

Effective Regional Improvement and Innovation Networks

Timms J^{1*}, Clark R¹, Espinosa E^{2*}, Gabunada F², Madzivhandila P P^{3*}, Maleza Z⁴, Matjuda L E³,
McCartney A¹, Motiang D M³, Nengovhela N B³, Stewart P¹ & Taveros A A²

¹ Department of Primary Industries and Fisheries, Brisbane, Queensland, Australia

² Leyte State University, Philippines

³ Agricultural Research Council, South Africa

⁴ Department of Agriculture, Eastern Cape Province, South Africa

Abstract

Effective and sustainable networks don't just happen by chance. They happen by design. In this paper we draw on experience, methods and results from projects that have established regional improvement and innovation networks in the Philippines and South Africa.

The paper highlights Critical Success Factors that can be used to inform the design and management of networks. Principles that contribute to the effectiveness and sustainability of networks are identified. These include network size, the management of the network over time, necessary functions, shared processes and tools, and developing and managing institutional support.

Please note a glossary of key terms is included at the end of this paper.

Keywords

Infrastructure, regional, networks, improvement, innovation

Introduction

The ability to achieve our goals, fulfil our missions, and make our contributions to the world depends as much on the resources available in and through our networks (our social capital) as it does on our individual knowledge, expertise and experience (our human capital) (Baker 2000). A recurring theme at the National Innovation Summit in Australia in 2000 was that collaborative activities such as networks are an effective means of achieving increased improvement and innovation (Anon 2000). There is also a growing realisation that innovation is grounded in local and regional conditions (Holbrook and Wolfe 2000), and that industry and regional economic growth can be accelerated through the design and management of regional innovation systems (Asheim 1996; Asheim 2003; Asheim and Coenen 2005) that include effective regional improvement and innovation networks and partnerships.

Networks are purposeful, value-adding partnership based on reciprocal transactions between partners. They are oriented to a common purpose which is beyond the limited abilities of network members (Chisholm 1996; Gray and Wood 1991a; Roussos and Fawcett 2000). That is, individuals and organisations come together to achieve common outcomes that none of them can achieve separately. Network activity has both external effects (impact on the community) and internal effects (impact within the network) (Chisholm 1996; Ashby 1956). Members choose to belong to networks, and the network is controlled by the members who determine

the network's rules, processes and procedures (Chisholm 1996; Weiner et al. 2000). Each member is equal within the network (Chisholm 1996; Gray and Wood 1991) and there is no centralised source of power (Chisholm 1996). However networks do involve a division of labour where members have specialised functions, tasks and skills (Alter and Hage 1993).

Regional improvement and innovation networks in the Philippines and South Africa

The establishment of regional improvement and innovation networks was incorporated into two projects in the Philippines and South Africa that were designed to achieve sustainable agricultural industry improvement and innovation — the Leyte Livestock Improvement Project (LLIP) and the Beef Profit Partnerships Project (BPP). In LLIP the Leyte Improvement and Innovation Network (LIIN) was established with the mission to support, and benefit from a network of teams and partners focussed on achieving improvements and innovations for impact on profit, efficiency, environment and wellbeing. The Beef Profit Partnerships network is focussed on achieving 5 per cent improvement in profitability per annum of beef businesses, initially in the Limpopo and North West provinces, but now also in several other provinces.

Both the LIIN and the BPP network are innovative partnerships between farmers, R&D service providers, members of regional supply chains, and relevant local and provincial government and non-government institutions. The networks are designed to enable and support members to achieve improvements and innovations. Both networks were equipped with a shared process and tools to work more effectively to achieve rewarding results. The shared process that both the LIIN and BPP use is called Continuous Improvement and Innovation (CI&I) (Timms et al. 2005). Both LIIN and BPP created logos which include representations of the continuous improvement and innovation process being used in the networks to achieve targeted improvements (Figure 1). Members of LIIN also proudly wear network t-shirts and caps to show their membership of the network.



Figure 1. The logos developed by the Leyte Improvement and Innovation Network (LIIN) and the Beef Profit Partnerships project (BPP). Both logos incorporate stylised versions of the Continuous Improvement and Innovation (CI&I) process which is used in the networks to achieve targeted improvements.

Individual farmer teams and their partners meet regularly to focus their thinking and action on achieving targets, to provide and receive mutual support, and to share, promote and celebrate their achievements (Figure 2). The teams and their partners also interact with other teams and members of the network at

regional improvement and innovation forums. When several regional networks are functioning, they can come together in larger cross-regional forums to share and celebrate achievements, and showcase their achievements and the network to potential partners who may want to join and support the networks.

