounted for approximately 45 per cent of all roles on the organisational chart during 2017. This means that since June 2017 nearly half of GRDC's workforce are either new to their roles or to the organisation. At most, approximately half of the workforce have less than 18 months experience working for GRDC or in their current role. This is also shown in **Table 3.5**, which has information relating to the tenure of GRDC's current workforce. While these vacancies are a direct result of the organisational restructures in 2015 and 2017 and the rationale for the restructures is sound, it means that staff throughout the organisation are potentially still learning to navigate the complexities of GRDC's new purpose, systems and processes, external stakeholders and partners, and the grains industry more generally.

TABLE 3.5 YEARS OF TENURE (2018)

Years	# of staff	%
0-1	23	29
1-2	22	28
2-3	12	15
3-4	6	8
4-5	2	3
5-6	14	18

SOURCE: GRDC 2018

Fourth, staff training, learning and professional development are critical for an organisation with a relatively new workforce. The 2018 Employee Survey undertaken by Korn and Ferry identified eleven areas of GRDC's performance that were significantly below other comparable industry organisations. Two of these areas included issues related to the training and information staff receive. Staff

responses to questions of training were 13 percentage points below General Industry (GI)³⁹ benchmarks, while this dropped to 27 percentage points below GI benchmarks for new staff. Moreover, staff responses to the provision of information needed to do a job well were recorded as 12 percentage points below GI benchmarks.⁴⁰

These survey results are consistent with feedback provided by stakeholders during consultations. Senior staff, current and former Board members consulted all recognise the challenge associated with training and developing a relatively new workforce—especially those staff who are in direct and regular contact with GRDC’s research providers and partners. Staff who are both new to the grains industry and new to GRDC must build the domain knowledge essential to effective management of a milestone-based (agile) investment and contracting regime. They must have the requisite expertise to review project level documentation and form a judgement as to whether projects are meeting the performance/quality dimensions of a milestone and whether changes are required to the scope of a contract. Without a strong learning and professional development framework that builds the capacities and capabilities of staff at the coal face, GRDC’s ability to capture the benefits of reform will be constrained.

3.7.5 Cultural dimensions—staff responsiveness and empowerment

The degree to which staff feel empowered to take decisions that are within the scope or appropriate boundaries of their role are as much a factor of an organisation’s culture as they are about the rules and processes staff work to. In high performing organisations, staff are encouraged to take, rather than defer, decisions and trusted to use their professional judgement/expertise to complete work.

At GRDC, staff operate under a regime of delegations designed to provide clarity and accountability for decision making (in particular, financial decision making) that is consistent with the PIRD Act and PGPA Act. These delegations and authorisations cover the corporate governance, communication, financial, administration, HR, Intellectual Property (IP) and expenditure functions of GRDC.

An extract of the R&D expenditure-related authorisations and delegations are re-created for illustrative purposes in Appendix C.3, **Table C.3**.

A selection of internal and external stakeholders consulted identified the need for cultural change to ensure the objectives of the restructure and the new purpose are achieved over the longer term. For those consulted, the willingness of staff (who interface with external providers, growers and grower representatives) to take timely decisions that impact an R&D contract/agreement was key to unlocking the potential of GRDC’s reforms. This feedback was also consistent with the results of Korn and Ferry’s 2018 staff engagement survey which suggests that ‘authority and empowerment’ were key opportunities for GRDC to improve staff engagement over the coming years.⁴¹ Appendix C.4 further supports these findings, with a summary of results from the Research Partner Survey 2018. There has been a significant decline in the relationship between GRDC and its research partners. Survey results about the relationship quality (14 per cent decline), how GRDC performs as a partner (17 per cent decline) and the timeliness of response to information requests (11 per cent decline) all show a significantly decline between 2013 and 2018 in these ratings.

The issues concerning GRDC’s culture are well summarised by one stakeholder who provided a written submission to ACIL Allen:

One hopes that with experience and commencement of new or major projects from 1 July 2019, that GRDC’s responsiveness and respect for stakeholders will improve.

This may not be the case however, because of a deep-seated poor service culture within GRDC, apart from a few exceptional staff. Elements of this poor culture include lack of a timely responses to enquiries (from researchers and others) and micro-managing some elements of projects. The first aspect has the appearance of staff being arrogant and the second as not trusting funded project officers. When discussing these poor responses with GRDC Panel members I am told that the staff are “over worked”. I don’t believe this is the main reason, as their behaviour is in contrast to the attitude of staff in most

³⁹ This benchmark is based on data collected from over 6.8 million employees in 350 organisations around the world in a wide variety of industries.

⁴⁰ Korn Ferry 2018, ‘Engaged Performance Survey’, GRDC.

⁴¹ Korn Ferry 2018, ‘Engaged Performance Survey’, GRDC.

private enterprise businesses, where than amount of work would be similar. They may be “busy”, but not on the more important tasks.

It is of interest that many of the new staff are very responsive at first but after a few months this falls away to what appears to be a poor corporate culture of service to providers.

Confidential submission from GRDC stakeholder.

To this end, the internal and external stakeholders consulted are seeking an empowered, agile and customer-oriented staff who can make decisions about R&D agreements and consultancies without needing to defer to other staff in GRDC. The result often being, according to stakeholders, significant delays in approving contract variations. A review of GRDC’s delegations and authorisations, as shown in Appendix C.3, **Table C.3**, identifies no apparent problems with the schedule of delegations used by the organisation. For example, staff at the Manager level and upwards are provided with authority to sign contracts of significant value (e.g. from \$1,500,000 to \$30,000,000 depending on the level of staff member involved in the contract. These values should provide staff managing R&D contracts with the flexibility to vary a contract when needed.

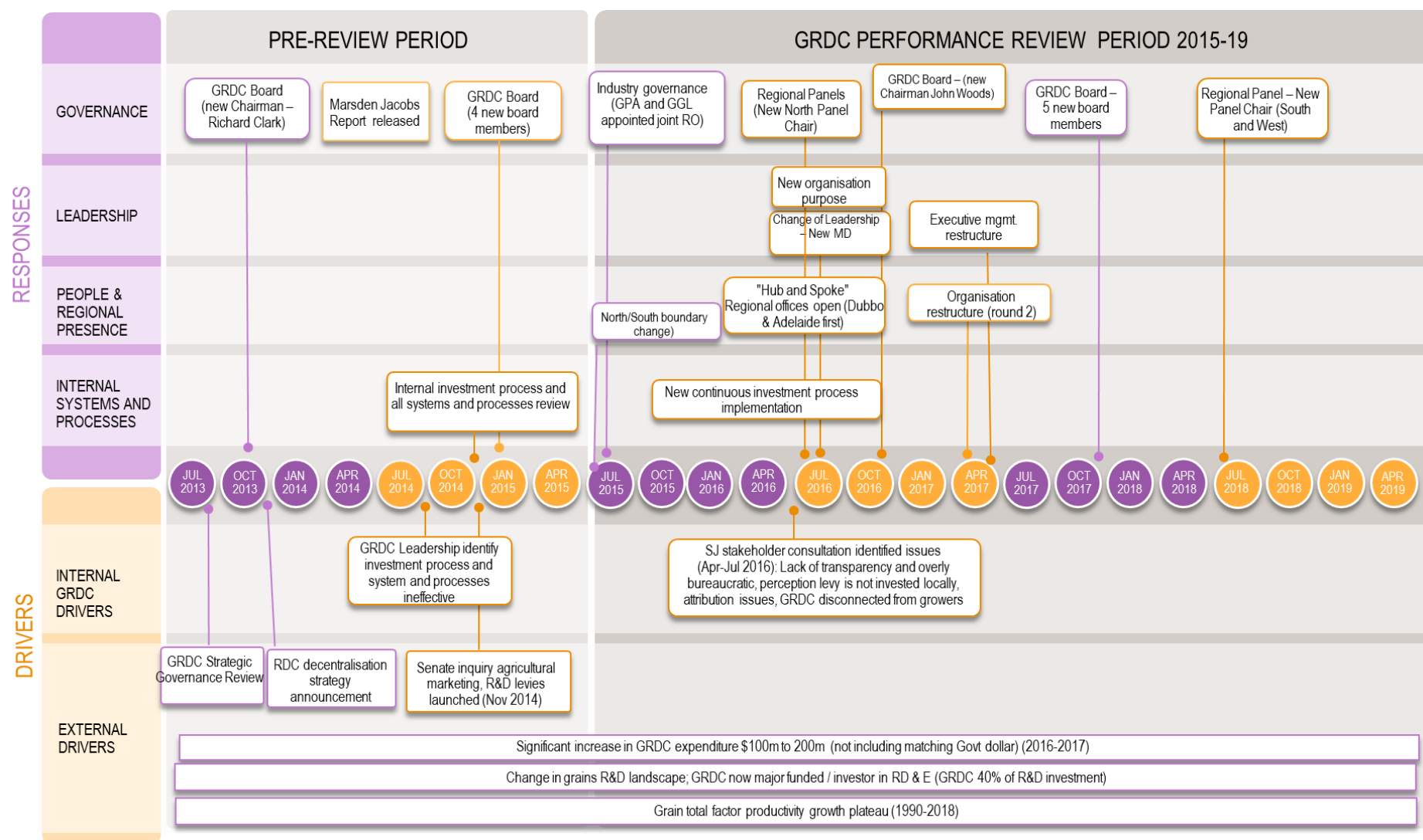
However, feedback provided to ACIL Allen suggests that some staff do not feel empowered to make decisions when required and feel constrained or obliged to seek additional approvals when varying a contract. While such a constraint may not be an issue in a highly systemised organisation, it is inconsistent with the principles of an agile, dynamic and commercially-focused organisation.

3.8 Key findings

This chapter has highlighted numerous responses that GRDC has initiated in response to the drivers for change. **Figure 3.6** shows that the most significant are:

- Leadership change. During the review period GRDC has initiated significant change to its leadership, including the appointment of a new Board Chairman, a Managing Director, Panel Chairs and General Managers.
- A new purpose. The renewed organisation purpose to *Invest in grains RD&E to create enduring profitability for Australian grain growers* reflects the shift the organisation to a commercially orientated organisation that needs to make investments that will keep growers in business in the long-term.
- The introduction of a new organisational structure through two phases of restructure. The new organisation structure reflects the new purpose that has a grower communication group and commercial business groups which aims to better engage with growers and reflect the aim to be more agile and business like.
- The introduction of a new IMS and the financial and project management systems. These systems have been redesigned and are in the implementation phase. All systems are yet to be bedded down and require further internal training of staff to effectively utilise the system and facilitate research partner interaction at the same time.

FIGURE 3.6 THE DRIVERS FOR AND RESPONSES TO CHANGE OVER THE REVIEW PERIOD



NOTES: REGIONAL PANELS HAVE BOTH GOVERNANCE AND ADVISORY ROLES, FOR THIS TIMELINE THEY ARE CONSIDERED A GOVERNANCE FUNCTION, CHECK AND BALANCE FUNCTION FOR THE ORGANISATION.

SOURCE: ACIL ALLEN CONSULTING

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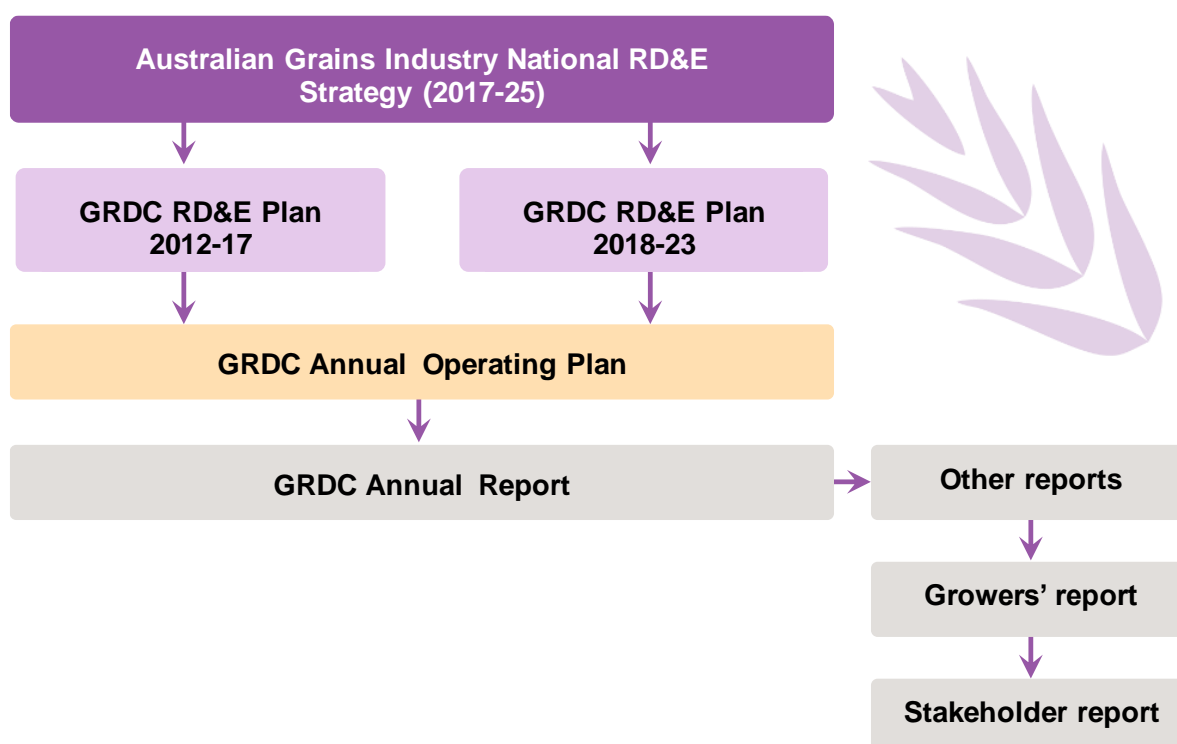
STRATEGIES AND INVESTMENTS

This chapter considers a range of metrics and evidence that allow ACIL Allen to evaluate GRDC's implementation of its strategies and plans, and to deliver investments are both efficient and effective. As such, the chapter addresses ToR 2—4.

4.1 Strategy, planning and reporting architecture

GRDC produces numerous documents that provide the framework for its RD&E efforts and that report on its activities. These documents form part of GRDC's SFA with the Commonwealth Government as prescribed in the PIRD Act, and the PGPA Act. Each of these documents are described in the following sections and are summarised in **Figure 4.1**.

FIGURE 4.1 GRDC STRATEGIC, PLANNING AND REPORTING ARCHITECTURE (2012 TO 2018)



SOURCE: ACIL ALLEN

4.1.1 National RD&E strategy

The national strategy for the grains industry was first developed in 2011.⁴² This strategy provides a framework for RD&E for the Australian grains industry. The strategy has its own vision, purpose, outcomes and priorities for government and industry.

The national strategy is intended to drive the RD&E strategies and plans for the GRDC. However, consultations with stakeholders have identified that the National RD&E Strategy, in practice, does little to shape the strategies or operations of GRDC.

4.1.2 RD&E Plan

Section 19 of the PIRD Act requires GRDC's Board to produce a five-year strategic RD&E plan. There were two five-year strategic plans that applied to the review period. While both plans are aimed at guiding the GRDC's research, development and extension efforts, they differ in their structure. The first RD&E Plan (2012-17) outlined the:⁴³

- priority areas in which RD&E is most needed to benefit the grains industry and the wider community
- six themes of RD&E investment to meet the RD&E priorities, which are:
 - Meeting market requirements
 - Improving crop yield
 - Protecting your crop
 - Advancing profitable farming systems
 - Improving your farm resource base
 - Building skills and capability
- short- and longer-term outcomes or goals of the investment themes
- corporate strategies outlining how the GRDC will implement the themes, and
- performance indicators to measure the progress in achieving the desired outcomes of the Plan.

The second RD&E Plan (2018-23) outlined the:⁴⁴

- GRDC's Key Investment Targets (KIT) which address the five objectives of yield, prices, input costs, post farmgate costs and risks. Thirty KITs have been developed to prioritise RD&E investment and each KITs progress will be reviewed annually, which will guide the development of the following year's Annual Operating Plan (AOP)
- Core frameworks that underpin all RD&E investments including data management and analytics; biosecurity; grower communication and extension; and capacity and skills
- Focus of the RD&E plan which is to deliver a balanced mix of investments
- Goals and measures used to assess the GRDC's performance in delivering on its purpose including key performance indicators (KPI).

4.1.3 Annual Operational Plan

Section 25 of the PIRD Act requires the GRDC to produce an AOP. The AOP describes the research activities that the GRDC will undertake to implement the goals of the strategic RD&E Plan as well as the annual budget and resources that are required to undertake research activities.

AOPs were produced for each year of the review period including for 2017-18 and 2018-19. AOPs are supported by a range of corporate strategies which cover all aspects of GRDC's operations.

4.1.4 Annual Report

An Annual Report is produced each year in accordance with the agreement with the Commonwealth Government. Annual Reports outline the GRDC's operational performance, organisational structure, and financial statements. During the review period there have been three annual reports produced for

⁴² National Primary Industries, Research, Development and Extension (RD&E) Framework, 2017.

⁴³ GRDC 2012, 'Strategic Research and Developments Plan 2012-17', GRDC.

⁴⁴ GRDC 2018, 'Research, Development and Extension Plan 2018-23', GRDC.

the 2014-15, 2015-16 and 2016-17 financial years. The Annual Report for the 2017-18 financial year was not available at the time of writing this report.

In each annual report, operational performance includes:

- A description of the overall performance of the GRDC against its KPIs
- A review of each of the six themes in terms of funding, projects, and reporting against measures identified in the AOP for the corresponding financial year
- Reporting on the achievements under each of the GRDC's corporate strategies
- The management of projects across the GRDC's portfolio
- Commercialisation strategy in terms of new varieties, commercial partnerships, IP management, and business relationships
- Feedback from stakeholders including from GRDC surveys including the Grower Survey, the Farm Practices Survey, the Research Partner Survey and the Products and Services Survey
- Grains industry performance in terms of growing conditions, the yield, value and volume of crop production.

4.1.5 Other reports

GRDC produces two key reports that are additional to its reporting requirements under the PIRD Act and the PGPA Act.

Growers' Report

The GRDC Growers' Report is a shortened form of the Annual Report summarising how the GRDC operates, the corporation's financial situation and highlights of research investment.

During the review period, an annual Growers' Report was produced for 2014-15 but there is no evidence on their website that they have been produced for subsequent years.

Stakeholder Report

Each year the GRDC provides a Stakeholder Report to the GPA and GrainGrowers. The Stakeholder Report focuses on the progress of the GRDC in meeting the industry priorities as well as its projected revenue and expenditure for the following financial year. The Stakeholder Report assists the GPA and GrainGrowers to formulate its advice to the Minister on setting the research levy rates for the Australian grain commodities.

During the review period, an annual Stakeholder Report was produced for 2014-15, 2015-16 and 2016-17.

4.2 Implementation of strategies, plans and investments

4.2.1 Alignment of investments with the RD&E Plan

Section 6.1 (b) of SFA requires GRDC to make investments on behalf of the grains industry that are aligned with the core themes/objectives of its RD&E Plan. The value of funding against the strategic themes of first RD&E Plan (2012-17) is presented in **Table 4.1**.

Data relating to the value of funding against the KITs of second RD&E Plan (2018-23) was not available at the time of writing this report. However, it is important to note that GRDC is currently in the process of developing strategies, plans and KPIs to support the KITs (which are planned for implementation by 2019). It is critical that GRDC accelerate implementation of the KITs so that performance against them can be measured.

The amount of total RD&E expenditure varies from year-to-year based on the value of grower levies and government funding received. In 2016-17, there were 700 RD&E projects undertaken compared to 898 projects in 2015-16, 942 projects in 2014-15 and 939 projects in 2013-14 as illustrated in **Figure 4.2**.

GRDC invested a total of \$575 million in the six RD&E themes, foundational activities and R&D management over the review period financial years 2014-15 to 2016-17. Protecting Your Crop was the largest theme in the portfolio accounting for \$146 million (25 per cent), followed by Improving Crop Yield \$114 million (20 per cent) and Advancing Profitable Farming Systems \$111 million (19 per cent) of the investment portfolio.

The percentage budget allocation between the six themes reflects GRDC's strategic direction during the review period, which aims to improve grain grower's productivity, profitability and overall sustainability. Protecting your crop investments are targeted at weed, disease and pest management strategies that focus on protecting grain yield, preserve plant available water and maintain the long-term availability of the agricultural chemical technologies.

Improving Crop Yield investments are generally targeted at long-term transformational change technologies to continue to improve yield performance of current and new cereal, oilseed and pulse crops.

Advancing Profitable Farming Systems is the third largest theme, which aims to demonstrate the optimal farming systems that maximise water and nutrient use efficiency.

These three themes focus on productivity and profitability outcomes, where as Meeting Market Requirements is focused on the post-farm gate, Building Skills and Capacity which is focused on human development and Improving Your Resource Base which focuses on maintaining the sustainability of grain growers land resources. Each of these themes account for significantly less of the budget proportionately, as they could be considered subordinate priorities to those mentioned earlier.

Overall, the strategic themes and budget allocations reflect a balanced investment portfolio that is aligned with the RD&E Plan for the 2012 to 2017 period.

TABLE 4.1 GRDC VALUE OF RD&E FUNDING BY THEME ('000)

Theme	2014-15 (\$)	%	2015-16 (\$)	%	2016-17 (\$)	%	2017-18 (\$)	Total (\$)	%
Meeting market requirements	18,442	10	5,399	3	7,860	4		31,701	6
Improving crop yield	36,101	19	39,688	21	38,430	19		114,219	20
Protecting your crop	49,333	25	42,365	22	53,920	27		145,618	25
Advancing profitable farming systems	36,117	19	35,459	18	39,240	20	Data unavailable for the 2018-23 RD&E Plan	110,816	19
Improving your farm resource base	14,644	8	16,370	8	13,930	7		44,944	8
Building skills and capability	9,933	5	9,252	5	6,710	3		25,895	5
Foundational activities	26,167	13	26,148	14	18,400	9		70,715	12
R&D management	3,371	2	8,115	4	19,630	10		31,116	5
Total	194,107		192,796		198,120			575,024	100

SOURCE: GRDC INTERNAL DATA

Over time, on a per dollar basis, there is no discernible pattern (as illustrated in **Table 4.1**) relating to expenditure across strategic themes (noting that the themes have changed over time and in some cases assumptions have been made to allow a consistent story to be told across years). The only trends that can be observed are a rise in operational expenditure over time, and a fall in research theme 'meeting market requirements' and 'building skills and capability'. It should be noted that as a result of short time series coupled with the significant internal restructuring and the development of

new systems and processes it is likely that at least three more years of financial data is needed to conduct a more robust analysis and to identify clear trends in the data.

Appendix C.1.1 outlines the budget split of investment between the regions over the review period. It shows an increase in the Northern region share of the budget from 10 to 20 per cent, with no change in the expenditure between the three regions observable over the review period. However, the change in the north/south boundary in 2015 would skew any results, which could draw misleading conclusions on changed allocation of funds to each region.

