



Andrew Fearne

Sustainable Food and Wine Value Chains

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Sustainable Food and Wine Value Chains

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Andrew Fearne

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Professor Andrew Fearne is Director of the Centre for Supply Chain Research at Kent Business School, University of Kent. He is an expert on food marketing, consumer behaviour and supply chain management. An economist by training, Andrew moved into the area of supply chain management because of an interest in an area of growing importance not usually covered by economists.

During the past twenty years he has been researching consumer requirements and expectations in a wide range of food supply chains in the United Kingdom, shedding light for farmers, processors and retailers on the changes needed to lift agribusiness performance in supply chains and the consumer food experiences in supermarkets into better value chains for stakeholders and better and safer eating experiences for consumers. He has also worked in France, Ireland, Slovenia, Germany, North America, the Middle East and South-East Asia.

Professor Fearne's integrated chain analysis research system and style of communication has been particularly effective during a period in the UK food and beverage sector when assaults to public confidence in food products from livestock disease outbreaks demanded system change. Growing up on a family farm and his early career role as an economist with the National Farmers Organisation in the UK were formative and influential stepping stones to an academic and consulting career which has been consistently transforming under-performing supply chains into value chains by focusing on consumer preferences.

His research and facilitation activities have involved the strategic analysis of consumer behaviour and the co-ordination of agri-food supply chains with clients and research partners from around the world.

Professor Fearne is the founding editor of the International Journal of Supply Chain Management, author of over 100 articles, and editor or contributor to over a dozen books on industry value chains and related matters.

Partners in the residency:

- Department of the Premier and Cabinet
- Primary Industries and Resources SA
- Department of Trade and Economic Development
- Department of Health
- University of Adelaide
- University of South Australia
- Yalumba
- Constellation Wines Australia
- TARAC Technologies Pty Ltd
- AMCOR Australasia
- Barossa and Light Regional Development Board
- Meat and Livestock Australia
- Department of Education and Children's Services
- Zero Waste SA
- Sustainability and Climate Change Division

Foreword



South Australia is globally renowned for the quality of our food and wine, and these industries remain our State's biggest employer and among our largest export earners.

However, the impact of climate change and rising living and production costs, along with the growing demand for healthy eating and more sustainable consumption, means the sector faces significant challenges.

During his term as an Adelaide Thinker in Residence, Professor Andrew Fearnle brought his vast international experience to help improve the processes that deliver food and wine from producers to consumers.

Professor Fearnle's residency focussed on assisting local food and wine businesses to better understand the importance of value chain thinking – to ensure we value add to our products, and maximise our sustainable competitive advantages.

He emphasised the need to work beyond traditional boundaries, and challenged the conventional thinking of organisations and individuals.

Professor Fearnle spent time working closely with regional communities – in the Barossa Valley, Riverland, Eyre Peninsula and South East – where he met with farmers, fishers, growers, packers, producers and retailers.

This not only enhanced his understanding of South Australia's agri-food sector, it also enabled him to better identify the challenges and opportunities facing our primary producing regions.

His message is a confronting one for our food and wine industries – adapt, or risk extinction.

We must embrace improvement and innovation to ensure we remain globally competitive, which is why the State Government established the SA Food Centre at Regency Park, the first facility of its kind in Australia.

Professor Fearnle's final report also highlights the enormous potential that exists, and the key steps we must take in order to position South Australia as the leading innovator in Australian food and wine.

I thank Andrew for his work and his contribution to our State, and I commend this final report to you.

Mike Rann
Premier of South Australia
August 2009

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Executive Summary



'When you stand back and face your issues, a glimpse of light falls on the face in the shadow.'

Rabbi Lionel Blue

Sustainable value chains are those in which collaborative relationships facilitate the effective flow of information, to enable rational decision-making and effective resource allocation, for the benefit of the chain as a whole. Value chains can only be sustainable if chain members are in tune with and responsive to the needs of their customers, the wants of final consumers and the complex interaction between what they do, how they do it and the natural environment within which they operate.

I found pockets of excellence in the South Australian food and wine industries, where the principles of value chain management are being implemented by businesses large and small. However, the examples of good practice were over-shadowed by an overwhelming sense of denial – the rains will come, the markets will adjust... 'She'll be right' – with few substantive changes in the strategic orientation, culture, business processes or incentive structures within many of those organisations – businesses and government agencies – that are struggling with the challenge of sustainable business development.

There is no reason why South Australia could or should not position itself as **the** innovator in Australian food and wine. Indeed, it already has an international reputation for excellence in some sectors – for example, viticulture and aquaculture. However, to develop a sustainable competitive advantage, South Australian food and wine businesses must devote more resources to penetrating higher value markets and avoid the 'race to the bottom', competing purely on price, which they are ill-equipped to win.

All organisations can benefit from the application of value chain thinking. However, the process of change is challenging, as it requires a paradigm shift in thinking (from supply 'push' to demand 'pull'), and a collaborative re-allocation of resources and responsibilities amongst all stakeholders in the value chain. This encompasses the relationship between government and industry and is applicable to all sectors – it is not an imperative that is exclusive to food and wine. Complex problems demand holistic solutions, which are stifled by the proliferation of

disciplinary and functional silos, as evident in government as they are in business.

Achieving the requisite change in mindset that constitutes the first steps on the road to sustainable competitive advantage has been the greatest challenge I have faced in this residency. It is likely to prove one of the greatest challenges in the future, so embedded is the supply chain paradigm, in government and industry alike, in strategic planning, policy making, program development and the delivery of products and services.

Recommendations

In considering my recommendations, of which there are five, I have been mindful of the depressed economic climate and the need to 'do more with less', which is, after all, consistent with value chain thinking! These recommendations are summarised below and explored more fully in the main report.

1 Thought leadership

I believe that there is a serious lack of understanding of value chain principles amongst senior managers, in both government and industry. What is needed is a catalyst for change and a mechanism for empowering senior managers to turn the principles into practice. Thus, my first recommendation is the development of a global thought leadership program, with investors from multiple agencies and a range of industries, not confined to South Australia. The focus of this program is the development of leaders who will drive change in their respective organisations and raise the level of awareness, understanding and implementation of value chain thinking and management in South Australia and beyond, at a time when the need could not be greater.

Such a program should attract investment from across government – all agencies would benefit from value chain thinking – other states, the Commonwealth

Executive Summary

Recommendations (cont)

Government and the Research and Development (R&D) corporations. This program would put South Australia on the map, in terms of global thought leadership in value chain management. The program should also seek to break down the 'silo' culture that is endemic within business and government – the benefits should transcend functional, disciplinary, geographical and sectoral boundaries. Thus, I believe it would be most appropriate for the Department of Further Education, Employment, Science and Technology (DFEEST) to be charged with implementing this recommendation, in consultation with the Department of Primary Industries and Resources (PIRSA), the Department of Trade and Economic Development (DTED) and other agencies with an interest in value chain thinking.

2 Integrated market intelligence and consumer insight

The lack of consumer insight, at all stages of food and wine value chains (but particularly upstream), amongst input suppliers and primary producers, is a major impediment to the development of a sustainable competitive advantage for the South Australian food and wine industries. This is a 'blind spot' which everyone can 'see', the removal of which is therefore something around which all stakeholders can unite. Existing market intelligence is extremely fragmented and not easily accessible in a form that individual businesses can readily use in business planning and marketing decision-making. Thus, my second recommendation is the generation of an integrated market intelligence and consumer insight service, one that is accessible to **all** stakeholders in the respective (sector specific) value chains. It should combine information about markets (size, structure, organisation, access), consumers (attitudes and perceptions) and shoppers (purchasing behaviour). The goal is to achieve a

common understanding amongst all stakeholders of what it is that consumers value and how this differs across markets (distribution channels and geographies) and consumer segments.

Whilst this may be a weakness shared by other sectors, the focus here is unequivocally on food and wine consumers. Thus, I would recommend that the lead agency for implementing this recommendation is PIRSA, in partnership with the other state agencies responsible for agriculture, food and wine; the federal Department of Agriculture, Fisheries and Food (DAFF); and the plethora of trade associations and R&D corporations, whose duplication of effort in the exploration of overseas markets and consumers is bewilderingly spectacular.

3 Holistic food policy

The current SA Food Plan is devoid of meaningful linkages to the plans of other agencies, yet the food system impacts substantially on the work of many of them. Thus, my third recommendation is the development of a holistic food policy, to support the implementation of an SA Food Plan that interacts with other plans (trade and development, health, education, workforce development, sustainability and climate change) and will facilitate the development of cross-agency programs and a more effective engagement with industry.

This recommendation should be led by PIRSA but must involve other key agencies with an interest in the food and wine industries – DTED, Department of Education and Children's Services (DECS), SA Health, Sustainability and Climate Change Division – Department of the Premier and Cabinet, and Zero Waste SA.

4 Education and training

Pathways through the education and training system are, to say the least, complicated. Syllabuses do not always

take adequate account of industry needs, are deficient in critical areas, and the methods of delivery are not as flexible as they need to be to attract more young people into the food and wine industries – an ageing workforce and low levels of retention are major concerns. Thus, my fourth recommendation is for a root-and-branch review of the current education and training provisions for the South Australian food and wine industries.

This is clearly a task for DECS and DFEEST and was initiated during the course of my residency. It must not be allowed to falter and should involve consultation with PIRSA, DTED and the regional development boards.

5 Regional co-innovation clusters

Innovative industries are built around innovative communities, and I believe that there is scope for more effective collaborative innovation at the regional level. Thus, my final recommendation is the creation of regional co-innovation clusters. The vision is to create virtual networks that are rooted in the regions but extend globally and target young people, on whom the future depends but who are currently excluded from the sustainability debate. These clusters would act as incubators for ideas, and provide pathways for young people to gain experience in business and become more pro-actively involved in community development.

This recommendation is strongly influenced by the insightful conclusions drawn by the A-team¹. Thus, I am keen that the Office for Youth should have a major role in taking this forward, in partnership with DTED and the Barossa and Light Development Regional Board, with whom progress has already been made in the formulation of a potential pilot project.

¹Engaging Young People in Sustainable Value Chains – Communication, Education and Opportunities', Office for Youth Policy Action Team (OFY A-Team) Recommendations Report, January 2009.

Introduction



'I choose life over death... and if I should fail, then I will try again. The only true failure would be not to explore at all' **Ernest Shackleton**

When I began this journey of discovery I had little idea of the terrain before me, my fellow travellers or even the final destination! After twelve months of looking, listening and engaging with a fascinating mix of government, industry and academic stakeholders, I have a much clearer picture of the landscape of the South Australian food and wine industries.

I also have a better understanding of the adaptation that is required if they are to fully exploit their potential, and become more resilient and responsive to the increasingly complex economic and environmental forces that are an enduring threat to their sustainability.

The future prospects for the South Australian food and wine industries are, I believe, fundamentally positive, but the impediments to sustainable growth and prosperity are significant and cannot be ignored.

This report is in four parts:

- Firstly, I discuss the development of value chain thinking, the benefits of value chain management and the generic barriers and enablers to its application.
- Secondly, I provide examples of the application of value chain thinking in the food and wine industries from around the world, to demonstrate what is possible, and make the case for the adoption of value chain thinking in South Australia.
- Thirdly, I present my diagnosis of the current state of South Australia's food and wine industries, highlighting what I see as the strategic challenges of today and the major opportunities for the future.
- Finally, I set out my recommendations.

My journey, like everyone else's, is coloured by my own background, experiences and intellectual limitations. As a social scientist, my fundamental interest is in behaviour – of individuals and organisations – and in how to change behaviour to achieve different outcomes. In the context of building sustainable food and wine value chains, the purpose of my residency was primarily to explore not **what** people and organisations do, but **how** they do it. Value chain thinking is concerned primarily with inputs (processes), not outputs (products and services), the assumption being that if the processes are responsive to customer needs and consumer wants, and resilient to the external challenges of climate change and global competition, then the outcomes will be more sustainable – economically, socially and environmentally. Thus, the focus of my final report is less on **what** is happening in South Australian food and wine value chains and more on **how** things get done, with a view to identifying opportunities for process improvement.

Value chain thinking

Value chain thinking



'If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart.' Nelson Mandela

There are various interpretations of (and some might argue a degree of confusion over) what constitutes value chain thinking and its relevance to the South Australian food and wine industries. In the following sections I aim to clarify the scope of the subject and the distinction between three key elements: value chain, value chain management and value chain analysis.

Value chain

The concept of the value chain was first introduced by Michael Porter in his seminal work on competitive advantage (Porter 1985). The chain, as the name implies, represents a linked set of value-added activities. Porter's view was that competitive advantage cannot be discerned by looking at a firm in isolation, but stems from the many discrete activities in designing, producing, marketing, delivering, and supporting products and services. Hence, sustaining a competitive advantage depends on understanding not only a firm's value, but how the firm fits in the overall value-adding activities (value system) of the chain as a whole.

