

# SUPPLY & VALUE CHAIN GUIDE

Supply Chains encompass all parties involved in fulfilling a customer request. Value Chains identify the complexities of the interrelated activities to production and sale. Understanding and managing these chains is the basis for creating a competitive advantage for your business.

# TERMINOLOGY

Professor Andrew Fearn who is a former South Australia “Thinker in Residence” and a value chain expert from the United Kingdom describes the difference of Value chains and Supply chains as follows:

**In a supply chain model, businesses focus essentially on what they do, and they push product down the chain to the end user. In a value chain model, product is pulled through the chain in response to what consumers want and are willing to pay for.**

**In supply chains, relationships are weak because businesses are pushing product with all of their might, irrespective of what the next link wants.**

**In value chains, relationships are strong, because we’re all being pulled by the consumer, we respond more readily to the consumer. We have a greater chance of survival. Because we have a greater chance of survival through that method of doing business, trust is built. And with that trust, information flows more freely. There is a race to the top. The richer the flow of information, the more likely we are to find segments where we can make money. Where we can be more profitable, and we can stay in business for longer.”**

Prof. A. Fearn

Using Value Chain Mapping to Build Comparative Advantage, (2015), Economic Development Board SA, Department of State Development, Government of South Australia

# TOOLKIT PURPOSE & EXPLANATORY NOTES

## Aim

The aim of this toolkit is to provide business owners with access to information with regards to analysing and understanding their supply chains and identifying further value in order to facilitate growth or assist in the operations of their business.

## Toolkit methodology

The toolkit has been developed by experienced business professionals who have practical knowledge and experience in growing and managing businesses, and analysing supply chains.

It comprises a combination of information topics as well as a template, with practical examples.

The template is generic and may need to be altered to suit the individual circumstances of the business owner.

## Toolkit principles

There are a number of key principles that the toolkit has adopted:

- Provide some basic yet high quality information relevant to supply and value chains
- Formulate a supply / value chain template
- Strike the right balance between information and clarity
- Avoid complex technical terminology is fundamental - does not use sophisticated technical terminology
- Use of high level and powerful language that conveys succinctly the key information and messages
- Provide a list of additional resources for further assistance in key business areas.

**A FIRM'S SUCCESS IS TIED, IN PART, TO THE STRENGTH OF ITS WEAKEST SUPPLY CHAIN PARTNER. ONLY THROUGH CLOSE COLLABORATIVE LINKAGES THROUGH THE ENTIRE SUPPLY CHAIN, CAN ONE FULLY ACHIEVE THE BENEFITS OF COST REDUCTION AND REVENUE ENHANCING BEHAVIORS**

**Spekman et al, 1998**

Spekman E R., Kamauff J., W.Jr, Myhr N., (1998), An empirical investigation into supply chain management: a perspective on partnerships, *Supply Chain Management: An International Journal*, Jun, Vol 3, Issue- 2, pp 53 - 67





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# WHY INNOVATION IS NEEDED

It has been shown that businesses that pursue innovative product/market expansion strategies outperform those that do not have innovation strategies.

Innovation is a way for you to grow profits without having to continuously focus on cost cutting. Your supply chain is both a source of innovation and means to manage innovation.

'Sustaining' innovation is often perceived to be within the capabilities and resources of most firms. 'Substantial' innovation is perceived to be outside the normal capabilities of a firm.

When looking to innovate your supply chain give consideration to the value provided, efficiency and/or effectiveness of all aspects of your current supply chain and its management, and how you might be able to do things differently. The following can be used as prompts for your analysis and for developing innovation strategies:

- what you produce or supply, and/or what you make or buy
- what your customers value and what drives their purchasing decisions
- the sales channels that you use to bring your products or services to market
- the inventory stocked at each stage in your supply chain; how much of it is held; when (how frequently) you place inventory orders; and the size of those orders
- where your facilities, including those for production and/or inventory storage, are located
- where the most cost efficient locations for production and/or for storage of inventory might be located (including existing facilities or building new ones)
- modes of transportation used (how you move inventory from one supply location to another, and to your customers)
- what processes are used to manage your business, including the management of your operations and supply chain.

# WHY CONSIDER SUPPLY CHAINS ... AND WHAT ARE THEY?

It is important that consideration be given to designing and operating your supply chain so that you can deliver your goods and services in a way that matches customers' expectations. Depending on your type of business, supply chain management can involve product design, purchasing, manufacturing, service operations, logistics, and distribution.

The process of delivering finished goods, services and supplies from one place to another is accomplished by means of technological innovation, new applications of old ideas, software and traditional infrastructure.

The aim of understanding your supply chain is to enable you to deliver your goods and services at low cost while meeting the requirements of your customers and potential customers. This understanding involves the integration of your business strategy with processes that can deliver your products and services, and analysis that supports the ongoing decisions needed to manage your business.

Ultimately, the cost of your supply chain affects your bottom line - your profit.

