Achieving and Enabling Continuous Improvement and Innovation

Focussing Action for Impact on Performance! – In a Team? In a Partnership? In a Network?

R. Clark[1], J Timms[2], A. MacCartney[3], K. Egerton-Warburton[4], N. O'Dempsey[5] and B. Radokovich[1]
[1]-The Rural Extension Centre, Gatton, Queensland
[2] The Department of Primary Industries, Brisbane, Queensland
[3] Private Consultant, Toowoomba, Queensland
[4] Agriculture Western Australia, Albany, Western Australia
[5] Private Consultant, Texas, Queensland

ABSTRACT

In any business the greatest single competitive advantage is to improve performance faster than your competitors. In agricultural industries the need to improve business performance becomes increasingly important and urgent as competition, and social and environmental demands for improved land management and ethical food and fibre production increase. Participants in agricultural business development programs are facing decreasing resources (particularly time and money). An important constraint is an estimated total interaction time, per program target group, of a maximum of 4 working days (over 3 years). Many current approaches to achieving improvement are based on 'one-off activities' as apposed to 'specific processes of ongoing improvement' managed for outcomes. There is a need to focus action on those things that will *make a real a difference* to improving wealth, wellbeing and the environment and *stop doing those things that don't make a real difference*. The Better Practices Process of Continuous Improvement and Innovation (CI&I) is designed to focus action for impact on performance *now and in the future*! The Process and key principles are described. Recommendations are:

- To enhance the capacity of people in food and fibre businesses to practice, achieve and enable CI&I
- To focus on identifying and actioning opportunities with high benefit/cost pay-off
- To manage Research and Development programs, products and services for CI&I
- To establish a network of CI&I teams as part of a sustainable improvement system for rural product businesses (within the total supply chain).

KEY WORDS
Continuous improvement, Innovation, Research and Development, Systems management, Process management, Partnerships, Networks.

INTRODUCTION

Purpose of this Paper

The purpose of this paper is to:

- Stimulate thinking about what continuous improvement and innovation is, and *why* achieving and enabling continuous improvement and innovation (CI&I) in rural systems is important
- Enhance understanding of *how* to achieve CI&I in rural systems by describing the process, outputs and outcomes of the "Better Practices Process" of CI&I.

Need for Sustainable Improvement Systems

In any business the greatest single competitive advantage is to improve performance faster than your competitors. In agricultural industries the need to improve business performance becomes increasingly important and urgent as competition, and social and environmental demands for improved land management and ethical food and fibre production increase. There are many (often too many) ideas about ***what*** can be done to improve the performance of any particular food and fibre system. However, the more important questions, given decreasing resources (particularly time and money), are:

- ***How*** do you decide which option has most impact? And,
- ***How*** do you ensure action to achieve impact on performance?

Different and more challenging questions are:

- ***How*** do you achieve impact on performance *now and in the future*? And,
- ***How*** do we achieve *sustainable improvement systems* for food or fibre businesses?

Our experience has been in Research and Development (in practice) of processes for improvement and innovation in a variety of contexts including:

- Production, business and marketing, and supply chain systems in food and fibre industries (including beef, wool, pork, dairy, cotton, mixed cropping and livestock)
- Rural community development
- Natural resource management
- Research and Development program design and management
- Product and service design and management
- Organisational management.

Previously we have worked in two major contexts:

1. Agricultural 'Research and Extension', where *'activities'* (trials, demonstrations, field days, workshops, seminars group discussions) are conducted on an irregular, as needed, basis to communicate the outputs of research. There is no explicit intention to achieve or enable continuous improvement.
2. Agricultural Development using 'Participatory Problem Solving' based on Action Research (Clark *et al*. 1996). The intention is to equip participants to identify and solve problems in an ongoing way.

We have moved on from working in these contexts to now working predominantly in Continuous Improvement and Innovation in rural and organisational contexts embracing the principles of 'Sustainable Improvement Systems', 'Participative/Multi-disciplinary Research and Development', 'Dynamic Systems Management' and 'Program, Product and Service Design, Management and Improvement'.

