Horticulture Australia

Nursery & Garden Industry Australia

Nursery and Garden Industry Strategic Investment Plan 2012 – 2016

Disclaimer

The information contained in this publication is intended for general use to assist public knowledge and discussion and to help improve the development of the Nursery and Garden Industry across Australia. You must not rely on any information contained in this publication without taking specialist advice relevant to your particular circumstances.

Whilst reasonable care has been taken in preparing this publication to ensure that information is true and correct Nursery and Garden Industry Australia (NGIA), Horticulture Australia Limited (HAL) and the Commonwealth of Australia give no assurance as to the accuracy of any information in this publication.

NGIA, HAL and the Commonwealth of Australia, the authors or contributors expressly disclaim, to the maximum extent permitted by law, all responsibility and liability to any person, arising directly or indirectly from any act or omission, or for any consequences of any such act or omission, made in reliance on the contents of this publication, whether or not caused by any negligence on the part of NGIA, HAL and the Commonwealth of Australia, the authors or contributors.

The Commonwealth of Australia does not necessarily endorse the views in this publication.

This publication is copyright. Apart from any use as permitted under the Copyright Act 1968, all other rights are reserved. However, wide dissemination is encouraged. Requests and inquiries concerning reproduction and rights should be addressed to the HAL Publications Manager (+61 2 8295 2300).

Robert Prince
Chief Executive Officer
Nursery and Garden Industry Australia
PO Box 7129
Baulkham Hills BC, NSW 2153
Ph 02 88615107
Fax 02 96593446

Foreword

The Australian Nursery industry plays a critical role in providing products that contribute to Australia's lifestyle and wellbeing.

The industry is diverse in production outcome and locality and as a result has skills and business processes that are world's best practice in both technology development, and utilisation of resources, both human and natural.

The industry has reached this position as a result of investment over time by individuals and businesses through their own resources or as part of the funds provided by the nursery industry levy which have been matched by funds from the Australian federal Government.

This plan provides a structured guideline for investment over the next four years and has been developed in consultation with leading growers and levy payers from around Australia.

It has been based on reviewing past investments and identifying what has worked as well as understanding the issues facing the industry into the future. Our industry is faced with the challenge to get plants and green environments to be recognised as significant contributors to the development of liveable and sustainable communities. There is a real need for plants in the urban environment to be valued correctly. This is not only with regards their financial value but the contribution made to both environmental and personal sustainability. While Australia may be viewed as having a wealth of wide open spaces covered in vegetation, in our urban areas there is a drive for developments to have less greenlife which is detrimental to human wellbeing.

In reviewing past investments of the levy and planning for future priorities it is critical to recognise that the "Industry Value Chain" starts with the production sector, who are the levy payers. There is a need for all parties within the industry to recognise that the benefits of the investment are captured and are fair to all participants. This includes a clear identification of the public good that results from the investment of matched funds from the Federal Government.

This Strategic Investment Plan does not replace the Industry Strategic Plan 2010-2015 but is an essential component relating to the investment of levy funds.

The Vision for the strategic Investment plan is " A profitable and sustainable Australian plant production sector"

The achievement of this vision will enable the total industry to achieve the objectives as outlined in the wider industry plan, and will enable all Australians to improve their plant life balance.

David Mathews
Chairman
Nursery Industry Advisory Committee

Robert Prince
Chief Executive Officer
Nursery and Garden Industry Australia

Table of Contents

1. Executive Summary 8

2. Industry situation analysis 10

2.1 Structure and production 10

2.2 Sales and markets 11

2.3 Trends, challenges and drivers 14

2.4 Implications for investment 17

3. Nursery and Garden Industry Strategic Plan 21

3.1 Relationship between the Industry Strategic Plan and the Strategic Investment Plan 21

3.2 Strategic Plan strategies 21

3.3 Strategic plan details concerning R, D, E and marketing 23

4. Strategic Relationships and Investment Influences 26

4.1 Partners' strategic plans & objectives 26

4.2 How do our activities align to industry strategic plans and government priorities 29

5. Development and implementation of the Strategic Investment Plan 32

5.1 The planning process 32

5.2 The investment principles 32

5.3 Influencing others: Our communication, partnership and co-investment strategies 33

6. The Strategic Investment Plan 36

7. Summary of Proposed Investment 60

8. Financial Analysis 61

9. References 64

Figures

Figure 1: Summary of the Nursery & Garden industry Strategic Plan 20

Figure 2: Apportionment of activity expenditure over 2010-11 and 2011-12 22

Figure 3: Investment Planning Process 31

Figure 4: Target markets associated with delivering the Industry Strategic Plan 35

Tables

Table 1: Summary of Investment split 8

Table 2: Greenlife category share of market 10

Table 3: Greenlife market and distributors 11

Table 4: Industry priorities and rationale 15

Table 5: Allocation of current activities to R&D, extension, marketing, governance and training 21

Table 6: HAL priorities, RD&E programs and outcomes 23

Table 7: Australian Government RD&E priorities (2010-2015) 24

Table 8: Indicative investment in RD&E ($'000) for the lifestyle horticulture sector by PISC agency, HAL/Industry and other funding sources 25

Table 9: Mapping Investment Projects to Industry Strategic Plans and Government Priorities 26

Table 10: Budget summary 2012-2016 43

Table 11: Strategic Investment Plan Compliance to HAL Guidelines 44

Acronyms

B2B Business to business

CSIRO Commonwealth Scientific and Industrial Research Organisation

DAFF Department of Agriculture, Fisheries and Forestry

DEST Department of Education, Science and technology

DIISR Department of Innovation, Industry, Science and Research

HAL Horticulture Australia Limited

IAC Industry Advisory Council

MDBA Murray Darling Basin Authority

NGI Nursery and Garden Industry

NGIA Nursery and Garden Industry Australia

NSW New South Wales

PIMC Primary industry ministerial Council

R&D Research and Development

RDCs Research and Development Corporations

R, D, E & M Research, Development, Extension and Marketing

SEWPAC Dept of Sustainability, Environment, Water, Population and Communities

SMART Specific, Measurable, Achievable, Realistic and Time-bound

TM Target Market

UTS University of Technology, Sydney

VCs Voluntary Contributions

VOCs Volatile organic compounds

1. Executive Summary

This plan has been developed by the industry advisory committee in conjunction with industry. It provides the guidelines to the IAC for priorities of investment over the next four years. In developing this plan the industry has reviewed all former investments of the levy and how that investment has been split.

The consultation process has involved key growers and state associations who represent growers throughout the country. The Nursery Industry is a diverse industry located in all States and Territories. Unlike other horticultural industries the Nursery & Garden Industry operates in a range of markets that are not dependent on share of plate but space for plants within the urban environment, planting of property developments, natural landscape rehabilitation and exports of products or technologies to all countries.

The review of past and recent investment priorities shows that the focus has been almost equally split between the key areas of the industry Strategic Plan. Looking to the future there is a change in priorities, the industry has world class best management practices, our irrigation management practices have been developed through years of drought and water restrictions. Industry has also invested in staff development, training programs and industry accreditation.

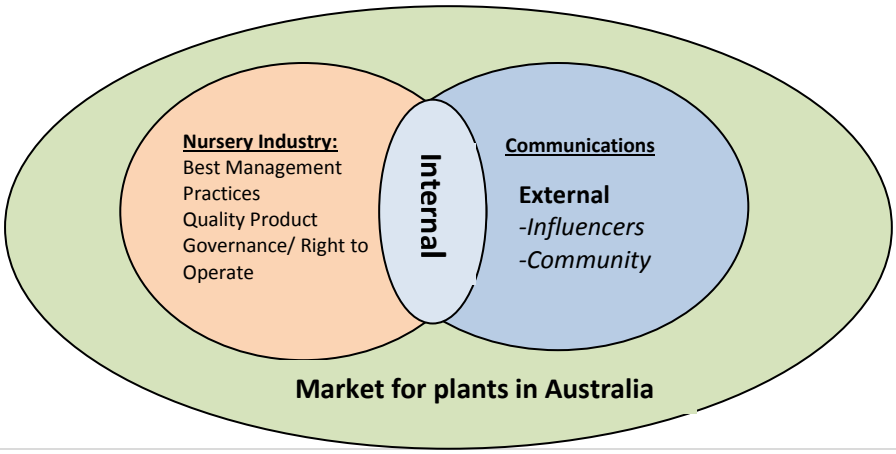
During this period of industry improvement and capability development the channels for marketing the product have changed dramatically.

Urban planning policy and the pressures on urban space have meant that the areas allocated for green space have shrunk dramatically. This coupled with a depressed economic market due to global influences and home based policies has meant industry has not been able to capitalise on better growing conditions delivery better soil moisture since the drought has broken.

The key focus of this strategic investment plan is based on three key principles:

- **Grow the market for plants and greenlife in the urban environment.**
- **Communicate the benefit of plants to all industry sectors, influencers at all levels of government and consumers**
- **Ensure industry has processes in place re governance and biosecurity to enable businesses to operate effectively.**

These three areas of focus are interconnected and dependent on all being strongly supported.



The changes proposed for industry investment ratios are detailed in Table 1 and fully detailed in Section 6. Some projects are already in existence and funds are allocated for new projects to be scoped.

Table 1 shows that there will be a significant change in investment focus in future years compared to past strategies. This was the result of in depth discussion during the SIP consultation meeting. This was also checked with a wider group of industry stakeholders during the industry conference.

Table 1: Summary of investment split

Objective	Existing Split	SIP Consultation
MARKETS	17%	30%
CAPACITY	19%	9%
COMMUNICATION	21%	36%
INNOVATION	19%	10%
GOVERNANCE	22%	15%

The economic analysis of the key aspects which are the basis of this plan show that historic investment has given a npv return of between 2 and 8 times the investment. The changes that have been proposed within this plan have been reassessed and the report is included in the appendices.

The independent economic analysis of the Nursery Industry Strategic Investment Plan shows that the strategies and prioritisation of investments will provide a return on investment of 80% with a benefit cost ratio of 3.9 to 1 (i.e. for each levy and government matching dollar invested by HAL $3.90 will be returned).

2. Industry situation analysis

2.1 Structure and production

Our Industry

Australian nursery and garden businesses make up a multi-billion dollar industry that plays a vital part in the human (community and personal), environmental and economic wellbeing of Australia. It is a truly Australian industry, transcending all state borders and spreading across urban, rural and coastal environments. Production areas are well established with some having been in existence and having Industry Representation for over 100 years.

The Industry is far broader than the perceived "ornamental" market, with businesses involved in large scale forestry, nurseries, revegetation for mining, landscaping and starter plants for fruit and vegetable production all engaged as levy payers.

Industry location and scope

- Production is spread throughout all States and Territories of Australia. The industry is located in urban, peri-urban and regional/rural areas.
- Production areas are well established with some having been in existence and having Industry Representation for over 100 years.
- Statistics for production location and levy collection are reasonably linked to the population split.
- Production areas will follow the market development e.g. mining revegetation nurseries, seedling vegetable production, forestry nurseries and fruit crop nurseries.
- Urban encroachment will force relocation of urban businesses due to land value increases.
- Environmental and resource availability will also dictate the movement into some new areas.
- New production areas are focused on infrastructure – recycled water and transport as supply chain issues become important. Environmental conditions have had an impact on the dynamics of the industry over the past three to five years with a reduced number of producers but they are generally bigger and involve greater investment.
- Changes in the distribution channels over the past period have resulted in market consolidation for some products.
- The industry lacks sound production statistics and this is an issue that is being addressed.

Maturity

- The Industry is classified as "well established", but has embraced new developments in production methods and technologies.
- As with any established market there is considerable variability in individual business' ability to respond to market drivers.
- As the industry is diverse, it may appear to be fractured into sub sectors which are very competitive. This is not the case when subjected to closer examination.
- The industry has not fully embraced improvements in the supply chain as the channels have changed dramatically in recent years. E-commerce has the potential to both eliminate some intermediaries and create others in the supply chain.

Products and distribution

- The product mix is highly diversified with a wide range of plants under production to meet market demands. Table 2 provides examples of greenlife category products.
- There are specialised production and niche products.
- There is some brand specialisation due to the complete business package – products, marketing and service.
- Product diversification based on labelling and promotions, packaging is occurring to meet the needs of the diverse distribution channels.
- Product protection occurs via Plant Breeders Rights and marketing agreements.

