

Nursery

STRATEGIC INVESTMENT PLAN

2017-2021



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Introduction

This Strategic Investment Plan (SIP) is the roadmap that helps guide Hort Innovation's oversight and management of individual industry levy investment programs. The SIP lays the foundation for decision making in levy investments and represents the balanced interest of the particular industry from which the levy is collected. The very important function of the SIP is to make sure that levy investment decisions align with industry priorities.

Hort Innovation is the not-for-profit, grower-owned research and development (R&D) and marketing company for Australia's \$9 billion horticulture Industry.

As part of the role Hort Innovation acts as the industry services body for Australian horticulture, the organisation is tasked by the Australian Government with working alongside industry to produce a strategic plan for investment of levies in industry R&D and marketing activities.

Each individual levy industry investment strategy also speaks to the future growth and sustainability of the Australian horticulture industry, as a whole. The SIPs are produced under the umbrella of the Hort Innovation Strategic Plan, which takes a whole of industry view in setting its direction, as it considers broader agriculture government priorities for the advancement of Australian horticulture.

The process of preparing each SIP was managed by Hort Innovation and facilitated in partnership with the Industry Representative Body and the Strategic Investment Advisory Panel (SIAP). Independent consultants were engaged to run the consultation process, to gather the advice from stakeholders impartially and produce a plan against which the nursery industry can be confident of its strategic intent.

Hort Innovation has valued the support, advice, time and commitment of all stakeholders that contributed to producing the SIPs, especially nursery growers.

The nursery SIP

Producers in the nursery industry pay levies to the Department of Agriculture and Water Resources (DAWR), which is responsible for the collection, administration and disbursement of levies on behalf of Australian agricultural industries.

Statutory agricultural levies and charges are imposed on primary producers by government at the request of industry to collectively fund R&D and marketing.

The levy is payable on potted plants produced in Australia where the producer either sells the product or uses it in the production of other goods. However, for ease of collection, the producer pays the levy when they purchase pots (prescribed goods) to be used in producing or preparing a nursery product for sale or to be used in producing other

goods, such as repotted or propagated nursery products for later sale. The levy rate on nursery is five per cent of sale price or landed cost price of the container*.¹

Hort Innovation manages the proportion of nursery levy funds that is directed to the investment in the nursery R&D and marketing programs (4.75 per cent). Separately, Plant Health Australia (PHA) manages plant health programs (0.25 per cent). In 2015/16 total nursery levy receipts were approximately \$2.28 million: \$1.33 million of R&D levies and \$955,000 of marketing levies.

Hort Innovation has developed this SIP to strategically invest the collected nursery levy funds in the priority areas identified and agreed by the nursery industry. The ability to deliver on all the articulated strategies (and investments) in an impactful manner will be determined by the ability of the statutory levy to provide the resources to do so.

This plan represents the Australian nursery industry's collective view of its R&D and marketing needs over the next five years (2017 to 2021). This plan has been developed in consultation with Australian nursery levy payers through a synthesis of various processes, including:

- direct consultation with key stakeholders
- an online survey on R&D and marketing priorities
- a national workshop
- three briefings and discussions with Hort Innovation's nursery industry SIAP
- widespread industry consultation
- stakeholder review of draft SIP.

The process to develop this plan is described in **Appendix 1**. The people consulted in the preparation of the plan are listed in **Appendix 2** and the documents referred to are noted throughout the document. The nursery SIAP has responsibility for providing strategic investment advice to Hort Innovation. Both Hort Innovation and the panel will be guided by the strategic investment priorities identified within this plan. For more information on the nursery industry SIAP constituency, please visit Hort Innovation's website at www.horticulture.com.au.

* <http://www.agriculture.gov.au/ag-farm-food/levies/rates/nursery-products>

Nursery

STRATEGIC INVESTMENT PLAN 2017-2021 AT A GLANCE

POTENTIAL IMPACT OF THIS PLAN



Based on an estimated investment of \$16.3 million over the next five years

OUTCOMES	STRATEGIES
Increased demand and sales of green life products by four per cent per annum plus CPI	Develop an annual marketing program
	Identify and monitor effectiveness of marketing program and allocation of spend between business to business, and business to consumer
	Continue to support the 2020 Vision program
	Enhance the 2020 Vision brand beyond 2020
Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge	Identify and promote the benefits of green-life products and services
	Obtain a better understanding of the customer, their requirements and reasons for buying or not buying green-life products and/or services
	Obtain better industry intelligence, including value of industry, and people employed
	Disseminate industry information and insights to growers and key stakeholders

OUTCOMES	STRATEGIES
Improved industry protection from exotic, emerging and endemic pests and diseases	Maintain and test surveillance systems and emergency disease management preparedness
	Increase the awareness of the requirement of biosecurity to industry and stakeholders
	Review importation requirements and barriers to adoption of new genetics
	Work with state governments to develop a more workable system for plant movements between states
	Maintain access to chemicals through Minor Use Permits
Improved productivity, profitability and professionalism through the creation and adoption of innovation and industry BMPs	Monitor overseas innovation and trends
	Identify and fill R&D production gaps where research would provide a collective benefit to the industry
	Review and update the industry best management practice (BMP) modules to promote and expand these programs, including accreditation
	Develop and conduct extension activities to drive adoption of BMP practices
	Promote, survey and monitor growers' uptake of BMP and levy funded outcomes
	Create and maintain a library of projects that is open, easily accessible and catalogued for grower access
	Develop and implement an effective communication program
	Monitor the effectiveness of communication activities

Nursery

STRATEGIC INVESTMENT PLAN

2017-2021 AT A GLANCE

OUTCOMES	STRATEGIES
Better career development	Promote the industry as a professional career choice
	Identify future skill sets needed in the industry
	Collaborate with institutions about industry training and development needs
	Implement a young leader and development program
	Use future innovators/young leaders to promote and adopt R&D and marketing outcomes within the industry

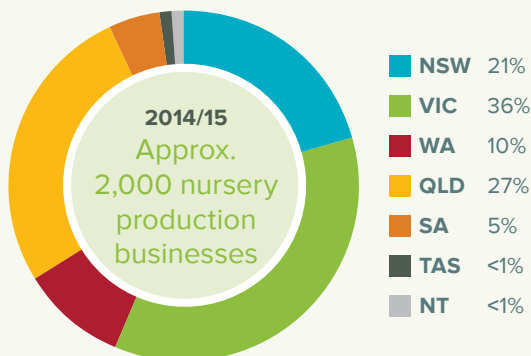
Major opportunities

- Promote the benefits of green-life and nursery products
- Continue the strong focus on biosecurity to protect Australia from pest and disease incursion
- Harmonisation of interstate biosecurity protocols
- Better industry data showing the value of industry, number of people employed and benefit to economy
- Improved use of technology
- Industry training and development
- Adoption of BMPs.

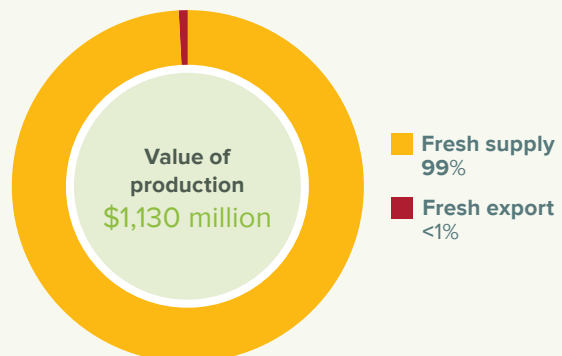
Major challenges

- Increasing biosecurity risks
- Increasing the amount of green space in developments
- Lack of perceived value of green-life products in the community
- Restrictions on water access for nursery production and green space
- Rising cost of production
- Inadequate knowledge of the consumer within industry
- Greater competition for the discretionary income dollar (for example, spending money on leisure versus nursery products)
- Lack of industry data
- High staff turnover and an inability to attract and retain qualified people.

Industry size and production distribution



Nursery supply chain and value 2014/15



1

SECTION ONE

Context

The Australian nursery industry

The nursery industry is involved in the ornamental market, large-scale forestry nurseries, revegetation for mining, landscaping, and starter plants for Australia's fruit and vegetable production. The nursery industry plays a vital role in providing health, economic, environmental and wellbeing benefits for all Australians.