## What is a supply chain?

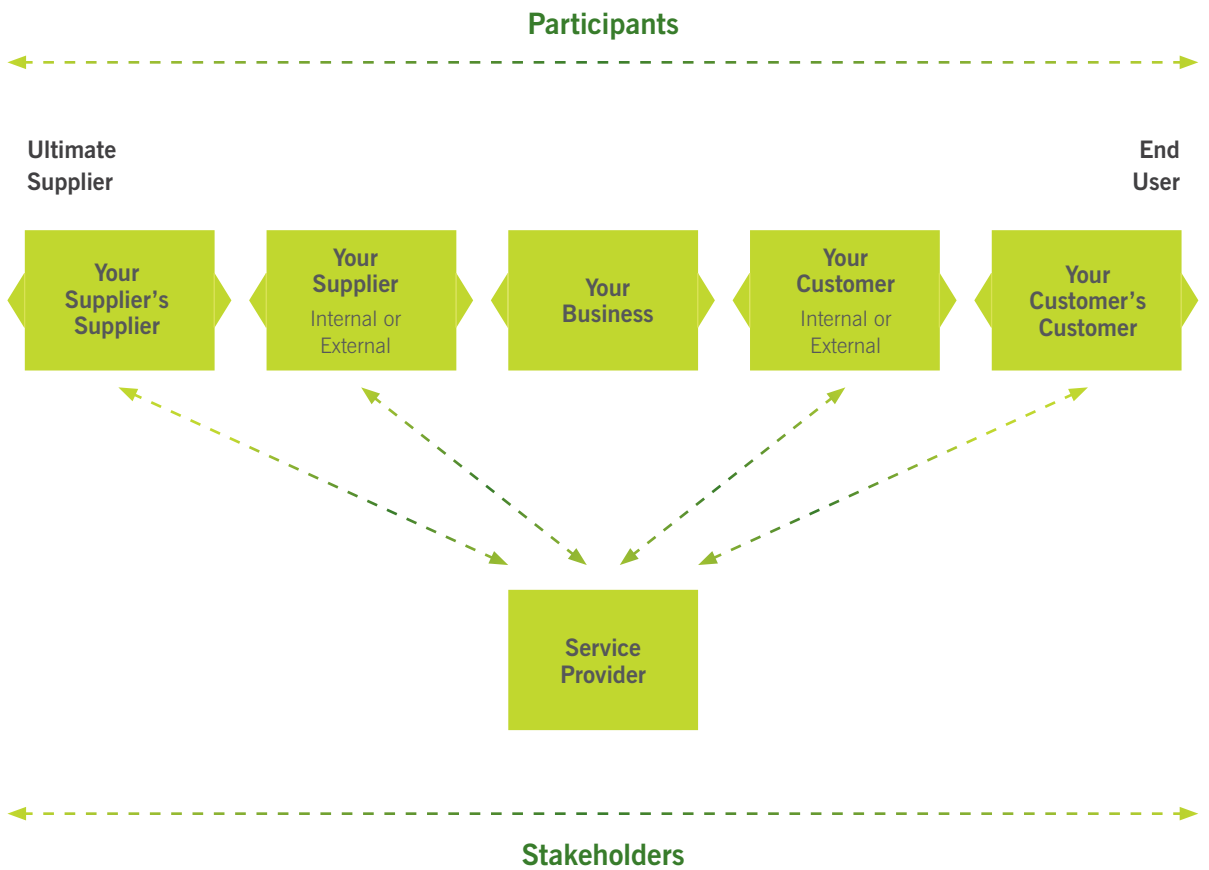
A supply chain refers to **processes** that move information and material to and from the production and service aspects of your business and includes the processes that enable the physical movement of product (transporting), and the warehousing and storage that position products for efficient and effective delivery to your customer. It includes providing products and services to your production facilities and warehouses at the input end of your business as well as to the supply of products and services to the customer on the output end of your business.

In this context a process refers to an activity or activities that transforms inputs into outputs.

## Generic supply chain

May include businesses, individuals, groups, organisations, government bodies or regulators who directly contribute in some way to getting a product or service from its source to the end user.

Have an indirect support or influence upon your supply chain. Examples include a licensing authority, a government agency, or a second or third tier supplier (your supplier's supplier).





## Supply chain – inbound (your suppliers)

### Alternate paths from your suppliers to your business



## Supply chain – outbound (your customers)

### Alternate paths from your business to your customers



### What is supply chain management?

Supply chain management is about the design and improvement of the supply chain that is used to create and deliver your business's products and services.

