



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PART III. PROJECT DESIGN AND MANAGEMENT

Paper 5. The Project System Improvement and Innovation Strategy

P.F. Parnell^{AB}, R.A. Clark^{AC} and J. Timms^{AC}

^ACooperative Research Centre for Beef Genetic Technologies, Armidale NSW 2351

^BNSW Department of Primary Industries, Armidale NSW 2351

^CQueensland Department of Primary Industries, Brisbane QLD 4000

Abstract. The purpose of the Project System Improvement and Innovation Strategy is to ensure regular and frequent improvement and innovation of the design, leadership and performance of the project system and its component elements, and to manage the interaction between the project system and the broader meta-system. The importance of this strategy has become more apparent over the past year. Initially it was treated as a 'supporting' strategy, but with time, recognition of its importance is growing. This strategy will require greater ingenuity and attention over the next two years to ensure project success, efficiency and sustainability.

Keywords: Sustainable improvement and innovation; model; system; strategy.

Background

The rationale for developing the System Improvement and Innovation Strategy area was:

- that the project has been designed and managed as a system with a set of interconnected and interdependent elements;
- that given the dynamic and complex context of the BPP project, it needs to improve and innovate if the target outcomes of the Beef CRC are to be achieved; and
- that since the project is fundamentally based on the concepts and principles of continuous improvement and innovation; leadership and management of the project should be firmly grounded in these same principles and practices.

Applying the Underpinning Science

As detailed in Paper 2, there is an extensive literature that explains the science underpinning the Beef Profit Partnerships project methodology. That literature was reviewed in relation to the six key elements of the SI&I model described in Paper 4. To be congruent with the systems-based approach used to design the project, the project team decided to implement a set of strategies that would assist in managing the project system. The six BPP project integrated strategies ensure that the BPP project target outcomes are achieved as a system, that the system itself is continuously improving and innovating, and that the project remains focused on partnerships (Figure 4.3):

- Partnership and network support – To ensure effective partnerships, networks and social architecture, and to achieve momentum and institutionalisation of the CI&I process during and after the project;
- Capacity, capability and competency - To equip all BPP partners, teams and networkers with the knowledge, skills, resources and support to achieve and sustain beef business and industry improvement and innovation for impact on profit, productivity and growth year by year, and to fulfil their functions and roles in the BPP project;
- Communication, information and marketing - To ensure all partners have a shared vision of the project (system, focus, methods etc) and that the partnership network and industry are adequately informed of the project achievements, and share and promote improvements and innovations;
- Measuring, monitoring and evaluation - To ensure project partners are able to measure achievements and obtain feedback and support to contribute to achieving further improvements and innovations
- Research and development - To improve, discover and create more effective and efficient mechanisms (theory, models, methods, tools) to achieve accelerated improvement and innovation;
- Project system improvement and innovation – To ensure regular and frequent measurement, improvement and innovation of the design, leadership and performance of the project system and its component elements, and to manage the interaction between the project system and the broader meta-system.

The Project System Improvement and Innovation Strategy is designed to ensure CI&I principles are applied to all elements, strategies, processes, mechanisms, teams, roles and functions, and the project system as a whole. That is, the strategy ensures regular and frequent measurement, assessment and improvement and innovation of the performance of all aspects of the project system.

Table 5.1 lists the six elements of the sustainable improvement and innovation system model and the criteria used to measure and manage the model.

All six elements of the BPP project system need to be managed to ensure effectiveness, vitality and sustainability. Each of the six elements is important, and all are linked together through the systems-based approach to project design. From the perspective of the Project System Improvement and Innovation Strategy, the last two elements – “continuous improvement and innovation processes and tools” and “momentum, culture development and institutionalisation” provide particular opportunities to leverage project improvement, progress, momentum and sustainability. Various authors support this type of approach (GOAL/QPC Research Committee 1990; Chang 1993; Cupello 1994; Holzer 1994; Walsh 1995).