The starting point on the journey to sustainable competitive advantage is a change in mindset that places the consumer first and everything else subordinate to their wants. Consumer preferences (eg. taste, texture, provenance, convenience, value for money) are not always consistent with customer needs (eg. higher rates of sale or lower levels of in-store waste) or policy objectives (eg. healthier diets or fewer food imports), but whether we are trying to build loyalty for individual brands or more sustainable communities and environments, changing peoples' behaviour begins by understanding what motivates them. The ability to do that requires a paradigm shift in the way we view the value chain – from supply push to demand pull.

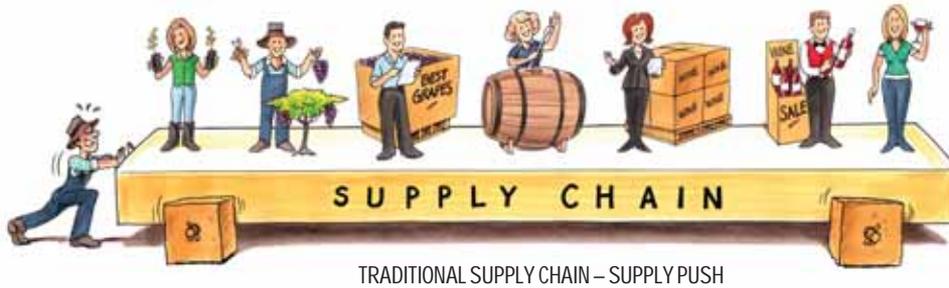
The implications of this paradigm shift for the way organisations interact is summarised in **Figures 1 and 2**.

In (traditional) supply chains (**Figure 1**) the primary focus is on material (product) flow – pushing what is made/available through as many distribution channels

as possible, heavily reliant on wholesalers and agents, building distribution and sales and exchanging transactional data (eg. sales orders, delivery notes, invoices) with little interest in behavioural drivers (eg. attitudes, perceptions, motivations), upstream or downstream. In these chains, efficiency grows from being a primary objective to an obsession and businesses do whatever it takes to cut costs (including the abuse of market power). Information is viewed as a cost, which means it can be cut and the only information exchanged is transactional. Relationships are 'arms length', due to the lack of trust and commitment between opportunistic buyers and sellers. Success in these chains is measured by the margin each stakeholder manages to generate over their costs – for commodity suppliers this will vary according to factors largely beyond their control (eg. exchange rates and world stock levels). The end result is a race to the bottom (lowest cost) in which there is little incentive to invest in anything but scale – commodity production and supply chain thinking is a hard addiction to kick.

In value chains (**Figure 2**), by contrast, the focus is on the identification of opportunities to differentiate – cutting costs where necessary (hence the removal of wholesalers and agents) but adding value wherever consumer preferences make so doing profitable. In these chains information is regarded as a critical success factor in which businesses invest and are willing to share with like-minded trading partners – those with whom trust has been built through commitment over time and with whom conversations focus on where the opportunities for adding value exist and how the benefits of collaborative cost reduction and differentiation can be shared for the longer term benefit of all stakeholders in the chain. Notice also that in value chains the barriers between firms (inter-organisational silos) that are so prominent in traditional supply chains, dissolve over time as the chain learns to pull together, as one, united in the focus on the final consumer and the sustainability of the chain as a whole.

Figure 1. Supply chain thinking



TRADITIONAL SUPPLY CHAIN – SUPPLY PUSH

Figure 2. Value chain thinking



SUSTAINABLE VALUE CHAIN – CONSUMER DEMAND PULL

IMAGE COURTESY OF PRIMARY INDUSTRIES AND RESOURCES SA

Focusing on the key enablers – information flow and relationships – changes the way businesses view the world in which they operate. A switch to value chain thinking has fundamental implications for the quality of information and the strength of relationships that underpin strategic and operational decision-making, and the financial model that drives the incentivisation of individuals’ behaviour, from the boardroom to the shop floor. Value chain thinking requires firms to embrace the principles of collaboration, which in turn demands aligned objectives, open communication, sharing of resources, risks and rewards. This is not easy and cannot happen overnight, particularly when the dominant paradigm, which has served so many businesses so well in the past, is diametrically opposed to value chain thinking.

Sustainable value chains are those in which collaborative relationships are underpinned by inter-personal and inter-organisational trust. This facilitates the

effective flow of information – within and between organisations – which is an essential ingredient for rational decision-making and effective resource allocation. More important, in the context of sustainability, sustainable value chains are more in tune with the needs of their customers and the wants of final consumers, and more sensitive to the complex interaction between what they do, how they do it, and the environment within which they operate.

The value chain proposition

It is widely recognised that final consumers have exclusive rights to the definition of what constitutes value in a product or service. Firms can only create successful value propositions by understanding what it is that consumers value in the products and services they create, and subsequently adapt to suit specific target segments (see, for example, Anderson et al. 2006, Butz & Goodsten 1996; Parasuraman 1997; Rintamäki et al. 2007; Vargo & Lusch 2004; Woodruff 1997).

Thus, when discussing value propositions, value chains and the sustainability thereof, it is important to distinguish between the terms ‘customer value’ and ‘consumer value’. The former relates to organisational buyer behaviour and focuses on the buyer’s evaluation of a product (or service) in the context of organisational performance measures (eg. margin, rate of sale, waste), and business objectives (eg. profit, return on investment, market share). The latter term focuses on final consumers and their evaluation of the consumption of a product or service, in the context of individual or collective (eg. household or community) utility, which extends from the basic fulfilment of physiological needs (eg. hunger and thirst) to higher levels of psychological fulfilment (eg. wellbeing and self-respect).

Therefore, the primary difference between a supply chain and a value chain is a fundamental shift in focus, from the supply base and producers to the customer base and consumers. Both ends of the chain are highly heterogeneous

Value chain thinking

and require careful segmentation, for the purpose of effective resource allocation. However, in most instances, supply chains focus upstream on integrating supplier and producer processes – improving efficiency, reducing waste and meeting customer value – while value chains focus unequivocally downstream, on understanding what it is that consumers value and then delivering it as effectively, efficiently and quickly as possible. This distinction often gets lost in translation as businesses become too focused on value as defined by their own organisation (or in some cases the next organisation in the chain) and fail to recognise the importance of delivering value as defined by the final consumers of their products or services.

The important point here is that whilst customer value is critical in order to gain market access – failure to understand and meet the needs of retail buyers will eventually result in an adversarial relationship, minimal information sharing and a competitive strategy wholly reliant on efficiency – it is the final consumer who ultimately determines where the value lies in a product or service. Failure to understand and meet the wants of final consumers will result in both suppliers and buyers losing ground to competitors who have likewise satisfied customer needs but present a stronger and more carefully targeted consumer value proposition.

This point is particularly relevant in the context of the growing interest in sustainability – of both production and consumption behaviour – and the increasing demands being made of commercial businesses to behave more responsibly with respect to the environmental sustainability of their procurement, production and distribution practices. If sustainable production and distribution practices are something that consumers value, then suppliers should allocate resources to reduce their carbon footprint, in the expectation of a commercial return in

the form of a price premium. However, if consumers remain oblivious to the challenges of sustainability – the response to which is currently being led by government policies and corporate social responsibility initiatives – the appropriate allocation of resources could be very different, with compliance the primary motive for changes in the way products and/or services are produced and delivered.

The potential disconnection between customer needs and consumer wants is not the only one that makes the concept of ‘value’ in value chains a difficult one to pin down. The tension between consumerism and citizenship is at the heart of the sustainability debate, in which too few people are engaged. The resulting degradation of our natural environment and deterioration in social welfare (eg. public health) represent fundamental challenges to the notion of consumer sovereignty. Some would argue that sustainable value chains should have public good, not private benefit, as the primary focus. The problem with this argument is that most commercial enterprises are motivated by financial returns, not the public good, which of course is why the market mechanism often fails to deliver the public benefits that governments seek. This is changing, albeit slowly, as consumers become more aware of and concerned about the sustainability of their lifestyles and reflect this in their purchasing decisions.

In the meantime, whilst the rapprochement of consumerism and citizenship may be happening too slowly, it remains the most effective way to capture the minds of chief executives, which is why I continue to promote a strong focus on the consumer value proposition in value chains. Commercial businesses must be tuned into the way consumers perceive, form attitudes towards and establish preferences for different products if

they are to stand any chance of competing effectively. Similarly, government agencies and non-governmental organisations (NGOs) must be tuned into the same wavelengths if they are to stand any chance of changing consumer perceptions, attitudes and preferences where it matters most – at the supermarket checkout.

In collaborative value chains prices are determined by the value that is derived by the final consumer, which for commodities is volatile but generally falls over time. Thus, in commodity markets, the emphasis is very firmly on reducing supply chain costs to enable businesses to survive at lower prices. By contrast, the adoption of ‘lean thinking’, in which value chains are configured to allow product to be pulled through the value chain in response to demand, with minimal inventory and maximum speed and flexibility of response, is gaining increased attention. In the UK several pilot projects have been co-ordinated through government-funded initiatives to demonstrate the value of lean thinking in removing waste and improving efficiency².

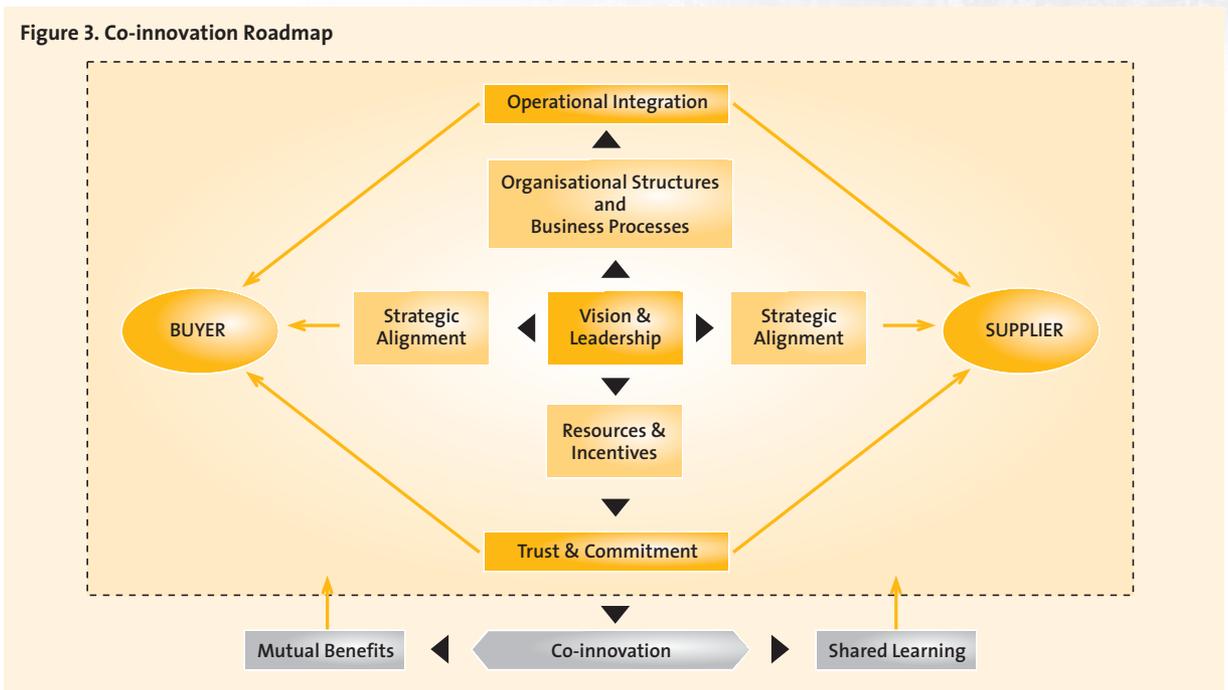
Value chain management

Managers are charged with making decisions about resource allocation and use. When an organisation recognises the merits of value chain thinking and comes to terms with the consequences of embracing the paradigm shift from supply chains to value chains the question arises: What should it be doing differently?

There are four key ingredients for effective value chain management (VCM):

- Strategic alignment – collaboration is not feasible unless all parties are pulling in the same direction.
- Transparency – this relates to the **efficient** and **timely** flow of **relevant** information to all parties in the value chain, without which too many decisions will be taken ‘blind’ leading

Figure 3. Co-innovation Roadmap



to inappropriate allocation and use of scarce resources.

- Relationship integrity – trust, commitment and inter-dependence are key success factors that require fundamental changes in the way organisations and people interact. Without trust, buyers and suppliers have no choice but to trade on the open market or use traditional contracts as transactional vehicles to reduce the risk of opportunistic behaviour.
- Consumer insight – customers are the gatekeepers, with whose strategies suppliers must be aligned if market access is to be maintained, but consumer insight is the key to **sustainable** competitive advantage as without it, sooner or later, buyers and suppliers fall blindly into the commodity trap.