Two important issues have led us to focus more on achieving and enabling continuous improvement and innovation, these are:

- Most 'Research and Extension' (R&E) and 'Research and Development' (R&D) programs are based on 3 – 5 year time frames. Assuming that most of the programs are group-based (Clark *et al*. 1999), the total hours of interaction, per target group, are likely to amount to a maximum of 4 working days (over 3 years) (Table 1). This severe constraint can be overcome by equipping participants with thinking skills, processes, techniques and tools to achieve on-going improvement as individuals in teams, partnerships and networks. Without the capacity to practice on-going improvement individuals are dependent, for opportunities to improve, on the interaction time with service providers.
- Most 'Research and Extension' and 'Research and Development' programs base their services on '*activities*' as apposed to 'specifically designed processes' to achieve on-going improvement (Clark *et al*. 1999). Given the short interaction times with service providers and very dynamic food and fibre systems, building the capacity of individuals and teams for ongoing improvement is an opportunity for impact on R&D performance.

Table 1. Total hours of interaction in a traditional 3-year group-based 'Research and Extension' program.

Duration of program	Number of activities per target group/year	Duration of group activities	Total hours or days of activity over 3 years
3 years	4	3 hours	36 hours or 4 days

Our Focus

Our focus is to achieve effective and efficient impact on performance, now and in the future. We aspire to achieve focussed action for impact on performance. The need for 'focus' and 'impact' is driven by our experience that people are overwhelmed with the pace of business and the plethora of things that they could do. We need to do those things that will *make a real a difference* to improving wealth, wellbeing and environment and *stop doing those things that don't make a real difference*. Specifically we need to identify and action those opportunities that have the biggest benefit/cost pay-off.

Our assumption is that equipping individuals in teams with the knowledge, skills, process, roles and responsibilities to practice CI&I can dramatically increase the efficacy of R&D programs.

The Importance of 'Thinking' in Achieving Improvement and Innovation

One of our assumptions is that 'improvement' of performance can only occur through 'action' i.e. people *doing different things* or *doing things differently* (Figure 1). If we do the same we can expect to get the same. It is a logical assumption that in order to improve 'action' better decisions are necessary. Improved decision-making is often the starting point of programs with the intent to improve situations. We believe that to improve decision-making in the long-term we need to build the capacity to improve 'Thinking' (Figure 1). Einstein is reputed to have said that no problem can be solved at the same level of thinking that created the problem. *How* do we improve *how* we think in order to achieve continuous improvement and innovation? Together with specific tools, we think the use of language is important in stimulating and improving thinking (as a foundation for improved decisions, actions and performance).

Looking at Figure 1, if we improve 'Thinking' then 'Decision-making' can be improved. Unfortunately decision-making is sometimes the end-point of 'improvement' programs. Deciding to do something and actually doing something are two different things. Achieving action is essential to improving performance even if it is to stop doing something.

Action can be taken at three levels (Figure 1):
1. The 'Practice' level (e.g. achieving 'Best' or better practice of land tillage)
2. The 'Process' level (e.g. improving processes of land preparation and planting)
3. The 'Systems' level (e.g. improving, deleting and/or incorporating new elements in sustainable land management systems).

In general leverage for improvement of performance is greatest at the 'Systems' level (Kim 1995). If, for example, the focus for action is at the systems level, then appropriate language needs to be used and understood to enable 'Systems Thinking'.

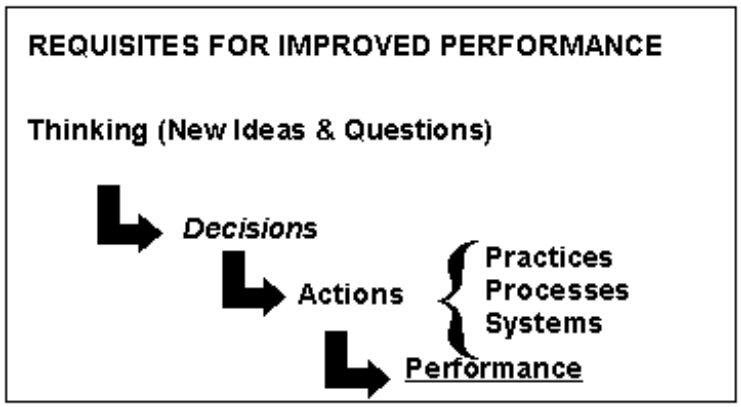

Figure 1. A framework showing the importance of enabling and achieving new thinking for improved performance.

The importance of language in achieving improvement and innovation

Language is very important when working with people to achieve improvement and innovation. For example we have already used some key words like:

- 'Focus'
- 'Research & Development'
- 'Continuous Improvement'
- 'Innovation'
- 'Systems'
- 'Processes'
- 'Practices'

What is your understanding of these terms? Do people participating in improving food and fibre systems have a shared understanding of these crucial words? Without a shared understanding individuals will develop different meanings when they use these words and concepts. We believe that it is important to *define key words early* in improvement processes in order to be more effective in working with people to achieve improvements.