In the consultation process in the development of this SIP, the operating environment for the industry was analysed under the following key areas:

- Size
- Location
- Markets
- Key considerations
- Levy
- Previous and committed investments.

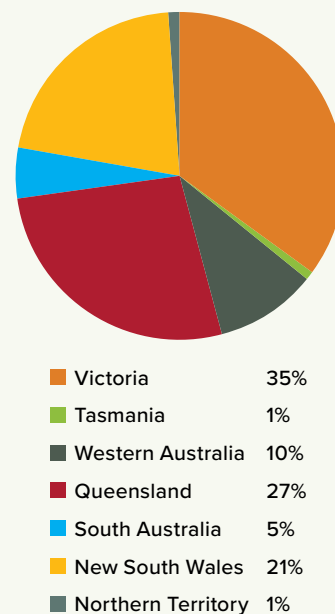
Size

- The estimated Local Value of Production and Wholesale Value for 2014 and 2015 was \$1.13 billion and \$1.22 billion, respectively (source: *Australian Horticulture Handbook 2014/15*).
- The industry consists of about 2,000 nursery production businesses located in all Australian states and territories (source: Discussion with Nursery and Garden Industry Australia (NGIA) staff).

Location

- Most nursery production is in Victoria, Queensland and New South Wales (**Figure 1**).

Figure 1: Nursery production by state and territory, 2014/15



Markets

- The domestic market consumes over 99 per cent of Australian nursery production. Therefore, industry growth is dependent on creating greater demand and value for nursery products in Australia.
- Less than one per cent of nursery production is exported.
- Large retailers, landscapers, developers and local governments are major clients. Large retailers have a dominant position within the retail sector.

Key considerations

Key considerations are:

- There is limited data on the industry's true contribution to the Australian economy
- There are some questions over the accuracy of the available data
- There are limited barriers to enter the industry
- Biosecurity is a major issue for the industry. Compared to other countries, Australia is relatively free of major international pests and diseases. Biosecurity plays a key role in protecting Australia from incursions of new pests and diseases
- More harmonised biosecurity programs between states would benefit the industry and lower costs
- Labour, water and energy are major costs to the nursery business
- The industry is continuing to consolidate as it faces urban encroachment, rising production costs, supply chain developments and generational change
- Uptake and use of technology is limited within the industry
- The Nursery Production Farm Management System, comprised of Nursery Industry Accreditation Scheme Australia (NIASA), BioSecure HACCP, and EcoHort, provides a platform for growers to assess and implement strategies associated with best practices, environmental, natural resource and biosecurity management. This potentially is a good platform for the extension and adoption of R&D outcomes.

Compared to other countries, Australia is relatively free of major international pests and diseases.

The levy has funded projects in:

- Urban greening – market development and industry product features and benefits
- Industry Development Network – including Industry Development Officers
- Nursery Production Farm Management System (NIASA, EcoHort and BioSecure HACCP)
- Youth investment – student linkages and young leader
- Biosecurity (industry-wide)
- Pest and disease management (on-farm)
- Water
- Media
- Communication – workshops, tours, conferences, nursery papers and extension
- Industry narrative – policy development, structure, statistics and analysis.

There are a number of R&D projects that have already commenced and will be completed during the SIP period (2017 to 2021). These projects are in the areas of biosecurity, industry communications, industry statistics and the Green Industries Leaders program:

- Two biosecurity projects that will end in 2019/20
- Two industry communication projects that will end in 2018/19
- Industry statistics and research that will end in 2017/18
- Green Industries Leaders program that will end in 2019/20.

The nursery industry's marketing levy has funded the 2020 Vision program, a large collaboration of organisations working together to create 20 per cent more and better green space by 2020. Previous levy funded R&D projects provided the foundation for many parts of this program.

Operating environment

The following SWOT analysis was developed from the findings of the review of operating environment.

The nursery industry	
Strengths	<ul style="list-style-type: none"> • As a 'green' industry, the nursery industry has a positive image for government, the media and the community. Nursery products are an important part of the Australian lifestyle • Provides major environmental, economic, health and wellbeing benefits to the Australian community. Its products make a difference • Contributes significantly to the Australian economy. Demand for nursery products is increasing • Passionate industry community: diverse, innovative and knowledgeable • Excellent national biosecurity systems protect the Australian industry from major pests and diseases • Excellent diversity of plants, including Australian natives, ensures that there is a plant for all seasons and regions • Levy funded R&D has already addressed a wide range of industry issues
Weaknesses	<ul style="list-style-type: none"> • Limited data on the industry and its contribution to the Australian economy • Very easy to enter the industry, resulting in many smaller operators selling at low prices and reducing overall industry profitability • Chain store/large retailers dominant within the retail sector • Red tape for market access – no harmonised approach between the states. Lack of system for nursery registration poses a biosecurity risk • Lack of industry training and development recognition. Not enough suitably qualified people or young people entering the industry • The level of business and technical sophistication throughout the industry is generally low • Industry does not sell itself well enough; needs greater effort in shaping end-user perceptions about the industry, independents and plants • Not addressing the barriers for the poor uptake of technology and innovation within the industry • 'Backyard operators' and those who do not know their cost of production or the value of their product • High staff turnover, and the inability to attract and retain suitably qualified people into the industry

The nursery industry	
Opportunities	<ul style="list-style-type: none"> • Increase the economic size of the industry by strongly positioning the financial, health and wellbeing benefits of plants with target audiences • Make cities more liveable as per 2020 Vision program, and run suitable programs that promote the benefits of green-life and nursery products • Capitalise on the impact of climate change • Continue and maintain the strong focus on biosecurity to protect Australia from overseas pest and disease incursion • Harmonise interstate biosecurity protocols and have nursery registration • Develop better industry data showing value of industry, number of people employed and benefit to economy • Expand reach to capture opportunities within production horticulture • Improve use of technology: <ul style="list-style-type: none"> » Monitoring » Disease detection » Remote systems » Automation » Waste heat and electricity obtained from bio-energy • Stronger focus on BMPs within the industry to improve professionalism, quality of plants and production efficiencies, including reducing use of chemicals • Support industry training and development as a way to attract younger people into the industry. Create better career paths to attract forward-thinking people into the industry
Threats	<ul style="list-style-type: none"> • Increase in biosecurity risks (national and international) • Biosecurity risks associated with a relaxation of quarantine vigilance, and hence potential for pest and disease incursions from overseas, including Asian imports • Local planning not permitting enough green space in developments. Australian community lacks perceived value of green-life products • Drought, national water reform and government policies that restrict access to water for nursery production and green space • Rising cost of production, including for unskilled labour, energy • Urbanisation creating greater pressure on peri-urban nursery businesses • Inadequate knowledge of the consumer; the industry does not take into account the future needs of the consumer • Greater competition for discretionary income, for example, spending on leisure versus spending on nursery products • Reduced access to input, such as existing and new chemicals



SECTION TWO

Nursery industry outcomes

Industry outcomes

OUTCOME 1

Increased demand and sales of green life products by four per cent per annum plus CPI

The growth and sustainability of the nursery industry is dependent upon increasing the demand and value for green-life products. Currently, 99 per cent of nursery production is consumed within Australia. Exports are a minor component of the industry.

The industry has used levy funded marketing to increase demand for green-life products. Previous programs include *Improve Your Work/Life Balance* and *Life is a Garden*.

The industry currently invests in the 2020 Vision program that is focused on increasing green-life in major urban areas by 20 per cent by 2020. This program initially focused on influencing the influencers, especially on business to business. It is now moving to influencing consumers, and has aligned with the green movement. The program has created and uses a panel of experts who talk about the benefits and value of green-life in the urban environment. Levy funded research outcomes have underpinned this marketing approach. The industry acknowledges the importance of the 2020 Vision program and wants to continue to build upon its successes.

The nursery industry is positioning itself as the go-to industry that provides beneficial solutions to how people interact with nature to improve their lives, health and environments. The industry needs to continue building upon government, business, community, and consumer knowledge on the benefits of green-life products. Market research will continue to keep the nursery industry abreast of consumer requirements and shape future marketing programs.

Measuring the impact of levy funded marketing activities will help to monitor their effectiveness. The tools and processes to achieve the change will improve as improved industry data becomes available.

