

Wine
Australia

Extension and Adoption Strategy 2020–25

Contents

Introduction	2
About the extension and adoption strategy	3
Objectives	3
Principles	3
Outcomes	3
Focus areas requiring change	5
Visualising the strategy	10
Appendix 1: Adoption program delivery partners	11
Appendix 2: Best practice design features of extension and adoption delivery formats	14
Appendix 3: Adoption pathway checklist	17

Introduction

This document sets out Wine Australia's Extension and Adoption Strategy for the five-year period from July 2020¹. The Extension and Adoption Strategy is aligned with *Wine Australia Strategic Plan 2020–25*. The Wine Australia Strategic Plan in turn seeks to deliver upon the long-term priorities of the grape and wine sector as described in Australian Grape & Wine's 30-year plan, *Vision 2050*.

For the purposes of this strategy, 'extension and adoption' is broadly defined as activities that are designed to facilitate practice change by participants in the wine sector, mainly grapegrowers and winemakers. This may be in response to research and development activities providing opportunities to improve practices or increase adoption of best-practice innovation. The term is taken to include related concepts such as capability and capacity building.

The focus for Wine Australia is on investments in activities that strive to achieve adoption, practice change and innovation.

Innovation is broad in its meaning – new or different ideas, new devices or methods, or the application of better solutions to meet new requirements. Sources of innovation for practice change are multiple and include Wine Australia-funded research and development (R&D) but also other Australian and international R&D, products from the private sector (e.g. AgTech companies) and sector participants themselves. Such innovations may have been developed specifically for the wine sector or may be adapted from a totally separate industry.

Importantly, adoption is not considered an 'end-of-pipe' outcome but rather one stage in an innovation cycle. The process of adoption raises opportunities for further improvement and or problems to be solved that potentially lead to further research and/or development.

Participants in the grape and wine sector's innovation cycle include:

- winegrape growers (more than 6250)
- winemakers (almost 2500)
- sector organisations – Wine Australia, Australian Grape & Wine (AGW), Australian Wine Research Institute (AWRI), Australian Society of Viticulture and Oenology (ASVO), Vinehealth Australia
- regional and state associations
- consultants and advisors (private and government)
- input and AgTech suppliers
- researchers
- universities, vocational education and training and private providers – teachers, lecturers and students, and
- wine sector and wider societal communicators.

¹ This strategy was developed as part of a review of Wine Australia's investments in extension activities during 2019–20. The results are available in *Strategic review of extension and adoption in the wine sector: Final report* by Forest Hill Consulting.

About the extension and adoption strategy

Wine Australia's extension and adoption strategy consists of the following elements. Further details and supporting evidence for this approach can be found in the report by Forest Hill Consulting *Strategic review of extension and adoption in the wine sector: Final report*.

Objectives

The aspirational goal of Wine Australia's extension and adoption strategy is that every one of its levy payers is provided with the evidence and opportunity to make fully informed decisions about the adoption of innovation in their businesses.

By June 2025:

- Of levy payers who participate in Wine Australia-supported extension and adoption programs:
 - 80 per cent consider them as a good or very good use of levy funds
 - 80 per cent have gained new knowledge or new information to improve their long-term profitability and sustainability
 - 50 per cent intend to make, or have made, changes to existing practices by adopting the outcomes of research and development
 - 80 per cent of those who have adopted AgTech have a positive return on their investment.

Principles

Contemporary thinking in agricultural extension, design thinking, social marketing and related disciplines suggest the principles described in Figure 1 underpin a successful extension and adoption program. These six principles are supported by Wine Australia and set the framework for our investments in extension and adoption activities.

