

Final Report

National Innovation Coach/ Hort 360

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Project code:

VG16063

Project:

National Innovation Coach/ Hort 360 – VG16063

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Funding statement:

This project has been funded by Hort Innovation, using the vegetable research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Publishing details:

ISBN 978 0 7341 4477 5

Published and distributed by: Hort Innovation

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www.horticulture.com.au

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Summary

The Innovation Coach Research project set out to test if this unique process could improve farm gate returns to vegetable growers. The project now has the capacity to become a significant new service in the industry as an AgTech extension role, able to translate many of the technology and business growth solutions within the farm business context.

To achieve this, the coach must first understand the grower's long term vision for their enterprise. Then through a change management process take the grower and team on a sequenced strategic planning, identification of risk, improved business planning & practices, workforce planning and technological journey. Finally, coach mentors the enterprise through the adoption and implementation of the agreed plan in an ever-changing industry

Coach is a unique program that also assists industry to communicate and prepare the growers for the big picture opportunities and challenges that lay ahead. The first major challenge is to convince growers they don't just grow produce they are smart, small to medium business owners working in a very complex value chain. The second stakeholder group was the matching of regional service agencies to provide the many free or co-contribution programs delivered by a range of agencies and specialists.

To deliver the key activities, farm visits and building trust with the growers was a key success factor. As the growers start to open up and express their vision and also "pain points" coach was able to tap into and the available experts, via the established network and provide individual solutions to the enterprise.

Traditionally horticulture has had a narrow focus of funding support from Department of Agriculture, Dept of Environment sustainability, Hort Innovation and for-profit suppliers to provide new product and service advice. During the delivery phase of the project it became evident growers valued the coach independent advice and the new sources of research & government service provider and truly reflect the complex value chain.

While the 12 month period proved too short for full grower engagement. The project did receive outstanding support from all sectors. A major achievement was building linkages and networks amongst service providers in each region and improved understand of operational eligibility criteria. This connection also assisted regional service providers and Governments, better appreciation the business opportunities and challenges faced by vegetable growers and Horticulture in general.

In hindsight, it is clear that a 12-month timeframe to implement a robust pilot process with 16 clients was too ambitious. The main reasons the project was unable to meet some of its grower milestones are timing of the on farm process must be matched to the seasonal schedule of the business during a relatively quiet time in their season when growers have more time to invest in reflection and strategic thinking.

As coach is now interacting within the vegetable supply chain. There is a noticeable shift in Government attitude to horticulture and Agriculture in general. Agriculture is a cornerstone growth industry for Federal Government and State Govt QLD, with sponsors beginning to understand growers are not just primary producers anymore but work in a very complex supply chain that if supported can deliver economic & jobs growth.

Horticulture is facing significant changes and grower must be given every opportunity to adjust and expand with the industry. The lines between growing and food are becoming blurred. Successful horticulture business such as Mulgowie, Rugby Farms and Qualipak are moving further up the value chain and this is a desired trend within the Coach grower-base. While some businesses may continue to make sufficient returns simply growing fresh produce and sending it to market (or supplying larger grower-packers), for those who want to build their influence in the market and engage differently in

established and emerging supply chains and markets, a new business model will be essential, and its underpinning technology must change. Innovation Coach helps farm businesses with this transition.

Keywords

Innovation; extension model; farm business; entrepreneurship; technology; investment; vegetable supply chain; Hort360; business planning

Introduction

The concept and design of the Innovation Coach program evolved over 2015-2016, in response to a number of critical industry challenges:

- The business of vegetable (and other horticultural) production and marketing is in a period of rapid change and is becoming increasingly complex. A myriad of new technologies and supply chain opportunities are opening up - but many growers remain in a mentality of commodity production.
- Growers face significant workforce challenges related to security of access to labour with appropriate skills and commitment. It is common amongst growers to simply accept as a given the 'churn' of workers. Some workforce challenges in the vegetable industry could be resolved through investment in mechanization, automation, robotics or sensing technologies; others through seeking to more strongly influence the systems that underpin training and workforce development.
- There is a risk (and evidence) that some growers select and implement a technology solution without sufficient knowledge of the available options and without sufficient consideration of the whole-of-business implications of their decision.
- Growers seek advice on appropriate technology solutions from people with a vested interest in sales. There is a critical need within the horticulture industry for independent advisors to assist growers to make good/effective decisions around selection and implementation of technology solutions.
- Over recent years, state and federal governments have established a significant number of programs offering small-to-medium sized businesses access to expertise, grants and co-investment opportunities to improve and grow their enterprise. Businesses in the horticulture sector, however, have tended to remain narrowly focused on traditional sources of R&D investment. Due to the pace and demands of the vegetable production business, few growers have the time to research new assistance programs or their eligibility criteria. As a consequence, the wider set of programs are untapped by the vegetable production sector.

Growcom seized the opportunity to address these issues through the creation of an Innovation Coach program, which was launch at the 2016 National Horticulture Convention, HortConnections, as a commercial grower service.

The program aimed to help businesses implement a robust planning process to assess their risks and opportunities, establish clear business objectives and vision, and work through options to pursue innovation and growth.

The Innovation Coach process has three main objectives

1. Provide necessary training and assistance to enable horticulture growers to pursue industry growth opportunities and improved enterprise management, to adopt best practice in growing horticulture crops, and achieve greater influence/control over the marketing, supply chain and customer requirements. Depending on the growers needs, training and advice could include finance, process mapping, marketing, supply chain, risk analysis, food safety, research and development, sustainable natural resource management, export, digital marketing, or other options as required.
2. Assist horticulture growers to tap into new sources of support and investment.
3. Assist growers to navigate through the vast array of new technologies and then implement innovative solutions to their high production and packing costs and labour supply problems, underpinned by a robust planning framework.

Following its launch in 2016, the Innovation Coach program gained around 40 expressions of interest from horticulture businesses across Queensland. These were largely from family farm enterprises in the \$1-3 million revenue bracket. An initial barrier to take up, however, was the required up-front investment in an untested process.

In 2017, Hort Innovation saw merit in investing in Innovation Coach to test its capacity to facilitate greater engagement in innovation amongst vegetable industry members. The investment aimed to consider

- Could the program offer an effective new national extension model in collaboration with other horticulture organizations throughout Australia?
- Could the program provide a more effective mechanism for the translation of R&D outcomes, new technologies and business improvements into measurable on-ground outcomes?

Under this project, the Coach program has been offered free of charge to levy paying vegetable growers in Queensland to enable to process to be tested and evaluated. Through the project, six vegetable farm businesses have been engaged and achieved significant benefits, even from progressing through just the first two to three stages the Innovation Coach process. The project has also delivered valuable outcomes beyond the business scale.

The work conducted through this project has enabled the Innovation Coach model to further evolve. It has become apparent that the program has the capacity to become a significant new service in the industry as an AgTech extension role, able to translate many of the technology solutions to the farm business context. It has also powerfully demonstrated the value that can be harness from building connections between the horticulture industry and the wider R&D landscape.

Methodology

The project methodology was to:

- Facilitate the Innovation Coach program with vegetable growing/packing businesses in Queensland to test and evaluate the model as a structured training, mentoring and extension service designed to assist growers realize their potential in the context of an industry experiencing rapid change.
 - A target of 16 businesses to be selected from the Innovation Coach interest register, with an aim of including a diverse range of commodities and farm sizes across the four key vegetable production regions of the Lockyer Valley, Bundaberg, Bowen/Burdekin and Far North Queensland.
 - Aim to take at least four businesses through to stage four of the Innovation Coach process. The Innovation Coach process is outlined in detail in Appendix 1.
- Enhance collaborative networks amongst extension officers and service providers for the benefit of the vegetable industry in the project delivery regions. In particular, leverage the growing recognition within all levels of government of agriculture as a cornerstone economic growth industry by improving linkages between government-sponsored service providers and the Queensland vegetable industry.
- Identify and engage with relevant research and development projects and programs operating (or establishing) in the delivery regions to optimize connections with innovative farm businesses and to position the vegetable industry in the emerging innovation landscape.
- Document, monitor and evaluate the outcomes of the Innovation Coach process to identify success factors and options for refining the process.

The activities conducted under each of these areas is outlined below.

Facilitate the Innovation Coach process

Select project participants

Since its launch in May 2017, Growcom has now collected expressions of interest from 64 production horticulture businesses to participate in the Innovation Coach program. Given the short timeframe of the VG16063 project, vegetable production businesses from north and far north Queensland were approached to commence the Innovation Coach process during their low season (November to April).

The initial contact is an on-farm visit for a one-hour interview to help explain the process, begin scoping the grower's needs and interests, and to assess the business' willingness to commit the required time and energy to the process.

Eight businesses accepted the initial offer, though two of these subsequently determined that they were not ready to proceed with the process. Six businesses commenced the Innovation Coach process from November 2017.

A further six businesses in Bundaberg and the Lockyer Valley were later identified as potential participants in the project with a view to commencing the process during their low season, however, scheduling their commencement could not be arranged within the remaining timeframe of the project.

Deliver Innovation Coach Services and activities

The Innovation Coach process has three key areas of focus, with key services and activities linked to each:

- Provide trusted and independent advice.
A critical distinction of this process is that Coach has nothing to sell to a grower. The Innovation Coach process offers a truly independent perspective and advice; facilitates an introduction for farm businesses to a range of services and expertise; and opens access to substantial financial assistance from a broad range of sources. In turn, growers appreciate that industry associations are helping them.
- Improve profitability by increasing margins, reducing inputs and improving cost control.
Coach achieves this by guiding growers through a number of assessment procedures; including Growcom’s Hort360 best management practices modules, the Energy Savers program, the AusIndustry Business Evaluation process, R&D tax concessions, export plans and digital grants. A further essential foundation stone is advanced farm management software which enables growers to better track and analyse their costs of production and which crops or operations make the returns. Implementation of these software systems are a critical step for any farm business that seeks to operate more effectively further along the supply chain.
- Business continuity and sustainability.
Key tools used in the process to build business continuity and sustainability include Hort360, which enables businesses to understand (then reduce) the risks associated with their practices, and the AusIndustry business evaluation process. Insight generated through these two key tools enable Coach to support the grower to develop a plan to stay in the industry, profit from new and emerging opportunities, and access professional assistance for innovation and succession planning. The Coach process assists growers to map and record their business and apply data to improve business decisions based on a long-term strategy.

Track progress achieved with participating businesses

The Innovation Coach worked with participating vegetable businesses from November 2017 September 2018. The key Coach activities undertaken with the participating businesses are summarized in Table 1.