OUTCOME 2

Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge

There is limited information currently available on the size and value of the nursery industry. One of the challenges in creating this plan was obtaining meaningful and reliable data. The industry must obtain improved data in order to monitor its contribution to the Australian community and economy. This improved data will also play an important role in creating an effective monitoring and evaluation program for this plan. It is important that investments in this area provide value for money on a clearly defined scope, such as collecting relevant information only.

The industry must have a stronger understanding of consumers, their needs, wants, and reasons for purchasing. It must monitor trends to enable better decisions to be made about marketing and promoting green-life products and services. This information will also help to position the industry to ensure it captures long-term demand and sales. Most importantly, the data that is generated on consumers and their requirements must be well researched.

Improved data and knowledge is also needed about growers. This will be used to target communication and extension activities and to highlight potential R&D areas. The improved data will also be used to monitor and evaluate activities in this plan.

OUTCOME 3

Improved industry protection from exotic, emerging and endemic pests and diseases

Biosecurity is one of the key areas of levy R&D investment for the nursery industry because protecting industry assets from exotic, emerging and endemic diseases is of utmost importance.

Australia's preparedness to manage exotic disease is best served through prevention. Ensuring strong national biosecurity systems and processes that prevent the introduction of exotic pests and diseases is important. Understanding risks, using surveillance for preparedness, and testing and modifying existing emergency disease preparedness plans are examples of strategies that can assist in protection of Australian nursery industry assets.

The ability to minimise the spread of disease requires an understanding of existing production locations, the speed of testing and diagnosing disease, and the rapid implementation of good disease eradication practices. While the industry has systems in place, they need to be tested to identify areas for improvement and identify potential research gaps.

A well-structured industry and on-farm biosecurity program maintains or improves on-farm productivity, profitability and the overall sustainability of the business through:

- Improved overall pest, disease and weed management, reducing crop losses and operational costs with a structured pest management system and resources
- Provision for knowledge-based decision-making leading to operational efficiency gains in labour allocation (such as applying less pesticide) and cropping inputs (such as pesticides) by following on-farm biosecurity procedures
- Access to a secure data storage and retrieval system, reducing administration costs through efficient data management
- Flexible market access with self-certification, allowing businesses to meet client demands 24/7
- Reduced market access costs, by self-certification and electronic documentation system (estimates in the millions of dollars annually)
- A faster return to market access after an emergency plant pest impact by operating under a credible biosecurity system
- Confidence in the supply chain, by recognising skilled staff and managing biosecurity risks professionally
- Industry representation on national biosecurity committees and groups that have influence over direct impacts and costs to growers along the biosecurity continuum
- Guided R&D investment into areas that provide direct benefit to growers, including efficient business data management, pest reporting and identification resources
- Provision of new and alternative pesticides for use in nursery stock to manage pests, diseases and weeds (Minor Use Permits).

Fewer casualties of pests and diseases in production nurseries will benefit the industry's profitability, and also the profitability and experiences of their customers.

OUTCOME 4

Improved productivity, profitability and professionalism through the creation of opportunities through innovation and adoption of industry best management practices

The creation of innovation and adoption of industry best practices will improve the profitability, productivity and professionalism of nursery businesses. This goal will be achieved through three interconnected approaches:

1. Innovating to create opportunities

Innovation plays a vital role in the long-term development of the nursery industry. It helps to improve profitability and sustainability with more efficient use of resources, such as labour and power, by reducing the unit cost of production and/or opening up new uses and markets for green-life products. It is important that innovation investment provides collective benefits, and ones not already underway by a commercial enterprise.

The management of pests and diseases is of utmost importance. Innovation into better diagnostics tools, faster response times, and use of electronic documentation and data management are some examples that will provide benefits to the industry.

Labour is a significant component of the cost of production. A number of industries have used automation to streamline their labour inputs and processes. Modification of these may offer the nursery industry more-efficient options.

Other industries are using data initiatives. For example, drones that fly above cotton crops to monitor insect levels. Similar innovations could lay the foundation for how future production nurseries may operate.

Innovation that provides collective benefits will help to ensure the industry minimises production costs while maximising the production of quality green-life products.

2. Adopting industry best management practices

As part of this plan, a review of current BMPs will highlight areas where possible improvements and potential R&D gaps may exist.

The diffusion model best captures how innovation is adopted within a community. This model is used in the 2020 Vision program. It shows that innovators will be the first to adopt new technology and/or practices. Innovators have a higher appetite to risk and make calculated decisions on ways to introduce and modify innovation to their businesses and environments.

Early adopters will be the next to use innovation. They will have seen an innovation in practice and then act on it. The late majority are the next to adopt, and eventually the laggards are the last. It is important to understand that not all people adopt innovation at the same time.

Growers can be classified as practical, hands-on people, and extension of R&D and marketing programs must be in a format and manner that targets these traits. Good extension programs bring a range of R&D outcomes together and package them in a way that enables growers to see, hear and/or read about innovation.

The use of early adopters sharing their experience with other growers on their success with levy funded outputs provides a better platform for adoption because the growers will trust the early adopters as a key source of information.

An integrated extension program that uses extension best practice to drive adoption is needed. When R&D outcomes are presented in an integrated manner, growers better understand how different outcomes combine to deliver greater productivity and profitability. More growers adopting BMP not only raise professionalism within the industry but also enhance the return on investment in their business and the industry's levy investments.

The industry's best management practice programs, (NIASA, BioSecure HACCP and Eco-Hort) offer a framework for the delivery of extension activities.

OUTCOME 4 (continued)

3. Engaging levy payers

As levy payer engagement in the industry increases, so too will the development of the industry. Levy payers engage less when they do not understand the longer-term vision, they fear change, and they are unable to connect with how levy funded R&D and marketing outcomes improve the industry's profitability and sustainability.

As a consequence, they question the future of the industry and the role and value of the levy and the activities it funds. However, innovation through R&D potentially contributes to future profitability. It is important that the industry is made up of engaged levy payers who are passionate about the future of the industry and see value in levy funded outcomes. This can be achieved through effective communication.

Improving the effectiveness of industry communication has been a constant challenge. Growers tend to be time-poor and can receive an overwhelming amount of information from a wide range of sources. In the future, levy funded communication activities will need to be better targeted and delivered to cut through the daily 'noise' most growers receive. Communication must ensure that growers identify not just the activities and outputs that the levy funds, but also how they can be adopted to improve productivity and profitability.

It is important that a line of sight between the industry's vision is provided: positioning for long-term growth along with the current levy funded outcomes. This will provide context and assist growers understand how the different outcomes contribute to building greater profitability and sustainability within their businesses and industry.

The industry's previous investments in this area provide effective communication channels. This plan aims to build on previous investment outcomes, and monitor communication activities to ensure they are effective in communicating key outcomes and messages to growers.

OUTCOME 5

Better career development

This outcome focuses on attracting the appropriate talent so that the industry can better position itself and increase consumer, government and community perception about the role and value of green-life in their environments, homes and workplaces.

Attracting and retaining forward-thinking people within the nursery industry is essential for maintaining profitability and sustainability of the industry. The nursery industry, like many other agricultural industries, has difficulty with attracting and retaining the appropriate people. Traditional recruitment channels are becoming less effective, and with online education increasing, younger people will likely have up to six job moves throughout their careers.

While it is important to attract good talent, it is equally important to ensure opportunities for career and leadership development. If the industry intends to portray itself as dynamic, vibrant and providing green solutions to improve the environments we live in, then it needs to have appropriate support systems. These include good human capital development programs, systems and career paths. National training programs, accelerated online courses, and exciting career opportunities provide the platform for attracting and retaining good talent.