Since 2005 I have been working with colleagues in the University of Tasmania³ and the University of Queensland⁴ to

develop a conceptual framework for the analysis of VCM, and particularly the identification of barriers and enablers for its adoption in the food and wine industries. We have placed specific emphasis on collaborative innovation (which we refer to as co-innovation), where we feel there are real opportunities for improvement, in organisational activity (product and/or service innovation) and the way that organisations go about their business (process innovation). We have developed the framework, which we refer to as the co-innovation roadmap (Figure 3), by modifying existing value chain theory in light of detailed insights gained from two Australian case studies – Houston’s Farm (Bonney et al. 2007) and Coles-Simplot (Horticulture Australia Ltd 2008).

The framework builds on the key VCM ingredients highlighted above, placing them in the context of an individual business seeking to embrace the principles of VCM and put them into

practice. It begins with the strategy and vision – so often lacking, particularly in small and medium-sized enterprises (SMEs) – which must be aligned with that of key (target) partners – you cannot ‘do’ VCM with everyone so the first step is to determine the most likely candidates. This is followed by investment in and design of business structures and processes that support the vision and, again, are aligned with partners. If these are not well understood and well integrated then the strategy will fail, as people within the organisations will face repeated barriers to change – working around existing processes is a drain on resources and the spirit of co-innovation.

² See, for example, the work of the Food Chain Centre (www.igd.com), the Red Meat Industry Forum (www.redmeatindustryforum.org.uk), the Cereal Industry Forum (www.hgca.com) and the Dairy Industry Forum (www.dairyuk.org).

³ Laurie Bonney and Rob Clark, Tasmanian Institute of Agricultural Research (www.utas.edu.au/agsci)

⁴ Ray Collins and Ben Dent, School of Integrative Systems (<http://www.nrsm.uq.edu.au/>)

Value chain thinking

Accepting the need for continuous improvement creates a culture and mindset that embrace change rather than resist it – people are encouraged to challenge the status quo; where skills are deficient, training and support is provided, often in partnership with collaborating partners. Mentoring and mobility within the value chain are the norm in ‘mature’ value chains that co-innovate.

Trust is a critical component of VCM as it lies at the very heart of relationship development; the co-innovation roadmap highlights the importance of building trust through what you do (competence) as well as what you say (commitment). The key here is the cycle of organisational learning, within and between partner organisations, as this learning is the hardest thing for competitors to copy.

Despite the well documented benefits of the collaborative business model that value chain management embraces⁵, the proportion of businesses practising it is relatively small. Managers continue to refer to the value chain as a supply chain and practice supply chain management rather than value chain management. As Meadows (1999) explains ‘Paradigms are the sources of systems. From them, from shared social agreements about the nature of reality, come system goals and information flows, feedback, stocks and flows and everything else about systems’. The paradigm shift from supply chain thinking to value chain thinking is in motion but has a long way to go before the transition becomes the norm.

I believe the primary reasons for this are fivefold:

- The majority of today’s chief executive officers (CEOs) and senior managers – those who make the rules and determine the vocabulary and culture within and between organisations – cut their business teeth during the 1980s. It was a time when global

markets were in a general state of excess demand and the focus was on operational effectiveness – making sure there was enough product in the chain and shifting it as quickly as possible to strategically located warehouses. The concept of ‘value’, let alone ‘consumer value’, was irrelevant and distribution was the key commercial weapon employed.

- The planning horizon for too many business managers and policy-makers is too short. Small and medium sized enterprises (SMEs) struggle to find the time or the desire to consider the longer-term challenges as they grow – if growth is their objective. Policy makers are often politically motivated, which means the planning cycle is far too short, particularly when it comes to policy planning for challenges that voters do not understand or recognise as immediate priorities (eg. climate change and sustainability). Focusing on the here-and-now leaves businesses (and government) blind to the challenges of tomorrow, and impotent when required to respond swiftly to crises, often of their own making and to which they have paid insufficient attention to fully comprehend.
- Determining what it is that consumers value is conceptually and methodologically challenging. Why focus on the complex when it is much easier to assume that all consumers want to pay less for everything and then focus on reducing costs? Within organisations this often results in relocation to low-cost countries, outsourcing and process re-engineering. Externally, it often results in the rationalisation of suppliers and the abuse of market power.
- The proliferation of functional and disciplinary silos stifles innovation and adaptation to what is becoming an increasingly turbulent, uncertain and dynamic business environment. The silo mentality makes it extremely

difficult for individuals to think ‘outside of the box’, to consider the implications of their actions for the organisation, let alone the chain, as a whole, and to recognise the value of ‘seeing the whole’. Managers tend to work in specific functional areas (eg. purchasing, manufacturing operations, logistics, sales, marketing, finance and innovation) and are usually rewarded for optimising that part of the business for which they have responsibility. Worse still, CEOs are generally paid on results, no matter the process, and as Nicholas Taleb laments, in his incredibly insightful book “Fooled by Randomness”⁶, “We continue to worship those who won battles and despise those who lost, no matter the reason”. Many CEOs are revered for their success in commodity markets, which in many, if not most, instances, has more to do with good luck than good judgement.

- The benefits of collaborative value chains generally outweigh the costs, but the latter are not insignificant. They are often perceived as prohibitive by those (primary producers, processors and retailers) scarred by opportunistic behaviour upstream and downstream, and for whom the abuse of power remains a much easier option in the short term, which is as far as many stakeholders in the agri-food industry care to look. The biggest cost associated with building collaborative value chains is management time – generating the trust and goodwill necessary to integrate key business processes in order to reduce costs takes time, and results in a degree of inter-dependency with which many feel uncomfortable and about which those outside of these collaborative value chains remain sceptical.

I believe that these barriers to the adoption of value chain thinking are endemic, and embedded in business organisations and business culture the world over. Overcoming them is bound



to take considerable time and effort. As Meadows puts it: 'You keep pointing at the failures in the old paradigm, you keep speaking louder and with assurance from the new one... you don't waste time with reactionaries; rather you work with active change agents and with the vast middle ground of people who are open-minded' (Meadows 1999). Nobody said it was easy!

It is important to acknowledge that the collaborative business model is more appropriate for some enterprises/ markets/value chains than others. For example, in commodity markets (in which the opportunities for growth are diminishing), price is the key driver of resource allocation, and volume growth, market share and efficiency are the key performance measures. In these circumstances there is less scope (and it is fundamentally more difficult) for trading partners to develop relationships beyond 'arms length' and share information beyond the transactional level. In contrast, in value-added, differentiated, fragmented and rapidly changing markets (which tend to provide the greatest opportunities for growth) the scope and need for improved vertical co-ordination is far greater.

It is also important to stress that VCM is a strategy that businesses, individually and collectively within a chain, choose to do; it cannot be imposed from above,

by industry associations, government agencies or regulators. Yet all organisations (large or small, public or private) can benefit from the application of value chain thinking – using scarce resources more efficiently and effectively by focusing on specific consumer segments in distinct target markets.

The process of change is challenging, as it requires a paradigm shift in thinking (from supply chains to value chains) and a re-allocation of resources, risks and rewards. Many, perhaps most, businesses in the food and wine industries find this difficult to accept, so scarred are they by the systemic abuse of market power, particularly from stakeholders downstream, in the past.

Value chain analysis

There are opportunities for improvement in all organisations and all value chains. The problem is that all too often organisations (or at least the people that manage them) are reluctant to accept the principle of continuous improvement, or believe it applies only to other organisations with whom they interact and not themselves!

Value chain analysis (VCA) is a diagnostic tool, defined by Taylor (2005) as '...

the multi-dimensional assessment of the performance of value chains including the analysis of product flows, information flows and the management and control of the value chain'. It provides a mechanism for drawing the attention of different stakeholders to the opportunities for improvement at different stages in the value chain, and can be an effective catalyst for change.

VCA involves an assessment of the relationships between the different stakeholders which, coupled with the effective flow of information, enables the economic optimisation of material flows – allocating time, people and technology appropriately. Consequently, the methodology focuses on three key issues:

- the dynamics of information in the value chain, from final consumption through to primary production and input suppliers and back again – how inclusive, transparent and responsive are the information flows in the chain? To what extent are stakeholders' decisions (what to produce, when to produce, how to produce) influenced by what consumers value?
- the creation and flow of value, in the eyes of the final consumer, at each stage in the value chain – how many of the production and processing activities truly add value? How much investment is being made in these critical activities? How many are necessary but do not add value (these should be completed with minimal resource allocation)? How many are unnecessary (wasteful activities must be eliminated and resources re-allocated to drive value creation and efficiency)?

⁵ See, for example, Bello et al. 2003; Cannon & Homburg 2001; Duffy & Fearn 2004; Kalwani & Narayandas 1995; Lusch & Brown 1996; Noordewier et al. 1990; Whipple et al. 2002)

⁶ Taleb, N. 2004. *Fooled by Randomness: The hidden role of chance in life and in the markets*, Penguin Books

Value chain thinking



- the nature of relationships – how much trust exists between different stakeholders? What is the nature of communication within and between organisations? What evidence is there of organisational commitment? How are risks shared and the assumption of risks rewarded in the chain?

Understanding the nature and source of consumer value (as opposed to cost or margin) facilitates behaviour change at all stages in the value chain, the operation of which will always be sub-optimal when there is a lack of transparency (poor information flow) and poor communication between trading partners due to a lack of trust and commitment (poor relationships).

Life cycle thinking and the value chain

Life cycle thinking is a qualitative framework used to understand and assess systems. It has historically been applied to natural systems through fields like ecology, where the relationships between species and their habitats are studied. More recently, the framework

of life cycle thinking has been applied to the field of industrial ecology as a means of understanding the interaction of industrial systems with the natural environment⁷. Life cycle thinking does not produce easy answers, but it does provide a framework to recognise and understand complex systems and their inter-relationships.

The goal of life cycle thinking is to reduce resource use and emissions to the environment from a brand, product or service whilst simultaneously improving its socioeconomic performance throughout the life cycle. This way of thinking leads to extended and shared responsibilities from cradle to grave. It goes beyond the traditional focus on production sites and manufacturing processes so that the environmental, social, and economic impacts of a brand, product or service over its entire life cycle, including the consumption and end-of-use phase, are taken into account.

Life cycle analysis

Life cycle analysis (LCA), often called ‘cradle-to-grave’ analysis, is the most comprehensive of the analytical tools available for quantifying the environmental impacts related to the production, processing, packaging, distribution, use and disposal of a product (Camilleri 2008). The focus of LCA is on the intensity of resource use (eg. energy, water) and the environmental impact of outputs (eg. by-products, waste and emissions) at each stage of the value chain, the aim being to identify opportunities for improving resource use, reducing environmental impacts and targeting parts of the life cycle where the greatest improvements can be made.

During the course of the residency I was exposed to life-cycle thinking through my involvement with Yalumba, Australia’s oldest family-owned winemaker. Yalumba’s internationally

recognised environmental management system uses a streamlined LCA that underpins the company’s commitment to sustainable winemaking, and provides a catalyst for strategic dialogue within Yalumba and with its trading partners, upstream and downstream (Camilleri, 2008).

Sustainable value chain analysis

VCA and LCA are diagnostic tools, the value of which lies in their ability to stimulate behaviour change amongst multiple stakeholders in the value chain. LCA, by definition, requires an assessment to be made of the environmental sustainability of a product, from input supply to final consumption and end of life. VCA requires value chain members to expose themselves to scrutiny with respect to the economic efficiency of material flows, the effectiveness of information flows and the resilience of stakeholder relationships.

Together they have the potential to provide a more powerful diagnosis of sustainability, within and between organisations in the value chain. Their combined application was explored during the course of my residency, in a demonstration case study sponsored by PIRSA and involving a host of partners⁸. The case study used the value chain for Oxford Landing (one of Yalumba’s brands) to Tesco (the largest single overseas customer of Australian wine) in the UK (the largest overseas market).

The full results of the project can be downloaded from the PIRSA website⁹ – they represent one of the major outputs from the residency – but are summarised in the following case study.

⁷ Cohen-Rosenthal 2004; Ehrenfeld 1997; Ehrenfeld 2000; Nielsen 2006; O’Rourke 1996

⁸ Yalumba, Tesco, Amcor, PIRSA, DTED, University of South Australia, University of Adelaide, Kent Business School

⁹ http://www.pir.sa.gov.au/_data/assets/pdf_file/0003/93225/V2D_Final_Report.pdf

Case Study

Sustainable Value Chain Analysis – Key Findings from the ‘Vine to Dine’ Project

CONSUMER VALUE: More sustainable wine production/packaging may be something that retail buyers are requesting of their suppliers, in an effort to support socially responsible strategic initiatives, but very few UK shoppers currently value sustainability as an attribute of the wine they purchase from supermarkets. Oxford Landing is regarded as a ‘typical’ Australian wine (a ‘safe bet’) but for many supermarket shoppers the selection of Oxford Landing, like most ‘everyday’ wines, is triggered by a promotion, which in the case of a known brand is difficult to resist and requires little effort, and thus, attention to the bottle or the label.