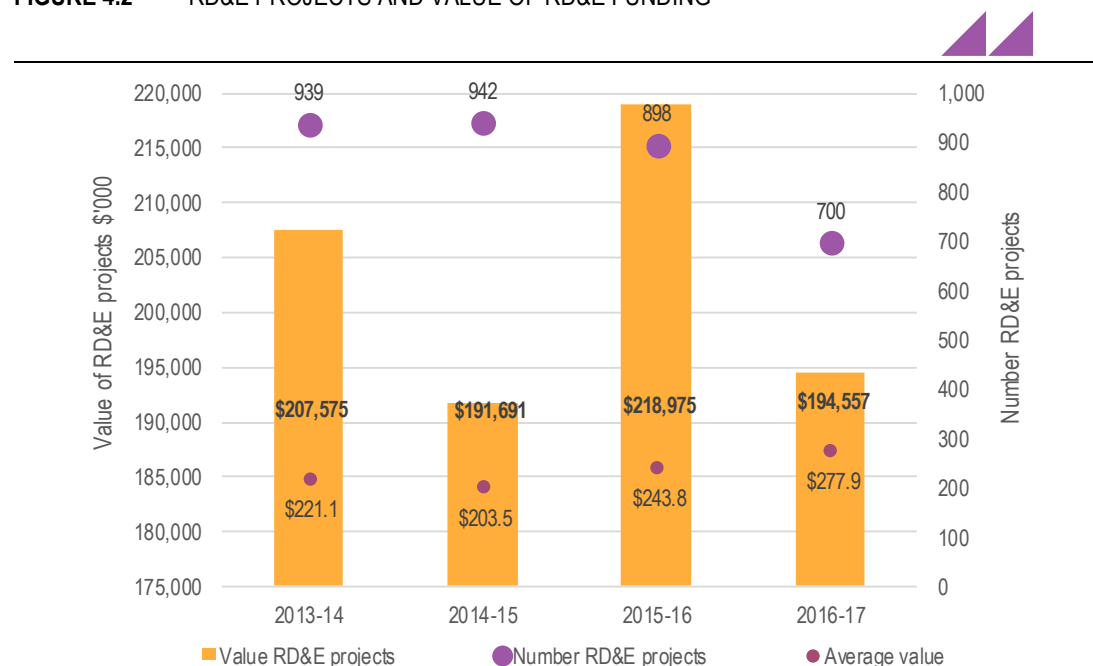
4.2.2 Efficiency of managing R&D investments

A key objective of the first and second phases of GRDC's restructure was to develop an agile and commercial culture. This also involved improving GRDC's ability to seize opportunities in the form of new ideas or allow research projects to evolve and change direction as necessary, and thus remove the rigid controls placed on projects that were required to deliver, for example, a certain number of trials at specified locations for a certain number of years.

GRDC's project and contract administration processes and procedures are uniform for projects of all values. Therefore, by reducing the number of projects GRDC administers there should be a reduction in administration overheads and subsequent efficiency gains.

Figure 4.2 shows that GRDC had a 25 per cent reduction in the number of projects contracted from 939 to 700 between 2013-14 and 2016-17. The figure also shows that the average value of each research project has increased from \$203,500 per project in 2014-15 to \$277,900 in 2016-17.

FIGURE 4.2 RD&E PROJECTS AND VALUE OF RD&E FUNDING



NOTE: 2017-18 DATA NOT PROVIDED

SOURCE: GRDC

Stakeholders commented that GRDC has had up to 1,200 projects contracted in a financial year. Anecdotal evidence showed that a project manager's project portfolio could exceed 100 projects at any one time. Based on one FTE, such a workload would only provide the manager enough time to contract a project, assess basic compliance of a progress report and annual reports, reducing any time available to actively manage the performance of a project on a milestone and risk adjusted basis (as is the requirement of agile and commercially-focused project management).

There are several issues worth noting here about the impact that a high volume of projects per project manager can have on relationships with external partners. These issues are exacerbated for the staff who are new to GRDC or their role and have not developed the domain knowledge, technical

understanding or relationships with providers that are required to resolve these issues efficiently and effectively.

First, research partners, who are seeking variations to existing contracts, report incidences of delays in finalising contract variations and changes to a project's scope. These delays create anxiety amongst some research providers which rely on project funding to pay the salaries of research staff.

Second, a large number of projects per project manager does not afford GRDC staff sufficient time to interrogate the progress and outcomes of projects against their strategic or operational objectives. This means that GRDC is potentially missing important opportunities, through the application of active management techniques, to extract additional value from projects under contract.

Third, a large number of projects per project manager, deprives GRDC staff the time necessary to develop the type of deep and trusting relationships required to identify/co-develop/design investments that will deliver enduring profit to the grains industry. GRDC's new purpose and reforms are challenging the organisation to consider different investments in the future, and staff need the time to work through these investment opportunities in collaboration with research partners.

4.2.3 Effectiveness of GRDC's investments

As part of GRDC's accountability arrangements to stakeholders, performance information is assembled and published annually. Key to this information are the range of metrics (or KPIs) GRDC use to demonstrate their progress against RD&E plans. These metrics are developed in consultation with stakeholders during the assembly and early implementation of the RD&E plans and are approved by the Board for use and publication. These metrics are then broken down into sub-indicators and used by GRDC for annual planning and internal performance management purposes.

To understand whether GRDC has been effective, ACIL Allen undertook a systematic examination of its KPIs reported over the review period. This analysis considers the KPIs associated with implementation of the first RD&E Plan (2012-17), however, due to the timing of this report stops short of analysing the KPIs (which are still under development) for the second RD&E Plan (2018-23).

For the analysis undertaken in this section a system has been applied, which classifies each KPI as each achieved, partially achieved or not achieved. Some additional evidence on the effectiveness of GRDC's investments is located at Section 5.1. This section analyses the benefits derived from a selection of its investments under the RD&E Plan (2012-17).

It is important to note that the process for reporting KPI success changed during the review. In the 2014-15, the achievements listed against the 'practice change' and 'targets' for each theme provided a summary of activity in the area for the year. This summary provided no definitive judgment of whether the target was met. Instead detail regarding project activity or output was recorded. In the later years, 2015-16 and 2016-17 more specific information and a judgment by GRDC was made as to whether the KPI has been achieved, partially or not achieved.

In some instances, data has not been collected or survey questions not asked regarding a few KPIs, as a result, these KPIs are unassessed.

All KPIs in the RD&E Plan (2012-17) have been assessed below covering the years where relevant comparable data is available. A summary of the KPIs achieved by strategic theme is provided in **Table 4.2**. While data presented in the table are limited to two financial years, overall, the table shows a high level of achievement. These data and analysis are consistent with feedback from stakeholder consultations which suggested that GRDC has worked hard throughout the review period to deliver investments which are aligned with its RD&E Plan, and has been relatively successful in meeting the metrics and targets set for the organisation. In ACIL Allen's view, the presentation of additional data is likely to confirm our assessment about GRDC's effectiveness outlined below, however, this can not be known definitively.

TABLE 4.2 GRDC THEME KPIS ACHIEVED

Theme	2015-16 (%)	2016-17 (%)	2017-18 (%)
1: Meeting market requirements	100	93	Data unavailable
2: Improving crop yield	100	91	

Theme	2015-16 (%)	2016-17 (%)	2017-18 (%)
3: Protecting your crop	100	67	
4: Advancing profitable farming systems	86	80	
5: Improving your resource base	71	60	
6: Building skills and capacity	83	93	
NOTE: 2017-18 DATA UNAVAILABLE			
SOURCE: ACIL ALLEN			

Theme 1—Meeting market requirements

Theme 1 is focused on investments in grain quality and functionality that will support growers maintain and expand access to markets. **Table 4.3** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

TABLE 4.3 THEME 1 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	14 (100%)	0	0	14
2016-17	14 (93%)	0	1	15
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE

SOURCE: ACIL ALLEN

Understanding market opportunities for Australian grain

The focus of this intermediate outcome is the creation and dissemination of market information which will improve future market opportunities for growers. A key target for the theme was the establishment of the Australian Export Grains Innovation Centre which enables market analysis and end-product quality traits and functionality. Other key investments/activities included: Grains Industry Market Access Forum (GIMAF); market prioritisation of quality traits to guide investment in wheat pre-breeding; and oversight of grain protection chemicals.

All KPIs were met during 2015-16 and 2016-17.

Crop and variety selection aligned with market requirements

The focus of this intermediate outcome was for growers to use in-crop management techniques to support them meet grain quality and end-use functionality specifications. Investment in GIMAF, the Feed Grain Partnership and regional sowing guides were activities that supported achievement of KPIs.

All KPIs were met during 2015-16 and 2016-17.

Crop production aligned with market requirements

The targets of this intermediate outcome were focused on running workshops and surveying growers about how they make decisions and provision of best practice materials.

All KPIs were met during 2015-16 and 2016-17.

Grain harvest and storage practices aligned with market requirements

The targets of this intermediate outcome were to increase adoption of best practice harvest and storage practices that will ensure delivery of grain that meets quality specifications. Investments were made in grain storage workshops, development of strategies to manage grain storage pests and other best practice material is developed.

One KPI which related to the grower awareness of benefits of measuring grain quality, was not achieved. Although, unachieved, 77 per cent of growers indicated in the Grower Survey they were aware or interested in the benefits of measuring grain quality.

Theme 2—Improving crop yield

Theme 2 is focused on the genetic approaches and technologies that can be applied to developed varieties with increased water limited yield potential. **Table 4.4** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

TABLE 4.4 THEME 2 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	8 (100%)	0	0	8
2016-17	10 (91%)	1	0	11
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE
SOURCE: ACIL ALLEN

Genetic yield potential and stability improvement of cereal / pulse and oilseed varieties

The targets of this intermediate outcome were to enhance collaboration between researchers and breeders working on cereal, pulse and oilseed traits, identify improved genetics and tools which will improve water limited yield potential for future varieties. All KPIs for this intermediate outcome were achieved or partially achieved. For the targets partially achieved, the grower survey showed modest gains or stable results regarding the proportion of growers who report satisfaction with the new varieties developed from R&D projects.

Theme 3—Protecting your crop

Theme 3 is focused on the development of control options that prevent pests, weeds and diseases from reducing crop yield and quality. **Table 4.5** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

TABLE 4.5 THEME 3 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	11 (100%)	0	0	11
2016-17	8 (67%)	3 (33%)	0	12
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE
SOURCE: ACIL ALLEN

Effective, sustainable and efficient management of cereal rusts, weeds, vertebrate and invertebrate pests, cereal (non-rust), pulse and oilseed fungal pathogens, nematodes and viruses and bacteria

The targets of this intermediate outcome are focused on increasing growers and advisers understanding of the costs of weeds, best practice integrated pest/disease/weed management and chemical resistance management. All KPIs were achieved in 2015-16, however, a reduction in the number of KPIs achieved occurred in 2016-17 with 67 per cent achieved. This was due to the evolution of targets as KPIs were met. For example, the target of breeders having access to markers to select for greater tolerance to crown rot in barley, was partially achieved, with molecular markers for crown rot resistance developed ready for validation in 2017.

There was a new target set for the number of growers who were aware of integrated management practices for weeds, pests and diseases increased, however, the proportion of growers implementing the practices decreased between 2014 and 2017 Grower Surveys.

Biosecurity and stewardship

The targets for this intermediate outcome are focused on providing growers with the knowledge and tools to mitigate and manage biosecurity incursions and protect the efficacy and stewardship of agri-chemicals. Key investments in the Theme include publishing a red legged earth mite (RLEM) insecticide resistance management plan, development of new sampling techniques and high-throughput surveillance assessments for fungal spores.

All KPIs regarding biosecurity and stewardship were met in 2015-16 and 2016-17.

Theme 4—Advancing profitable farming systems

Theme 4 aims to demonstrate the value of implementing a farming system to manage risk and increase profitability. **Table 4.6** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

In 2015-16, 86 per cent of KPIs were achieved, meaning only one KPI was not achieved. However, there was a minor reduction in KPI achievement across the Theme in 2016-17, with 80 per cent achieved, 13 per cent (two KPIs) partially achieved and one not achieved. Although, the number of KPIs measured in 2016-17 doubled compared with 2015-16.

TABLE 4.6 THEME 4 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	6 (86%)	0	1 (14%)	7
2016-17	12 (80%)	2 (13%)	1 (7%)	15
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE

SOURCE: ACIL ALLEN

Knowing what is important (key business drivers)

This intermediate outcome is focused on identifying key business and profit drivers for growers. There were mixed results in meeting KPIs across the two years. No tenders were received for a business case assessing the potential to add value to research and management data through use of georeferencing technology. This indicates the project specifications or description of the issue was not clearly described. In 2016-17 two targets were not met focused on publishing yield and nutrition benchmark data from National Variety Trial sites. Key investments include the development of the Yield Gap Australia website and an analysis farm business and technical management drivers were analysed and reported for major agro-ecological zones of Australia.

Responding strategically (building system benefits and rotations)

The key focus of this intermediate outcome was to study the agronomic benefits of systems approaches to crop management. All target KPIs were met across the two years, except for one. An investment aimed at training growers and advisers to characterise soil water holding capacity did not proceed in 2016-17. The most significant investment was the national Stubble Initiative which included research, development and extension of the benefits of stubble retained no-till farming systems.

Responding tactically (individual crop agronomy)

The key focus of this intermediate outcome was to provide growers with information through development and demonstration trials of best agronomic practices for specific crops. All KPIs for this intermediate outcome were met for 2015-16 and 2016-17. Key investments for the intermediate outcome were the fast-track projects implemented in each region which provide groups with funding to address in-season tactical issues, through local demonstration trials. Also, Variety Specific Agronomy

Packages were developed for wheat and canola in the Southern Region and published across many mediums including GroundCover and GRDC Updates.

Theme 5—Improving your resource base

Theme 5 is focused on the promoting the protection of the farm's natural resources, including soil, water, native habitat, atmospheric resources in a variable climate for sustainable grain production. **Table 4.7** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

Theme 5 delivered the lowest KPI achievement across the themes for 2015-16 (71 per cent) and 2016-17 (60 per cent).

TABLE 4.7 THEME 5 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	10 (71%)	4 (29%)	0	14
2016-17	9 (60%)	4 (27%)	2 (13%)	15
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE

SOURCE: ACIL ALLEN

Understanding and adapting to climate variability

Not outlined in the Strategic Plan, this Intermediate outcome focused on growers being aware of and adapting to climate variability. All KPIs were either achieved or partially achieved across the 2015-16 and 2016-17 review period. Most targets appear to focus on growers taking climate variability or change into consideration when making decisions regarding types of farming systems and crops. In general, growers appear to aware of climate variability or climate change and a high proportion consider such issues when making decisions. Whether or not these targets measure farmers adopting new climate change mitigation strategies as opposed to strategies already implemented is uncertain.

Improving soil health

This intermediate outcome is focused on growers knowing the benefits of measuring and managing soil health. All KPIs for the 2015-16 and 2016-17 were achieved, and a high proportion of results in the Grower Surveys report growers adopting and implementing practices that sustain or improve the soil health.

Managing water use on dryland and irrigated grain farms

This intermediate outcome is focused growers understanding the water holding capacity of their soils and how to best manage available soil moisture. Not all KPIs were achieved for 2015-16 or 2016-17. Interestingly, there was a significant decrease in the number of growers assessing plant available water prior to planting (reduction from 58 per cent to 43 per cent) in the 2016 farm practices survey, as well as a reduction in the soil moisture assessment of 25 per cent of the crop area, which fell from 34 per cent in 2014 to 25 per cent in 2016.

Understanding and valuing biodiversity

This intermediate outcome is focused on growers using vegetation management plans to better understand and manage biodiversity on-farm. All KPI targets for this intermediate outcome in 2015-16 and 2016-17 were achieved. Investments supported growers developing vegetation management plans.

Communication of sustainable production methods

This intermediate outcome is focused on communicating the benefits of sustainable production methods to growers. Of the four KPI targets, one was achieved, two were partially achieved and one not achieved. A KPI focused on grower awareness and participation in catchment management plans

was partially achieved for both years, citing anecdotal evidence to suggest that growers are aware and participate. As for the KPI focused on increasing growers adopting quality assurance, environmental management systems or stewardship approaches to meeting market requirements, there was no proportional change in numbers of growers implementing programs.

Theme 6—Building skills and capacity

Theme 6 is focused on supporting growers, advisers and researchers by providing opportunities for professional development and leadership to benefit the grains industry. **Table 4.8** provides an overarching assessment of KPI achievement for this theme. A breakdown of the KPI analysis, against GRDC's intermediate outcomes, follows.

All KPI targets were achieved or partially achieved for the 2015-16 and 2016-17 years. The key focus of targets and investments were funding programs and strategies that develop growers, advisers and researchers.

TABLE 4.8 THEME 6 KPI ANALYSIS

Year	Achieved	Partially achieved	Not achieved	Total
2015-16	10 (83%)	2 (17%)	0	12
2016-17	13 (93%)	1 (7%)	0	14
2017-18	Data unavailable			

NOTE: 2017-18 DATA UNAVAILABLE

SOURCE: ACIL ALLEN

Grains industry leadership and communication

This intermediate outcome is focused on supporting future grains industry leaders, including attracting students to careers in grains. All KPIs were achieved for 2015-16 and 2016-17. Key investments included supporting three grains industry Nuffield Scholarships annually, the Australian Rural Leadership Program, Resilient Grain Leadership Program and Emerging Leader Programs.

Capacity building in the extension sector

This intermediate outcome is focused on supporting the development of grains extension providers. All KPIs were either achieved or partially achieved. Key investments included the support of the Resilient Grains Leaders, Extension and Adoption Training and Support Programs and Undergraduate Honours Scholarships and traineeships.

Capacity building in the R&D sector

This intermediate outcome focuses on capacity building for researchers. All KPIs were achieved for 2015-16 and 2016-17. Key investments included supporting PhD scholarships, and measurement of the proportion of growers using farm management advice including agronomy consultants.

Capacity building for grain growers

This intermediate outcome is focused on development of grain growers specifically. All KPI targets were met for 2015-16 and 2016-17. Key targets are focused on the increased involvement of growers in training and extension activities, including the GRDC Updates, and grower and adviser training. A significant number of growers (68 per cent) have changed practices on farm and (56 per cent) is stimulated by GRDC information and training programs.

4.2.4 Analysis of grower and stakeholder views about GRDC's strategies and investments

The GRDC Grower Survey has been conducted annually since 1992, with a robust sample size of 1,200 participants annually. The focus of the Grower Survey has evolved from primarily tracking

grower's awareness of GRDC to using information captured to measure the performance of the organisation against KPI targets and how the organisation is performing against the RD&E Plan.⁴⁵

Table 4.9 provides a summary of key GRDC Grower Survey results for the years 2015, 2016 and 2017. The results for 2018 are not available at the time of writing.

TABLE 4.9 GRDC ORGANISATIONAL PERFORMANCE SURVEY

Survey target questions	Result 2015 (%)	Result 2016 (%)	Result 2017 (%)	Result 2018 (%)
Comfortable to extremely comfortable paying the levy	79	76	76	
Credibility of information	93	93	91	
Engaging with growers	69	76	76	
Allocating funding to R&D	73	76	75	
Growers believing, they directly benefit from research in which GRDC had a role	71	71	72	

Data unavailable

NOTE: 2017-18 DATA UNAVAILABLE.

SOURCE: GRDC GROWER SURVEY 2015 AND 2017.

Overall improvements in GRDC's performance have been evident since the first survey results were published in 1992. For example, the 2017 survey results show that growers view GRDC as an effective investor in grains research, with 83 per cent of respondents rating GRDC as either very or fairly-high on this basis.

The survey results have also suggested that an increasing proportion of growers believe that they benefit from GRDC-supported research. For example, 63 per cent of respondents thought they benefited from GRDC-supported research in 2014, which by 2017 had grown to 72 per cent of respondents.⁴⁶

Similarly, GRDC rated high on measures of credibility of information (91 per cent), engaging with growers (76 per cent), allocating funding to R&D (75 per cent) and communicating plans and future strategy (72 per cent) in the most recent surveys.

At a regional-level, growers from the western region are the least likely to score GRDC highly for each measure (above), and have a significantly lower propensity than in 2016 to rate GRDC's allocation of R&D funding fairly to very-high. Similarly, western region growers comfort with paying the levy is proportionately lower (67 per cent) than the southern (80 per cent) and northern region (76 per cent) growers.

These survey results are consistent with feedback gained from stakeholders in the west which suggests that many western stakeholders are at this time disenchanted with GRDC. The reasons for this disenchantment are complex and nuanced. They involve frustrations amongst growers about the overarching direction of GRDC's research agenda and whether a focus on step change research outcomes (as opposed to incremental research outcomes) is an appropriate outlook for the west.

The reasons also relate to issues which are beyond the immediate scope of GRDC's control, but impact stakeholder perceptions of GRDC in the western region. Many stakeholders have identified coordination, investment, capability and capacity of the western region provider-base as significant constraints on GRDC's ability to meet its new purpose and deliver a more agile and commercially-focused research agenda.

A theme of stakeholder feedback is that GRDC needs to play a leading role helping key western region stakeholders to arrive at a partnership model that supports GRDC's strategic objectives and is sustainable over the longer-term.

⁴⁵ GRDC 2017, 'Organisational Performance Research—Grower Survey Report', August 2017, GRDC.

⁴⁶ GRDC 2017, 'Organisational Performance Research—Grower Survey Report', August 2017, GRDC.

4.2.5 Effectiveness of bilateral and strategic R&D investments

A key challenge for rural innovation across Australia is sustaining and coordinating the capability to undertake the R&D that RDCs and others invest in. Without coordination and access to high quality researchers and facilities the rate of gain from R&D will fall irrespective of whether the level of investment increases. At the same time, public investment in rural R&D has been in decline this century. The National Primary Industries RD&E Framework was a positive response to this decline. It created focus and coordination mechanisms through strategies developed by the relevant RDCs, governments and universities for each major rural sector and several cross-sectoral issues.

The National Grains RD&E Strategy had some success in improving coordination and offsetting the decline in public funding and sustaining capability but fell into decline due to the challenges associated with maintaining a multi-lateral approach.

During the review period, GRDC and the state governments shifted focus towards bilateralism which resulted in establishing longer-term partnership agreements with departments in South Australia, Victoria and New South Wales. Negotiations with Queensland and Western Australia did not lead to partnership agreements. This remains a considerable source of frustration in the west where DAFWA (now DPIRD) continue to work towards completing their own reforms.

GRDC also established additional strategic partnerships such as the Centre for Crop Disease Management and AEGIC as well as creating preferred provider agreements. Most recently GRDC established a long-term international partnership with Bayer to conduct joint research and share/develop research capability.

Views on the effectiveness of partnerships are mixed. At one level, the agreements have allowed partners to invest in capability when combined with funding commitments by both parties. This has created a platform for GRDC and its partners to adapt the research as required. In practice, this has proven to be challenging because of the effort required to actively manage the partnerships. This is especially true when the partner has high levels of reliance on GRDC funding and limited opportunity to readily re-allocate its capabilities to other purposes.

While GRDC intends to honour the existing partnerships, it is actively working with partners to improve agreements where necessary and no longer offers partnerships as a default outcome from negotiating opportunities. Given the challenges of actively managing partnerships and the impact on financial agility associated with large financial commitments to them this development has some inherent merit. The downside is that new and existing partners are driven to the IMS processes as the primary mechanism for engaging with GRDC emphasising a transactional relationship. At the time of the review GRDC's new RD&E Plan had only just been released and the detailed KIT strategies are yet to be developed.

In practice, many partners are yet to experience these reforms given a large proportion of investments are operating under existing agreements and contracts so they are not affected. Many stakeholders who are looking to establish or renew the relationships with GRDC are seeking more information and certainty on where and how to engage with GRDC to secure investment.

The consequence of GRDC's investment portfolio and processes being in transition at a time when the National Grains Sector Strategy is in decline is a vacuum where partners' views on GRDC's reforms and performance is a matter of perspective and experience. Those operating under existing contracts and agreements that are deemed to be successful by both parties with enough time left are reasonably comfortable. Those experiencing adjustment to existing arrangements or seeking new investment are concerned, frustrated and in some cases angry.

4.2.6 Effectiveness of IP management and commercialisation

GRDC's IP Management Plan provides GRDC staff, growers, potential investment partners, commercial collaborators with guidance about GRDC's approach to the creation and management of IP to maximise benefits for growers. It states the following steps in the investment process which IP is managed:⁴⁷

⁴⁷ GRDC 2017, 'Intellectual Property Management Plan', GRDC.

1. During project design and establishment phase, existing IP required for a project, and freedom to use this IP for generating and using project outputs, are carefully assessed.
2. Throughout the project, active management monitors and evaluates progress, along with identification and management of any IP generated. Researchers are required to document any IP that has been developed within a project, and to provide annual updates of IP registers to GRDC.
3. Following conclusion of the project, final updates of the IP generated are captured on the IP register.

To complement the IP Plan an Intellectual Property Management and Commercialisation Policy was developed to assist GRDC staff manage IP generated from projects and in the commercialisation of research outputs.⁴⁸ By all accounts, GRDC has the plans and internal policies in place to manage its IP and commercialisation activities in accordance with its obligations under the PIRD Act (which are broad) as shown below:

The functions of an R&D Corporation are to... disseminate and commercialise, and facilitate the dissemination, adoption and commercialisation of, the IP created in its research and development investments. This may be via non-commercial or commercial mechanisms.