Table 2: Greenlife category share of market (Year Ending June 2009)

Greenlife Category	Share of Total	+/- LY	Market value ($'000)
Bedding plants and colour	12.5%	8.9%	234,066
Bulbs and seeds	4.1%	3.2%	73,113
Indoor and patio	8.2%	8.2%	153,347
Propagation stock	6.0%	-50.4%	112,407
Trees and shrubs	62.1%	5.4%	1,159,796
Turf	6.0%	2.4%	111,888
Other plants	1.0%	2.8%	17,810
Total		-1.0%	1,866,428

Source: FreshLogic 2009

2.2 Sales and markets

Markets and customers

The market for products is very diverse with product sold to a full range of customers - B2B, retailers, landscapers, consumers and through a diverse range of distributors (see Table 2). The industry does not have more recent data, although proposals are underway to address this.

The Industry is a key component of the Food Service sector as a supplier of basic starter plants – vegetable seedlings, fruit trees, potted herbs etc.

Industry has seen major growth with consumers in the Grow Your Own sector.

Industry supplies plant product into the services sector via plant rental market.

The export market is more focussed on technology/IP transfer than actual plant sales due to international controls on plant movement.

Some sectors are increasing in plant sales to the Middle East and Asian property development market. These require modification of growing practices to meet market access requirements.

Table 3: Greenlife market and distributors (Year Ending June 2009)			
Distribution channel	Market share	+/- LY	Market value ($'000)
Landscapers	36.5%	3.0%	2,219.093
Local government and sports	1.7%	3.1%	104,406
Revegetation	1.9%	4.8%	144,588
Plant hire	1.5%	2.1%	89,291
Garden services	6.5%	2.7%	195,144
Retail nursery	11.1%	1.7%	672,417
Discount department stores	2.9%	0.4%	176,156
Garden supplies	14.0%	2.5%	849,235
Hardware	19.7%	3.1%	1,198,443,
Mail order and E-commerce	0.4%	3.4%	25,565
Markets	0.2%	4.2%	13,254
Supermarkets	1.4%	1.9%	86,980
Wholesale direct	0.4%	0.3%	25,489
Propagators	1.8%	-50.0%	112,407
Total		0.7%	6,082,460

Source: FreshLogic 2009

Supply chain

- Supply chain characteristics are variable and changing as a result of changes in the customer makeup.
- The production sector does not fully understand the requirements of having an effective supply chain processes or the opportunities that exist.
- Industry does not have a "cradle to grave" view of the supply chain.
- Traditionally the industry has been and still is dependent upon the transport sector.
- Generally there is very little communication of market signals as the industry is relationship driven rather than market driven.
- Industry has not invested consistently in ongoing consumer research.

2.3 Trends, challenges and drivers

Competitive environment

- The better growers have considerable power and respect within the industry. This is as a result of relationships and total market offering.
- Those areas focused on commodity lines may be subject to being a “price taker” for some lines.
- In recent years the emergence of the “big box” retailer and stronger landscape sector has changed the balance within some sectors.
- Industry at both buyer and grower levels is focused on maximising value returns for plants.
- There are no major threats from importation of products due to biosecurity risks and controls. The product range diversity will be a threat to other sectors of the industry.
- External environmental impacts have a greater impact on Industry growth –e.g. regional availability of water and urban restrictions (see Figure ???).
- There are minimal barriers to entry into the market. There are no registration or licensing requirements at this stage.
- Western Australia, South Australia and Tasmania have introduced restrictions on plant movement due to biosecurity concerns. These restrictions impact on grower returns within all states.
- Environmental legislation and controls can offer barriers to production in some areas.
- Industry works together for common benefit, but is competitive when it comes to the market.

Strengths

- We have a diversity of growing conditions and production areas;
- Our industry is well established with an experienced business sector;
- All industry sectors have growth potential due to increases in population;
- International technology is easily transferred to Australian market;
- The broad spread of distribution channels makes greenlife easily accessible to our customers and consumers;
- Plants in the urban environment have a major position within climate change debate;
- The Australian lifestyle and weather is conducive to being outdoors all year.

Weaknesses

- The impact of Climate change and drought or water shortage on markets;
- While also a strength, the diversity of growing regions and distance from major markets makes cooperation and improving efficiency difficult;
- Australia's Federal political system, with differences in State regulations, impacts on plant movements;
- As a result of education or ethnic background, many consumers do not understand the benefits of nursery and garden products in relation to their lifestyle, home environment and earth environment;
- There is a limited pool of funds to promote the industry;

- There is decreased interest in “gardening” due to changing lifestyle – i.e. bigger homes, smaller blocks, increased units/flats, decrease in back yard size;
- Industry profitability is very reliant on weather patterns at critical times of the year;
- There are few barriers to entry for businesses to produce plants.

Opportunities

- Climate change provides a positive role for increased greenlife in the urban environment (indoor and outdoor);
- Increased focus on food security will provide opportunities for nurseries supplying starter plants for this sector;
- The sector can play a vital role in preventing, stabilising and reversing environmental degradation;
- Technology developed, i.e. Industry Best Management, water management etc, has export potential;
- There is considerable room for demonstrating how gardens and greenlife can improve personal health and wellbeing, and increase property value (plants appreciate in value over time)
- Improvement in profitability can be found not only in new technologies and better business practices, but also through all stages of the supply chain working together more efficiently;
- Encouraging gardening to start at an early age can have a positive impact on future behaviour;
- House size increasing and domestic gardens shrinking provides an opportunity to sell more indoor plants and outside shade trees to reduce reliance on air conditioning/heating;
- Garden retailers are ideally positioned as the public's “Green Advice Shop”;
- New forms of non-traditional advertising and other channels provide the ability to target consumers in niche segments;
- We can bridge the gap between people's desire to have a great environment and their participation in gardening;
- There is room to position the Industry as the information leader in the category for products, employment and training.

Threats

- Government policy can both help or hinder increased expenditure in horticultural activities and greenlife purchasing in all sectors;
- Ongoing drought and water restrictions and regulation;
- Lack of accurate industry data to measure impacts and values of investment activities;
- Limitations on key resources – particularly water, skilled labour and efficient transport;
- Biosecurity policies of states can severely impact plant movement;
- There is a lack of national standards for plant production;
- The lack of unity between industry representative bodies (States and sectors) limits both investment efficiency and outcomes;
- Gardening is positioned in the discretionary spend segment for most consumers and has to compete with many other industries and categories for consumer time, disposable income, lifestyle and enjoyment;
- Importation of product from bordering countries as part of Free Trade Agreements can impact on both profitability and plant health, such as through a major pest incursion.

Success and barriers to success

The Industry Strategic Plan's vision suggests "success" means an industry that is productive, profitable and sustainable. Given this, a meeting of the industry's top levy payers convened in November 2011 identified a range of inhibitors to success:

Inhibitors to being more productive

Attitude and willingness among some industry members to change

Inappropriate business models

Lack of adoption of or participation in industry R&D, extension and training

Too much attention to generic needs and insufficient attention to specific needs

Insufficient focus of the IDO network, requiring

- a redefinition of role
- greater focus on developing the industry
- increasing the links with accreditation and technical schemes and investments
- a long term communication strategy

Inefficient supply chains and logistics

Ineffective marketing, requiring better

- data
- market access
- consumer programs
- confidence
- focus, including transforming the industry's products and values from being perceived as luxuries to an essential part of life
- targeting of influencers, retailers, landscaper and governments

Inhibitors to being more profitable

Ineffective marketing programs that:

- send wrong message
- have insufficient funds
- use the wrong vehicle for any given target audience
- don't focus on growing the market
- don't gather sufficient data to underpin decisions

Inappropriately directed R&D, marketing and communication activities, requiring development of a specific R&D, marketing and communication plans

Inability to deal with price versus product issues

Competition

Lack of education cost structures

A view that the industry is not (just) driven by profit

Lack of attention to finding alternate channels to develop e.g. garden clubs, water companies, energies, health funds, real estate companies

Lack of financial planning

Lack of industry statistics to base better decisions

Inhibitors to being more Sustainable

Insufficient R&D focussed on industry sustainability, including on farm tools, capacity to adopt, biosecurity, urban forest / iTree, increasing industry data and issues addressing the public good i.e. H2O power usage, carbon footprints etc

Impact / investment of green product for environmental / social partnerships

2.4 Implications for investment

Taking into account the preceding situation analysis and in particular the inhibitors to success, the following outcomes have been identified as priorities for investment in this plan. These priorities do not cover the full Industry Strategic Plan, but rather will act as a guide to the investment of specific R&D and marketing levies, government matching funds against the R&D levy, and industry voluntary contributions. The priorities and rationale for these priority outcomes is outlined in Table 4.

Priority outcomes and rationale:

Priority Outcome	Rationale
Enhanced profitability resulting from marketing investments that increase the overall size of the greenlife market	In a competitive but stagnant market, producers can only enhance profitability at the cost of their competitors. The market failure role of the levy system is to grow the overall market to enable all producers an opportunity to increase their profitability.
Improved market data and marketing resulting in sales growth	A base level of market data is required to support industry-wide level investment allocation, particularly in respect to generic marketing.
Generational education resulting in long-term access to skilled labour	The NGI competes against many industries for a limited labour resource, yet requires labour that is capable of meeting accredited

Priority Outcome	Rationale
	best practice management standards
Better targeting of IDOs to assist industry with Technology Transfer and Adoption capabilities, resulting in on-ground implementation of activities relevant to all Industry Strategic Plan objectives	The IDO network has been recognised as an effective conduit for providing industry information and training, and is now ready to go the next step towards meeting the wider objectives set out in the Industry Strategic Plan. This will entail broadening the contribution of the network towards marketing and innovation activities.
Enhanced extension and training effort resulting in enhanced adoption of Best Management Practice	The adoption of best management practice will lead to increased business productivity and profitability and enhance the industry's reputation (hence supporting marketing efforts to grow the overall greenlife market
Strengthened government relationships resulting in strong support for industry initiatives	The NGI delivers against a range of government priorities, including social (wellbeing), economic (i.e. GDP) and environmental (i.e. carbon initiatives). At the same time, government policies (i.e. water policies, R&D funding) can affect the operations of NGI members and industry investment capacity.
Improved internal and external communication resulting in better decisions informed by industry knowledge and consistent messages	Incorporating good communication mechanisms into all industry activities is the modus operandi by which the industry can make better informed decisions through engagement of industry members, while also building constructive relationships with the industry's diverse stakeholders and partners.
Increased greenlife in urban landscapes	In Australia, around 25% of the population lives within 3kms of the sea, while 95% lives within 50km. With population expected to dramatically increase in Australian cities, it is important that to create liveable spaces by planning and providing adequate urban forestry. Not only is green-life essential to tackling climate change but also to improving the liveability, health and

Priority Outcome	Rationale
	wellbeing of our urban centres.
Strengthened industry R&D capacity resulting in greater productivity	The current R&D talent pool for the NGI is very limited, with State agencies and other research bodies having reduced their investment in R&D provision. That said, an exciting range of new R&D initiatives being established particularly under various governments climate programs is potentially widening the pool of researchers interested in the benefit of greenlife.
Increased investment evaluation resulting in better decisions focused on adding to industry value chain.	Monitoring and evaluation is an important element in best practice management of investments in innovation. It provides the basis for better investment decisions in future, for transparency and accountability of industry and government expenditure, as well as for supporting marketing and extension programs that demonstrate the benefits and values of greenlife innovation.
Enhancement of partnerships and co-investment resulting in overall increased investment across Industry Strategic Plan objectives	While the present forecast income from levies, government funds and voluntary contributions is adequate to cover the priorities of the SIP, they are inadequate to deliver against all strategies and sub-strategies of the wider Industry Strategic Plan. Partnerships can help fill this gap.
Enhancement of capacity to prepare and manage pest and exotic pests (biosecurity)	Owing to the geographic isolation of Australia, nursery production in Australia has remained relatively free from exotic pests that have significantly affected nursery production in other parts of the world. However, exotic pests have the potential to cause huge production losses and trade problems. Indeed, the detection of an exotic pest in Australia may prevent the cultivation of certain plant species and restrict intra and interstate green-life trade.
Improved industry structures resulting in efficient use of industry resources	In order to facilitate the adoption of best management practice by industry members, the industry bodies themselves

Priority Outcome	Rationale
	must operate effectively and efficiently using best management practices structures and systems.

