

AWI FRAMEWORK FOR MONITORING AND EVALUATION

2011/12

Version 1.07

Performance evaluation is critical to AWI's ability to deliver, effectively and continuously, benefits to shareholders and the many AWI stakeholders from farm to retailed garment. AWI is developing a comprehensive monitoring and evaluation framework which addresses the unique technical and marketing contexts in which AWI operates, and which meets the needs of critical stakeholders, such as the Commonwealth Government. This development and implementation process is based around a principle of continuous improvement and refinement, as the evaluation framework and the tools and processes within adapt to the evolving needs of AWI and the greater industry we serve.

This document outlines the strategic and operational aspects of the AWI Evaluation Framework, and summarises 2010/11 and planned 2011/12 evaluation activities.

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1. INTRODUCTION

Australian Wool Innovation Limited (AWI) exists to improve the profitability and sustainability of Australia's US\$2.6 billion wool industry through investments in research, development, extension and marketing. Specifically, the outcomes AWI seeks to achieve are:

- through investment in Research, Development and Extension, assist growers to make informed decisions which enhance the profitability, international competitiveness and sustainability of the Australian wool industry, and;
- through investments in product and fibre marketing and promotion, increase demand and market access for Australian wool.

AWI's is primarily funded through a levy imposed on grower wool sale receipts, with 'matching' contribution from the Commonwealth Government for eligible R&D, through a Statutory Funding Agreement. More specifically, the Wool Services Privatisation Act 2000 provides the legislative framework for AWI's existence, the SFA for AWI's statutory requirements, and the associated Levy Principle and Guidelines document makes it clear that 'research and development corporations'

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such AWI exist to invest in the collective interests of growers where market failure exists, and in so doing *must generate benefits in excess of costs of compulsory levies imposed.*

Accordingly, AWI is required to institute processes to evaluate and report the benefits and costs of the investments made. Every three years, shareholders are provided with an evaluation of AWI's performance over the preceding triennium, and given the opportunity to determine by poll, the level of levy imposed for the coming triennium (and zero is an option).

The current AWI Strategic Plan (2010-2013) outlines the broad approach to evaluation pursued within AWI (Section 4.2), and some of the measures utilised – key concepts enshrined are that:

- a variety of measures are applicable in each area of AWI activity
- For wool marketing activities, partner declarations of benefit are critical
- The frequency of assessment varies.

Within these broad guidelines, AWI has been actively reviewing its measurement and evaluation approaches, investing in the development of analytical tools, and is committed to an ongoing process of refinement of its evaluation methodology and overarching framework. A number of limitations of the existing approaches have been identified, and opportunities for improvement identified.

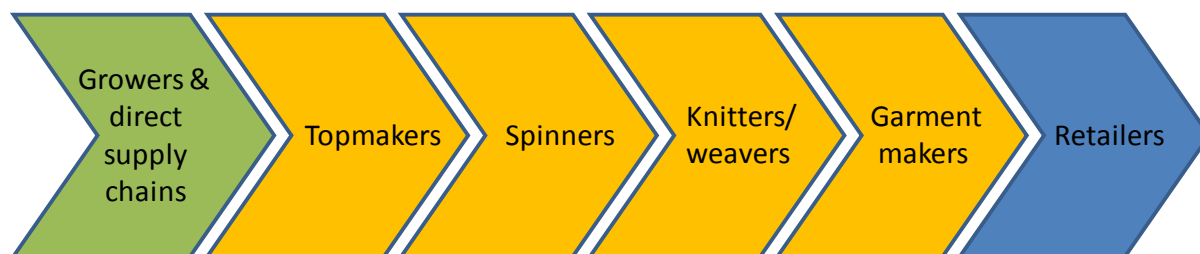
The purpose of this paper is to define the latest iteration in this ongoing review and refinement process, where AWI has worked to develop a comprehensive evaluation and monitoring system which addresses the very wide scope of AWI investments and stakeholders. Operational plans for 2011/12 are also defined, and activities conducted in 2010/11 summarised and reviewed.