Outcomes

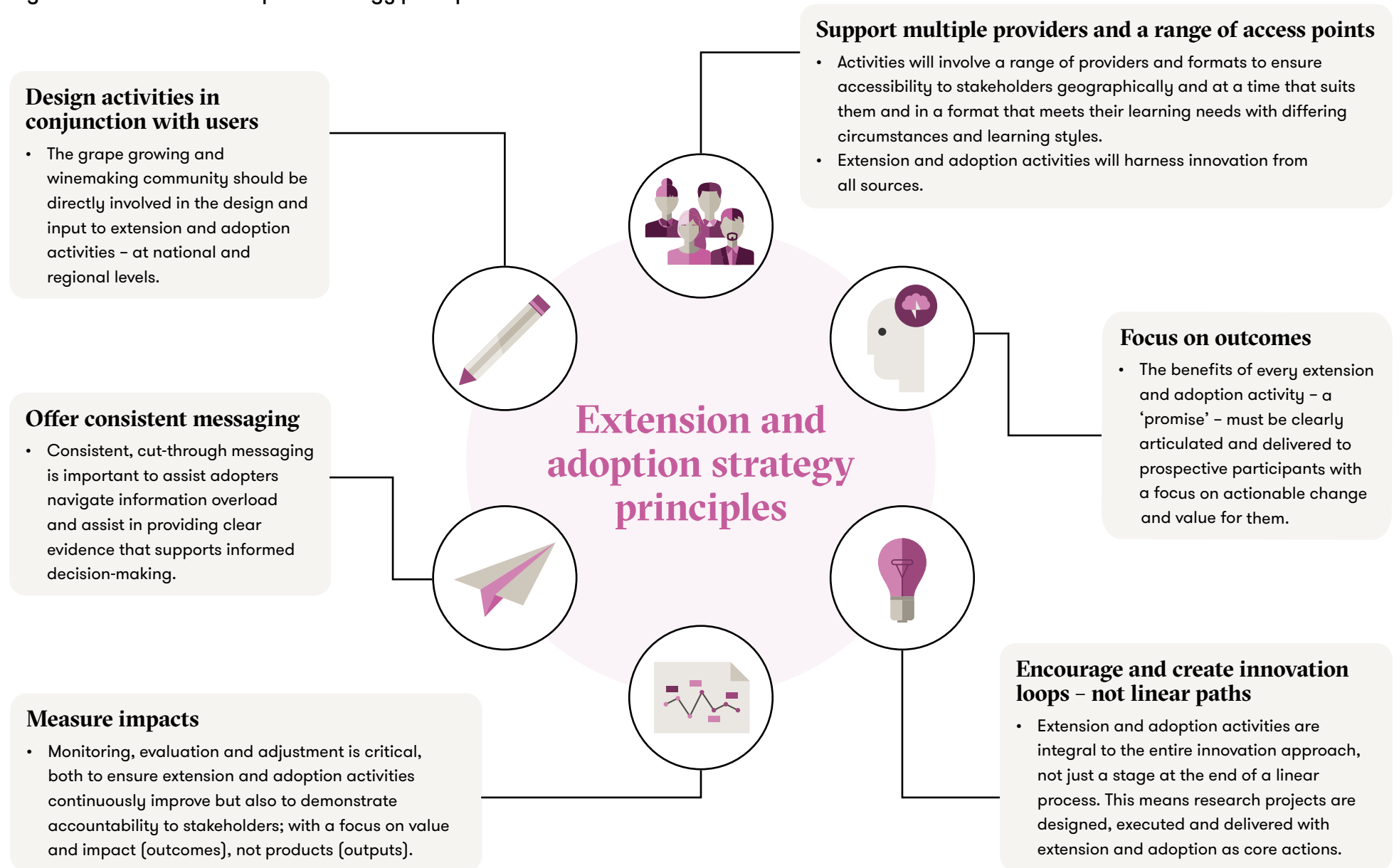
The desired long-term outcome is profitable, resilient and sustainable wine grape and wine businesses.

The following four focus areas are identified as priority intermediate outcomes to achieve maximum impact:

1. knowledge is available to enable and empower the sector to make informed decisions
2. knowledge is easily accessible at multiple access points and supports various learning and engagement styles
3. research, development and extension activities focus on maximising adoption impact and sustaining practice change, and
4. research, development, extension and adoption activities are co-designed with end-users; with feedback loops and practice change measured.



Figure 1 Extension and adoption strategy principles



Focus areas requiring change

Wine Australia and our key extension delivery partners such as the Australian Wine Research Institute (AWRI) and the Australian Society for Viticulture and Oenology (ASVO), along with many others such as agronomists, universities and government agencies play a vital role across many forms of development, communication and extension activities to identify challenges and implement solutions based on sound research evidence.

In light of the principles underpinning the extension and adoption strategy, the review identified a number of recommendations and improvements to the way in which Wine Australia invests in activities.

This new approach recognises that there is a continuum of levels of stakeholder participation – from being informed or consulted and involved in decisions to collaboration and empowerment. This demonstrates our commitment to focus on outcomes and give end-users greater involvement in activities and decision-making to achieve adoption and practice change.

The key focus areas requiring change are summarised in Table 1.

Table 1 – focus areas for change

Focus area	Key change	Key components
Principle 1: Design activities in conjunction with users		
Advisory structure – sector input	The Australian Grape and Wine Research Advisory Committee (RAC) will be a key advisor in extension and adoption priorities for the sector.	<p>The role of the RAC will be to:</p> <ul style="list-style-type: none"> • facilitate greater stakeholder input in relation to national priorities for extension and adoption • provide advice to Wine Australia and its extension partners on priorities, and • ensure the directions proposed in Vision 2050 (Australian Grape and Wine) and Wine Australia’s Strategic Plan 2020–25 are considered in extension and adoption activities. <p>Wine Australia’s delivery partners will continue to seek wider sector input into the design and delivery of activities, especially across the regions.</p>
Principle 2: Support multiple providers and a range of access points		
Extension and adoption delivery partners	A range of providers are required to achieve the principles and priorities outlined in the strategy; but this also requires enhanced transparency and co-ordination practices between the key partners.	<p>Extension activities to the grape and wine sector are delivered by a range of providers.</p> <ul style="list-style-type: none"> • The AWRI, ASVO and Regional Program Partners (see below) receive funding from Wine Australia to design and deliver extension activities. The priorities will be put into effect through annual agreements and operating plans. • Activities that are funded by Wine Australia, and those that are delivered by Wine Australia itself, will be coordinated to optimise efficacy and return on investment. • Wine Australia and our delivery partners will also need to be agile in our functions as required to deliver extension activities aligned with the aspirations of this strategy, the advice of the RAC and emerging issues affecting the sector. <p>Refer to Appendix 1: Extension program delivery partners.</p>