MATERIAL FLOW: The VCA highlighted the dominance of necessary but non-value adding activities in the Oxford Landing/Tesco (OLT) value chain, which implies a focus on efficiency and suggests that there is limited scope for adding value. Tesco’s approach to merchandising and setting promotion slots introduces greater uncertainty in forecasting annual sales, which potentially creates waste or loss of profit along the value chain.

CARBON EMISSIONS: The LCA revealed relatively low carbon emissions occurring downstream (retail and final consumption) but substantial contribution made in the vineyard and at the winery. Together these account for more than one-half of the total carbon emissions from the chain. The recent attention directed towards alternative packaging formats is justified by the emissions data – bottling, packaging and labelling together account for 15% of total



emissions. However, the fact that consumers regard the appearance of the bottle and the information on the label as ‘value adding’ means that low cost solutions that are effective in reducing emissions may reduce the perceived value of the wine in the eyes of the consumer, resulting in less not more value being added as a result of reducing the carbon footprint

RELATIONSHIPS: The OLT value chain is characterised by strong relationships. There are many examples of best practice throughout the chain – Yalumba is widely respected as a customer, a supplier and as a place to work. However, they need to make more use of their strong relationship with Tesco to engage more effectively in strategic dialogue with respect to sustainability and to the longer term development (and possible re-positioning) of the Oxford Landing range.

INFORMATION FLOW: The OLT value chain contains a mixture of strong and weak information flows between and within organisations. A clear correlation exists between the nature of relationships and information flows. Relationships appear slightly weaker with downstream partners (eg. Tesco) and with the secondary players (eg. logistics providers). Moreover, the understanding of the customer (Tesco) needs and consumer wants (value) is distinctly limited upstream, particularly amongst input suppliers and growers.

The case study highlights the value of emissions data – when viewed alongside the categorisation (in the eyes of the consumer) of activities involved in the production and distribution of wine – as an input to sustainable value chain management and resource allocation for capital expenditure, R&D, and government intervention programs. This ensures that decision-making is more closely aligned with and driven by environmental **and** economic sustainability.

Value chain thinking

Demonstration projects

Achieving the requisite change in mindset that constitutes the first steps on the long and winding road to sustainable competitive advantage has been the greatest challenge I have faced in this residency, and is likely to prove one of the greatest challenges facing the South Australian food and wine industries in the future, so embedded have they become in the supply chain paradigm.

Demonstration projects are key to engaging people and organisations in the change process. Thus, during the course of my residency a Value Chain Project Development Team (VCPDT) was established to assist in the design and implementation of a range of value chain projects to help promote the message. The VCPDT comprised of eighteen people from across a number of disciplines and experiences, representing relevant government agencies and industry stakeholders¹⁰. Their prime task was to identify projects that would enable the participants in the chain to embrace the principles of value chain management and to work towards collaborative solutions that involve multiple stakeholders and an acceptance of the need to change what is done, as well as the way it is done.

The VCPDT was successful in working through a number of project proposals and kick-starting several 'live' projects during the course of the residency, in addition to the Vine to Dine project summarised above:

- Spencer Gulf Prawns – mapping of existing South Australian prawn value chains with a view to identifying opportunities for greater collaboration between fishermen and vertical co-ordination with agents, distributors and end users, to differentiate South Australian prawns from (lower cost but inferior quality)

imported prawns (in partnership with Rural Solutions SA, PIRSA, Spencer Gulf and West Coast Prawn Fishermen's Association, Seafood CRC).

- Barossa Valley Community Store – leverage of their existing co-operative membership and purchasing databases to enable more effective use of targeted promotions and the maintenance of store loyalty in the face of growing competition from national supermarket chains (in partnership with Barossa & Light Regional Development Board, University of Adelaide).
- 'Feast' Fresh Meat retail stores – development of a loyalty card program to enable the targeting of specific shopper segments with specific promotional offers, encouraging repeat purchase and building shopper loyalty to help grow the business from the strong niche base established in Adelaide (in partnership with Meat & Livestock Australia, University of Adelaide).
- Free Eyre – feasibility study for the development of sustainable lamb value chains in the Eyre Peninsula, for the benefit of more than 240 mixed farming enterprises who have come together in pursuit of a collaborative business model based on value chain efficiency. The scoping project includes mapping existing resources (flock sizes and genetic pool) and potential links into differentiated markets (in partnership with PIRSA, Rural Solutions SA, Meat & Livestock Australia, Eyre Regional Development Board).
- Fruit & Vegetable Consumption – South Australian consumption of fresh fruit and vegetables is amongst the lowest in Australia and the Departments of Health is keen to engage with industry stakeholders to explore collaborative interventions to raise awareness and educate consumers about the benefits of eating more fruit and vegetables, whilst simultaneously making sure that quality produce is available and in

the right format (eg. fresh, prepared, pre-packed) for different target groups (in partnership with the Department of Health, PIRSA, Rural Solutions SA and Adelaide Produce Markets).

- Riverland Futures – a value chain workshop was held with a wide range of stakeholders from government and industry, the result of which was the identification of a number of potential value chain projects designed to support innovative approaches to much-needed community and industry restructuring in the face of a chronic lack of water for irrigation and declining demand for the crops traditionally grown in the region (in partnership with PIRSA, Rural Solutions SA, DTED, Riverland Grape Growers Association, Riverland Tourist Board).

The legacy is that many of these projects continue to progress and will hopefully generate lasting benefits to the stakeholders, providing relevant (local) examples of value chain thinking in practice.

¹⁰ Rural Solutions SA (convenor), Primary Industries and Resources SA, Dept of Trade & Economic Development, SA Health, University of Adelaide, University of South Australia, Yalumba Wines, Tarac Technologies, Amcor, Barossa and Light Regional Development Board, Zero Waste SA, Meat and Livestock Australia

Value chain management in practice – insights from around the world



'The range of what we think, do, and achieve is limited by what we fail to notice' **John Grinder**

Value chain thinking, management and analysis are not new concepts, but their application to the food and wine industries remains limited outside Northern Europe, and particularly the UK, where supermarket strategies, government regulations, market conditions and industry structure have conspired to promote an increasingly collaborative model of doing business.

The case studies presented here are not intended to provide exhaustive insights into the scope of collaborative value chain initiatives. Indeed, the focus is deliberately on small-scale businesses operating in commodity (eg. largely unbranded) sectors, in order to illustrate that value chain management is not the exclusive domain of global corporations with well-developed systems and integrated business processes. Further examples can be found in the additional readings and on websites listed at the end of the report.

Case Study 1

Dedicated value chains for dedicated retail strategies – fresh potatoes in Asda and Waitrose (Duffy et al, 2008)

Asda and Waitrose are at opposite ends of the retail spectrum – Asda is the second largest supermarket in the UK with an every-day low price (EDLP) strategy that drives volume; Waitrose is a niche player with quality and choice at the heart of their offer to consumers. Yet in recent years these two retailers have led the pack in terms of market growth in fresh produce, a category that both retailers regard as strategically important and in which they have adopted very similar value chain strategies.

Solanum packs fresh potatoes from its Sutton Bridge site, which is almost 100% dedicated to Waitrose, who stock up to 35 different varieties throughout the year. Fenmarc packs from its site at March, which is almost 100%

dedicated to Asda, whose range is less diverse, comprising 10 key lines. Rationalisation of the respective value chains, at packer level, occurred several years ago, so both companies have been working as sole suppliers for some time.

Both business are extremely well integrated with their respective customers' operations. Solanum has a desk at Waitrose head office and the account manager spends two days per week working directly with the Waitrose team, who encourage open communication with their supply base. Fenmarc is given a free hand to develop the category plan for Asda to ensure that they remain on target over the course of the season. There are no panic buttons in the Fenmarc/Asda relationship – Fenmarc is entrusted to get it right over time and Asda trust them to take difficult decisions on their behalf. A trusted source of supply means fewer inspections, fewer rejects, better availability and fewer customer complaints.

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Both Fenmarc and Solanum see dedication as a key part of their competitive advantage and want to see greater dedication at the grower level, but for different reasons. For Fenmarc, fewer, larger, dedicated growers is consistent with the Asda model of volume growth and cost reduction, but Mark Harrod, Managing Director of Fenmarc, is keen to stress that it is not just about taking out the cost; it is what you do with the savings that makes the difference in the long run:

'A dedicated grower base with fewer larger growers will provide opportunities to keep driving down the cost of doing business. It is really simple, but organisational culture is a major barrier to change. Taking cost out is one thing, investing in growth and further cost-saving is another thing. Many farmers will use profit from one enterprise to subsidise another. The big prize is investment in continuous improvement – a lot of growers have invested in cold storage on the back of a cost-plus contract.'

Solanum sees communication as a key in driving down costs and raising quality across the grower base, as Paul Tracey, Logistics and Purchasing Manager explains:

'Growers have a better chance if they have a full understanding of what Waitrose want and take responsibility for what they do, for which they will be paid a premium. We have worked really hard on crop intelligence. We don't want to be giving Waitrose problems, we want to offer solutions. The key is communicating early when we do have a problem. Waitrose encourage that and are very open to discuss plans as well as problems. Waitrose want the best potatoes and growers want the best prices, our job is to make this possible and retain a margin for ourselves!'

Case Study 2

Implanting the benefits of buyer-supplier collaboration in the soft fruit sector – KG Fruits and Sainsbury's (Fearne et al, 2006)

Forecasting sales is notoriously difficult for many food products, but particularly for those susceptible to surges in demand due to unforeseen changes in key environmental factors, such as the weather. This makes it difficult for food retailers to predict accurately what will be needed and hence what to order. In their efforts to ensure adequate on-shelf availability, retailers will tend to over-order when demand is uncertain, to avoid running out of stocks and disappointing consumers. This can cause significant problems for suppliers of short shelf-life products, such as soft fruit, for which wastage can, in extreme cases, reach 15 to 20%.

Sainsbury's is one of the few multiple retailers to open their doors to suppliers and invite them to collaborate, specifically in the highly sensitive area of sales forecasting. Supplier implants now populate Sainsbury's Holborn office on a regular basis but, as soft fruit buyer, Dominique Schulenburg recalls, the decision to open up their demand management systems to suppliers was not taken lightly:

'At first we were nervous about pulling suppliers in and exposing our systems but it was obvious to most of us that we did not have the capacity to give the soft fruit category the attention it deserved... we suspected the problem was largely down to our inability to generate store-level forecasts that responded more effectively to local buying behaviour and short of a major system overhaul we knew the solution required manual intervention, product-specific knowledge and time that we simply did not have within our internal forecasting team. The scenario was unwelcome but tailor-made for a supplier implant.'

KG Fruits is a grower-controlled soft fruit marketing co-operative and the largest of Sainsbury's five soft fruit suppliers. In Susan Barrow they had someone who was IT literate, well informed about consumer needs (having worked for several years on KG's extensive program of consumer research) and keen to get an insight into retail systems, for the benefit of all concerned.

Susan was given the objective of '... assisting the accurate forecasting of soft fruit to maximise sales and reduce waste across the Sainsbury's estate'. Associated responsibilities included:

- assistance in the provision of accurate soft fruit forecasts, with final sign off from the supply chain manager and buyer
- interrogation of data at store level
- management of weekly service level analyses for all suppliers, including rationale for performance
- assistance to the buyer in post-promotional analysis, planning analysis for seasonal programming, and daily (summer), weekly and monthly customer complaints management
- weekly store visits and quality benchmarking
- collation of Electronic Point of Sale (EPOS) data and working with Sainsbury's other soft fruit supplier, AFI Ltd, to produce periodic reviews.

This seemed a tall order and the implant was scheduled for six months, starting in February 2003. However, as Susan recalls, it was obvious to everyone that any improvement, however small, would have a positive impact on the supply base and so the investment (KG continued to pay Susan's salary for the duration of the implant) appeared justified:

'We estimated that every 1% of forecast inaccuracy was costing growers dearly in lost sales and avoidable waste, so it did not take us very long to respond to the invitation from Sainsbury's.'

The first month was spent understanding the different systems that Sainsbury's use and how they influence daily procedures. One of the first changes made was to reduce the expected carryover of stock with which stores could begin each day. There was no rule of thumb about what percentage of the next day's sales should still be in store at the close of business. Due to the short shelf-life of the product and the time that deliveries arrive at store it was agreed that 70% would be acceptable until a thorough housekeeping of all stores for all lines within the soft fruit category had been completed. This resulted in an immediate, one-off change in the basis for orders to avoid excessive carryover of stock, which immediately reduced potential wastage at store level.