The improvement and innovation teams and networks are enabled and encouraged to have a common high level focus, such as improving agricultural business profitability and sustainability, every network member has the opportunity to focus on achieving targets that are most relevant to their own situation. Focusing Frameworks (Timms et al. 2005) were a key tool to support the development of relevant focuses. In LIIN members chose to focus on a range of different areas for improvement depending on their situation which were supported by specifically designed sub-projects. The areas for improvement included: improving the profit from their pig or chicken enterprises; reducing the input costs of their enterprises and increasing the sale price for their produce through cooperative input and output marketing; and reducing the environmental impact of pig waste. In BPP network members focussed on a range of different targets related to improving business profit. These included: improving the marketing of produce and thereby increasing sale price and reducing transport costs; improving growth and throughput; improving reproduction; and improving animal health.

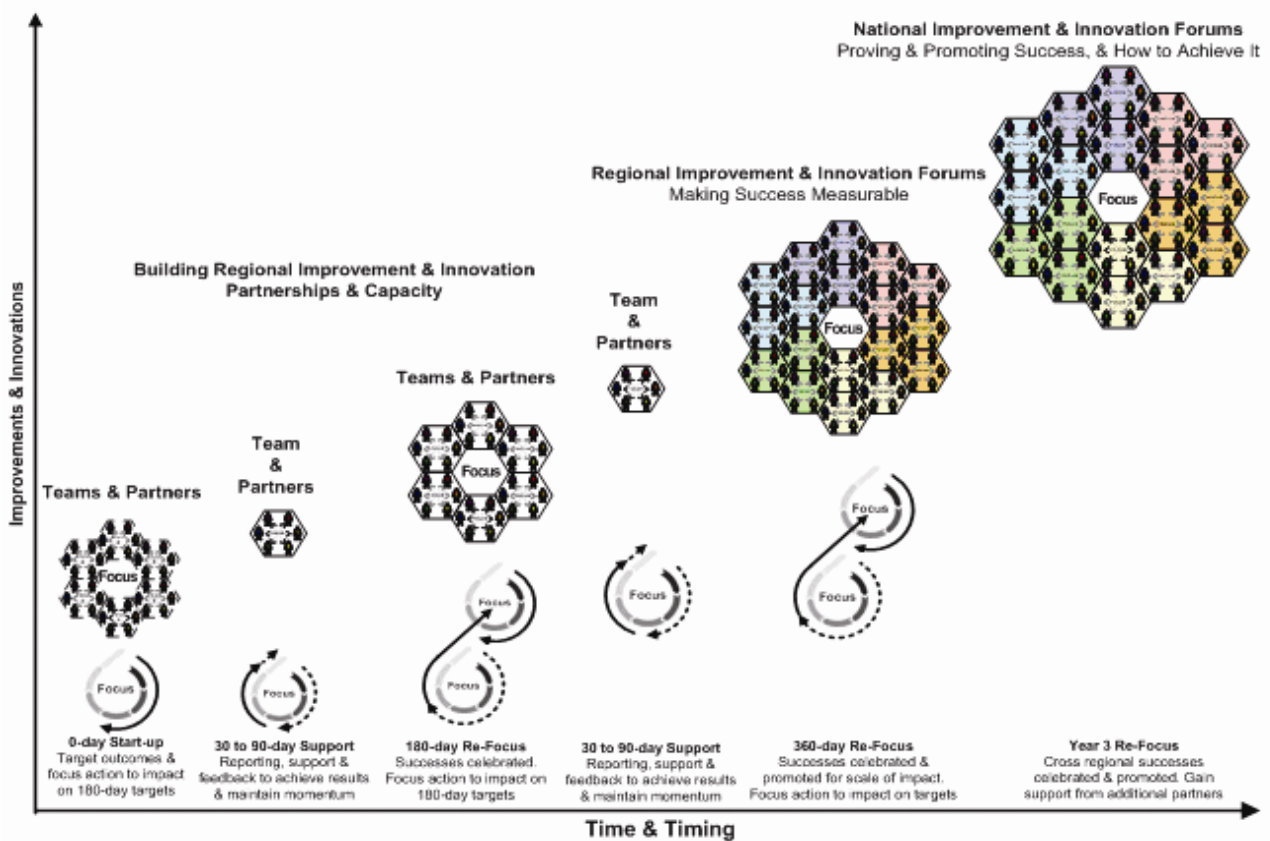


Figure 2. A diagram showing how: (1) Strong regional industry improvement and innovation partnerships are developed within Provinces; and (2) Successes are measured to enable proven results and methods to be promoted and applied on a larger scale, and greater improvements and innovations to be achieved.