Focus area	Key change	Key components
<p>Regional Program</p>	<p>The role the Regional Program plays in the sector's extension and adoption program will be enhanced, and there will be a new focus on AgTech and demo farms as pathways to adoption.</p>	<p>Australia's 65 wine regions are divided into 11 regional clusters, which receive funding from Wine Australia, proportional to the R&D levies paid by the region, to organise and run extension and adoption activities identified by them as having greatest relevance.</p> <ul style="list-style-type: none"> • Based on familiarity with Wine Australia and AWRI priorities and resources, plus input from their own members, regions are well placed to determine what specific activities they need. Each region prepares a simple five-year plan and an annual operating plan to determine how this funding will be used. • The value and success of this program is largely driven by the goodwill and commitment from Regional Program Partners. The program is bolstered by Wine Australia staff time to assist with planning. Interaction between the regions occurs at the planning stage each year, and at an annual forum to exchange learnings from their activities and discuss with Wine Australia and AWRI the latest developments within their programs. • There will be a renewed effort to ensure outcomes and outputs from Regional Program activities are better shared with other regions (e.g. dedicated web page, blog etc.) to increase communication, collaboration and cost-effectiveness, implemented and managed by Wine Australia. • In addition, from 2020 Wine Australia's focus is on AgTech projects and the establishment of demonstration sites in focus vineyards and wineries across the regions as a mechanism to trial innovations and increase adoption. • Allied with the Regional Program is the Incubator Initiative, which supports early career researchers working with Regional Program Partners, grape and wine associations and groups on regionally specific research. <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>The role of the Regional Program is to:</p> <ul style="list-style-type: none"> • identify their region's highest priority innovation, extension and adoption issues and communicate this to Wine Australia and R&D partners. • evaluate new concepts and technology to measure regional benefits of adoption, and facilitate local practice change • help all extension providers work with the sector to meet regional needs, and avoid duplication • connect researchers with the sector to support quality project outcomes and assist with the uptake of new tools and research findings, and • provide support in collecting evidence of investment impact to levy payers and amplify success stories. </div>

Focus area	Key change	Key components
Principle 3: Focus on outcomes		
Activities and learning platforms/ delivery formats	Activities will vary in design, complexity and influence – ranging from awareness raising to targeted adoption packages using specific design principles to maximise impact and behaviour change.	<p>Awareness raising activities</p> <p>Primarily activities that are designed to alert stakeholders to emerging innovations, such as outputs of R&D projects, or to notify them of upcoming workshops or other events – via emails, newsletters, social media alerts, videos, webinars and seminars providing R&D updates.</p> <ul style="list-style-type: none"> • These activities are not expected to significantly drive adoption by themselves, except where an innovation is simple and/or incremental and requires little explanation. They provide a signpost by which members of the target audience can seek further information to assist in their decision-making. An important conduit here will be the Regional Program Partners and regional associations who can re-package Wine Australia, AWRI and other research partners' information via their own newsletters. • To maximise efficiency in time and resources (money and people), webinars and other electronic formats will be increasingly used for subjects that lend themselves to 'seminar' type delivery, and there will be a greater focus on shared resources and learnings across activities. <p>Workshops and education programs</p> <p>Workshops and education programs provide suitable pathways to adoption., and to increase that likelihood most activities should have the following attributes:</p> <ul style="list-style-type: none"> • offer a balance of viticulture and winemaking topics as determined by stakeholders • take a very hands-on, learning-by-doing approach, as far as possible • establish a 'promise' from participation (at the end of this extension/adoption event you will...), and • measure practice change outcomes. <p>The design of activities such as webinars, seminars and workshops may, in part, be influenced by adoption packages for priority and/or under-adopted innovations (see below).</p> <p>Refer to Appendix 2: Best practice design features of extension and adoption delivery formats</p>

Focus area	Key change	Key components
<p>Adoption packages for priority and/or under-adopted innovations</p>	<p>Wine Australia, with the guidance of the RAC, will facilitate the development of extension and adoption targeted packages for priority technical areas</p>	<p>Activities must have a primary purpose and be linked to specific focus areas or adoption targets based on sector need or priority areas, as well as measuring adoption rates.</p> <p>These may include, but not be limited to:</p> <ul style="list-style-type: none"> • KPIs in Wine Australia’s Strategic Plan, such as under strategy 4 Grow sustainable environments where by 2025 we are committed to: <ul style="list-style-type: none"> - the use of vineyard cover crops and soil remediation practices increasing by 10 per cent - the area dedicated to enhancing functional biodiversity increasing by 10 per cent, and - best-practice irrigation scheduling to optimise water use efficiency being adopted by an additional 30 per cent of growers in warm irrigated regions. • other key viticulture and oenology practices identified as priority areas, and/or • areas where there is a clear identified need for behaviour change, i.e. biosecurity, sustainability. <p>Adoption packages may take many forms. They may:</p> <ul style="list-style-type: none"> • combine awareness raising materials such as podcasts, videos and case studies through to presentations and best practice manuals • include information prepared for a variety of audiences (e.g. grape growers and agronomists) • form the basis of workshops and education programs. <p>The range of formats and content within a particular package will depend on the adoption objective, characteristics of the innovation/s and the target audience/s and other factors (see Appendix 3). These packages will be based on the principles described in this strategy.</p> <p>Refer to Appendix 2: Best practice design features of extension and adoption delivery formats</p>
<p>Principle 4: Offer consistent messaging</p>		
<p>Maintaining the knowledge base</p>	<p>Adoption is facilitated when information is readily accessible and searchable, consistent in its messaging and provided by a trustworthy source.</p>	<p>While recognising the importance of multiple delivery partners and access points to knowledge, as well as reaching a geographically dispersed audience, we will foster the development of a knowledge hub that centralises learning resources on technical aspects of grapegrowing, winemaking and related disciplines.</p> <ul style="list-style-type: none"> • This includes written materials such as best-practice management guides and fact sheets, as well as decision-making tools, videos and other media formats. The material will range from simple summaries to more in-depth technical materials aimed particularly at advisors. • Much of the material already exists and will include components from the AWRI and Wine Australia websites. The AWRI library is also an important service for the sector and consideration will be given to evolving this into a modern, curated information service. • It is vitally important that the knowledge hub be designed to capture innovation from all sources, not just the traditional ones, although of course technical rigor remains a critical consideration. It is also important that access to this ‘source of truth’ information is very visible and readily available. <p>A related resource will be a searchable database of technologies (AgTech hub) with application for the wine sector, managed by Wine Australia and integrated into the knowledge hub.</p>