This housekeeping had not been done before, due to the lack of time available for forecasters to spend on the assessment of sales and stock levels for individual product lines at store level – no small task with 12 soft fruit product lines and over 500 stores.

The implant was an unqualified success: in the six weeks after the housekeeping was done, modifications to Sainsbury's systems were completed, strawberry sales alone reached record levels of over £3 million per week, waste levels were reduced significantly and there was more stock on the shelves for Sainsbury's customers to buy at the right time of the week.

Clearly, both Sainsbury's and their supply base benefited directly from their soft fruit implant, but Susan Barrow points to much broader and longer-term benefits that she thinks will flow from her six months at Holborn:



'The real benefit to come from all of this is the trust and goodwill that we have built with Sainsbury's... we now have a much better mutual understanding of our respective businesses, which means we can work more efficiently and more effectively for the benefit of KG, Sainsbury's and, most important of all, Sainsbury's shoppers.'

Case Study 3

Communication is key to Metro Cash & Carry's success in Vietnam (Cadilhon & Fearn, 2005)

Metro Cash & Carry Vietnam is a German-owned business-to-business grocery wholesaler specialising in services to hotels, restaurants, and catering institutions. This special focus accounts for more than half of Metro's business in Vietnam. The company's main strategy is to be cheaper than its competitors in the traditional wholesale markets, while also focusing on food safety and customer satisfaction.

Metro's success is closely linked to its strategy of building long-term supply relationships – especially with local producers of fresh vegetables. These relationships are based on trust. To gain that trust, potential suppliers, for their

part, must show that they can deliver high-quality produce regularly and be responsive to fast-changing customer demands. Metro looks for financially stable suppliers with proven experience in vegetable production and a reputation for produce quality.

Trust is built mainly on results. Metro will start sourcing from potential suppliers little by little to check the regularity of quality. This reliability is important. Fresh produce buyers at Metro receive many offers from local suppliers, but a supplier that consistently provides good quality and low price in a stable manner throughout the year is difficult to find. At the same time, Metro also needs to acquire the trust of its suppliers. One way it does this is through establishing secured payment in the supply contract. Although there is a fixed delay in payment, which can go up to 30 days, the company rewards a successful supply relationship by lowering the delay after a period of satisfactory deliveries.

These trust-based relationships rely on the exchange of transparent market information between suppliers and Metro buyers. Metro's individual fresh food buyers are responsible for maintaining good interpersonal relationships with all regular suppliers. This means not only communicating

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frequently with suppliers by telephone and fax but also physically visiting suppliers several times each month. Metro has even purchased fax machines for those suppliers who did not have one. Although the communications may seem low tech, they have proven to be very effective.

The focus on communications and product quality has had a positive impact on value chain performance. Metro's focus on higher-quality vegetables brings them greater stability in orders and prices. These suppliers also gain greater risk avoidance through the company's guarantee of payment. Finally, because reliable quality produce is still relatively difficult to find in Vietnam, established Metro suppliers who focus on quality have a certain power in negotiations with the wholesaler.

Trusting relationships are time-consuming to build and regular suppliers are difficult to find in Vietnam. So, once a supply relationship is established, it is important for Metro to keep it because of the investment made. Therefore, best-performing Metro suppliers can be assured of a long-term commitment by the distributor – a commitment that is manifest in the supply contract.

For Metro, the investment in building strong supply relationships for its fresh vegetables assures the company of a constant supply of quality goods for its demanding customers. By building supply relationships directly with farmers – and not trading intermediaries – Metro can reduce costs and stay relatively competitive on price.

Collaboration doesn't end with Metro's suppliers; it extends to customers as well. The company's relationship with the New World Hotel, a five-star property in Ho Chi Minh City, offers an excellent example.

The general managers of Metro Cash & Carry Vietnam and the New World Hotel agreed in 2002 to experiment with a strategic alliance whereby Metro supplies most of the hotel's needs. Basically, the hotel buys everything that Metro can offer. As a result, more than 97% of the hotel's purchases come from Metro.

The partnership is based on strong collaboration and information sharing in order planning and replenishment. Both companies have assigned a dedicated staff member to manage this strategic alliance: a key-account manager at Metro and a procurement manager at the hotel. The hotel purchasing manager can call the Metro key-account manager at any time during working hours for an emergency delivery, and Metro will deliver immediately – even during weekends. Furthermore, Metro always sends a member of its sales staff to the New World Hotel to supervise each delivery and assess its quality with the hotel's staff.

The New World Hotel orders three times a week, on Monday, Wednesday and Friday, for delivery on the following day. This order cycle enables Metro to take its time in preparing the goods and saves time for the hotel's procurement staff. Transportation costs are minimised because it is cheaper to have one big truck transport a large order than to have several trucks deliver daily. Metro also extends credit to its privileged partner as the hotel's payments are made twice a month by bank transfer.

The relationship depends on frequent communication between the Metro key-account sales manager and the hotel procurement manager. The hotel procurement manager will call the Metro key-account manager four times every week to assess the quality of each delivery. Additionally, when market conditions lead to shortages,

Metro staff provide the hotel's staff with advanced warning of changing supply factors. This enables the hotel to implement alternative supply arrangements. As with the supplier communication, the interaction between Metro and its customer is personalised, simple, and highly effective: daily phone calls between dedicated staff in the partner firms and joint planning of supply and demand are enough to lead to the satisfactory delivery of highly perishable fresh vegetables.

Sophisticated technology certainly has a place in the modern value chain, but the Metro Cash & Carry story proves the enduring effectiveness of simple, straightforward communication.

Case Study 4

The evolution of market mechanisms and organisational structures – Europe's wholesale markets (Cadilhon et al, 2003)

Collaborative value chains evolve in part due to the failure of existing market systems to deliver value for some or all stakeholders. In the majority of agri-food markets where collaborative value chains have evolved, a polarisation is observed in market characteristics, with the more consistently high-quality products generally associated with the collaborative value chains and the lower and more variable quality associated with the traditional marketing systems. This invariably causes tensions between different stakeholders – those outside the collaborative value chains complain of lower prices as demand for higher/more consistent quality products moves from the traditional marketing systems to the collaborative value chains, whilst members of the collaborative value chains enjoy premiums over the market price and/or higher margins (sometimes at lower prices).



The 'success' of collaborative value chains threatens the existence of traditional organisations (eg. auction markets) as volumes and prices fall. Producers complain of a lack of transparency in collaborative value chains (from which they are excluded) and pressure increases in existing organisations to change, in response to the changing market requirements. In some parts of the world (eg. Northern Europe), where collaborative value chains are most advanced, these traditional marketing systems have embraced the opportunity for change, replacing their original price discovery and determination roles with a range of services (credit provision, warehousing, distribution, export support). This facilitates more effective value chain operations between collaborating partners, with particular emphasis on supporting primary producers, where fragmentation remains greatest and the need for consolidation and central service provision is most evident.

One of the best examples of this change in the role of traditional market channels and marketing organisations is the auction market, which historically has played a critical price determination and discovery role but which faces extinction by

the vertically co-ordinated value chains, where traceability and quality assurance is more important than price alone. Those auction markets that have failed to adapt now represent little more than a residual 'dumping ground' for second-grade produce, meat and fish, which will still find a home in the fragmented food service sector but which has no place in the majority of supermarket value chains in Western Europe. Those that have survived and continue to prosper (eg. Rungis in Paris, Rotterdam in the Netherlands and Girona in Italy) have done so on the basis of a much extended range of consolidation, warehousing, and distribution services tailored to the needs of distinct market segments which are poorly served by existing channels (eg. ethnic foods and food service).

The Rotterdam wholesale market is a good example, experiencing renewed growth in its activities in recent years, despite the dominant market share of supermarkets and cash-and-carry shops in the country, due primarily to three specific local characteristics:

- a steady development of open-air retail markets for local Dutch people living in and around the city. The Markets Department division of the

City Council of Rotterdam has been encouraging the opening of regular outdoor retail markets in the city. Native Dutch residents increasingly enjoy buying fresh produce from these markets. All the retailers in these markets come to the wholesale market for their supplies, thus maintaining the traditional activity of fresh produce wholesalers.

- a strong presence of small near-East grocery shops. Rotterdam city has a strong ethnic minority population, coming mainly from Turkey. These ethnic minorities have kept their native shopping habits and prefer to buy food in small grocery shops rather than in big supermarkets. This has induced a strong development of small independent grocery shops in Rotterdam. All these grocers come to the wholesale market for their supplies, including some items that are specifically imported and packaged for them from the near-East (eg. preserved olives and pickles in large jars, unripe green plums). These ethnic retailers make up 25% of customers to the market. It is all the more striking to note that some wholesalers and the Market Authority seem ill at ease with this turn of events, though they admit its positive impact.

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- a rising importance of independent fast food catering. Many small pizza and Turkish sandwich shops have sprung up in Rotterdam. These numerous independent fast food restaurants come to the wholesale market for their supplies and are now the driving force of the market.

Faced with this evolution, wholesalers in the Rotterdam market have reacted to their changing customer base by providing delivery services, some processing services, or by specialising their activity. For example, one cheese wholesaler on the market has been diversifying his activity: from Dutch and European cheese sold to small cheese retailers he is now making most of his throughput by selling pizza ingredients (ready-made pizza dough, grated cheese, feta cheese, ham slices, etc.). The Market Authority likewise has accompanied this change towards more institutional customers in the customer base by following a one-stop shopping concept for the market. By leasing some units to firms selling dessert ice creams, groceries, packaging and decoration items and flowers, catering firms can now find most of their supplies on the market and do not need to go to another location to buy other non-food items.

The liberalisation of the market has also reduced the role of the Market Authority to that of a general infrastructures manager. The only market regulating activity left to the Authority is the choice of firms admitted in the market. In this way the Authority can still decide to further diversify the market, though its founding act states food as its main activity.

As far as the state and local governments are concerned, the former role devoted to wholesale markets – ensuring food security and low food prices to the country – has been transferred to the supermarkets, yet wholesale activities are still considered important. Indeed, the district plan of Rotterdam designates parts of the Spaanse Polder industrial area for food wholesale only. The new recognised role of the wholesale institution is a social and employment one: providing jobs for unskilled labour in the food value chain and preserving small independent retail activities in the city.

An analysis of South Australia's food and wine value chains



'I keep six honest serving men (They taught me all I knew); their names are What and Why and When And How and Where and Who.' **Rudyard Kipling**

The aim of my residency was to explore the extent to which the application of value chain thinking might assist commercial businesses and government departments in developing more economically, environmentally and socially sustainable South Australian food and wine industries. In this part of my report I summarise what I have identified as the main strategic challenges and opportunities.

In presenting my diagnosis, I have focused on the four key enablers of successful value chain management: strategic orientation and alignment, transparency, relationship integrity and consumer insight. However, context is critical in the application of any conceptual framework or business model, so I begin my diagnosis with a brief summary of the contextual challenges that I have identified during my residency.

The statistical evidence base underpinning this landscaping of the South Australian food and wine

industries is surprisingly fragmented and incomplete. Australian Bureau of Agricultural & Resource Economics (ABARE) statistics provide a comprehensive picture of the state of primary production but, as you move downstream, the evidence regarding industry structure and profitability is patchy at best. Thus, this summary reflects consideration of the available data where it exists, and subjective assessment based on personal observation and discussions with sector specialists and business leaders where it does not.

Contextual challenges

The contextual challenges which confront the South Australian food and wine industries are many and varied. I have found it useful to classify them as external challenges (those which are not of their making and are beyond their direct influence or control) and internal impediments (factors that inhibit innovation, adaptation and sustainable growth).

The major external challenges facing the South Australian food and wine industries include:

- rising input costs (eg. fuel, grain, water)
- currency volatility
- the global financial crisis
- increased competition in all markets (domestic and global) from countries that have lower input costs (eg. Chile, Brazil, China and New Zealand)
- growing pressures from health lobby groups with regard to obesity (eg. the rapid growth in processed food of high calorific and low nutritional content) and alcohol abuse
- growing pressure from environmental lobby groups with regard to waste, energy and the degradation of landscapes and ecological systems as a result of intensive primary production systems
- the drought, which has resulted in a complex and politically motivated paradigm shift in the way water is valued.

When I began my residency in February 2008, South Australia was 'consumed' by the drought. The lack of water created unprecedented constraints on primary production and the very existence of entire regions and communities – the Riverland being the most vivid example of a region heavily dependent on large-scale production of commodities, the value of which has been declining much faster than their ability to increase productivity. For grape growers and producers of field vegetables and top fruit, for which the Riverland is renowned, the drought constitutes, quite literally, the final straw, for some, and a major social, economic and political challenge for the South Australian government.

