

# Sustainable co-innovation



Sylvia Estrada-Flores  
LDA Winner 2008

**Sustainable Co-innovation in the Australian food supply chain. The aim of the food industry is to transform**

**agricultural raw materials into safe, convenient, good tasting and nutritious products for consumers, in a profitable and sustainable manner.**

To reach the consumers, all the participants in a food chain need some sort of integration that allows product distribution 'from farm to fork'. This integration encompasses a set of interdependent companies that work to manage the flow of goods and services along the value-added chain of agricultural and food products.

Ideally, the objectives of the supply chain partners should be closely aligned to reach the ultimate goal of realizing superior customer value at the lowest possible costs, with a fair distribution of the profits among the partners. In practice, there are often misalignments of values, goals, aspirations and personalities of the players in the chain, as pointed out by Dr John Gattorna recently. This is certainly true in the food industry, where the diversity of the sector and the variety of activities required in the supply chain are factors that contribute to these misalignments.

There is one area in which the alignment of supply chain collaborators is particularly beneficial: innovation.

It is difficult to quantify the impact of the historic expenditure in innovation-related strategies on the modern Australian food industry. One reason is the concept of innovation itself, which goes beyond the realm of research and development (R&D) to reach into business practices and processes.

Additionally, there is the complexity of the food industry and its eventful history, which evolved from fierce competition in the 1980's to relentless consolidation and the supremacy of retailers as a market power in present times.

Nevertheless, food industry experts have reached consensus in two issues:

- a) The Australian agri-food industry is in danger of losing markets that were taken for granted in the past, due to increased competition from countries such as New Zealand, South Africa, India and China.
- b) Innovation has a key role in stopping the decline in the performance of the food sector in Australia.

In present times where collaboration in the supply chain is the rule rather than the exception, innovation has also transformed from an isolated company activity often seen as a liability in the profit & loss sheet, into a collaborative activity that is perceived as an asset and even as a key strategy to a company's survival. Co-innovation (CI), a term coined by Prof. Andrew Fearne, seeks to extend the scale and scope of external partnerships and alliances to access and exploit new technologies, knowledge, and markets. CI is a key corporate strategy where the success of a new product or service in the market means success for all the supply chain partners. The development of 'innovation networks', or clusters of collaborators working at every stage of the product cycle and at every link of the chain, is crucial for successful CI.

The challenge of CI is better understood if we take into account the balance of market power between food suppliers, manufacturers and retailers: in the Australian environment, retailers (particularly supermarkets) are

perceived as the most influential party in the food chain. The ACCC is currently investigating the competitiveness of grocery prices, taking into consideration aspects such as the nature of competition at the supply, wholesale, and retail levels. In view of these developments, it is clear that the greatest hurdle that companies will face to co-innovate will be developing the right environment for collaboration. In a CI environment, elements such as communication, trust, commitment and interdependence need to exist at interpersonal and interorganisational levels.

Once these elements for CI are in place, the participants need to assess the priorities of the supply chain partners and how these can be aligned to respond to consumer needs. For example, growers and producers may centre their attention on improving field productivity and product quality, while manufacturers develop novel products that respond to the ever-changing consumer demands. Retailers may be more preoccupied by improving the distribution network and optimising cost efficiencies. Therefore, it is important to recognise the strengths and experience of each participant and evaluate their unique potential contribution to a CI project.

I believe that there are three areas where CI can achieve its greatest impact:

1. Environmental CI. For economies that largely depend in agricultural exports, such as Australia and New

Zealand, it will become critical to demonstrate that our food supply chains are aligned with good environmental practices. A recent example of environmental CI is the Sustainable Distribution strategy, which involves 37 well-known food & consumer goods companies in the U.K. It is expected that this initiative will lead to savings of 23 million litres of diesel fuel per year, through sharing of vehicles and optimising the use of warehouses.

2. New product development (NPD). Consumer-led NPD is perhaps the best platform for co-innovative projects between retailers and manufacturers. In highly perishable NPD's, procurement planning may occur more than once a day by some retailers. In these cases, the potential wastage cost exceeds the savings through economies of scale in transportation and warehousing activities. The flow benefits of CI can be captured simply with information sharing and forecasting collaboration. For less perishable foods (e.g. canned goods), efficiency in the chain is derived from low inventory levels & high capacity utilization, thus making synchronization very attractive for the supply chain partners. In a co-innovative environment, synchronization has more probabilities of success than in traditional, manufacturer-led NPD efforts.

3. New services and processes. Most of the retail-led innovations in supermarkets have focused on improving aspects such as inventory, electronic data interchange, category

management, crossdocking and coordination of supply and demand. An issue that has been brought out recently is ensuring that the shopping experience is enjoyable through improvements in retail layout and electronic cash register. Other aspects relevant to retailers are: fast response to changes in business formats, supply chain initiatives, traceability and tracking technologies.

It is my belief that CI in the food sector represents a paradigm shift in the way food supply chain business is conducted in Australia. Such a shift cannot be accomplished at the operative level only (e.g. growers, food manufacturers and retailers). To realise the full potential of CI, a national system that supports collaboration between R&D organisations, training and education providers, entrepreneurs and food supply chain partners would go a long way in helping to build trust and communication among these parties.

A national strategy for food innovation should encompass all the activities required for a successful innovation supply chain: grants for CI projects, development of market-led projects in public R&D organisations, training initiatives for staff involved in CI projects and the provision of regulatory frameworks that encourage the uptake of CI, among other activities.

I will go further to suggest that a sustainable co-innovation model would require a central overseeing organisation. This organisation, which could be a Food Innovation Strategic Council (FISC), would:

- Provide a strategic framework for food innovation in Australia, from a market-led, supply chain perspective.
- Coordinate the activities required to introduce new technology in the marketplace.
- Act as a technology broker, bringing venture/equity capital and innovator companies together.
- Coordinate legislative activities that provide adequate market conditions for adopting innovations in the wider industry.

- Coordinate government-led innovation activities (e.g. grants and strategic directions for public R&D).
- Provide timely competitive and technical intelligence to all stakeholders about the particular projects targeted.

Examples of specific food supply chain projects where a national system could improve the success rate of CI in the market include:

- i. Safety & quality in the supply chain
- ii. Sustainability of food supply chains, with emphasis in water, energy & food waste (eg. carbon neutral supply chains)
- iii. Improvements in food transportation & storage (cost, quality & energy efficiencies)
- iv. Pandemic scenario & contingency planning

In conclusion, it has been long recognised that CI, in the form of cooperation and integration of existing knowledge from different organisations across the chain, can lead to exciting new products and services. However, a concerted approach to CI in the Australian food industry would go a long way to reach the levels of openness, communication, and commitment required. Such a concerted approach should recognise the highly dynamic nature of the food manufacturing industry, the benefits of market driven innovation and the usefulness of policy as an instrument to encourage innovation in the marketplace.

It is my belief that a sustainable CI framework can help to achieve a paradigm shift in the way the Australian food industry creates novel products, processes & services. Furthermore, transforming supply chain relationships from adversarial, transactional-based operations, to cooperative approaches is a way of achieving faster & more efficient responses to the many disruptive external events that have plagued the industry, thus adding value to companies, their partners & the society in general.