Focus area	Key change	Key components
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Principle 5: Measure impacts

<p>Monitoring, evaluation and reporting</p>	<p>Monitoring, evaluation and reporting is needed to determine, and showcase, the success of our efforts.</p>	<p>A simple but robust monitoring, evaluation and reporting arrangement will be established as part of this extension and adoption strategy, involving both delivery partners and Wine Australia.</p> <p>The key elements of evaluation will be:</p>														
		<table border="1"> <thead> <tr> <th>Measure</th> <th>Mode of measurement</th> </tr> </thead> <tbody> <tr> <td data-bbox="907 406 1288 534"> <p>Inputs</p> </td> <td data-bbox="1288 406 2069 534"> <ul style="list-style-type: none"> operating plans with delivery partners funding levels (\$ measure) stakeholder engagement (in both design and participation ie. practical pre and post engagement surveys) </td> </tr> <tr> <td data-bbox="907 534 1288 670"> <p>Outputs</p> </td> <td data-bbox="1288 534 2069 670"> <ul style="list-style-type: none"> number and type of activity (e.g. workshops, webinars, seminars, training programs etc) number of attendees and role locations and geographical spread </td> </tr> <tr> <td data-bbox="907 670 1288 821"> <p>Outcomes – changes in knowledge and skills</p> </td> <td data-bbox="1288 670 2069 821"> <ul style="list-style-type: none"> simple surveys undertaken by delivery partners after each activity to capture: <ul style="list-style-type: none"> intention to adopt (percentage measure), and practice change six-months following (depending on activity, percentage measure) </td> </tr> <tr> <td data-bbox="907 821 1288 901"> <p>Adoption – practice change</p> </td> <td data-bbox="1288 821 2069 901"> <ul style="list-style-type: none"> annual extension and adoption survey of stakeholders (for those that attend events and those that don't) </td> </tr> <tr> <td data-bbox="907 901 1288 973"> <p>Benefits</p> </td> <td data-bbox="1288 901 2069 973"> <ul style="list-style-type: none"> case studies benefit-cost analyses of specific activities </td> </tr> <tr> <td data-bbox="907 973 1288 1061"> <p>Reporting</p> </td> <td data-bbox="1288 973 2069 1061"> <ul style="list-style-type: none"> Wine Australia will curate the results from monitoring and evaluation activities, surveys and case studies into an annual impact report </td> </tr> </tbody> </table>	Measure	Mode of measurement	<p>Inputs</p>	<ul style="list-style-type: none"> operating plans with delivery partners funding levels (\$ measure) stakeholder engagement (in both design and participation ie. practical pre and post engagement surveys) 	<p>Outputs</p>	<ul style="list-style-type: none"> number and type of activity (e.g. workshops, webinars, seminars, training programs etc) number of attendees and role locations and geographical spread 	<p>Outcomes – changes in knowledge and skills</p>	<ul style="list-style-type: none"> simple surveys undertaken by delivery partners after each activity to capture: <ul style="list-style-type: none"> intention to adopt (percentage measure), and practice change six-months following (depending on activity, percentage measure) 	<p>Adoption – practice change</p>	<ul style="list-style-type: none"> annual extension and adoption survey of stakeholders (for those that attend events and those that don't) 	<p>Benefits</p>	<ul style="list-style-type: none"> case studies benefit-cost analyses of specific activities 	<p>Reporting</p>	<ul style="list-style-type: none"> Wine Australia will curate the results from monitoring and evaluation activities, surveys and case studies into an annual impact report
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Principle 6: Encourage and create innovation loops – not linear paths

<p>Design of Wine Australia-funded R&D projects</p>	<p>Adoption pathways are developed</p>	<p>An indicative adoption pathway and estimated resourcing will be developed for each new R&D project before its commencement, by the Wine Australia program manager in conjunction with the research proponent.</p> <ul style="list-style-type: none"> This adoption pathway will be tailored to each innovation on its merits, using a systematic framework to determine the optimum approach. A checklist to assist with this process is at Appendix 3. The research proponent may or may not be the best lead for extension and adoption of the project outputs, but they need to be involved in the design of the relevant extension and adoption activity for their research. <p>Refer to Appendix 3: Adoption pathway checklist (to help researchers frame their adoption pathways)</p>
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Visualising the strategy