‘Institutionalisation’ can be used to sustain outcomes of projects (Clark 2008). When a new model, process, technology or innovation is used in a routine manner and is accepted as something normal that is expected to continue, it is incorporated into discipline, project, organisational or industry systems frameworks and their procedures as a natural pattern (Billig, Sherry and Havelock 2005). As Ekholm and Trier (1987) explain, with institutionalisation there is an assimilation of the innovation or new way of doing things into the structure of the system. Several authors identify factors, actions and measures that support institutionalisation and sustainability of outcomes including Hawe et al. (2000), Onyango and van de Steeg (2004) and Buchanan et al. (2005). Clark (2008) highlights that in addition to institutionalisation, it is important to improve the interface of the project system with the broader meta-system in which the project and the institutions associated with the project sit. This is especially important in the Beef CRC situation where there are multiple partner agencies spread over multiple industry sectors and multiple regional environments.

In seeking to develop a sustainable project, Hill (2002) emphasises the need to institutionalise the participation of partner organisations in networks. Evaluating the network’s effectiveness and activities is important in developing and managing institutional support because “few can argue with success” (Weiner, Alexander and Zuckerman 2000). Weiner, Alexander and Zuckerman (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, Halverson and Kalrzas 1998; Mitchell and Shortell 2000).

The architecture surrounding projects, policies and organisations can influence sustainable improvement and innovation systems and processes so that they do not achieve outcomes or sustainability. The architecture can be managed by proactive action to achieve proof of concept and proof of value. This proof of value can be used to market, promote and achieve organisational, industry and government support through the ‘institutionalisation’ of policy, protocols and investment. Within the BPP project as a whole, there is an underlying critical need for the productivity and profitability, industry capacity, and partnerships and networks, focuses and outcomes to be measurable and for the achievements in these areas to be provable to Beef CRC management and other investors. There is a related need within the CI&I partnerships for effective and efficient measuring, monitoring and evaluation mechanisms to ensure partners are able to demonstrate achievements and obtain feedback and support from each other to contribute to achieving further improvements and innovations within 180-day timeframes.

According to Robert Kaplan: “*If you can't measure it, you can't manage it*”, while John Lingle proposes that “*You get what you measure; measure the wrong thing and you get the wrong behaviours*”. Therefore deciding *what* and *how* to measure is essential for project success, effectiveness and efficiency. Kaplan and Norton (2000) identify the following three pitfalls for performance measurement systems: (1) too few measures (two to three) per perspective; (2) too many measures without clear identification of the critical few measures; and (3) lack of linkage to a system for sustainable competitive advantage. It is important to link performance measures to motivation and rewards for all project partners (Pandey 2005). Several authors advocate the design of systemic performance management frameworks, such as a balanced

scorecard, which include outcomes and targets, linked to critical success factors (CSFs) and Key Performance Indicators (KPIs) (Kaplan and Norton 1992; Waldman 1994; Sinclair and Zairi 1995; Harrington 1998; Cao, Clarke and Lehaney 2000; de Waal 2002; Marlow 2005; Hansen and Birkinshaw 2007). Further discussion about CSFs and related key performance indicators (KPIs) is available in Paper 10.

Momentum and growth need to be achieved with efficiency and optimum return on investment, and agility can play a role in this (Bessant et al. 2002; Sherehiy, Karwowski and Layer 2007). The concept of agility can be applied in thinking about agile projects, organisations, industries and systems. Dynamic capability, the frequency of improvement and innovation efforts, and the speed with which improvements and innovations are incorporated, is critical to agility (Clark 2008).

Strategy Focus and Target Outcomes

Based on these considerations, the overall focus of the SI&I strategy is to ensure regular and frequent measurement, improvement and innovation of the design, leadership and performance of the project system and its component elements, and to manage the interface between the project system and the broader meta-system.

The target outcomes of the strategy are:

- To ensure outcomes, improvements and innovations from the outset of the project, and the accumulation of these year by year for high impact by the end of the project and thereafter; and
- To have influence within the meta-system (other Beef CRC programs, partner agencies and the broader cattle industry) to enable and enhance outcomes, institutionalisation and sustainability.