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SECTION THREE

Nursery industry priorities

Industry investment priorities

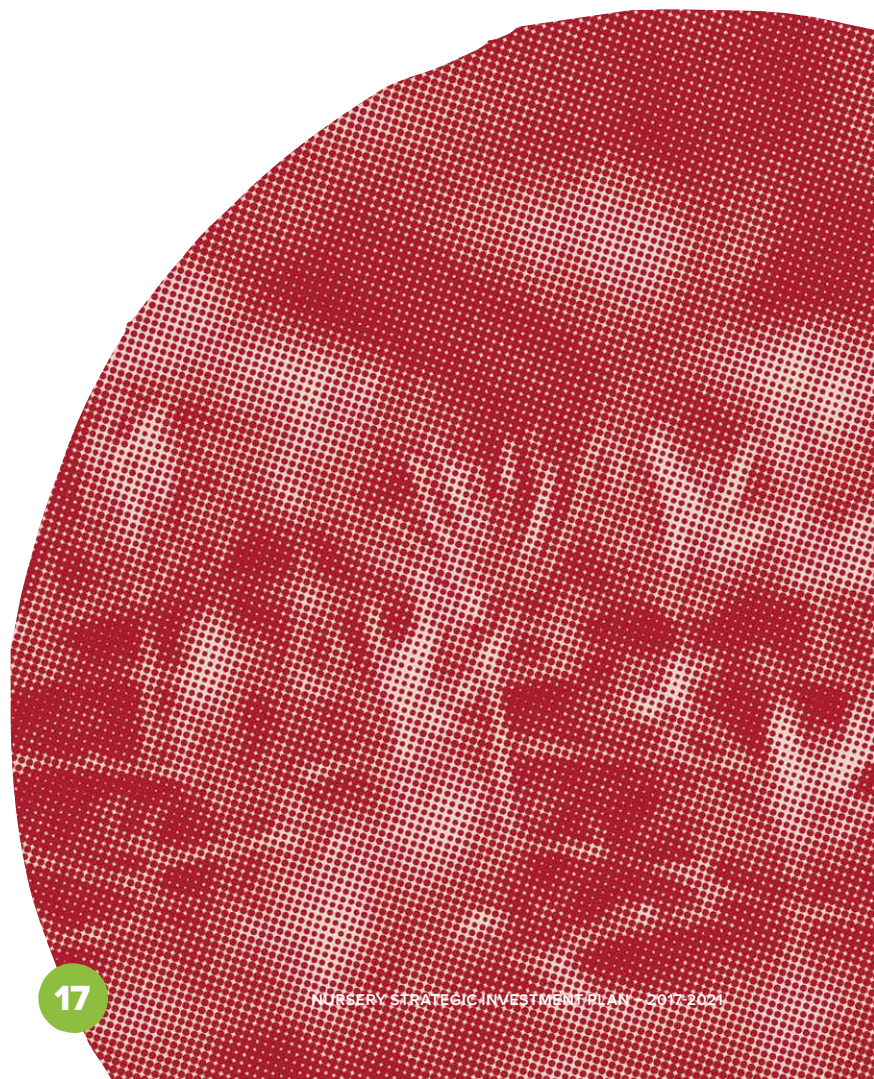
OUTCOME 1 – Increased demand and sales of green-life products by four per cent per annum plus CPI	
STRATEGIES	POSSIBLE DELIVERABLES
Develop an annual marketing program	<ul style="list-style-type: none"> • Development of an annual marketing program which identifies and communicates key messages to target audiences including: <ul style="list-style-type: none"> » Identification of target audiences » Uptake by target audiences » Identification of key messages » Press releases and marketing campaigns » Creation of industry narrative and supporting stories » Advocates for key messages
Identify and monitor effectiveness of marketing program and allocation of spend between business-to-business and business-to-consumer	<ul style="list-style-type: none"> • Understanding of the growth of the market • Research showing consumer engagement and uptake • Systems that enable decisions to be made about the allocation of spend between marketing between business and consumer audiences
Continue to support the 2020 Vision program	<ul style="list-style-type: none"> • Annual marketing plans for the 2020 Vision program
Enhance the 2020 Vision brand for beyond 2020	<ul style="list-style-type: none"> • Evolution of the brand and marketing approach that will follow 2020 Vision program • Research into requirements
Identify and promote the benefits of green-life products and services	<ul style="list-style-type: none"> • Marketing program using R&D outcomes in promoting green-life benefits • Educational and appropriate institutions informed on the 2020 Vision program and green-life benefits

OUTCOME 2 – Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge	
STRATEGIES	POSSIBLE DELIVERABLES
Obtain a better understanding of the customer, their requirements and reasons for buying or not buying green-life products and/or services	<ul style="list-style-type: none"> • Market research reports – state of the play • Benchmark of market segments
Obtain better industry intelligence, including value of industry, people employed	<ul style="list-style-type: none"> • Industry economic metrics, including value and size of industry, number of people employed • Identification of trends
Disseminate industry information and insights to growers and key stakeholders	<ul style="list-style-type: none"> • Better engagement with industry through sharing information through an effective extension and communication program

OUTCOME 3 – Improved industry protection from exotic, emerging and endemic pests and diseases	
STRATEGIES	POSSIBLE DELIVERABLES
Maintain and test surveillance systems and emergency disease management preparedness	<ul style="list-style-type: none"> • National strategies aimed at reducing pest, disease and weed incursions • Run a simulation exercise to test early warning systems and identify areas for further research or improvements • Communication of importance of this activity so people have a plan on what to do in an emergency • A faster return to market access after an emergency plant pest impact due to operating under a credible biosecurity system • Industry representation on national biosecurity committees and groups that have influence over direct impacts and costs to growers along the biosecurity continuum
Increase the awareness of the requirement of biosecurity to industry and stakeholders	<ul style="list-style-type: none"> • Information packages on improved pest, disease and weed management • Cooperation between government quarantine and the nursery industry
Review of importation requirements and barriers to adoption of new genetics	<ul style="list-style-type: none"> • Report on barriers • Identification of safe methods for plants and people handling them
Work with state governments to develop a more workable system for plant movements between states	<ul style="list-style-type: none"> • Develop and have endorsed BioSecure HACCP program by state governments • Reduced market access costs through self-certification and electronic documentation system • Access to a secure data storage and retrieval system reducing administration costs through efficient data management
Maintain access to chemicals through Minor Use Permits	<ul style="list-style-type: none"> • Provide new and alternative pesticides for use in nursery stock for managing pests, diseases and weeds (Minor Use Permits)

OUTCOME 4 – Improved productivity, profitability and professionalism through the creation of opportunities through innovation and adoption of industry best management practices	
STRATEGIES	POSSIBLE DELIVERABLES
Identify and fill R&D gaps where research would provide a collective benefit to the industry	<ul style="list-style-type: none"> Identifying and capturing opportunities through research and development Research reports Communicate innovation to industry
Monitor previous investments, innovation and trends	<ul style="list-style-type: none"> Identification of relevant nursery industry innovation globally Regular reporting to share innovations and important trends
Review and update the industry BMP modules to promote and expand these programs, including accreditation	<ul style="list-style-type: none"> Updated BMP modules and make modifications where required. Update approach should show commercial focus of a BMP system Identification of information gaps requiring research
Develop and conduct extension activities to drive adoption of BMPs	<ul style="list-style-type: none"> R&D and marketing outcomes packaged into extension modules that can be delivered through a range of extension activities Development of an annual extension strategy that includes workshops, field days, seminars and conferences Database of attendees at extension activities for evaluation purposes Communication packages levy payers can sources while on their farm Development of online resources
Promote, survey and monitor growers' uptake of BMPs and levy funded outcomes	<ul style="list-style-type: none"> Feedback response from those attending extension activities Follow up surveys of extension activity attendees to gauge adoption of BMPs Market the BMPs to increase uptake and raise awareness of the value of BMPs with customers
Create and maintain a library of projects that is open, easily accessible and catalogued for grower access	<ul style="list-style-type: none"> Grower input into the useability of an online resources Online system that is up to date, catalogued and accessible to growers
Develop and implement an effective communication strategy program	<ul style="list-style-type: none"> Development of an effective and integrated communication strategy that: <ul style="list-style-type: none"> » Use modern techniques in industry communication » Evidence the benefits of levy funded activities and grower investments » Sharing knowledge and grower experiences » Short, interesting and continuous communication to industry
Monitor the effectiveness of communication activities	<ul style="list-style-type: none"> Understanding of levy payers' current views on levels of engagement, effectiveness of industry communication including what is working and areas for improvement Undertake regular survey/focus group activities to monitor the effectiveness of levy funded communication activities Make recommendations of survey/focus group results on strategies to increase effectiveness and engagement within the industry

OUTCOME 5 – Better career development	
STRATEGIES	POSSIBLE DELIVERABLES
Promoting the industry as a professional career choice	<ul style="list-style-type: none"> • Identify and promote industry career paths • Understanding on why people are entering and exiting the industry • Create and tell the narrative of good careers within the nursery industry • Marketing package targeting the reasons people enter the industry and promoting it as a vibrant, innovative and satisfy industry to people's environments, life and careers
Identify future skills sets required within the industry	<ul style="list-style-type: none"> • Research and greater understanding of the future skill needs for the nursery industry
Collaborate with institutions regarding industry's training and development needs	<ul style="list-style-type: none"> • Assess current qualifications and training for the industry • Identification of training need gaps • Development of training modules that better reflect industry needs and/or address existing gaps • Collaboration with institutions and industry on attracting and skilling talent for the nursery industry
Implement an innovator/young leader development program	<ul style="list-style-type: none"> • Have 75 future innovators/young leaders attend a development program over the next five years and rate it as beneficial
Use future innovators/young leaders in the promotion and adoption of R&D and marketing outcomes within the industry	<ul style="list-style-type: none"> • Annually have 15 future innovators/young leaders speak at extension activities about innovation and their experience with R&D outcomes



Aligning to Hort Innovation investment priorities

In establishing investment priorities, Hort Innovation analysed both historical and current levy and co-investment portfolios and priorities. From this analysis we identified eleven cross-sectoral investment themes. We consolidated these themes further and considered their alignment with the Australian Government’s Rural RD&E Priorities and National Science and Research Priorities, to arrive at five investment priorities outlined in **Figure 2** below. **Figure 2** also shows how each cross-sectoral investment theme relates to the five investment priorities.