Achievements of the Leyte Improvement and Innovation Network

As at December 2004, there were 11 teams with a total of 119 farmer members, 16 leaders, 17 partners and eight managers. Initially, lack of capital for buying pig feeds and veterinary supplies was identified as a key problem for LIIN farmers. LIIN farmer teams established five local input-output stores, one of which has been registered as a cooperative, which enables it to access greater support from local, regional and national governments. Collaborative input-output marketing has resulted in higher prices, e.g. PhP 2/kg for grower pigs, and decreased feed costs, e.g. PhP 0.10/kg. Figure 3 shows the rate of improvement in capital and the extent of involvement in the first of the cooperatives established (the HISRAC cooperative).

HISRAC has sustained a profitable operation for four years. Its total sales increased by 171 per cent in 2003. It generated a total net income amounting to PhP 11,283.55 during its first nine months of operation in 2001. In 2002, the store received a net operating income of PhP 19,688.18, while in 2003, it generated a net operating income of PhP 32,365.22 or an increase of about 64 per cent in its net operating income for the period 2002–2003 (Table 1). The farmer members agreed to retain these earnings to increase the store's operating capital, and to distribute profit as rebates/dividends, thus contributing to farmers' income.

Table 1. The business performance of HISRAC Agri-Vet Store

Items	2002	2003	Increase	
			Amount (PhP)	Percent
Sales (PhP)	2,153,860	5,843,053	3,689,193	171
Net operating income (PhP)	19,688	32,365	12,677	64
Members' equity (PhP)	82,245	155,173	72,928	89
Total assets (PhP)	543,312	709,880	166,568	31

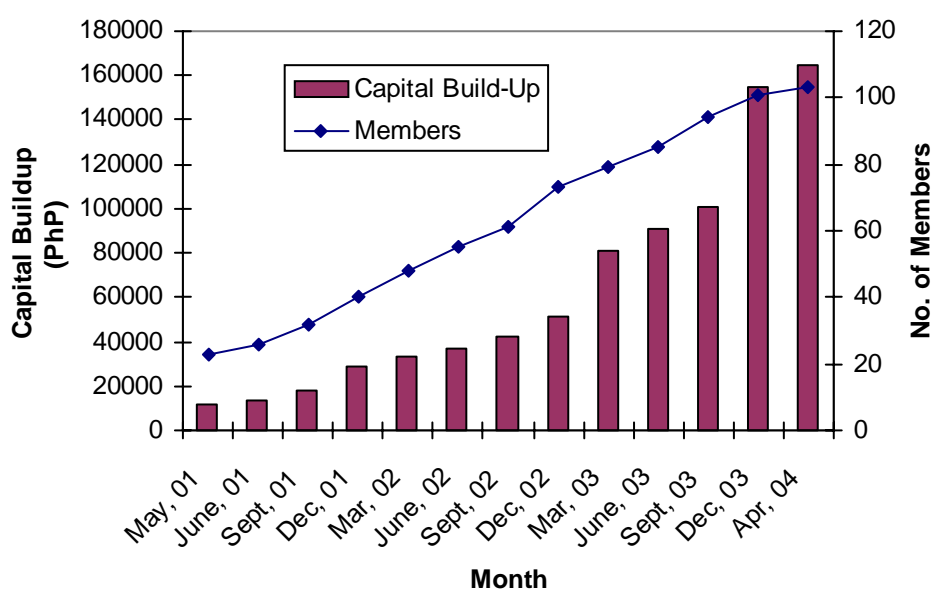


Figure 3. The number of members and capital build-up of the Hindang Swine Raisers Cooperative

Smallholder farmers raising pigs in densely populated environments have compelling reasons to improve the management of their pig waste. Twenty-seven LIIN members developed and implemented at least one plan of action to improve their pig waste management. Environmental benefits included cleaner waterways, as these farmers no longer disposed of waste by burial or discharging into local waterways, and fewer problems with mosquitoes and flies. Social benefits included improved relationships with neighbours, often linked to reduced on-farm smell, and greater cleanliness of farmers' immediate surroundings. Efficiency benefits included using the pig waste as an input to biodigesters to produce gas for cooking, and as a fertiliser for crops. Pig farmers in 11 Local Government Units in four of the six provinces in the Eastern Visayas region have been supported by LIIN to improve their pig environment.