Activities/outcomes	Business A	Business B	Business C	Business D	Business E	Business F
Complete key Hort360 modules	*	*	*	*	*	*
Implementation of Hort360 recommendations	*			*		
Energy Savers program (QFF) <ul style="list-style-type: none"> Energy use audit and identification of efficiency opportunities Application for \$20,000 matched funds to implement recommendations 	*			*		
R&D plan for ATO tax concession claim	*	*				
Complete business evaluation (AusIndustry)	*	*		*	*	
Implement Apunga farm management system software	*	*	*			
AusIndustry Business Growth plan		*			*	
Application for Qld Government digital grants program (\$10,000)		*	*	*		*
Commence development of Export Plan (HIA/Growcom)		*	*			

Table 1 Innovation Coach Activities undertaken by vegetable businesses.

Further to the above table and to illustrate business diversity and activities with the Innovation Coach process:

Business A

- Implementing Hort360 Workplace Health and Safety recommendations
- Commenced project to scope options to value-add pumpkin waste, supported by FIAL & Advance Queensland.
- Commenced preparation of farm succession plan, supported by QRIDA

Business B

- Process mapping and improved pumpkin sorting
- Scoping options to improve marketing arrangements, including review of the Horticulture Code.
- Following implementation of Aping farm management system, commenced design of system approach to future business.

Business C

- Preliminary consideration of Export Marketing Development Grant claim to ATO.
- Investigation of on-farm food waste project via modular units freeze dry to powder.
- Commenced review of workforce development needs

Business D

- Investigation of value-adding for farm waste via relish product, including food safety review and marketing.

Business E

Commenced Hort 360 modules

Commencing farm mapping through Horticulture Great Barrier Reef extension project

Evaluating option of implementing Apunga (or similar) farm data management software

Business F

- Commenced Coach Program, however, had an immediate need to upgrade packing facility to meet quality and contract obligations. Ceased participation to focus on this, but intends to re-engage in Coach Process at appropriate time.

Next Steps

The businesses that are the most advanced in the process will now moving into the Business Growth phase three. This phase provides an opportunity to choose from a range of services outlined in attachment.

From stage three onwards is where the Innovation Coach program really begins to add value to the farm business as from this point; the business has a clear plan for growth and implementation of innovation opportunities.

This provides the opportunity to link the businesses with the hundreds of available grants programs and provide assistance to navigate the eligibility criteria – saving growers the frustration of making applications that are deemed ineligible. During at this stage, coach shows the growers how to search the vast stock of research and information that is available from Hort Innovation, AUSVEG and other industry sources.

Outputs

The Innovation Coach process has produced a number of observations, reports and assessments for each of the participating vegetable production businesses. The key outputs generated through the project for participants are outlined below.

- **Hort 360 Risk Assessment and Recommendations**
Through a one-on-one facilitated process, the grower works through each Hort360 module. At the completion of each module, the grower receives a report summarizing their responses, the risks associated with any practices they have identified that are below industry recommended standards, a comparison of their performance against the industry standard for each practice, and recommendations for matters that should be addressed in the business to manage identified risks and meet recommended practice standards. For each practice identified as below the industry standard, growers are advised on what necessary actions are required to reach the right level. (Appendix 2)
- **Business Evaluation**
During the Business Evaluation phase, independent advisers provided through AusIndustry work with growers to assess the current business, research their operating environment, and create a plan of action and implementation phase. This AusIndustry process provides growers access to the wealth of information, networks and resources at their disposal. A Sample of the output can be found in Appendix 3.
- **Business Growth Plans**
once the business evaluation is completed, growers have the option to seek co-funding from AusIndustry of up to \$20,000 to engage with wide range of service providers matched to their business needs. Refer to Appendix 4 for range of options Appendix 4
- **Energy Use Audit**
Energy is a major cost for most horticulture businesses. The Queensland Government supports an Energy Savers program, with delivery in the agriculture sector managed by the Queensland Farmers Federation (QFF). Growers who apply to participate in the program are offered a comprehensive on farm audit taking in energy consumption tariffs and demand curves. The grower receives a report with a list of recommendations and estimated payback time on implementation costs. Following completion of their energy use audit, farm businesses have the opportunity to apply for up to \$20,000 co-contribution to implement cost saving improvements to infrastructure and operational equipment.
- **R&D Incentives applications**
Many growers are implementing genuine research and development projects within their enterprises, however, very few know of the Department of Innovation and Science R&D tax Incentives. The program requires growers to register their R&D challenge with AusIndustry and if their application is successful, the business is issued a registration number. If the business invests over \$20,000 over a financial year, a 43% tax deduction may be claimed for those research costs.
- **Digital grants program applications**
this is a co-contribution fund that encourages growers to apply for up to \$10,000 to seek training advice, purchase software and hardware to help expand into the digital economy.
- **Workforce plan**
As the 5-10 year vision becomes clearer, the grower understands the need to adopt new

technology an up skilling a workforce will also needed. By engaging with regional Queensland Agricultural workforce officer, (QAWN) a free service, the grower is able to identify future workforce needs, skills set and employee number. The QAWN officer works with the individual grower to provides a gap analysis to advise training up skilling programs and recruitment strategies. Refer Appendix 5

- Export Plan
Coach refers growers to the Export Facilitator who can assist with an export readiness assessment, then a referral to a consultant who assists them to develop a detailed Export Plan.

Technology transfer

Ensure growers are aware of many of the labour saving system, and equipment that will allow them improved productivity and a reduction of unskilled labour.

Other outputs generated for participating businesses include:

- Application drafted for a micro grant from Advance Queensland for a food waste project.
- Assist prepare for pack shed upgrades under the (\$250,000) Rural Economic Development Grants through Queensland Rural and industry Development Authority (QRIDA)

The project planned to produce case studies. Case studies will be more compelling and provide clearer evidence of benefit of IC process as the project enters into stage 4/5. Therefore Growcom will prepare case studies in 2019 as participating business work their way through the remainder of the process Completed case studies will provide the basis for industry magazine articles (FVN and VA)

Engage in, and contribute to, regional-scale initiatives that support farm business innovation

Technology will not be optimally utilized in the vegetable industry unless efforts are concurrently made to up skill the workforce to operate and maintain the systems that are implemented. Through this project, the Innovation Coach liaised with key stakeholders to progress and provide advice to two important workforce development initiatives:

- Aligned innovation/technology to workforce development a FNQ/TAFE project. The Queensland Government's Training in Emerging and Innovation Industries fund (TEII Fund) TEII project will act as a conduit to improve collaboration and knowledge between the agriculture sector and the education & training sector to better deliver the new on farm digital skills and workforce requirements. A key component is to boost on Farm Business Management Skill Set across the entire agriculture sector. TAFE NQ will deliver a two day short course and this is being widely promoted to regional vegetable growers as a pre-cursor to support growers to full coach program.
 - Develop and review a business plan
 - Monitor and review business performance/ budgeting.
 - Develop and implement business structures and relationships
- Manage Risk
- Development of targeted qualifications focused on 'Pathways to technology'. Tech NQ Townsville now has an approved training course to attract Ag Tech student who will graduate with ready to work skills certificate 2 in Electro technology and Cert 4 in Integrated Technologies. They are the only school in Australia to be accredited Appendix 6 P-TECH brochures

Build stronger linkages between vegetable growers and extension/service providers

Horticulture is complex industry and extension services need to evolve to match the knowledge and skills development needs of vegetable producers. This project has enabled the Innovation Coach to cultivate improved relationships with a broad range of extension and service providers who work with, or could work with, Queensland vegetable growers. Key linkages enhanced through the project include:

- A significant investment in relationship-building with key AusIndustry service providers, with a particular focus on improving their awareness and understanding of the specific issues faced by horticulture business owners. This helped improve the relevance and quality of outcomes achieved through AusIndustry-facilitated assessments with participating businesses.
- Assistance in designing and delivering a workshop for extension officers, service providers and industry partners in north Queensland held in December 2018 to improve collaboration and cross promotion of services and support available to farm businesses in the region.
- Establishment of a core team of collaborators across the VegNet network, industry development and support officers and Growcom staff, which led to enhanced opportunities to secure funds for new projects. Project collaborators are identified and acknowledged in the acknowledgements section.

Industry Development

The project has also contributed to the generation of other significant outputs related to activities that link business-level needs with wider innovation building efforts by regional stakeholders. The Innovation Coach has played a significant role contributing to the development of two key funding applications that offer direct benefits to innovation opportunities at the farm business level:

Advanced Manufacturing

Coach liaised and encouraged with key stakeholders in Queensland Government to have AgTech and food manufacturing included in the Advanced Manufacturing centers based in Cairns, Townsville and Rockhampton. Each centre will have \$10 M each over three years to invest into advanced manufacturing knowledge and skills in the regions and will be hosted within in the TAFE system.

National Food Waste Strategy HIA/CSIRO VG15076

Many growers wish to learn more about and engage with on farm food waste or oversupply and boost farm gate returns. Growcom on behalf of industry is confident of receiving funding from Queensland Government's Advance Manufacturing department for a feasibility, ownership model and business case for a state of art waste transformation facility based on CSIRO technology in North Queensland.

The facility would apply CSIRO-developed technology to convert either surplus or purpose-grown produce into food ingredients as well as vitamin/nutritional supplements, opening whole new markets for vegetable commodities. The proposed 30 million dollar facility will process 22,000 tonnes of oversupply vegetables produce. Transforming the raw product into 2,200 tonnes of powder and liquids for value add food ingredients and nutraceuticals. Employment will be in the order of 50 high tech jobs and millions of dollars flowing back to growers.

CRC for Developing Northern Australia

At a regional development level coach has also been instrumental at endorsing and reviewing outcomes and implementation opportunities in the vegetable industry from four CRC Northern Australia projects;

- Smart Crate (traceable logistics)
- Export potential of perishable products (CQU research)

- North Queensland Horticulture expansion study (Townsville Enterprise)
- Hells Gate Dam. Potential for a new 50,000 Horticulture area west of Townsville.

Outcomes

The following interim outcomes can be highlighted, and lessons learnt reported against the M&E plan

Achievements

- Project outcomes
 - 6 businesses engaged in IC and progressing through the process
 - Growing interest in IC amongst other businesses across north and also Bundaberg and Lockyer Valley
 - Expansion and evolution of ‘Coach’ role – Coach now firmly embedded in regional development agenda of NQ and the national innovation landscape/broad range of government and research innovation investment initiatives and programs
 - Progress towards a customised process mapping methodology for horticulture
- Outcomes achieved within the participating businesses / coach clients
 - Business vision developed and articulated in 4-6 businesses
 - Supported shift in thinking and culture (beyond production thinking to SME and food industry/value chain thinking)
 - Secured to support detailed planning/assessment, research and development at business scale
 - Three businesses at stage 3 of IC
 - Significant improvement in data management and analytical capability following implementation of farm management software
 - Greater uptake of mapping to support precision Ag in field and process improvement in packing shed
 - Increased focus on value adding and waste reduction
- Wider industry/regional outcomes
 - Greater regional effort/investment in vegetable industry workforce development and training opportunities (esp in tech-based jobs in hort)
 - Regional scale waste/value add opportunities through scoping of advanced manufacturing options
 - Mapping of available funds/investment opportunities in CRCs, FIAL etc

A) Optimise adoption of new/better ways of doing business

Before we can improve the business, we need to understand the business.