There is another reason why language is important. People need to be able to recognise a new opportunity (described in words) as being different from their current experience before they can begin to think differently. If people 'fit' a new concept or opportunity into their current framework for thinking

(paradigm) their action will be similar to that prompted by their 'old' thinking. People need to go through a cognitive act of *'making a distinction'* between concepts or principles in order to explore their meaning and implications for action. If we use the same 'old' words to describe completely different concepts, or if we interpret new words as meaning the same 'old' familiar concept we will not enable thinking and action about the new concepts. For example the word 'extension' is often used in agricultural development to describe unique concepts like 'Innovation'. Another example is the use of the word 'System'. This word is used to describe concepts which range from farming 'practices', farming 'processes', and/or activities where it is assumed there is a linear relationship between inputs and expected outputs. This 'loose' use and interpretation of the word 'system' is disenabling because it does not help people to understand the unique concepts and principles of 'dynamic systems' and 'systems thinking'. A very specific example in agriculture in Australia is the use of the term 'Action-learning'. 'Action-learning' (Revans 1985) can be a powerful process for learning, however the term has been used to describe any activity that involves 'action' eg 'learning by doing'. The result is that participants in 'Action-learning' exercises are confused and are not able to compare effectiveness of their current learning process with a rigorous application of 'Action-learning'. A disappointing outcome is that people will respond to other opportunities to practice 'Action-learning' with statements like "we are already doing it" or "we tried it once and it didn't work".

Criticism of the use of new language as 'Jargon' can contribute to the continued use of simplistic terminology and prevent the recognition of new opportunities for different and improved thinking.

Specific Definitions

In order to contribute to the focus of this paper and to a achieve a shared understanding of key words used in the context of achieving improvement in agricultural systems we offer the definitions in Table 2.

Table 2. Definitions of words and concepts that are important in achieving improvement in agricultural systems.

Focus	Clear and shared understanding of the desired purpose/outcome to be dealt with and the boundaries around it
Continuous improvement	A process to enable individuals in teams to regularly and frequently focus their thinking and action to achieve impact on their performance through improving their practices, processes, systems, products and/or services
Innovation	A process of developing new practices, processes, systems, products and/or services for a specific purpose or market place and achieving specific outcomes or the adoption of specific outputs in the market place
Continuous improvement & innovation	A process to enable individuals in teams to regularly and frequently focus their thinking and action to achieve improvement in current practices, processes, systems, products and/or services; and develop new practices, processes, systems, products and/or services to make a real difference to their performance
Practice	A described (doable) activity which can be performed by individuals with the appropriate capability
Process	A purposeful sequence of steps, techniques, tools, actions and activities designed to enable people to achieve a specific output and outcome
System	A set of elements (in dynamic and usually counter interactions) interconnected for a purpose
Research	A process of inquiry leading to new knowledge and/or conclusions
Research & development	A process of developing new practices, processes, systems, products and/or services for a specific purpose or market place
Team	A small number of people, committed to work together for a common goal and with individual skills, roles and responsibilities
Partnership	An interdependent relationship between people for a specific purpose involving clear rights, roles, and responsibilities
Network	An organisation of individuals and groups who exchange inputs and outputs for benefit (purposeful outcomes)

We think the act of 'making a distinction' is enhanced if people are enabled to describe what a word or concept 'does not mean'. For example 'Research' does not mean 'Research & Development'. Research

does not require its products to be developed in the marketplace (Table 2). Some words can be used to describe both a process and an outcome e.g. 'continuous improvement' and 'innovation'. In these situations we find it helpful to use the relationship Inputs ⇒ Process ⇒ Outputs ⇒ Outcomes, to distinguish between the concept as a process and the concept as outputs and outcomes (Table 3).

Table 3. Using the relationship Inputs ⇒ Process ⇒ Outputs ⇒ Outcomes; to explain the meaning and context of words important in achieving improved performance.

Inputs	Process	Outputs	Outcomes
People, Time, $ Technology etc.	'Continuous Improvement'	Continuously improved practices, processes, systems, products and/or services	Continuously improved performance
People, Time, $ Technology etc	'Innovation'	New practices, processes, systems, products and/or services	New performance
People, Time, $ Technology etc	'Continuous Improvement & Innovation'	Continuously improved and new practices, processes, systems, products and/or services	Continuously improved and new performance

The better practices process of CI&I

There are six critical components of the Better Practices Process of CI&I:
1. A commitment to achieve a clear 'Focus' for action
2. The involvement of the appropriate people in high performance teams, partnerships and networks
3. Mechanisms to enable people to decide whether they are committed to achieving CI&I.
4. A clear, simple and meaningful process (sequence of steps)
5. A range of practical tools and techniques which can be purposefully selected and sequenced to support the process and to ensure impact on performance
6. A flexible user-friendly application of the process to ensure impact on performance.