A majority of the LIIN members who focussed on pig profit increased the profit from their pig enterprises during the project. For farmers that had multiple production cycles during the project, 79 per cent of the sow raisers achieved an average increase in gross margin per piglet of equal to or greater than five per cent. Sixty-three per cent of growing pig raisers achieved an average increase in gross margin per pig of equal to or greater than five per cent. As farmers viewed their pig enterprise as a source of household income, the increase in profitability achieved by many farmers made a valuable contribution to the economic position of their families (Clark et al. 2005b).

In October 2003 LIIN held a highly successful and supportive Farmer-to-Farmer Forum where members from all farmers teams in the network plus network partners came together to report on their achievements and receive support to continue to achieve improvements and innovations into the future (photos below). Thirty-five presentations were made by network members, and feedback from Forum participants indicated they valued the challenge and opportunity to prepare and present reports. They found preparing the report helped focus their thinking — they know how they are progressing. Sharing the report helped others to offer relevant feedback and support for further action.



Achievements of the Beef Profit Partnerships Network

BPP was initially designed around establishing regional networks in North West and Limpopo Provinces. In early 2005 the network consisted of a total of 17 farmer teams with a total of nearly 300 individual farmers. In 2005, the project concept has been expanded to include four additional South African provinces, as well as Limpopo and North West Provinces, and emerging farmers from the dairy, sheep meat, wool and horticultures industries as well as beef cattle farmers.

Through focussing on improving local market access the BPP network has been able to organise regular and frequent on-farm sales. The resulting improvements in marketing have meant that between 2002 and 2004, prices for weaner cattle rose by 54.2 per cent and those for mature cattle by 29.6 per cent (Table 2). As well, on-farm sales led to significant cost savings and gave the farmers added flexibility, because when demand was low they no longer faced the unattractive alternatives of settling for a poor price or transporting the stock home again. Cost savings achieved through organisation of on-farm sales are shown in Table 3.

Table 2. Percentage increase in prices received for different classes of cattle due to BPP activities

	Weaner Prices	Mature Cattle Prices
Before BPP (R/kg)	4.56	4.5
After BPP (R/kg)	7.03	5.8
Difference (R/kg)	2.47	1.33
Percentage improvement	54.2	29.6

Table 3. Cost savings achieved through organisation of on-farm sales

Team	Normal Sale Venue	Distance from farm/village	Rand saved per trip	Rand saved per head	Total Rand saved
Magatle	Bele-Bala	200	1300	73.00	12,264
Maboi	Polokwane	50	375	18.00	378
Khomele	Mapani	100	625	34.72	4964
Kromspruit	Zeerust/Northam	60	313	20.83	791
Railywayblock	Vryburg	180	1125	62.50	7812
Total					26,209

A remark from Mr K Moletsane, a BPP network member from Kromspruit, North West Province highlights the importance of supportive partnerships in BPP — “I cannot find the right words to express my appreciation for the support we have received through BPP. We have learnt a great deal and hope that we will forge ahead as a closely knit partnership, committed to achieving profitable beef businesses” (Banga 2005). The BPP has conducted 180-day workshops and is planning a major cross-regional forum in 2006.

Critical factors for Sustainable Regional Improvement and Innovation Networks

Six factors have proven to be critical to the success of LIIN and BPP:

1. Creating a network culture based on mutual support, mutual responsibility-taking, self-mobilisation, self-enterprise and reciprocity.
2. Targeting specific, achievable improvements and making success measurable.
3. Appropriate network size, necessary functions and capacity to fulfil network roles.
4. Using shared processes, tools and language.
5. Developing and managing institutional support.
6. Sharing results and celebrating success.

Network culture

Gladwell (2000) poses that if you want to bring about fundamental change in people's belief and behaviour, a change that will persist and serve as an example for others, you need to create a community around them, where those new beliefs can be practised, expressed and nurtured. In LIIN, building a network culture and sense of community based on mutual responsibility-taking and support was an innovation in a region which had previously experienced many aid projects based on 'dole-outs'. A 'dole-out' and 'entitlement' culture creates dependency which is counter to sustainable networks.