3. Nursery and Garden Industry Strategic Plan

3.1 Relationship between the Industry Strategic Plan and the Strategic Investment Plan

As the *HAL Strategic Investment Planning Guidelines* (HAL 2011) suggest, the primary purpose of the SIP is to guide the HAL R&D and Marketing investment for an industry sector, in this case for the NGI. Each HAL Industry Advisory Committee (IAC) must have a current SIP. This plan is used by the IAC in making investment recommendations to HAL for investment of industry and federal government matching (for R&D) funds through HAL and can also provide a framework of accountability for the implementation of the plan.

This SIP complements the Nursery & Garden Industry's Strategic Plan covering the period 2010 to 2015. The Strategic Plan is the Industry's broader platform for investment and activity, and incorporates activities not funded by the industry levy program. The SIP, on the other hand, relates specifically to those components of the Strategic Plan which deal with the industry levy and Commonwealth matching funds.

The SIP is thus informed by the strategic plan, but it is not the same thing. It is limited only to strategies and activities that are Levy funded. Moreover, because the primary purpose of the Investment Plan is to guide HAL's R&D investment for the NGI. The scope of the SIP is constrained to strategies which can be addressed through the HAL investment program.

3.2 Strategic Plan strategies

In order to frame the directions of the SIP, it is necessary to understand its guiding document, the Industry Strategic Plan. In this plan, the Industry's vision of "A unified Australian nursery and garden industry that is productive, profitable and sustainable" is supported by four investment objectives covering markets, capacity, communications, and innovation, all underpinned by an objective of good governance. Each of these objectives is supported by a range of strategies, many of which are directly relevant to shaping the SIP. These strategies include:

Objective 1: Markets

Strategy 1.1: Build demand for nursery and garden industry products and services through coordinated marketing and promotion

Strategy 1.2: Underpin promotional campaigns, new product development and public relations with existing and emerging values of plants

Strategy 1.3: Build the next generation of nursery and garden customers

Objective 2: Capacity

Strategy 2.1: Ensure the whole industry has access to appropriately trained human resources

Strategy 2.2: Enhance adoption of best industry practice across the production sector

Strategy 2.3: Provide general and retail customer confidence through industry accreditation

Objective 3: Communication

Strategy 3.1: Establish effective communication and engagement with industry and the community

Strategy 3.2: Coordinate an engagement program with all levels of Government

Strategy 3.3: Have a strong unified industry with one voice

Strategy 3.4: Strengthen the benefits derived in value chain interactions

Objective 4: Innovation

Strategy 4.1: Identify growth opportunities for the industry and the implications for R&D investment

Strategy 4.2: Invest in research and technology development across high priority areas

Strategy 4.3: Monitor and evaluate the return on investment in R&D and improve the capacity to improve future investments

Objective 5: Governance

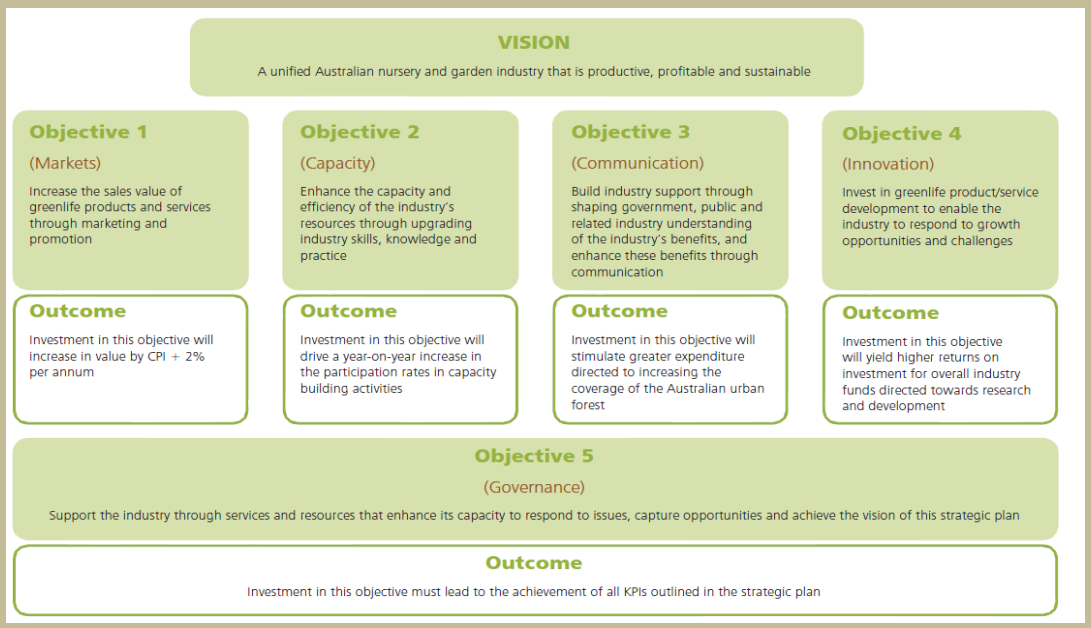
Strategy 5.1: Well informed industry

Strategy 5.2: Increasing funding

Strategy 5.3: Efficient service delivery

Strategy 5.4:Risk management planning and responses, including biosecurity

Figure 2: Summary of the Nursery & Garden industry Strategic Plan



Source: NGIA 2010

3.3 Strategic plan details concerning R, D, E and marketing

This section analyses and categorises the current sub-strategies of the Industry Strategic Plan in terms of their relevance to research, development, extension and / or marketing, all of which require investment of industry levies. Such a step is a prerequisite to defining which elements of the Strategic Plan are relevant to the SIP.

For the purpose of this section, the following definitions taken from HAL's Deed of Agreement apply:

Research and Development is the systematic experimentation or analysis in any field of science, technology, economics or business carried out with the object of:

a) acquiring knowledge that may be of use for the purpose of improving any aspect of the production, processing, storage, transport or marketing of horticulture products (research); or

b) applying knowledge for the purpose of improving any aspect of the production, processing, storage, transport or marketing of horticulture products (development).

Extension, which has traditionally sat outside of R&D, is now generally included in the Development part of R&D. Extension is a system of communication that aims to apply R&D knowledge in a way that changes behaviour from current practice. It can take the form of technology adoption, advisory work, human resource development or educational facilitation or empowerment.

Marketing includes activities intended to improve the meeting of consumer needs such as processing, handling, transporting, storing, promoting and selling, but does not include research and development.

Where a project is not easily classified as either R&D or Marketing, HAL suggests four key questions need to be asked. These are:

1. Who is the target of the proposal? e.g. growers, industry bodies, end users

2. What is the core activity outlined?

3. What is the aim of the activity?

4. What is the intended outcome of the activity?

If the activity does not expressly fall within the scope of 'marketing' (i.e. intention to improve the meeting of consumer needs) it does not mean it is automatically R&D. The test to be then applied is does the activity involve systematic experimentation or analysis carried out with the objective of acquiring knowledge or applying knowledge aimed at improving any aspect of the production, processing, storage, transport or marketing of horticulture products.

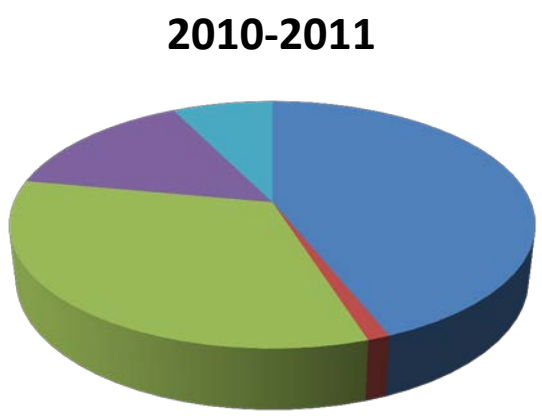
The activities presently supported under the current strategic plan cover the categories of R, D, E and M as described above, together with two additional categories; Governance and Training. Current and recent expenditure directed towards these activities is outlined in Table 5, while Figure 3 shows how this investment has been apportioned over 2010-2011 and 2011-2012.

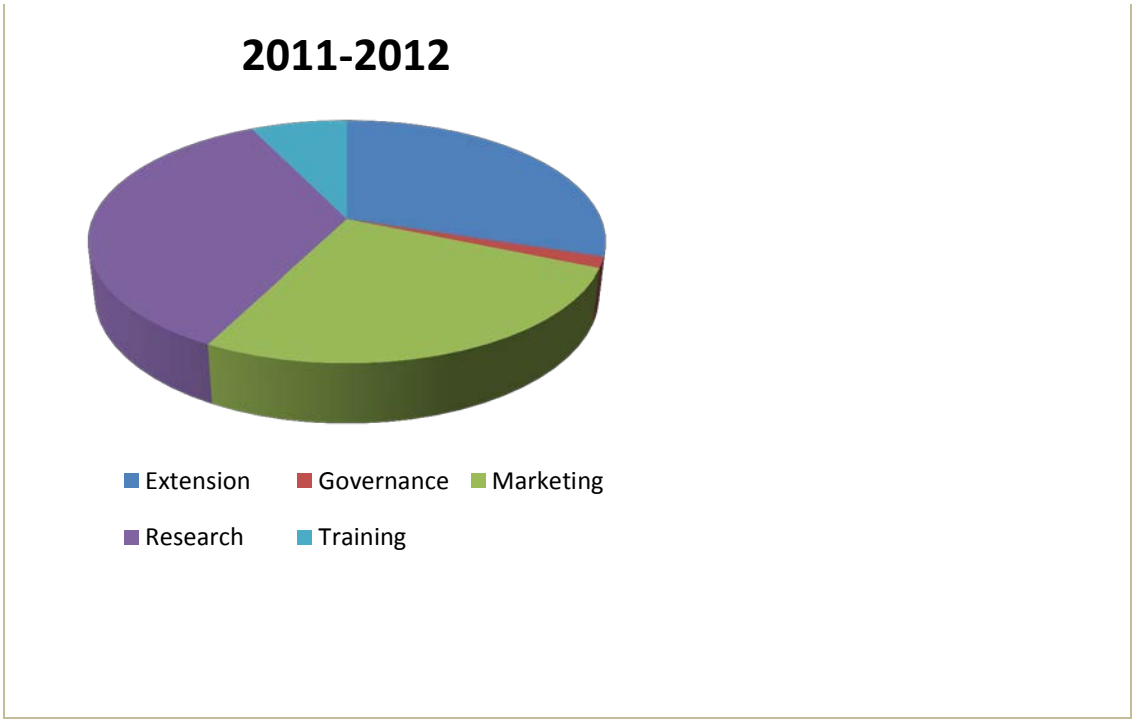
Table 5. Allocation of current activities to R&D, extension, marketing, governance and training

Activity type	Projects 2010-2011		Projects 2011-2012	
Extension	$1,187,525	43.9%	$920,000	30.3%
Governance	$32,000	1.2%	$44,667	1.5%
Marketing	$889,500	32.9%	$805,000	26.5%
R&D	$398,622	14.7%	$1,042,809	34.4%
Training	$199,000	7.4%	$221,647	7.3%
Total	$2,706,647		$3,034,123	

NGIA 2011

Figure 3: Apportionment of activity expenditure over 2010-11 and 2011-12




2011-2012
Extension
Governance
Marketing
Research
Training

NGIA 2011

4. Strategic Relationships and Investment Influences

4.1 Partners' strategic plans & objectives

The NGI is a strong alliance of inter-connected interests with common aspirations and objectives. However, these aspirations and objectives overlap with those of other organisations and agencies that both influence our industry and are influenced by it. In some cases, the nature of the influence is based on formal relationships underpinned by financial and contractual obligations, while in other cases it is based on strategic partnerships aimed at achieving mutual benefit.

Key agencies that will continue to be partners with us in delivering our R, D, E and marketing outcomes include:

- HAL
- Australian Government
- Government and private research providers from around Australia and beyond

In order to either meet the NGI's obligations or to maximise the advantages derived from our alliances and strategic partnerships, it is important that we understand the objectives of our partners. A shared vision is fundamental to identifying co-investment opportunities and to maintaining healthy relationships.

Co-investment is not the only reason for understanding what other agencies are doing in the NGI R, D, E and marketing areas. In some cases other agencies are best placed to take the lead or even sole role in an investment domain. Knowing who is doing what can help avoid duplication and sending mixed messages to industry members as well as help ensure activities are complementary.