To achieve this outcome, growers need to first understand their current business, challenges, and future business directions. Growers then need to make the connection they operate sophisticated small business operating in a very tight margin industry. Undertaking Hort 360 industry risk and AusIndustry Business Evaluation plan confirmed this improved enterprise understanding Sample outputs are in Attachment

One strong theme is that progressive vegetable growers show interest in value adding opportunities, either on farm or within value chain. Most are driven by profit (controlling inputs) and environment sustainability. Coach has been able to broaden the sustainability issues to include business continuity.

In a sad indictment to the industry only a few growers knew their cost of production. The mantra “can’t improve if you don’t measure” rings very true in this case. Current tracking cost of production ranged from I think we are making money, to quarterly accounts or just waiting for the accountants P&L at EOFY.

B) Program logic

Based on Milestone 102 the intent was to sample a range of vegetable growers with different commodities, farm sizes, in the 4 main geographical regions Lockyer, Bundaberg, Bowen and Burdekin and possibly Far North Queensland. This section has been reported throughout the document.

C) Project Risk Identification

The project manager confirms no change to risks registrar during the project

D) Improved alignment of HIA and external R&D .

This was a pivotal learning in the project. If we acknowledge the full value and complexity of the horticulture supply chain. There are literally 100’s of grants, co-funding, events and industry experts that can help the grower and greatly leverage Horticulture Innovations investment in the industry.

E) Adopt appropriate technology suited to vegetable industry

Once growers have a vision, long-term plan and understanding what business they are in. This helps inform future technology, sequencing and the capital planning that is required.

AgTech, may be a solution to many growers’ problems but before we get to this stage the growers must articulate what part of the vegetable supply chain they are in or would like to be in for better alignment of technology solutions.

Before the enterprise invests in technology, it is essential to get growers to understand they are moving from a variable cost structure driven by unskilled Pick and Pack labour. Into a longer term and expensive investment in equipment and machinery that will reduce their labour costs. This becomes a different management model for the grower, from the current people management to asset management and requires a highly skilled permanent workforce.

Growers have been explained the benefits of the Internet of Things IoT and Industry 4.0 next industrial revolution.

Many growers have legacy software systems that are unable to export import to save time and double entry this is a major pain point for all growers AusIndustry now provide a digital canvas as part of their Business Evaluation offering. Appendix 7 sample of digital canvas.

Implementing Farm Management software and digital farm maps help build data management and recall. The foundation systems improve farm planning, precision agriculture, production management and inform future capital investment.

F) Expand production management Knowledge through lean manufacturing knowledge

Process mapping – understanding production management and how to reduce waste in the supply chain cycle is add profit and business continuity to any business.

An ongoing observation is poor understanding production concepts is a major issue within out Production horticulture. AusIndustry can sponsor a free process mapping learning event specific to the vegetable industry Horticulture. The EP Learning events are free for charge for large farms or regions, and the training session is normally held over 4 hours.

Training in lean production and waste identification concept to growers. As these EP events are being developed growers are shown a power point presentation outlining some of the concepts and how they can improve the farm system was designed to demonstrated process flow appendix Dec Mech

G) New workforce development

Grower interviews confirmed they are most concerned about their workforce. The industry relies heavily on unskilled pick and pack labour that may be 50% of the enterprises cost. Coach has been provided a useful insight into grower’s attitudes and systems in this area of business. With little emphasis on employment and workforce development the churn effect of their pick and pack labour is costing them dearly. The industry in general seems reluctant to value and hold casual permanent staff. However, just a small improvement in training and career plan could pay grower and industry dividends.

Traditionally Horticultural as relied on the Ag Sciences and growing system. The rapidly emergence in AgTech offers horticulture a range of solutions but new skills sets also need to be developed. The IT revolution is already transforming the modern agriculture economy. Technology will drive horticulture into a high-tech, data driven industry with improved decision making, improved yields, and adding value to business and satisfying global needs

Growers and the industry are ill prepared for the digital future_and IC is assisted with training models

Growcom is working with QFF and Australian Industry Group to **up skill** the existing workforce through the adoption in Queensland of Victoria’s Educations Diploma of Integrated Technologies and_ongoing TAFE discussion

Training systems are now in place for New **Entrants** via and Pathways to Technology (P-Tech). Tech NQ based in Townsville is an approved training provider to deliver Ag Tech student with ready to work skills by year 12 in certificate 2 in Electro technology and Cert 4 in Integrated Technologies. Growcom is industry partner with Tech NQ is the only school in Australia to be accredited. This education pilot could be rolled out into horticulture regions.

Monitoring and evaluation

1. Effectiveness To what extent has the project achieved its expected outcomes?

Seven months into the 12 month research project Growcom informed HIA that the project would need more time for the outcomes to be known and 12 months was too ambitious to achieve the intended outcomes. Two years or seasons would be required as a minimum.

To be effective commencement of the Innovation Coach process must be matched to the seasonal schedule of the business. For most potential clients, this must be during a relatively quiet time in their season when they have more time to invest in reflection and strategic thinking.

The first stage of the process requires farm business owners to develop a vision for the next 5-10 years in their business. The pilot project found that this can take up to six to eight months to work through. This vision is an essential foundation for the process and must be completed prior to commencing the second stage.

As farm businesses progress through stages 2 and 3 of the Innovation Coach process, there have been challenges in coordinating the grower's availability with appointment times for external consultants and advisors sourced from AusIndustry and other programs.

2. How relevant was the project to the needs of intended beneficiaries?

When designing the project, the expected outcomes were initially weighted to the growers and the industry in general.

Coach was able to engage with a wider R&D system/emerging to facilitate innovation uptake. As the project progressed, clearer insights emerged regarding growers' business visions and aspirations, and also key 'pain points' experienced within vegetable growing enterprises. Through their involvement in the Innovation Coach process, growers increasingly recognized that they cannot continue to simply grow things; that they were small-to-medium enterprises with the opportunity to engage in agri-food industries, advanced manufacturing and expanding export markets. This has reinforced the need to better position vegetable businesses and the horticulture industry as a whole to engage in, and benefit from, a wider pool of R&D agencies and programs.

This unexpected bonus was the engagement and benefit to industry and government agencies and the understanding of the vast programs available to the industry. Over the project period, Coach identified and established links with a diverse range of organizations and programs that leverage direct investment towards supporting innovation in the vegetable industry.

3. How well have intended beneficiaries been engaged in the project?

The industry & growers in the program have been fully engaged and provide valuable feedback

Vastly improved linkages and networks amongst service providers in each region, and understand the available programs, their operational arrangements and eligibility criteria. This has also assisted regional service providers to better understand the business opportunities and challenges faced by vegetable growers.

In order to build linkages with these and other opportunities, Coach was invited to participate in, or presented at the following events and forums:

- February 2018 – CSIRO Transforming the Horticulture Value Chain
- March 2018 Innovation Forum in Bowen
- April 2018 Hosted Food Transformation Hub in Townsville with CSIRO (VG15076)
- May 2018 Burdekin Export forum (VG15056) did not present but promoted program
- May 2018 CSIRO Werribee Food waste Forum presented NQ extension findings. (VG15076)
- May 2018 CRC NA NQ Agriculture study Meeting A with KPMG presented Horticulture Industry.
- May 2018 – Presented Food waste as an advanced manufacturing opportunity to QLD Government.
- May 2018 – Presented food waste to Amanda Copping, Executive Director Originator Northern Australia Infrastructure facility
- June 2018 – attended Hort connection no formal presentation but large supplier promotion
- June 2018 – Presented NQ perspective at inaugural meeting CRC Fighting food waste at University of Queensland
- July 2018 – Presented to Bosch Australian President and key JCU head of schools on Agtech barriers to implementation and adoption.
- August 2018 – Presented Food waste project to Northern Australia Infrastructure facility CEO Laurie Walker
- August 2018 – Updated MP George Christensen Federal member for Dawson on food waste -
- December 2018 – Presented industry training and up skilling challenges to Director General Department of Education Small Business and Training.

4.To what extent were engagement processes appropriate to the target audience/s of the project?

The project relies on two target audiences; the grower and the industry and the support and services sector Government and non government.

At this stage the five step process seems to be appropriate at this time but needs to run the full course over 2 years to confirm any adjustments.

The process for engaging and timing external consultants could be improved at a regional level to ensure the grower and the consultant's available time is aligned.

Many of the industry support agencies at regional level now have a better understanding of the industry and are eager to support our economic growth. This will require regular contact to be maintained.

5. What efforts did the project make to improve efficiency?

Coach is all about efficiency on farm and better use of R&D in the vegetable industry. While it is too early in the coach program to confirm bottom line improvements at individual farm level. We have identified more efficiency use of funds in the support side.

It is no secret that all government and industry acknowledge that some of their projects duplicate each other and, in some cases, don't cover industry needs at all. Coach has delivered a grower path and two way communication flows for the industry to potentially access millions of industry and government funding can be better utilised and targeted and leveraged for the benefit of all stakeholders.

If we look beyond just growing produce and deeper into business and the supply chain, there are many programs the enterprise and Veg industry can become involved in and indeed following sponsors need industry involvement. The following is a sample of this potential support and approximate fund values.

Cooperative Research Centers

Cooperative Research Centers (CRCs) run for 10 years. The CRCs listed below commenced during the project period and are of strategic importance to the vegetable industry.

- ✓ CRC for fighting food waste (\$150M)
- ✓ CRC for Northern Australia (\$140M)
- ✓ CRC for Food Agility (Digital and Traceability) (\$200M)
- ✓ CRC Innovative Manufacturing (\$150M)

Federal Government

- ✓ Food Innovation Australia Limited (FIAL) (\$12M per annum)
- ✓ CSIRO Food and Agriculture & Food Innovation Centre
- ✓ AusIndustry Food and Agribusiness division
- ✓ North Australian Infrastructure Facility (\$5 B concessional loan facility)
- ✓ Regional Development Australia (\$641 M)
- ✓ Clean Energy Finance Corporation – Agriculture section (\$200M to invest over 10 years)

Queensland Government

- ✓ Made in Queensland - Grants up to \$2.5 M
- ✓ Advanced manufacturing Centres - \$10 M each to be invested in Cairns, Townsville and Rockhampton
- ✓ Advance Queensland program (\$623M)
- ✓ Queensland Alliance for Agriculture and Food Innovation (QAAFI)
- ✓ Townsville Enterprise
- ✓ Department of Training and Small Business.