Section 11.1 (e), PIRD Act.

The Marsden Jacobs report (2012) identified GRDC's inability to establish commercial subsidiaries as a key constraint to GRDC exploiting commercial opportunities and becoming agile like. Under the current statutory body arrangements, private sector research providers, like GRDC, cannot own more than 50 per cent of the commercial value generated from an investment.⁴⁹ This in turn limits the types of partnerships GRDC can form. Even if all parties agree GRDC should take a majority stake it cannot do so and next best alternatives need to be found.

4.2.7 Development and implementation of Risk Management and Fraud Control plans

Risk Management

GRDC's risk management procedures (Procedure B 11.02) requires the MD to 'develop, implement and maintain a Risk Management Plan for the organisation'. The Plan must be documented and communicated to all members of GRDC's Senior Leadership Group, and reviewed regularly.

Risk information is monitored through a monthly review of a Risk Assessment Register (which includes a register of risks and treatment plans for those risks).⁵⁰ This review is conducted by GRDC's Senior Leadership Group which considers whether:

- the risk register is accurate and complete
- the risk register contains statements that clearly articulate specific risks and their treatments
- the consequence and impact levels identified for individual risks are still relevant
- current treatments are effective.

The Risk Assessment Register is also reviewed once every six months by GRDC's Senior Leadership Group. This includes:

- reviewing the risk profiles in depth, to help ensure that no new risks have emerged and that treatment strategies are still appropriate
- removing risks, actions or comments that are no longer relevant
- reviewing the currency of risk ratings and the effectiveness of treatments.

Moreover, GRDC participates in the annual Comcover benchmarking survey, in order to assess the GRDC's risk management performance against that of its peers.

Finally, an external audit of GRDC's risk management is conducted once every two years. Independent auditors are used to provide assurance that risk management framework used by GRDC

⁴⁸ GRDC 2018, 'Intellectual Property Management and Commercialisation Policy', (viewed 15th Nov 2018), GRDC.

⁴⁹ Marden Jacobs & Associates 2014, 'GRDC Independent Strategic Governance Review', GRDC.

⁵⁰ GRDC 2015, 'Risk Management Framework', GRDC.

is comprehensive and effectively identifies and manages the key risks facing the organisation. Drawing on the findings of the external audit, the Risk Management Plan is revised every two years. The plan is reviewed by the Executive Manager Corporate Services and Compliance Officer in consultation with corporate business areas such as finance, security, processes and procurement and information technology.⁵¹

If the two-yearly review identifies changes in the nature of previously identified risks (including their treatments or controls), the changes are reflected in subsequent updates to the Risk Assessment Register. The outcomes of this review are considered by the Board's Finance, Audit and Risk Committee which, according to the Board's Meeting Minutes reviewed by ACIL Allen, take an active role in assessing audit findings and recommending remedial action where required.

In ACIL Allen's view, GRDC's risk management documentation and monitoring architecture is sound and typical of the architecture found in a mature organisation with good governance and management practices. The application of this architecture is embedded into the operations of the organisation and reviewed regularly by the Board.

That being said, ACIL Allen's consultations have identified that risk management will be an increasingly important, to all levels of GRDC, in the future. To capture the value of new commercial opportunities, GRDC's staff, panels and the Board must have an appreciation of both the upside and the downside risks of each opportunity as it emerges. Risks must be managed; not avoided. Staff must be both empowered (as discussed in Section 3.7.5) and adequately trained to understand the risk profile of opportunities and shape them in a way which is consistent with the commercial intentions of GRDC's new purpose. Risk management should be an integral aspect of any learning and development (L&D) framework, as proposed in Recommendation 2 of this review.

Fraud Control

GRDC meets its requirements under the PGPA Rule Section 10—Preventing, detecting and dealing with fraud—through the development and management of fraud control plans and policies. GRDC's current Fraud Control Plan and Policy was endorsed by the Board in December 2017 and was made available to staff shortly thereafter.

The Policy and Plan applies to all GRDC staff (permanent or temporary), Directors, Panel members, consultants and contractors. The Policy and Plan also cover any external research partners that receive funding from the GRDC.

Consultations with representatives from GRDC's governance compliance functions and with Board members identified a commitment to a culture which is characterised by high standards of ethical behaviour, and in which there is a collective responsibility for the prevention of fraud and corruption, and a coordinated approach to managing fraud risks. All incidents of fraud are recorded on an incident register, and regular analysis of reported incidents are conducted to report trends to the Board's Finance, Risk and Audit Committee.

To ensure that all staff understand their responsibilities and obligations, GRDC provides **mandatory** training and induction activities relating to code of conduct and fraud awareness. The GRDC has a *zero tolerance* approach to fraud and corruption and all allegations of fraud are investigated in accordance with the Australian Government Investigations Standards.

Examples of GRDC's fraud control-related activities and initiatives, include:

- A review fraud risks and plans every two years. The results of this review are considered by the Board.
- Implementation of additional risk treatments following risk assessments that identify uncontrolled or risks rated medium and above after controls (e.g. GRDC has implemented a suite of procurement policies and procedures that support the 2017 Fraud Control Policy and Plan).
- The provision of training to staff, panel members and Directors of fraud. This training is provided during induction and is also updated annually. GRDC also provide advice and training to staff and panels on procurement.

⁵¹ GRDC 2015, 'Risk Management Framework', GRDC.

- The development and maintenance of policies and procedures for the acquittal of staff credit cards and the acquittal of travel related expenses for panel members.
- The conduct of regular internal audits on payroll, accounts payable. GRDC has an annual audit plan that addresses areas of potential fraud such as procurement and contracting.
- The separation of duties on financial and payroll processes to minimise the opportunities of fraud occurring.
- The addition of a requirement in contracts to allow access for GRDC auditors to audit provider records in relation to the expenditure and acquittal of GRDC funds. GRDC has directed auditors to do this on a least one occasion during the review period.

In summary, GRDC has the plans, policies and systems in place to effectively manage its exposure to fraud. This conclusion is supported by evidence provided in Appendix B which provides the outcomes of ACIL Allen's compliance assessment. While this assessment is not a forensic audit of GRDC's financial controls, the assessment and consultations undertaken by ACIL Allen indicate that GRDC is both effective and efficient in managing fraud and related issues.

4.3 Key findings

This chapter shows that GRDC is a mature organisation which has in place the strategies, plans and reports to meet its accountability obligations under the SFA, PIRD Act and PGPA Act. Further analysis of GRDC's compliance to these requirements is provided at Appendix B.

It also shows that GRDC's execution of key strategies and plans is effective and aligned with expectations of growers and other industry stakeholders.

Questions of efficiency are once again difficult questions to answer, as it is too early to tell whether the reformed organisation delivers investments in a more-timely way than before. However, GRDC's desire to reduce the number of projects in its portfolio will contribute to improve its ability to manage investments efficiently in the future.

There are some issues relating to GRDC's interactions and investments in the western region that need urgent attention. These issues require a subtle blend of leadership and collaboration to ensure they are resolved to the satisfaction of GRDC and other western region stakeholders.



5

INDUSTRY BENEFITS, PROJECT SELECTION AND EVALUATION

This chapter considers a range of factors that contribute to GRDC delivering research investments which have impact. The chapter first considers some available evidence that illustrates the type of benefits to industry which can be achieved from GRDC's investments. This analysis is essentially backward looking, in so far as it analyses a selection of research projects which relate to the strategic themes of the previous RD&E Plan (2012-17). While this analysis is useful in demonstrating GRDC has met a key ToR (5) of the review, it is not particularly insightful as to what the future impact may be. To this end, the chapter explores two key dimensions (project selection and evaluation) that will shape investment decision making and ultimately GRDC's ability to deliver on its purpose and strategic objectives in the future.

5.1 Evidence of benefits to industry under the RD&E Plan (2012-17)

GRDC conducted benefit cost assessments (BCAs) of five projects for its 2017 Annual Report. Each project relates to investments that commenced under the previous RD&E Plan (2012-17). The projects are also indicative of the scale of benefits delivered under the 2012-17 plan, although it is acknowledged that the assessment exercise is not exhaustive. An exhaustive analysis of past benefits was agreed with GRDC to be an expensive exercise and of minimal value to the organisation's future investments.

The results of those five BCAs are shown in **Table 5.1**. The results show that all projects had benefit cost ratios (BCR) in excess of 2, and several had BCRs in excess of ten. The average BCR for the five projects examined was 6.6. In ACIL Allen's experience, the estimated BCR of a research program will tend to vary from year-to-year. However, a BCR of 6.6 aligns with similar estimates by ACIL Allen of BCR's for other research organisations, such as CSIRO.

The total net present value of the five projects assessed for the 2017 Annual Report was \$78.5 million. This is almost 40 per cent of the total amount GRDC invested in RD&E projects in the 2016-17 financial year. The GRDC provided funding for 960 new and on-going projects in 2016-17. The five assessments done for the 2017 Annual Report represent only 0.5 per cent of these projects. Reportedly only 20 per cent of the GRDC's projects are unsuccessful, hence it is highly likely that many of the projects not included in the assessment for the 2016-17 Annual Report would add to the estimated value of the five projects assessed. Hence, the \$78.5 million in net benefits delivered by the five projects assessed could provide a lower bound for the total benefits of GRDC's RD&E program.

TABLE 5.1 EX-POST BCAS PREPARED FOR 2017 ANNUAL REPORT

Project	Present value benefits (\$m)	Present value costs (\$m)	Net present value (\$m)	Benefit cost ratio
Lupin Breeding for Australia	11.5	2.8	8.7	4.2
Genetic options for nematode control	30.5	2.9	27.6	10.6

Project	Present value benefits (\$m)	Present value costs (\$m)	Net present value (\$m)	Benefit cost ratio
Northern Region High yielding cereal agronomy—NSW	16.4	0.6	15.8	26.7
PBA Australian faba bean breeding program	14	6	8	2.3
Soil water holding capacity and measurement	20.2	1.8	18.4	10.7
<i>Total</i>	92.6	14.1	78.5	6.6

SOURCE: GRDC 2017 ANNUAL REPORT

GRDC also conducted BCAs of seven projects for its 2018 Annual Report. The results of those BCAs are shown in **Table 5.2**. No project had a benefit cost ratio below 4.4, and several had very large BCRs. The average BCR for the seven projects assessed was 14.3.

TABLE 5.2 EX-POST BCAS PREPARED FOR THE 2018 ANNUAL REPORT

Project	Present value benefits (\$m)	Present value costs (\$m)	Net present value (\$m)	Benefit cost ratio
New Chemistry options for wild radish control	20.9	0.9	20	24
Sorghum with more feed grain energy: bigger grain with higher starch content	4.2	0.2	4	21.6
Improved management of slugs and snails	32.5	1.5	31	22.1
Optimising nitrogen fixation of grain legumes - southern region	3.8	0.9	2.9	4.4
Agronomy practices and market trends of pulses in Madhya Pradesh, India	9.1	0.02	9.1	608
Increasing yield and reducing risk through early sowing	143	1.4	141.6	99.1
Cereal rust program (suite of investments)	141.6	19.9	121.7	7.1
<i>Total</i>	355.1	24.82	330.3	14.3

SOURCE: GRDC'S ANNUAL REPORT

The total net present value of the seven projects assessed for the years 2017 and 2018 was over \$330 million. This is about 172 per cent of the total amount GRDC invested in RD&E projects in that year. Again, the assessments done for the 2018 Annual Report represent only a relatively small proportion of the projects funded by GRDC. The GRDC provided funding for 689 new and on-going projects in 2018. It is highly likely that many of the projects not included in the assessments for the 2018 annual report would add to the estimated benefits. Hence, the estimated \$330.4 million in net benefits delivered by the seven projects assessed could be regarded as a lower bound for the total benefits of GRDC's RD&E program in 2017-18.

The outcome of RD&E is by its very nature uncertain. It is therefore unsurprising that the estimated benefits based on an assessment of a small sample of projects will vary from year-to-year. Nonetheless, the estimated benefits from the twelve projects assessed for the 2016-17 and 2017-18 annual reports total almost \$409 million, which compares favourably to the total funding provided for RD&E projects over those two years of just over \$393.5 million. Particularly given that assessments were only done for a very small proportion of the total number of projects funded and the estimated benefits are therefore likely to be a very conservative lower bound.

5.2 Factors that shape the delivery of benefits under the RD&E Plan (2018-23)

5.2.1 R&D project selection

Capturing and assessing ideas

The GRDC's purpose is to *"Invest in research, development and extension to create enduring profitability of Australian grain growers"*. To help GRDC achieve this objective it provides funding for selected R&D projects.

The GRDC has developed a system for identifying ideas that may be candidates for support from GRDC. An idea is defined as:

A constraint or opportunity to create enduring profitability for Australian grain growers that has been identified through stakeholder engagement as a potential investment priority.

Ideas can be submitted by a wide range of parties, including growers, grower networks, GRDC panel members and GRDC staff. External parties, such as growers, agronomists, other supply chain participants and researchers are also able to suggest ideas directly to GRDC staff. Under the new continuous investment cycle, ideas can be submitted at any time throughout the year. A formal process to consider ideas takes place at least monthly.

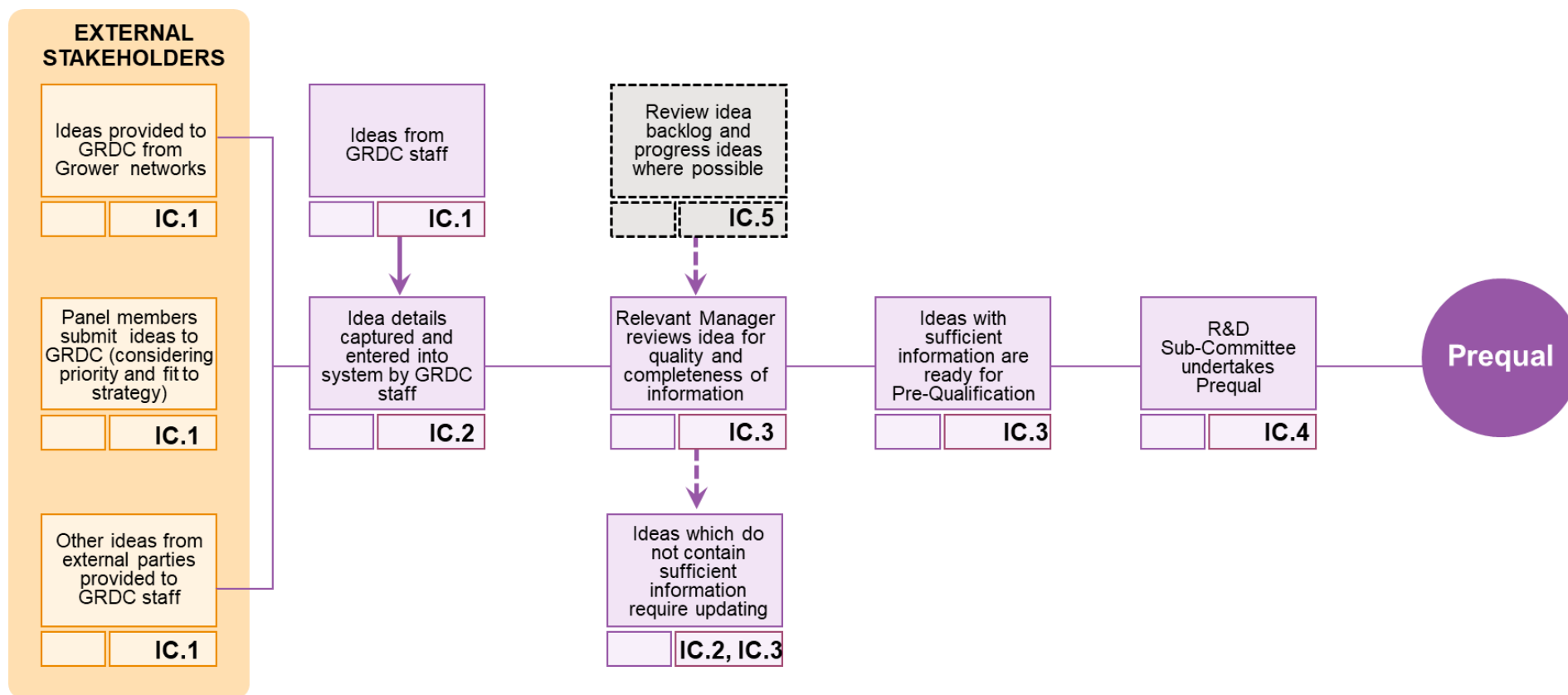
Proponents of an idea need to provide information about it. That information should be succinct while providing enough detail to allow preliminary assessment and prioritisation of the idea. Where an idea has arisen through an interaction with a third party, staff and panel members must ensure that their discussion with the proponent of the idea captures the necessary depth of information. To do this, staff or panel members would generally have an iterative conversation with the source of the idea to help the proponent to turn the idea into meaningful research question for further analysis.

The details of an idea are entered into the IMS in enough detail to undertake a preliminary assessment of the potential to contribute to GRDC's purpose and determine whether it should be prioritised for gap analysis and further scoping. After an idea is entered into the IMS it is assigned to a manager. The selection of the manager is based on factors such as: the source of the idea; the regional or national nature of the idea; and any specialist expertise or experience deemed to be appropriate.

Any idea with insufficient information to allow assessment will be retained as a "Draft" idea until otherwise determined by the Senior Manager or delegated Manager. Depending on whether sufficient information subsequently becomes available the idea can either be re-classified as "New" and progressed to pre-qualification or discontinued.

Once the assigned manager for the idea is satisfied that the idea record in IMS is complete the idea's status within IMS is changed to "New". When this occurs, the idea will be progressed through pre-qualification by the R&D Sub-Committee at its next meeting. **Figure 5.1** illustrates the GRDC's process for capturing and progressing ideas through to pre-qualification.

FIGURE 5.1 ILLUSTRATION OF GRDC IDEAS CAPTURE PROCESS



SOURCE: INVESTMENT CYCLE PROCEDURES AND GUIDELINES - IDEA CAPTURE, GRDC, UNDATED

Pre-qualification

Once an ‘idea has been categorised as “new” it is passed to the R&D Sub-Committee for pre-qualification. Pre-qualification is preliminary assessment of the idea against a set of criteria to determine whether it should progress through to an analysis phase. The criteria include assessments against:

- GRDC Purpose and mandate
- past investment(s)
- rationale for continuation of current work
- third party investments and/or knowledge
- regional relevance
- potential need for local validation and extension.

The aims of Pre-Qualification are to: identify duplicate ideas; remove ideas that are outside GRDC’s remit or, which do not fit GRDC’s national or regional investment strategy; identify ideas where GRDC and or other parties are/have invested; identify where GRDC has previously decided not to invest; and identify opportunities to undertake short term regional research, development or extension in the region. The questions that must be answered as part of the GRDC’s pre-qualification process are shown in **Box 5.1**.

BOX 5.1 QUESTIONS CONSIDERED AS PART OF PRE-QUALIFICATION

1. Is the idea expressed as a technology agnostic opportunity or constraint?
2. Does GRDC have current or previous investments that have Outputs that address the idea?
3. Do Outputs require local validation or is there justification for continuing /re-contracting current investment(s)?
4. Has someone else addressed the Idea?
5. Does this idea align with Regional / National strategy?
6. Can current investments be varied to address this idea?
7. Has GRDC previously determined that we would not invest in this area?
8. Has the basis of the previous rejection changed?

SOURCE: GRDC

There are five possible outcomes from the consideration of an idea by the R&D Sub-Committee, each is briefly described below.

Not qualified

An idea which is judged to be unsuitable for undergoing further scoping work.

Awaiting variation

An idea has merit, but the potential to be incorporated into an existing investment in a RD&E project. The approval of variations to an existing investment will only be considered where the incorporation of the new idea does not change the Expected Outcome of the original investment. Variations that would require changes to a current outcome should be treated as new ideas and potential new investments (i.e. re-asses Pre-Qualification). If the proposed variation results in a substantial change to the outputs or increases the budget by more than \$100,000, then investment advice should be sought from panels.

Qualified

An idea that qualifies for prioritisation and potentially approval for further analysis. Initial prioritisation of ideas will be undertaken in conjunction with regional panels who review each idea which has passed pre-qualification. The regional panels validate the description of the idea and prioritise it as

high, medium or low. The prioritisation considers a range of factors such as area affected, impact on profit, and frequency of the occurrence. The priority ranking is captured in IMS.

Recommended for analysis

Based on an idea's priority and considerations of portfolio balance the accountable Senior Manager can recommend an idea to the R&D Sub-Committee for progression to Gap Analysis. This analysis involves more in-depth examination of the idea and the development of a business case. The outcome is a potential investment recommendation for consideration.

Lower priority ideas that have been approved for analysis will have little or no action associated with them until they are assigned a higher priority. Ideas that have been approved for analysis but have not had any activity for more than 12 months should be considered for discontinuation.⁵²

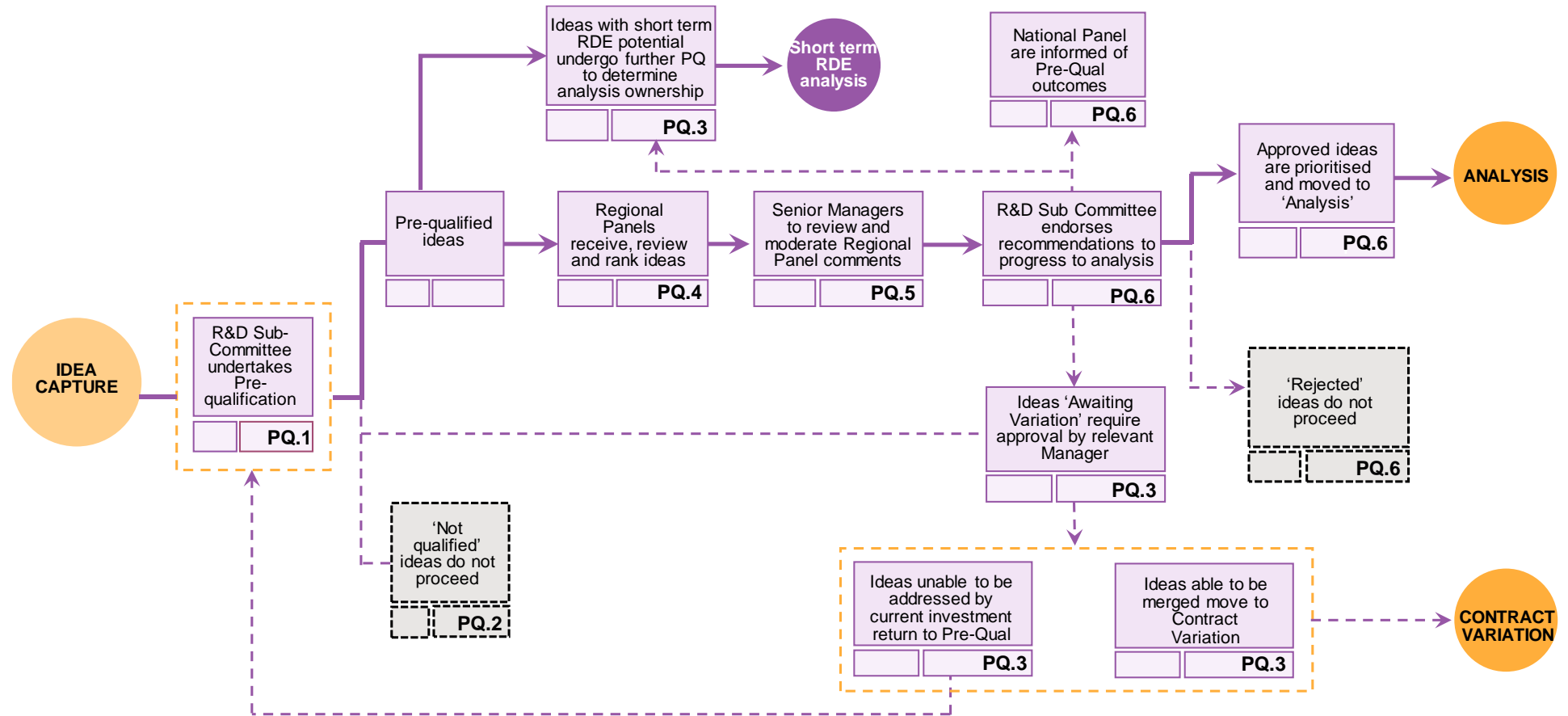
Short term RD&E investments

In some cases, the R&D sub-committee can identify an idea as suitable for funding as a short-term extension investment. To be eligible the idea must be limited to a sub-regional/ local location, the duration of the investment must not exceed two years, and the value of goods and/or services must be no more than \$100,000 per annum (\$200,000 in total).