An analysis of South Australia's food and wine value chains

At the time of writing, the state remains starved of adequate water supplies for irrigation, but worse still, the global financial crisis is now putting even greater pressure on commodity prices and South Australia's ability to compete in global export markets.

At the same time, growing awareness of, interest in and concern about diet, health, alcohol abuse and the environmental sustainability of the food chain – primarily from lobby groups that are highly influential in export markets (most notably Europe) but increasingly across Australia – is creating additional burdens on primary producers and processors who are struggling to survive, and therefore fail to see the opportunities that come with all these forces for change: necessity **IS** the mother of invention.

These external challenges are coupled with:

- a population of just 1.5 million (the second smallest state in the country population-wise)
- an industry structure that is predominantly small scale – there are relatively few large-scale (multi-national) food and wine businesses beyond the three major wine processors, ABB Grain and San Remo
- a fragmented production base – there is a distinct lack of collaboration between producers
- an ageing farmer/grower profile
- a shortage of skilled labour and low rates of retention in food processing, due to competing demand from other industries (eg. mining), a lack of career opportunities within small agri-food businesses, and the negative image that the agri-food industry has with a substantial proportion of young people
- a lack of basic business skills, particularly marketing, amongst primary producers.

Together, these challenges have contributed to volatile returns and declining profitability, particularly upstream (Lagura et al. 2009), and make it extremely difficult for South Australian food and wine businesses to compete purely on the basis of scale and economic efficiency. Yet, scale is not the key to success in all markets.

The Netherlands is an example of a country that has made a virtue of its small size, establishing a global reputation for being innovative, responsive, with fingers on every (market) pulse, collaborative arrangements with centres of applied research, and government agencies willing to provide support to lubricate the wheels. Moreover, while the fragmentation of regional, national and international markets is bad news for large commodity meat processors, fruit and vegetable packers and wine makers, who thrive on homogeneity of demand and economies of scale, for a state that is so heavily dependent upon small and medium-sized food and wine businesses this is a welcome trend.

Diagnosis

The base ingredient for success in any organisation is strategy – those that fail to plan, plan to fail, and those that fail to recognise the perils of competing in commodity markets, without the necessary resource endowments and (large scale) industry structure, lack strategic vision.

As already noted, South Australia has neither the resource endowments nor the industry structure to compete in global commodity markets. After decades of a production orientation that proved successful, in the short term, due to excess global demand, industry leaders failed to anticipate the inevitable decline in the level of demand, as new market entrants emerged and the growth in supply from South Australia continued unabated, often exacerbated

by government initiatives to attract investment in primary production and further processing.

The alternative strategy, which the minority of food and wine businesses have adopted in recent years, is differentiation and value adding: producing for market channels and consumer segments where price is not the primary determinant of purchasing decisions for customers or consumers, such as niche retail outlets and high-end restaurants in Japan, Europe and North America. In these markets innovation is the critical ingredient – without it South Australian food and wine producers will struggle to differentiate themselves from the competition and become price takers.

Several people with whom I have spoken during my residency, as well as previous Adelaide Thinkers in Residence (eg. Geoff Mulgan, Susan Greenfield), have highlighted the culture of innovation that exists in this state. There is no reason why South Australia could or should not position itself as the innovator in Australian food and wine. Indeed, it already has an international reputation for excellence in viticulture and aquaculture.

The Premier's Food Awards are an excellent showcase of all that is good about South Australian food and wine – innovative and high quality – and the World Food Exchange, which was hosted by South Australia in 2008, highlighted the tremendous potential that resides in this state for innovation and excellence in food and wine and the important links with tourism.

During my residency I was fortunate enough to witness some of these most innovative and successful food businesses, all of which have embraced the principles of VCM in their strategic and operational decision-making. Detailed case studies of these businesses are downloadable from the SA Food Centre website¹¹. The following summaries highlight the key points.

¹¹ www.safoodcentre.com.au/talking_food/case_studies

Richard Gunner's Fine Meats

Richard Gunner's Fine Meats is a rarity in Australian meat, growing flagship brands through the formation of key alliances and the alignment of product quality with shopper purchase data (beef and sheep meat produced, graded and labelled to Meat and Livestock Australia's world-best system, Meat Standards Australia). They adopted a winning 'paddock to plate' value chain, long talked about in the industry, achieved in this case in South Australia by an exceptionally well-informed family business in less than a decade.

Almondco Australia

From a grower co-operative in the 1930s, Almondco Australia has transformed into an internationally competitive player in both the domestic and export markets. Almondco accounts for 30% of national production, and shows that focused, strategic alignment of the whole chain, including scale, innovation and consistency, pays dividends for consumers, customers and stakeholders.

ABB Grain Ltd

This leading national grain company (which could be perceived to be a commodity trader) is a best-practice value chain manager. This is manifested in their attention to detail and precision processes, unrivalled chain management, and marketing of barley from South Australia to Sopporo Breweries in Japan.

Maggie Beer Products

A desire for excellence, a passion for flavour, prolific networking and innovation have been the 'secrets' to an extraordinary business journey from a no-frills, much-loved, Barossa family restaurant into national best 'foodie' brands. Strong collaborative relationships, especially in-family, have grounded and enabled this incredible journey, with Maggie now a national



icon through books and ABC-TV's hugely popular program, *The Cook and the Chef*. Maggie Beer Products continue to discover unique product niches.

Barossa Fine Foods

This family-owned business based in the Barossa Valley highlights the successful application of 'consumer insight' in the quantum leap that it has achieved from a small, regional meat processor to a fine food retailer with five outlets in Adelaide, as well as the original site in Angaston.

Kinkawooka Shellfish

Extensive international consumer and market research by the family business principals set the course for accelerated development from bulk shellfish in Eskies in 2000 to pre-packaged, clean, pot-ready, one-kilogram bags of mussels – the first Australian business to translate research to this set of product attributes.

Tarac Technologies

In an era when the community is demanding environmentally sound solutions to industry waste management, Tarac has been quietly and successfully doing exactly that for decades. It built on its solid technical foundations by focusing

on its customers' requirements and became a key player in the Australian wine industry. Tarac provides an essential service to winemaking businesses in four states, as well as exporting international quality brandy back to where it originated, France.

Foodbank SA

Diligent application by an experienced business manager of value chain principles, especially collaborative relationships with food retail and charitable organisations, has enabled a 'not-for-profit' organisation to meet compound growth in demand for food by the poor and needy, with minimal government assistance.

These case studies demonstrate that innovation is alive and kicking in the South Australian food and wine industries, and that the principles of value chain management are already being implemented where it matters most – on the ground and in the factory – by businesses of all sizes and in all sectors. These businesses recognise the importance of a strategic orientation, aligning themselves with customer needs and consumer wants and adopting a collaborative approach to different parts of their businesses.

An analysis of South Australia's food and wine value chains

However, my impression is that these businesses are the exceptions that prove the rule. In order to develop sustainable competitive advantage, South Australian businesses must be able to effectively access high-value niche markets, not seek to be cheaper than their competitors. Continuing to engage in a race to the bottom on costs is a practice that simply cannot be sustained, without the support of favourable exchange rate movements. Moreover, improvements confined to the borders of individual organisations, let alone the artificial borders between states, will always result in sub-optimisation of the value chain and struggle to achieve any macro-economic impact.

If my assessment is accurate, the question that arises is: How have so many South Australian food and wine businesses fallen into the commodity trap? I believe there are several reasons for this, few of which are unique to South Australia and many of which are in common with the barriers to the adoption of value chain thinking discussed earlier.

Firstly, there appears to be a lack of strategic thinking about value chains at all levels, and a production ('push') orientation that is as deeply rooted in South Australia as I have seen anywhere in the world. There is a strong sense of pride in production excellence in almost all of the sectors with which I have engaged – 'We produce the best x in the world!' has been a common claim. However, the evidence for this has been less convincing and, in many cases, does not exist. That does not mean it is not true, but it does mean there is a lack of detailed knowledge about what customers and consumers want, perceive and value in food and wine from South Australia.

The lack of consumer insight often results from excessive (and in most export markets exclusive) dependence on agents and distributors. These may

lack the skills to gain the depth of consumer knowledge necessary to compete effectively in high value export markets; they may also lack the incentives to share such knowledge with their suppliers, for fear of dis-intermediation (losing control as customer loyalty to the agent is replaced by consumer loyalty to the supplier's brand).

My impression is that, in common with the national picture, South Australian food and wine businesses have been (and remain) too dependent on a supply chain model that separates individual businesses from the most important stakeholders – customers and consumers. Excessive focus on production excellence and market share (which has driven 'blind' investments in processing capacity), and, for the most part, exclusive reliance on distributors to 'dispose' of product, have left large parts of the South Australian food and wine industries disconnected and vulnerable to competition on the world stage.

In most commodity supply chains in Europe and North America, suppliers have failed to invest sufficiently in market research and consumer insight, leaving them with no other option but to focus on efficiency and compete on price. The realisation that, in most instances, this strategy is unsustainable invariably comes too late, following relentless cost-cutting exercises which leave them starved of resources to invest in the capacity to interpret market information and to pro-actively drive value added from the bottom up rather than awaiting the next cost-cutting edict from the buyer.

The importance of collaborative innovation was highlighted by Terry Cutler in his report 'Venturous Australia' (Cutler 2008), which concluded that 'Innovation in the first decades of the 21st century is more

open and pervasive, characterised by skill in collaborating and making connections so that knowledge flows and grows, and so becomes available to meet customer and community needs.'

If more South Australian food and wine businesses embrace value chain thinking they will, if nothing else, recognise the paramount importance of customer and consumer insight. This should result in at least two things:

- investment in more and better consumer research – focusing on the drivers of behaviour (purchasing and consumption) as well as behaviour itself
- closer scrutiny of value chain design – getting connected with customers and consumers is difficult at the best of times, but particularly so when wholesalers and agents block the flow of information and the development of relationships upstream.

There is a fundamental disconnection between primary producers, processors, distributors, retailers and consumers. This has resulted in a breakdown in relationships (there is very little trust between the different stakeholders in the value chain), and ineffective information flows, which underpin strategic planning and operational decisions within and between businesses.

A major factor contributing to the lack of trust in the Australian food and wine industries is the abuse of market power by the supermarkets, Coles and Woolworths, who together account for 70% of grocery sales. The enquiry of the Australian Competition and Consumer Commission (ACCC) on the competitiveness of Australian supermarkets, published in September 2008, reported an increase in the profit margins of supermarkets despite fierce retail price competition and an increase in global commodity prices. This implies that the margins of suppliers (food manufacturers, winemakers and primary

producers) have consequently suffered. Indeed, 30% of suppliers reported revised trading terms ('increased promotional expenditure provided by the supplier, increased rebates, warehousing allowances, increased remittances and increased off-invoice discounting') as contributing factors to the increase in retailer gross margins (ACCC, 2008). The maintenance of such practices does little to foster a collaborative mentality amongst manufacturers and primary producers in supermarket value chains.

My impression is that the South Australian food and wine industries have, in the past, relied too heavily on government for support and leadership – in identifying market opportunities, penetrating new markets and investing in R&D. Governments and sectoral R&D corporations are generally too slow in responding to, let alone anticipating, changes in the market, and their motives are not always in tune with the needs of individual businesses.

I believe that there is a lack of strategic vision and leadership. The signs are emerging that harsh lessons have been learned and the painful process of structural adjustment is under way, certainly in the wine industry. However, the fragile relationships that exist and the paucity of information that flows between stakeholders in the value chain mean that this process is not well understood by all and, as a result, may well take longer than necessary.

I also believe there has been an excessive R&D focus on primary production and inadequate attention paid to food technology, logistics (eg. cool chain and traceability), and investment in the development of the 'soft' skills associated with co-innovation, relationship management and new product development. PIRSA is making a real effort to move beyond the farm-gate but remains too reactive to the perceived needs of primary producers, preventing



adequate resources from being (re)allocated to programs and projects focused on addressing the needs of the value chain as a whole.

The industry strategic planning process developed within PIRSA may be an effective way for government to engage with industry and prioritise resource allocation, but, to date, resources have been allocated primarily upstream – so the planning process and industry engagement needs to be more closely reflected in the agency's priority areas and resource allocation. Moreover, my experience elsewhere suggests that industry strategic planning has limited impact at the enterprise level, where engagement in the planning process (and therefore ownership of the resulting plans) is limited – it is individual businesses that take decisions, and they are not a homogeneous mass all pulling in the same direction.

Grasping the opportunities – the process of adaptation and the role of government

government



'If there is anything we wish to change in the child, we should first examine it and see whether it is not something that could better be changed in ourselves.'