The concept of 'New Regionalism' (Rainnie 2004; Garlick 1997) is aligned with the type of culture that is supportive of sustainable improvement and innovation networks. 'New Regionalism' is about developing *creative regions* that have the ability to generate and implement new ideas, by *actively* linking its structures and processes of innovation and learning to regional needs. Building a culture (and the associated capacity) where network members and partners manage and lead the network, and achieve improvement and innovation across the network is critical to viable regional networks. This type of capacity can contribute to achieving an 'Enterprising State' (Considine 2001) in which the role of citizens changes from one of 'entitlement' and 'dependency' to new forms of 'self-mobilisation' and 'self-enterprise'. This is the key to a future state of 'entrepreneurial governance'. In LIIN and BPP both the expected benefits and responsibilities associated with being a member of the network was made overt from the beginning to assist people in making decisions about joining the network.

Targeting specific, measurable improvements and making success measurable

Another factor critical to the success of regional improvement and innovation networks is to ensure the network addresses issues that matter to local people over time, across concerns, and across generations of dispersed leadership (age and experience) (Roussos and Fawcett 1995). It is critical to develop specific, measurable, actionable, realistic, targeted and timeframed outcomes on which the network can focus and against which network members can monitor and celebrate their progress (Fawcett et al. 2000; Weiner et al. 2000; Hill 2002).

In LIIN and BPP both farmers and other network partners have been encouraged to measure and report on their success in terms of the project and network target outcomes: greater profit, improved environment and increased efficiency, rather than in terms of outputs and activities conducted. This represents a major cultural change for all partners in managing R&D for outcomes.

Appropriate network size, necessary functions and capacity to fulfil network roles

From sociology, anthropology, military science and organisational science there is a balance between a network being too large and too small (Dunbar 1996). The network needs to be large enough to support the achievement of the target outcomes of the network, yet small enough for everyone to feel part of a purposeful, mutually supportive network. In an improvement and innovation network it is critical to encourage creativity and to stimulate new thinking, in which case each team in the network needs six or more people. However, too many people in network teams or the network as a whole has negative impacts on the effectiveness of conversations and personal interactions. Bigger groups require more time servicing their

relationships and social groupings larger than 150 to 200 become increasingly hierarchical in structure. Dunbar (1996) suggests the optimum size is approximately 150 members.

In LIIN and BPP the aim has been to build the regional networks to a size of approximately 120 to 170, with each network team consisting of between six and 12 people. Multiple regional networks come together to share results, support each other and celebrate success, but the more frequent and regular relationships are based on the smaller regional or sub-regional network, its teams and partnerships.

While each member in a network is equal within the network, networks do involve a division of labour where members have specialised functions, tasks and skills (Alter and Hage 1993). Wellington (1999) suggests that some form of network leadership is necessary to ensure the network's activities support the outlined purpose and target outcomes, to maintain momentum, to coordinate activities, and to secure participation and increase membership when appropriate. Fawcett et al. (2000) suggest that the network is highly vulnerable when there is a change in leadership or a loss of key leadership (Fawcett et al. 2000). This suggests that some form of succession planning can be of value in networks.

In LIIN and BPP several different functions have been recognised and people have been supported in developing the capacity and confidence to fulfil these functions (Figures 4 and 5 and Table 4). Each farmer team has a designated leader and a co-leader who can take over the leadership function when needed. A network leadership team has also been established and the members of this team supported to develop their network leadership capacity. Network management is a separate function which involves creating the environment and systems in which the network will thrive.