The purpose of these investments is to rapidly deploy short term RD&E at a sub-regional area to respond to tactical needs.

Figure 5.2 illustrates the pre-qualification and prioritisation stage of GRDC's project selection process.

⁵² Investment Cycle Procedures and Guidelines Pre-Qualification and Prioritisation, GRDC, undated

FIGURE 5.2 ILLUSTRATION OF GRDC PRE-QUALIFICATION AND PRIORITISATION

SOURCE: INVESTMENT CYCLE PROCEDURES AND GUIDELINES PRE-QUALIFICATION AND PRIORITISATION, GRDC, UNDATED

Gap analysis

If an idea is approved and classified as high priority it undergoes a gap analysis. A gap analysis involves an in-depth scoping study and the development of a business case for a pre-qualified idea. The analysis is done by GRDC staff and or external experts (the latter would normally be engaged in cases where specialist knowledge is required). Where external expertise is needed then regional panel members are given preference.

Factors that may be considered during this phase of the process include:

- a MAKAT analysis (this examines whether the barriers to practice change relate to any of the following: Motivation; Attitude; Knowledge; Ability; and or Tools / technology)
- technical feasibility and risk
- adoption risk:
 - pathway to market
 - freedom to operate
 - the ADOPT (Adoption and Diffusion Outcome Prediction Tool) model (see **Box 5.2**)
- investment amount
- potential return (and ROI) on investment spend)
- likelihood that others will invest or potential for co-investment
- regional strategy around investment split—budget and spend in different investment areas and over different time horizons (TTD) of research.
- anticipated industry impact

The gap analysis and the development of a business case are used to calculate the expected benefits of a project by using a gross margins model. The model allows for factors such as prices and yield to be varied. The model assesses how an idea would change the industry compared to a baseline that is the 10-year average for that industry. International demand analysis is used to identify how elastic demand is and project potential changes in export markets.

The model allows the GRDC to estimate the what the value of the industry would be if the idea generates the anticipated change(s) in practice(s). To progress the idea needs to beat the baseline outcome (the baseline includes a gradual trend improvement over time).

The outcome is a BCR for the idea. GRDC staff also factor in the level of risk associated with each idea. Discount rates of 3, 5 and 10 per cent and sensitivity of outcomes to yield rates are used to factor in risks. The information obtained from the gap analysis and the business case is provided to decision makers who then decide whether to fund the project in question or not.

In a small percentage of cases it is not possible to accurately determine the cost of the project. In such cases the average BCR for GRDC projects (namely around 4.7 to 5) is used along with the estimated benefit from the project to estimate what an appropriate expenditure on the project might be.

BOX 5.2 THE ADOPT MODEL

ADOPT is a model that predicts of a practice's likely rate and peak level of adoption as well as estimating the importance of various factors influencing adoption. The ADOPT model requires responses to 22 questions that relate to the:

- a) characteristics of the practice that influence its relative advantage
- b) characteristics of the population influencing their perceptions of the relative advantage of the practice
- c) characteristics of the practice influencing the ease and speed of learning about it
- d) characteristics of the potential adopters that influence their ability to learn about the practice.

ADOPT provides a prediction of the diffusion curve of the practice and sensitivity analyses of the factors influencing the speed and peak level of adoption.

SOURCE: GRDC

Discussion of project selection process

GRDC's process to capture and assess ideas is a relatively complex one. However, the approach does allow ideas to be put forward in several ways and by a broad range of different stakeholders, including those representing regional interests. The approach also allows all ideas to be assessed in a systematic manner.

By assigning a specific manager to an idea GRDC is effectively assigning a case manager to that idea. This ensures that there is a person within GRDC that can learn about the idea, follow the progress of the idea through the IMS system and help to ensure that the necessary information is collected at the appropriate stage of the process.

There are several stages in the process where regional panel members have an opportunity to provide input into the process. These include submitting the idea, reviewing and ranking ideas after they have undergone the prequalification process, and the opportunity to provide input into the gap analysis if the member has the required skill set and expertise that may be needed to carry out the gap analysis for an idea.

One potential concern about the project selection process described above is that it will tend to favour projects which are assessed as having very low risk. If so, then this could have two potential impacts. The first is that the projects selected to receive support will tend to be those that have a relatively high prospect for a successful outcome. The fact that only around 20 per cent of projects fail to deliver the anticipated benefits supports an argument that the selection process is strongly weighted towards selecting projects with a low risk of failure. Some might argue that projects with such high prospect of success, where the benefits will be captured by industry, could more appropriately be entirely funded by the industry.

Another potential impact might be that while the risks associated with the projects selected by the above process are low, this may be reflected in them also generating relatively low benefits. In other words, the projects supported may be more likely to generate smaller incremental improvements rather than larger improvements that are usually associated with breakthrough discoveries. This does not mean that small improvements are un-useful, however, it is the bigger step changes in practices that are more likely to deliver competitiveness benefits over the longer term.

One option may be to allocate a small proportion of GRDC funding to ideas that appear to be high risk, but potentially high reward. The funding could be used to do some preliminary work to further develop and test the idea. This could allow more information to be obtained to reinforce the potential benefits associated with the idea and or reduce the potential risks of the idea. Such an approach could work well with the current GRDC approach of assigning a Manager to each idea.

Finally, the fact that ex-ante analysis is largely done in-house creates some risk. In-house analysts are more likely to support projects they are familiar with and could unintentionally bias selection with these preferences.

5.2.2 Project evaluation and its impact on future benefits

As discussed in the previous section, the GRDC places considerable focus on ex-ante analysis as part of its project selection process. While there is also some ex-post analysis of projects, this is seen as a lower priority. Ex-ante analysis is largely done in-house whereas ex-post analysis tends to be contracted to external parties.

The GRDC reports that both ex-ante and ex-post analysis is done in accordance with the current CRRDC guidelines. The cross-RDC Impact Assessment Program: Guidelines were updated in April 2018. The two main changes made to the 2014 Impact Assessment Guidelines were:

- *Reporting timelines*—the new guidelines for Impact Assessments now require results to be reported at five-yearly intervals, namely at 0, 5, 10, 15, 20, 25, and 30-years from the final year of the RD&E investment being evaluated.
- *Treatment of costs of adoption*—the costs of adopting or implementing a new technology or other innovation should be incorporated into an assessment by deducting them from the gross returns realised by industry from adoption of the innovation.

The Impact Assessment Guidelines note that it is challenging to manage and sustain investment in rural R&D designed to maintain economically valuable productivity growth in rural industries when the benefits of that R&D accrue so long after the initial investment (often many decades). The Guidelines also state that experience has shown that sustaining the support of all stakeholders in the RDC structure requires a sustained effort to provide persuasive evidence to show that the funds spent on R&D have been well managed and that the investments have earned a satisfactory return.⁵³

The Guidelines identify four reasons why impact assessment of R&D is important, namely:

- The results inform the principal funders of R&D projects about the net benefits derived from their investments.
- The assessed ROI provides valuable information for R&D decision makers.
- Researchers and collaborators know how research proposals and performance are judged by RDCs.
- Rigorous impact assessment is central to ensuring good governance and transparency in the administration of RDC projects.

The Guidelines envisage that ex-post assessments are important means of providing feedback to RDC boards and management on the value that is generated by their investments in R&D. This form of assessment is also used to inform rural research strategies. Estimates of the future benefits of research may also help guide the design of the adoption program to maximise the net benefits to industry and the community.

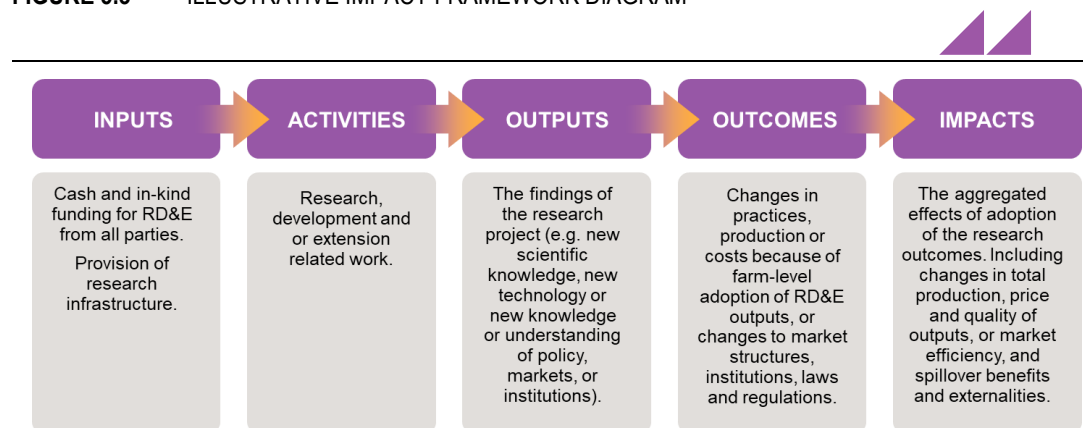
The Guidelines envisage that RDCs will use ex-ante assessments of the potential future benefits of a proposed research activity to inform its decisions on whether to invest or not. The Guidelines note that ex ante analyses can be used to test the claims made by a project's proponents and rigorously explore the possible outcomes and impacts of a project. They can also provide a benchmark against which to conduct subsequent ex-post assessments.

GRDC is increasing its use of ex-ante CBA as part of its decision making process. GRDC also does ex-post analysis, but GRDC staff report that their priority is very firmly on ex-ante analysis. Project benefits are only assessed the once the project is completed and the objectives have been delivered.

GRDC uses the results of its ex-ante analysis to help them identify future R&D projects.

Guidelines use a relatively standard approach to impact assessment. A generalised impact framework is illustrated in **Figure 5.3**. Implicitly included in the impact assessment are the need to define a counterfactual, estimating what the adoption of new practices will be and assigning attribution of the benefits among the contributors to the project.

⁵³ Rural R&D Corporations Cross-RDC 2018, 'Impact Assessment Program: Guidelines', Updated April 2018.

FIGURE 5.3 ILLUSTRATIVE IMPACT FRAMEWORK DIAGRAM

SOURCE: ACIL ALLEN AND CROSS-RDC IMPACT ASSESSMENT PROGRAM: GUIDELINES

The GRDC has a comprehensive database that allows it to establish a baseline against which to measure improvements resulting from the projects that it supports. The ADOPT model allows GRDC to develop an adoption curve for a change in practice that might result from a project (see **Box 5.2**).

The timing of an impact assessment has a significant bearing on the results and the level of certainty that can be attached to the results. An early impact assessment (*ex-ante*) will have greater uncertainty around the results but will be useful for informing decision making. When an assessment occurs later in the project (usually after a significant milestone has been reached or after the project has been completed (*ex-post*)), more of the benefits are likely to have been realised and can be measured as actual rather than expected or estimated. These assessments will often generate more reliable estimates of benefits.

The Guidelines specify that:

The primary focus of the Cross-RDC Impact Assessment Program is on ex post evaluation of R&D investments by RDCs, undertaken to provide a contemporary overview of the outcomes and benefits from the RDC portfolio. However, the same cost-benefit analysis techniques are also applicable in ex ante assessments to contribute to the project selection process or subsequent project management.

Ex-ante assessments can highlight the variables that need to be monitored and measured during the research and adoption phases of the project and assist research managers to develop the criteria they will use to assess and manage the research they have supported. This should lead to the most appropriate data being collected and more robust ex-post evaluations of a project's benefits.

GRDC staff advise that they use the information collected for ex-ante assessments to help manage the projects that the organisation subsequently decides to fund.

The Guidelines note that:

In ex ante impact assessment, where less is known about the outcomes from an investment than in an ex post impact assessment, additional attention should be paid to risk and uncertainty.

The need to factor in risks and uncertainties into their ex-ante assessments is something that GRDC staff are aware of. Sensitivity analysis and varying the discount rate are two approaches that they reportedly use to do so.

Discussion of project evaluation

As can be seen from the discussion in Section 5.1 the projects supported by GRDC have returned considerable benefits. The low failure rate (reportedly around 20 per cent) suggests that the project selection process is successfully identifying projects with low risk of failure.

The framework for ex-ante and ex-post assessments of projects appears to be sound.

Given the detailed analysis that is undertaken before a decision whether to support a project can be taken, it would be interesting to track how well the initial ex-ante results align with those from the eventual ex-post assessments.

5.3 Key findings

This chapter provided some evidence of historical benefits delivered under the RD&E Plan (2012-17). While this is a lower bound estimate, it is indicative of the value generated from GRDC's investments between 2015 and 2017 that is consistent with stakeholder feedback and grower survey results.

The chapter has also considered two elements (project selection and evaluation) that are critical in shaping GRDC's ability to deliver benefits under the new RD&E Plan (2018-23). While the project selection process is relatively complex, it has the potential to identify projects which deliver strong benefit, if GRDC's staff can identify the commercial value embodied with an idea and shape it accordingly. There is also an inherent bias in the project selection process towards projects which are low risk in nature. This has the potential for GRDC to overlook investments which are misaligned with the process (and the KITs) but may deliver strong returns to the industry if extended/commercialised.

Moreover, the chapter has identified that GRDC's evaluation approach is sound and fit-for-purpose. Once again, caution should be taken to ensure that the use of ex-ante evaluation techniques are balanced against ex-post techniques to minimise the opportunities for bias in the evaluation and, ultimately, the selection process.


 A purple rectangular graphic with a large white number '6' on the right side. On the left side, the text 'STAKEHOLDER ENGAGEMENT AND PARTNERSHIPS' is written in white, all-caps, sans-serif font. In the top-left corner of the purple area, there is a small orange logo consisting of two triangles.

6

STAKEHOLDER ENGAGEMENT AND PARTNERSHIPS

This chapter provides the capstone piece to ACIL Allen's analysis. It examines the ability of GRDC to form meaningful partnerships with key stakeholders. These partnerships, which must be deep and trusting in nature, are critical to GRDC deriving value from its new purpose and approach. Without a strong partnership model built on the foundations of a capable and a resilient provider-base, GRDC's ability to be a truly great organisation will remain constrained.

6.1 Stakeholder engagement

When planned and applied thoughtfully and effectively, stakeholder engagement can be a strategic tool for an organisation like GRDC, which is dependent on high-quality stakeholder input to derive value from its investments. The process of stakeholder engagement and its outcomes can create value by clearing the way for GRDC to achieve its new purpose, inform investment decision making so that it considers potential stakeholder actions (or inaction), and build long-term socio-political and reputational value.⁵⁴

"We are transparent and accountable to our stakeholders" is a GRDC value.

GRDC website, viewed 2018.

A 'stakeholder' is an entity or person that can either be affected by an organisation or can have an affect on the organisation.

Stakeholder engagement is a management *process*, managed to achieve a stated objective.⁵⁵

Another way of looking at the process and outcomes of strategic stakeholder engagement is that it is a way of managing to:

- gather insights and data on the internal and external operating environment, so GRDC better understands that environment when planning and making decisions
- ensure GRDC's goals, dependent on the decisions, actions and contributions of other entities and people, can be achieved
- provide inputs to managing organisations (like GRDC) that are committed to navigating the external environment to 'get things done'.

Communication with stakeholders is an element of stakeholder engagement but is not a proxy.

The process of *communicating with stakeholders* in an organisational environment can be:

⁵⁴ Watrick L, Mahon J, 2001, 'The Importance of Multiple Stakeholder Perceptions, Corporate Social Performance Profiling', Proceedings of the International Association for Business and Society, Vol 20, pp326-336, 2001; Burns W, 2008, 'The big issue: arena shopping for success', Newsletter: Centre for Corporate Public Affairs.

⁵⁵ Freeman, E, Harrison J, Wicks A 2009, 'Managing for Stakeholders', Yale University Press, Burns, ibid.

- one way, involving an entity pushing out and delivering messages and information to stakeholders, without stakeholders having an opportunity to respond, or
- two-way, involving an entity pushing out and delivering messages and information to stakeholders and providing stakeholders with opportunities or channels to respond.

Managing a process of stakeholder engagement requires two-way communication. However, two-way communications are one element only of stakeholder engagement.

Also, engagement is characterised by the organisation and the stakeholder seeking to better understand the other's typology, strategy, agendas, priorities, and modus operandi; and how each party can work together to create value for the other, including mutual benefit.

For many organisations, stakeholder engagement is a management process to secure social license to operate from stakeholders critical to its social license to operate.

Social license to operate is the term first used in the mining industry in the early 2000s. Social license is the *acceptance* (or not) and *approval* (or not) afforded to an organisation by its stakeholders. It is different from corporate reputation, which is the *perception* of an organisation by its stakeholders. GRDC measures some dimension of its reputation with its levy payers as part of its annual Grower Survey.

The social licence is the level of acceptance or approval continually granted to an organisation's operations or project by local community and other stakeholders. It has four levels from lowest to highest: withdrawal, acceptance, approval and psychological identification. Most companies or projects are in the acceptance or approval range most of the time. It can vary across time or between stakeholder groups in response to actions by the company and/or its stakeholders.

Thomson, I. 2003, 'International Resource Journal', 2013.

GRDC's social license is not permanent, as it is informed by the values, beliefs, perceptions and actions of stakeholders, which are subject to change. Thus, a social license is contestable, and needs to be earned and maintained.

Social license cannot be quantified specifically. However, it can be understood by seeking and analysing the perceptions and expectations of stakeholders and asking them the degree to which they extend (or not) to the organisation's social license.

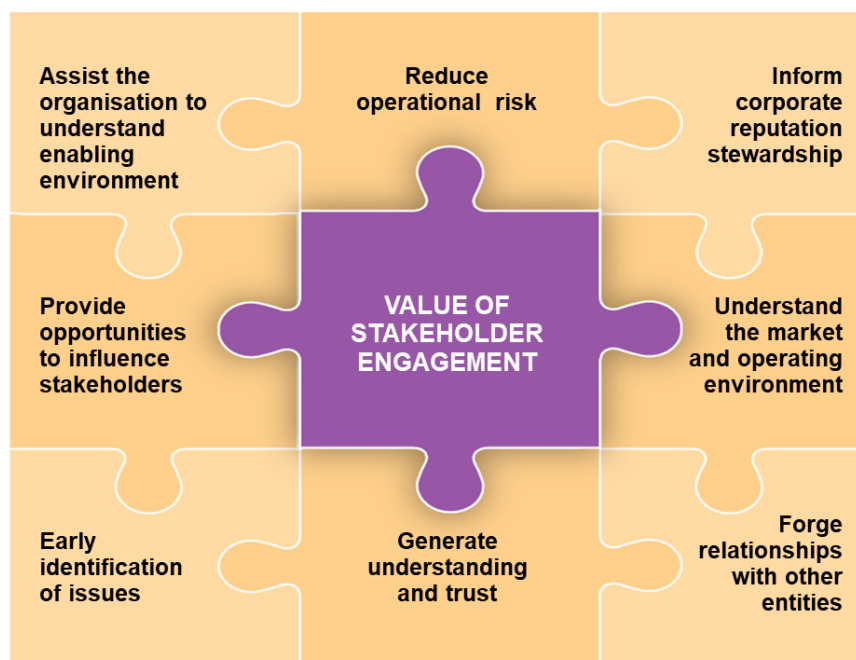
The degree to which an industry, sector, or corporation is regulated also affects its social license to operate. The statutory nature of GRDC clearly impacts on stakeholder perceptions about its ability to deliver on a mission that is agile and commercially-focused. Moreover, numerous stakeholders consulted have questioned whether GRDC's new purpose can be delivered under its existing corporate form.

Research internationally has established a correlation between the quality of an organisation's relationship with its stakeholders and its performance⁵⁶ and sustainable value.⁵⁷

The value that an organisation can develop from stakeholder engagement varies from organisation to organisation. It can depend on the purpose of the engagement, the scope of the engagement, and also the stakeholders who are engaged. **Figure 6.1** outlines the value effective stakeholder engagement can create for GRDC.

⁵⁶ Waddock, S. & Graves, S., 1997, 'Quality of management and quality of stakeholder relations: are they synonymous?' Business and Society Review.

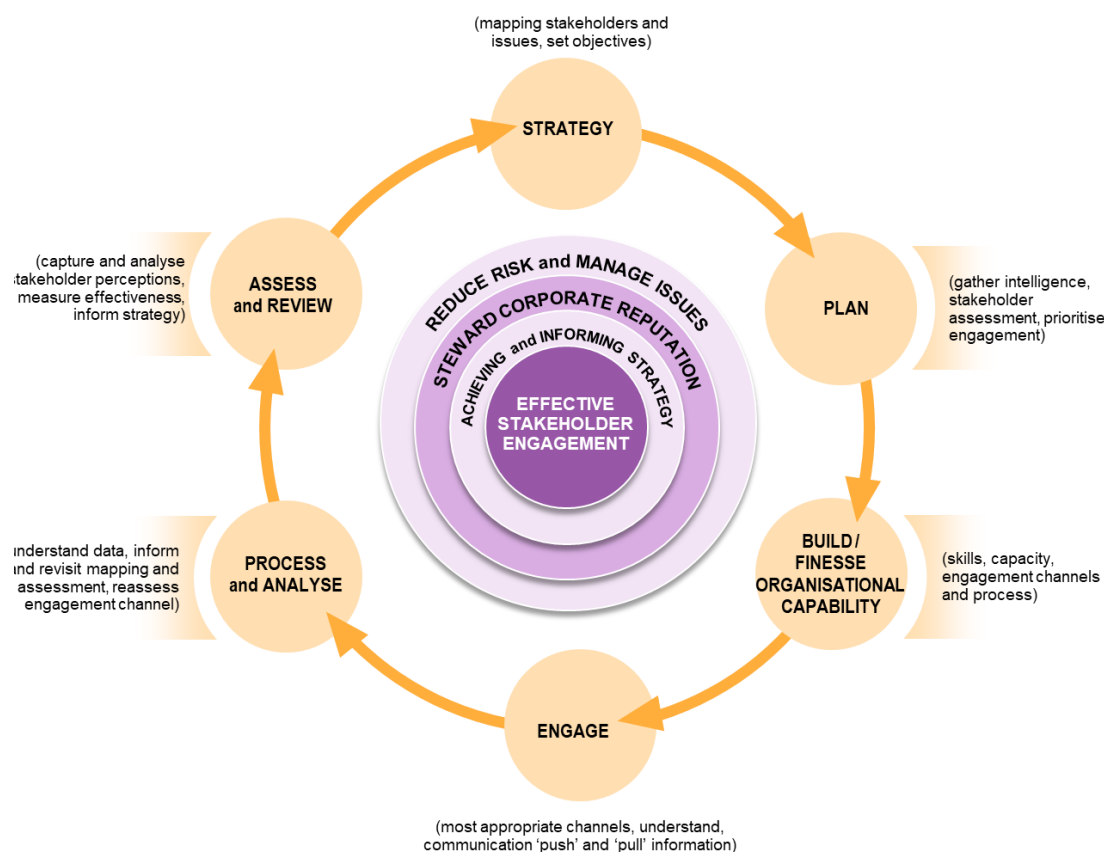
⁵⁷ Post, J., Preston, L., & Sachs, S. 2002, 'Redefining the Corporation. Stakeholder Management and Organisational Wealth', Stanford University Press.

FIGURE 6.1 VALUE OF STAKEHOLDER ENGAGEMENT TO ORGANISATIONS

SOURCE: CENTRE FOR CORPORATE PUBLIC AFFAIRS, 2013

Globally, there are various approaches (i.e. models and processes) that can be used to capture the most value from stakeholder engagement.

Figure 6.2 illustrates an international best practice approach and process of engaging stakeholders. This approach is pursued by many Australian and global corporations, government departments and agencies of State, and some RDCs, including Meat & Livestock Australia (MLA).