Recommendations

Delivery of this project over 12 months has provided important insights regarding the Innovation Coach model.

From the lessons learned, embedded throughout this report the following recommendations can be made – the model is on the right track and there is an urgent need for it. There's certainly scope for further evolution of the model, but this project demonstrates its value and importance and potential.

Continue to invest in the Innovation Coach program to support the further development of the model through regional-scale projects in priority production regions.

- The project has provided sufficient demonstration of the value of the Innovation Coach model delivered at a regional scale.
- The IC process is not for every enterprise. It appears to be most suitable benefactor is the small family farm in the 1.5 – 5.0 million revenue range. The Grower profile is next generation have worked off farm and returned and wish to apply skills / interests back on the farm or new entrants. While coach should be open to all growers this appears to be the target market.
- We don't have enough case studies or champions to promote the IC project just yet and the project now needs across the broad support of all stakeholders' industry and government agencies.

Continue to broaden the funding base for Horticulture

Technology is available to revolutionize the production process and value chain in the horticulture sector. IC model provides a critical opportunity to support rigorous planning and selection of the right set of technology tools and the right business/governance models at the business level and to help individual farm business, collective businesses to position themselves in emerging domestic and international value chain/market opportunities.

To achieve this opportunity the emergence of significant and diverse/novel funding sources for small-medium sized businesses, business cooperatives, regions] whole new pools of funds/investment are opening up and the vegetable industry must be connected and positioned to take advantage of them. Coach builds readiness and capability for those businesses with a vision to grow and move towards emerging opportunities

The delivery of the project has also highlighted some wider / further / critical issues and opportunities:

- Horticulture has normally sought funding support from traditional sources such as Dept of Agriculture, Dept of Environment, Landcare and industry sources. Coach has identified and brokered many more sources of new support. Refer here to the table of programs/initiatives (presented in the outcomes section) and the funds available through them that industry can tap into
- Wider trends and opportunities: the emergence of war on waste and dedicated CRCs and fed/state government strategies to find solutions; the emergence of game changing technologies that open whole new opportunities for value adding to hort produce; the interest in advanced manufacturing and the interest in including Ag/hort in scope enabling a move beyond traditional food processing towards advanced food/nutritional products.
- The program plays a dual role: both as a business-scale advisor and also a regional-scale innovation broker. During this 12 month project, Coach became a central figure in the regional extension network, became integrally involved in several regional initiatives (export initiatives, infrastructure projects, major regional development) and sought to position the vegetable industry in wider/national initiatives such as FIAL, CRCs, NA Infrastructure Fund and CRC, strategic CSIRO research

Barriers to adoption

Growers are time poor

Time is huge barrier to adoption and the necessary change management. Growers need support to understand they cannot be experts at everything. The industry is becoming very complex, constantly changing and value chain that does not have grower interests at heart. For the future Growers need to build both on farm and off farm expertise, and the IC program can help with this improvement.

The competitive nature of our industry, tight margins and market expansion opportunities means grower will not share their knowledge amongst the industry (an important source of information and endorsement). This should be countered through regular themes, updates and Case studies from respected industry sources HIA, Ausveg & Growcom and various extension services to help share and validate information.

An industry culture of; working many hard and long hours must mean success right? Many growers are in self-inflicted crisis management. Growers now have the opportunity to work smarter not harder. By identifying and implement systems and sequencing technology that will, reduce their manual labour inputs, improve the business by freeing up time to spend on the enterprise not just in it. (No one makes good decision under constant and the constant season pressure).

Improve awareness of industry opportunity

Growers are overrun with information and technology, some of it valuable - most of it from vested interest and sales hype. While Horticulture might be one of Australia's most traditional industries, it's about to be transformed by technology. Digital technologies have the capacity to make production and supply chain more precise, more profitable and more sustainable, yet many growers are not prepared for this evolution,

Key industry stakeholder recognises industry has ample R&D but we lack the Extension. Sector supporters have an opportunity to help increase the levels of empathy and raise awareness of constraints and processes for growers. Specifically, sector supporters who can identify and invest to improve adoption of and implementation of better systems and technology.

Growers must be profitable to invest back into the industry and demonstrate business continuity

More effort needs to encourage Growers to understand their cost of production in real time by demonstrate to them how easy it is with modern technology. To do this we must change the language most accountants do tax returns they don't advise on productivity services or continuous improvement

- ✓ It has been a surprise to witness how much R&D is being done at farm level. The industry needs to demystify and improve acceptance and use of the ATO's R&D Tax incentives via case studies.
- ✓ Growers all need training on how to use the internet to source completed R&D projects
- ✓ Many enterprise improvement can be co-funded by 50%
- ✓ Acknowledge that Growers need to invest their time into coach 100 hrs so they have skin in the game
- ✓ Provide the systems to better Understand how to identify waste in their enterprise

Culture

Understandably most of our older growers who do not have a succession opportunity, and are risk adverse and looking for exit strategy not a growth plan.

IC project has a unique insight into the next generation of horticulture leaders. They are dynamic, entrepreneurial, and commercially savvy and embrace AgTech. It's up to industry groups to provide them with the support, networks and services to ensure the industry's bright future.

It is noted succession planning is tough at any time, for any family. Coach acts an independent person to introduce and during this process and able to broker the communication for professional entry and exit of the enterprise.

Advancing the model

Industry Translators

Recent reports from ABARES 2018 & Agrifutures 2018 independently highlight and endorse the intent the industry needs for coach as a solution for the industry. The study encourages and describes the opportunity to identify and invest in translators between agriculture and agtech industry

“Growers are indicated the value of changing to digital agriculture is not clear...If digital agriculture is to be adopted; it needs to be better communicated and sustained by consistency of service and support and the reliability of technology”.

Both reports highlight the poor take up and confusion of new technology, Sector supporters have an opportunity to help increase the levels of empathy and raise awareness of constraints and processes for both producers and Agtech suppliers. Specifically, sector supporters can identify and invest in translators who have knowledge of both agriculture and Agtech.

Translators can help find common ground and build a common language for producers and technology provided they can appreciate the high-tech and long-term visions of Agtech entrepreneurs and communicate them to producers in terms of how they can be practical, grounded solutions to current problems.

Beyond communications and a common language, translators can help to manage expectations around timelines and raise awareness of constraints that producers face (e.g. seasons, varying workloads at certain times of the year, farm safety, cultural nuances, etc.). Agriculture to AgTech translators have knowledge of, and experience with, existing forums and events that can help startups and producers connect.

Next Steps

Coach is not a silver bullet for the industry rather another tool in the solutions locker. Growcom will continue to support existing participants working through stage 3-4 of the projects and provide better case studies during 2019.

Industry Partnerships: we need to work with national providers and to look at old problems in new ways, embrace technology and innovate to provide our industry with solutions to boost productivity and profits. After further evaluation of the projects, we believe stakeholder meeting should be held in the May June 2019 with HIA, AusIndustry, Advance Queensland, Dept of Ag both fed and state and see if and a range of other stakeholder to co-sponsoring national coach.

Refereed scientific publications

This project did not intend to produce refereed scientific publications.

References

Agrifutures (2018) Accelerating the development of agtech solutions worth adopting

<https://www.agrifutures.com.au/product/accelerating-the-development-of-agtech-solutions-worth-adopting/>

ABARES (2018) ICT use in Australian Agriculture

<http://www.agriculture.gov.au/SiteCollectionDocuments/abares/ict-use-australian-agriculture.pdf>

Intellectual property, commercialisation and confidentiality

Growcom thanks HIA for recognition of the IP generated.

Acknowledgements

Growcom acknowledges and thanks the farm businesses who have participated in the project and provided a commitment to testing the Innovation Coach model.

Growcom would also like to acknowledge these valued collaborators:

AusIndustry – Regional Manager Ms Kay Strong

AusIndustry Entrepreneurs fund – Managed by Australian Industry Group, Ramona Bollard (North Queensland NQ) and Jayne Gray (Far North Queensland FNQ)

Advanced Queensland – Innovation team member Mr Trent Forbes

Bowen Gumlu Growers Association – VegNet manager Ms Cherry Emerick

Queensland Agriculture Workforce Network Officers – Ms Julia Wheway (NQ) and Ms Leanne Kruss (FNQ).

CSIRO Food Waste team Werribee – Mary Ann Augustin, Deb Krause, Pablo Juliano and Lloyd Simons

Department of State Development – Mr Paul Holden and Amy Levers (Townsville) and Kellie Potter Advanced Manufacturing Team (Brisbane)

CRC for Developing Northern Australia – Mr Jed Matz and his project team

Mayor of Burdekin Shire – Lyn McLaughlin and Economic Development officer Eliza Lovell

Tech NQ School Townsville P-Tech – Ms Jennifer Trybula and P-Tech project team.

Department of Education, Small Business and Training Regional Director NQ – Ms Kim Hargreaves.

TAFE North Queensland Regional Director – Mr Ian Smyth

James Cook University – Mr Tony Tucker

Ausindustry Innovation Connection Manager – Mr Mario Martini

Trade and Investment Queensland NQ – Ms Denise Kreymborg and Vic Okeefe

Port of Townsville (Export cold chain) – Maria James and Allison Collier

Digital Economy Manager Qld Government – Mr John Williams

QFF Energy Savers – Mr Andrew Chamberlin

Food Innovation Australia Limited – Barry McGookin and James Krahe.

Cairns Airport Corporation (Export airfreight) – Paul McLean and Darren McDermott

CRC for Fighting Food Waste – Stephen Lapidge.

Food Agility CRC – Dr MiKe Briers and Peter Lonergan

Future food CRC –

Australian Institute of Packing – Ms Nerida Kelton

Horticulture Innovation Australia – Byron de Kock and Michael Rogers.

Appendices

Appendix 1 Innovation Coach process overview

Appendix 2 Hort 360 report

Appendix 3 Output from Business Evaluation

Appendix 4 Business Growth Grants Eligible improvement

Appendix 5 Workforce development plan

Appendix 6 Pathways to Technology P-Tech Training Model brochure.

Appendix 7 AusIndustry Digital Canvas

Appendix 5 Process mapping power point presentation

Appendix 1

Why consider an **Innovation Coach**?