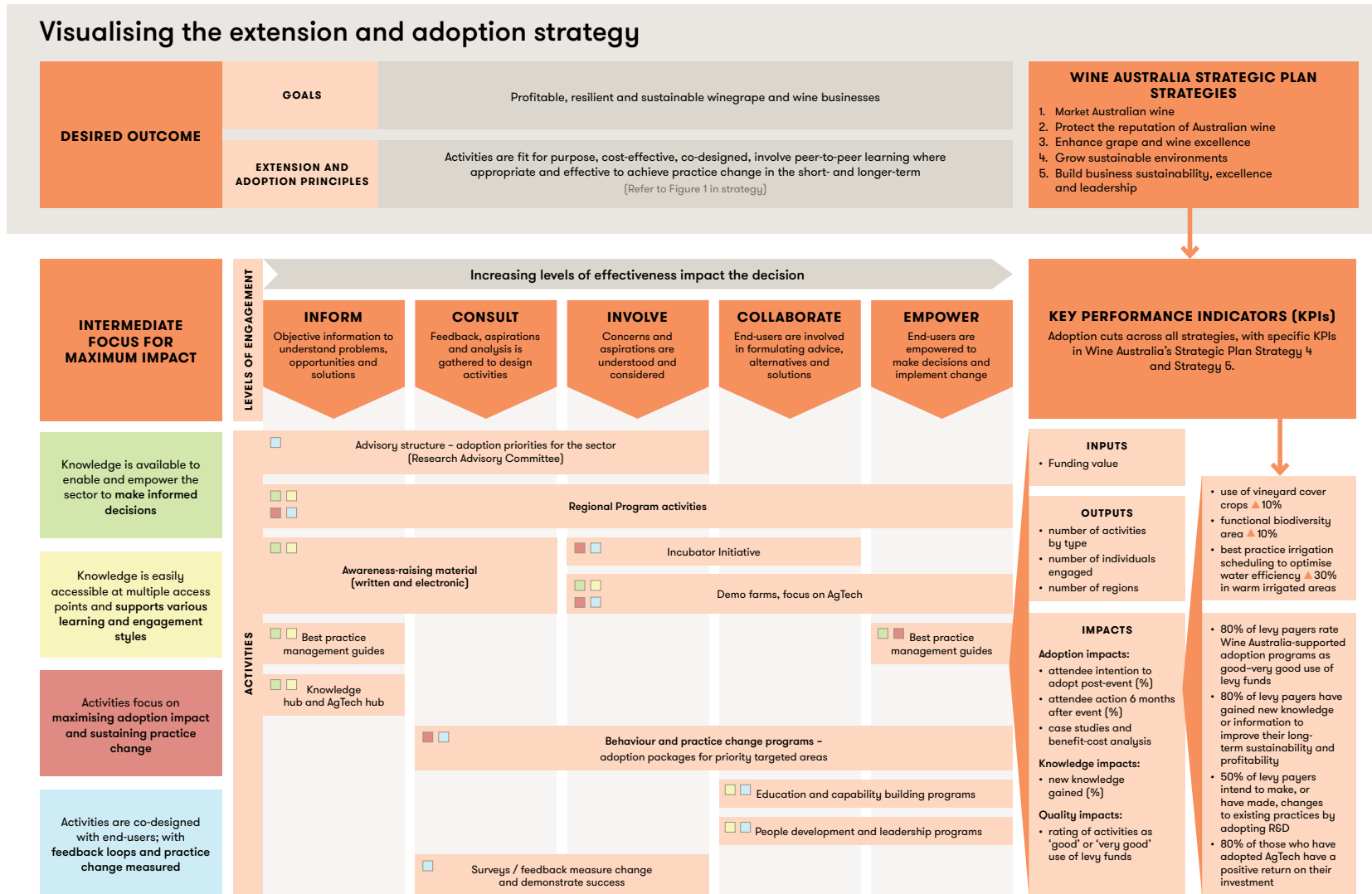


Figure 2 demonstrates the connections between the objectives, principles, desired outcomes and activities of this strategy against the key performance indicators (KPIs) and priorities in Wine Australia's Strategic Plan 2020-25.

Appendix 1: Adoption program delivery partners

This strategy will be delivered by Wine Australia in conjunction with a range of partners.

Regional program partners

Regional cluster	Regions included in the cluster	Regional program partner
SA North	Barossa Valley, Clare Valley, Eden Valley, Adelaide Plains, Southern Flinders Ranges	Barossa Grape & Wine Association Inc.
SA Central	Langhorne Creek, McLaren Vale, Adelaide Hills, Southern Fleurieu, Currency Creek, Kangaroo Island	Langhorne Creek Grape & Wine Inc.
Limestone Coast (SA South)	Coonawarra, Padthaway, Wrattenbully, Mount Benson, Robe, Mt Gambier	Limestone Coast Grape & Wine Council
Greater NSW and ACT	All regions in NSW and ACT excluding Riverina	NSW Wine Industry Association
Riverina	Riverina	Riverina Wine Grapes Marketing Board and NSW Department of Primary Industries
Riverland	Riverland	Riverland Wine
Murray Valley	Murray Darling and Swan Hill	Murray Valley Winegrowers Inc.
Western Australia	All regions in Western Australia	Wines of Western Australia
Tasmania	Tasmania	Wine Tasmania
Greater Victoria	All regions in Victoria excluding Murray Darling and Swan Hill	Wine Victoria Inc.
Queensland	All regions in Queensland	Queensland Wine Industry Association

The Australian Wine Research Institute (AWRI) is an important provider of services to the Australian grape and wine sector, the majority of which are funded by levy payers and the Australian Government through Wine Australia under a bilateral agreement.

AWRI provides the following functions under this strategy:

- library
- helpdesk
- awareness-raising activities
- webinars
- seminars
- workshops, and
- adoption campaigns where AWRI is identified as the preferred delivery partner.

Specific activities under the last three of these functions will be agreed annually with Wine Australia with the guidance of the RAC, taking account of the profile of help desk queries, requests from the Regional Program and other stakeholder input.