1. Achieving a Clear Focus for Action – What Outcome do you Want?

Enabling people to develop a clear mission and focus is the most critical success factor in achieving outcomes. Having a clear and shared understanding of a desired outcome and the boundaries around it enables:
1. The active involvement of appropriate people
2. Participants to develop Specific, Measurable, Achievable, Relevant and Timeframed (SMART) objectives (including outputs and outcomes)
3. Appropriate processes to be designed to achieve the *Focus*
4. Action to be concentrated on achieving the *Focus*.

We have developed specific tools to enable people to develop a shared focus (Clark and Timms 2000). These tools help people focus on the level of action (Systems, Process or Practices, Figure 1) that will give them most impact relevant to their current context.

2. Involving the Appropriate People in CI&I Teams, Partnerships and Networks

Involving the appropriate people in the most appropriate way is critical to the success of continuous improvement and innovation programs. Clear criteria for the involvement of appropriate people can be developed given the context and Focus. We have developed criteria that can be applied to most contexts (Clark and Timms 2000).

Forming and motivating CI&I teams

The process of continuous improvement and innovation is built on the principle of 'high performing teams'. These teams function best when between 6 and 10 people in size (see 'Practitioners' in Figure 2). All members should have a shared mission and values. High performing teams are built on the principle *that 'groups/teams don't take action - individuals do'*, therefore individuals need to be committed to take action and be equipped with skills, clear roles and responsibilities.

Forming and motivating CI&I partnerships and networks

Continuous improvement and innovation requires people to share knowledge and ideas and utilise specialist knowledge, skills and support. Organisation and infrastructure are necessary for partnerships and networks to be effective. Figure 2 indicates categories of people that may be targeted to form a sustainable CI&I partnership and network.

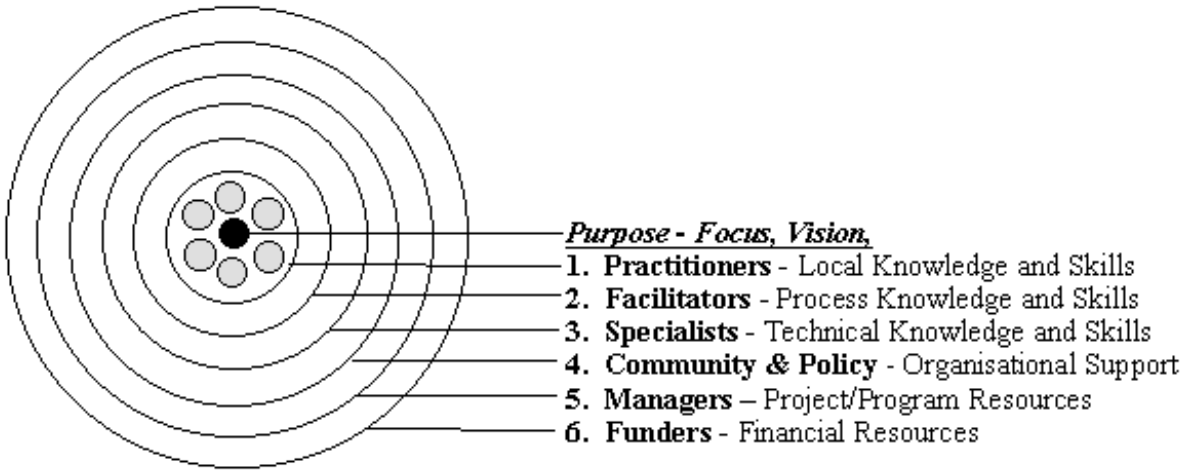

Figure 2. A 'Target Diagram' of potential partners in a continuous improvement and innovation network.

It is desirable for all participants in a CI&I network or partnership to be practitioners of CI&I. A common mindset in Australian agriculture is for Research and Development service providers to expect farmers to practice continuous improvement, but the service providers are usually not active partners in the process of improvement. The most desirable application of CI&I is for service programs to be set-up with a CI&I process as the process for program management and service delivery. Having farmers represented as partners in the program management enhances the partnership.