FIGURE 6.2 EFFECTIVE STAKEHOLDER ENGAGEMENT PROCESS

SOURCE: CENTRE FOR CORPORATE PUBLIC AFFAIRS, 2013

We note that a symptom of the absence of meaningful stakeholder engagement is that organisations are less able to identify and manage external issues that may get in the way of implementing strategy, including being able to identify those issues early, so that they may be managed effectively (issues are often identified in the 'Process and Analyse Data' phase of engagement as illustrated in Figure 6.2).

6.3 An assessment of GRDC's stakeholder environment

The context in which this review is being conducted is analysed in Chapter 2.

Since 2014, GRDC has been in a deliberate state of change, focused on the organisation becoming more commercial and operationally agile, to increase value for stakeholders, including levy payers, the grains industry, and the nation.

GRDC's internal reorientation and organisational redesign has been of keen interest to many external stakeholders, especially its new regional office network operating model, research arrangements and related to this, its ideas portal process.

As noted elsewhere in this report, change at GRDC since 2014 has been extensive.

It has included new:

- GRDC purpose
- leadership and personnel
- investment process and systems
- organisational restructure
- new offices and more direct engagement with stakeholders in three regions, and
- internal governance arrangements.

GRDC's Grower Survey (2017) suggests growers are mostly satisfied with their engagement with the organisation during this period of change.

However, analysis of data collected from other stakeholders during interviews for this review, including stakeholders who can be categorised as GRDC's research and partner stakeholders—as well as some GRDC employees—suggested that many non-grower stakeholders have been less engaged with GRDC's change in strategy, and new business and operating model. There are two distinct and interrelated reasons for this disengagement. First, GRDC's consultation process was designed around high-level discussions with senior research leaders and university staff. The messages from consultations with these stakeholders did not trickle down to the lower levels of partner organisations where much of the activity and decision making around an investment occurs. This means that consultations were less impactful than anticipated. Second, GRDC's consultation strategy was built around one-off-information sessions, with limited follow-up or complementary information sharing. This meant that key messages about the new purpose, processes and systems were not reinforced in a systematic and continued way.

The benefits of good and continuous stakeholder engagement—robust and trusting relationships—can be realised during periods of significant organisational change.

In the private and public sectors, stakeholder change management communications and engagement with internal and external stakeholders is a core element of good practice change management.

(Change management is) the process, tools and techniques to manage the people-side of change to achieve a required business outcome.

Creasey, T. 2012.⁵⁸

Change management is not a project plan to be implemented. It is a dynamic process of management and interactions that depend on human acceptance, engagement, and action, to realise an organisational benefit.

Centre for Corporate Public Affairs 2013.⁵⁹

As GRDC enters the next phase of its development, it could consider how it calibrates its Learning & Development content to embed stakeholder engagement capability as an enterprise skill, and as a capability to support effective change management. This could be especially prescient given the percentage of the GRDC workforce that is relatively new to the organisation.

It is noted later in this Chapter that best practice approaches to stakeholder engagement envisage outcomes when one or more parties to a relationship applies resources to strengthen the capacity and capability of the other party to engage and work with it.

6.3.1 Stakeholder engagement 'holding pattern'

A common theme that emerged during ACIL Allen's consultations with GRDC's external stakeholders was that many of them were "fatigued" with what they perceived as a long period of change in the organisation, and a perception that they had "poor line of sight" to significant change that had occurred.

For many external stakeholders and some staff, the GRDC's objective or 'end game' has at times been "unclear" or "uncertain". The timeline for value to be generated from significant change remains uncertain for many important stakeholders.

Some entities and individuals also indicated that their "personal link" with the GRDC had been diluted or severed as GRDC personnel moved in and out of the organisation as it changed its direction, structure, and modus operandi.

Many important stakeholders perceive that although GRDC indicated it wanted them to be 'partners' in how the GRDC operates, and to generate value with them jointly, they perceive that since 2015 the organisation has been focused on "communicating" with them, and that it had put them, and engaging with them, in a "holding pattern".

⁵⁸ Creasey, T. 2012: 'Change Management: The People Side of Change', Prosci Learning Center Publications.

⁵⁹ Centre for Corporate Public Affairs, 2013, 'Seven best internal communications practices for effective change management', paper.

ACIL Allen's analysis of GRDC's communication and engagement strategies and plans between 2015 and 2018 lends some credence to this perception. The strategies and plans guiding GRDC's interaction with non-grower stakeholders in the review period up to mid-2018 indicates that the organisation sought to maintain a tactical approach to communication with stakeholders during the period of significant change.

These stakeholder perceptions were confirmed by multiple GRDC executives consulted during the review. They indicated it was "not ideal" but was "frequently practicable" to maintain communication with stakeholders instead of engaging them with change that remained in flux.

Tactical outreach to external stakeholders was occurring concurrently with deliberations between 2015 and 2017, and decisions in 2018, to co-locate GRDC's Communications management function in the new regional offices, as well as in the organisation's Canberra office, managed by a General Manager in a new Extension and Communications unit.

Stakeholder consultations suggested that GRDC sought to manage many stakeholder relationships in such a manner as to maintain business continuity while significant organisational, governance, and investment reform was considered, decided, and implemented.

During this time, external stakeholders indicated they were intermittently asked for information by GRDC, or their views may have been sought, but they did not feel engaged with the proposed changes, including options to recalibrate GRDC's research program approach and processes, and decentralising its operations.

This analysis is supported by the results of the recent Research Partner Survey 2018 (see Appendix C), which showed a significant decline in the relationship between research partners and GRDC on rating of quality of relationship, GRDC's relationship as a research partner and timeliness of response to requests for information.

ACIL Allen's assessment of GRDC documentation—confirmed by the perceptions of external stakeholders—concluded that stakeholder interaction with stakeholders between 2015 and 2018 focused primarily on:

- sustaining the organisation's investment cycle/processes
- linear transfer of knowledge to growers to maximise its utility, and
- providing information on new rules and processes as they emerged.

By 2017-18, important stakeholders perceived they had been kept "arm's length" during four years of change at the GRDC and did not feel engaged with its plans or new operating model, including understanding or having "joint ownership of" how new research partnerships would be approached or managed. These sentiments were echoed in some of the confidential submissions provided by stakeholder to the review:

There are still a lot of changes that continually keep happening and... this has not been communicated as a shared journey... [which] is a big thing from an external view.

Confidential submission from GRDC stakeholder

There appears to have been little, if any, transition phase for these changes or any action to liaise with those who have left the organisation.

Confidential submission from GRDC stakeholder

6.4 Reconnecting and re-engaging with stakeholders

Analysis of the RD&E Plan 2018-23 suggests that GRDC will require a new type of relationship with many of its non-grower stakeholders to achieve its objectives, including a more flexible research program, and a partnership model in which the organisation and providers work to generate shared outcomes that drive the profitability of growers.

ACIL Allen's observations and analysis suggests that the way GRDC has approached some of its key stakeholder relationships (including its research partners) during its period of change will most likely not suffice to underpin its shift to a shared stakeholder outcome and value model.

The ‘holding pattern’ approach to communicating with stakeholders as a proxy for stakeholder engagement may have been practicable between 2015 and 2017. However, external non-grower stakeholders have higher expectations about engagement with GRDC from 2018 and some important relationships have been diluted as GRDC has been focused on clarifying its purpose, internal structures, governance, policies, and procedures.

Managing a transition from operating in a command and control funding mode to a partnership model based on outcomes and values shared with research partners and growers, would benefit significantly from GRDC pursuing a process of good practice stakeholder engagement to extend some relationships, build new relationships, and repair others.

Good practice engagement includes proactively approaching relationships to understand stakeholder culture, objectives, priorities, capacity, and people; and where necessary, identify agreed and joint areas to build mutual capability to achieve mutually agreed objectives and outcomes.

Significant stakeholders who are disengaged, and a GRDC that does not have the capability to effectively engage, would, ACIL Allen observes, make it very difficult for strategy to be delivered.

GRDC’s approach to stakeholder strategy and tactics during the review period has been anchored in and focused on communication, rather than engagement. ACIL Allen’s consultations with GRDC’s Board and executives suggest that it is sensitive to, and aware of the idea that shifting its approach from communicating with stakeholders to engaging with them would represent a shift in management approach and execution.

6.4.1 Engagement with the idea management process

GRDC’s ideas and research proposals process is analysed in some detail in Chapter 5, Section 5.2, and was raised by important external stakeholders as an area of operations in which there was considerable opportunity to better engage external stakeholders.

Stakeholders suggested there was opportunity to clarify and invite engagement around the role, modus operation, and processes of GRDC’s ideas portal, and how it assesses and manages proposals and ideas for research.

Our stakeholder consultations suggested many research stakeholders have been *communicated with* about the ideas portal, and how to lodge ideas for consideration; but that they have not been engaged with the process, or its objectives and value to GRDC, nor its value to a proposer or proponent of a research idea.

Some stakeholders perceive there could be an IP “risk” associated with submitting ideas via the portal because of uncertainty about how the idea would be managed, including how it would be assessed, and perceived ambiguity about who ‘owns’ ideas submitted via the portal, and how ideas submitted inform GRDC’s broader research agenda.

The perception of “intellectual property risk” could be addressed or mitigated by GRDC considering how it could strengthen stakeholder communication about, and stakeholder engagement with, the portal, including the role the portal plays in GRDC’s approach to innovation and managing its research program.

6.5 Key findings

This chapter has considered GRDC’s consultation and engagement processes as a function critical to its future success. Based on this analysis the following findings can be observed:

- GRDC has been managing its interaction with most of its stakeholders during the review period via tactical communications to sustain the organisation’s investment cycle, facilitate linear transfer of knowledge to growers, and provide research partners with information on new rules and processes as they emerged.
- This mode of interacting with non-grower external stakeholders was deemed practicable by GRDC during a period in which the Corporation recalibrated its purpose, strategy governance, organisational architecture, workplace composition, and research investment approach.

- Grower satisfaction with GRDC stakeholder engagement, measured via its annual Grower Survey has been high for many years.
- Feedback from stakeholders is emblematic that important stakeholders are disengaged with the GRDC, its direction, operations, and agenda.
- Many important stakeholders who participated in the review perceive they have been placed in a “holding pattern” by GRDC since it embarked on its change agenda. This perception has resulted in these stakeholders feeling disengaged with GRDC.
- The GRDC may require highly engaged external stakeholders to shift its research partnership model to one of funding control, towards a partnership model within which value is represented by value generated for partners and growers.
- There is an opportunity for GRDC to develop and manage an international good practice approach and framework to engaging its most important stakeholders (Tier One stakeholders). This would require a shift in focus and strategy from stakeholder communications to stakeholder engagement by its Extension and Communications Team (the team has indicated it is aware of the rationale and importance of such a shift).
- Enterprise capability and skills in stakeholder engagement would be valuable to underpin GRDC realising its RD&E Plan 2018-23. GRDC’s corporate public affairs capability in its Extension and Communications business unit should be accountable for developing stakeholder engagement strategy and working across the organisation to facilitate its execution (this is common practice in other RDCs, agencies of State, and corporations). However, GRDC could maximise delivery of its strategy if stakeholder engagement capability was nominated and required as an enterprise capability. This would represent a significant capability step-up for the organisation, and require stakeholder engagement skills development to be integrated into GRDC’s L&D framework.
- Good stakeholder engagement practice suggests that GRDC should consider seeking to work with its external stakeholders to support and assist them maintain or strengthen their capacity and capability to engage and work with GRDC as sustainable partners.



CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

7.1.1 Overall conclusion

This review has occurred against a backdrop of sustained reform. Since 2014, GRDC has looked for ways to transition from an inwardly focused and highly bureaucratic organisation to one focused on agility, commercialisation and the external context.

With this transition, GRDC has implemented a new purpose—moving from a productivity-agenda early in the review period to a profitability agenda more recently. Also, GRDC has embarked on a process of restructure to enhance its capacities and capabilities to deliver on the new purpose and respond to the needs of growers in a more compelling way.

During this review, GRDC has identified the rationale for many of the changes implemented since 2014. ACIL Allen has cited numerous internal documents which demonstrate the rationale for reform. GRDC's investment in new capabilities, capacities, systems and purpose was based on robust evidence and a solid rationale for reform. These reforms position GRDC for a promising future. Most stakeholders consulted are optimistic about GRDC's future, however suggest that it is too early to tell whether GRDC can deliver on its promise of a more outward facing, grower focused approach.

While reforms generate upside opportunities that need to be captured, they also carry downside risk.

GRDC's reforms are built on the premise that GRDC can be a people first, rather than a process oriented and bureaucratic business. This carries an assumption that GRDCs can effectively manage a continuous procurement investment and an agile project management process, and (under the guidance of the Board) can make investment decisions that are commercial and enhance the profitability of growers. Meeting the requirements of these assumptions would present a challenge to any RDC, however, they are even more challenging given the large number of staff who are new.

To mitigate these risks, GRDC must (as a matter of urgency) invest in the L&D of staff and dramatically accelerate the domain knowledge of the new recruits. Importantly, it will have to find ways of empowering and retaining those staff who are critical to its future success.

Moreover, GRDC's reforms are built on the assumption that its strategic partners and providers can match its appetite for agile project management and commercial outcomes. GRDC requires partners which are agile and industry-focused to deliver its mission.

These partners will work hand-in-hand with GRDC to deliver outcomes not previously achieved for the industry. Not all partners will come from GRDC's existing provider-base and in a small research market, like Australia, these partners may be sourced from overseas or non-traditional markets (such as, the private consulting market). These new partners will require clearly articulated pathways that allow ideas for future investments to be identified and co-developed by all parties involved.

Where GRDC draws on its existing provider-base to execute its RD&E Plan (2018-23), long-term providers/partners will require support and assistance to meet the demands of an agile approach. Some partners (particularly, universities) operate in ways that are quite different to GRDC's new purpose and are driven by incentives (such as the existence of soft/temporary money for researchers) which run counter to its objectives. These partners have been operating in particular ways for many decades and will require support and patience to transition to a new type of partnership model.

GRDC will only be as good as its partners and will have to continue to invest in relationships with providers which are productive but also trusting. Trust between GRDC and its partners will be a key ingredient to its future success.

7.1.2 Conclusions against ToR 1

This review has identified that GRDC has achieved a high level of compliance with its obligations under the PIRD Act and the SFA (see Appendix B). ACIL Allen has cited numerous internal policies, reports and documentation which demonstrate that GRDC is effectively managing its roles and responsibilities under legislation and formal agreements with Government.

This observation is consistent with feedback gained from key stakeholders who have a formal relationship with GRDC and who, with no exception, view GRDC as a highly mature organisation that has the appropriate policies, processes, systems and structures in place to ensure it is accountable for its use of industry/public moneys.

7.1.3 Conclusions against ToR 2

GRDC has developed and implemented all plans that are critical in managing an effective RD&E project/investment portfolio. RD&E plans (2012-17 and 2018-23) were developed following extensive consultation with stakeholders. These plans were then broken down to AOPs which drove GRDC's annual funding and investment activities over the entire review period. Chapter 4 provides a discussion of the KPIs met by GRDC over the review period as a formal record of its successful implementation of AOPs and RD&E plans. It is important to note that GRDC is currently in the process of turning its KITs into sub-strategies and targets. These sub-strategies and targets will provide stakeholders the granularity being sought from the RD&E Plan (2018-23).

A review of Board minutes and compliance reports provided to the Commonwealth Government identifies that GRDC maintains Risk Management Plans which are reviewed at regular intervals by a Board sub-committee (currently named Audit and Risk sub-Committee). IP management is also an important function of the Board, which is regularly discussed and documented in its minutes. While it is inappropriate to comment on individual cases relating to IP, the processes and procedures implemented by GRDC to manage its IP appear to be appropriate for the level of investment and the risks of the investments undertaken by the organisation.

Further, these minutes and compliance reports show that financial probity and fraud control is an important issue at the Board level, with no apparent incidents of fraud identified for the review period. Feedback from Board members, Government and senior GRDC staff collected for this review, support the observation that fraud control plans and procedures are appropriately implemented at GRDC.

7.1.4 Conclusions against ToR 3 and ToR 4

ACIL Allen considered numerous indicators of organisational efficiency over the review period. These indicators included consideration of staffing, corporate and other overhead costs. They did not indicate an improvement in the administrative efficiency of GRDC over the review period. Nor did they indicate a disproportionate or unexplained growth in administration.

However, considerations of this nature are misleading for an organisation which has initiated significant reform for several reasons.

First, the underlying objective, of reforms was to improve the effectiveness and, ultimately, the impact of GRDC's investments.

Second, to achieve this objective investment in the new IMS and other internal systems was required. These systems will generate additional costs in the short-term, but should also deliver future benefits

to organisational efficiency as they will be fit-for-purpose and provide staff with the tools needed to manage against a new purpose. The ability to show that GRDC can execute its investment responsibilities in a timely way will be a key indicator of efficiency improvement in the future.

Third, the establishment of a physical regional presence generated additional leasing and office-based costs. Some of these costs represent one-off costs (like lease establishment, the introduction of video conferencing and staff relocation costs) while others will be ongoing (such as additional rent and the need for some senior staff to travel between offices). There are many costs associated with having regional offices which have now been sunk and are unlikely to reappear over the coming years.

Finally, staff turnover generates additional costs which are unavoidable. New staff often require more administration support and assistance than existing ones. Also, GRDC has used contractors and external staff to resource positions that are vacant on the organisational chart. These staff are typically more expensive on a per hourly basis than full time equivalent staff. As GRDC fills its remaining vacancies and staff become more familiar with their roles these costs are likely to decline over the coming years.

GRDC's move to continuous procurement was aimed at materially reducing the time taken for an idea to become an investment. Under the previous procurement system, applicants who missed deadlines could be required to wait 12 months before lodging the application, potentially delaying the ability of researchers to deliver investment outcomes within a timely fashion. The previous system also prevented research partners from commencing an investment at a point of time in the year when seasonal factors (such as rain fall) were favourable to the execution of a research project.

One benefit of a continuous procurement process is that it can reduce the burden placed on research partners to prepare, submit and finalise application funding applications within a specified timeframe. This flexibility should provide partners with more time to refine and improve their research ideas/proposals before they are submitted. Another benefit is that it affords investment partners the flexibility to conduct research at the appropriate time within a season. A final benefit of the model is that while there are natural peaks in the investment cycle (once again due to seasonal factors) which means that GRDC will always experience intense periods of decision making and management, a continuous process provides opportunities for staff to smooth the workload of activities that are not subject to seasonal factors to other times of the year. This makes for a more efficient (and effective) use of GRDC's staff resources throughout the entire year.

Furthermore, GRDC has effectively managed its research portfolio over the review period. Chapter 4 identified numerous indicators to demonstrate that GRDC's investments have been aligned with its core plans and strategies, effective in terms of meeting its own performance indicators, and effective in the eyes of growers. The high success rate in meeting these indicators provides further evidence that GRDC is a mature organisation which meets the requirements set by the Board and key stakeholders.

There is one exception to ACIL Allen's observations about GRDC's effectiveness. Consultations with a range of internal and external stakeholders have identified that GRDC has received mixed results from their bi-lateral agreements with state governments. As a result, the case for entering and maintaining bi-lateral agreements will be assessed on a case-by-case basis. With due consideration of GRDC's purpose being supported by arrangements that are agile and performance-based whilst also appreciating the value in retention and development of staffing in areas of key strategic importance, GRDC will be adopting more commercially-focused partnerships that may or may not include state governments.

Finally, the existence of strategic partnerships with large international providers holds significant potential, especially in circumstances where there are small domestic markets for such research. However, it is too early to tell whether these partnerships will deliver the promise they are signalling to GRDC and the grains industry.

7.1.5 Conclusions against ToR 5

Chapter 4 provided lower bound estimates that GRDC's investments under the RD&E Plan (2012-17) delivered outcomes that are aligned with expectations and consistent with strategies. For example, a sample of projects analysed for the years 2017 and 2018 show that the average benefit to industry

from these projects was between 6.6 and 14.3 (BCR) or \$78 million and \$330 million in net present value terms. These benefits (which exceed the total value of GRDC's contribution to investments 2018) have been delivered from approximately 12 projects out of the 700-800 projects in the investment portfolio during that time.

A consideration of this review is whether GRDC's investment processes, including project selection and analysis processes, will support the objectives of a new purpose and a commercially agile mindset. The review has identified a strong desire within GRDC and its Board to invest in projects which deliver step-change or breakthrough research outcomes (which equate to double digit growth opportunities for the grains industry over the coming decades). These outcomes are only likely to be achieved if investment processes and decision making are consistent with a higher-risk and higher-reward investment approach. However, ACIL Allen has also identified some potential for the investment and project evaluation process to have unintended bias towards incremental or lower risk research outcomes. The fact that only 20 per cent of projects fail to deliver the anticipated benefits supports an argument that the selection process is weighted towards risk or failure minimisation.

7.1.6 Conclusions against ToR 6

GRDC's regional presence and ongoing focus on regional issues are viewed as strengths of the organisation by a broad range of Board, GRDC, research providers, grower representatives consulted.

While the establishment of a physical regional presence has increased GRDC's corporate and overhead, these costs have created opportunities for better connectivity with growers and investment partners who are located in non-metropolitan areas. By having a regional presence, GRDC affords stakeholders the opportunity to have more face-to-face time with GRDC staff and to develop relationships that are built on mutual understanding and trust. Many stakeholders consulted credit regional office managers as being important conduits to growers and research partners and critical in developing the long-term relationships that are required to make partnerships work on the ground. These managers play important integration roles that ensure stakeholder interaction with GRDC is wholistic and not siloed by interaction through with its individual business units.

The establishment of regional panels is also identified as a strength of the GRDC model. Panels, which are often chaired by well-connected influential growers (who have a sense of civic duty), are critical in ensuring grower needs and requirements are reflected in the investment process. These panels operate through a series of coordinated activities and regional cropping solutions networks which provide a dynamic set of interactions between GRDC and growers and offer important filters for assessing potential investment ideas that would be difficult to achieve in absence of panels.

Some repositioning of the panel responsibilities and reporting procedures clarified the boundaries, roles and accountabilities of the panels towards the latter half of the review period. While these changes elicited mixed responses from stakeholders, it is evident that panel effectiveness is determined by the quality of the representatives appointed to panels, the quality of their relationships with stakeholders in the regions, and their ability to continue to meet regularly in a face-to-face setting. By quality, ACIL Allen refers to the ability of panel members to effectively represent grower needs and work collaboratively with other panels. Panels should be encouraged to act cooperatively, not competitively, to ensure a wholistic view of grains research is incorporated into the investment process. A siloing of panel activities and deliberations will dilute the power and potential of the panel system.

The impact of establishing a regional presence in Western Australia has assisted but not resolved the tensions between the west and GRDC. Having staff based in Western Australia has improved relationships through better communication and understanding. However, at present both GRDC and DPIRD are yet to complete reforms which started before the review period. In this case neither are well-positioned to clearly articulate and agree where their interests align to develop a joint agreement on how to collaborate and co-invest. Given there is historical and future co-dependencies between the two (in needing to collaborate nationally and specific needs of the industry in the west) it is unlikely that either can complete individual reforms on their own. Joint resolution of this issue is paramount and beyond the remit and capability of GRDC's regional presence.

7.2 Recommendations

The following recommendations are provided for GRDC's consideration. The recommendations have been organised into two key themes.

The first theme focuses on recommendations that improve the internal operations of GRDC. These recommendations focus on helping GRDC to realise the benefits of reforms. This theme covers recommendations 1 to 4.

The second theme focuses on recommendations that improve GRDC's interactions with its external environment. These recommendations are effectively outward focused in nature. This theme covers recommendations 5 to 6.

7.2.1 Bed down internal reforms to realise the benefit of two restructures and new systems

The emergence of reform fatigue is clear from consultations with a range of internal and external stakeholders. Most stakeholders consulted for this review identified the need for GRDC to realise the potential of reform by a relentless focus on execution. These stakeholders were typically aware of the rationale underpinning reforms and were supportive of the direction articulated by GRDC's senior leadership.

However, stakeholders are keen to ensure that GRDC avoids the temptation for additional restructuring in the coming years and to imbed the new systems and processes into the core practices of the business. This also extends to GRDC's corporate form. In the short term, GRDC should avoid actions that progress a move towards an IOC. These actions have the potential to consume considerable organisational resources and will distract GRDC from completing its reform agenda.