Implementation in the BPP Project

As Johanson et al. (1999) claim 'it is hard to obtain a good picture of anything that is moving so quickly and changing so often when only snapshots are taken at relatively long intervals'. Regular and frequent improvement and innovation sessions (every 30, 90 and 180 days) are important in dynamic systems, and are scheduled for the different teams involved in the project (see Figure 3.6, Paper 3). For example, the Project Leadership team have scheduled 30-day sessions which are conducted by teleconference, with 90- and 180-day

sessions usually conducted face-to-face. The 30-day sessions focus on reporting on and supporting operational implementation and measurement of the project strategies and project system. The 90-day sessions focus on measuring the performance of the project, and the 180-day sessions focus on evaluating the performance of the project, creating opportunities for improving project performance, and re-focusing the design and functioning of the project.

The Project Coordination team, which is made up of the BPP Coordinators from each state and New Zealand, plus the Project Leadership team, also have scheduled improvement and innovation sessions. State Coordinators conduct improvement and innovation sessions with their State Project teams. For example in Queensland 30-day teleconferences are scheduled in which the Regional Leaders and State Coordinator have the opportunity to report on action and receive support from their colleagues.

While several actions have been undertaken to support project momentum and institutionalisation of the BPP approach, this is an area that will require additional effort during the remainder of the project. Initial discussions with potential private sector providers have been undertaken, but will need to be followed up by a more systematic approach to expanding the delivery capacity for BPP. Further discussions with industry and government organisations interested in implementing, promoting or supporting the BPP approach will be scheduled.

At the whole of project system level (see Paper 4), a comprehensive and agreed performance management framework consisting of the project focus, project target outcomes and associated CSFs and KPIs is actively used to both monitor the impact of the project, and to guide continuous improvement and innovation at all levels in the project. A 'project scorecard' has been designed and is used regularly to help focus the project, assess performance, and to target areas for improvement and innovation. It is set up in terms of the six key elements of the SI&I model. An example of the type of project scorecard used (in the form of a 'spider' diagram) is given in Figure 5.1 (for a related project). It shows the average scores of the leadership team for the success of the project as a whole. The scorecard is updated as appropriate and compared over time to suggest areas for renewed efforts and improvements or revised approaches.

For example, in Figure 5.1 there was a consistent progression in scores for each

element between 2002 and 2004. However, several of the elements still have relatively low scores (especially capacity and momentum), and while from Figure 4.2 we expect momentum to be slow to begin with, the low score for capacity in this case prompted a new capacity-building initiative. This would also happen if one or more of the scores decreased over time instead of increased.

Another element of the project scorecard used to assess project performance is the success of individual meetings – did the meeting have a sound focus? Were the participants well intentioned, supportive, energetic, etc? Did the thinking improve? An example is given in Figure 5.2. Low scores on any one element suggest areas for improvement next meeting.

Preparation of the papers for this special edition has also provided an opportunity to improve the project system. In terms of the Continuous Improvement and Innovation (CI&I) process underpinning the project, the papers relating to each of the strategies represent an assessment of the performance of the strategies, and a re-focusing of thinking and action to implement specific opportunities to improve the performance of the strategies over the next one to two years.

Issues in Implementation to Date

Systems approaches to project design, leadership and management, and rigorous and overt application of continuous improvement and innovation within projects, are not common in agricultural contexts in Australia and New Zealand. Therefore it is to be expected that many of the constraints and challenges that come with applying new, different or counter-cultural approaches are to be expected during the BPP project. We need to learn from other industries and contexts where these approaches have been applied, and we need to effectively manage the dissonance that comes with change and innovation.

Time and effort are precious commodities in any project, organisation or business. Effective improvement and innovation can provide significant value to project effectiveness and efficiency. There can also be significant costs associated with not doing regular and frequent improvement and innovation. Even so, it is difficult to secure the time commitment required to undertake effective improvement and innovation sessions. This is a real “catch 22” situation

that requires concerted leadership and management to overcome.