3. Mechanisms to Enable People to Decide Whether they are Committed to CI&I

We have developed tools to support decision-making of people who may be interested in CI&I. Figure 3 shows a decision-tree that helps people through decisions about the benefits and costs of being involved in CI&I. Potential participants in CI&I may also find it helpful to test their aspirations against the attributes targeted by CI&I (Table 4). Potential participants can use the checklists in Table 5 to test whether they are committed to the type of behaviour that is needed to achieve CI&I. These tools may appear to overemphasise the importance of values and attributes, however high performance teams need to address these issues.

Table 4. Personal and professional attributes targeted by CI&I.

• Confidence in achieving continuous improvement & innovation	• Supportive & effective partner/team player
• Focussing action for impact on performance	• Creative & critical thinking
• Personal effectiveness	• Systems thinking
• Responsibility taking	• Initiative

Table 5. Checklist of requisites for Continuous Improvement and Innovation.

Commitment to:	**✓or ✖**
1. Improve	
2. Deal with the unease of change	
3. Change specific practices	
4. Measure impacts of change	
5. Utilise specialist knowledge of others	
6. Work in a group	
7. Help others improve	
8. Meet & share results at least every 60 – 90 days	

9. Play an active role in a team	
10. Practice action-planning, taking action, measuring, and learning & creating	

4. A Clear, Simple and Logical Process (Sequence of Steps)

The Better Practices Process:

- Is a sequence of six Key Steps (Figure 4).
- Has 'Focussing Questions' to enable thinking, dialogue, discussion and action to be *focussed* on the purpose of each step of the process (Figure 4)
- Has recommended techniques for each step (Table 6). Some of the techniques have been designed and developed specifically to support this process. Techniques from other sources are also used
- Is meant to enable flexibility in thinking, process and practice, and is not applied in a linear or recipe-like mode
- Is specifically designed to enable improvement and innovation of the process itself and is therefore continually improving.

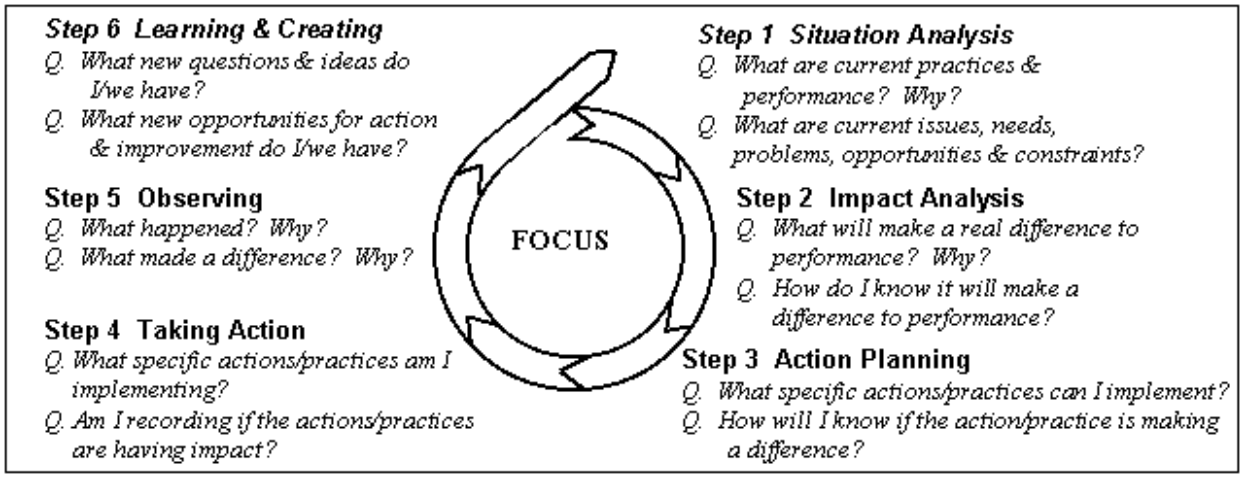

Figure 4. The six steps of the Better Practices Process and the questions used to focus thinking, action and creativity for continuous improvement and innovation.

Cycles and cycling

The productivity of the Better Practices Process is strongly related to the number, frequency and quality of the cycles that both individuals and teams experience. We recommend the following *minimum* number and frequency of cycles in order to enable people to start to experience the reward of achieving tangible outcomes (In the ethos of continuous improvement and innovation cycling should be continuous):

- For individuals – the minimum number of cycles is 3, the minimum frequency is less than 3 weeks apart
- For teams – the minimum number of cycles is 3; the minimum frequency of meetings is less than 3 months (60 - 90 days) apart.