*For example - a poultry breeding business may produce (grow) its own feed for the poultry (it is an internal supplier of its own poultry feed). Following analysis of*

*the processes and costs of providing poultry feed in this way, it may decide that it's more cost effective and efficient to have the poultry feed supplied by a supplier who specialises in providing the type of feed required (an external supplier). This supply chain management activity would then result in a change to the design of the poultry breeding business's supply chain.*

## What is a value chain?

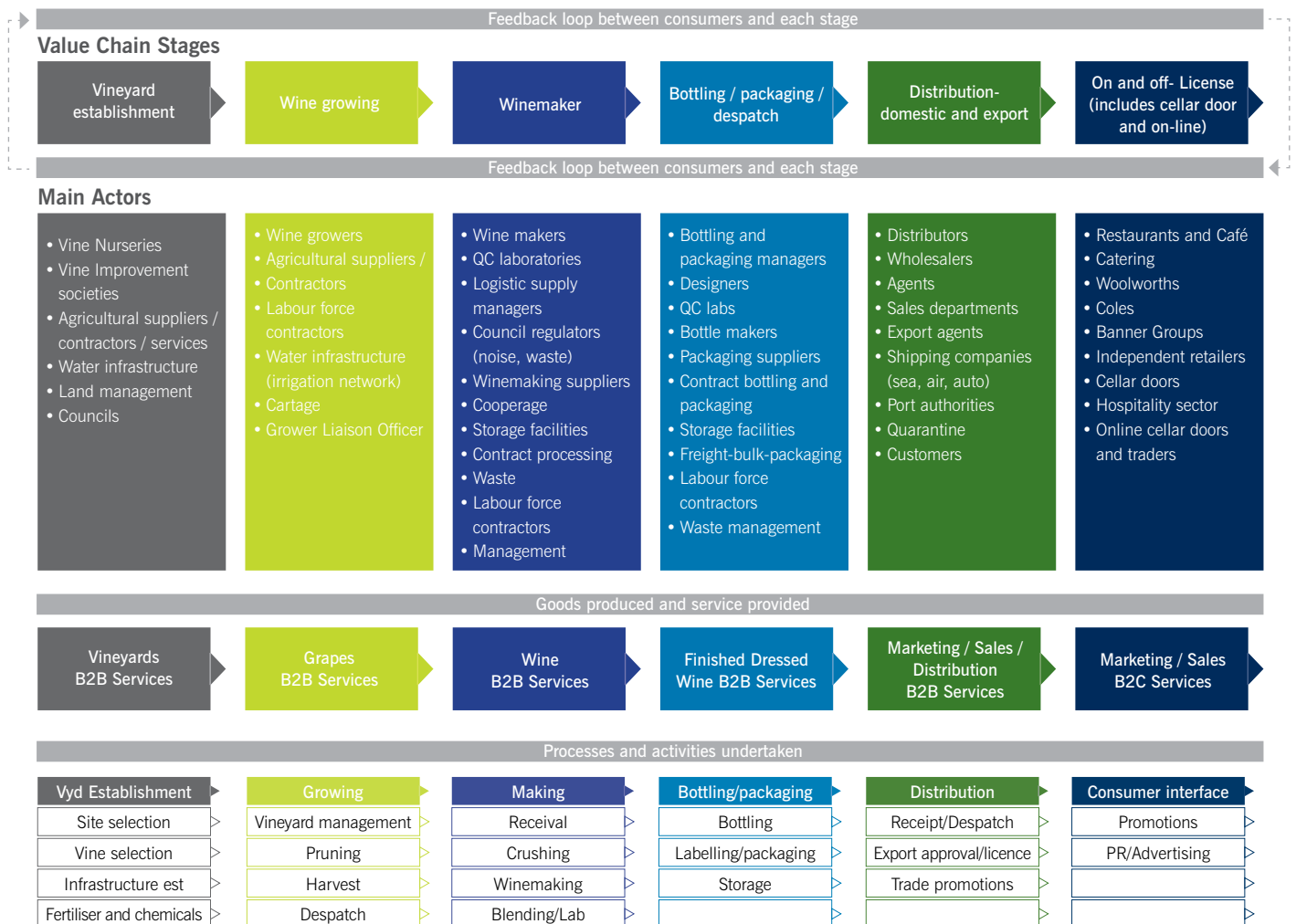
A value chain is a term used that refers to the concept that each of your supply chain processes, that deliver products and services to customers (end users), should create value to a product or service. If a step does not create value, it should be considered as an unnecessary overhead and be removed from the process, thus reducing cost. Hence, understanding your current supply chain enables you to analyse it in terms of value;

remove/change those processes that are not creating value, or add other processes to increase value; and thus form a value chain.

To achieve value for your customers, the **actors** in your supply chain also need to create value at each stage of the supply chain. Therefore, you should not only look for ways to create value internally in your own processes, but also look to your supply chain actors to create value by enhancing their inputs, processes and outputs.

## Example of a completed supply / value chain map

### Value Chain - Wine



#### Services across the chain

**R&D:** Wine Research Institute (AWRI) South Australian R&D Institute (SARDI) ASVO Au Society of Viticulture and Oenology CRCV Research centre for viticulture WIC Wine Innovation Cluster **National Wine Industry Associations:** WGGG Wine Grape Growers WFA Winemakers federation AGWA Au Grape and Wine Authority, WISA Wine Industry Suppliers Assoc. **SA Wine Industry Association:** BGWA Barossa Grape Growers Assoc. SAWIA SA Wine Industry Association WGCSA Wine Grape Council SA PGIBSA Phylloxera Board of SA **Education:** UoA (including Waite), UniSA, TAFE, NWETC, Barossa Wine School, Wine Academy, National Wine Centre **Government and NGO:** DAFF, TA, PIRSA, SATC, DSD, SATIC, RDA **Business support** (accountants, lawyers, banks, insurance, etc.)