PART A: Build farm profitability and sustainability through innovation guidance

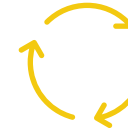
Queensland horticulture needs to double its production output by 2030 to meet domestic and export demands. This offers growers many long term expansion options increased production, new products and markets. Plus It seems every day we learn about some new technology that might improve growers' profits and sustainability. But ... *where do you find out about the technology? Do you need it? How do you integrate it into the business?*

Innovation counts for little without a purpose and clear goals can't be achieved by changing just one part of the business. A holistic approach is needed to build expertise in other areas such as business, production, finance, marketing, technology, data, understanding risk and implementation. We appreciate growers are busy just running their farms and would like help to seize current growth and sustainability opportunities.

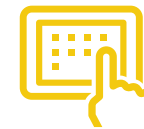
Innovation Coach provides an independent person to help guide and mentor growers and employees along the innovation journey. Coach works one-on-one to understand the grower's needs and vision. Coach then provides the resources to advise, identify, and apply for grants and improvement programs. A number of industry specialists will then deliver a range of on-farm advice, training or research. Finally an action plan will be agreed upon to help and mentor growers with implementation and changing practices.



INCREASE PROFIT



BUILD SUSTAINABILITY



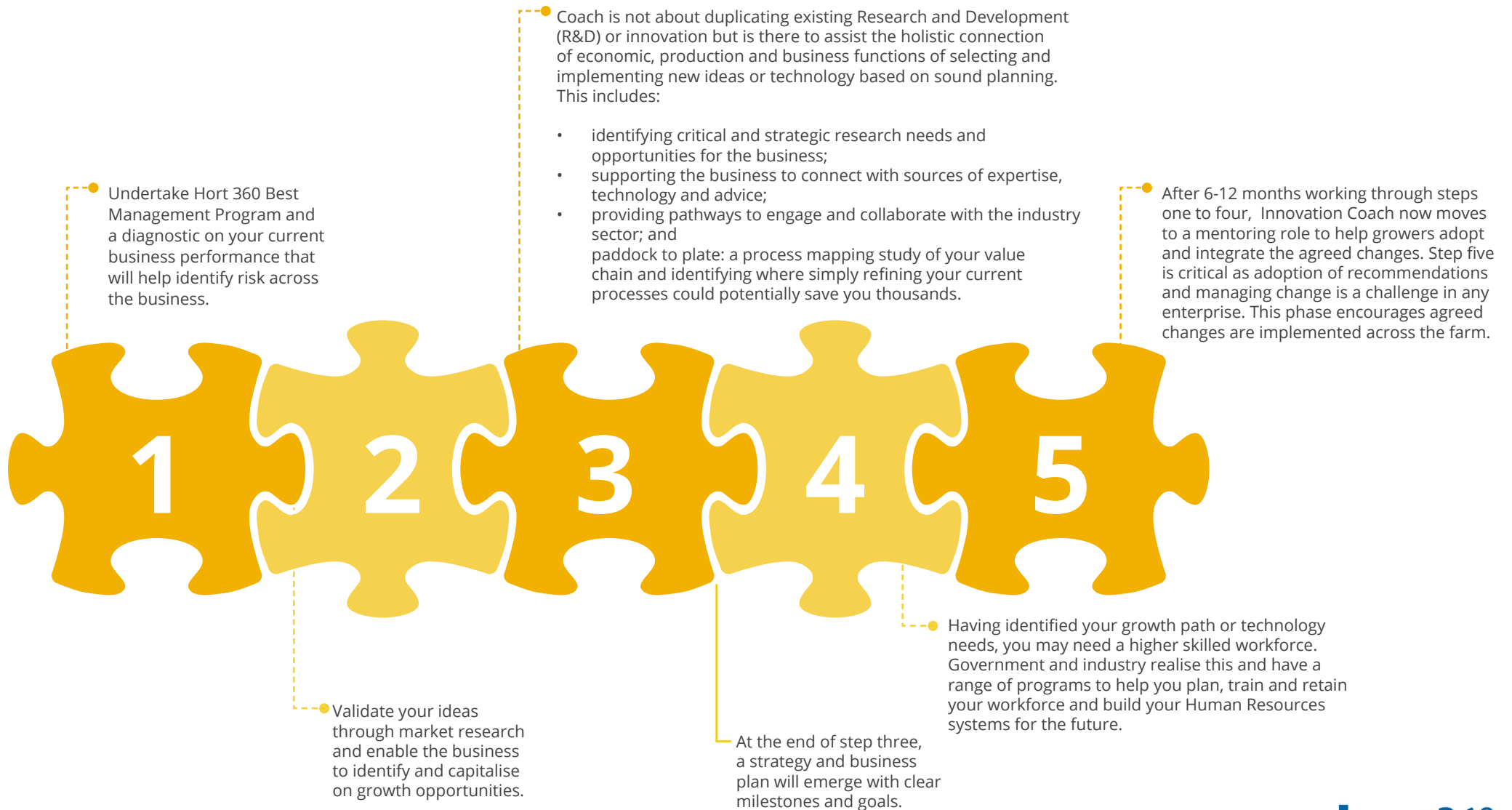
ADOPT APPROPRIATE TECHNOLOGY



PROVIDE INDEPENDENT GUIDANCE

PART B: Five-step Program

While every farm is different, the following is a sample of a five-step program that can work around your annual schedule. It takes around 12 – 24 months to complete.



PART C: What can you achieve?



BUILD YOUR BRAND

Build your brand, reputation, social license and sustainability through industry best practice within domestic and export markets



EXPAND BUSINESS

Expand business and finance knowledge, improve profitability and provide a low risk for loans or new investment



GROWTH MODEL

Design a business growth transformation model with the best possible advice and guidance from industry experts



COMMUNICATION SKILLS

Improve marketing and communication skills and integrate your brand within the current value chain in and the emerging agri-food sector



DECISION MAKING

Improve on-farm decision making and confidence by having a long running strategy for the selection and adoption of labour saving technology backed by a cost benefit analysis of investment decisions



INCREASE PROFIT

Multiply your business improvement and research dollars by accessing free or co-contribution industry and government funding and tax offsets incentives



ENTREPRENEURSHIP

Convert and protect your idea or invention through structured and proven Agri-preneurship & Agtech research development and commercialisation systems



FUTURE WORKFORCE

Build a future workforce that is capable of the digital and data future as more mechanisation and labour saving equipment and system become viable.

Appendix 2

About Hort360

Horticulture producers are increasingly expected to manage their enterprises in a way that reduces the impact on water quality both on and off farm. This is particularly important for those growers who live in the reef catchments or near other sensitive

Hort360 will:

- assistant to identify risks as a consequence of farm practice on horticulture enterprises
- Identify appropriate actions to manage / mitigate those risks and information resources to support the implementation of these actions
- provide a program for growers to assess their own on-farm risks in relation to their management and provide a plan which recommends specific on-farm actions to manage those risks.

What are the benefits

Increased profitability and sustainability are the major benefits of improved natural resource management and business management. However, voluntary adoption of Hort360 will also help ensure the most effective use of farm inputs (i.e labour, fertiliser, chemicals or irrigation) and farm resources to reduce environmental impacts, reduce transaction costs, improve public perception of the horticultural industry and reduce the need for regulation or mandatory controls in the future.

What is the best practice

The measurement of current performance and the identification of practices to improve performance is commonly regarded as a 'best practice' process. It is not expected that your farming enterprise will be perfect. However, Hort360 is designed to assist you to identify areas where you may be able to make improvements and thus, increase profitability. Specific best practices will vary between farms depending on a wide range of factors. Hence, it is necessary for individual growers to identify their own best practices. This is normally achieved through benchmarking existing performance and working towards continual improvement.

Is this process compulsory?

No. Hort360 has been developed to assist you identify business management issues which could be affecting your profitability or sustainability. Participation is entirely voluntary and for your own benefit. There is no expectation that your scores or responses will be publicly reported.

Results summary page

This sheet is a collation of your answers per section of My Farm completed, and forms a snapshot of your opportunity levels. This sheet is useful to quickly identify individual areas where there is opportunity to improve and sections within the farming system that have greater potential to improve over others. The possible levels of opportunity are Good Practice, Room for Improvement, At Risk or Significant Risk.

Results Summary

Water Quality

MyFarm Areas

Average Score

Runoff Deep Drainage

Maintain good practice, and review annually

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
4	4	4	1	2	4	3	4	4	4	4	4	4

88.46 %

Chemicals / Fuel / Waste



Maintain good practice, and review annually

Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
4	3	4	4	4	4	4	4	4	4	4

97.73 %

Nutrition / Fertiliser



Have large room to improve.

Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34
3	2	3	3	4	3	1	4	2	4

72.50 %

Soil Management



Maintain good practice, and review annually

Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43
4	4	1	4	4	4	4	4	4

91.67 %

Irrigation



Have large room to improve.