There is a critical mass of specific skills required for effective and efficient application of the SI&I model. Clark (2008) identifies the following six areas of capacity required for people in design, leadership, management and partnership roles in the SI&I system model: (1) managing ‘in’, ‘on’ and ‘for’ dynamic systems; (2) operational, strategic and meta-level thinking, action and praxis; (3) enabling and supporting dynamism, flexibility and agility; (4) evidence-based practice; (5) recognising, supporting and enhancing both the individual and the collective; and (6) mastery in continuous improvement and innovation. Those responsible for leading and managing the project system improvement and innovation strategy require high levels of skills in these areas. These same people often have other leadership and administration responsibilities, and the personal and professional commitment needed to be proficient in these areas can be jeopardised by pressures from ineffective or unsupportive governance and organisational systems.

A significant issue in the BPP project is actively involving public service partners in the continuous improvement and innovation process and system. Issues related to promoting improvements and innovations in public services are well covered by the following authors (Gilbertson 2002; Albury 2005; Bessant 2005; Hartley 2005; Moore 2005).

Conclusion

Setting the BPP project up as a system requires implementation of a management framework to ensure regular and frequent measurement, improvement and innovation of the design, leadership and performance of the project system and its component elements, and to manage the interaction between the project system and the broader meta-system. That is the purpose of the Project System Improvement and Innovation Strategy. The critical importance of this strategy has become more apparent over the past year. Initially it was treated as a ‘supporting’ strategy, but with time recognition of its importance is growing. This strategy will require greater ingenuity and attention over the next two years to ensure project success, efficiency and sustainability. The key performance indicators of project success need to be continually improved for project effectiveness, efficiency and agility.

Appendix

Table 5.1. The six elements of the Sustainable Improvement and Innovation (SI&I) system model and the criteria used to measure and manage the model

SI&I Elements	SI&I Criteria
1. Focus	Need, vision, mission, principles, values, SMARTT targets, KPIs
2. Partnerships	Individuals, groups, partners, organisations, roles, networks, networking
3. Capacity	Knowledge, skills, resources, training, competencies, expertise
4. Technology	Technologies, information, expertise, databases, benchmarks, innovation frameworks
5. Momentum	Support, motivation, culture, institutionalisation, policy, promotion, marketing, management, leadership
6. CI&I	tools, practices, processes, systems, measurement, ideas, improvements, innovations, learnings

Figure 5.1. Evaluating implementation of the SI&I model – project scorecard

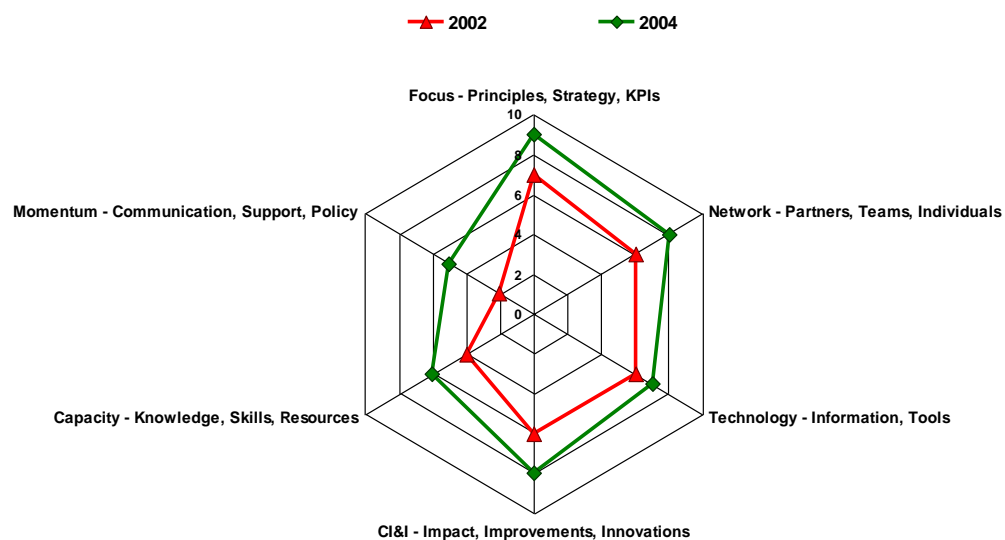


Figure 5.2. Evaluating meeting success – meeting scorecard