Most stakeholders feel that it was now time to 'give the reforms some air time' before they are reviewed or fundamentally refined. This air time will provide opportunities for a relatively new GRDC workforce to become familiar with the systems and processes adopted and to implement them in the most efficient and effective way possible.

That being said, it should not preclude GRDC from recognising when processes are not working and making appropriate adjustments.

RECOMMENDATION 1 BED DOWN REFORMS

Allow time (up to two years) for GRDC to realise the benefits of internal reforms and investments before making any significant changes to the organisation's purpose, structure, systems and processes.

7.2.2 Continue to build the capabilities and capacities of GRDC's workforce

GRDC has a large number of staff who are new to the organisation or their roles. To ensure GRDC captures the benefits of two internal restructures, the investment in new systems and the move to a continuous investment process, it must accelerate the L&D of these staff.

A good practice L&D function should focus on providing the best learning environment possible. It should promote the personal growth of employees through a mixture of structured and flexible training programs at levels within GRDC where skills development has been identified as a critical to organisational performance. The programs should not only develop 'learning moments' but also deliver 'experiential learning journeys' that reinforce and continue learning over time.

To this end, GRDC could consider the introduction of a learning and development framework that uses the 70/20/10 model of contemporary L&D. The model was created in the 1980s by researchers from the Center for Creative Leadership, a not-for-profit educational institution in Greensboro, N.C. (namely, Morgan McCall, Michael Lombardo and Robert Eichinger). The model provides general guidance for organisations seeking to maximise the effectiveness of their L&D programs. The model is

widely employed by public sector organisations in Australia (see the Australian Public Sector Commission website⁶⁰) and overseas.

The model suggests that hands-on experience (the 70 per cent) is the most beneficial for employees because it enables them to discover and refine their job-related skills, make decisions, address challenges and interact with influential people such as bosses and mentors within work settings. They also learn from their mistakes and receive immediate feedback on their performance.

Employees learn from others (the 20 per cent) through a variety of activities that include social learning, coaching, mentoring, collaborative learning and other methods of interaction with peers. Encouragement and feedback are prime benefits of this valuable learning approach.⁶¹ In the context of GRDC it may be prudent to invite significant research partners (who are experts in their field) to participate in the coaching and mentoring activities.

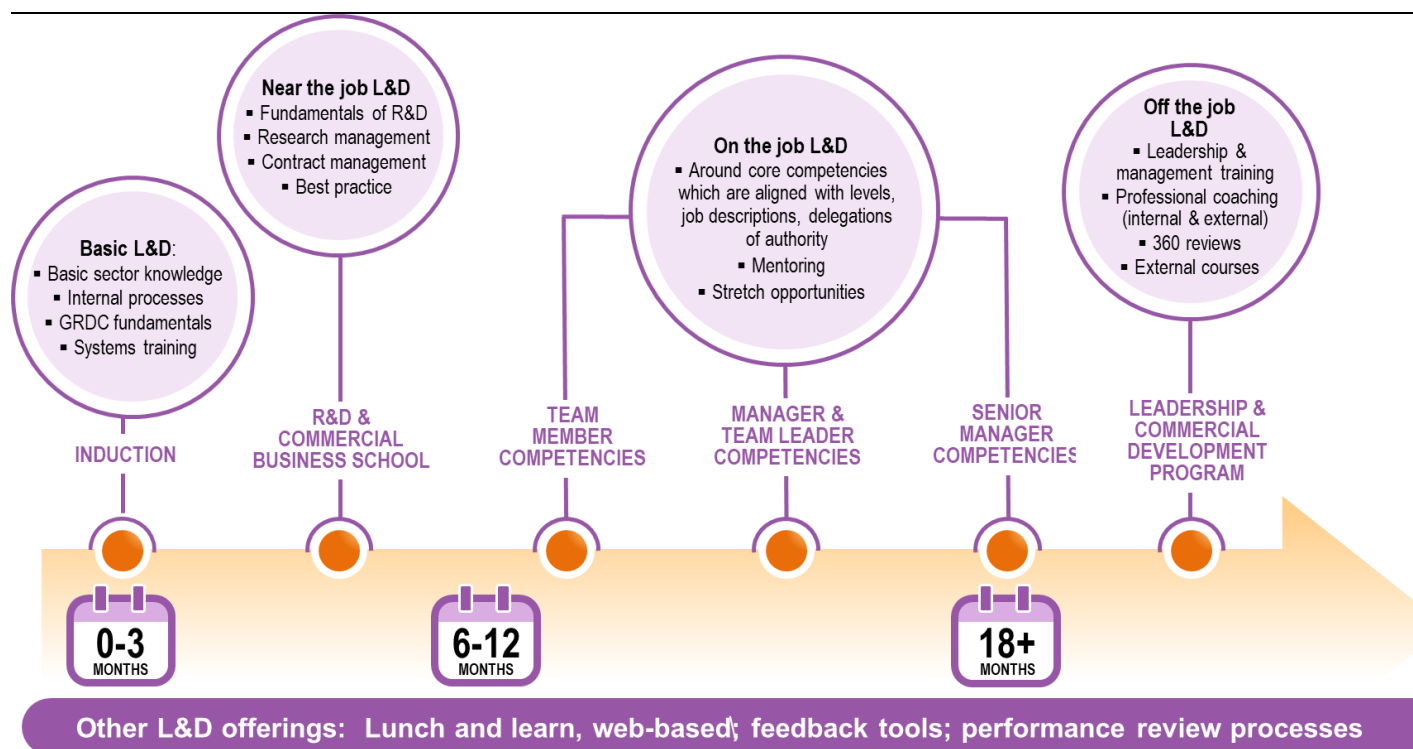
The formula holds that only 10 percent of professional development optimally comes from formal traditional coursework instruction and other educational events, a position that typically surprises practitioners from academic backgrounds.

In short, this model ensures that 70 per cent of a staff member's learning journey happens on the job, 20 per cent occurs through social learning, coaching and mentoring (near the job), and 10 per cent through structured class training and development by GRDC's HR function (off the job).

By ensuring senior-level staff are actively involved in coaching and mentoring staff while on the job, GRDC helps to foster a learning culture that is not just reliant on receiving class-based training.

A typical L&D roadmap using this model is provided in **Figure 7.1**. The model should be adapted to meet the exact needs of GRDC. However, it may include an R&D Business School where staff are trained in the facilitation, networking and the commercial skills required to deliver GRDC's purpose. It may also include the use of a competency framework from which skills can be baselined, organisation-wide L&D activities can be developed, and progress towards goals can be monitored.

FIGURE 7.1 ARCHITECTURE OF A L&D ROADMAP FOR GRDC




SOURCE: ADAPTED FROM MCCALL ET AL USING A RANGE OF ONLINE RESOURCES

⁶⁰ <https://www.apsc.gov.au/job-learning>

⁶¹ <https://trainingindustry.com/wiki/content-development/the-702010-model-for-learning-and-development/>

RECOMMENDATION 2 IMPROVE THE CAPABILITIES AND CAPACITIES OF GRDC'S WORKFORCE


Develop an L&D roadmap for GRDC staff that rapidly accelerates the professional and domain knowledge of its workforce. Ideally, the roadmap should be underpinned by a competency framework which provides staff and management with a clear understanding of the L&D needs of staff at all levels.


7.2.3 Focus on retention

To effectively execute GRDC's new vision and purpose, and to deliver on the promise of a new commercially-focused and agile approach, staff will need time to learn their respective roles and build the trusted relationships required to deliver strong commercial partnerships between GRDC and its providers. This places a primacy on implementing strategies and approaches that not only encourage the development of staff but also their retention. High staff turnover will prevent GRDC from realising the potential of its reforms and two restructures. That being said, this recommendation should not prohibit GRDC from managing staff who are not aligned with its vision, culture and performance requirements out of the organisation.

RECOMMENDATION 3 FOCUS ON RETENTION

Develop and implement strategies that encourage the retention of staff who are critical to the implementation of the RD&E Plan (2018-23). These strategies could include: career and professional development opportunities; travel opportunities; cultural improvement; and employee recognition schemes and rewards that are consistent with Commonwealth staffing requirements/obligations.



7.2.4 Improve the feedback loops associated with idea generation

Idea generation is a critical aspect of the new investment process, where GRDC has implemented new processes and systems to improve the quality and consistency of investment proposals that are put to the organisation for consideration.

As discussed in Chapter 6, stakeholders are seeking additional feedback from GRDC about the outcomes of investment ideas that are generated through panel activities, regional networks and other interactions with the organisation. Feedback loops were also identified by PwC in 2015 as a critical risk to GRDC if they are not effectively managed and supported by internal systems. As a matter of urgency, GRDC should look for ways to provide feedback to stakeholders who generate ideas that become part of GRDC's formal investment process. This feedback will help stakeholders to better understand how ideas become investments and thus build trust in GRDC's management of the ideas process.

RECOMMENDATION 4 IMPROVE FEEDBACK LOOPS RELATING TO IDEAS MANAGEMENT

As a matter of priority develop feedback loops or protocols for communicating to those stakeholders who are credited in the IMS as the source of an investment idea.


7.2.5 Investigate the feasibility of establishing an open innovation pool

This recommendation encourages GRDC to explore mechanisms which help it to capture the benefits of investment ideas that may not fit neatly with the KITs, but may deliver step change or break through outcomes for the grains industry. The recommendation also provides GRDC with a mechanism that

shields it from unintended biases towards investment ideas that are incremental (as discussed in Section 5.2).

It involves investigating the feasibility of establishing a mechanism for financing research ideas that are higher risk in nature and could deliver strong benefits, but require support that is beyond the standard investment. The mechanism should be established within GRDC's existing legislative framework so as to avoid the need for legislative amendments which typically take significant time to occur. There are many examples of mechanisms that GRDC could model their approach on. The actual mechanism chosen should be based on a detailed understanding of the costs, benefits and impacts associated with the mechanism and its ability to support GRDC's long-term objectives.

RECOMMENDATION 5 OPEN INNOVATION POOL

Investigate the feasibility of establishing an open innovation pool. GRDC should consider the pool's legal, governance, management, staffing and resourcing arrangements, as well as its performance and accountability arrangements. GRDC should also consider the full range of costs and benefits associated with establishing a pool.



7.2.6 Build or complement existing competency in the (domestic) research provider-base

GRDC is the most significant source of funding for grains research in Australia. It also operates within the context of small RD&E provider market, relative to other major grain producing countries and regions, such as Europe, North and South America.

The adoption of a more agile and commercially-minded investment approach delivers many benefits to levy payers (and the grains industry more broadly) through the efficient and effective execution of grains RD&E. However, these benefits can only be realised if GRDC's investment partners operate in a similarly agile and commercially-oriented way.

GRDC can pursue two options in parallel to achieve this: change corporate form, and play a stronger leadership role in the transformation of its partners to become more agile and commercial.

Changing from a statutory corporation to an industry owned company or hybrid as recommended by Marsden Jacobs would provide GRDC with greater opportunities to partner and build their capacity, as well as remove other operational constraints. The question is whether this is necessary and sufficient in the immediate future. Implementing such change will require considerable resources by GRDC, industry and government. Care needs to be taken to ensure it does not detract from completing the existing reforms which still need to be completed.

Irrespective of what GRDC's corporate form is there is broad consensus that the grains innovation system needs to adapt and will benefit from becoming more agile and commercial. GRDC's dominance of the Australian grains R&D landscape means the system has evolved to a hub and spoke structure. Most partners cannot enter or move in the system without GRDC which works against the agile and commercial outcomes being sought.

International collaborations, such as the Bayer partnership, are welcome additions and reinforce the global dimension to R&D. GRDC is open to more international collaborations as means of increasing competency, as collaborations have the potential to introduce skills and technologies that may not be available domestically. Such in-flows can enhance, complement and 'boot strap' Australian-based capability if well-managed. GRDC's Board and management has also recognised that new sources of innovation capability may be held within non-agriculture research providers, for example within centres of excellence in engineering, chemical, genetic and other technologies. The question must be asked whether more can be done to attract strong partners/collaborators from overseas and other sectors.

The imperative is for the system to move away from GRDC being the hub for all parts of the system to a network-based structure where GRDC's position is defined by the focus and maturity of each component system.

The transition to a more open network form is not simply a matter of revitalising the National Grains Sector RD&E strategy. While valuable, integrating private and overseas investment and capability into the system is critical and a committee of public agencies is not sufficient. Rather it is a progressive evolution of agile commercial relationships developed through mutual and national interest.

Unless such a transition is made it is likely GRDC will generate less value than its potential. The key to the transition is the way in which GRDC engages and forms partnerships through its investment and procurement systems. While the KITs are an important development, they must be responsive to opportunity rather than a simplistic rules-based justification. The same applies to procurement which is the step in the investment process where the actual expected value is often determined through negotiation. In both cases, GRDC must be able to engage in a genuine exploration as to where value lies. The intent is already inherent in the IMS, but in the absence of clear, transparent and repeated communication, a mechanism beyond the GRDC controlled call for tender will result in transactional rather than partnership-based relationships that will limit value. At the same time, partners will have their own constraints in terms of how they define commercial and agile and the degree to which they can do so.

The implication is that GRDC must be prepared to invest in potential as well as existing capability. GRDC must also be clear on when it leads/control and when it supports/follows others. These can only be determined by working together.

RECOMMENDATION 6 BUILD PROVIDER CAPACITY

GRDC must communicate where it intends to lead and support the grains innovation system which is repeatedly validated and adapted with its partners. GRDC must clarify how it will engage and invest with stakeholders to provide clear and transparent partnership mechanisms.





A Sydney Focus Group was to be held on Wednesday 19 September but did not go ahead due to insufficient interest. One was interviewed face-to-face, one indicated attendance at the Canberra workshop, one declined, one requested a phone interview, and no response from all others invited.

A Brisbane Focus Group was to be held on Tuesday 25 September but did not go ahead due to insufficient interest. Two phone interviews were booked, one will provide written feedback, and no response from others invited.

An Adelaide Focus Group was to be held on Thursday 4 October but did not go ahead as there was insufficient interest. One was interviewed by phone, one is scheduled to be interviewed in person, one made a written submission, one declined, and one indicated attendance at the Melbourne workshop. There was no response from all others invited.

A Melbourne Focus Group was held on Monday 15 October. There was one attendee, despite others indicating attendance. Phone interviews have been scheduled for three stakeholders, two declined and no response from others invited.

A Perth Focus Group was held on Wednesday 17 October. There were four attendees. One declined, one was interviewed by phone, two were interviewed in person, one will make a written submission, and no response from others invited.

Canberra Focus Group was held for Tuesday 23 October. One invitee declined, and there were three attendees.

ACIL Allen received four confidential written submissions.

Approximately 75 stakeholders were invited to participate in the review. Those who were consulted are outlined in **Table A.1**. Approximately 20 stakeholders invited chose not to participate in the review. These stakeholders were contacted (via phone and email) on average 3-4 times each by ACIL Allen.

TABLE A.1 STAKEHOLDERS CONSULTED

Name	Organisation	Meeting type
Mr John Woods	GRDC	Face to face
Ms Roseanne Healy	GRDC	Phone
Dr Helen Garnett	GRDC	Phone
Dr Jeremy Burdon	GRDC	Face to face
Dr Steve Jefferies AM	GRDC	Face to face
Dr Steve Thomas	GRDC	Face to face
Ms Lucy Broad	GRDC	Face to face

Name	Organisation	Meeting type
Ms Brondwen Maclean	GRDC	Face to face
Ms Cathie Warburton	GRDC	Face to face
Mr Martin Priest	GRDC	Face to face
Dr Nicole Jensen	GRDC	Face to face
Mr Justin Crosby	GRDC	Face to face
Ms Jan Edwards	GRDC	Face to face
Mr Craig Ruchs	GRDC	Face to face
Mr Charles Thorn	GRDC	Phone
Dr Terence Ferrell	GRDC	Face to face
Ms Anissa LaMaitre	GRDC	Face to face
Mr John Bennett	GRDC Southern Panel	Phone
Mr Peter Roberts	GRDC Western Panel	Phone
Mr Darrin Lee	GRDC Western Panel	Phone
Mr John Minogue	GRDC Northern Panel	Phone
James Clarke	GRDC Northern Panel (ex Chair)	Phone
Mr Wayne Newton	AgForce	Phone
Ms Caroline Welsh	Birchip Cropping Group	Phone
Prof Gavin Ash	Centre for Crop Live, USQ	Phone
Mr Bruce Finney	CRDC	Face to face
Prof Mark Gibbers	Curtin University	Face to face
Prof German Spangenberg	DEPI	Phone
Dr Mark Sweetingham	DPIRD	Face to face
Mr Maurie Street	GOA	Face to face
Dr Garry Fullelove	QDAF	Phone
Ms Fiona Hart	Riverine Plains	Phone
Dr Peter Appleford	SARDI	Phone
Dr Greg Harper	University of Melbourne	Phone
Andrew Weideman	Grain Producers Australia	Phone
SOURCE: ACIL ALLEN		



B.1 Assessment of compliance

Assessment of GRDC's obligations under the SFA (2015-19) is provided in Table B.1. Note that only the clauses which are relevant to GRDC meeting its obligations under the SFA (as opposed to the obligations of other parties) are analysed below.

TABLE B.1 ASSESSMENT OF GRDC'S OBLIGATIONS UNDER THE SFA (2015-19)

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
2. Term and operation of the Deed	
2.2 In accordance with section 33(5) of the Act GRDC must publish this signed Agreement and any variations to this Agreement on its public website.	Fully satisfied. The Agreement available on the GRDC website at: https://grdc.com.au/about/corporate-governance (Viewed: 15 October 2018)
2.3 The parties must, at least six months before the expiry of this Agreement commence negotiation in good faith with a view to entering into a new Agreement either on the same terms and conditions or on varied terms and conditions as agreed by the parties.	On-track. Planned to commence negotiations no later than 1 December 2018. See SFA Compliance Report July 2018.docx. (Viewed: 15 October 2018)
3. Compliance with legislation	
GRDC must comply with all relevant laws, including its respective obligations under the Act, the Regulations and the PGPA Act.	Fully satisfied. See SFA Compliance Reports 2015-18 and Annual Reports 2015-18. (Viewed: 15 October 2018)
4. Corporate governance and board performance	
4.1 GRDC must comply with the corporate governance requirements in the PGPA Act and implement a framework of good corporate governance practice in managing and investing the Funds. In establishing and maintaining the framework GRDC should draw on better practice guidance as appropriate.	Fully satisfied. Reported in SFA Compliance Report Updated Nov 2017. The corporate governance framework is documented on the GRDC website at: https://grdc.com.au/about/corporate-governance (Viewed: 15 October 2018)

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>4.2 GRDC must report on steps taken to enhance corporate governance at the six-monthly meeting held under clause 14.1.</p>	<p>Fully satisfied. The Board has overseen the implementation of governance and reporting arrangements under the PGPA Act including:</p> <ul style="list-style-type: none"> – Reviewing fraud control risks. – Strategic planning. – Reviewing strategic risks. – Receiving gifts and benefits policy. <p>See SFA Compliance Reports 2015-18. (Viewed: 15 October 2018)</p>
<p>4.3 GRDC must ensure that up-to-date information on the following is available on its public website:</p> <p>(a) GRDC's R&D Plan, including information relating to its development and any changes;</p> <p>(b) the priorities used by GRDC to determine which projects it will fund;</p> <p>(c) an overview of GRDC's desired outcomes, key activities to achieve those outcomes and key achievements; and</p> <p>(d) key Research and Development, Extension and Marketing Activities which GRDC is funding.</p>	<p>Fully satisfied. All plans, project information and RD&E GRDC funds is available on the GRDC website (https://grdc.com.au/):</p> <p>a) GRDC RD&E Plan 2018-23 (https://grdc.com.au/about/corporate-governance/rde-plan).</p> <p>b) RD&E priorities are outlined in the 2018-23 RD&E Plan (https://grdc.com.au/about/corporate-governance/rde-plan) and Annual Operating Plans published on the GRDC website. (https://grdc.com.au/about/corporate-governance/annual-operational-plan)</p> <p>c) GRDC's desired outcomes, key activities to achieve those outcomes can be found in the Annual Operating-Plan. (https://grdc.com.au/about/corporate-governance/annual-operational-plan) and key achievements in the Annual Reports (https://grdc.com.au/about/corporate-governance/annual-report).</p> <p>d) Current RD&E investments which GRDC are funding can be found (https://grdc.com.au/about/corporate-governance/annual-operational-plan).</p> <p>(Viewed: 15 October 2018)</p>
<p>4.4 The information to be published under the preceding clause shall not include information of the following kinds:</p> <p>(a) personal information as defined in the Privacy Act 1988, unless permitted under the Privacy Act 1988; or</p> <p>(b) information about the business, commercial, financial or professional affairs of any person if it would be unreasonable to publish that information, such as Confidential Information; or</p> <p>(c) information which would, or could reasonably be expected to damage:</p> <p>(i) GRDC; or</p> <p>(ii) the Industry; or</p> <p>(iii) the national interest.</p>	<p>Fully satisfied. The RD&E Plan 2018-23, Annual Operating Plans 2015-16 to 2018-19, Annual Reports 2015-16 to 2016-17 and the Investment listing 2018-19 do not include information as specified in 4.4 (a) to (c). (Viewed: 16 October 2018)</p>
Committee and panel members disclosure of pecuniary interests	
<p>4.5 If a person is appointed as a member of a GRDC committee or panel concerned with the selection and funding of Research and Development Activities and/or Marketing Activities and has a pecuniary interest that relates to the affairs under consideration by the committee or panel, that person must disclose that interest in accordance with any instructions given by GRDC.</p>	<p>Fully satisfied. All GRDC Committee or Panel members disclose pecuniary interests through Conflict of Interest Declarations Forms, which are updated frequently. See Conflict of Interest Policy. (Viewed: 15 October 2018)</p>
Payment of funds	

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>5.2 Notwithstanding any other provision of this Agreement, for the purposes of sections 33, 34 and 35 of the Act:</p> <p>(a) the Commonwealth must invoice GRDC for amounts equal to the expenses incurred by the Commonwealth in relation to sections 34 and 35 of the Act;</p> <p>(b) GRDC must pay any amount so invoiced to the Commonwealth within 30 days of receipt of the invoice; and</p> <p>(c) an amount to be paid by GRDC under this clause must be paid:</p> <p>(i) from the Research and Development Payments to the extent that the amount relates to the Research and Development Payments; or</p> <p>(ii) from the Marketing Payments to the extent that the amount relates to the Marketing Payments.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 5.2.</p> <p>(Viewed: 15 October 2018)</p>
Timing and manner of making payments	
<p>5.4 The Commonwealth must pay the Research and Development and Marketing Payments to GRDC within two calendar months after the Commonwealth receives the amounts in cleared funds.</p>	<p>Fully satisfied. See Compliance Report SFA – July 2018. "Monthly claims forms are completed annually details what has been spent on R&D activities. Financial statements have been audited annually by ANAO."</p> <p>(Viewed 15 October 2018)</p>
<p>5.5 Subject to the applicable limits and certification the Commonwealth will pay the Commonwealth Matching Payments to GRDC within two calendar months after receiving from GRDC:</p> <p>(a) a correctly rendered claim for payment or tax invoice; and</p> <p>(b) evidence reasonably satisfactory to the Commonwealth that GRDC has already spent the amount that forms the basis of the claim on Research and Development Activities.</p>	<p>Partially satisfied. See Compliance Report SFA – representation letter to KPMG.docx 30 November 2016. Findings in the KPMG Reasonable Assurance Report notes GRDC made claims that do not comply with Clause 5.5, however, it was noted that an alternative arrangement had been in place since 2002 and that it is by mutual agreement between the GRDC and the Department of Agriculture and Water Resources.</p> <p>(Viewed: 15 October 2018)</p>
<p>5.6 For the purposes of clause 5.5(b) a certificate signed by the Executive Director or the Chief Financial Officer (or equivalent) of GRDC, certifying that GRDC has spent a particular amount on Research and Development, is reasonably satisfactory evidence in the absence of any evidence to the contrary.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 5.6.</p> <p>(Viewed: 15 October 2018)</p>
<p>5.7 The final claim for a Financial Year must be supported by a certification from the Board, signed by the Chair of the Board and the Executive Director or equivalent of GRDC certifying:</p> <p>a) the amount of Eligible R&D Expenditure expended for the relevant Financial Year; and</p> <p>b) the claims for payment of Commonwealth Matching Payments under clause</p> <p>5.5 and the declared Eligible R&D Expenditure are accurate and in accordance with the Act and this Agreement.</p>	<p>Fully satisfied. Documented in Statement by the Directors, Managing Director and Financial Controller in Annual Reports 2015-19.</p> <p>(Viewed: 15 October 2018)</p>
Application of the funds	