Carl Gustav Jung

The case for government intervention in the process of adaptation and change, from supply chains (push) to value chains (pull) is, in my view, compelling and may be summarised as follows:

- The shift to vertically co-ordinated value chains is a broad shift across nations and industries, is soundly based in commercial practice and is now proceeding apace in international food and wine markets (as exemplified in the case studies outlined earlier).
- South Australia's food and wine industries have been slow to adopt a similar model (with only a few exceptions of which I am aware), leaving them exposed in international markets.
- The reasons for tardy adoption of value chain thinking include a combination of inappropriate government interventions in the past, culturally embedded resistance to change, and poorly functioning information

systems. Information asymmetry results in bounded rationality, which leads to inappropriate (inefficient and/or ineffective) allocation of (scarce) resources.

This points very clearly to intervention, which might facilitate a more rapid adaptation and change – of mindset, culture, strategy and operations. This does not leave industry more dependent upon government but provides it with the capacity and capability to adapt systemically, by developing robust, resilient and integrated processes rather than using a recipe of 'do's and don'ts'.

Meadows (1999) points to the futility of focusing on 'parameters' when seeking to intervene in order to change the way a system (society, industry, organisation) functions, and highlights the importance of culture change and empowerment, to facilitate behaviour change from within, which is far more

likely to endure. 'Putting different hands on the faucets may change the rate at which the faucets turn, but if they are the same old faucets, plumbed into the same old system, turned according to the same old information and goals and rules, the system isn't going to change very much.'

The importance of government facilitation and capacity building in the specific area of collaborative innovation was also highlighted by Terry Cutler, whose report called for 'The current suite of government market-facing program assistance (to be) designed to focus on... building the capacity of firms to absorb and incorporate new knowledge (and)... facilitating collaboration – especially between firms and universities and publicly funded research agencies' (Cutler 2008).

It is evident from the discussions I have had with senior managers from different government agencies and across the industry sectors that there is inadequate collaboration in addressing the increasing complexity around food and wine value chains. This is perhaps not surprising, given the singular State Food Plan target of 8% growth in the sales of finished food. The Food Issues Group provides a vehicle for addressing this and will hopefully do so in the consultation process feeding into the new State Food Plan, from 2010.

The collaboration between PIRSA and the Department of Trade and Economic Development (DTED) in the creation of the SA Food Centre is a good example of cross-agency collaboration in support of industry needs, and is to be applauded. There is scope for much more in future.

In the following sections I reflect on the roles of those agencies with whom I have engaged, in supporting the process of change and adaptation identified above.

Primary Industry and Resources SA (PIRSA)

As the lead economic development agency responsible for food and wine, PIRSA's role is to facilitate sustainable development of South Australia's primary industries and of their downstream, value-adding industries. This role involves two main challenges:

- Since primary industries are resource (land, water, energy) intensive, PIRSA must facilitate negotiation between competing resource users about appropriate levels of access to those resources.
- Since the South Australian food and wine industries have significant structural problems that impede the successful exploitation of commercial opportunities in increasingly competitive global markets, PIRSA must facilitate the evolution of different commodity sectors in a way that allows firms to compete successfully over the long term.

Both of these challenges are complex and for neither of them does PIRSA have the means to do the required facilitation on its own. In this respect, its 'production environment' is similar to that of many commercial product and service providers who have found the 'value chain' a winning business model.

The environment in which PIRSA operates involves a number of stakeholders, including:

- most other South Australian Government agencies
- numerous Commonwealth Government agencies
- all South Australian regional local government bodies (and many urban ones)
- industry institutions such as representative and R&D organisations



- prominent firms in key industries and, particularly, at key stages of the value chains of primary industry products
- key consumer and resource-user groups (eg. recreational fishers).

It is evident from this description of PIRSA's environment that it cannot succeed in its role without building an effective value chain for its own products and services. The obverse of this logic is that operating in silos has the potential to place PIRSA in a position of marginal effectiveness – mostly in the more straightforward functions such as regulation of resource use and fundamental R&D. The (second-order) challenges of building such a value-chain approach are primarily to do with building the trust and sense of collaborative endeavour that is central to successful value chains.

My impression is that PIRSA does not have the capacity to effect many of the requisite changes directly and must therefore operate largely by working with and influencing others. This will require greater integration of its activities in at least three ways: across its divisions, with other government agencies (particularly in regional strategic planning), and with industry groups.

Department of Trade and Economic Development (DTED)

DTED is well versed in the principles of value chain thinking, through its work in Manufacturing Excellence, which works with small businesses to embed 'lean thinking' and continuous improvement within their internal manufacturing processes. As part of this process, value stream mapping (similar to value chain analysis) is routinely used to highlight areas for improvement. However, to date DTED has had little involvement with the food and wine industries, partly due to the lead role of PIRSA therein and partly due to the lack of resources, making it necessary to focus on a subset of willing and compliant 'patients' in the industrial manufacturing sector.

The limited collaboration between DTED and PIRSA in the past has resulted in minimal cross-fertilisation of ideas between the agencies. This has undoubtedly resulted in missed opportunities for the South Australian food and wine industries. However, the collaborative investment in the SA Food Centre breaks the mould and provides a real opportunity for DTED and PIRSA to join forces in offering a suite of consulting, research and training programs developed and delivered

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jointly, to ensure the rapid identification and uptake of best practice in lean manufacturing, value chain analysis and value chain management.

Given the likely budgetary constraints in the foreseeable future, it is imperative that DTED and PIRSA continue to explore opportunities for collaborative design and delivery of services and programs, not just between the two agencies but with other constituencies: inter-state, intra-state, federal and sector-specific.

Education – Department of Education and Children’s Services (DECS), Department of Further Education, Employment, Science and Technology (DFEEST)

The lack of skilled labour has been repeatedly drawn to my attention as a significant threat to the sustainability of the South Australian food and wine industries. In addition, my perception is that middle/senior management is lacking in some of the key skills (strategic planning, marketing, purchasing, operations and innovation management) required for the effective application of value chain thinking. Thus, I see education and workforce development as critical factors in the process of developing sustainable competitive advantage – without the right calibre of people in sufficient number to service the dynamic needs of the South Australian food and wine industries, they will struggle to survive and prosper.

The role of value chain thinking here is twofold:

- better understanding of the contribution which education makes in delivering the (new) skill sets the South Australian food and wine industries need to ensure that the pathways are clear, relevant and in-tune with consumer (individual) and customer (industry) needs



- identification of more effective ways of attracting and retaining people within the South Australian food and wine industries.

Clear, well-defined pathways through school and into a range of post-school options for training at vocational and higher education levels are essential for appropriate workforce development. DECS, DFEEST and PIRSA are the major players to achieve this outcome, with state and commonwealth governments influencing workforce development strategies through policy and funding.

An initial mapping exercise of the current educational and training options has identified 22 different vocational pathways, programs and initiatives available in South Australia. These are developed through schools, industry, Job Networks and Industry Skills Boards, delivered by secondary schools, DFEEST, registered training organisations (RTOs) and TAFE SA and funded through DFEEST, DTED, DECS, and the federal Department of Education, Employment and Workplace Relations (DEEWR). The exercise highlighted the complexity of the existing provisions, a plethora of stakeholders (course designers, certifiers and deliverers), a lack of integration from primary through

secondary to higher education, and a lack of co-ordinated input from industry through the Industry Skills councils and boards.

I cannot claim to have grasped all the disparities, but I feel sure they are many and significant, with the greatest challenge being the delivery of flexible and responsive vocational programs within what appears to be a rather rigid accreditation process.

The question of recruitment and retention of appropriately skilled people within the South Australian food and wine industries is one that the Office for Youth was asked to explore through the A-Team program. Their recommendations¹² point to a lack of engagement in the sustainability debate amongst young people in the state, and a disinterest in career opportunities in the food and wine industries. This is of considerable concern as, in the long term, the sustainability of the South Australian food and wine industries will be dependent on the recruitment and retention of young leaders with vision and passion for the cause. It is difficult to see where these will come from unless these industries take a much more strategic, targeted and innovative approach to engagement with young people.

Turning to higher education, university academics the world over struggle to break out of the disciplinary silos that prevent academic research and university education from being as relevant to, or influential over, the 'real world' as it could be.

During my residency, I have been fortunate enough to work with some excellent academics from the University of South Australia and the University of Adelaide, operating in departments and research centres of international repute. However, the involvement of the universities in the eighteen Cooperative Research Centres (CRCs) relating to agri-food and wine is predominantly in the areas of natural science – animals, crops and environment – with only one (the seafood CRC) comprising a significant social science (marketing) component. This highlights the extent to which state and industry-funded R&D is heavily skewed towards primary production and fundamental research, with inadequate attention being paid to applied research, particularly research into consumer preferences and shopper behaviour, which, I have argued steadfastly, is misunderstood, under-estimated, and poorly researched the world over.

One important initiative – Constellation SA – may serve to rectify this situation in future. The government's Ten Year Vision for Science, Technology and Innovation (STI10) focuses on strategies to improve the generation and application of knowledge to advance the objectives in South Australia's Strategic Plan. Constellation SA was developed to a) strengthen collaboration between researchers, within and across disciplines, and b) improve the interface between the research community and end-users so that research is more effectively translated into practical solutions. The Wine Innovation Cluster (WIC) and, to a lesser extent, the Marine Innovation Cluster (MISA), provide role models for the identification, execution and implementation of applied research of



the highest academic quality, research which is of genuine benefit to industry and which transcends institutional and disciplinary boundaries.

The 'Alliance': SA Health, Sustainability and Climate Change Division – Department of the Premier and Cabinet, and Zero Waste SA

As Staziak & Ronan (2008) argue very forcefully, 'the food system is a stage on which the major societal challenges of our time are being played out' and the impending revision of the SA Food Plan presents an excellent and timely opportunity for a more holistic approach to food planning.

The 'Alliance' within my residency represented those agencies whose agendas are constrained by, or in some cases diametrically opposed to, the economic agenda with which industry tends to be preoccupied. The lack of profitability upstream makes it difficult for businesses to adopt a more holistic view of food and wine production and the complex and dynamic relationship between the food system, climate change, health and economic well-being. However, the growing pressures from the

health and environmental lobby groups present opportunities for collaborative research and co-regulation.

The changing climate is already affecting the balance of land use in South Australia, and this has implications for the economic, social and cultural diversity of the state and the sustainability of regions particularly exposed to the drought. Moreover, market access is threatened by growing concerns about food miles, carbon emissions, food (bio) security and economic competitiveness. So the reality is that businesses are being forced to deal with these complex relationships as part of 'doing business'. What is evident is that their ability to do so is fundamentally constrained by existing (business and policy) processes that perpetuate an inadequate reductionist, functional, and sectoral approach.

In the long term, for South Australian food and wine industries to be sustainable they will have to do more than pay lip service to environmental sustainability. The industries will need policy makers willing and able to cross agency divides, and consumers who behave more like

¹² See 'Engaging Young People in Sustainable Value Chains - Communication, Education and Opportunities', Office for Youth Policy Action Team (OFY A-Team) Recommendations Report, January 2009

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citizens when making purchasing decisions. However, this remains an aspirational goal at present. Thus, the immediate priority is to get more people (businesses, policy makers and consumers) on the journey. This requires the appropriate motivations for behaviour change, which in turn requires a much better understanding of values, attitudes and perceptions at all stages of the value chain but particularly amongst consumers – the greatest ‘blind spot’ in everyone’s rear-view mirror.

Thus, the benefit of value chain thinking to these agencies is fourfold:

- It advocates holistic solutions identified systemically through process integration and collaborative planning and decision-making – no single link in the value chain has all the answers and even if they did they could not implement them unilaterally.
- It requires businesses to critically assess not only what they do (right product? right market? right channel?) but how they do it (right technology? right inputs? right suppliers? right customers? right information?), which is likely to result in more businesses taking the first steps on the journey to sustainable profitability.
- It behoves policy makers and business planners to gain a more fundamental understanding of what drives (consumer) behaviour – making it easier for consumers to behave more like citizens more often, which will stimulate consumer demand for more sustainable food and wine solutions, and, in turn, will prompt businesses to allocate more resources to delivering sustainable solutions than would be the case if regulatory compliance was the primary motive.

- It provides a vehicle – the value chain – for the alliance to find a common language (value propositions) with which to converse with industry, to work in partnership to meet mutually beneficial goals. This allows more efficient and effective allocation of scarce resources (public and private) for the development of sustainable (economic, environmental and social) solutions that prevent market failure and avoid the resulting regulation that the South Australian food and wine industries can ill afford.

One of the ‘Alliance’ members, Zero Waste, has made more progress than most in this regard. The significant level of engagement Zero Waste now has with industry is a result of its focus on the economic benefits of doing more with less, and on preventing waste from being created in the first place rather than managing its disposal after the event. Thus, the principles of value chain thinking are well embedded within this agency’s work and there are clear synergies between the work of Zero Waste and DTED, where an operations management focus and attention to process mapping and continuous improvement result in an economic and environmental win-win. The challenge for the future is for Zero Waste to get more involved in issues that extend beyond waste management, and play a greater role in shaping policy that guides consumers away from a ‘mass consumption’ lifestyle into a lifestyle that is more sustainable, both at the commercial/industrial level and at the household level.