The Australian Society for Viticulture and Oenology (ASVO) is an important conduit to the advisors and consultants serving the wine sector, as well as viticulture and oenology professionals within sector enterprises. ASVO promotes the dissemination of scientific, technical and practical information through multiple mediums to advance the knowledge and skills of its members.

State government and education providers such as the South Australian Research and Development Institute (SARDI) and state government departments such as Primary Industries and Regions SA (PIRSA), NSW Department of Primary Industries, WA Department of Primary Industries and Regional Development etc. along with the university (for example and in particular the teaching universities University of Adelaide and Charles Sturt University) and vocational training sectors will have a role in delivery of extension and adoption activities, particularly within their respective geographic footprints and depending on specific expertise.

Individual viticulturists, agronomists and other sector advisers play an important role in assisting adoption. Advisers will be provided access to the knowledge base and Wine Australia will work towards greater collaboration with this network. Individual advisers may also be deliverers of funded extension and adoption activities, depending on the client base and specific expertise, especially through the Regional Program.



Wine Australia

All staff within Wine Australia's research and development team play a role in mobilising the extension and adoption strategy.

Meet the team: Research, development and adoption

Research, development and adoption (RDA) General Manager Dr Liz Waters leads a team that ensures the Australian grape and wine sector prospers through trusted and accessible research, insights and solutions.

liz.waters@wineaustralia.com

We facilitate sector-led, national prioritisation of research and extension for the grape and wine sector. We fund and manage research and development, and facilitate the dissemination, adoption and commercialisation of the results.

Dr Paul Smith

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- Wine science
- Winemaking
- Ag Tech

Alex Sas

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- Viticulture
- Sustainability
- Smoke exposure

Jo Hargreaves

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- People development
- Education and careers
- Extension and adoption strategy

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- Climate adaptation
- Grapevine biosecurity
- Pests and diseases

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- National Regional Program co-ordinator
- Extension activities
- People development

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AgTech Program Manager
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- AgTech research and initiatives
- AgTech adoption and commercialisation
- Regional program demonstration farms

Coordinator National Xylella Preparedness Program

Craig Elliott

Coordinator National Xylella Preparedness Program (shared with Hort Innovation)
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- Plant biosecurity
- Xylella preparedness
- Emergency preparedness and management

RDA Administrator

Deb Felton

RDA Administrator
research@wineaustralia.com

- Clarity Investment Management System (CIMS)
- Reports, funding and finance
- Admin support for RDA team

Team contacts for regional program and bilateral research partners

- **Paul Smith**
Bilaterals – University of Adelaide, AWRI, NWGIC
Regions: Limestone Coast, SA North
- **Alex Sas**
Bilaterals – CSIRO, NWGIC
Regions: Riverland, Murray Valley, Riverina
- **Sharon Harvey**
Bilateral – SARDI
Regions: Tasmania, SA Central
- **Belinda Bramley**
Regions: Greater NSW & ACT, Greater Victoria and Western Australia
- **Jo Hargreaves**
Region: Queensland
- **Dave Gerner**
AgTech demonstration sites

Appendix 2: Best practice design features of extension and adoption delivery formats

The purpose of this appendix is to highlight the best practice design features of a range of extension programs.

A number of examples are provided that bring the design features to life, but this is not an exhaustive list.

Activity type	Description	Best practice design features	Examples
<p>Information, with a focus on ‘single-source-of-truth’ and updates</p> <p>Levels of end-user engagement: inform and consult</p>	<p>Individuals and groups can access a broad range of information from a distance at a time that suits them.</p> <p>It can be based on a website, information centre or other centralised locations.</p>	<ul style="list-style-type: none"> the information needs to be current, continually promoted, updated and alerts issued for new information the basis of finding information needs to be intuitive rather than classical ‘library’ based specific information links or access points need to be circulated at timely intervals some form of ‘human’ facilitation adds value scanning for new information and links/linkages with other information initiatives is necessary linking innovations to information on risks and economics improves the value of the information case studies / videos of other producers making changes and providing practical ‘tips’ are powerful ‘virtual extension’ instead of traditional extension activities, such as ‘immersive ag’ 	<ul style="list-style-type: none"> Wine Australia, AWRI and ASVO websites AWRI library eutypa dieback videos, regional examples and case studies on managing dieback and increasing yield GrapeAssess app updated regularly and includes information on bushfire affected vines Rootstock Selector Tool Cover crop finder Best Management Practice Guide Grapevine trunk diseases one source of truth that is updated annually (refer to Case Study 1).
<p>Facilitated groups i.e. peer-to-peer learning/ communities of practice and other facilitated groups</p> <p>Levels of end-user engagement: consult, involve, collaborate and empower</p>	<p>Facilitated groups ‘increase their own capacity in planning and decision-making and in seeking their own education and training needs based on their situation’.</p> <p>This may include inviting in experts, undertaking research or holding training workshops.</p>	<ul style="list-style-type: none"> self-formed groups are best – by invitation or application rather than open groups should have guidelines and boundaries and then be allowed to find and select their own facilitator groups should follow a planning, action and review cycle provide support and training for facilitators provide opportunities for groups and representatives to meet and interact with other groups encourage groups to become self-funding after an interval 	<ul style="list-style-type: none"> Wine Australia Regional Program demonstration vineyards i.e. Barossa Demonstration vineyards (refer to Case Study 2) pruning workshops Simonit & Sirch method.