Figure 2: Hort Innovation’s investment priorities



The nursery SIP outcomes alignment to the Hort Innovation investment priorities and as a consequence the Australian Government’s Rural RD&E Priorities and National Science and Research Priorities is shown in **Table 1**.

Table 1: Alignment of nursery SIP outcomes to Hort Innovation investment priorities

Hort Innovation investment priorities	Nursery SIP outcomes
Support industry efficiency and sustainability	Improved industry protection from exotic, emerging and endemic pests and diseases Improved productivity, profitability and professionalism through the creation and adoption of innovation and industry best management practices
Improve productivity of the supply chain	–
Grow the horticulture value chain capacity	Improved productivity, profitability and professionalism through the creation and adoption of innovation and industry BMPs Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge Better career development
Drive long-term domestic and export growth	Increased demand and sales of green life products by four per cent per annum plus CPI
Lead strategically to enhance the development of the Australian horticulture industry through operational excellence	Enabler



4

SECTION FOUR

Nursery industry monitoring and evaluation

Nursery SIP monitoring, evaluation and reporting

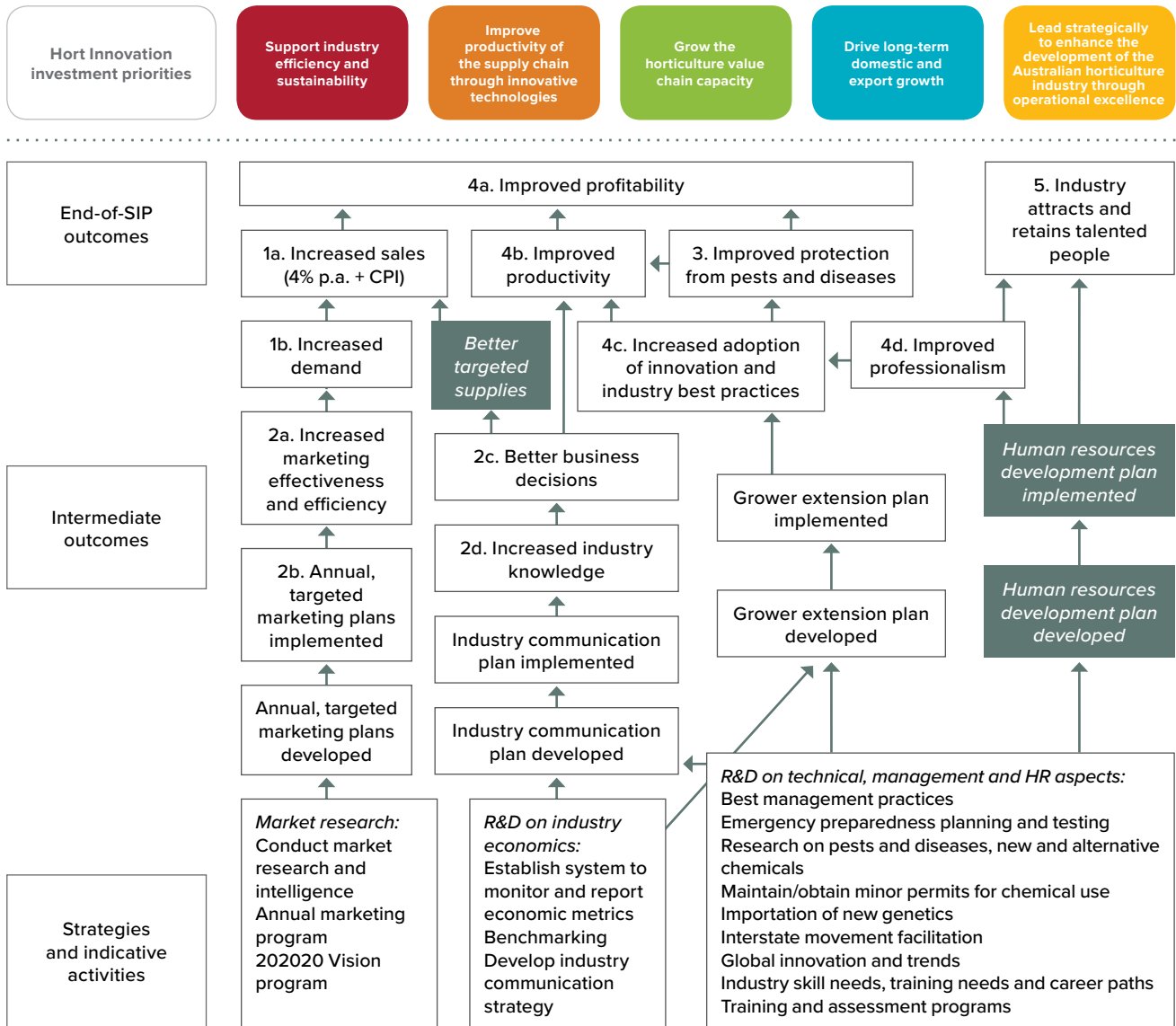
A SIP program logic and monitoring and evaluation (M&E) plan has been developed for the nursery SIP. These are informed by the Hort Innovation Organisational Evaluation Framework. The logic maps a series of expected consequences of SIP investment. The M&E plan shows the performance measures to demonstrate progress against the SIP and the data to be collected. Progress against the SIP will be reported in Hort Innovation publications and at industry SIAP meetings.

The SIP outcomes and strategies will be used to inform investments in individual projects to deliver on the SIP. The results of M&E will be used to reflect on the results of investments and in decision making. Hort Innovation will facilitate the regular review of SIPs to ensure they remain relevant to industry.

Nursery SIP logic

An indicative nursery SIP program logic is shown below in *Figure 3*. The logic is based on the Hort Innovation SIP logic hierarchy (*Appendix 3*).

Figure 3: Nursery SIP logic



Nursery SIP M&E plan

The nursery M&E plan is shown in **Table 2**. The table includes key performance indicators (KPIs) and data collection methods both at a macro/industry (trend) level and at more specific SIP level/s.