2. AWI'S STRATEGIC INVESTMENT PORTFOLIO

2.1 Scope of AWI investments

Reflecting both the role of AWI in research, development and product and fibre marketing, and the complex nature of the wool processing pipeline, AWI typically invests around \$35-40 million per annum in project investment, where these investments are made in a very wide range of areas and forms. Some of these are summarised in the following table.

Table 1: Scope of AWI investment portfolio



On-farm	Post-farm (pipeline)	Retailer-brand
30% of project investments	20% of project investments	50% of project investments
<ul style="list-style-type: none"> Exotic disease preparedness Genetic benchmarking research and tool provision Animal welfare, including development of standards Environmental sustainability and credentials Shearer and wool handler training Wool grower education and training opportunities 	<ul style="list-style-type: none"> Product innovations in knitwear, wovens, interior textiles, sports/active, and other categories Processing and product technologies, such as chlorine-free treatments New fabric and garment specifications Process accreditation and quality assurance 	<ul style="list-style-type: none"> Global public relations, including fibre advocacy Retail workshops and other training opportunities Trade Shows Woolmark Tickets and labels Point-of-sale information Marketing partnerships, including licensee relationships
Market intelligence, trade reporting, school education, stakeholder relations		

Through these investments and across the wool pipeline, AWI seeks to service the needs of the very wide array of AWI stakeholders, including:

- Wool growers (AWI has 27,000 shareholders)
- Australian Government (AWI interfaces include with DAFF, DFAT, AHA, etc)
- Wool processors (primarily in China, but also in many other countries globally), including topmakers, spinner, knitters and weavers.

- Garment manufacturers, retailers, and brand partners (domestically, but also in 11 major retail markets, and in the major international processing hubs in Asia and Europe).

Thus, similarly to MLA, but unlike most other RDC's, AWI investments span a long demand chain and include global marketing remit. A critical challenge therefore is the ability to evaluate the benefit of project investments made at each stage of the pipeline, in the context of benefits to Australian woolgrowers and stakeholders such as the Commonwealth.

2.2. Different types of AWI investments

In engaging with this broad array of stakeholders, AWI makes investments which take a wide range of forms, including:

- Provision of services, especially knowledge-related, in a market failure sense.* Such non-commercial, industry-good services include investment in wool production forecasting and other market intelligence activities, exotic animal disease preparedness, scoping papers, development of National RD&E Strategy, provision of information to shareholders and consulting with stakeholders.
- Classical research, development and innovation projects.* These investments are typically made with research or commercial partners in the on farm and off farm areas, as individual projects within defined programs of work defined within the AWI strategic plan.
- Marketing and business development activities.* These address the marketing component of the AWI Strategic Plan which represents 50% of AWI project-related investments, but also the global Key Account network – the network of AWI offices around the globe funded through the Woolmark licensee structure.

It is essential, in considering the development of an evaluation and monitoring framework for AWI, that these forms of investment forms are recognised, and that relevant evaluation criteria are applied to each. Specifically, traditional economic assessments of RD&E projects, such as net present value, are applied only to those projects where it is possible to generate a sensible present economic value – those in (b) and (c) above.

3. AWI EVALUATION AND MONITORING CONTEXT

From the preceding discussion, a key challenge for AWI to address in developing an effective and representative Measurement and Evaluation framework is thus ***to develop a suite of tools capable of assessing the wide scope of investments made, and reflecting the context of a wide array of relationships required.*** In addition, other contextual factors need to be considered.

3.1 Commonwealth Evaluation Guidelines

The Australian Government provides indicative guidelines for conduct of economic evaluations by RDC's such as AWI through its 2006 *'Australian Government Introduction to Cost-Benefit Analysis and Alternative Evaluation Methodologies'*¹ and related *'Handbook of Cost-benefit Analysis'*². These documents are intended for use by Government agencies, for use in evaluation of regulatory proposals, programs and projects, and where investments have 'major resource implications'. While considered by AWI and consistent with fundamental principles applied by AWI, these guidelines are of limited specific utility to AWI, given the nature of the investments made by AWI.