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>6.1 GRDC may only spend the Funds:</p> <p>(a) only in accordance with the Act (in particular Part 2 Division 5), the PGPA Act (in particular section 15) as it applies and this Agreement; and</p> <p>(b) in a manner that is consistent with:</p> <ul style="list-style-type: none"> i) the R&D Plan; ii) the Annual Operational Plan; and iii) the Guidelines. 	<p>Fully satisfied. See SFA Compliance Report July 2018.docx. GRDC publishes the AOP each financial year, that implement the Strategic Plan 2012-17 and the new Strategic Plan 2018-23. The Annual Report published on the website details the R&D expenditure against investment priorities aligned with GRDC's strategic themes.</p> <p>(Viewed: 15 October 2018)</p>
<p>6.2 GRDC may only spend Funds on Research and Development Activities if such expenditure is consistent with the functions and powers of GRDC under the Act and to the extent possible within those constraints, ensure that those Research and Development Activities:</p> <p>(a) relate to the Industry and are for the benefit of Industry; and/or</p> <p>(b) are for the benefit of Industry and for the Australian community generally.</p>	<p>Fully satisfied. GRDC's strategic plans, investment against these plans and assessment of benefits (as shown in chapters 3, 4 and 6) are a clear indication that section 6.2 has been satisfied by GRDC throughout the evaluation period.</p>
<p>6.3 Marketing Payments may only be applied by GRDC for, or in relation to Marketing Activities related to the Industry, for the benefit of the Industry.</p>	<p>Clause not enacted. Statutory Funding Agreement "GRDC does not receive Marketing Payments as at the Agreement Date".</p> <p>(Viewed: 15 October 2018)</p>
Management of the funds	
<p>7.1 GRDC must establish necessary accounting systems, procedures and controls in accordance with the PGPA Act and this Agreement, including a Cost Allocation Policy, to ensure:</p> <p>(a) the Funds are spent only in accordance with the Act and this Agreement; and</p> <p>(b) all dealings with the Funds are properly authorised, conducted and accounted for; and</p> <p>(c) an auditor is able to readily verify that the Funds have been used only in accordance with the Act and this Agreement.</p>	<p>Fully satisfied. See Compliance Report SFA—representation letter to KPMG.docx 30 November 2016. Also, see SFA Compliance Report Updated Nov 2017, which identifies the implementation of the new cost allocation model policy.</p> <p>(Viewed: 15 October 2018)</p>
Extension of research	
<p>9.1 GRDC must carry out its functions under section 11 of the Act and contribute to the implementation of relevant Industry sector and cross-sectoral strategies under the RD&E Framework.</p>	<p>Fully satisfied. Dr Steve Jefferies AM represented GRDC on the committee of the Grains Industry National RD&E Strategy released in 2017. See (https://www.npirdef.org/content/75/7afad8b6/Grains-Industry-National-RD-E-Strategy-2017.pdf). Also GRDC's previous and strategic plans are closely aligned with sectoral and other Government RD&E strategies.</p> <p>(Viewed: 15 October 2018)</p>
<p>9.2 Without limiting the obligations set out in clause 9.1 and for the purposes of carrying out its functions under subsection 11(e) of the Act, GRDC must demonstrate that pathways to extension and adoption are incorporated into the planning and approval process contemplated by this Agreement.</p>	<p>Fully satisfied. See SFA Compliance Report July 2018. The pathway to market for an investment is a new requirement of the project scoping process within the new GRDC continuous investment process.</p> <p>(Viewed: 15 October 2018)</p>
Planning	
Program framework	

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>10.1 GRDC must develop and maintain a Program Framework to support its planning & performance and accountability requirements under the PGPA Act (Chapter 2, Part 2-3) and this Agreement within six months of the Agreement Date.</p>	<p>Fully satisfied. Reported in SFA Compliance Report Updated Nov 2017. Completed in accordance with development of planning framework around R&D investment themes 1-6 (2012-17 Strategic Plan) and the profit focused equation for the 2018-23 Strategic Plan. (Viewed: 15 October 2018)</p>
<p>10.2 The Program Framework should also inform the development of the key planning and reporting documents such as the R&D Plan and Annual Operational Plans and the Annual Report and must include specifications of:</p> <p>(a) planned outcomes-results, consequences and impacts-from the investment of Funds. An outcome statement should:</p> <p>(i) be specific, focused and easily interpreted;</p> <p>(ii) identify the intended outputs, with the level of achievement against the intended outcomes being measurable;</p> <p>(iii) specify the target groups (where these groups can be identified.)</p> <p>for the outcomes;</p> <p>(iv) specify the Programs, sub-programs (if any) key deliverables and Activities to be undertaken that contribute to the achievement of the intended outputs and outcomes; and</p> <p>(v) be agreed by key stakeholders and the Commonwealth as part of developing the R&D Plan.</p> <p>(b) for each Program identify key performance indicators that provide an accurate and succinct story of performance. Key performance indicators should:</p> <p>(i) in the R&D Plan, be strategic in nature and linked to the planned outputs and outcomes;</p> <p>(ii) in the Annual Operational Plan, link to the deliverables;</p> <p>(iii) in the Annual Report, bring the key performance indicators under (i) and (ii) above together and demonstrate how the deliverables funded advanced the outcomes;</p> <p>(iv) be clear, unambiguous and measurable with appropriate timeframes for achievement;</p> <p>(c) the expected total cost (direct and indirect) of activities and resources attributable to the delivery, policy development and associated costs of each Program; and</p> <p>(d) an Evaluation Framework designed in accordance with clause 10.3.</p>	<p>Fully satisfied.</p> <p>a) Planned outcomes: Reported in the Annual Operating Plan 2017-18 (https://grdc.com.au/data/assets/pdf_file/0016/243430/GRDC-Annual-Operational-Plan-2017-18.pdf). (Viewed: 15 October 2018)</p> <p>b) Key performance indicators: Reported in Annual Operating Plan 2017-18 (https://grdc.com.au/data/assets/pdf_file/0016/243430/GRDC-Annual-Operational-Plan-2017-18.pdf). (Viewed: 15 October 2018)</p> <p>c) Expected costs (https://grdc.com.au/data/assets/pdf_file/0016/243430/GRDC-Annual-Operational-Plan-2017-18.pdf). (Viewed: 15 October 2018)</p> <p>d) Monitoring and Evaluation Framework provided to ACIL Allen. (Viewed: 28 September 2018)</p>
Evaluation framework	

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>10.3 GRDC must develop an Evaluation Framework within six months of the Agreement Date. The Evaluation Framework must:</p> <ul style="list-style-type: none"> (a) support the Program Framework; (b) ensure that key performance related information is generated by the Program Framework and is routinely collected and monitored; (c) include a structured plan for the systematic evaluation of the efficiency, effectiveness and impact of GRDC's key investments; and (d) include a means of publishing and disseminating relevant Research and Development outcomes and outcomes of evaluations undertaken under subclause 10.3(c). 	<p>Fully satisfied.</p> <ul style="list-style-type: none"> a) Framework provided to ACIL Allen (23 September 2018). See chapter 6 for a discussion about the evaluation framework used by GRDC. b) Performance related information is measured through the Grower Survey annually (https://grdc.com.au/about/corporate-governance/grower-and-researcher-surveys). c) See Chapter 6 for an explanation of GRDC's evaluation approach. d) Impact assessments of R&D investments are published on the GRDC website (https://grdc.com.au/about/our-investment-process/impact-assessment).
<p>10.4 GRDC must:</p> <ul style="list-style-type: none"> (a) consult with the Commonwealth in preparing the evaluation plan; (b) participate in any evaluation project relevant to GRDC's operations which is established for all RDCs; and (c) demonstrate GRDC's commitment to provide adequate expenditure for this purpose. 	<p>Fully satisfied. GRDC meets regularly with the Commonwealth to discuss all facets of the SFA.</p>
<p>10.5 The Evaluation Framework must be published on GRDC's public website within 30 days of being adopted by GRDC.</p>	<p>Not satisfied. The evaluation framework is not present on the GRDC website. (Viewed: 15 October 2018)</p>
R&D Plan	
<p>10.6 GRDC must:</p> <ul style="list-style-type: none"> (a) prepare an R&D Plan in accordance with sections 19 to 24 of the Act and this Agreement; (b) ensure the R&D Plan is consistent with GRDC's Program Framework; and (c) publish the R&D plan and any amended R&D Plan on its public website within 30 days of approval by the Minister. 	<p>Fully satisfied. The RD&E Plan 2018-23 is published on the GRDC website (https://grdc.com.au/about/corporate-governance/rde-plan). (Viewed: 15 October 2018)</p>
<p>10.7 In addition to the matters in clause 10.6 the R&D Plan must also cover matters including, but not limited to, the following:</p> <ul style="list-style-type: none"> (a) an assessment of GRDC's operating environment including its strengths, weaknesses, threats and opportunities, and including current and future trends and implications; (b) collaboration with other RDCs on priority Research and Development issues; (c) a broad overview of the priorities and outcomes from stakeholder consultation, as more fully described in the stakeholder consultation plan required under clause 10.8. 	<p>Fully satisfied. See Strategic Plan 2012-17 and 2018-23. Each document outlines the R&D plan for the planned period.</p> <ul style="list-style-type: none"> a) SWOT analysis outlined in Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018) b) Collaboration with other RDCs is identified in the Investment Partner section of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018) c) See Consultation Process and Stakeholder Priorities sections of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018) d) See Consultation Process and Stakeholder Priorities sections of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018) e) See Section 4: Goals and Measures of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>(d) consultation with Industry and an explanation on the extent to which Industry priorities are reflected in the R&D Plan;</p> <p>(e) key strategies, objectives, investment priorities and outcomes planned for the period of the R&D Plan;</p> <p>(f) the Research and Development Activities and Marketing Activities that GRDC intends to adopt to achieve the planned outcomes;</p> <p>(g) key deliverables which contribute to achieving the planned outcomes;</p> <p>(h) performance indicators that enable progress being made towards achieving planned outcomes to be monitored and reported upon;</p> <p>(i) how the Research and Development and Marketing Activities to be funded align with, and give effect to, the Guidelines;</p> <p>(j) how GRDC addresses extension, technology transfer, and commercialisation of Research and Development and demonstrate that extension and adoption are incorporated into the planning and approval process;</p> <p>(k) estimates of income and expenditure for the life of the R&D Plan including broad estimates of expenditure separately for each of the Research and Development Activities and Marketing Activities for the life of the R&D Plan; and</p> <p>(l) an explanatory statement of GRDC's approach to ensuring a Balanced Portfolio appropriate to the Industry.</p>	<p>f) Key Investment Targets have been developed to achieve the specified objectives in the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p> <p>g) Key Investment Targets have been developed and specified in Section 4: Goals and Measures of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p> <p>h) Key performance indicators have been specified in Section 4: Goals and Measures of the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p> <p>i) Outlined in the strategic plans relevant to the review period.</p> <p>j) The process for how GRDC addresses extension, adoption and technology transfer is specified in the Core Frameworks section of the Strategic Plan 2018-23. The approach GRDC takes for commercialisation of R&D is not clearly specified in the Strategic Plan 2018-23. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p> <p>k) The Financial Forecasts sections of the Strategic Plan 2018-23 specifies the forecast income, expenditure for the investment areas for the R&D plan. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p> <p>l) The Portfolio Balance section of the Strategic Plan 2018-23 details the balanced portfolio approach for the R&D plan period. (https://grdc.com.au/about/corporate-governance/rde-plan) (Viewed: 15 October 2018)</p>
<p>10.8 In developing the R&D Plan, or varying an existing R&D Plan, GRDC must develop a consultation plan including details of proposed consultations with:</p> <p>(a) the Commonwealth; and</p> <p>(b) GRDC's Representative Organisation; and</p> <p>(c) other stakeholders as appropriate, including, but not limited to, other RDCs.</p>	<p>Fully satisfied. Numerous stakeholder engagement plans and reports (both of a strategic tactical and nature) were reviewed by ACIL Allen for this report. (Viewed: 28 September 2018)</p>
<p>10.9 For minor variations to an existing R&D Plan, consultation must be undertaken in accordance with section 24 of the Act. However, GRDC may request approval from the Commonwealth not to develop a consultation plan.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 10.9. (Viewed: 15 October 2018)</p>
<p>10.10 The consultation plan must be agreed with the Commonwealth before consultation commences.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 10.10. (Viewed: 15 October 2018)</p>
<p>10.11 The consultation plan must be published on GRDC's public website prior to consultation commencing.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 10.11. (Viewed: 15 October 2018).</p>
<p>10.12 The Commonwealth must treat the R&D Plan, and each amendment of the R&D Plan, as Confidential Information until the R&D Plan or amendment is publicly released by GRDC.</p>	<p>Fully satisfied. Compliance reports do not identify any outstanding issues or concerns about GRDC's compliance with section 10.12. (Viewed: 15 October 2018)</p>

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
Annual Operation Plan	
10.13 GRDC must prepare an Annual Operational Plan in accordance with section 25 of the Act and this Agreement.	Fully satisfied. GRDC developed and provided the Commonwealth with Annual Operating Plans in accordance with section 25 of the Act and this agreement. (Viewed: 15 October 2018)
10.14 The Annual Operational Plan must be provided to the Commonwealth by 1 July each year and in addition to the matters set out in clause 10.13 it must set out: (a) how and to what extent Research and Development and Marketing Activities to be funded give effect to the R&D Plan and its objectives and the Guidelines. (b) the key Research and Development and Marketing Activities to be funded by GRDC during the Financial Year under each program of the Program Framework; (c) key deliverables arising from the Research and Development and Marketing Activities planned; (d) performance indicators, timetables and milestones relating to GRDC's proposed Research and Development and Marketing Activities and expenditure which enable the progress being made towards achieving planned outcomes to be monitored and reported upon; (e) a statement on how GRDC intends to implement and operationalise a Balanced Portfolio appropriate to the Industry for the Financial Year referred to in the plan.	Fully satisfied. As identified in SFA Compliance Report Dec 2017. Refer to 10.13. (a) Outlined in the strategic plans relevant to the review period. (b) Detail specified in 2018-19 Investment Portfolio section of Annual Operating Plan 2018-19 (https://grdc.com.au/data/assets/pdf_file/0022/363136/GRDC-Annual-Operational-Plan2018-19.pdf) (Viewed: 15 October 2018). (c) Outlined in each AOP. (d) Detail specified in 2018-19 Investment Portfolio section of Annual Operating Plan 2018-19 (https://grdc.com.au/data/assets/pdf_file/0022/363136/GRDC-Annual-Operational-Plan2018-19.pdf) (Viewed: 15 October 2018). (e) Detail specified in Balanced Research Portfolio section of Annual Operating Plan 2018-19 (https://grdc.com.au/data/assets/pdf_file/0022/363136/GRDC-Annual-Operational-Plan2018-19.pdf) (Viewed: 15 October 2018).
10.15 GRDC must submit all Annual Operational Plans developed in accordance with clause 10.13, and all material variations or updates to the Commonwealth within 30 days of the Annual Operational Plan or variations being adopted by GRDC.	Fully satisfied. As identified in SFA Compliance Report Dec 2017. (Viewed: 15 October 2018)
Other plans	
10.17 GRDC must develop, maintain and implement: (a) risk management and internal control systems consistent with the PGPA Act. This includes a Fraud Control Plan and Risk Management Plan; and (b) an Intellectual Property Management Plan.	Fully satisfied. See SFA Compliance Report Updated Nov 2017. GRDC provided the Department with the current Risk Management Framework, Risk Management Policy, Fraud Control Plan and Policy and IP Management Plan. The Fraud Control Policy was updated following the independent review of the GRDC's fraud risks and controls. (Viewed: 15 October 2018)
10.18 GRDC must review the Intellectual Property Management Plan at intervals of no more than four years.	Fully satisfied. Identified as completed in the SFA Compliance Report Updated Nov 2017 and in the Board Minutes reviewed by ACIL Allen. (Viewed: 15 October 2018 and 9 November 2018)
10.19 GRDC must provide the Commonwealth with a copy of the plans required under clause 10.17(a) and (b), or amendments to the plans, within 30 days of their approval by the Board.	Fully satisfied. See IP Management Plan, which has been reviewed and updated and provide to the Department. (Viewed: 15 October 2018)
Reports	
Compliance assurance report	
11.1 GRDC must, within five months after the end of each Financial Year, give the Commonwealth a Compliance Assurance Report regarding compliance	Partially satisfied. See annual Reasonable Assurance Reports presented to the Directors of GRDC.

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
with its Act and this Agreement during the relevant Financial Year.	<p>2016-17 satisfied. 11.2.1 GRDC Reasonable Assurance Report 2016-17 (Viewed 15 October 2018)</p> <p>2017-18 on-track. Synergy contracted to complete report for 2018, to be submitted 30 November 2018. (Viewed 15 October 2018)</p>
<p>11.2 A Compliance Assurance Report must include a statement from an independent auditor which provides an opinion on whether GRDC has complied with its obligations under clauses 6 and 7 of this Agreement during the relevant Financial Year. The independent auditor's statement must;</p> <p>(a) be prepared in accordance with relevant Australian Auditing and Assurance Standards;</p> <p>Note: this work can be completed with reference to ASA.E 3100.</p> <p>(b) include a statement that GRDC has complied with clause 6.6 of this Agreement;</p> <p>(c) include a statement that the accounting systems processes and controls comply with clause 7.1;</p> <p>(d) include a review of the amounts spent on and Research and Development Activities and Marketing Activities verify the claims made for Commonwealth Matching Payments under clause 5.5 are consistent with the amount of Eligible R&D Expenditure;</p> <p>(e) state any limitations to which the Compliance Assurance Report is subject; and</p> <p>(f) indicate any incidences of non-compliance and assess and report on the impact of those incidences of non-compliance.</p>	<p>Fully satisfied. See 11.2.1 GRDC Reasonable Assurance Report 2016-17 (Viewed 15 October 2018)</p>
<p>11.3 A Compliance Assurance Report must also include a certification from the Board, signed by the Chairperson of the Board and the Executive Director or equivalent of GRDC certifying whether, in the Board's opinion, GRDC has;</p> <p>(a) materially complied with its obligations under the Act and this Agreement during the relevant Financial Year; or</p> <p>(b) not materially complied with its obligations under the Act and this Agreement during the relevant Financial Year giving an explanation of the non-compliances.</p>	<p>Fully satisfied. Board Minutes provide a record of this certification. (Viewed 9 November 2018)</p>
<p>11.4 The Compliance Assurance Report must also include a statement that the Compliance Assurance Report has been prepared for the Commonwealth for the purposes of this Agreement and an acknowledgement that the Compliance Assurance Report will be relied upon by the Commonwealth.</p>	<p>Fully satisfied. Board Minutes provide a record of this statement. (Viewed 9 November 2018)</p>
Annual reports	
<p>11.8 GRDC must prepare its Annual Report in accordance with the Act, section 46 of the PGPA Act and the requirements of this Agreement.</p>	<p>Fully satisfied. See Annual Reports for 2015-16, 2016-17 and 2017-18 (TBC). (Viewed: 15 October 2018)</p>
<p>11.10 The Annual Report must include, in respect of the relevant Financial Year:</p>	<p>Fully satisfied. See GRDC Annual Report 2015-16, 2016-17 and 2017-18 (TBC).</p>

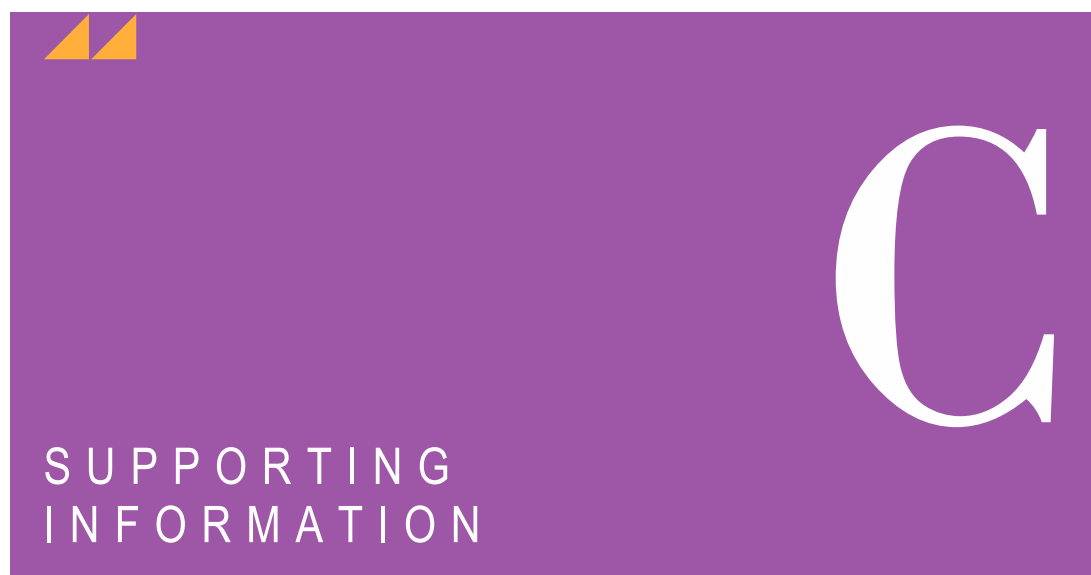
Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>(a) a report on GRDC's contribution to the implementation of relevant Industry sector and cross-sectoral strategies under the RD&E Framework;</p> <p>(b) the rationale for the mix of projects included in the Balanced Portfolio;</p> <p>(c) a report on the R&D Corporation's research extension activities;</p> <p>(d) a report on any significant collaboration by GRDC with Industry or research providers that is not covered by an agreement under sections 13 and 14 of the Act;</p> <p>(e) sources of income allowing for separate identification of Research and Development Payments, Commonwealth Matching Payments and any other forms of income and, if applicable Marketing Payments and Voluntary Contributions;</p> <p>(f) the full cost of the Research and Development and Marketing programs, with costs being allocated in accordance with the Cost Allocation Policy;</p> <p>(g) progress made in implementing R&D Plans, including progress against key performance indicators and the achievement of key deliverables and associated outcomes specified in the plans;</p> <p>(h) an assessment of the efficiency and effectiveness of GRDC's investments;</p> <p>(i) progress in implementing the Guidelines;</p> <p>(j) consultation with the corporation's Representative Organisation on its R&D and Annual Operational Plans, Research and Development and extension Activities and Marketing Activities; and</p> <p>(k) other relevant matters notified to GRDC by the Commonwealth.</p>	<p>a) See section Implementation of strategies under the National Primary Industries Research, Development and Extension Framework of the GRDC Annual Report 2015-15 and 2016-17. (Viewed: 15 October 2018)</p> <p>b) See section Portfolio Management of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>c) See section Theme 1 to 6 of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>d) Collaborations not covered by ss. 13 and 14 of the PIRD Act, see GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>e) See Financial Statements section of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>f) See section Financial Statements of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>g) See Theme 1 to 6 section of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>h) See Portfolio Management section of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>i) See section Annual Performance and Theme 1 – 6 of GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>j) See section Accountability to the Grains Industry section of the GRDC Annual Report 2015-16 and 2016-17. (Viewed: 15 October 2018)</p> <p>k) No matters mentioned by Commonwealth.</p>
Review of performance	

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>12.1 GRDC must complete a Performance Review six months before the expiry of this Agreement and must:</p> <p>(a) engage an independent organisation to undertake the Performance Review and prepare a report on the Performance Review (the Performance Review Report); and</p> <p>(b) agree the terms of reference of the Performance Review six months prior to the commencement of the Performance Review process with the Commonwealth to ensure that the Performance Review will meet the requirements of the Act and this Agreement; and</p> <p>(c) provide the Commonwealth with a copy of the draft Performance Review Report and any comments made by the Board within 7 days of the Board considering the draft; and</p> <p>(d) provide the final Performance Review Report to the Commonwealth within 14 days of its acceptance by the Board; and</p> <p>(e) develop a response to the final Performance Review Report and a proposed implementation plan including dates and milestones for the implementation of recommendations within three months of the Board's acceptance of the Performance Review Report; and</p> <p>(f) provide the Commonwealth with the response developed under clause 12.1(e) within 30 days of the Board accepting the response; and</p> <p>(g) report to the Commonwealth in the meetings required under clause 14.1 on progress implementing the Performance Review Report recommendations; and</p> <p>(h) publish the Performance Review Report and GRDC's response to the Performance Review Report recommendations on GRDC's public website.</p>	<p>On-track to complete. GRDC engaged ACIL Allen Consulting to undertake the independent performance review in August 2018. The Review is planned to be completed by December 2018.</p>
<p>12.2 The independent organisation engaged to carry out the Performance Review must be an organisation that has not, within the term of the Agreement, carried out any corporate governance activity or reviews, performance audit or similar reviews of GRDC.</p>	<p>Fully satisfied. GRDC engaged ACIL Allen Consulting to undertake the independent performance review in August 2018. The Review is planned to be completed by December 2018.</p>

Clause & obligation	Status (Fully satisfied, partially satisfied, not satisfied, on-track, clause not enacted) during the Review period
<p>12.3 The terms of reference for the Performance Review must take into account:</p> <ul style="list-style-type: none"> (a) the performance of GRDC in meeting its obligations under the Act and this Agreement; and (b) GRDC's development and implementation of its R&D P Annual Operational Plan, Risk Management Plan, Fraud Control Plan and Intellectual Property Management Plan, and GRDC's effectiveness in meeting the priorities, targets and budgets set out in those plans; and (c) the efficiency with which GRDC carried out those plans; and (d) the efficiency and effectiveness of ORDC's investments; (e) the delivery of benefits to the Industry foreshadowed by those plans, including an assessment of the degree to which GRDC's investments have met the needs of Industry; and (f) any other matters required to be covered by the Minister. 	<p>Fully satisfied. See Chapter One of the GRDC Draft Report.</p>
Consultation	
Consultation with the Commonwealth	
<p>14.1 The Chairperson of GRDC, or in their absence, their Board nominee must meet with the Commonwealth at not more than six-monthly intervals from the Agreement Date or at any other time requested by the Commonwealth on reasonable notice to brief the Commonwealth on GRDC's performance of its functions including:</p> <ul style="list-style-type: none"> (a) progress on implementing GRDC's Annual Operational Plan and R&D Plan; (b) progress on the implementation of the relevant sectoral and cross-sectoral strategies under the RD&E Framework; (c) consultation with other RDCs and the corporation's Representative Organisation; (d) measures taken to enhance corporate governance in accordance with clause 4 of this Agreement; (e) progress in developing and implementing the Evaluation Framework; (f) progress on implementing the recommendations from the most recent Performance Review; and (g) the development and implementation of additional systems, processes and controls necessary to meet the requirements of this Agreement required by clause 7.1 of this Agreement. 	<p>Fully satisfied. See SFA Compliance Report July 2018.docx Meetings held in June and November annually, discussed items (a)-(g). (Viewed: 15 October 2018)</p>
SOURCE: STATUTORY FUNDING AGREEMENT 2015-19	

B.2 Key findings

Overall GRDC has maintained a high level of compliance with the SFA and the PIRD Act throughout the review period. This assessment is based on a review of GRDC's compliance reports, a review of other selected reports and consultations with representatives from the Commonwealth Government and GRDC.