Table 2: Monitoring and evaluation framework for the nursery SIP

Outcomes	Strategies	KPIs	Data collection methods and sources
Increased demand and sales of green life products by four per cent per annum plus CPI	Develop an annual marketing program	<ol style="list-style-type: none"> 1. Levy revenue increases by four per cent per annum plus CPI. This will be the initial indicator until better industry data can report on industry revenue. This will then be the KPI because it more accurately reflects the increase in sale value 2. Continuation of funding of the 2020 Vision program 3. Marketing program from 2020 and beyond that positions the nursery industry as the specialist in how people benefit from their interaction with green-life, including research findings on the benefits of green-life products 	<ul style="list-style-type: none"> • Levy revenue data • Industry data • Research and marketing project reports
	Identify and monitor effectiveness of marketing program and allocation of spend between business to business, and business to consumer		
	Continue to support the 2020 Vision program		
	Enhance the 2020 Vision brand beyond 2020		
Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge	Identify and promote the benefits of green-life products and services	<ol style="list-style-type: none"> 1. Industry communications plan 2. System for monitoring and reporting industry metrics 3. Market research data and insights being used in levy funded marketing programs 4. Evidence of use of industry data and insights by key stakeholders 	<ul style="list-style-type: none"> • Research and marketing project reports • Industry data (such as data generated through project NY16004) • Stakeholder feedback
	Obtain a better understanding of the customer, their requirements and reasons for buying or not buying green-life products and/or services		
	Obtain better industry intelligence, including value of industry, and people employed		
Improved industry protection from exotic, emerging and endemic pests and diseases	Disseminate industry information and insights to growers and key stakeholders	<ol style="list-style-type: none"> 1. Industry preparedness for emergency disease outbreak tested and refined by 2021 2. 80 per cent of growers aware of the importance of biosecurity and know what to do in an emergency 3. Evidence of increased number of growers and production base using strategies to reduce pest, disease and weed incursions 4. Number of Minor Use Permits obtained 	<ul style="list-style-type: none"> • Grower/industry surveys • Research project reports • Biosecurity meeting minutes • NGIA
	Maintain and test surveillance systems and emergency disease management preparedness		
	Increase the awareness of the requirement of biosecurity to industry and stakeholders		
	Review importation requirements and barriers to adoption of new genetics		
	Work with state governments to develop a more workable system for plant movements between states		
Maintain access to chemicals through Minor Use Permits			

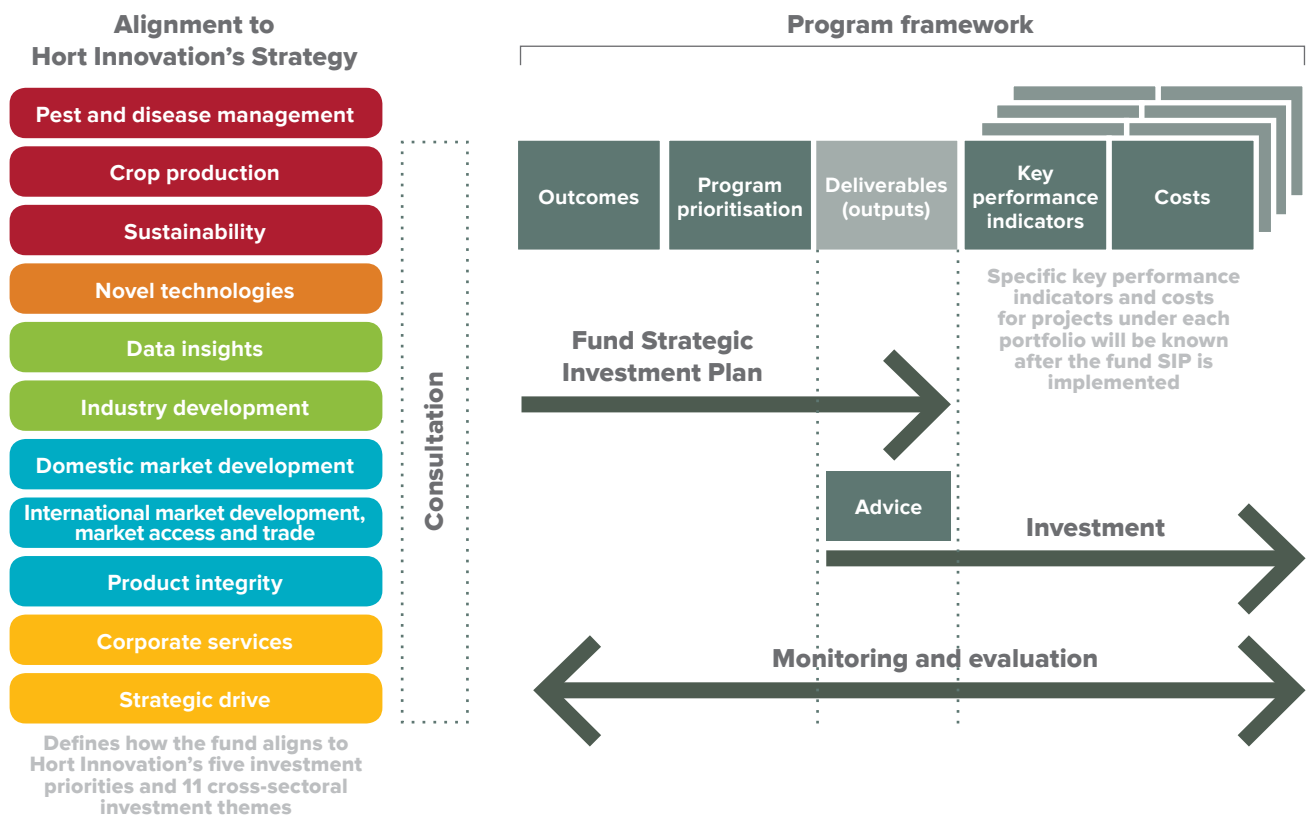
Outcomes	Strategies	KPIs	Data collection methods and sources
Improved productivity, profitability and professionalism through the creation and adoption of innovation and industry BMPs	Monitor overseas innovation and trends	<ol style="list-style-type: none"> 1. Industry communication and extension plans and evidence of implementation 2. Evidence of innovation outcomes incorporated into BMPs, extension and communication programs 3. Regular communication with growers on global innovation pertinent to the nursery industry 4. Increased number of growers reporting adoption of a BMP since 2016 5. Increase in growers' perceptions of the commercial value of the BMP programs (with baseline to be established) 6. The BMP programs have been reviewed, updated and is seen as also offering commercial benefits 7. 70 per cent of growers attending extension activities rate them as beneficial or better 8. An increase in use of online resources for growers 9. Evidence of satisfaction amongst growers of engagement levels through industry extension and communication projects (with baseline to be established) 10. SIAP recommendation on communication improvements actioned in a timely manner 	<ul style="list-style-type: none"> • Research project reports • Grower surveys • Grower numbers in BMP programs • NGIA • Extension event surveys • SIAP minutes • Communication project data and analytics • BMP project records
	Identify and fill R&D production gaps where research would provide a collective benefit to the industry		
	Review and update the industry BMP modules to promote and expand these programs, including accreditation		
	Develop and conduct extension activities to drive adoption of BMPs		
	Promote, survey and monitor growers' uptake of BMP and levy funded outcomes		
	Create and maintain a library of projects that is open, easily accessible and catalogued for grower access		
	Develop and implement an effective communication strategy program		
	Monitor the effectiveness of communication activities		
Better career development	Promote the industry as a professional career choice	<ol style="list-style-type: none"> 1. Increase in numbers of educators informed of the 2020 Vision program 2. An increase in the level of engagement of young people within the industry as measured by a survey 3. 80 per cent of future innovators/young leaders rate the development program as beneficial 4. 15 future innovators/young leaders speaking at extension activities annually 5. Human resources development plan 	<ul style="list-style-type: none"> • Industry surveys • Young leader feedback • Research project reports
	Identify future skill sets needed in the industry		
	Collaborate with institutions about industry training and development needs		
	Implement a young leader and development program		
	Use future innovators/young leaders to promote and adopt R&D and marketing outcomes within the industry		

Reporting

The program framework in **Figure 4** is the mechanism that links Hort Innovation’s strategy and investment priorities to the investment process through the industry SIP. SIPs assist Hort Innovation to prioritise and implement the specific industry R&D, extension and marketing programs.

Hort Innovation will use dynamic reporting against our monitoring and evaluation framework to report on investment progress. The contribution of investments to each industry outcome will be reported regularly, including through industry Annual Reports, Hort Innovation’s Annual Report and Hort Innovation’s Annual Operating Plan.