- **Horticulture Australia Limited**

HAL is a not-for-profit, industry-owned company. Its major role is to manage the expenditure of levy funds collected by the Australian Government on behalf of horticulture industries. When expended on RD&E (but not marketing and promotion), these levied funds are matched by the Australian Government. HAL is responsible for all decisions relating to the expenditure of levy funds to the Department of Agriculture, Fisheries and Forestry's (DAFF). Where it is deemed that appropriate benefits accrue to the general Nursery industry, HAL is also responsible for investing Australian Government funds alongside private sector or overseas funds (as voluntary contributions; VCs).

As a general guide, the annual level of matched funds managed by HAL is expected to be in the order of $4m; $2m from levies and another $2m from VCs.

In HAL's Draft Strategic Plan 2010-2015 the key strategic priorities, RD&E investment programs and outcomes over the next five year period are presented in Table 6.

Table 6 - HAL priorities, RD&E programs and outcomes

HAL Strategic Priority	HAL Investment Program	HAL Major Outcomes
Deliver new information & knowledge	Best practice on-farm management Natural resource management Value chain efficiency New product development	Increased knowledge that enhances productivity, competitiveness and sustainability
Enhance industry skills & capability	On-farm R&D extension Investing in people Targeted communications Enhancing industry capability	
Build consumer demand	Domestic marketing program International market access Promote health and well-being New product and market development	Increased demand for produce in both domestic and international markets

Source: HAL 2010

- **Australian Government**

The Australian Government's support and encouragement for effective RD&E is carried out through several Departments:

- The DAFF which has formulated its Rural Research and Development Priorities (2007) to be a guiding document up to 2017;
- The Department of Innovation, Industry, Science and Research (DIISR) which has developed its National Research Priorities (reviewed June 2009) and which also embraces the Australian Research Council; and
- The Department of Sustainability, Environment, Water, Population and Communities (SEWPAC), which embraces the National Environmental Research Program.

HAL has an obligatory reporting arrangement and accountability to DAFF with respect to its RD&E investment decisions.

The combined strategic priorities for RD&E for the Australian Government which are applicable to the period 2010-2015 are shown in Table 7. The Australian Government is increasingly seeking outcomes from its co-investments that demonstrably meet one or more of these priority objectives.

During 2005, the Primary Industries Ministerial Council (PIMC) endorsed a concept of national research with regional development and local extension. Subsequently, PIMC and the rural research and development corporations (RDCs) signed a *Statement of Intent* containing a set of principles to support better cooperation between agencies and industry to improve the efficiency and effectiveness of the national RD&E capability. The principles emphasised collaboration, information sharing, continuity of funding, access to capability and reporting.

Over 2010 and 2011, the Productivity Commission undertook an enquiry into the funding and governance arrangements in respect to Australia's RDC system, which includes HAL and the industries associated with it. The outcomes of the enquiry are expected to be known following Government response to it in 2012, although an important theme was the need to address the fall in productivity that has been noted across most rural and agricultural industries.

Table 7. Australian Government RD&E priorities (2010-2015)

National RD&E Priorities	Rural RD&E Priorities
Promoting and Maintaining Good Health	**Productivity and Adding Value** Improve the productivity and profitability of existing industries and support the development of viable new industries
	Supply Chain and Markets Better understand and respond to domestic and international market and consumer requirements and improve the flow of such information through the whole supply chain, including to consumers
An Environmentally Sustainable Australia	**Natural Resource Management** Support effective management of Australia's natural resources to ensure primary industries are both economically and environmentally sustainable
	Climate Variability and Climate Change Build resilience to climate variability and adapt to and mitigate the effects of climate change
Safeguarding Australia	**Biosecurity** Protect Australia's community, primary industries and environment from biosecurity threats
Frontier Technologies for Building and Transforming Australian Industries	**Innovation Skills** Improve the skills to undertake research and apply its findings
	Technology Promote the development of new and existing technologies

Source: DEST 2010; DAFF 2007

- **State Governments**

As with most of the horticultural industries, the Nursery and Garden Industry is heavily reliant on State R, D & A activities (see Table 8). In terms of facilities to undertake R&D QPI&F's Redlands Research Station is considered the best equipped single centre to service the wider needs of the lifestyle horticulture sector with extensive field areas, poly tunnel, tissue culture lab, glasshouses (including PC2), shade house, water lab, and irrigation testing facilities available.

Other states such as New South Wales possess similar facilities but these are dispersed over a broader area. The National Centre for Greenhouse Horticulture at Gosford is the major existing infrastructure in NSW with potential R&D capacity for this sector, but the priority is not high and activities will be limited to the provision of Industry Development services.

Table 8. Indicative investment in RD&E ($'000) for the lifestyle horticulture sector by PISC agency, HAL / Industry and other funding sources

Investment source	Qld	NSW	Vic	Tas	SA	NT	WA	CSIRO	HAL	Total
Non-PISC									4,223	4223
Agency	372	152				56	171			751
HAL with agency	55									55
Agency with other	72									72
Total Nursery	499	0	0	0	0	56	171	0	4223	5101

Source: National Horticultural Research Network 2010

4.2 How do our activities align to industry strategic plans and government priorities?

The Industry's current and recently completed activities all demonstrate good alignment to the Industry Strategic Plan, the HAL Strategic Plan and the Government's current rural R&D priorities. Table 9 shows how each activity aligns, for the most part, with not just one but with several of these priorities. Indeed, with a limited budget, it has been important to make investments that result in multiple benefits.

The current Rural Research and Development priorities are:
1: Productivity improvement and adding value
2: Supply chain improvement and market development
3: Natural Resource Management
4: Climate variability and adaptation to climate change
5: Biosecurity
6: Innovation and skills development
7: Technology transfer and adoption

Table 9. Mapping Investment Projects to Industry Strategic Plans and Government Priorities

			Nursery & Garden Industry Plan 2010-2015																HAL Investment Plan 2010-2015																Government Priorities						
			1			2			3				4			5				1				2				3				4									
Project		$ Invested	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	5.3	5.4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7
	Projects 2009-2011																																								
NY09010	IDO Network for NGI	616000																																							
NY09018	Business Skills for NGI	320000																																							
NY10003	Supply Chain -FNQ	85000																																							
NY10004	Business Improvement -retail	90525																																							
NY10008	Regional Tech Conferences	76000																																							
NY10012	Regional Tech Consultation	32000																																							
NY08023	NGI National Conference	90000																																							
NY09004	Mgmt of Marketing and Communications	128000																																							
NY09013	Awards and Accreditation	139000																																							
NY10009	Industry Marketing	130000																																							
NY10010	NGI Communications	275000																																							
NY10011	Industry Value Study	0																																							
NY10500	Consumer - PR and Research	127500																																							
NY10001	Mgmt of Technical and Environment	164022																																							
NY10005	Research and Development for NGI	234600																																							
NY09011	Training Programs for NGI	199000																																							
NY10002	Mgmt of Training & Development	0																																							
CCR-PA	CCR and Governance	441736																																							
		3148383																																							
	Projects 2011-2012	per annum																																							
NY11000	NGI Tech R&D and Extension	432000																																							
NY11001	Plant Health Risk Management, Planning	158812																																							
NY11002	Carbon potential of Urban Forest	69997																																							
NY11003	Training and Capacity Development NGI	221647																																							
NY11004	Nursery Industry Market Data	100000																																							
NY11005	Regional Communications for NGI	80000																																							
NY11006	Industry Investment Consultation	35000																																							
NY11007	Water conservation products	144000																																							
NY11008	NGI Consumer Marketing	420000																																							
NY11009	Improvement FMS	110000																																							
NY11010	NGI Insights and PR	180000																																							
NY11011	NGI Awards and Industry Development	125000																																							
NY11012	Plants - Media: subtropical green roofs	0																																							
NY11013	Greening City - Heat mitigation	138000																																							
NY11014	Business Improvement for NGI Retail	100000																																							
NY09010	IDO Network for NGI	710000																																							
CCR-PA	CCR and Governance	411650																																							
		3436106																																							

Objectives

1 Increase the sales value of greenlife products and services
2 Enhance capacity and efficiency through skills,knowledge and practice
3 Build industry support through shaping community understanding
4 Invest in secyor development to enable industry to grow
5 Support industry through services and resources to achieve startegic plan

Objectives

1 Deliver new information and knowledge
2 Build Consumer demand
3 Enhance Industry skills and capability
4 Deliver operational excellence

Priorities

1 Productivity and Adding Value
2 Supply Chain and Markets
3 Natural Resource Management
4 Climate Variability and Climate Change
5 Biosecurity
6 Innovation Skills
7 Technology adoption

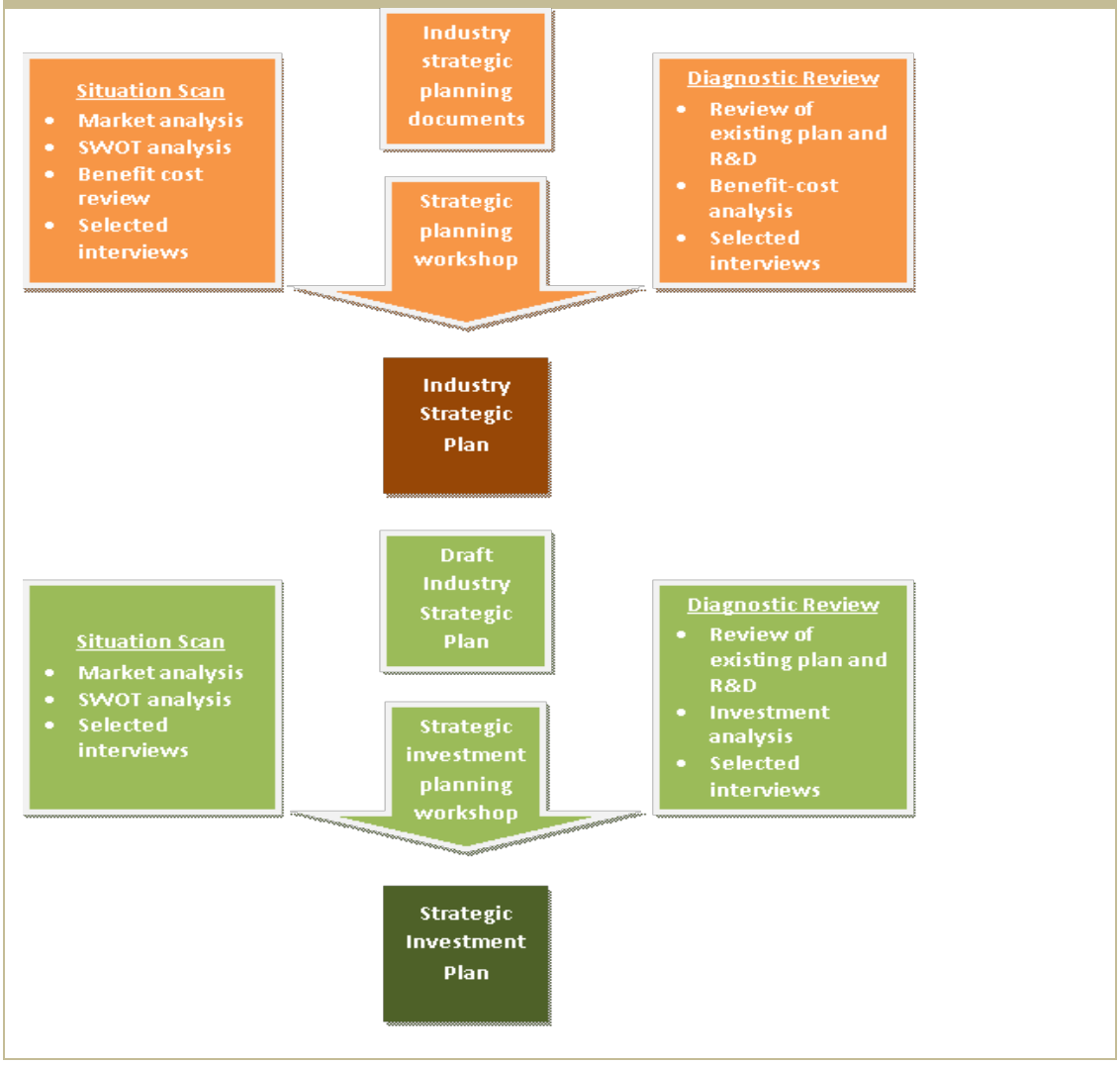
5. Development and implementation of the Strategic Investment Plan

5.1 The planning process

As required by HAL and the Australian Government, the NGI SIP details those aspects of the Industry Strategic Plan that relate specifically to the investment of Industry levies and voluntary contributions and Government matching payments. While the focus of the SIP is on investment in research, development, extension activities, the details outlined in Section 6 – Investment Details, go further to elaborate on the performance criteria across all investments outlined in the Strategic Plan.