Activity type	Description	Best practice design features	Examples
<p>Adoption and practice change programs i.e. community-based social marketing</p> <p>Levels of end-user engagement: consult, involve, collaborate and empower</p>	<p>It is recognised that simply relying on ‘information delivery’ to achieve adoption of new practices or technologies will not be as effective as using techniques that identify and address the barriers to end-users adopting the changes or encourage motivating factors.</p> <p>Using a mix of social marketing tools to develop norms within the end-user community and enhancing motivation and providing reminders as well as making it easier to adopt new practices and technologies has been shown to be more effective in achieving extension outcomes.</p>	<ul style="list-style-type: none"> desired behaviours (e.g. adoption of new viticulture practice, undertaking biosecurity measures) are identified on the basis of potential impact or benefit, current level of adoption, likelihood of adoption and the applicability to end-users or others barriers to adoption are identified within the end-user audience as well as the potential benefits and motivations to change a pilot intervention strategy using multiple tools is delivered to test effectiveness and then evaluated and reviewed before roll-out to a wider end-user audience 	<ul style="list-style-type: none"> behaviour change projects in biosecurity and sustainability (under development).
<p>Training, education and capability building programs</p> <p>Levels of end-user engagement: collaborate and empower</p>	<p>Specifically designed training programs and workshops are delivered to targeted groups of landholders, community members, government personnel and others to increase understanding or skills in defined areas. These can be delivered in a variety of modes and learning approaches.</p>	<ul style="list-style-type: none"> learning events must be based on researched and expressed sector needs incorporate latest research on the topic include local examples allow participants to share their own experience and knowledge use adult and experiential learning methods, and cater for different learning styles change the focus to align with the needs of different geographical areas pilot test the events with a range of participants use a tried and tested total quality management system link outcomes with competency standards from the Vocational Education and Training (VET) system from outset provide for mentoring, particularly of small enterprises, after or between events use interactive and small group work to balance ‘lectures’ allow for participants to develop their ‘next steps’ by the end of the event 	<ul style="list-style-type: none"> Wine Australia’s ‘Growing Wine Tourism’ capability building program Wine Australia’s ‘Growing Wine Exports’ capability building program (refer to Case Study 3).
<p>Consultants and mentors</p> <p>Levels of end-user engagement: inform, consult, involve and collaborate</p>	<p>A mentor or consultant works over a period of time with an individual or community to improve their managerial, technological, social or environmental situation.</p>	<ul style="list-style-type: none"> consultants and mentors should encourage individuals to understand and make their own decisions based on their understanding of the facts and their own unique situation – rather than providing ready-made answers 	<ul style="list-style-type: none"> viticultural consultants and agronomists AWRI helpdesk

Activity type	Description	Best practice design features	Examples
<p>Research and development – where an adoption pathway is part of the R&D itself, could be a focus on a technological development (also refer to Appendix 3)</p> <p>Levels of end-user engagement: consult, involve and collaborate</p>	<p>Individuals work together to develop specific technologies, management practices or decision support systems that will then be available to the rest of the sector. This often involves local trials, demonstrations, field days and on-site visits.</p>	<ul style="list-style-type: none"> • look to establishing strong industry-funder-government partnerships, where they are applicable • include a strong on-farm / in-community practice component to ground and test technology or practice change or both • take the broader ‘target’ community along with you through use of mass media and other communication channels • include local or regional committees to overview direction and developments • use incentives and awards to encourage interest in developments • link in to applied research and tie in with relevant legislation 	<ul style="list-style-type: none"> • AWRI Viticare manuals • spray application workshops • irrigation workshops • Brettanomyces – solving a wine spoilage problem (refer to Case Study 4) • VitiVisor project led by the University of Adelaide, the project is a collaboration between the university, Riverland Wine and Wine Australia, with support from UniSA and PIRSA.

Case studies referred to are detailed in the *Strategic review of extension and adoption in the wine sector: Final report* by Forest Hill Consulting.

1. Managing grapevine trunk disease – Pyramids Road Wines and SARDI
2. Barossa Demonstration Vineyards
3. Growing wine exports
4. Brettanomyces – solving a wine spoilage problem

Information in this table is adapted from:

- Coutts J&R (2017), Review report: Practice change, education and extension in Reef Catchments Project
- Cooperative Venture for Capacity Building (CVCB) (2004), What works and why in extension (fact sheet 1) and Best practice in extension (fact sheet 2)

Other useful resources:

- [Remote extension tips and tools](#) developed by the Hort Innovation Extension team.

Appendix 3: Adoption pathway checklist

The following is intended as a preliminary checklist to be applied when innovations such as R&D outputs are considered for extension and adoption projects. It is likely to be built upon and otherwise modified over time with experience of its use. The checklist has been developed from a number of sources. For background see the *Strategic review of extension and adoption in the wine sector: Final report*, Forest Hill Consulting 2020.

1. Outcome sought

- What would represent the best outcome for the sector?
- Is it something all grapegrowers or winemakers would benefit from adopting, or a certain segment (e.g. defined by climate, region, variety, size of business etc.)?
- What does the investor (Wine Australia and/or partners) seek from their investment in an adoption program?

2. Characteristics of the innovation

- Is it readily adapted into existing systems, for example, the use of a better strain of yeast in winemaking, or adoption of a new app?
- Or is it more complex and requiring of a significant re-think of the existing system, and even the development of new skills?
- Or something in between?

3. Characteristics of the target audience for the innovation

- Do we understand how potential adopters learn about new ways of doing things, what communication vehicles they access, other people they might emulate or listen to, such as peers or consultants?
- What is most effective for them? What is the 'competition' for the innovation among this audience – existing beliefs, influencers advocating alternative approaches?
- Is there value in market research to better understand these things? Would segmentation / targeting / positioning assist the adoption effort?