In addition, AWI is one of the 15 RDC's involved in the Australian Government *Council of Rural Research and Development Corporations (CRRDC)* Evaluation process, whereby the RDC's are collaborating to explore methodologies for evaluation of projects and programs, and also to produce a set of pooled cross-RDC project evaluations. The CRRDC *Guidelines for Evaluation 2009* contains strong recommendations regarding application of Triple Bottom Line accounting principles and conduct of ex-post cost-benefit analyses, in addition to the more common ex-ante analyses³.

While AWI has utilised a range of tools and service providers to assist with conduct of ex-ante and ex-poste evaluation tools over the past decade, including co-investments with MLA, the Government guidelines and methodologies best suit 'program' level investments – e.g. aggregations of individual

¹ www.finance.gov.au/publications/finance.../Intro_to_CB_analysis.pdf

² www.finance.gov.au/publications/finance.../Handbook_of_CB_analysis.pdf

³ Assessment of the outcomes from a prior (completed) investment is called 'ex-poste' evaluation. Assessment of the potential of a prospective investment is called 'ex-ante' evaluation

projects that often reflect discrete activities within the context of an overall goal. This assessment is shared with MLA.

In addition, such tools are required to consider the so called ‘triple bottom line’ (TBL) – addressing the financial, social, environmental aspects of the project outcomes. This implies development and implementation of tools which consider these aspects across on-farm, post-farm and marketing programs, but also implies collection of ground-truthing or benchmarking data on which assumptions can be made, or impacts compared. The latter is critical and represents a not-insignificant investment in data collation or generation.

3.2 Existing AWI Tools and Resources

3.2.1 Price Waterhouse Coopers (PWC) Project Evaluation tool

In 2010, AWI commissioned PWC to develop a TBL ex-ante evaluation tool for application across all sectors of the company. The tool developed is based on an MS-Excel platform, and requires an external generator of financial (NPV) information. In practice, the PWC tool has proven complex and time consuming to use and is not ideally suited to individual project evaluation.

3.2.2 Rendell McGuckian (RM) Model

AWI’s primary tool for generating ex-ante estimates of the benefits of an on-farm investment is the RM model, which is also used by MLA, and has been cooperatively refined over the decade. This tool includes R&D costs, allows users to define very specifically the nature of the impacts arising from an investment, and the difficulties associated with grower uptake – producing estimates of the number of adopting enterprises across a range of industry sectors. The critical challenge for the RM tool is that the data underpinnings are based on ABS Census data, which is only updated on a 5-yearly basis, the last time being 2006.

3.2.3 Innovar Project Scorer

In 2001, AWI commissioned Innovar Pty Ltd to develop a project evaluation tool, which scores projects based on a number of criteria, where economic benefits (NPV) are one aspect. Innovar worked through with AWI senior management and the AWI Board the *Pareto Principle* process for assigning weightings to key aspects of the project evaluation – reflecting the AWI strategic plan and

corporate situation at the time. The tool was extensively used in the on-farm area, and fell into disuse from 2004 with change of management. It has been reconsidered in the recent months, customised to suit current AWI needs and strategy alignments. Following review of the PWC tool, the Innovar scorer has been shown to have around an 80% correlation with PWC outputs, and subsequently used for all post-farm project evaluations and a sample of on-farm evaluations. AWI will use this as the primary tool moving forward for ex-ante project evaluations.

3.3 Other portfolio and project evaluations

From time to time, AWI commissions external expertise to evaluate RD&E portfolios. Most notably, BDA Group (Dr David Collins) was commissioned to review the on-farm and post-farm RD&E portfolios in 2002 and 2003. The purpose of this process, the outcomes of which were shared with the AWI Board at the time, was to gain an indication of overall portfolio balance, and to highlight investments for reconsideration/termination.