The process of preparing this SIP cannot be considered in isolation from process that led to the preparation of the Strategic Plan. Figure 4 outlines the processes involved in the preparation of both documents and the relationship between the two.

Figure 3: Investment Planning Process



5.2 The investment principles

The co-investment principles outlined in *Section 4 – Strategic Relationships and Investment influence* sit within overarching strategic investment principles. These principles are used as filters to

determine whether a potential investment domain or specific activity warrants an outlay of industry or government funds. These principles include:

Investments address industry priorities

- Investments need to address the priorities articulated by industry members as agreed within current strategic plans and investment plans;
- Investments should benefit the wider sectors of the industry and not be captured by individual vested interests;
- Investments should preferably anticipate key drivers of change so that the industry is not constantly in 'catch-up' mode;
- Investments should be objective driven and not historically based.

Investments provide significant benefits

- Collective investment (i.e. the total portfolio investment) must generate significant return on investment unless there are compelling reasons to do otherwise;
- Investments must ultimately benefit levy-payers, even where non-industry sectors may be the primary beneficiaries;
- Investments should address market failure and not lead to over-crowding in an investment domain;
- Value creation arising from investments must be accompanied by mechanisms to distribute this value.

Investments demonstrate best practice

- Investments should reflect the professionalism and innovative nature of the industry and be made in organisations or individuals with the capacity to professionally undertake and account for contracted activities;
- Conversely, investments should demonstrate industry leadership and its own capacity to professionally manage a significant and diverse portfolio of activities;
- Investments should embrace best practice extension principles that maximise the likelihood of adoption. This includes ensuring:
- the adoption process matches the investment technology; i.e. commercialisation Vs communication Vs extension Vs capacity building Vs policy / regulatory response;
- the technology (product or service) takes into account the systems, business models, risk profiles and life-cycles of organisations or individuals;
- the technology (product or service) can be trialled, evaluated and if necessary adapted by individuals or business;
- the technology (product or service) make intuitive sense to the potential adopter of the technology;
- the technology (product or service) addresses a core problem or opportunity;
- the process of undertaking R&D activities allows for the engagement of potential adopters from the commencement of the activity;

- Investments should embrace appropriate research methods where the activity is research based. This applies not only to scientific studies, but also social science, economic and other studies. Proposed studies should be peer reviewed prior to final approval;
- Investments should allow for operational flexibility should circumstances change. This might mean incorporating phases into bigger projects that allow for stop-go decisions by the investors.

Investments are measurable

- Benefits arising from investments must be measurable and ideally they should be broader than economic alone;
- Investment should be framed, such as using Specific, Measurable, Achievable, Realistic, Timely (SMART) objectives and milestones, so that they can be readily monitored and evaluated.

Investments are appropriate in their scale and structure

- The scale and nature of each investment should be tailored so that the activity won't fail on account of the investment itself. The budget, timeframe and methods should be appropriate to ensure success;
- Alternatively, activities should be amenable to co-investment, in which case the principles of co-investment should be applied, i.e. as outlined in *Section 4 – Strategic Relationships and Investment influence*, taking into account:

- strategic fit;
- capability matching;
- IP management;
- Commercialisation;
- fair and equitable investment;
- risk sharing; and
- transaction costs.

5.3 Influencing others: Our communication, partnership and co-investment strategies

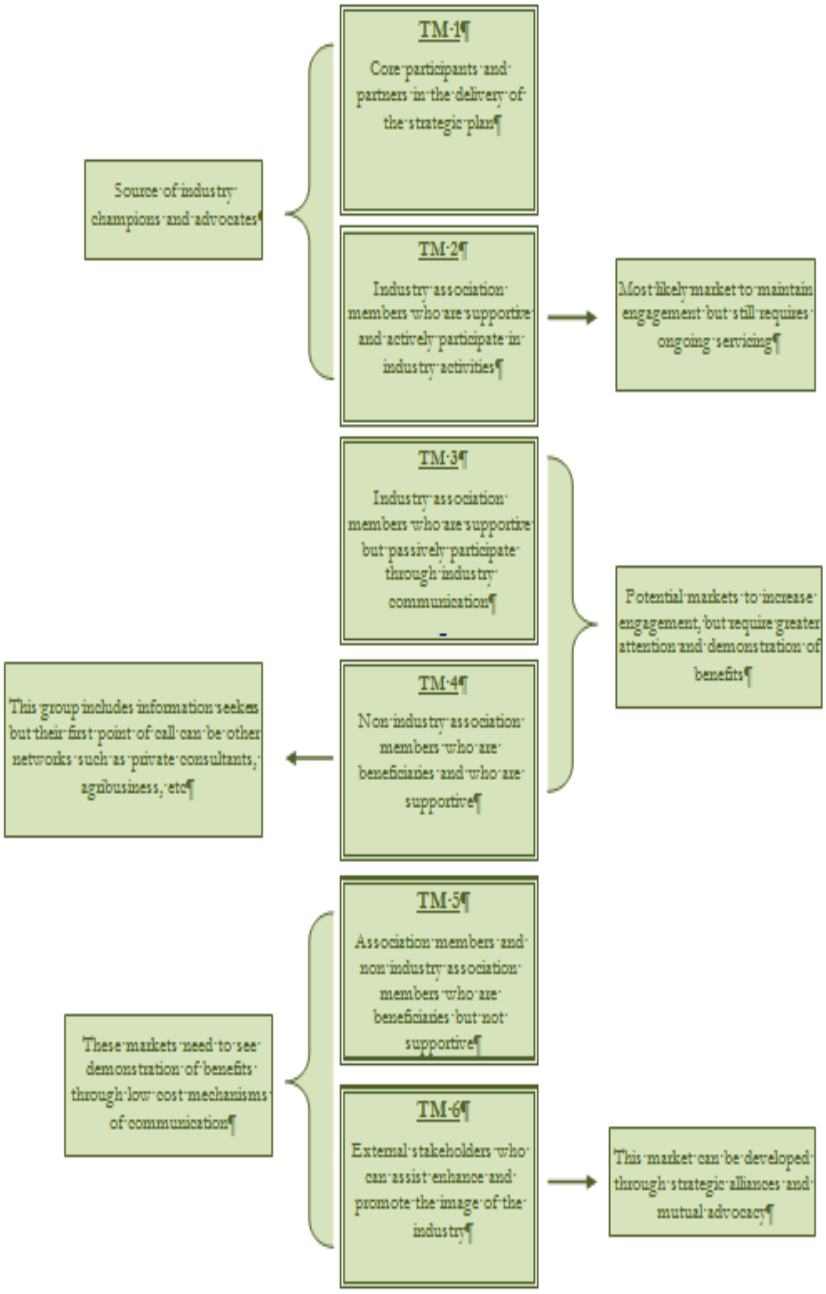
The industry supports a wide range of communication activities, and these have been embedded into the Industry Strategic Plan. Communicating the Strategic Plan is an important strategy to influence and rally commitment around achieving its vision and objectives. The Communication strategy recognises that not all industry participants and potential collaborators and co-investors have the same characteristics and will view the opportunities in the plan in different ways. For this reason, the strategy differentiates different target markets (Figure 5).

In making strategic decisions to co-invest in activities, the following principles are used as a guide:

- **Strategic fit**: Does the proposed co-investment match the strategic plans and objectives of all co-investors?

- **Capability matching**: Does the proposed co-investment provide NGIA with complementary capability, capacity, resource access and experience?
- **IP management**: Does the proposed co-investment have a well-considered IP management strategy that can deliver appropriately apportioned benefits to all investors?
- **Commercialisation**: Does responsibility for commercialisation of IP reside with the partner best equipped to manage the process?
- **Fair and equitable investment**: Are the contributions to the co-investment in proportion to the expected benefits?
- **Risk sharing**: Are the risks associated with the proposed co-investment fairly distributed across the investors.
- **Transaction costs**: Are the transaction costs associated with maintaining an effective partnership in the co-investment worth the investment?

Figure 4: Target markets associated with delivering the Industry Strategic Plan



Source: NGIA 2010

6. The Strategic Investment Plan- Investment Details

The tables presented in the following pages detail the specific proposed investments of levies, VC contributions and matched government funding against each sub-strategy of the Industry Strategic Plan.

For each proposed investment over 2012-2016, a performance indicator has been included as an aid to monitoring and evaluating the SIP. The NGIA has a separate monitoring and evaluation strategy detailing how all investments are accounted for.

INDUSTRY STRATEGIC PLAN		
	OBJECTIVE 1:	**Increase the sales value of greenlife products and services through marketing and promotion** **Outcome:** **Increase in value by CPI + 2% per annum**
	Strategy 1.1: Build demand for nursery & garden industry products	*Sub-Strategies* 1.1.1 Establish and manage a resource centre for marketing material based on customer profiles, preferences, behaviours and trends 1.1.2 Develop and implement an Australia-wide marketing and promotion program recognising the respective roles of different industry partners Outcome: Year-on-year increase in sales of nursery and garden products and services
	Strategy 1.2: Underpin promotional campaigns, product development and public relations	*Sub-Strategies* 1.2.1 Support research and market studies that identify, and where possible quantify, the values and benefits associated with the industry's products and services 1.2.2 Develop and promote alternative usage ideas for the full range of industry products and services 1.2.3 Expand the range of products and services offered by investigating new and emerging opportunities and promoting these to the industry's entrepreneurs Outcome: 1) An expanded range of products and services contributing to increased value of sales. 2) Increase in new customer segments by 2015
	Strategy 1.3: Build the next generation of nursery and garden	*Sub-Strategies* 1.3.1 Provide a public relations interface that promotes the benefits and opportunities of the industry to schools (teachers and children) and to the wider community 1.3.2 Identify new or underutilised target markets for specific promotion campaigns

	customers	Outcome: Year on year increase in schools participating in NGI activities					
STRATEGIC INVESTMENT PLAN	**Investment Plan Outcome**	**Rationale#**	**Performance indicators**	**HAL Key Objective**	**Government R&D Priority**	**Timing**	**Investment**
	Enhanced profitability resulting from marketing investments that increase the overall size of the greenlife market	**In a competitive but stagnant market, producers can only enhance profitability at the cost of their competitors. The market failure role of the levy system is to grow the overall market to enable all producers an opportunity to increase their profitability.**	Increase in industry value by CPI + 2.5% by 2016 Evidence of increased profitability across industry sectors by 2016	Increased demand	Supply Chain and Markets	Annual investments over 2012-2016	$700,000pa plus the value of contributions from the IDO network and communication activities not exceeding 30% of the total portfolio budget Market development and research data investment at $300k pa
	Improved market data and marketing resulting in sales growth	**A base level of market data is required to support industry-wide level investment allocation, particularly in respect to generic marketing.**	Evidence that market data is used to influence industry marketing campaigns Increase in industry value by CPI + 2.5%.	Increased demand	Supply Chain and Markets	Annual investments over 2012-2016	

The investment of industry levies must avoid distorting market competition, and hence should be directed towards generic promotion aimed at growing the overall market in which competition occurs.

The following table details the investment profile for the marketing Objective.

Strategy focus	Project		2011-12	%	2012-13	%	2013-14	%	2014-15	%	2015-16	%	
1a. Greenlife marketing	NY11502	Nursery Industry Marketing campaign	70		100								170
	New	To be scoped			600		700		700		700		2700
	NY09004 (50%)	Management of Business Development and Marketing.	60										60
				11%		**26%**		**29%**		**30%**		**35%**	
1b. Market data	NY11004	Nursery Industry Market Data 2012-2014	137		51		150		160		170		668
	NY09004 (50%)	Management of Business Development and Marketing.	60										60
1c. Market Development	New	To be scoped			220		220		240		120		800
				327		**971**		**1070**		**1100**		**990**	**4458**

Investment rationale:

The industry has invested heavily into processes for industry best practice and capacity development during periods of tough trading due to environmental and economic times. The market channels have changed dramatically over that time and there is a need to focus on "expanding" the market for plants in the urban environment. This will require industry to undertake a two pronged marketing approach via the key influencers and planners who designate green space in regional planning and consumers who

have the space to plant or can require that their environment is well planted. Industry data shows that while the area occupied by the urban forest is 40% public land and 60% private land, the split in plant markets is 60% landscaper managed and 40% consumer managed. The projects to be scoped will focus on addressing this and be measured by sales figures, canopy cover improvements and planning decisions.