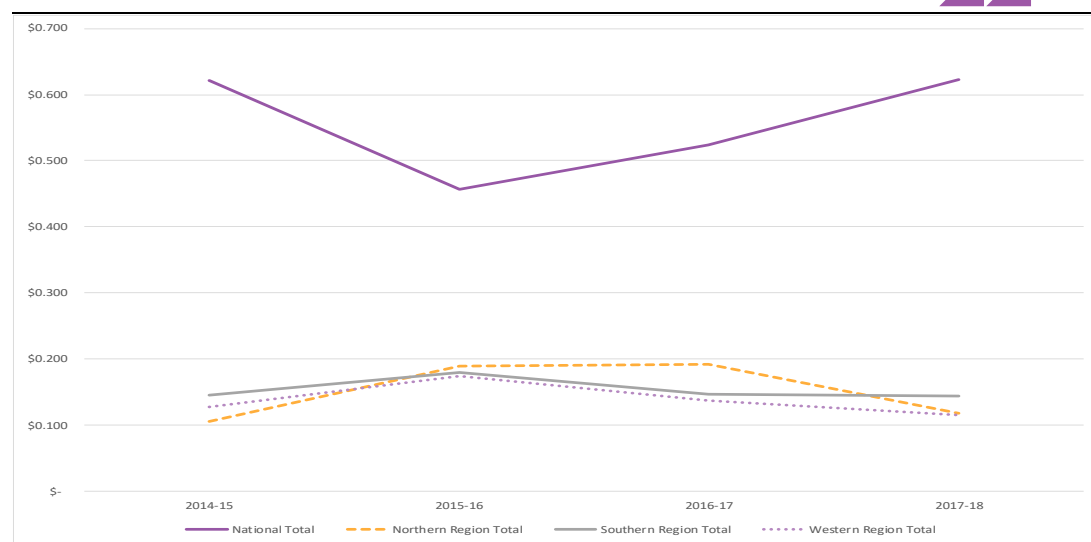


C.1 Financial information

C.1.1 Investment in the regions—has anything changed over the review period?

Over the period 2014-15 to 2017-18 the total regional expenditure has fluctuated but not significantly. In 2015-16, there was a distinct increase in total regional spending, but this has moderated over the last two years to return to 2014-15 levels (refer **Figure C.1**).

FIGURE C.1 REGIONAL EXPENDITURE OVER TIME RELATIVE TO NATIONAL EXPENDITURE, ON A PER DOLLAR BASIS



NOTE: NORTH/SOUTH BOUNDARY CHANGED IN 2015

SOURCE: GRDC RESEARCH AND OPERATING EXPENDITURE DATA, 2018

Operating expenditure at the regional level was provided for 2014-15, 2015-16 and 2017-18 the data was not available for 2016-17. ACIL Allen estimated the operating expenditure by regional panel base on the average proportional expenditure across the other three years and the total operational expenditure in 2016-17.

Operating expenditure has increased over time and across regions from a total of \$5.1 million in 2015-16 to \$10.6 million in 2017-18, a 51 per cent increase over four years. (Refer **Table C.1**).

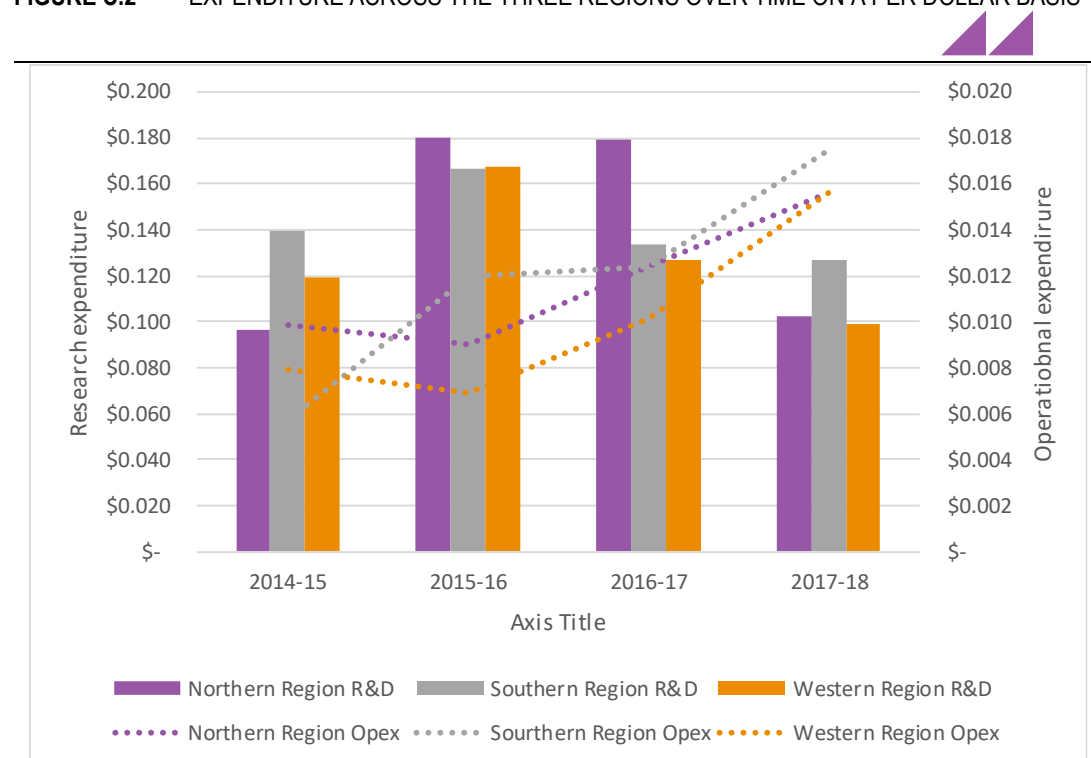
TABLE C.1 REGIONAL OPERATING EXPENDITURE \$ (2014-15 TO 2017-18)

Region	2014-15	2015-16	2016-17*	2017-18
Southern region	1,248,214	2,571,300	2,797,097	3,798,624
Northern region	2,153,707	1,933,039	2,797,097	3,390,719
Western region	1,733,315	1,477,816	2,288,534	3,394,499

*2016-17 data was unavailable, the numbers reported here have been estimated by ACIL Allen based on the proportional average across the other three financial years.

SOURCE: GRDC OPERATING EXPENDITURE DATA, 2018

Research expenditure data was provided from a different source to the operational data but has been used together for the purposes of this analysis. When looking across the regions (excluding the national spend) it is apparent that there has been an increase in operational expenditure over time across all three regions and that R&D expenditure in 2017-18 is at or below R&D expenditure levels in the regions in 2014-15 (refer **Figure C.2**).

FIGURE C.2 EXPENDITURE ACROSS THE THREE REGIONS OVER TIME ON A PER DOLLAR BASIS

SOURCE: GRDC RESEARCH AND OPERATING EXPENDITURE DATA, 2018

C.1.2 GRDC cashflow statement

For the 2013-14 to 2016-17 the variation in GRDC's expenditure fluctuated between \$213 and \$241 million per annum. Research and development expenditure represented 91 per cent of expenses, with the remaining expenditure on suppliers and employee entitlements.

Table C.2 outlines the cashflow statement for cash used for GRDC from 2013-14 to 2016-17.

TABLE C.2 GRDC CASHFLOW STATEMENT (\$'000)

	2013-14	2014-15	2015-16	2016-17
Research and development	207,575	191,691	218,975	194,557
Suppliers	9,446	10,732	11,090	13,233
Employees	6,361	10,664	10,624	11,221

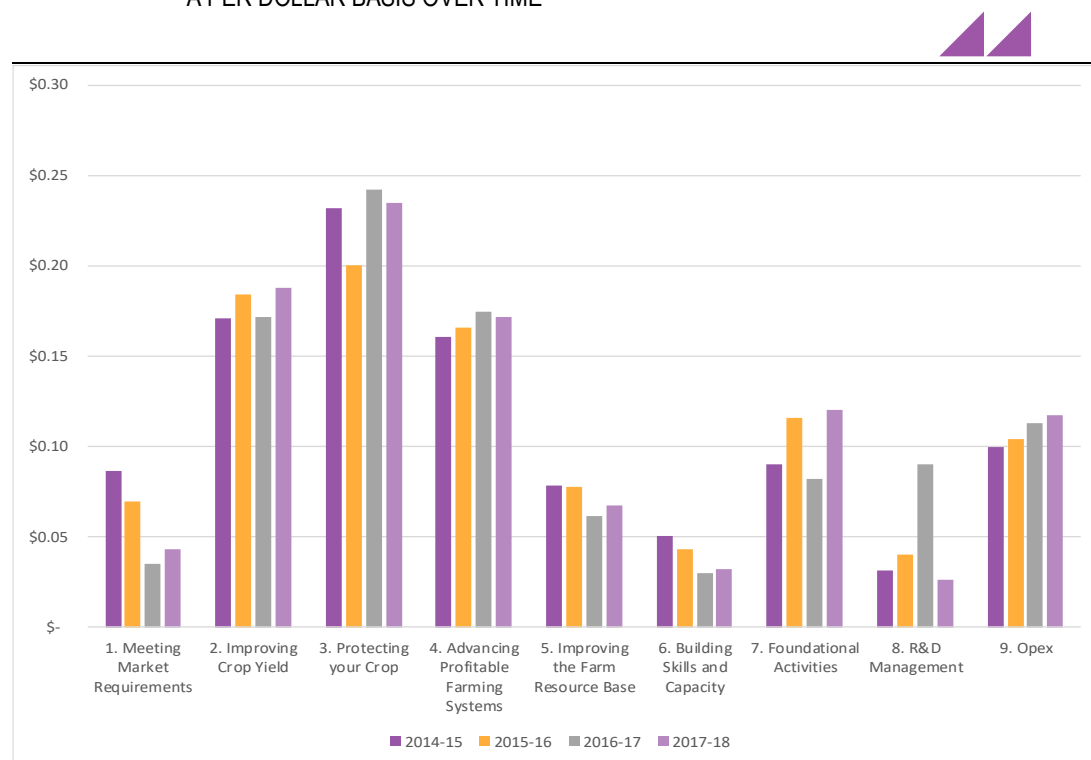
	2013-14	2014-15	2015-16	2016-17
Total cash used	223,382	213,087	240,689	219,011

NOTE: CORPORATION CASHFLOW STATEMENT NUMBERS HAVE BEEN USED 2015-17, 2014 DOES NOT DIFFERENTIATE BETWEEN THE TWO
SOURCE: GRDC ANNUAL REPORT 2014-15 TO 2016-17

C.1.3 GRDC spending against the RD&E Plan

A summary of expenditure by research theme (on a per dollar basis) over the review period is provided in **Figure C.3**. Expenditure by research theme fluctuates over the review period, with notable exceptions, there is a decline in expenditure of Meeting Market Requirements and Building Skills and Capacity. Conversely, a steady increase in funding for Advancing Profitable Farming Systems. Most significantly is the year on year increase in operating expenditure, which reflects the investment in people and suppliers during the organisational restructure period.

FIGURE C.3 EXPENDITURE BY RESEARCH THEME (INCLUDING OPERATIONAL EXPENDITURE) ON A PER DOLLAR BASIS OVER TIME



SOURCE: GRDC RESEARCH AND OPERATING EXPENDITURE DATA, 2018

C.2 GRDC's investment process

Figure C.5 provides a schematic of GRDC's investment process prior to the implementation of an annual investment cycle process in operation prior to 2016-17. The annual investment cycle followed a staged process of issue prioritisation, investment planning week, release of the investment priority plan, tender evaluation, contracting, project delivery and evaluation. During which a research issue could take approximately 18 months to progress from identification to contracting of a project.

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THE GRDC'S INVESTMENT PROCESS

A visual overview of the GRDC's investment process is presented below with an explanation of the six key steps in the process provided over the page.

Growers, researchers, consultants, Grain Producers Australia (GPA) and state farming organisations, RCS networks, updates, forums, field days, reference groups etc.

For projects to begin in 2013-14

For projects to begin in 2013-14

For projects to begin in 2014-15

2011-12

2012-13

2013-14

1. Priorities

2. Investment Planning Work

3. External investment plan released (suit for funding)

4. Tender responses assessed

5. Contracting

6. Status, progress and gap review

Manage projects

Assess reports

Extension and adoption

Jul

Aug

Nov

Mar

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Box C.1 provides an overview of the key dimensions of GRDC's continuous investment process introduced after 2016-17.

BOX C.1 CONTINUOUS INVESTMENT PROCESS

- 1. Idea capture**
- 2. Idea progression: a process of questions will be asked**
 - (i) Current investments
 - (ii) past investments – has the research been done is this an extension issue
 - (iii) Past analyses – do we need or are we waiting on new technology?
 - (iv) Other parties – is it out of scope i.e. marketing
 - (v) GRDC mandate
- 3. Gap analysis**
 - (i) Technical approaches
 - (ii) Background IP
 - (iii) Grower Value Proposition
 - (iv) Path to Market
- 4. Procurement of research services**
 - (v) Continuous call for tenders
 - (vi) Published GRDC website
 - (vii) Submissions via online portal
- 5. Contract management**
 - (viii) Reporting all milestones online
 - (ix) Variations to milestones online
 - (x) Annual reports transition to milestone reports
- 6. Payment for research services**
 - (xi) Linked to negotiate and identified milestones
 - (xii) Payments tailored to contracted milestones
 - (xiii) Invoices and financial statements submitted via portal

SOURCE: GRDC RESEARCH PARTNER PRESENTATION 2017

C.3 GRDC's staffing

Table C.3 provides an extract of GRDC's delegations and authorisations that relate to R&D expenditure.

TABLE C.3 GRDC DELEGATIONS AND AUTHORISATIONS SCHEDULE—R&D EXPENDITURE

Section	Authorisation (A) / Delegation (D)	Power / Function	Position	Limit	Direction
47	A	Further allocate the budget approved by the Board for short, medium, long-term and foundational strategic investment plans to area within each of those strategic investments	Managing Director	No Limit Applied	The Managing Director may have regard to any recommendations made by National Panel in relation to the proposed allocations
48	D	R&D agreements (excluding consultancies)	Managing Director	\$30,000,000	The GRDC value of the R&D agreement must be within the
			General Managers	\$20,000,000	

Section	Authorisation (A) / Delegation (D)	Power / Function	Position	Limit	Direction
		<ul style="list-style-type: none"> – Approve expenditure for funds for R&D agreements – Approve issuing of R&D agreements – Sign R&D agreements – Sign or novate R&D agreements 	Senior Managers Head of Business Development Head of Economics Head of Corporate Affairs Managers	\$5,000,000 \$1,500,000	budget for that area as allocated by the Managing Director The limits are total agreement values i.e. total amount from GRDC (GST exclusive) and include a variation to an R&D agreement where the total of the original agreement value and increased total expenditure must be within the limits The person with the delegation must have regards to the R&D Investment Management Policy and Procedures The use or development of GM technologies in research projects must be approved by the Deputy CEO or the Managing Director
49	D	Approve issuing, signing and expenditure of funds under R&D agreements approved by the Board	Managing Director	No Limit Applied	The Managing Director may have regard to any recommendations made by the General Manager responsible for the R&D agreement
50	D	Agreements for R&D consultancies (PIRD Act s88) <ul style="list-style-type: none"> – Approve expenditure of funds for R&D consultancy agreements – Approve the issuing of R&D consultancy agreements – Sign R&D consultancy agreements – Assign or novate R&D consultancy agreements 	Managing Director General Managers Senior Managers Heads and Chiefs Managers	\$300,000 per consultancy \$150,000 per consultancy \$100,000 per consultancy \$25,000 per consultancy	The limits are total agreement values i.e. total amount from GRDC (GST exclusive)
51	D	Approve expenditure of funds for IP management costs	Managing Director Deputy CEO Head of Business Development Manager IP Manager Commercialisation	\$500,000 \$100,000 \$50,000 \$10,000	The person with the delegation must have regard to the relevant GRDC IP and Communication Policies and Procedures

SOURCE: GRDC 2017, 'DELEGATIONS AND AUTHORISATIONS', 28 JULY

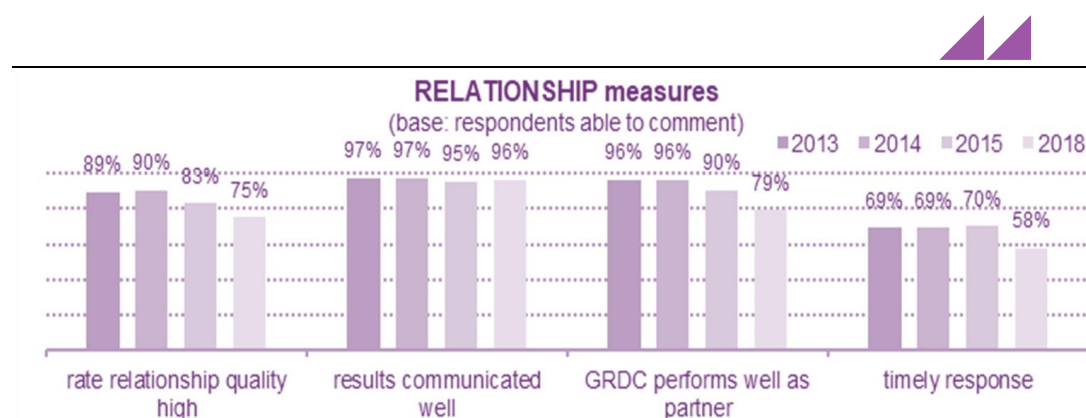
C.4 Research partner survey

GRDC commissions a Research Partner Survey to collect KPI and other data about research partner views on relationships and GRDC's general performance.

Figure C.5 shows the measure of the quality of relationship between GRDC and its research partners. Research partners consistently believe that GRDC communicates results at high level, with relatively unchanged score between 97 and 96 per cent between 2013 and 2018. However, on measures of

- rating relationship quality, 89 per cent in 2013 down to 75 per cent in 2018 (14 per cent decline)
- rating GRDC performs well as a partner, 96 per cent in 2013 down to 79 per cent in 2018 (17 per cent decline)
- rating of time response to information requests, 69 per cent in 2013 down to 58 per cent in 2018 (11 per cent decline).

FIGURE C.5 RATING OF RELATIONSHIP QUALITY

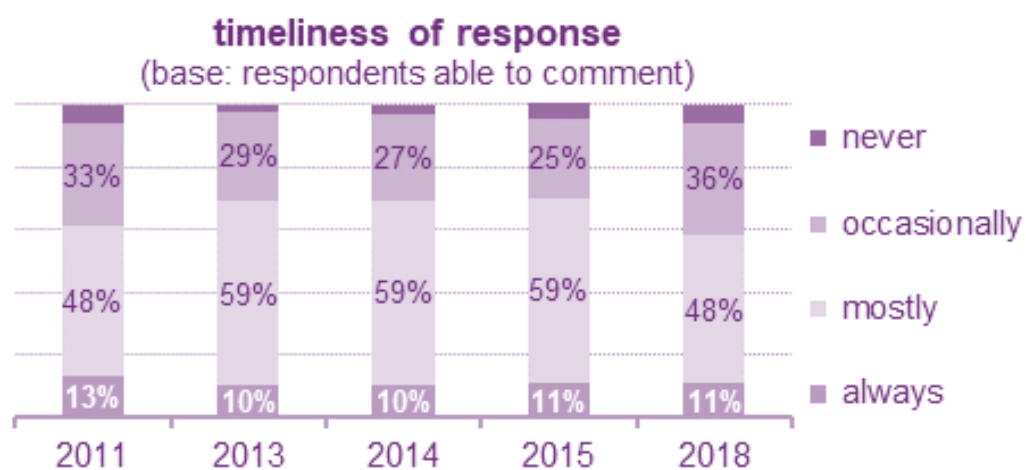


SOURCE: GRDC RESEARCH PARTNER SURVEY 2018

Figure C.6 shows the measure of GRDCs timeliness of response to an information request from a research partner. There has been a significant decline in research partners rating of GRDCs timeliness in response to information requests. Down to Earth Research (DTER) notes that 58 per cent of respondents believe that GRDC always or mostly responds to requests for further information in a timely manner, which is significantly lower than 70 per cent in 2015 (12 per cent decline) and the lowest rating since 2011.

DTER also notes, that there has been a much greater decline in the timeliness category amongst specific research partner categories. For example, respondent from CSIRO, there has been a decline from 74 per cent to 44 per cent and universities from 66 per cent down to 53 per cent.⁶²

⁶² Please note the sample size are small and conclusions drawn from the data should reflect this limitation.

FIGURE C.6 EXPERIENCES WITH RESPONSE TO INFORMATION REQUESTS FROM GRDC

SOURCE: GRDC RESEARCH PARTNER SURVEY 2018

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