# SUPPLY CHAIN / VALUE CHAIN MAPPING TEMPLATE

The nature of mapping has the benefits of:

- being visual and easily shared
- promoting higher level collaboration in regards to barriers to entry, bottlenecks, value sharing and supply constraints
- being easy to analyse, acting as a starting point for members trying to enter a supply chain, or for existing members to identify issues, challenges and areas where overall competitiveness could be improved.

The act of mapping is especially helpful when participants do not share the same level of information about the supply chain and the environment. A visual map helps you to see the system's dynamics and can show:

- key actors, boundaries of the supply chain, inter-relationships and functional roles
- flow of goods, services, payments and information along the chain
- linkage points, and gaps or blockages between actors.

The outcomes of a supply chain/value chain map are:

- improving flows of knowledge and resources to make all firms in the chain more productive
- strengthening the weakest link to address bottlenecks in the chain
- improving specific links between firms to address issues at identified bottlenecks
- creating new or alternative links in the chain, such as promoting local firms to enter global supply chains, or linking to new, additional lead firms.

The Supply Chain/Value Chain Mapping Template has a number of components that will be completed by the business owner. The categories are:

- Value or supply chain stages
- Main actors
- Goods produced and/or services provided
- Processes and activities undertaken
- Support services across the chain.

The Toolkit has provided a step-by-step guide as to how to complete a supply chain/value chain map. It has also provided examples in order to complete each section.

## IMPORTANT NOTE:

**Some of the information for your value chain will need to come from other actors along your supply chain or from your customers. The best way to get this information is to get out and talk to these people. Understand their needs and wants and how that fits in with your business, products and services. “Value’ is derived from the relationship between people / groups and is a reciprocal exchange between the parties. You can not find ‘value’ on your own.**

## Value Chain Stages

Determine the chain stages in your supply chain.

### Considerations

There is no set number of stages, but between four and six is usually appropriate, high level and simple to generate.

To generate:

- group related activities and functions
- keep each major stage distinct
- it may be useful to link them at the point where participants change.

It may be easier to begin at the end - look at the end product and consumer market, and then ask how the products got there. This will allow you to draw the flow diagram of each of the major stages i.e. raw materials, inputs, collection, processing/production, packaging, transport, marketing, and distribution.

When starting the process of identifying key stages use both research and discussion through your supply chain.

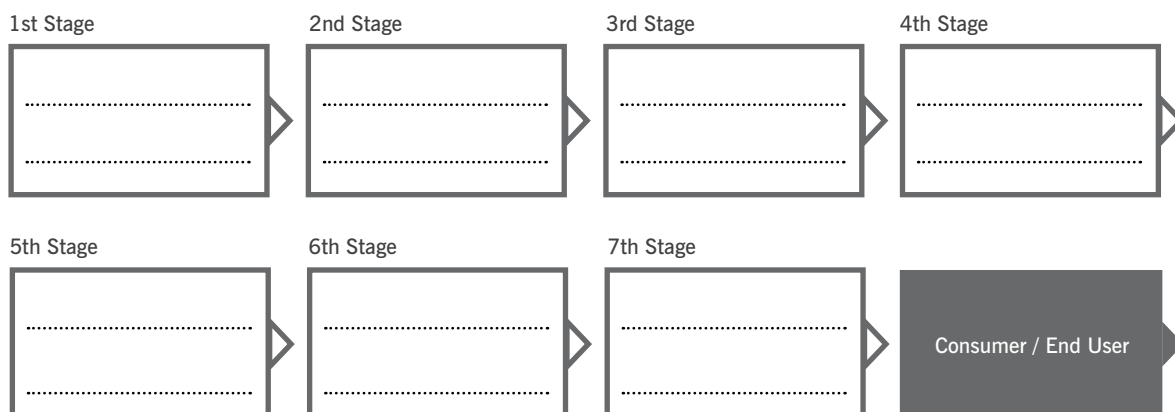
### Example



### Your Stages

List the Stages in your Supply / Value Chain in sequential order:

Note: Most businesses / industries will range from four to six stages in their value chain to get to the end user or consumer.





## Main actors

Identify and map the key players or actors linked to each stage.

### Considerations

Identify and map the key players or **actors** early in your mapping process so you are aware of all stakeholders and actors.

Identify the major actors that are involved in key transactions. Note that some actors may be present across the full supply chain (called vertically integrated), while others may be involved in distinct stages.

At this level of detail, it may not be individuals or businesses/organisations, but instead groups within a particular stage.

Hints:

- Sometimes there are many actors and suppliers involved in production activities - group actors together in order to match the stages.
- Only include those that are directly related to the products/services/outcomes provided in each stage. Those indirectly connected to the full value chain fit better under 'support services'.

Consider a participant's/ actors workshop ...