Figure 4: Hort Innovation’s program framework

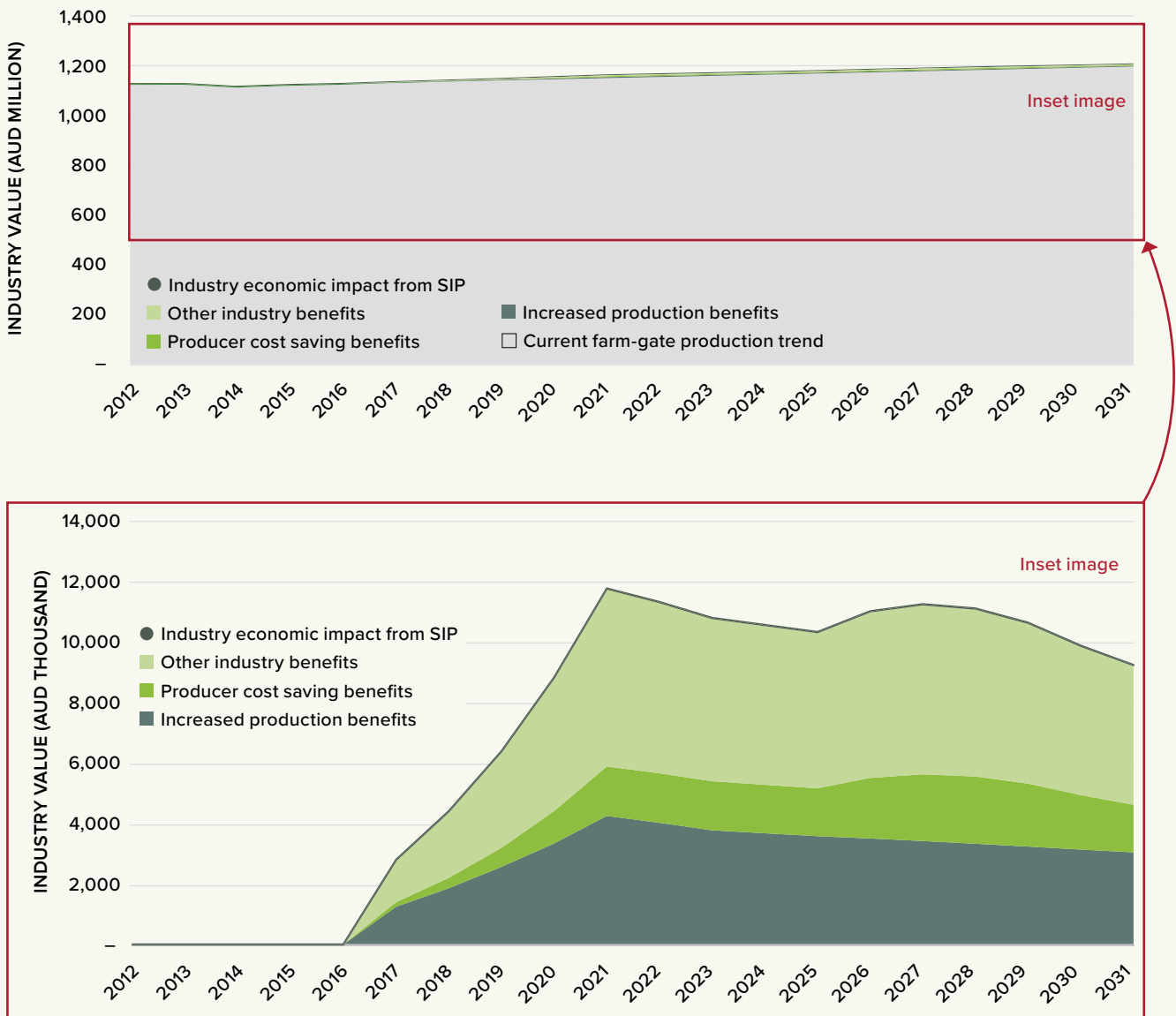


SECTION FIVE

Impact assessment



Figure 5: Economic benefit from investment in the nursery SIP



An independent assessment of the potential economic impacts from investment into the nursery SIP indicated a positive return on investment for the industry (**Figure 5**). The anticipated investment of \$16.34 million over the next five years in R&D, extension and marketing activities is expected to generate \$139.82 million in net benefits for the industry, representing a benefit cost ratio of 8.56 times to growers and service providers along the value chain.

The assessment draws from a wide range of available data sources, and projects economic impacts over a 15-year period starting from 2016/17. A five per cent discount rate has been applied and all values are adjusted for inflation and presented in 2016/17 dollar terms. The assessment takes a highly conservative approach and the presented figures have been adjusted to account for risks associated with achieving research outputs, expected adoption and impacts.

Table 4 provides a summary of the impacts assessed for the SIP, their corresponding outcomes, net economic benefits and benefit cost ratio.

Table 4: Overview of impacts assessed and alignment with SIP outcomes

Outcome	Expected deliverables <i>Refer to Section 3 for further details</i>	Anticipated SIP investment (over five years)	Net benefits (over 15 years)	Benefit cost ratio
Increased demand and sale of green life products	<ul style="list-style-type: none"> Annual nursery marketing program Marketing program effectiveness evaluation Annual 2020 Vision program marketing plan Nursery brand enhancement beyond 2020 Marketing to promote green life products 	\$3,267,928	\$46,949,157	14.37
Increased industry knowledge	<ul style="list-style-type: none"> Market research and benchmark reports Industry data and trends Extension and communication program 	\$3,267,928	\$24,262,008	7.42
Protection from exotic, emerging and endemic pests and diseases	<ul style="list-style-type: none"> National strategies on pest, disease and weed incursion Information packages on pest, disease and weed management Review of importation requirements for new genetics Improved system for plant movements between states Minor Use Permits program 	\$3,267,928	\$27,229,722	8.33
Improved productivity, profitability and professionalism	<ul style="list-style-type: none"> Communication strategy – implementation and monitoring Global nursery innovation – reports and communication BMP modules – update, extension and monitoring Project library – implementation and maintenance 	\$3,267,928	\$29,177,981	8.93
Better career development	<ul style="list-style-type: none"> Promotion of nursery careers Identification of future skills Collaboration with institutions to deliver training Future innovators/young leaders development program 	\$3,267,928	\$12,203,250	3.73

The quantified impacts associated with Outcome 1 include:

- Market expansion and price premiums from the development, delivery and evaluation of an annual marketing program for the industry to communicate key messages to target audiences
- Market expansion and price premiums from the delivery of the annual marketing plans for the 2020 Vision program and foundation work to enhance the brand beyond 2020
- Market expansion and price premiums from marketing, promotion and education of stakeholders on the benefits of green life products.

The quantified impacts from Outcome 2 include:

- Market expansion, price premiums and a reduced cost of production from the delivery of market research, benchmark reports and industry data trends to improve alignment of the industry to market needs and better decision-making on-farm
- Increased adoption of the market research, benchmark reports and industry data trends from the delivery of an extension and communication program to better engage with industry to share the information developed.

The quantified impacts from Outcome 3 include:

- Reduced impact on production value from pest, disease and weed incursions from the development and delivery of national strategies and information packages aimed at reducing pest, disease and weed incursions
- Reduced pest, disease and weed management costs from the development and delivery of information packages on improved pest, disease and weed management
- Reduced cost of importing new genetics from overseas from the review of importation requirements and reporting on the barriers to adoption of new genetics and the safe methods for plants and people handling them

- Reduced cost of plant movements between states from working with state governments to develop a more workable system for plant movement including the BioSecure HACCP program, a self-certification and electronic documentation system as well as a secure data storage and retrieval system
- Increased production yield and reduced losses from pests and diseases through the delivery of a Minor Use Permit program specific to the nursery industry.

The quantified impacts from Outcome 4 include:

- Increased adoption of levy funded research outcomes from better communication of innovation and research outcomes to industry and the development of a project library
- Market expansion, price premiums and a reduced cost of production from identification of relevant nursery industry innovation globally, and providing regular reports to share the innovation and trends
- Market expansion, price premiums and a reduced cost of production from the adoption of BMPs through the update, extension and monitoring of the BMP modules in the Nursery Industry Accreditation Scheme Australia (NIASA) Guidelines, EcoHort Certification and BioSecure Certification.

The quantified impacts from Outcome 5 include:

- The attraction of new talent and retention of people in the industry from greater promotion of careers in areas such as horticulture, production and retail nursery
- Increased benefits from the research undertaken in Outcome 5 due to the foundation work undertaken to identify the future skill gaps for the industry
- Human capital improvement from the delivery of training modules in collaboration with institutions and industry to attract and upskill the workforce
- Human capital improvement from the delivery of a future innovators/young leaders program over the next five years.

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SECTION SIX

Risk management

The purpose of this risk section is to highlight any unique or specific risks that qualify the SIP. This is not intended to be an exhaustive risk review of the industry risks which in part are considered in the SWOT. This is also not reflective of the general investment risks which will be considered in the project investment process.