There is a need to ensure that the benefits of investment in the market expansion are “identified, captured and reflected” within the industry value chain in a fair and equitable manner.

INDUSTRY STRATEGIC PLAN		
	OBJECTIVE 2:	**Enhance the capacity and efficiency of the industry's resources through upgrading industry skills, knowledge and practice** **Outcome:** **A year on year increase in the participation rates in capacity building activities**
	Strategy 2.1: Industry access to appropriately trained human resources	*Sub-Strategies* 2.1.1 Utilise cost effective methods such as electronic media to promote industry as an attractive career pathway for potential employers 2.1.2 Develop and implement an industry-wide training strategy that matches industry skills to employer needs 2.1.3 Improve the quality of content in recognised training packages by constant negotiation with Government bodies Outcome: 80% employers satisfaction they can attract and maintain adequately trained staff
	Strategy 2.2: Enhance adoption of best industry practice	*Sub-Strategies* 2.2.1 Improve extension and adoption of industry best practice through comprehensive program-based extension strategies 2.2.2 Regularly update extension material to reflect current best industry practice 2.2.3 Enable easy access of information about best management practice to those unable to participate in formal extension activities Outcome: At least 50% of producers use best industry practice applicable to their business
	Strategy 2.3: Provide confidence through industry accreditation	*Sub-Strategies* 2.3.1 Implement and constantly improve industry accreditation schemes recognising the evolving customer base 2.3.2 Acknowledge and reward individual and industry sector achievements through a range of mechanisms 2.3.3 Document and promote to customers the value of industry accreditation schemes Outcome: At least 30% of industry participants are accredited where accreditation schemes are applicable to their business

STRATEGIC INVESTMENT PLAN	Investment Plan Outcome	Rationale#	Performance indicators	HAL Key Objective	Government R&D Priority	Timing	Investment
	Generational education resulting in long-term access to skilled labour	**The NGI competes against many industries for a limited labour resource, yet requires labour that is capable of meeting accredited best practice management standards**	80% employers satisfaction they can attract and maintain adequately trained staff	Increased production efficiency	All priorities are covered , in particular innovation skills	Annual investments over 2012-2016	Focus on Young leader development Investment of $35k per annum
	Better targeting of IDOs resulting in on-ground implementation of activities relevant to all Industry Strategic Plan objectives	**The IDO network has been recognised as an effective conduit for providing industry information and training, and is now ready to go the next step towards meeting the wider objectives set out in the Industry Strategic Plan. This will entail broadening the contribution of the network towards technology transfer, marketing and innovation activities.**	Evidence that the IDO network has made positive contribution to the performance indicators set out across objectives 1-5. Measured by CBA on the program and regular reporting of gains tables.	Increased production efficiency	All priorities are covered by this investment	Annual investments over 2012-2016	Investment is split with 60% of funding for roles in this area. Need for change in focus to increase technology transfer. Annual investment of $550k
	Enhanced extension and training effort resulting in enhanced	The adoption of best management practice will lead to increased business productivity and profitability and enhance the industry's	At least 40% of producers use best industry practice applicable to their business. Industry Best Practice programs have economic drivers to ensure there are $	**Increased production efficiency**	**All priorities are covered , in particular innovation skills**	**Annual investments over 2012-2016**	Investment of $230k in early years dropping to $100k

	adoption of Best Management Practice	reputation (hence supporting marketing efforts to grow the overall greenlife market)	benefits to adoptees.				

Industry capacity development has focussed on training and availability of the extension network for on property development and technology transfer. The investment will be maintained but in future will have a different focus on outcomes that are driving the market development and increased value for product off farm, rather than value improvements in the production process. Industry training and review of resources will be required to deliver this new outcome.

The following is a summary of existing proposed projects under this objective:

Objective	Strategy focus	Project		2011-12	%	2012-13	%	2013-14	%	2014-15	%	2015-16	%	Total
Capacity 9%	2a.Generational education	NY11017	NGI Young Leaders Development	44	18%	26	19%		12%		9%		12%	70
		New	NGI Young Leaders Development					35		35		35		105
	2b. IDO network	NY09010 (60%)	IDO Network	305		140								445
		NY12006 (40%)	IDO Network			288		264		264		264		1080
	2c. Extension & training	NY11003	Training and Capacity development	0		100		100						200
		NY11009 (50%)	NGI Farm Management System	55										55
		NY11001 (20%)	Plant Health Risk Management	18		27		32		33		50		160
		NY10001 (15%)	Management of Tech RD&E for NGI	26		26								52
		NY12002 (50%)	NGI Farm Management System			63								63
		NY10003	Eval of cage transport for FNQ	53		17								70

		New	To be scoped - NGI FMS					35		35		35		105
					501		**687**		**431**		**332**		**349**	**2405**

INDUSTRY STRATEGIC PLAN	**OBJECTIVE 3: Build industry support through shaping government, public and related industry understanding of the industry's benefits, and enhance these benefits through communication** **Outcome: Stimulation of greater expenditure directed to increasing the coverage of the Australian urban forest**	
	Strategy 3.1: Communication and engagement with industry & community	*Sub-Strategies* 3.1.1 Develop and implement an industry communication plan to foster communication of relevant information across and between all sectors of the industry as well as ensuring the public are well informed about the benefits of the industry 3.1.2 Provide forums and other mechanisms to constantly listen to and respond to stakeholder ideas, concerns and questions 3.1.3 Document industry contributions to regional economies and the environment to underpin promotion and stakeholder communication Outcome: Year on year increase in public support for the industry and its benefits manifested in increased sales
	Strategy 3.2: Advocacy with all levels of Government	*Sub-Strategies* 3.2.1 Develop and advocate industry policy positions on issues that impact the industry and its surrounding communities 3.2.2 Work with government, NGOs and other industries to identify and facilitate support for nursery and garden solutions to a range of social and environmental issues Outcome: Increase in Government understanding of the industry, inclusion in policy development and funding support
	Strategy 3.3: Strong unified industry with one voice	*Sub-Strategies* 3.3.1 Provide forums for regular cross industry interaction to ensure effective relationships between sectors that enhance unity, common purpose and consistent messages to the public 3.3.2 Develop strong and effective partnerships across industry in activities that exemplify and strengthen unity

		Outcome: Year on year increase in relationship satisfaction among industry participants					
	Strategy 3.4: Strengthen benefits derived in value chain interactions	*Sub-Strategies* 3.4.1 Identify value chain and logistics weaknesses across the industry and address these through collaborative action 3.4.2 Identify how value chain relationships can support new product and service development Outcome: The combined strength of each stage of the value chain maximises profit to all industry sectors					
STRATEGIC INVESTMENT PLAN	**Investment Plan Outcome**	**Rationale#**	**Performance indicators**	**HAL Key Objective**	**Government R&D Priority**	**Timing**	**Investment**
	Strengthened government relationships resulting in strong support for industry initiatives	The NGI delivers against a range of government priorities, including social (wellbeing), economic (i.e. GDP) and environmental (i.e. carbon initiatives). At the same time, government policies (i.e. water policies, R&D funding) can affect the operations of NGI members and industry investment capacity.	**Evidence of an increase in Government understanding of the industry, inclusion in policy development and funding support.** **Increased adoption of Urban Forest tools and processes to increase greenlife utilisation.**	**Effective operating environment** **Increased production efficiency**	All priorities are covered by this investment	**Annual investments over 2012-2016**	Investment of $330k per year to focus on educating decision makers on the need for more greenlife in urban areas
	Improved internal and external communication resulting in better decisions informed by industry knowledge and consistent	Incorporating good communication mechanisms into all industry activities is the modus operandi by which the industry can make better informed decisions through engagement of industry members, while also building	**Improved perception of the value of the industry's products and improved awareness of the contributions made by the industry towards better environments and wellbeing.** **Year on year increase in public support for the industry and its benefits manifested in**	**Effective operating environment** **Increased production efficiency** **Increased**	All priorities are covered by this investment	**Annual investments over 2012-2016**	Investment of $600k over four years will focus on providing supportive and

	messages	constructive relationships with the industry's diverse stakeholders and partners.	**increased sales (CPI +2.5% by 2016)**	**demand**			educative material to decision makers.

The following table details the Investment made and proposed for the Communications Objective. The rationale supporting this Investment is that industry needs to convince key decision makers and consumers that plants have a real value to the liveability of cities as well as impacting on health and wellbeing. This will be done via targeted communications activities utilising Fora, electronic media and traditional communication vehicles. It is critical in achieving this Industry wide consistency of communication that industry stakeholders participate. Industry has developed a full communications matrix . There is greater focus on the IDO network facilitating this increased communication to assist in growing the market.

Objective	Strategy focus	Project		2011-12	%	2012-13	%	2013-14	%	2014-15	%	2015-16	%	Total
Communication 36%	3a.Government relationships	NY10001 (10%)	Management of Tech RD&E for NGI	17	21%	18	20%		30%		27%		34%	35
		NY11009 (50%)	NGI Farm Management System	55										55
		NY12002 (50%)	NGI Farm Management System			63								63
		New	To be scoped			120		150		150		150		570
		New	To be scoped - Govt target comms					200		200		200		600
	3b. Communication	NY08024	NGI National Conference	77										77
		NY10010	NGI Communications	167		37								204
		NY11010	Industry Insights and PR	172										172
		NY11005	Reg and Tech Comms 2011-2013	0		140		140		140				420
		NY09010 (20%)	IDO Network	102										102

		NY12006 (40%)	IDO Network		288	264	264	264	1080
		New	To be scoped- Industry communications		70	255	255	255	835
		New	To be scoped- Industry National Conference			100		100	200
				590	**736**	**1109**	**1009**	**969**	4413

This objective accounts for up to 36% of the investment. The projects to be scoped will have outcomes that will be fully aligned with achieving Objective 1 - market growth

INDUSTRY STRATEGIC PLAN	**OBJECTIVE 4:** **Invest in greenlife product / service development to enable the industry to respond to growth opportunities and challenges** **Outcome:** **Higher returns on investment for overall industry funds directed towards R&D, contributing to increased industry value (Objective 1: i.e. + 2% pa)**	
	Strategy 4.1: Identify growth opportunities	*Sub-Strategies* 4.1.1 Support forums and analyses to identify new and emerging opportunities for industry growth 4.1.2 Identify and negotiate partnerships that can investigate new opportunities and bring these to fruition 4.1.3 Annually articulate the priorities for research investment for the following year Outcome: Increased quantum of investment in new growth opportunities
	Strategy 4.2: Invest in research and technology development	*Sub-Strategies* 4.2.1 Position the industry as a leader in establishing climate change solutions through the use of green stock 4.2.2 Ensure the adequate provision of and access to, water for all stakeholders (producers, resellers and consumers) 4.2.3 Utilise current / existing R&D regarding 'clean air' to promote the benefits and usage of green life in and around the home 4.2.4 Encourage the uptake of green infrastructure strategies particularly in commercial projects Outcome: Enhanced adoption of technologies across sub-strategy investments
	Strategy 4.3: Evaluate return on investment in R&D and improve R&D	*Sub-Strategies* 4.3.1 Develop a monitoring and evaluation (M&E) strategy that helps identify the benefits of R&D investments 4.3.2 Work together with research and other service providers to implement the M&E strategy where these providers are utilising industry

	capacity	R&D funds 4.3.3 Promote the benefits of industry R&D investment as a means of increasing voluntary and other contributions towards future R&D activities Outcome: Confidence among IAC and HAL members that R&D funds are well invested					
STRATEGIC INVESTMENT PLAN	**Investment Plan Outcome**	**Rationale#**	**Performance indicators**	**HAL Key Objective**	**Government R&D Priority**	**Timing**	**Investment**
	Increased greenlife in urban landscapes	In Australia, around 25% of the population lives within 3kms of the sea, while 95% lives within 50km. With population expected to dramatically increase in Australian cities, it is important that to create liveable spaces by planning and providing adequate urban forestry. Not only is green-life essential to tackling climate change but also to improving the liveability, health and wellbeing of our urban centres.	**Increase in urban greenlife from 15% to 20% 2012 to 2016.** **Adoption of Urban Forestry guidelines by major urban councils** **Recognition of the outcomes of NGI funded research in the area of increased Urban Greening.** **Recognition of carbon farming initiative in urban environment**	**Increased demand**	**NRM** **Climate Variability and Climate Change** **Productivity and adding value** **Technology**	**Annual investments over 2012-2016**	**Investment will build on needs analysis following outcomes of current R&D. Investment drops from $230k to $150k per annum. Focus is on communicating outcomes and how they can be implemented.**
	Increased investment evaluation resulting in better decisions based on	Monitoring and evaluation is an important element in best practice management of investments in innovation. It provides the basis for better investment decisions in future,	**Evidence investments are providing increased ROI compared to 2009 baseline**	**Effective operating environment** **Increased production**	**All priorities are covered by this investment**	**Annual investments over 2012-2016**	**There is a real need to monitor outcomes of all investments**

	performance	for transparency and accountability of industry and government expenditure, as well as for supporting marketing and extension programs that demonstrate the benefits and values of greenlife innovation.		**efficiency**			**made under the Plan. $225k allocated to assess benefits. Data to drive focus for the next plan.**

The following table provides a summary of current and to be scoped projects.