It may be a good idea to run a participatory process at this time to capture and refine the actors and stages:

- it is a great way to start engaging with actors in your supply chain
- it can help the process to gain momentum
- it is common for market players to not come together as a group as representatives from large businesses rarely attend the same events as small businesses, while small businesses rarely get the opportunity to meet any relevant government organisations.

A workshop starts the supply/value chain development process by promoting better communication and understanding across the chain, and identifying actors and support services within the chain that were not previously known.

It can also build relationships with government actors who are going to be interacting, which assists in building credibility from an early stage.

A practical way of beginning the networking process is to have an initial chain map and have the group then work on it; giving feedback to correct inaccuracies and at the same time gaining a shared picture of the sector.

Often more informal information starts to become clear including:

- relationship and communication dynamics and linkages
- the interests of the different actors
- how products, information and knowledge flow through your supply chain.

Gaining this understanding enables good quality decisions to be made concerning priorities, opportunities and issues.

The term 'actor' is used because they perform "actions" within the chain.

## Your Actors

List the Actors in your Supply / Value Chain in sequential order:

Note: There may be more than one Actor per stage. List all that you have interactions with.

<p>1st Stage</p> <div style="border: 1px solid #92D050; padding: 10px; min-height: 80px;"> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>2nd Stage</p> <div style="border: 1px solid #92D050; padding: 10px; min-height: 80px;"> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>3rd Stage</p> <div style="border: 1px solid #92D050; padding: 10px; min-height: 80px;"> <p>.....</p> <p>.....</p> <p>.....</p> </div>
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<p>7th Stage</p> <div style="border: 1px solid #92D050; padding: 10px; min-height: 80px;"> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<div style="background-color: #92D050; color: white; padding: 20px; display: inline-block; border-radius: 10px;">             Consumer / End User         </div>	

## Goods produced and services provided

Determine the goods and services that are produced in your supply chain.

### Considerations

The goods and services provided are the activities that add value and enhance your offering to consumers.

In the case of services sectors, such as higher education for example, the goods and services provided may themselves form the ultimate product (education).

It is important to discern the major goods and services at each stage of the supply chain to identify where value is added along the chain (and later to consider areas where there is no value added or areas that might provide additional value).

If your product or service is exported for further preparation, processing or distribution before being sold to consumers, the ultimate consumer is not included on the chain map, but is relevant for future planning.

### Finding information

To find information relevant to your supply chain:

- look at existing publications and studies, and ask stakeholders and actors
- gather relevant information and map, then engage with chain actors to correct inaccuracies and fill gaps
- it may be easier to complete the next level of processes and activities at the same time, given their interconnection
- provide a draft of the chain map for the chain actors to work on so as they can write changes and additions directly
- there may also be benefit in asking a series of targeted questions.

### Questions to ask

- What are the final products produced by the chain?
- Who are the ultimate consumers and where are the markets (local/ regional/ national/ international)?
- What are the inputs at each stage?
- Who are the participants involved in each stage?
- What are the goods and/or services provided and activities undertaken?
- What are the core processes in the supply chain?
- Who are the participants in the processes and what do they do?
- What interests do the different participants have?
- Is there a key participant in the chain, what is their role and how does that influence the rest of the chain?
- What types of relationships and linkages exist throughout the chain?
- How do products, payments, information and knowledge flow through the chain?

Detailed information may not be included in the final map but will be useful for drafting and refining the value chain components.

**IN CREATING NEW VALUE SYSTEMS, COMPANIES MUST RE-THINK HOW THEY VIEW THEIR CUSTOMERS AND SUPPLIERS. THEY MUST CONCENTRATE NOT JUST ON MAXIMIZING THEIR OWN PROFITS, BUT ALSO ON HOW TO MAXIMIZE THE SUCCESS OF ALL ORGANIZATIONS IN THE SUPPLY CHAIN.**