Q44	Q45	Q46	Q47	Q48	Q49	Q50
4	1	4	3	2	3	1

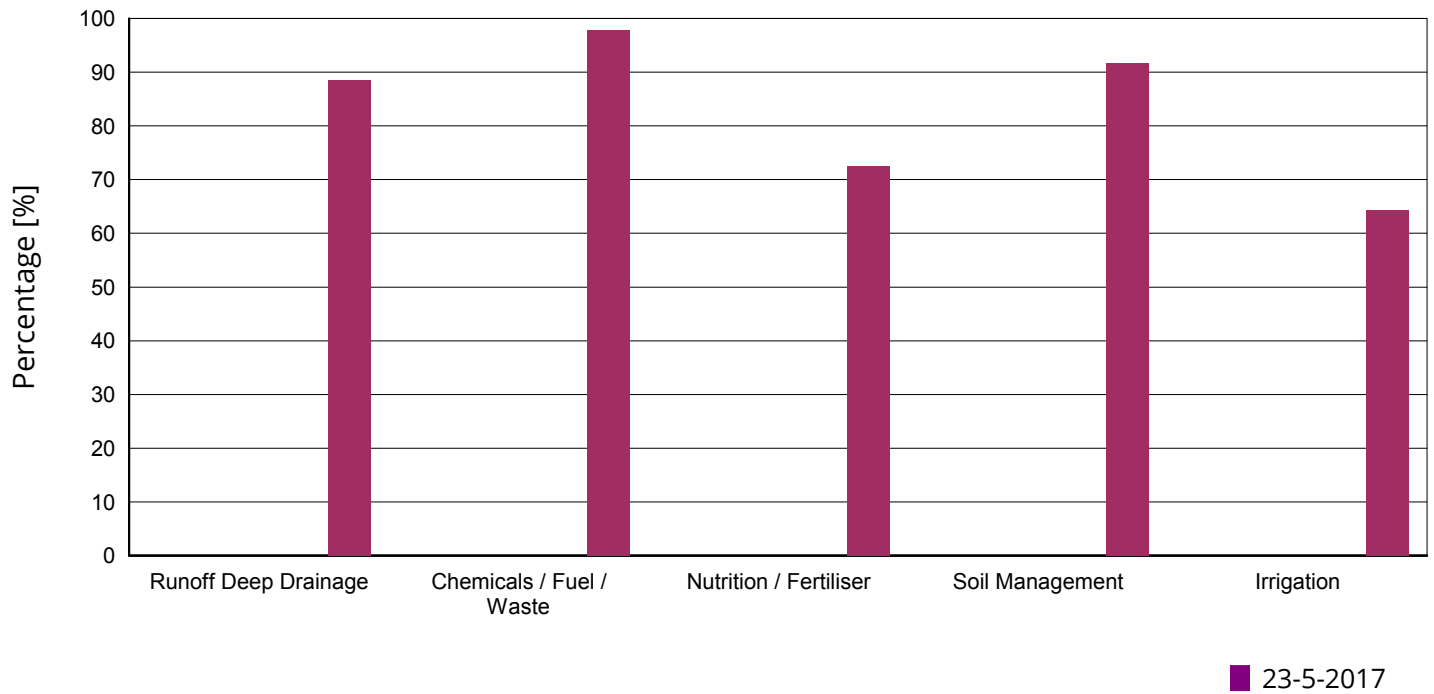
64.29 %



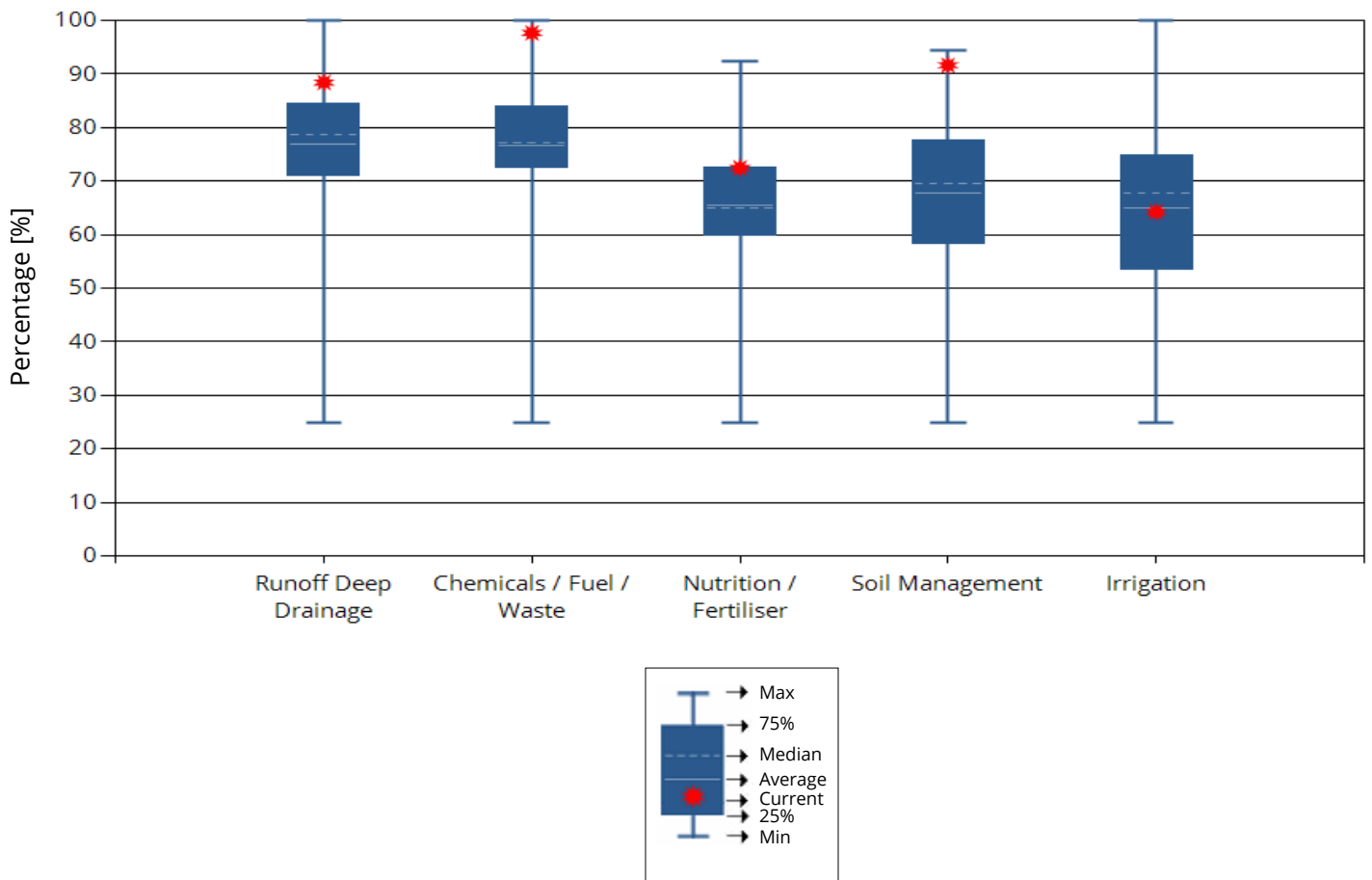
Overall Average Score : 84.50 %

Have room to improve.

Water Quality How Is My Progress



Water Quality How Do I Compare



Appendix 3

Appendix Business Evaluation overall action and detailed action plan.

Action Plan

01. Integrate business systems (compliance)

WHY

Applying QSE management system frameworks will enable system integration and control.

MILESTONES

1 SELECT SUITABLE CONSULTANT □ SEP.18

2 CONDUCT GAP ANALYSIS □ OCT.18

3 AUDIT REPORT AND PROJECT PLAN □ DEC.18

4 IMPLEMENT AND TRAIN □ MAR.19

02. Marketing and export strategy

WHY

A more strategic approach to marketing, export and branding is needed.

MILESTONES

1 ALLOCATE SUITABLE RESOURCES □ NOV.18

2 DEVELOP MARKETING AND EXPORT STRATEGY □ JAN.19

3 IMPLEMENTATION OF PLAN □ MAR.19

4 EVALUATE PERFORMANCE □ JUN.19

03. Implement digital solutions

WHY

Optimising the use of technology will improve productivity and efficiency.

MILESTONES

1 SOURCE SUITABLE IT CONSULTANT □ FEB.19

2 CONDUCT DIGITAL AUDIT □ MAR.19

3 PROJECT MANAGEMENT PLAN □ MAY.19

4 IMPLEMENT AND TRAIN □ AUG.19

04. Agriculture and farm business plan

WHY

The direction of the business is not articulated, shared or measured across the farm business.

MILESTONES

1 ACQUIRE EXPERTISE □ DEC.18

2 DEVELOP VISION AND OBJECTIVES □ FEB.19

3 STRATEGY AND ACTIONS □ MAR.19

4 EVALUATE REGULARLY AND ACTION □ APR.19

Agriculture and farm business plan

WHY

The direction of the business is not articulated, shared or measured across the farm business.

Defining business vision and strategy better equips the leadership team to focus energy and resources on key objectives and be more productive.

To inform the marketing and operational planning and identify risks & opportunities likely to contribute to growth.

A meaningful performance framework which aligns with strategy will help to articulate where the organisation is heading and actions needed to succeed.

HOW

The aim of this action is to create a unified focus to ensure efforts are targeted; shared; lived and measured to achieve planned results. Engage suitable mentor to facilitate plan development. Develop or articulate:

Strategic engagement:

- Establish values to support the vision and mission
- Market analysis summary (domestic and export)
- Products (consider product development and export markets)
- Conduct analysis of business model and SWOT (B2C)
- Consider exist strategy and/or succession planning

Key result areas:

- Formulate objectives and future strategies 1-3 years. Key result areas i.e. People; Financial; Markets; Sales and BD; Innovation;
- Financial plan
- Review and endorse agriculture and farm business plan;
- Communicate plan, delegate and engage workforce

A performance measurement framework which aligns with strategy:

- Establish lead and lag performance indicators to address performance
- Important lead considerations are employee engagement, satisfaction and skill development, financial ratios i.e. overheads, COS & labour margins
- Measure performance at agreed milestones (formalise forum and format)

MILESTONES

RECOMMENDATION START DATE: NOV.18		12 MONTHS	
Acquire expertise □ DEC.18 To develop a strategic plan for business and performance and assist with the implementation.	Develop vision and objectives □ FEB.19 Establish vision and objectives to inform strategy and the development of aligned KPIs.	Strategy and actions □ MAR.19 Formulate and endorse future strategies and review effectiveness of the plan on an ongoing basis.	Evaluate regularly and action □ APR.19 Performance management framework to include operational, financial, risk, HR, marketing, productivity.

BENEFITS

CLEAR DIRECTION

A clear, agreed vision and strategy builds passion among the team and provides clarity of roles and organisational links.

EMPLOYEE ENGAGEMENT

Job satisfaction and loyalty increases and engaged employees help to drive business success.

PROFITABILITY GROWTH

Strategic planning enables controlled growth and increased profitability.

STRATEGY ALIGNMENT

Higher performance by focusing the contributions of people, processes and inputs collectively.