Subsequently, in 2006 AWI engaged with Kurt Salmon Associates (KSA) to develop a post-farm project evaluation process, and AWI staff (the author) developed an evaluation model for rating individual investments. The latter included a rudimentary economic assessment of benefit to Australian growers, being hampered by the lack of a formal general equilibrium model basis for estimating benefits back to growers from downstream demand-related investments.

3.4 Learnings from a 2011 Review

In February 2011, a process of review of AWI evaluation approach was commenced, following the finalisation of the PWC tool and trial operational application, and also in the light of progress made in the CRRDC process. The key learnings have been:

1. AWI needs to be able to better compare ex ante and ex post evaluations
 - a. Given the 'newness' of the PWC tool, AWI will be unable to compare evaluations for some years to come, unless retrospective evaluations are applied.
 - b. The Innovar model was used intensively in the on-farm area in the 2001-2004 period, and so could be used for older comparisons.

- c. AWI should select, using a stratified random approach, a subset of completed projects and subject them to external review by a competent, experienced reviewer.
2. A great many project AWI investments are defined components of larger programs of work, where individual projects contribute to the collective outcome sought. AWI evaluations (ex ante or ex post) should focus first and foremost on the Program level, and this is particularly the case post-farm, where AWI often engages in a number of individual projects which, for example, try to address a particular technical issue, such as pilling.
3. The PWC tool is overly complex and unwieldy, not ideally suited to individual project evaluation, and requires a separate economic model to generate financial impact inputs. The Innovar tool similarly requires external economic impact inputs, but is far better suited to individual project assessment across on-farm and post-farm components of the AWI R&D portfolio, and correlates highly ($r \sim 0.8$) with the PWC tool output.
4. The Rendell McGuckian model is available and should be used for on-farm economic assessments, at both Program and Project levels (best suited to Program level). However, the model is dependent on ABS Census information, and as periodical major revisions are necessary (the next in 2012).
5. Post-farm AWI has lacked an economic evaluation tool that addresses specifically the types of product development opportunities AWI engages in. A prototype tool has been developed – this needs to be calibrated against peer-reviewed, general equilibrium models of the wool processing pipeline, such as the Global Wool Economic Model (GAWM) developed by the Department of Agriculture, Fisheries and Food-Western Australia (DAFWA), which itself needs updating and trialling in evaluation of AWI marketing programs.
6. AWI needs to develop a suitable proforma methodology for allowing retail, brand and garment manufacturing partners to declare the results/impacts of AWI investments, including social and economic aspects. This could take the form of a simple written declaration, and an external survey of the businesses involved.
7. Consumer level marketing projects (fibre advocacy) requires a specific tool for monitoring media investments and tracking benefits. A suitable framework has been developed – however, AWI needs an in-market longitudinal tracking process applicable to key influencer (Italy, France, UK) and consumer markets (China, USA, Japan etc).