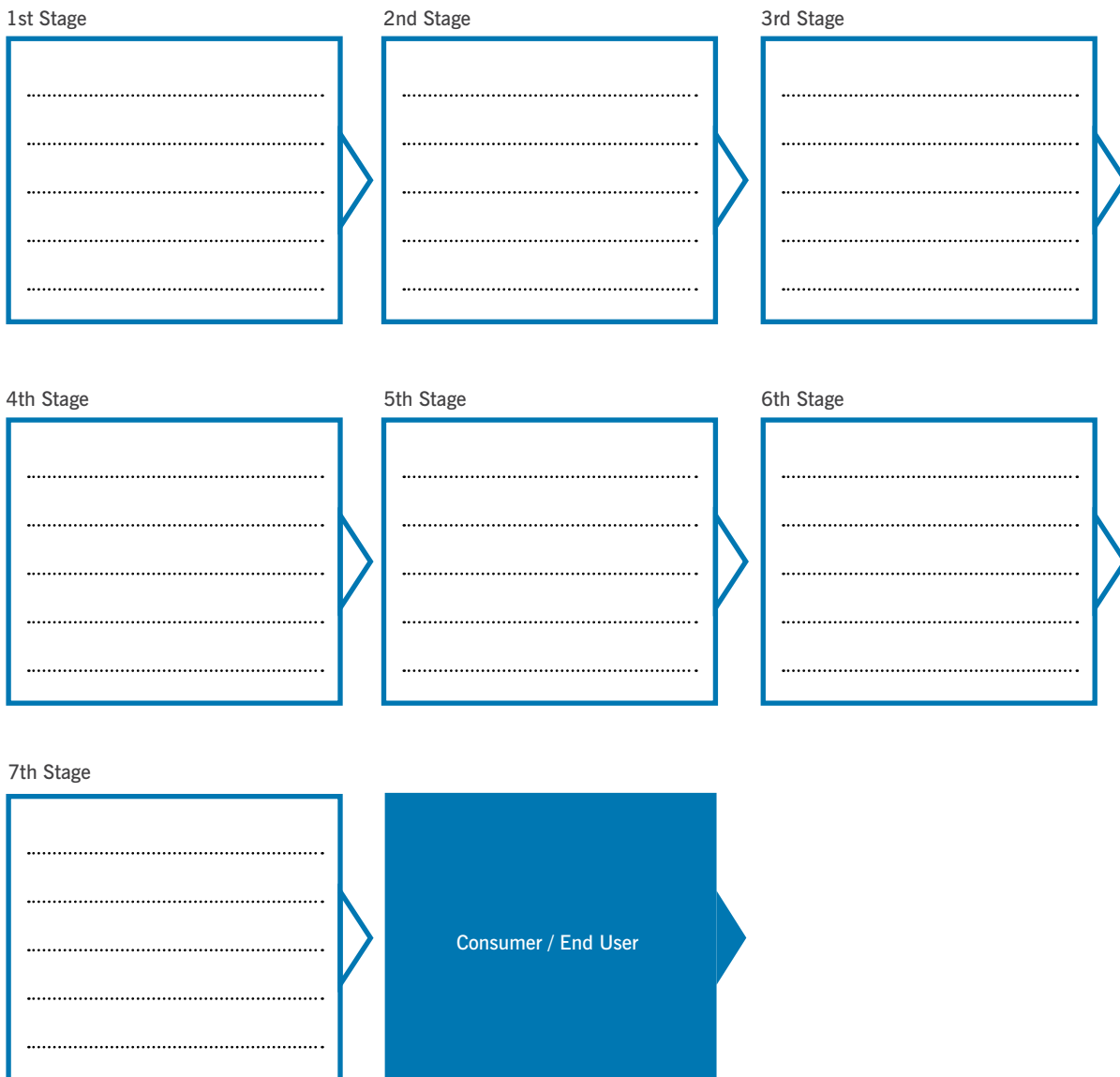
Handfield R, (2002)

Managing Relationships in the Supply Chain, Supply Chain Resource Consortium, NC State University, <http://scm.ncsu.edu/scm-articles/article/managing-relationships-in-the-supply-chain>

## Goods and Services Produced in Your Value Chain

List all the goods and services that the Actors in your value chain and your business produces or provide.

Note: Don't forget to include those things you produce in-house for your own use. These may have potential for further value for your business.



## Processes and activities undertaken

Determine the processes and activities in your supply chain.

### Considerations

Identify inter-relationships, in tandem with other elements of the chain map, to determine how value moves along the chain. It also helps pinpoint bottlenecks or further opportunities for value creation in your supply chain.

Production, processing and distribution activities help to illustrate the various business activities or functions involved in producing a particular product or service (for example, from primary production through transformation and marketing, to final consumption or use).

Separate functions and operations, and present both lines in parallel (this is because a supply chain can have one functional sequence, several types of enterprises, and different ways of organising production and marketing channels).

### Questions to ask

- What are the core processes in the supply chain?
- Who are the actors involved in the processes and what do they do?
- Where does the product or service originate from and where does it go?
- What interests do the different actors have and do they provide a service?
- What is the key actor's role in services or activities?
- What types of relationships and linkages exist? (This often denotes service flow.)
- How do products, payments, information and knowledge flow through the chain?

### When running a larger discussion ...

- capture the information on something which can be referred to and ideally moved around such as individual paper cards, and group connected cards together
- not every word needs to be written down, but capture enough information with the key words to allow people to understand what the paper card represents (and for your information later)
- when noting the activities/functions currently performed to generate the final product (service, consumable, etc), it is sometimes easier to begin from the final sales point (outlet on the domestic market, or exporter) and work backwards, listing the production and marketing activities necessary to sell the product on the market.

Detailed information may not be included in the final map but will be useful for drafting and refining the value chain components.



## Processes and Activities Undertaken in Your Value Chain

List all the processes and activities through each stage of your value chain.

<p>1st Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>2nd Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>3rd Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>
<p>4th Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>5th Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<p>6th Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>
<p>7th Stage</p> <div style="border: 1px solid green; padding: 5px; min-height: 100px;"> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> </div>	<div style="background-color: #388e3c; color: white; padding: 20px; text-align: center;"> <p>Consumer / End User</p> </div>	

## Support services across the chain

Determine the support services across your supply/value chain.