Appendix 4

Business Growth Grants - What improvements are eligible

In the report or plan, Business Advisers or Business Facilitators will recommend a range of improvements. The improvements that are eligible for the Grant fall under one of the following areas:

Business area	Example improvements
Strategic business Issues	<ul style="list-style-type: none"> • Formulating and implementing business goals, models and strategies • Supply chain integration and management • Corporate governance issues (i.e. board structures) • Developing formal business plans and review of business model • Developing business development strategies and sales plans • Developing key performance indicators • Developing strategic partnerships and collaborations • Developing product/service commercialisation plans • Strategic advice on structuring and raising equity and investment
Human Resources Issues	<ul style="list-style-type: none"> • Human resources and succession planning • Cultural changes / change management • Access to specialist skills to develop HR strategies and systems, including induction, performance management, job descriptions, remuneration, retention, skills auditing • Business (customer) specific leadership training and employee development • Workforce planning
Internal Systems	<ul style="list-style-type: none"> • Administrative processes, quality assurance and compliance • Occupational Health & Safety • Risk management • Developing documentation and processes in internationally recognised standards, training staff in meeting these standards • Scoping, consulting and training to implement a software system, social media/digital strategies, incorporation of ecommerce functionality, and website strategies
Production/Operational	<ul style="list-style-type: none"> • Structure and factory lay-out • Advice on investment in new equipment • Value stream mapping (process flow) • Inventory management • Process improvements (Lean auditing, reducing down time, error reduction) • Lean principles and practices • Research and Development planning • Developing time sheet systems and documentation • Scoping, consulting, (possibly developing) and training to implement business specific project management software systems
Marketing, Branding and Communication	<ul style="list-style-type: none"> • Marketing strategies, including branding strategies and social media/digital strategies • Communication strategies, marketing plans, distribution channel management • Enhancement of online capabilities for the integration of e-commerce, and Social Media • Development of branding strategies and development of a brand including a logo where the design process involves concept development, design and layout, finished artwork and project management • Strategic market research • Sales team performance and management, customer relationships and retention, and creating a capability to respond to tenders • Customer support systems including systems to record and action customer feedback
Financial Management Systems	<ul style="list-style-type: none"> • Scoping, tailoring and training of management accounting systems, including Accounting systems (financial reporting/dashboards, forecasting and cash-flow management, debtor controls and credit management systems) • Financial modelling in terms of developing the model for use by the business, including scoping, tailoring and training • Advice on planning, directing, monitoring, organising and controlling financial resources

Business area	Example improvements
Exploring New Markets and Market Intelligence	<ul style="list-style-type: none"> • Identification of new markets, sector analysis and market development • Industry research and market appraisal (eg identifying contacts, language barriers) • Competition strategy (i.e. price or quality basis) • Market research to assist Australian companies develop their international trading/ exporting strategies • Identification of potential offshore partners or customers • Support with arranging for companies to visit overseas markets eg establish itinerary • Export strategy, including compliance with foreign laws and regulations
Environmental Sustainability	<ul style="list-style-type: none"> • Tailored advice and strategies to support • Improving sustainability and reducing environmental footprint • Carbon pollution reduction • Waste stream identification, management and reduction • Water and energy efficiency tailored advice and strategies • Environmental management systems • Regulatory issues • Sustainability auditing (including waste, energy, water and environmental footprint)
Product and Service Development	<ul style="list-style-type: none"> • Strategic Intellectual Property (IP) plans including IP protection methodology and advice and general IP advice regarding differentiation of product design • Diversification and product/service innovation and development, including testing for market acceptability /product assessment and improvement for non-compliance purposes • Research and Development planning
Mentoring/ Coaching	<ul style="list-style-type: none"> • Engagement of an independent and skilled business coach or mentor to build management capability tailored to the needs of the business

What improvements are not eligible

The following improvements are considered ordinary every day operations of the business, and are **not** eligible for the grant:

- fees for services provided by related parties such as companies with common shareholdings or directorship with the customer, individuals, employees or immediate family related to the customer
- salaries for staff or the costs associated with recruitment activities
- in-house running expenses such as standard accounting fees, office expenses
- purchase of plant and equipment or the costs of relocating machinery
- design and printing of sales promotion materials and advertising, including newsletters, brochures and other promotional material
- the cost of trade shows or costs associated with visiting overseas markets and trade events
- the costs of ISO certification or any work in registering domestic or international patents and fees or charges associated with registering intellectual property
- general legal advice or costs associated with estate planning or legal advice associated with this
- creation of Shareholders' Agreements
- purchasing off-the-shelf software or costs of generic software associated with the administrative functions of the business normally carried out in the normal course of business (e.g. finance, administration, sales, payroll, HR, stock control, project costing etc)
- training or workshops in basic IT skills
- professional development for staff and workforce development
- the development of websites or basic website upgrades

Appendix 5



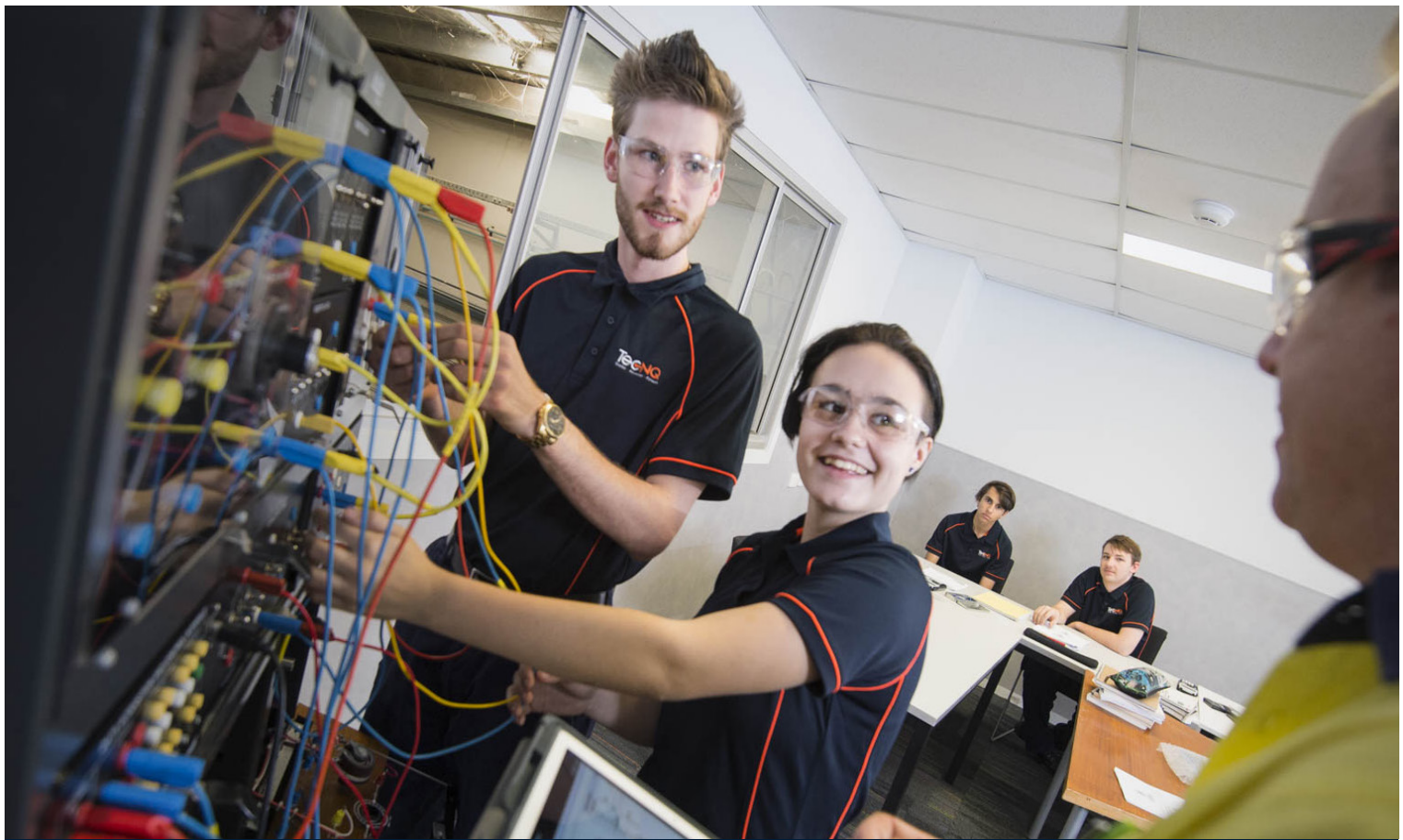
EMPLOYEE PLANNING FUNCTION as at Stage 1 Visit

Staff Name	Description + Skills/Training	Required in Future/ Suggestions/Skills Training
Atherton Farms Supervisor	Competent in Position	
		Replacement upon retirement Address as needed 3 months prior, current staff member most possible to upgrade to this senior role or source new recruitment. Final three months look at mentor program by Mark of proposed successor. Unexpected circumstances will not create immediate pressure on the business.
Horticulturalist-	Cert 3 Horticulture	
	Developing skills: <ul style="list-style-type: none"> • Apply knowledge and understanding of responsibilities and structure to work • Manage own work • Plan and organise • Communicate information and advice • Respond to requests and determine suitable response 	Management would like to see Rene develop financial life skills in the immediate future. Leanne to seek out options for workshop/course in Atherton Area Terrific budget app for phone located here: https://www.moneysmart.gov.au/tools-and-resources/calculators-and-apps/mobile-apps/trackmyspend Terrific budget website located here: https://www.moneysmart.gov.au/tools-and-resources/calculators-and-apps/budget-planner Future skills and training options will be developed upon creating a 12-month road map Workforce Plan from January 2019. Attend any relevant soft skills workshops as per upcoming industry dates in Tablelands region.
Farm Hand	Competent in Position	
		Replacement when/if required. Unexpected circumstances will not create immediate pressure on the business.
Administration	Highly Competent in Position	
		Replacement when required. Address as needed 6 months prior to proposed retirement. Source new recruitment options. Look at mentor program by Jenny of proposed successor. According to management, Jenny will be difficult to replace due to her high degree of competency and independence in book keeping and knowledge of HR legislation and policy. Filling of a vacant admin officer position within the organisational structure within the next 6 months, as the



		<p>onset of the picking and packing season for blueberries creates a possible 80 pickers and 20 packers to the staff numbers.</p> <p>I see mapping of the pathway to succession of this position vitally important.</p> <p>Future staff member recruitment required, skills and training options will be developed upon creating a 12-month road map full Workforce Plan January 2019.</p> <p>Unexpected circumstances would create immediate pressure on the business.</p>
Horticultural Assistant	New Position. Probationary Period	
		<p>Revisit in Jan 2019 in Workforce Plan after probationary period moves forward.</p> <p>Investigate tertiary study pathways/funding options to develop into qualified agronomist position for enterprise.</p> <p>Attend any relevant soft skills workshops/ RnD field days as per upcoming industry dates in Tablelands region.</p>
Field Supervisor	Competent in Position	
		<p>Development of Leadership and People Engagement Skills in new year.</p> <p>Possible Farm Business Management Skillset under the TEII funding program Leanne has at present.</p> <p>Attend any relevant soft skills workshops as per upcoming industry dates in Tablelands region.</p>
Field Team Leader	Gaining competency in position	
		<p>Development of Leadership and People Engagement Skills in new year.</p> <p>Possible Farm Business Management Skillset under the TEII funding program Leanne has at present.</p> <p>Attend any relevant soft skills workshops as per upcoming industry dates in Tablelands region.</p> <p>Training/Accreditation in basic farm skills and compliancy as per upcoming industry dates in Tablelands region</p> <ul style="list-style-type: none"> • Forklift • Chemical Accreditation
Farm Hand	Gaining competency in position	
		<p>Attend any relevant soft skills workshops as per upcoming industry dates in Tablelands region.</p> <p>Training/Accreditation in basic farm skills and compliancy as per upcoming industry dates in Tablelands region</p> <ul style="list-style-type: none"> • Forklift • Chemical Accreditation