4. AWI EVALUATION PROCESS

4.2 Goals

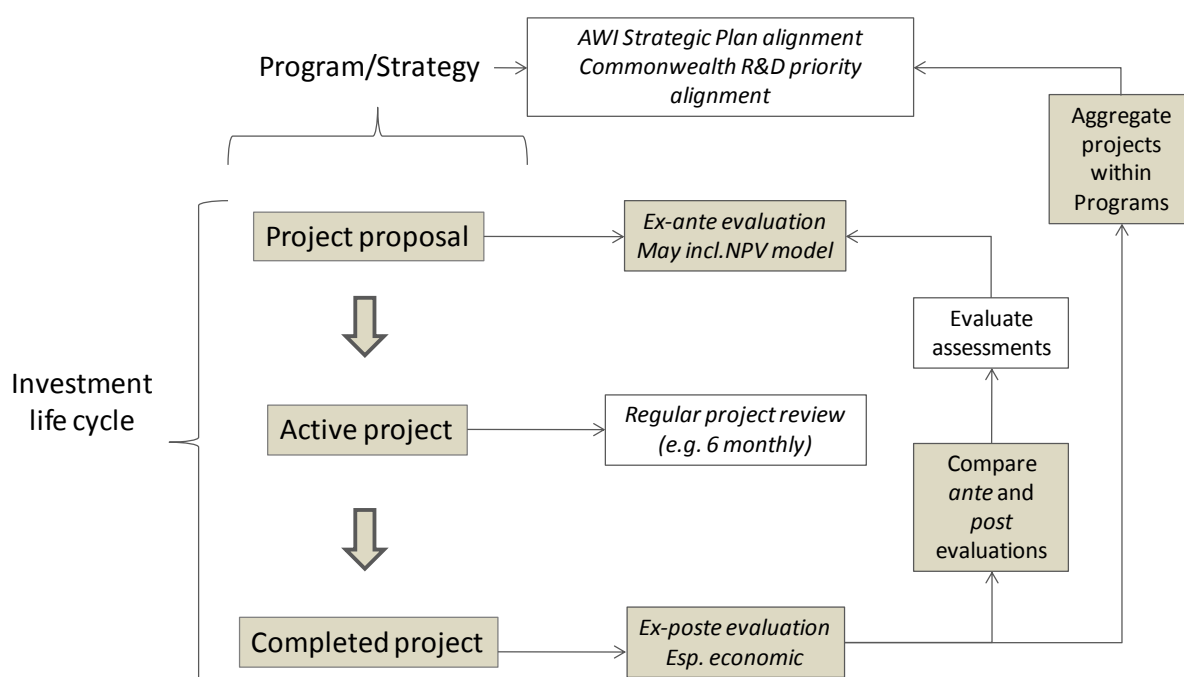
The broad goals of AWI in developing and implementing an effective evaluation framework are:

1. Build stakeholder confidence in AWI, by demonstrating returns to investors;
2. Meet evaluation and reporting obligations through developing a suitably comprehensive array of evaluation tools which account for the inherent complexity and broad scope of the AWI investment environment;
3. Improve the cost effectiveness of AWI investments, by building internal capacity and skills in investment assessment and management;
4. Continuously review and refine these evaluation processes.

4.2 AWI process concepts

Reflecting both the Commonwealth guidelines and AWI’s particular investment context, the general process for project evaluation within AWI is shown in Figure 1.

Figure 1: AWI evaluation process and framework.



The critical concepts enshrined are:

1. Recognition of overarching program structures, with component projects within
2. Recognition of the typical project lifecycle – proposal > active project > completed project
3. Ex-ante evaluations of proposals – these may include economic modelling if relevant
4. Regular project reviews
5. Ex post evaluation of completed projects
6. Aggregation of projects within Programs.
7. Evaluation in relation to the AWI Strategic Plan and Commonwealth RDI priorities

4.3 Operational detail

In applying the above evaluation framework to the wide array of AWI project investments, from farm to retail, an array of operational tools are required. These are summarised in Table 2.

Table 2: Operational detail underpinning the AWI Evaluation Framework

Strategic investment program	Investment targets	Metrics	Methods	Status (updated July 2012)
On-farm	~30,000 wool producing enterprises	Identified by project	Ex-ante (Innovar, plus RM too where appropriate)	• Innovar-supported assessments in place, with internal peer review process
			Selected Ex-poste evaluations	• 3 completed in 2011/12
		Grower attitude and engagement survey	Annual survey	• GA Research survey completed in 2011/12
Post-farm	Topmakers, spinners, weavers, knitters	Identified by project, but primarily sales impacts	Ex-ante (Innovar, plus GAWM and AWI internal tools)	• Innovar-supported assessments in place, with internal peer review process
			Partner declarations	• GAWM updated and applied to Woolmark Gold Program (2011/12)
		Selected Ex-poste evaluations (GAWM)	• AWI contracts revised to include partner declarations	
Partner engagement survey	Survey of B2B partner responses	• 1 ex-post applied in 2011/12	• Proposal received, and to be being contracted in 2012/13	
Fibre and Product marketing	Brands, Retailers, wholesalers, garment makeup	Awareness, attitude, and wool purchase data	Media monitoring	• Tool developed & implemented (2010/11)
			Consumer survey (baseline, tracking and wardrobe audits)	• Global consumer survey conducted in 2011/12. Following tracking surveys implemented from 2012/13
		AWI to partner investment ratio	Partner declarations	• Wardrobe audits underway.
		Kgs of wool sold	Partner declarations	• AWI contracts revised to include partner declaration requirement (2011/12)