### Considerations

Support services are those activities or services required by the sector but not produced by it. They are necessary for the chain to function effectively, but are often used across multiple stages. These activities might be much larger than the supply chain, such as the sale of fuel, energy or vehicles. These stakeholders could come from a variety of areas including government and private companies, and they greatly enhance the supply chain capacity.

## Support Services Across Your Chain

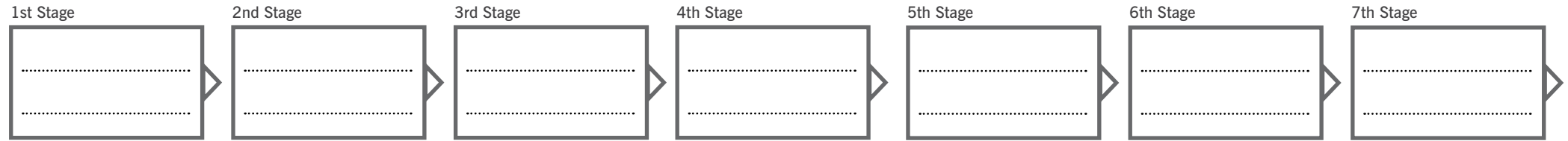
List all the support services used across your supply / value chain.

A diagram consisting of a large rectangular box with a blue border. Inside this box are five horizontal dotted lines, intended for listing support services. To the right of the bottom portion of this box is a blue arrow-shaped box pointing to the right, containing the text "Consumer / End User".

## Now Let's Complete Your Value Chain

Fill in the information you have collected in the previous sections into the full Value Chain template on the next page.

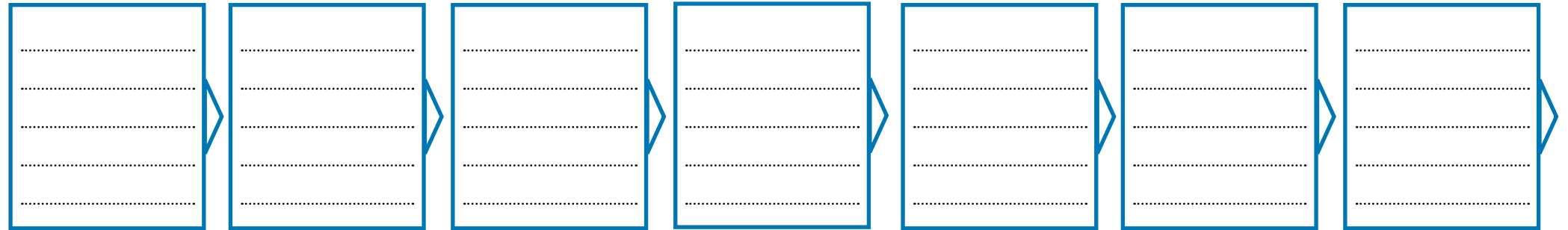
## VALUE / SUPPLY CHAIN STAGES



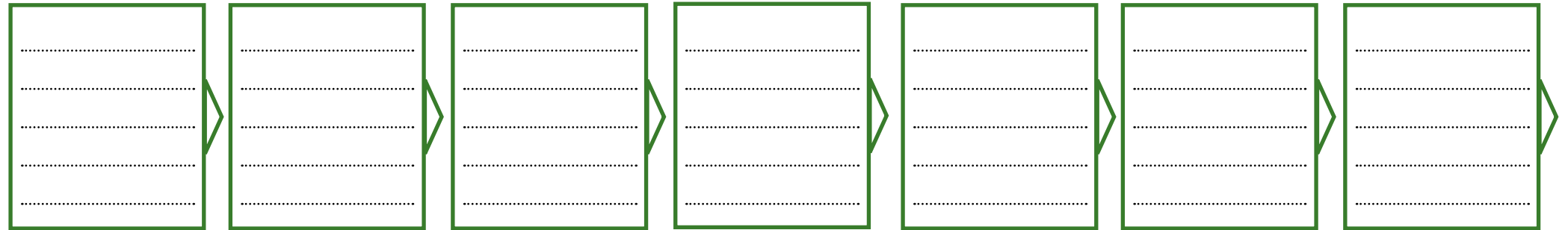
## ACTORS



## GOODS and SERVICES PRODUCED



## PROCESSES and ACTIVITIES UNDERTAKEN



## SUPPORT SERVICES





## More Detail

More detail can be added around the Supply Chain which includes a number of other components. Other considerations are:

- Sales Channels
- Customers and what they value
- Inventory needed
- Inventory suppliers
- Quantity of inventory needed
- Inventory location
- Transportation modes used.

# SUPPLY CHAIN CONSIDERATIONS

In undertaking supply chain management, and designing and analysing your supply chain there are some key considerations.

Each of your markets, or groups of customers, has a specific set of needs. The supply chain for each particular market should respond appropriately to these needs. There is no 'one solution' for a particular market or a particular business. Some markets will demand, and require high levels of responsiveness (how quickly you need to respond to the market); other supply chains will need to focus on efficiency (avoiding wasting materials, energy, efforts, money and time).