4. Benefit/cost proposition for adopters

- Based on the answers to 1, 2 and 3, what do adopters potentially gain or lose?
- Benefits may be related to sustainability, self-perception, convenience, expansion of marketing opportunities or other considerations, not just short-term profitability.
- Costs may be financial, but they might also be emotional or psychological, for example letting go of long-held beliefs or doing things differently to others.
- What's the benefit-cost ratio for other potential participants such as consultants?

5. Environmental factors

- What factors in the external environment might facilitate or block adoption of the innovation – such as market or seasonal conditions?
- How can we take advantage of facilitators or minimise the effect of blockers?

6. Design of adoption program

- Based on all of the above, what change management model makes the most sense?
- Does the model require only awareness activities such as publications, seminars or webinars (for simple innovations with high benefit-cost ratio), or is a more complex model of behavioural change needed?
- Can we go direct to the audience or do we need to work through intermediaries such as input suppliers or consultants?
- What might the program look like in terms of the 4 'Ps' of marketing – product, price, promotion, place? Have we applied best practice design principles to each of our activities?

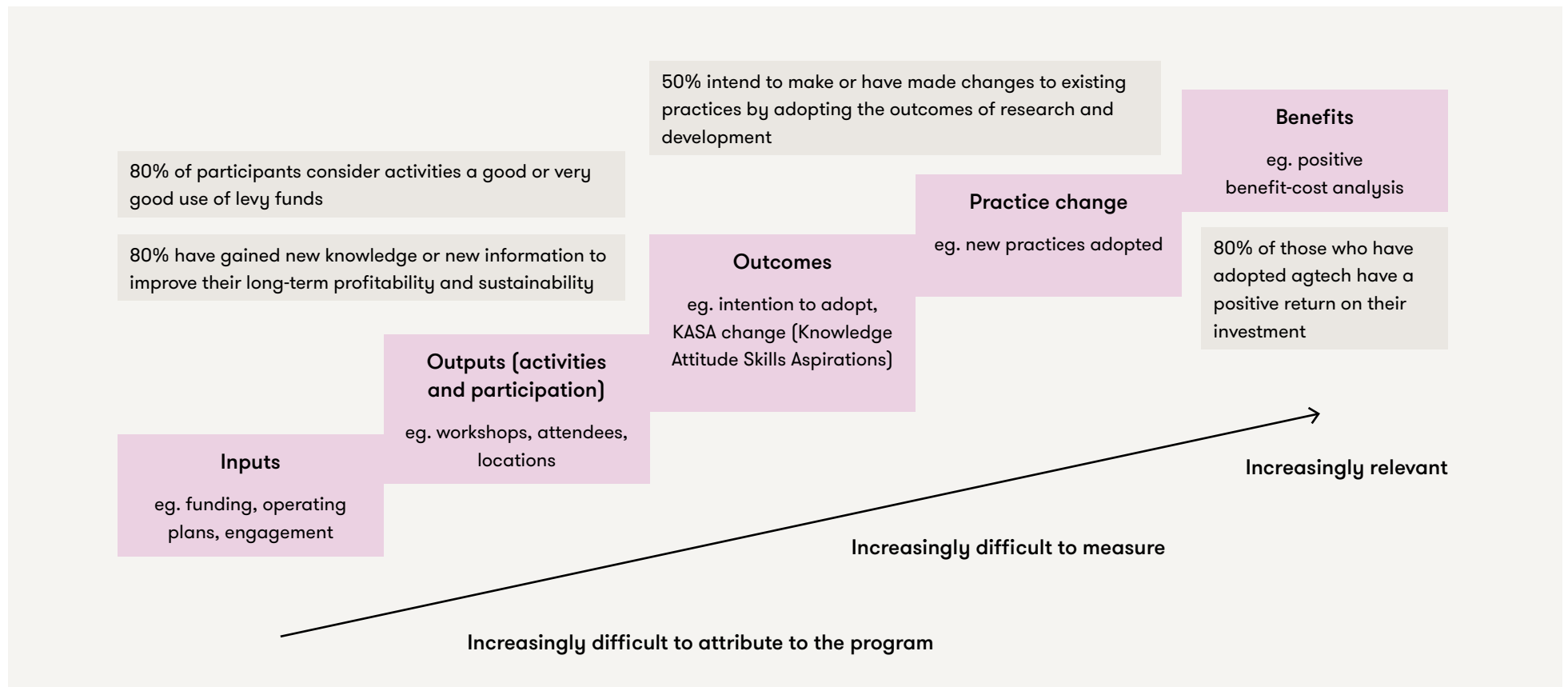
7. Monitoring, evaluation, reporting and adjustment (MERA)

- Given all of the above, consider this against an evaluation framework such as [Bennett's Hierarchy](#), see diagram below.
- What performance measures should we set, how will we collect data to monitor them and what are the targets for these measures (e.g. number of adopters, number trialling the innovation, changes in attitudes or beliefs)?
- How will we use the monitoring data to adjust the program as we proceed?

8. Oversight

- Do we have the right oversight model in place for the program?
- Does it include members of the target audience, the creators of the innovation, the investors and other stakeholders?

Bennett's Hierarchy, example adapted for Wine Australia purposes





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Wine Australia supports a competitive wine sector by investing in research, development and adoption (RD&A), growing domestic and international markets, protecting the reputation of Australian wine and administering the Export and Regional Wine Support Package.

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