The following risks will affect deliverability of the outcomes of this SIP:

- Adoption of R&D outcomes continues to be a challenge within Australian agricultural industries. While this plan focuses on using proven extension methodologies to drive adoption of R&D and marketing outcomes, the targets will be impacted if the diffusion is slower than expected. An integrated program will aim to help drive adoption but there is still the challenge of measuring the exact level of adoption because many growers do not attribute the BMP changes to levy funded R&D outcomes. This is often because they have seen other influential growers implement such practices or received advice from a trusted advisor
- The move to a more favourable market access system within Australia requires state governments to agree on common principles. Failure to obtain that agreement will limit the ability to achieve that outcome
- The accurate measurement of increase in sales and demand will initially be based on an increase in the levy revenue. This is because it is the only current measure that is accurate. It is noted that this does not reflect an increase in sale volumes but rather an increase in the volume and/or value of pots sold. If the investment in better industry intelligence cannot obtain accurate industry data, then an accurate evaluation of this objective is limited
- Attraction of talent is a challenge for all agricultural industries, particularly those with high labour requirements. The ability to position the industry as the key industry linking green-life benefits to the daily lives of people and their environments will play an important role in attracting labour. The inability to change perceptions will reduce the likelihood that these outcomes will be achieved
- If industry profitability does not improve, some outcomes in this plan may have limited success.

Figure 6: SIP development process



APPENDIX 1: Process to develop this plan

The SIP was developed in close consultation with the Australian nursery industry through the four-stage process (Figure 6) formulated by Hort Innovation.

Pre-planning activities included review of relevant literature, analysis of past investments, preparation of an industry profile, engagement with the SIAP and NGIA. Literature review focused on the nursery SIP 2011–16 and a number of levy funded projects reports.

Preparation tasks included gathering input and data to inform the SIP, completing an environmental scan, reviewing consumer and retailer trends, and discussing innovative technology relevant to their industry. This process involved a range of large and smaller.

At a one-day national SIP workshop in Sydney, growers discussed and identified levy investment priorities, outcomes and strategies.

Key themes from this consultation were then discussed with the SIAP and an industry-wide online survey was carried out (45 responses). The online survey and the themes raised in these responses were in line with the initial consultation of key stakeholders.

The SIAP advised on the need for a national workshop. It was decided that the workshop would be by invitation only. Members of the SIAP and NGIA were consulted to ensure the invitation list reflected the nursery industry’s sectors and state representations.

At a one-day national SIP workshop in Sydney, growers discussed and identified levy investment priorities, outcomes and strategies. The outcome from this workshop was used to develop the initial draft of the SIP. An interactive workshop was held with the SIAP to ensure the document reflected the industry’s intent.

Validation was completed by making the document available for public comment in February 2017 and March 2017.

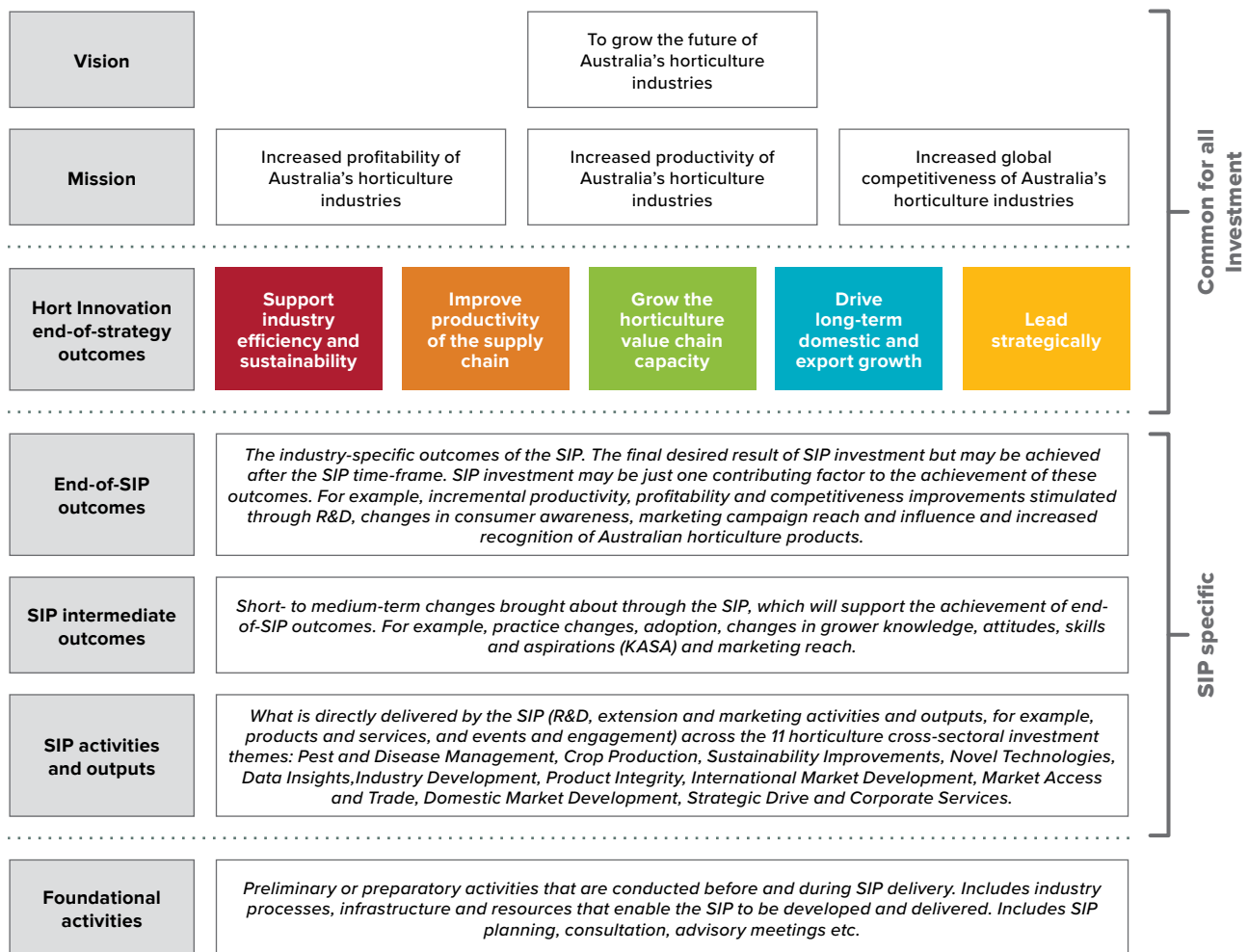
**APPENDIX 2:
Consultation**

The following individuals were consulted during the development of this SIP (and their assistance is gratefully acknowledged).

Name	Organisation
Anthony Tessalar	Tessalar Plants
Barry Humphris and John Phillip	Humphris Nursery Garden Assets
Ben Archibald	Touchwood Nursery
Carl Heyne	Heyne's Wholesale Nursery
Carole Fudge	Benara Nurseries
Chris O'Connor	NGIA
Craig How	Cloverlea Nursery
Craig Taberner	NGIV
Daniel Jacometti	Boomaroo Nurseries
David Mathews	Proteaflora Nursery
David Reid	NGIV
Deirde Plummer	Plummer's & United Nurseries
Elaine Duncan	Flourish Plants North Queensland
Eric Haar	Haars Nursery
Gavin Porter	ANFIC
Geoff Prettejohn	Living Colour Nursery
Hamish Mitchell	Specialty Trees
Jeno Kapitany	Paradisnia Nurseries

Name	Organisation
John Bunker	Greenlife Solutions
John McDonald	NGIA
Ken Bevan	Alpine Nursery
Kobie Keenan	NGIA
Mark Jackson	Southern Advanced Plants
Mike Hindle	Withcott Seedlings
Mike Mehigan	NGIA
Paul Boland	Ball Australia
Paul Lancaster	Suncoast Water Gardens
Peter Knox	Alpine Nursery
Peter Vaughan	NGIA
Ray Doherty	Azalea Grove Nursery
Robert Pohlman	Pohlman's Nursery
Ryan Weber	Ramm Botanicals
Sonja Cameron	Camerons Nursery
Teena Sandford	Darwin Plant Wholesalers
Terry Spink	Marlborough Nursery
Tody Layt	Ozbreed
Tom Kebblewhite	Florabundance Wholesale Nursery
Tony Marlton	Jackie's Wholesale Nursery (Zoomgarden)
Trevor Gay	Sunnyvale Plants

APPENDIX 3:
Logic hierarchy



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