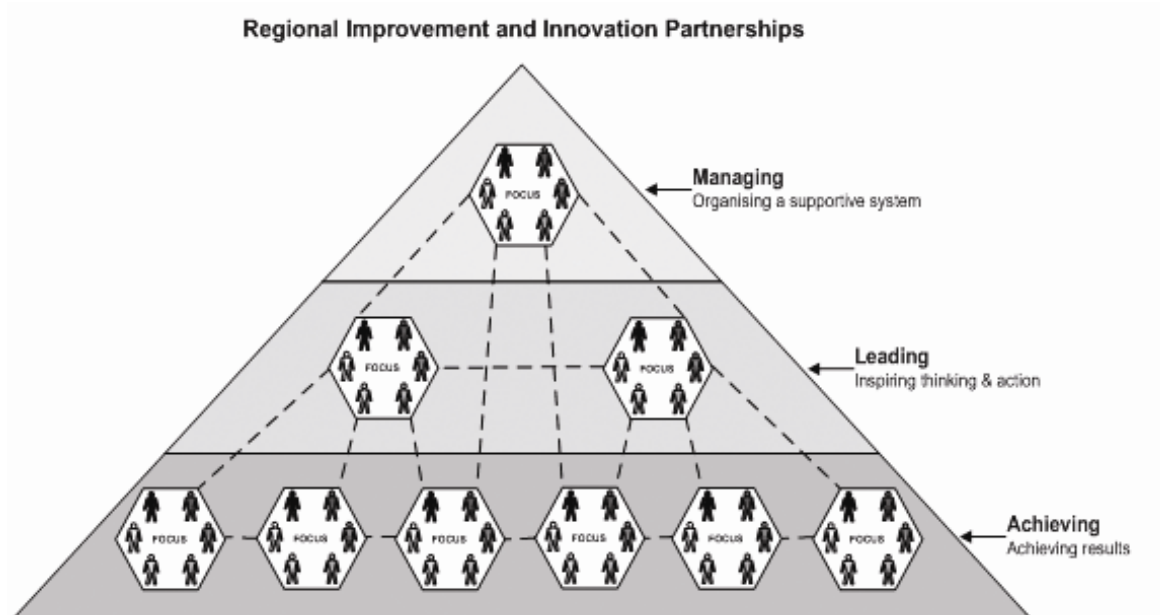


Figure 4. A model of a Regional Industry Improvement and Innovation Network of teams

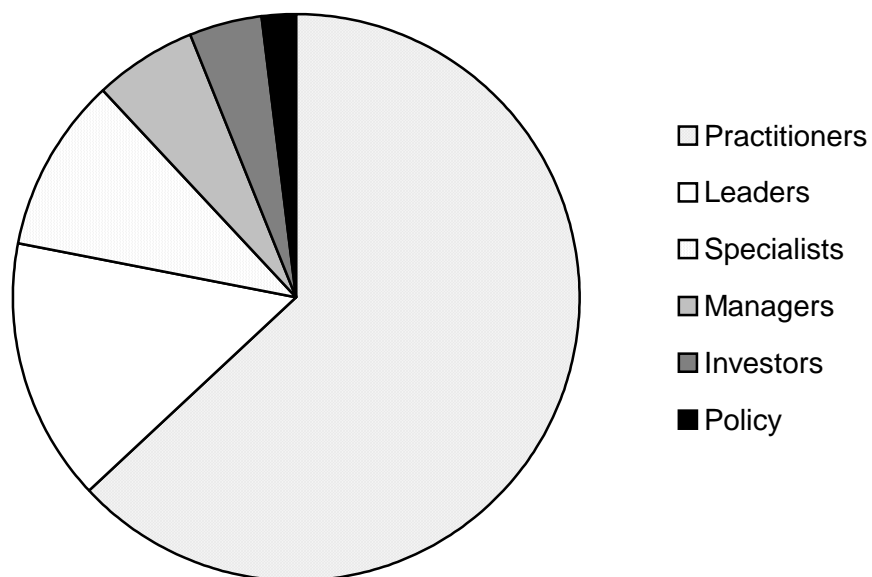


Figure 5. The types and proportion of participants necessary in productive Regional Improvement and Innovation Networks

Table 4. The functions of Achieving, Leading and Managing in regional improvement and innovation networks

Role	Function
<i>Achieving</i> Improvement & Innovation	To practice CI&I to achieve individual, and team target outcomes which contribute to project or initiative target outcomes
<i>Leading</i> Improvement & Innovation	To lead teams and networks to achieve their target outcomes effectively and efficiently. To practice CI&I to achieve individual and leadership team target outcomes which contribute to initiative target outcomes. To build capacity of individuals, teams and networks to achieve and co-lead CI&I.
<i>Managing</i> Improvement & Innovation	To design and manage a system to enable Leaders and Achievers to achieve their target outcomes effectively and efficiently. To practice CI&I to achieve individual and management team target outcomes which contribute to project or initiative target outcomes.

Shared processes, tools and language

Rounthwaite and Shell (1995) emphasise the need to develop shared processes in partnerships to achieve outcomes. LLIP and BPP were designed to equip all project participants with a shared process and tools for working together to achieve target outcomes. Working in teams using the Continuous Improvement and Innovation (CI&I) process and tools (Timms et al. 2005) enabled farmers and partners to establish effective and cooperative approaches with technical specialists and other partners, to achieve their target outcomes.

Developing a shared language is critical for effective and efficient communication and relationship building. Glossaries are useful tools for both developing a shared language and for supporting new members when they join the network. The network members decide which specific words, phrases and concepts are most critical to their effective operation and then define how these will be used in the everyday working of the network. Having shared processes, tools and language make working together, providing support, and reporting and sharing results much easier, and more effective and efficient.