5. A Range of Practical Tools and Techniques to Support the Better Practices Process

Table 6 lists a range of techniques and tools that can be selected and sequenced for each step of the process. The techniques are used to focus thinking, discussion, dialogue and action on producing desired outputs and outcomes effectively. The choice of techniques is determined by the focus e.g. improving 'Systems', 'Processes', 'Practices', 'Products' or 'Services'.

Table 6. The six steps of the Better Practices Process and a range of techniques that can be selected and sequenced for each step.

Better Practices		Techniques and Tools
1.	Situation Analysis	Focussing questions, enabling questions, specialist questioning, focussing frameworks, thinking frameworks, systems mapping and modelling, systems dynamics, flow diagrams, fishbone, timelines, local better practices, needs analysis, 6 hats, swot, mind-map, delphi, dialogue & discussion, focus groups, futuring, learning-logs, pin-boarding, rich-picture, skills-audits, surveys,
2.	Impact Analysis	As for Step 1, Brainstorming, Prioritisation Criteria, Critical Success Factors

		Technique, Impact & influence technique, Critical Success Factors Framework, Key Performance Indicators, Lateral Thinking, Decision Support Systems, Nominal Group Technique, Simulation
3.	Action-planning	Decision analysis, Decision Dimensions Framework, Action Planning Tool, Roles and Responsibilities, Force Field Analysis, PERT Chart, Gantt Chart, Constraints Identification, Risk analysis, Critical Success Factors, Learning-logs.
4.	Taking Action	Performance Checks, Key Practices, Learning-logs
5.	Observing	Key Performance Indicators, Systems Mapping and Modelling, Systems Dynamics, Learning-logs, Performance Checks, Feedback
6.	Learning & Creating	As for step 1, Observations, Ideas & Questions technique, 6 Why Technique, Why-Why Diagram, How-How Diagram, Critical Thinking, Lateral Thinking, Dialectic, Brainstorming.

6. A Flexible User-friendly Supportive Application for Impact on Performance

All the steps of the Better Practices Process must be part of a flexible and dynamic process of continuous improvement and innovation. Individuals and teams need to understand and apply the six steps consciously (and intuitively) to enhance individual and team learning and performance. The most important feature of the Better Practices Process is the emphasis on identifying and actioning opportunities with the biggest benefit/cost pay-off. The practice of CI&I need not be onerous, in fact it can be motivating because it enhances performance and efficacy. *Socialness is important in group and team motivation and functioning, it should be an explicit part of the Better Practices Process.*

Enabling individuals and/or teams to experience elements of the process in a passive way is not empowering of the individual and is *not* the Better Practices Process. *Individuals* need to implement each step of the process before they can appreciate the full value of enabling other team members to go through the steps of the Better Practices Process. *Learning to move through the steps of the Better Practices Process requires experience and practise.*

Outputs and outcomes delivered by the better practices process

The Better Practices Process should be managed for 'outputs' and 'outcomes' as apposed to conducting 'activities'. Table 7 lists the outputs and outcomes that are achieved at each step of the Better Practices Process. Steps 1, 2, 3 & 6 involve thinking and decision-making, and the use of local and specialist knowledge, also simulations and impact analysis tools. The outputs of Steps 1, 2, 3 & 6 are less tangible than those of steps 4 & 5. *Participants need to recognise the outputs of all steps and their linkages in order to appreciate the value of the process.* Table 8 shows the consequences of not completing any of the 6 steps.

The outputs and outcomes listed in Table 7 are achievable for individuals and teams given individual and team 'Focuses'. Synergies occur when partners (in service programs) practice CI&I. Sustainable improvement systems can be developed when C&I teams and partners in service programs form a 'Network' focussed on exchanging inputs and outputs with the benefit that all participants in the network achieve the best possible rate of improvement. Sustainable improvement systems need to be designed, managed and continually improving and innovating – A 'Network Management Team' is necessary to ensure improvement is sustained. High performing networks have buying power and attract high quality service providers.

Table 7. Outputs and outcomes delivered at each step of the 'Better Practices Process' of Continuous Improvement and Innovation (CSFs = Critical Success Factors; KPs = Key Practices; KPIs = Key Performance Indicators).