To date, SA Health has struggled to build partnerships with industry in pursuit of its illusive goal, a healthier population. Progress with the ‘Go for 2 and 5’ campaign has been patchy – South Australia has the lowest per capita consumption of fresh fruit and

vegetables of all the states, not least because the most vulnerable groups are often denied access to quality produce at affordable prices.

Solutions, in this instance, are not confined to raising awareness about the benefits of a healthy diet and the importance of eating adequate quantities of fruits and vegetables. They include the development of more effective distribution systems and more effective use of (geo-demographic segmentation) information for the purpose of targeting neighbourhoods where the need is greatest and the current provision is the weakest. The outcome from this should be of commercial interest to fruit and vegetable suppliers, as it will increase demand. It would also be of interest to SA Health, which will be much better able to target its scarce resources and measure the impacts of its intervention.

Towards the end of my residency two workshops were held to address the issue of low fruit and vegetable consumption. The first involved researchers and members of SA Health staff, in brainstorming the known and the unknown in this area, where significant research has been undertaken around the world – this is another challenge that is not unique to South Australia. The second involved representatives from SA Health and Adelaide Produce Markets to explore industry’s perceptions of the barriers to the purchase/consumption of fresh fruit and vegetables. The value of these workshops was not simply the generation of new ideas but the sharing of perceptions, the establishment of a common cause, the development of relationships between SA Health and industry and a commitment to undertake a number of pilot projects to test different forms of intervention. Some were concerned with changing the form of the product (eg. quality, diversity, packaging, preparation), others with the communication of

the 'Go for 2 and 5' message, which many felt was too prescriptive and not sufficiently seductive for those segments (younger, lower socio-economic groups) in which the deficit in fresh fruit and vegetables is the greatest.

This type of collaboration does not come easy or without the commitment of resources. It is too early to say whether or not collaborative pilot projects of this kind can be used to guide policies, programs and interventions and ensure that scarce resources are targeted at the most vulnerable segments, but I believe it is a step in the right direction.

Regional Development Boards

Communication of the message is an important part of the adaptation and change management process. Raising awareness amongst business and community leaders of value chain thinking and the perils of ignoring (or paying inadequate attention to) customer needs, consumer wants, and translating the message into a language that is relevant to the (regional) business community – very different in the Barossa than in the Riverland – is an important role 'on the ground'. Similarly, fostering horizontal collaboration amongst businesses ill-equipped to respond on their own, through joint ventures such as regional co-operatives, is a role that the Regional Development Boards (RDBs) can very usefully play.

The Regional Food SA Co-op is a good example of all that is 'good' and 'bad' in the world of RDBs. Customers (retailers) and consumers are showing greater interest in local products with a regional story, but the farmer's market has limited reach – very few businesses can sustain



their growth through farmers' markets alone. Pooling resources and providing a one-stop shop for retailers willing to stock regional speciality food makes good business sense – fewer transaction costs, reduced risk, more efficient ordering and distribution and scope for branding and collaborative marketing. However, for such initiatives to succeed there needs to be adequate seed corn funding and extended service provision (eg. training in customer service, product development, business planning) to support the development of the co-operative proposition, which is only as strong as the weakest link.

Failure of the Regional Food SA Co-op to become sustainable is unfortunate at a time when the need for alternative routes to market for small food businesses is greater than ever. The lesson here is not that government has been short-sighted or remiss in failing to continue its support, but that a process was not set in place to ensure that the co-operative took control of its own destiny at a specific point in time, whether that be to wind the venture down or to expand and spread out into new markets.

My own view is that there is considerable scope for the development of markets for South Australian regional food, within the state and beyond, but that it needs to be based on fantastic products and fantastic customer service, primed but not sustained by government investment. This requires commitment from producers and support from the Food Groups, the RDBs and the Industrial Development officers, each of whom, it appears, has their own objectives, performance measures and funding sources. This may result in confusion amongst those businesses they seek to serve, and duplication of effort, which none of them can afford.

Recommendations

Recommendations



'He did what he did in spite of his fear.
No man could be braver than that.'

Winston Churchill

In considering my recommendations for government and industry stakeholders in the South Australian food and wine industries, I have been mindful of the significant challenges and opportunities identified, yet sensitive to the current financial crisis and the likelihood that in the short to medium term the financial resources available to adopt these recommendations are likely to be distinctly limited. Thus, there is an underlying theme of 'doing more with less' – re-allocating existing budgets and leveraging funds from elsewhere – which, after all, is consistent with value chain thinking!

Recommendations

1. Global thought leadership program in value chain management

I believe that there is a fundamental lack of understanding of value chain principles amongst senior managers, in government and industry. What

is needed is a catalyst for change and a mechanism for empowering senior managers to turn the principles into practice. Thus, my first recommendation is the development of a global thought leadership program, with investors from multiple agencies and a range of industries, not confined to South Australia. The focus of this program is the development of leaders who will drive change in their respective organisations and raise the level of awareness, understanding and implementation of value chain thinking and value chain management in South Australia and beyond, at a time when the need could not be greater.

Such a program should attract investment from across government – all agencies would benefit from value chain thinking – other states, the Commonwealth Government and the R&D corporations. This program could serve to put South Australia on the map, in terms of global thought leadership in value chain management.

The program should also seek to break down the 'silo' culture that is endemic within business and government, and the benefits should transcend functional, disciplinary, geographical and sectoral boundaries. Thus, I believe it would be most appropriate for the Department of Further Education, Employment, Science and Technology (DFEEST) to be charged with implementing this recommendation, in consultation with the Department of Primary Industries and Resources (PIRSA), the Department of Trade and Economic Development (DTED) and other agencies with an interest in value chain thinking.

2. Integrated market intelligence and consumer insight service

The fundamental lack of consumer insight, at all stages of food and wine value chains (but particularly upstream), is a major impediment to the development of sustainable competitive advantage for the South Australian food and wine industries. This is a 'blind spot' which everyone can 'see', the removal of which is therefore something around which all stakeholders can unite.

Existing market intelligence is extremely fragmented and not easily accessible in a form that individual businesses can readily use in business planning and marketing decision-making. Thus, my second recommendation is the generation of an integrated market intelligence and consumer insight service, that is accessible to all stakeholders in the respective (sector specific) value chains and that combines information about markets (size, structure, organisation, access), consumers (attitudes and perceptions) and shoppers (purchasing behaviour). The goal is to achieve a common understanding amongst all stakeholders of what it is that consumers value and how this differs

Recommendations (cont)

across markets (distribution channels and geographies) and consumer segments.

The excuse is often given that consumer research is expensive, complex and of limited relevance to small food businesses, but this need not be the case, as my experience in the UK has shown. Innovative approaches to sourcing, analysing and disseminating consumer information are not only possible but much needed, if the chasm that exists between primary producers and final consumers is to be closed.

My recommendation is that PIRSA should take this forward, in partnership with the other state agencies responsible for agriculture, food and wine, the Commonwealth Department of Agriculture, Fisheries and Forestry, and the plethora of trade associations and R&D corporations whose duplication of effort in the exploration of overseas markets is bewilderingly spectacular.

Such a service could be delivered locally (the benefits of progressing this recommendation extend beyond South Australia) through the SA Food Centre, and consideration should be given to the establishment of an international network of PhD studentships, as a strategic and cost-effective means of conducting primary research in key markets around the world¹³.

3. Cross-agency food policy to support the implementation of a more holistic State Food Plan

The upcoming revision of the SA Food Plan presents an important and timely opportunity for the government to address a range of 'public interest' issues (water availability, regional

development, labour supply, economic instability, public health, sustainability and food security) that are influenced by and impact on the state of the South Australian food and wine industries. An over-arching vision document, or food policy, that would underpin the Food Plan, could be used to guide stakeholders on the government's directions and strategies in food, and clarify connections between the many complex issues and the implications for collaboration across government departments and between government and industry.

The current State Food Plan is devoid of explicit linkages with the plans of other agencies, notably SA Health, DTED and the DPC Sustainability and Climate Change Division, whose own targets are dependent on or have implications for the delivery of the food plan. Examples of such an integrated food policy are limited, but the recently published food policy initiatives in Scotland and Western Australia are worthy of consideration¹⁴.

The temptation will be to conclude that the existence of cross-agency silos is endemic within all governments and their disintegration is too difficult to achieve. However, the willingness of many middle managers to establish cross-agency teams for the consideration of some of the increasingly complex challenges with which they are grappling, suggests that such an initiative would meet with widespread support.

This recommendation should be led by PIRSA but must involve other key agencies with an interest in the food and wine industries – DTED, Department of Education and Children's Services (DECS), SA Health, Sustainability and Climate Change Division – Department of the Premier and Cabinet, and Zero Waste SA.

4. Root-and-branch review of the current provision in education and training (primary, secondary, tertiary, higher and 'executive') available to the South Australian food and wine industries

Pathways through the education and training system for the food and wine industries are, to say the least, complicated. Syllabuses do not always take adequate account of industry needs and the deficiencies in critical areas (eg. strategy, business planning, marketing, and operations management), and methods of delivery are not as flexible as they need to be to attract more young people into the food and wine industries, in which an ageing workforce and low levels of retention are a major concern.

This review should map the pathways and give careful consideration to the extent to which current provisions meet the needs of both students and employers. Recommendations to emerge from the review should be informed by consultations with both industry representatives and young people at different stages of their education and on different career paths.

This is clearly a task for DECS and DFEEST and was initiated during the course of my residency. It must not be allowed to falter and should involve consultation with PIRSA, DTED and the regional development boards.

¹³ For an example of such a partnership between government, industry and academia, visit www.whobuysmyfood.org.uk

¹⁴ See www.scotland.gov.uk/Topics/Business-Industry/Food-Industry (Scotland) and www.agric.wa.gov.au/content/foods/Fstrat/ (Western Australia).

Recommendations

Recommendations (cont)

5. Strengthen the role of regional stakeholder groups in building innovative communities and securing greater engagement from young people in the development of sustainable food and wine value chains

There are deeply rooted and culturally embedded impediments to change in general, and the adoption of value chain thinking in particular, within the South Australian food and wine industries. Turning this around is a huge challenge and, as Geoff Mulgan pointed out in his final report on social innovation, innovative industries are built around innovative communities; I believe there is scope for more effective collaborative innovation at the regional level.

Thus, my final recommendation is the creation of regional co-innovation clusters. The vision is to create virtual networks that are rooted in the regions but extend globally, and that target young people, on whom the future depends but who are currently excluded from the sustainability debate. These clusters would act as incubators for ideas and provide pathways for young people to gain experience in business and become more pro-actively involved in community development.

Given the enormity of the challenge I would envisage a multi-pronged approach, involving the Regional Development Boards, Industry Development officers and the Office for Youth, in the development of the co-innovation clusters. The purpose of these clusters would be to breathe life into the regional food and wine offerings and into the role of young people in the development thereof.

These clusters could provide a virtual link to opportunities for training, education, work placements and broader engagement in the sustainability debate, within and beyond the regions, strengthening the linkages between the food and wine industries, the regions, the state, the nation and the global opportunities for South Australian food and wine.

In the first instance, it may be necessary to undertake a review of the way the different stakeholder groups work together, in order to identify the key barriers and enablers to more effective collaboration at a regional level and more effective engagement with young people, which was the specific focus of the work undertaken by the A-Team. This review should take account of the recommendations made by the A-Team¹⁵, key amongst which are:

- the development of a Regional Centre of Sustainability, and of a Centre of Excellence and Virtual University (possible location: Beckwith Park, Nuriootpa)
- the engagement of young people in the sustainability debate and value chain thinking through the development of a Young Professionals Network
- scholarships for education fees, transport and accommodation, and extra points towards the Tertiary Entrance Rank (TER) to study at a regional institute – potential link with recommendation 4
- development of a Sustainable Schools Grant Program funded by both government and industry bodies – potential link with recommendation 4

- development and implementation of a mentoring program between value chain members in South Australia and value chain leaders around the world – potential link with recommendation 1
- development of a targeted employee education program that can be adopted by interested businesses – potential link with recommendation 1.

Given the extent to which this recommendation is influenced by the insightful conclusions drawn by the A-Team, I am keen that the Office for Youth should have a major role in taking this forward, in partnership with DTED and the Barossa and Light Regional Development Board (BLD), with whom progress has already been made in the formulation of a potential pilot project.

¹⁵ 'Engaging Young People in Sustainable Value Chains – Communication, Education and Opportunities', Office for Youth Policy Action Team (OFY A-Team) Recommendations Report, January 2009.

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Further Reading

Further Reading

The following resources are offered as sources of further examples and case studies of collaborative value chains and the application of value chain thinking in the food and wine industries.

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