Developing and managing institutional support

Hill (2002) emphasises the need to institutionalise the participation of partner organisations in networks. It is critical for network members to make representations to senior management of organisations involved in the network, explaining what the network is about, providing details of upcoming activities and establishing ongoing communication (Wellington 1999). Evaluating the network's effectiveness and activities is important in developing and managing institutional support because "few can argue with success" (Weiner et al. 2000).

In LIIN and BPP partnerships have been established with key government and non-government organisations. For example, a partnership has been established between the LIIN farmer leaders, Leyte State University staff and the Eastern Visayas Integrated Agricultural Research Centre to regionalise the pig environment improvement work undertaken by the network.

Sharing results and celebrating success

Weiner et al. (2000) emphasise the need to celebrate successes, even small ones. 'Quick wins' and small successes early on build confidence among participants and provide motivation for subsequent accomplishments (Mays et al. 1998; Mitchell and Shortell 2000).

In LIIN and BPP network members report on their actions and achievements to fellow network team members and partners every 30 to 90 days, and receive support to continue achieving their improvement and innovation targets. At regional improvement and innovation forums farmer teams and partners from across the network come together in highly supportive and motivating environments to share their results, celebrate their achievements and receive collegiate support to achieving ongoing improvement and innovation.

Early in LIIN and BPP there was some scepticism, mostly from R&D service providers, that network members would be willing and able to prepare reports and presentations on their achievements. However, with a little collegiate and technical support, network members have proved they can prepare and make reports and presentations to fellow network members and partners that are informative and valued. A comment from a member of the Hipusngo farmer team about reporting at the LIIN Farmer-to-Farmer Forum emphasises the type of supportive environment that can be created: "Reporting improved our confidence; we are not intimidated to report in front of many people because we feel that others wanted to learn from our report".

Conclusion

An old African proverb states: “None of us is as smart as all of us!” Regional improvement and innovation networks are an embodiment of this sentiment. Individual network members, partners and teams become capable of achieving outcomes they could not achieve by themselves. Research also shows a direct link between social capital such as regional improvement and innovation networks and quality, purpose and meaning of life (Baker 2000). Building networks improves our personal lives as it contributes to the world by making it a more connected place (Baker 2000).

Effective and sustainable improvement and innovation networks do not happen by chance. They happen by design. We hope the experiences gained from the Leyte Improvement and Innovation Network and the Beef Profit Partnerships project, and the critical success factors in this paper that have been synthesised from those experiences may help others to design, manage and improve sustainable regional improvement and innovation networks.

Acknowledgments

Many individuals who are involved in rural and regional improvement and innovation in Queensland, Australia, the Philippines and southern Africa have contributed to the thinking behind this paper. In particular people from the following programs and organisations have made valuable contributions in recent years — the Leyte Livestock Improvement Program and the Leyte Improvement and Innovation Network, the Beef Profit Partnerships Project in South Africa, and the Queensland Department of Natural Resources and Mines’ South East Region Workplace and Business Improvement initiative.

Also acknowledgment and thanks to organisations who have supported the Department of Primary Industries and Fisheries’ Continuous Improvement and Innovation team of Richard Clark, Janice Timms, Andrew McCartney, Paul Stewart and Helena Bond in their research, development and practice — in particular the Queensland Department of Primary Industries and Fisheries, the Australian Centre for International Agricultural Research (ACIAR) and the ATSE Crawford Fund.

Glossary

Capacity	People equipped with the necessary knowledge, skills, technologies, processes, tools, support and resources, and the capability to integrate them to achieve specific outcomes.
Improvement	Enhanced practices, processes, systems, products, services, outputs and outcomes.
Innovation	New practices, processes, systems, products and services in use and of value in the marketplace, workplace and/or community.
Network	A purposeful value-adding partnership based on reciprocal transactions between partners.
Outcome	The end result of converting inputs through systems, processes, products and services to fulfil a need.
Partnership	Interdependent (business-like) relationships between people for a specific purpose involving clear rights, roles and responsibilities.
Sustainability	Achievement of outcomes continues after an initiative finishes.