Appendix 6



North Queensland P-TECH Partnership

**A collaboration between education,
industry and community.**

P-TECH is a world-leading educational model that offers secondary school students an industry-supported pathway to a science, technology, engineering and mathematics (STEM) qualification. P-TECH provides students with skills and knowledge to prepare them for the jobs of the future. P-TECH enables industry to play an active role in the learning and career development of their future workforce.

ptech.org.au

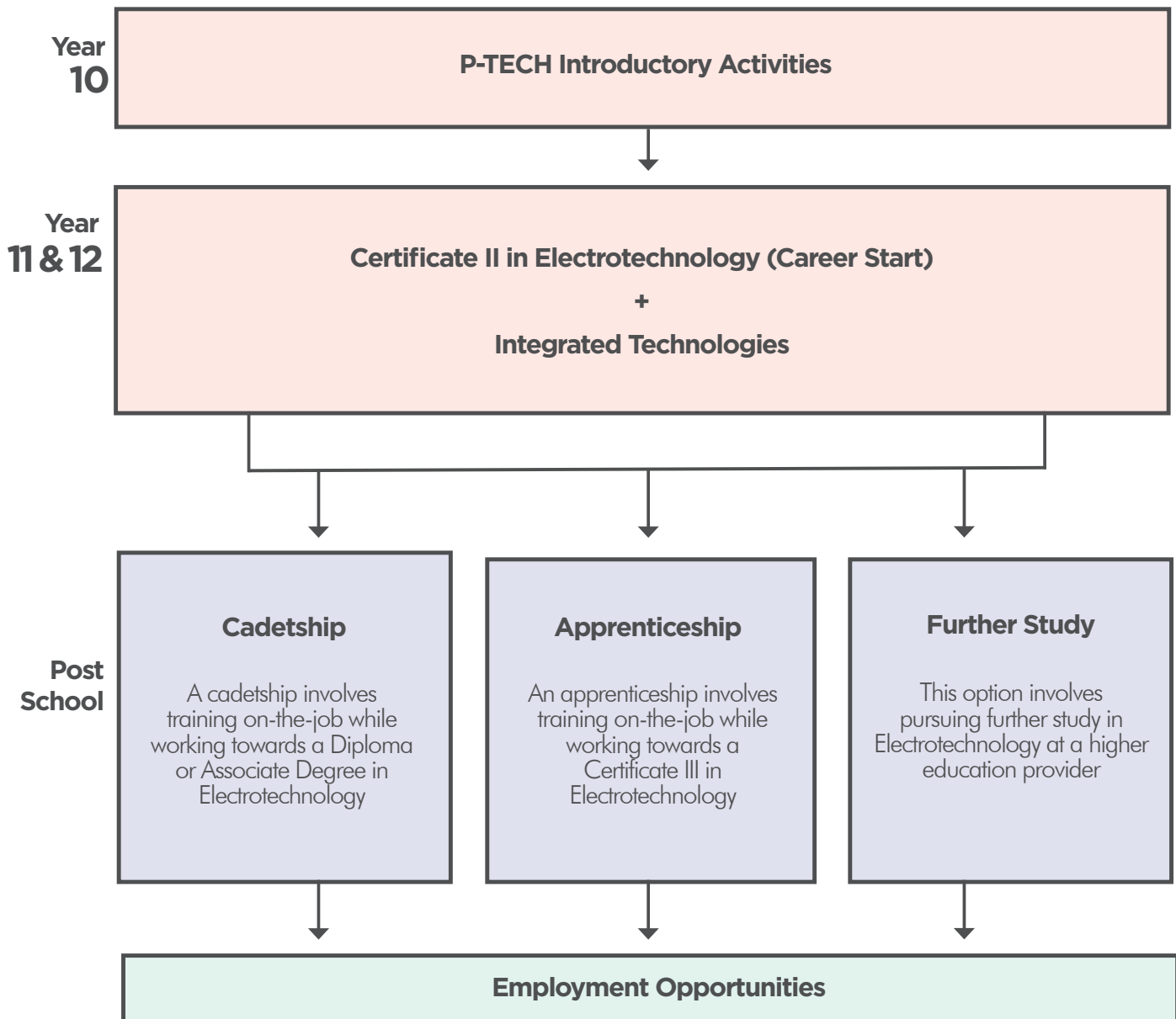


The Australian Government has engaged Skilling Australia Foundation to assist local stakeholders to work together to implement P-TECH learning programs at all 14 pilot sites.



Australian Government

P-TECH Pathways



Getting involved in P-TECH opens up a world of opportunities for students. As the above flowchart shows, the pathway is flexible, meaning that once students have graduated from Year 12, they can choose the next step that suits their needs best.

P-TECH industry partners support cadetship and apprenticeship employment opportunities. P-TECH

allows industry to mentor students while they are in school, providing them with valuable skills and experience to support them in being considered for these employment opportunities.

No matter how a student might map their career journey, doing P-TECH while at school provides students with many pathways to a successful career.

P-TECH at Tec-NQ

What's Involved?

The North Queensland P-TECH partnership focuses on the integration of technology in three growth industries in the region: Agriculture, Energy and Advanced Manufacturing.

Aligned with regional skill demands, P-TECH allows Tec-NQ students to develop specific skills and knowledge that will equip them for a STEM related career in their chosen industry.

P-TECH also teaches skills that enable students to adapt to an ever-changing work environment.



Meet the Partners

There are three industry partners involved in developing and implementing the P-TECH program in North Queensland: Wilmar Sugar, Ergon Energy and Growcom.

James Cook University and Tec-NQ are the education partners involved in supporting pathways to post-school qualifications.

Additional program supporters include: Queensland Health; Queensland Department of Employment, Small Business & Training; Queensland Department of Education; Queensland Department of Housing and Public Works; Queensland Agricultural Workforce Network; RDA North West Queensland; Queensland Resources Council; CSIRO; and CANEGROWERS Burdekin.

Collaboration between education and industry aligns student learning with skills that local employers need. In addition, students develop relationships with industry, which improves their employment prospects.





North Queensland P-TECH Partnership

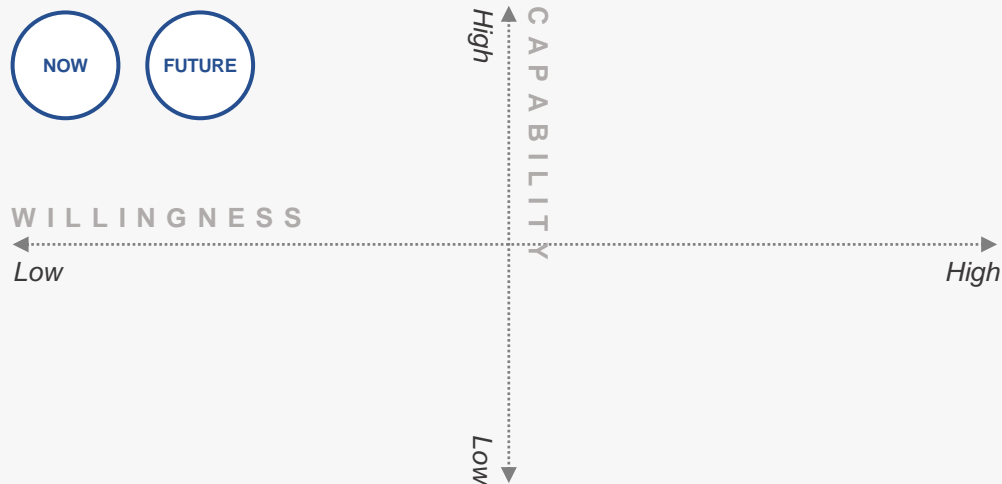
“ The North Queensland P-TECH Partnership is redefining skills development and creating career pathways for our local industry.”

Ross Jorgensen, Tec-NQ

www.ptech.org.au/north-queensland-p-tech-partnership/

Appendix 7

In terms of willingness and digital capabilities where is your business today and where would you like it to be? Move the circle to position your business within the digital space.



What can digital do for you? Which of the following statements best describes your digital goals?

- I'd like to **optimise** my business by reducing costs, automating workflows, improving decision making and making my business easier for my people and customers.
- I'd like to **evolve** my business by using digital technologies (and data) to develop enhanced products and/or services that further differentiate my brand and value propositions.
- I'd like to **transform** my business model by using digital capabilities to create and deliver new products and services that drive new revenues from markets here and internationally.

Number the below on a scale 1 to 5. 1 being a minor issue, and 5 the most important. Please write 0 if there is no issue at all.

What are the pains in your digital journey?

- Don't have a compelling reason to try
- Lack digital skills to assess and make the most of available technology
- Don't know who, where or how to get bespoke digital advice
- Concerned about return on investment
- Cashflow for investment
- Available resources to implement
- Previous digital experience unsatisfactory
- Company culture doesn't support digital
- Suppliers won't come on the journey
- Customers won't come on the journey
- Employees won't come on the journey



Manufacturing

DIGITAL CANVAS V1.0

Business Adviser:

Business Name:

Date:

Digital Solutions

- Adviser Engagement
- Webinars/Events

Digital Transformation

- Adviser Engagement
- Webinars/Events
- Innovation Connections STEM Graduate

1

INFRASTRUCTURE
& DATA

2



ACCOUNTING

3



HR & TRAINING

4



OPERATIONS

5

SALES
& SUPPORT

6

DIGITAL
MARKETING

1.1 Cloud / On Premise

1.2 Cybersecurity
Management

1.3 Telephone / Video

1.4 Email & Collaboration

1.5 Digital Services Partner

1.6 Internal or External
Support

2.1 Compliance

2.2 Payroll

2.3 Debtor Management

2.4 Creditor Management

2.5 Foreign Exchange

3.1 Compliance

3.2 Rostering

3.3 WHS

3.4 Policy & Procedures

3.5 Learning Management

3.6 Culture Management

4.1 Warehouse / Logistics / Freight

4.2 Procurement

4.3 Inventory

4.4 Production Planning

4.5 Production Management

4.6 Quality Assurance (Processes &
System)

4.7 R&D / Product Design

4.8 Plant / Asset Maintenance

5.1 Direct Sales

5.2 Quote

5.3 Manufacturing Model

5.4 Order

5.5 Customer Support

5.6 CRM

6.1 Website

6.2 Marketing Automation

6.3 Live Chat

6.4 Email

6.5 E-commerce

6.6 Analytics

6.7 Internal Resources

6.8 Social

6.9 Content
(Video / Rich Media)

6.10 SEO

6.12 Paid Search

6.13 Advertising

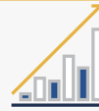
6.14 Affiliates

6.15 eDM

6.17 External Partner

6.11 Inbound

6.16 Outbound



7 BUSINESS INTELLIGENCE (BI) & ANALYTICS

Notes (Challenges, issues, priorities, budget and timings)