Investment rationale:

The industry has moved from process focused R&D to "urban value" research to justify the increased use of those product produced. The Industry must maximise the opportunities for products under production as space in the urban environment is at a premium. This is fully documented in the publication by Professor Tony Hall, "The Life and Death of the Australian Backyard" CSIRO publishing.

Objective	Strategy focus	Project		2011-12	%	2012-13	%	2013-14	%	2014-15	%	2015-16	%	Total
Innovation 10%	4a.Urban landscapes	NY11013	Greening City - Mitigate heat stress	166	22%	110	16%		14%		19%		19%	276
		NY11002	Carbon and pollution mitigation with Urban forest	65		45		30						140
		New	To be scoped							150		150		
	4b. R&D capacity	NY11000	NGI -Tech RD&E	265		72								337
		NY11001(40%)	Plant Health Risk Management	37		54		64		67				222
		NY12001	NGI -Tech RD&E - 2012-2013			224		56		30				310
		NY10001 (50%)	Management of Tech RD&E for NGI	87		87								174
		New	To be scoped – NGI R&D					150		150		150		450
		New	To be scoped- Management of NGI RD&E					150		220		230		600
	4c.Investment evaluation	New	To be scoped					75		75		75		225
					620		**592**		**525**		**692**		**530**	**2734**

INDUSTRY STRATEGIC PLAN		
	OBJECTIVE 5: Support the industry through services and resources that enhance its capacity to respond to issues, capture opportunities and achieve the vision of this strategic plan **Outcome: Achievement of all KPIs outlined in the strategic plan**	
	Strategy 5.1: Well informed Industry	*Sub-Strategies* 5.1.1 Develop collaborative links with international associations to gather market trends 5.1.2 Collect and communicate to industry members improved information on production and market trends, including forecasts, to underpin production, product development and distribution decisions 5.1.3 Support analyses and debate to identify emerging issues so that industry can respond to these in a timely fashion Outcome: 80% of industry participants feel they have access to good information if they choose to seek it
	Strategy 5.2: Increasing funding	*Sub-Strategies* 5.2.1 Develop an industry-wide agreed strategy to justify and underpin strategies to increase government, industry and other investment in the industry 5.2.2 Increase membership across NGI-related associations Outcome: A net growth in industry funding to support industry-wide investments
	Strategy 5.3: Efficient service delivery	*Sub-Strategies* 5.3.1 Develop leadership and governance skills of current industry leaders to enhance the effectiveness of industry structures and relationships 5.3.2 Document and implement best management practices for the range of administrative functions industry associations provide to their members 5.3.3 Seek industry cost reduction through collaborative actions between National and State industry bodies 5.3.4 Support the rigorous investment of levies through contractual arrangements aimed at maximising industry benefits

		Outcome: 80% of industry participants have confidence in their industry leaders and associations					
	Strategy 5.4: Risk and bio-security	*Sub-Strategies* 5.4.1 Strengthen current industry plans to underpin rapid response to emergencies 5.4.2 Educate industry participants on emergency planning and carry out training exercises to ensure industry preparedness for a range of emergencies 5.4.3 Enhance industry resilience to biosecurity risks by working closely with government agencies 5.4.4 Publicise the defence mechanisms of industry accreditation schemes (including Ecohort) to stakeholders Outcome: 80% of industry has participants have a risk management strategy in place by 2015					
STRATEGIC INVESTMENT PLAN	**Investment Plan Outcome**	**Rationale#**	**Performance indicators**	**HAL Key Objective**	**Government R&D Priority**	**Timing**	**Investment**
	Enhancement of partnerships and co-investment resulting in overall increased investment across Industry Strategic Plan objectives	While the present forecast income from levies, government funds and voluntary contributions is adequate to cover the priorities of the Strategic investment Plan, they are inadequate to deliver against all strategies and sub-strategies of the wider Industry Strategic Plan. Partnerships can help fill this gap.	**A net growth in industry funding to support industry-wide investments**	**Effective operating environment**	**Potentially all priorities are covered by this investment**	**Annual investments over 2011-2016**	**As this relates to potential VC programs it is difficult to quantify**
	Enhancement of capacity to prepare and manage pest and exotic pests	Owing to the geographic isolation of Australia, nursery production in Australia has remained relatively free from exotic pests that have	70% of industry participants have a biosecurity risk management strategy in place by 2016	Effective operating environment	Biosecurity	Annual investments over 2011-2016	Investment of $200k per annum managed primarily via

	(biosecurity)	significantly affected nursery production in other parts of the world. However, exotic pests have the potential to cause huge production losses and trade problems. Indeed, the detection of an exotic pest in Australia may prevent the cultivation of certain plant species and restrict intra and interstate green-life trade.					the IDO network.
	Improved industry structures resulting in efficient use of industry resources	In order to facilitate the adoption of best management practice by industry members, the industry bodies themselves must operate effectively and efficiently using best management practices structures and systems.	**75% of industry participants have confidence in their industry leaders and associations**	**Effective operating environment**		**Review completed by June 2013**	**Includes the HAL Consultative agreement for wider industry engagement on matters relating to sector and horticulture. $350k per year**

The Investment in Governance and resources to deliver the SIP are critical areas for the industry. The NGI are unique within Horticulture in that the industry is reliant on the efficient and unencumbered movement of plant germplasm around the country. Whereas other industries focus on the fruits of production the nursery sector moves plants. Biosecurity legislation and movement controls may have a critical impact on markets so industry must invest in resources to ensure both parties are fully aware of the implications.

Due to the diversity of the products covered by the sector and the climatic zones covered industry also undertakes prioritisation activities to ensure all sectors are covered with regards the limited investment available.

The following table details the current Investments and future focus in this area. The overall level of Investment will target 15% of available funds.

Objective	Strategy focus	Project		2011-12	%	2012-13	%	2013-14	%	2014-15	%	2015-16	%	Total
Governance 15%	5a Co-investment partnerships	NY11007	Water Conservation products SAWM	154										145
		NY12007	Water Conservation products SAWM			145								
		NY11001(40%)	Plant Health Risk Management	37		54		64		67				87
	5b. Biosecurity	NY10001	Management of Tech RD&E for NGI	44	**27%**	43	**19%**		**15%**		**15%**		**18%**	101.6
		NY09010 (20%)	IDO Network	101.6										564
		NY12006 (20%)	IDO Network			144		132		144		144		0
														234
		NY11006	NGI Consultation and Prioritisation	48		38		48		50		50		1448

	5c.Industry structures	NY11900	Partnership agreement	273	275	295	300	305	69
		NY11019	NGI International Networking	9	15	15	15	15	100
		NY 11011	SIP project	100					3124.6
				767	**714**	**554**	**576**	**514**	2579.6

While not covered by specific projects the industry accreditation and training programs need to recognise the demand on business for issues such as OH&S, Chemical usage and Resource management which are 'different' for the industry due the diversity of business types and production processes. These may require funding to avert potential market failure issues within the time scope of this plan.

7. Summary of Proposed Investments

The following table provides a summary of investment and timing over the period of the plan.

Objective	Strategy	*11_12*	*12_13*	*13_14*	*14_15*	*15_16*	*Total*
Objective 1:Markets	1a. Greenlife marketing	130	700	700	700	700	2930
	1b. Market data	197	271	370	400	290	1528
Sub-total							**4458**
Objective 2:Capacity	2a. Generational education	44	26	35	35	35	175
	2b. IDO network	305	428	264	264	264	1525
	2c. Extension & training	152	233	167	68	85	705
Sub-total							**2405**
Objective 3: Communications	3a. Government relationships	72	202	350	350	350	1324
	3b. Communication	517	535	759	659	619	3089
Sub-total							**4413**
Objective 4: Innovation	4a. Urban landscapes	231	155	30	150	150	716
	4b. R&D capacity	389	437	420	467	380	2093
	4c. Investment evaluation			75	75	75	225
Sub-total							**3034**

Objective 5: Governance	5a. Co-investment partnerships	191	174	64	67		496
	5b. Biosecurity	145	187	132	144	144	752
	5c. Industry structures	405	328	358	360	365	1816
Sub-total							**3064**
Total		**2778**	**3676**	**3724**	**3739**	**3457**	**17374**

The nursery industry is evaluating how the levy may be altered from both business risk management and to close the leaks re collection. This will increase the level of funds which be made available to increase expenditure in the areas identified within this plan.

8.0 Financial evaluation:

The key objective of the plan is to increase the market for greenlife throughout all sectors of the Australian economy.

An evaluation of four clusters of industry projects, including Business Improvement, Industry Development, Market Information and Environment, utilising industry funds was undertaken by Michael Clarke from AgEconPlus and Peter Chudleigh and Sarah Simpson from Agtrans Research in 2009 and is reported in full in Project NY08016.

The following is a summary from that report:

Economic analyses of four clusters of randomly selected research and development investments funded by the Nursery R&D Program of Horticulture Australia have been undertaken. The Program is funded by statutory levies and voluntary contributions paid by industry participants, with matching funding provided by the Australian Government up to 0.5 per cent of the industry's gross value of production.

The principal purpose of the economic analyses was to contribute to a process being undertaken for the Council of Rural Research & Development Corporation Chairs (CRRDCC) that aims to demonstrate through examples the outcomes and benefits that have emerged or are likely to emerge from the 15

Rural Research and Development Corporations (RDCs). Valuation of these benefits, along with identification of investment expenditure, is required in order to demonstrate their contribution to Australian rural industry as well as environmental and social benefits to Australia.

Each of the analyses provides a description of the constituent project backgrounds, objectives, activities, costs, outputs, outcomes, and benefits. The benefits were described in a triple bottom line context. Some of the potential benefits were then valued in monetary terms. Analyses were undertaken for total benefits that included future expected benefits. A degree of conservatism was used when finalising assumptions.

The four investment analyses all yielded positive results at the 5% discount rate, with B/C Ratios ranging from 1.7:1 to 5.6:1. Care should be taken in any comparisons of the results between clusters due to the different frameworks used for each analysis and the uncertainties involved in each set of assumptions.

Table 1: Investment Criteria for Four Nursery Industry Investments
(discount rate = 5%)

Investment Cluster	PVB ($m)	PVC ($m)	NPV ($m)	B/C Ratio	IRR (%)
Business Improvement (14 projects)	6.84	4.00	2.84	1.7	14
Industry Development (6 projects)	8.03	3.63	4.40	2.2	21
Market Information (6 projects)	2.17	0.89	1.28	2.4	21
Environment (14 projects)	9.92	1.78	8.13	5.6	26

Conclusions:

The investment criteria estimated are positive but modest. The investment of $4 million in present value terms can be considered to have more than paid for itself with a net present value of $2.8 million, a benefit cost ratio of 1.7 to 1, and an internal rate of return of 14% (all $ in 2008/09 terms using a discount rate of 5%).