References

- Alter C & Hage J 1993, *Organizations Working Together*, Sage, London.
- Anon 2000, *ISR: National Innovation Summit – Sectoral submissions*, 2000, viewed 9 February 2000, <http://www.isr.gov.au/industry/summit/reference/sectoral/body_sectoral.html>.
- Ashby W R 1956, *Introduction to Cybernetics*, John Wiley, New York.
- Asheim B T 1996, "'Learning Regions" in a Globalised World Economy: Towards a New Competitive Advantage of Industrial Districts?' *European Union and Regional Studies Conference on 'A Changing Europe in a Changing World: Urban and Regional Issues'*, Exeter, England, 11-14 April.
- Asheim B T & Coenen L 2005, 'Contextualising Regional Innovation Systems in a Globalising Learning Economy: On Knowledge Bases and Institutional Frameworks', forthcoming in *Journal of Technology Transfer*.
- Asheim G B 2003, 'Green national accounting for welfare and sustainability: a taxonomy of assumptions and results', *Scottish Journal of Political Economy*, vol. 50, no. 2, pp. 113–30.
- Baker W 2000, *Achieving Success Through Social Capital. Tapping the Hidden Resources of Your Personal and Business Networks*, Jossey-Bass, San Francisco.
- Banga C (ed.) 2005, 'Beef Profit Partnerships Project', Newsletter Issue 4, February 2005, Agricultural Research Council, Irene, South Africa.
- Chisholm R F 1996, 'On the Meaning of Networks', *Group and Organization Management*, vol. 21, no. 2, pp. 216-36.
- Chisholm R F 1998, *Developing Network Organizations: Learning from Practice and Theory*, Addison Wesley Longman Inc., USA.
- Considine M 2001, *Enterprising States: The public management of welfare-to-work*, Cambridge University Press, Cambridge.
- Dunbar R 1996, *Grooming, Gossip and the Evolution of Language*, Faber & Faber, London.
- Fawcett S B, Francisco V T, Paine-Andrews A & Schultz J A 2000, A model memorandum of collaboration: a proposal, *Public Health Reports*, vol. 115, no. 2-3, pp. 174-9.
- Forester J 1999, *The Deliberate Practitioner – Encouraging Participatory Planning Processes*, MIT Press, Cambridge.
- Garlick S 1997, 'Regional Economic Development: new partnership challenges for local government', in B Dollery & N Marshall (eds), *Australian Local Government: reform and renewal*, Macmillan Education Australia, South Melbourne, pp. 276-93.
- Gilchrist A 1995, *Community Development and Networking*, Community Development Foundation, Great Britain.
- Gladwell M 2000, *The Tipping Point*, Little, Brown & Company, Boston.

- Goss S 2001, *Making Local Governance Work – Networks, Relationships and Management of Change*, Government Beyond the Centre Series, United Kingdom.
- Gray B & Wood D J 1991a, 'Collaborative Alliances: Moving from Practice to Theory', *Journal of Applied Behavioural Science*, vol. 27, no. 1, pp. 3-22.
- Gray B & Wood D J 1991b, 'Toward a Comprehensive Theory of Collaboration', *Journal of Applied Behavioural Science*, vol. 27, no. 2, pp. 139-62.
- Holbrook J A & Wolfe D A (eds) 2000, *Innovation, Institutions and Territory – Regional Innovation Systems in Canada*, McGill-Queen's University Press, Montreal.
- Marshall R & Tucker M 1992, *Thinking for a living: education and the wealth of nations*, Basic Books, New York, NY, USA.
- Mays G P, Halverson P K & Kaluzny A D 1998, 'Collaboration to improve community health: trends and alternative models', *Joint Commission on Quality Improvement*, vol. 24, no. 10, pp. 518-40.
- Mitchell S M & Shortell S M 2000, 'The governance and management of effective community health partnerships: a typology for research, policy and practice', *Milbank Quarterly*, vol. 78, no. 2, pp. 241-89.
- Pasquero J 1991, 'Supraorganizational Collaboration: The Canadian Environmental Experiment', *Journal of Applied Behavioural Science*, vol. 27, no. 1, pp. 38-64.
- Putnam R D 1993, *Making Democracy Work – Civic Traditions in Modern Italy*, Princeton University Press, New Jersey.
- Rainnie Q 2004, 'New Regionalism in Australia', *Sustaining Regions*, vol. 3, no. 2.
- Roussos S & Fawcett S 2000, 'A review of collaborative partnerships as a strategy for improving community health', *Annual Review of Public Health*, vol. 21, pp. 369-402.
- Weiner B J, Alexander J A & Zuckerman H S 2000, 'Strategies for effective management participation in community health partnerships', *Health Care Management Review*, vol. 25, no. 3, pp. 48-66.
- Wellington S W 1999, *Creating Women's Networks – A How-To Guide for Women and Companies*, Jossey-Bass Publishers, San Francisco.