Step	Outputs	Outcomes
Situation Analysis	• Agreed Focus documented • Benchmarks & Frameworks of current thinking, systems, processes, practices, performances • Record of issues, problems,	• Agreed Focus • Shared mental models of systems, processes, practices • New thinking, ideas, questions • Critical thinking & logic stimulated

	opportunities, constraints & needs • Focus documents to engage Specialists, Service-providers, Policy-makers, Managers & Funders	• Shared agreements & differences • Benefit of others' thinking
Impact Analysis	• Clear criteria for priorities • Opportunities tested against for impact against priorities (high benefit/cost pay-off) • Records of Impact Analysis • Specialist input •	• Focus on appropriate criteria • Knowing which opportunities will make a real difference & at what cost (high benefit/cost pay-off) • Knowing which opportunities don't have impact • Benefit of others' thinking • Confidence in knowledge of opportunities which have impact
Action-planning	• Individual plans focussed on impact • Records of individual focuses for action in a team • Records of CSFs, KPs, & KPIs • Records of role & responsibilities	• Decision to commit to action • Confidence in CSFs, KPs, & KPIs • Confidence in input & support of others • Motivation for personal & professional development • Confidence in team roles, responsibilities & support
• Action-taking	• Records of actions • Records of observations, ideas, questions & thinking	• Improved practices implemented • Thinking stimulated
• Observing	• Records of focus, CSFs, KPs, & KPIs • Records of impact on Focus • Records of thinking • Records of different perspectives	• Understanding what made a difference & why • Thinking stimulated • Confidence in input & support of others
• Learning & Creating	• Records of new thinking, questions, ideas • Records of summaries & overviews • Benchmarks of improved & new systems, processes, practices, products & services impact	• Confidence in input & support of others • Understanding of the processes of focussing action for impact on performance • New thinking, systems, processes, practices, products & services of impact • New questions & ideas for improvement & innovation • Confidence in team performance

Table 8. Symptoms if any of the 6 steps of the Better Practices Process are missed.

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	Continuous Improvement & Innovation
Missing	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	Don't know where you are. No Benchmark to Measure from.
STEP 1	**Missing**	STEP 3	STEP 4	STEP 5	STEP 6	Don't know what will make a real difference (high benefit/cost pay-off)
STEP 1	STEP 2	**Missing**	STEP 4	STEP 5	STEP 6	Don't know how to achieve change
STEP 1	STEP 2	STEP 3	**Missing**	STEP 5	STEP 6	Nothing happens
STEP 1	STEP 2	STEP 3	STEP 4	**Missing**	STEP 6	Won't know what, how or why change occurred.

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	**Missing**	No consolidation, improvement & innovation.

CONCLUSIONS

A significant limitation to the impact of current agricultural development programs is the estimated total interaction time, per target group, about 4 working days (in 3 years). If targeted individuals and groups were equipped with processes, knowledge, skills and infrastructure to practice, achieve and enable continuous improvement and innovation; they would be able to make more effective use of the outputs of Research and Development. Continuous improvement and innovation concepts and processes are in regular use in manufacturing industries. The concepts and processes are not in common use in primary industries. Given:

- The predominance of 'Research and Extension' *activities* as apposed to 'Research and Development' *processes* in agriculture
- The relative lack of knowledge and skills in how to practice, achieve and enable continuous improvement and innovation
- The emphasis on identifying and actioning opportunities with the biggest benefit/cost pay-off in Better Practices Process of continuous improvement and innovation.

Recommendations are:

- To enhance the capacity of people in food and fibre businesses to practice, achieve and enable CI&I
- To focus on identifying and actioning opportunities with high benefit/cost pay-off
- To manage Research and Development programs, products and services for CI&I (in partnership with clients)
- To establish a network of CI&I teams as part of a sustainable improvement system for rural product businesses (within the total supply chain).

REFERENCES

1. Clark, R. A. & Timms, J. (2000). Enabling Continuous Improvement and Innovation. The Better Practices Process – Focussed Action for Impact on Performance. A manual to support skills development in the Better Practices Process. The Rural Extension Centre, Gatton College, University of Queensland, Lawes, Queensland.
2. Clark, R. A., Timms, J., & Roberts K. 1999. Group Processes for Rural Development - ideas, principles and success factors. The Rural Extension Centre, Gatton College
3. Clark, R., Bourne, G.F., Cheffins, R.C., Esdale, C.E., Filet, P.G., Gillespie, R.L. and Graham, T.W. (1996) The Sustainable Beef Production Systems Project. Beyond awareness to continuous improvement. Department of Primary Industries, Queensland. Project Report Series Q096002.
4. Kim, Daniel H. (1995) Systems Thinking Tools – A User's Reference Guide. Toolbox Reprint Series. Pegasus Communications Inc., Waltham MA
5. Revans, R. (1985). Action Learning. Its Origins and Mature. Gower, Aldershot, U.K.