Information for a confident evaluation has been sparse. Due to the lack of confidence in some of the assumptions necessary, most assumptions can be considered conservative. Hence the investment criteria estimates are probably underestimates.

Relevance of this analysis to the new Strategic Investment Plan:

The new plan as proposed focuses on the key areas of Industry development and Environmental benefits, the two areas that showed the greatest return on investment. This will be reinforced by two analysis being undertaken by AgEcon:

1. Business case analysis of the industry investment in its accreditation programs.
2. Economic analysis of the industry Strategic Investment Plan 2012-2016.

Reports from both of these will be added to this plan as appendices.

9. References

AgEcon+ (2009) *An Economic Analysis of HAL Investment in Projects in the Business Improvement Cluster* (unpublished draft report)

Australian Survey Research Group (2006) *National skills summary report*. Nursery & Garden Industry Australia: Sydney

Commonwealth Science and Industrial Research Organisation (2009) *The science of climate change.* http://www.csiro.au/files/files/poqu.pdf (Accessed 1 November 2011)

Department of Agriculture, Fisheries and Forestry (2007) Rural. *Research and Development Priorities*. http://www.daff.gov.au/agriculture-food/innovation/priorities (Accessed 1 November 2011)

Department of Education, Science and Technology (2010) *National Research Priorities.* http://www.dest.gov.au/NR/rdonlyres/AF4621AA-9F10-4752-A26F-580EDFC644F2/2846/goals.pdf (Accessed 1 November 2011)

Environmentrics Pty Ltd (2005) *A report of the review of resources & structures in the Nursery & Garden Industry (aka the Moko review)*. Horticulture Australia Ltd: Sydney

FreshLogic (2009) *Australian Garden Market Monitor: Year ending 30 June 2009*. Horticulture Australia Ltd: Sydney

Hall, Tony (2010) *The Life and Death of the Australian Backyard*; CSIRO press

Horticulture Australia Limited (2010) *Horticulture Australia Limited Strategic Plan 2010-2015*. Horticulture Australia Ltd: Sydney

Horticulture Supply Chain Services (2009) Improvements in supply chain efficiencies and logistics for the Nursery Garden Industry. Nursery & Garden Industry Australia: Sydney

National Horticultural Research Network (2010) *Horticulture Sector RD&E Framework*. DAFF: Canberra

Nursery & Garden Industry Australia (2010) *Nursery Industry 2010 – 2015: The strategic plan for Australia's Greenlife Industry*. NGIA: Sydney

Nursery & Garden Industry Urban GreenScapes Symposium (2009) http://www.ngiaevents.com.au/sympo2009/ (Accessed 1 November, 2011)

Appendix 1: Analytical Business Case Report

What is an Analytical Business Case

The Analytical Business Case (ABC) is a formal assessment process that draws from a range of tools to provide rigour and comparison between competing research investment areas and thus enhances the overall strategic investment plan (HAL Strategic Planning Guidelines November 2009).

The ABC for the Nursery Industry Strategic Investment Plan 2012-2016 uses benefit cost analysis techniques as described by Council for Rural Research and Development Corporation Guidelines (CRRDC updated 2009). Analysis was completed at the objective level and all forecast benefits and costs are expressed in 2010-11 dollar terms. Five benefit cost analyses and an aggregate impact assessment were completed.

The Present Value of Benefits (PVB) and Present Value of Costs (PVC) were used to estimate investment criteria of Net Present Value (NPV) and Benefit-Cost Ratio (BCR) at a discount rate of 5% real. Internal Rate of Return (IRR) was also estimated. The PVB and PVC are the sums of the discounted streams of benefits and costs. The discounting is used to allow for the time value of money, and the discount rate of 5% is that specified in the CRRDC guidelines.

In addition to private benefits accruing to nursery businesses there are likely to be 'spillover' community environmental and social benefits associated with implementing the Strategic Investment Plan. Spillover benefits are identified but not quantified in this ABC.

Analytical Business Case Framework, Data and Assumptions

Benefit cost analysis is reliant on data and assumptions and this information was assembled from the SIP Industry Situation Assessment (Chapter 2), previous nursery industry economic evaluations (i.e. Chudleigh *et al* 2009) and consultant estimates.

Industry gross value of production (GVP) was sourced from the SIP Industry Situation Analysis (Chapter 2, page 10) and cross checked with Chudleigh *et al* 2009. NGIA advice is that bulbs, seeds and turf should be excluded from the GVP estimate – these sectors do not pay the nursery industry pot levy.

While the Situation Assessment uses 2009 GVP estimates it was felt that these data were still relevant - there has been little or no growth in the Australian nursery industry post the Global Financial Crisis (GFC). Total industry value was therefore estimated at $1.68 billion (Total of $1.87 billion less bulb, seed and turf sales) – see Table A1.

Table A1 Greenlife Category Share of Market (Year ending June 2009)

Greenlife Category	Share of Total	+/- LY	Market value ($'000)
Bedding plants and colour	12.5%	8.9%	234,066
Bulbs and seeds	4.1%	3.2%	73,113

Indoor and patio	8.2%	8.2%	153,347
Propagation stock	6.0%	-50.4%	112,407
Trees and shrubs	62.1%	5.4%	1,159,796
Turf	6.0%	2.4%	111,888
Other plants	1.0%	2.8%	17,810
Total		**-1.0%**	**1,866,428**

Source: Freshlogic 2009

Industry profitability was estimated by Chudleigh *et al* 2009 at 10% of greenlife sales and this assessment was prepared in consultation with NGIA.

The Consumer Price Index (CPI) is relevant to the estimation of industry benefits as four of five SIP objectives are defined as an increase in greenlife sales value of CPI + 2%. CPI is forecast to remain in the Reserve Bank of Australia's target range through to 2016 and an annual average rate of increase of 2.2% has been assumed.

Table A2 over page provides a framework for the estimation of ABC benefits using the above data and summarises:

- SIP objectives and strategies – sourced from the draft plan
- Total levy investment required – sourced from the draft plan
- The key industry outcome anticipated and resultant benefit – sourced from the draft plan with analyst interpretation of resultant industry benefit
- Data needed to estimate the benefit – simple list of data required for spreadsheet modelling
- The probability of investment success – based on analyst's experience evaluating similar investments in other Horticulture Australia industries i.e. investments in marketing, skills, communication, product development and industry capacity.

Table A2 Framework for Nursery Industry Analytical Business Case

Objectives and Strategies	Total Levy Investment Required 2012 to 2016	Key Industry Outcome / Industry Benefit	Data and Assumptions Needed to Estimate Benefit	Probability of Success (i.e. realisation of industry benefit)
1.Increase the sales value of greenlife products and services through marketing and promotion 1a. Greenlife marketing 1b. Market data.	$4,458,000	Improved understanding of the market and supporting marketing effort contributing to an increase in greenlife sales value by CPI+2%.	Current greenlife value, CPI and proportion of additional sales attributable to this objective.	60% (target is reasonable. However it is noted that industry GVP has been static for some time in spite of industry investment in marketing).
2.Enhance the capacity and efficiency of the industry's resources through upgrading industry skills, knowledge and practice 2a. Generational education 2b. IDO network 2c. Extension and training.	$2,405,000	A year on year increase in the participation rates in capacity building activities contributing to an increase in industry productivity and profitability.	Data on industry profitability, the increase in profitability attributable to the SIP and proportion of this increase relevant to this objective.	40% (The nursery industry has found it difficult to gain more than 10% of industry population support for previous initiatives such as FMS).
3.Build industry support through shaping government, public and related industry understanding of the industry's benefits, and enhance these benefits through communication.	$4,413,000	Stimulation of greater expenditure directed at increasing the coverage of the Australian urban forest and contributing to an increase in greenlife sales value by CPI+2%.	Current greenlife value, CPI and proportion of additional sales attributable to this objective.	80% (target is reasonable and well resourced).

Table A2 Framework for Nursery Industry Analytical Business Case (continued)

4.Invest in greenlife product / service development to enable the industry to respond to growth opportunities and challenges.	$3,034,000	Improved greenlife products contributing to an increase in greenlife sales value by CPI+2%.	Current greenlife value, CPI and proportion of additional sales attributable to this objective.	80% (target is appropriate and well resourced).
5.Support the industry through services and resources that enhance its capacity to respond to issues, capture opportunities and achieve the vision of this strategic plan (i.e. industry development and governance)	$3,064,000	Outcomes include: delivery of all SIP KPIs; growth in industry funding; biosecurity risk plans; an increase in confidence in industry leadership contributing to an increase in greenlife sales value and an increase in industry productivity and profitability.	Data on industry profitability, the increase in profitability attributable to the SIP and proportion of this increase relevant to this objective. Current greenlife value, CPI and proportion of additional sales attributable to this objective.	70% (target is appropriate and supports other SIP objectives).

Review of Table A2 reveals two major production nursery benefit types that are shared across the five SIP objectives. The two key benefit types are:

- 'increase in greenlife sales value by CPI+2%' and
- 'increase in industry productivity and profitability'.

Some interpretation is required in order to quantify these forecast industry benefits.

The '*increase in greenlife sales value by CPI+2%*' is interpreted as an annual increase in sales i.e. sales commence at $1.68 billion and increase by $73.9 million as a result of plan investments. The annual lift in sales is realised two years after the commencement of plan investment.

The '*increase in industry productivity and profitability*' is measured as an annual lift in industry profitability from 10% (Chudleigh *et al* 2009) to 10.5%. The percentage increase in profitability (i.e. 0.5%) is an assumption developed by the analyst in the absence of data and is consistent with what might be expected in a mature and competitive industry. Once again the increase in profitability is assumed to commence two years after initial investment.

Given that these two key forecast benefits are shared between multiple objectives it was necessary to estimate both their total and their allocation between objectives. Allocation of aggregate benefit by objective is shown in Table A3 and was established by the analyst after considering the nature of the objective, the quantum of investment made and feedback from NGIA.

Table A3 Allocation of Benefits by Nursery Industry SIP Objective

Objective	**Increase in greenlife sales value attributable to objective (% of total)**	**Increase in industry productivity and profitability attributable to objective (% of total)**
1. Marketing and market data	30%	10%
2. Upgrade industry skills, knowledge and practice	10%	40%
3. Build industry support and communications	30%	10%
4. Greenlife product/service development	20%	10%
5. Industry development and governance	10%	30%
Total	**100%**	**100%**

Analysis results are presented in the following section.

Analytical Business Case Results

ABC results estimated using the above framework and data are summarised in Table A4. Results include qualitative consideration of spillover environmental and social benefits.

Table A4 Analytical Business Case Evaluation Results (discount rate 5%)

Objectives	PV Benefits ($'million)	PV Costs ($'million)	NPV ($'million)	BCR	IRR (%)	Enviro	Social
1. Marketing and market data	11.1	3.8	7.3	2.9	65	√	√
2. Upgrade industry skills, knowledge and practice	9.6	2.1	7.5	4.6	80	√√	√
3. Build industry support and communications	14.3	3.8	10.5	3.8	84	√√√	√√
4. Greenlife product/service development	10.9	2.6	8.3	4.1	79	√	√
5. Industry development and governance	14.4	2.7	11.7	5.4	87	√	√

Key: √√√ Strong environmental or social outcome, √√ moderate outcomes, √ minor outcomes.

From Table A4 it can be seen that the Nursery Industry Strategic Investment Plan 2012 -2016 delivers a balanced program of investments with each SIP objective forecast to deliver a positive Benefit Cost Ratio for production nurseries and Internal Rates of Return of between 65% and 87%. Modest but acceptable returns are forecast for Objective 1 (Marketing and marketing data). Modest returns for this objective reflect the analyst's observation that industry GVP has been static for some time in spite of industry investment in marketing. Modest returns are defined by referencing the long term average BCR for investment in agricultural R&D which points to Benefit Cost Ratios of between 2% and 11%. Strongest returns for the Nursery Industry SIP are forecast for Objective 5 which brings together industry development and governance. Spillover environmental and social benefits are associated with SIP investments.

In addition to analysis of the SIP at the objective level, results from individual BCAs were aggregated to provide a 'whole of plan' result. Whole of plan analysis shows that the strategies and prioritisation of investments will provide a return on investment of 80% with a Benefit Cost Ratio of 3.9 to 1 (i.e. for each levy and government matching dollar invested by HAL $3.90 will be returned).