Thus, the primary *ex-ante* tools for on-farm and post-farm use are the Innovar Project Scorer, with input where appropriate from the Rendell McGuckian on-farm evaluation tool, and other economic models where appropriate.

5. 2010/11 OPERATIONAL ACTIVITIES

A number of major developments occurred in 2010/11 in relation to the AWI Evaluation Framework. These are listed below, and should be considered in the context that AWI in 2010/11 initiated a project call process for on-farm and post-farm investment proposals – these ‘calls’ were completed in January (on-farm) and February 2011 (post-farm):

1. PWC tool developed, and criteria from PWC tool incorporated in AWI Project Proposal forms (July – November 2010)
2. Engagement of external expertises, to support the evaluation process on a ~0.5-1 day per week basis (October 2010).
3. Innovar tool updated, and IP rights resolved with Innovar P/L (March 2011).
4. On-farm project proposals (~40) evaluated using the subjective criteria contained in the Proposal form, and a sample (8) were also evaluated using the Innovar tool (March 11)
5. Media monitoring process developed (Insight and Navigare)
6. Economic models for post-farm project evaluations developed:
 - a. Apparel product sales model (January – March 2011)
 - b. Economic frameworks for post-farm investments developed (March 2011)
7. Post-farm project proposals (20) were evaluated using the Innovar tool (April 2011)
8. DAFWA GAWM updated, including use AWI Harvest database outputs (March-April 2011)
9. Grower survey planning process commenced (May-June 2011)

6. 2011/12 OPERATIONAL ACTIVITIES

The major 2011/12 operational activities associated with AWI’s Monitoring and Evaluation Framework were:

1. Open call for On-farm R&D proposals (October 2011)
2. Open call for Post-farm R&D proposals (November 2011)
3. Completion of the GA Research grower attitude and engagement survey (October 2011)

4. Appointment of BDA Economics and Environment Pty. Ltd. to provide external support to implementation of the AWI M&E Framework. (December, 2011)
5. Updating of Innovar project evaluation tool (January 2012)
6. Completion of global consumer attitude and awareness survey (February 2012)
7. Completion of internal evaluation of external R&D proposals (February 2012).
8. Review of 2011/12 M&E Framework initiated, and Program Investment Logic (PIL) development process initiated through BDA.
9. Completion of the DAFWA GAWM review of the Woolmark Gold Program (May 2012)
10. Initiation of consumer wardrobe audit survey (May 2012)
11. Completion of 7 ex-post program evaluations (June 2012)

7. GENERALISED ANNUAL CYCLE FOR AWI R&D INVESTMENT

Table 3: Generalised annual cycle for AWI R&D investment.

Month	AWI Planning & Governance cycle	Retail Fashion cycle (Northern hemisphere)	R&D cycle
July		Pitti Fillati etc.	New contracts start
August		SpinExpo etc.	
Sept.	Annual Report; SFA meeting	Retailers stocking shelves	
Oct.	ICC meeting	Peak sale season Market guidance	
Nov	AGM		Annual call for proposals
Dec	SFA meeting		
Jan		Following year product planning	Call concluded.
Feb		Intended product offer finalised	
March	Annual Operating Planning (AOP); SFA & ICC mtgs	Licensee renewals	Budgets and planning finalised
April		Packaging and collateral finalised	Second round offers
May	Industry consultation		Program approvals
June	SP & AOP lodged; ICC meeting		Program approvals