ACKNOWLEDGMENTS

Andrew McCartney and Elwyn Rea (both professional land and cattle business managers), and the Kunwarara Group, are acknowledged for ideas and concepts which contributed to the origin of the Better Practices Process.

Many land and business managers in the wool, beef, cotton, pork, dairy and cropping industries have contributed directly and indirectly to the Better Practices Process. These contributions, too many to list, are especially valuable given their practical business orientation.

Many agencies and individuals who provide and deliver rural development services have contributed to the development of the Better Practices Process. In particular the people involved with The Woolmark Company's BESTPRAC project have applied continuous improvement to their practice and BESTPRAC project. The Dairy Research and Development Corporation have invested in Continuous Improvement and Innovation (CI&I) of the 'Dairying Better & Better' program, and in the design of the 'Continuous

Business Improvement' product in the Target 10 Program. The Pig Research and Development Corporation has invested in the development of the 'Pig Continuous Improvement Program'. ACIAR has invested in Continuous Improvement and Innovation of programs in the Philippines and Africa. The Queensland Department of Primary Industries has invested in research and development of the process of CI&I. Other State departments which have contributed to the development of CI&I are: Agriculture Western Australia; The Victorian Department of Natural Resources and the Environment, and the New South Wales Department of Agriculture.

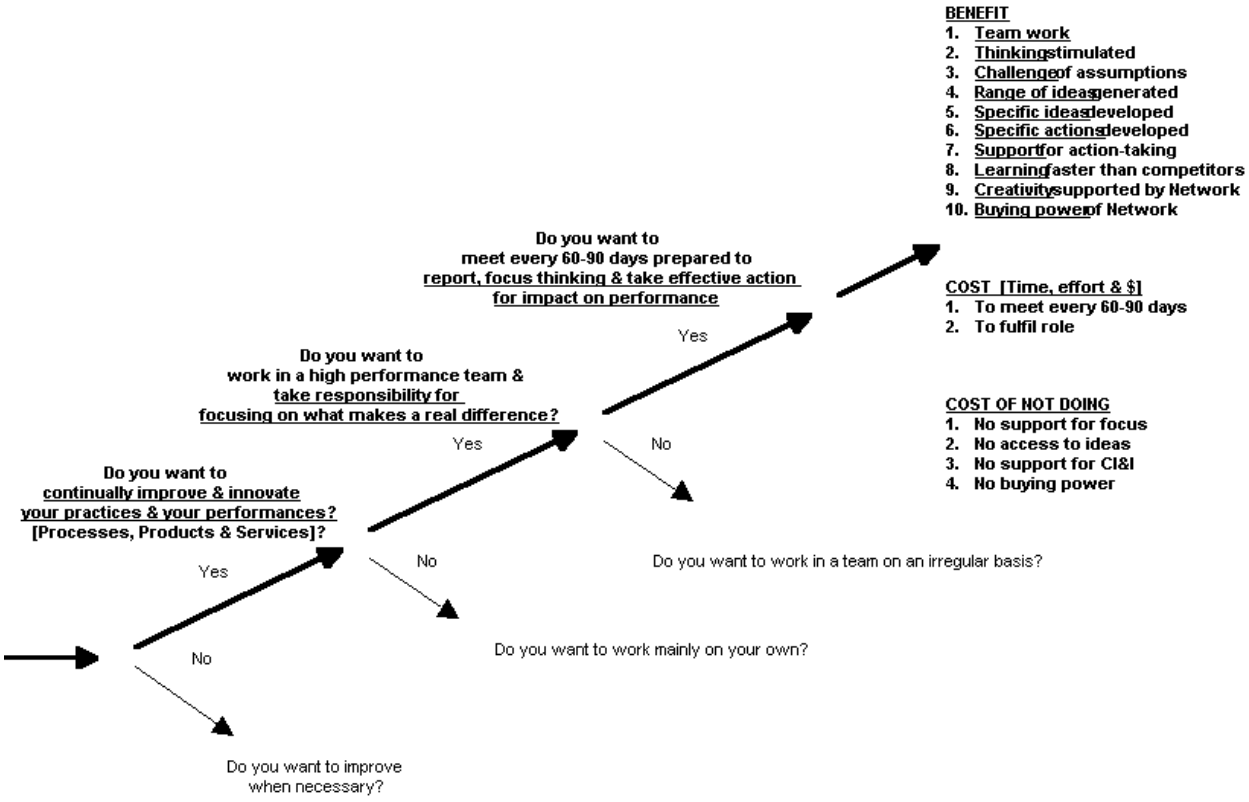

Figure 3. Decision to do Continuous Improvement and Innovation (CI&I) or Not