The overall impact of the decisions made concerning your supply chain will determine how well it serves its market and how profitable it is for the participants in that chain. Effective supply chain management is based upon an understanding of how it operates.

## Key questions to ask

There are a number of questions to ask when designing or analysing your supply chain.

### What do you produce or supply?

Do you make or buy? Production refers to the parts of your supply chain that makes and stores products.

What sales channels do you use or should you use? A sales channel is a way of bringing your products or services to market so that your customer can purchase them. In addition to the traditional 'shopfront', market stall, or retail store, other sales channels include:

- **Direct selling** - this is a type of sales channel, where products or services are marketed and sold directly to consumers away from a fixed retail location. It includes sales made through party plan, one-on-one demonstrations, and other personal contact arrangements as well as internet sales.
- **Multiple channels** - refers to the practice of interacting with customers using a combination of indirect and direct communication channels - websites, retail stores, mail order catalogues, direct mail, email, mobile, etc.
- **Online distribution** - this is the delivery or distribution of media content such as audio, video, software and video games. That is, distribution over an online delivery medium that bypasses physical distribution methods, such as paper, CDs, and DVDs.
- **Online marketplaces** - these are types of e-commerce sites where product or service information is provided by multiple third parties, whereas transactions are processed by the marketplace operator.

Questions to ask:

- What product/s or service/s does the market want?
- How much of which products should be produced/supplied, and by when?
- What are the best ways of distributing your product or service to that market? (considerations include cost, timeliness, reliability and promotional opportunities)



# SALES CHANNELS AND CUSTOMERS

Taking the products and services identified in the “Goods and Services Produced in Your Value Chain” section above against each one identify the sales channel used and who the customer is.

<i>Product Categories</i>	<i>Sales Channels</i>	<i>Customers</i>

## EXAMPLE

ABC Confectionary is a retail store that sells globally sourced confectionary:

<i>Product Categories</i>	<i>Sales Channels</i>	<i>Customers</i>
Chocolates	Retail Store	End User / Consumers
	On-line	Catering Company
Lollies/Sweeties	Retail Store	End User / Consumers
	Markets	
Savoury Snack Foods	Wholesale	End User / Consumers
		Retail Store

**Who are your customers?**

Is it possible to identify members of your target market/s - either directly or indirectly?

Do you continually evaluate the characteristics of your products and services that prompt customer purchase?

*Consider whether or not the things that you do best are important to your markets or customers. It's essential to look toward your customers to determine what influences their purchase decisions.*

*For example - when purchasing a mobile phone, customers may determine a price range and then choose the product with the most features within that price range. Or they may have a set of features in mind and then select the least expensive phone that has all the required features.*

**What do your customers value? What drives their purchasing decisions?**

- Customers driven by **price** are driven by the actual price of a product/service, discounts, short delivery times, and search costs (Can I find what I want quickly?).
- Customers driven by **functionality** are driven by delivery terms, quality of performance, delivery to agreed time, product development, geographical closeness, and weight.
- Customers driven by **distinctiveness** are driven by image, 'name', professionalism, references, brand, and reputation.
- Customers driven by **mental proximity** are driven by trust, shared values, shared beliefs, shared attitudes, and shared behaviours.

**Outline who your customers are and what they value**

Taking the Customers, you identified in "Sales Channels and Customers" above list what each different customer segment values.

Customers	What they Value

**EXAMPLE**

Customers	What they Value
End Users / Consumers	Distinctiveness
Take away food stores	Price

## How much and what inventory do you need?

Inventory is the stock of any item or resource used in an organisation, from raw materials to finished product, and is often held by different firms, or actors, who are part of your supply chain. Holding large inventories allows a firm - and the whole supply chain - to be responsive to changes in customer demand; but the creation and maintenance of inventories is a cost.

The primary purpose of inventory is to act as a safeguard against uncertainty in the supply chain. But since holding inventory is expensive, what are the optimal inventory levels and reorder points?

Questions to ask:

- Who are your suppliers?
- What inventory should be stocked at each stage in your supply chain?
- How much inventory should be held at each stage of your supply chain?
- When should items be ordered?
- How large should the order be?

### Where is your supply chain located?

Location refers to the physical site of supply chain facilities. Decisions about which activities should be performed at each location need to be made. Supply chain management considerations include the cost of facilities, the cost of labour, skills available in the workforce, infrastructure conditions, taxes and tariffs, and proximity to your suppliers and customers.

Location decisions have a strong influence on the cost and performance of your supply chain and reflect your business's basic strategy for producing and delivering your products to the market.

Questions to ask:

- Where should facilities for production and/or inventory storage be located?
- Where are the most cost efficient locations for production and/or for storage of inventory?
- Should existing facilities be used or new ones built?

### What transportation modes do you use?

Transportation covers the movement of everything in your supply chain.

Consideration needs to be given to the choice of transport mode used within your supply chain.

*For example - air transport is fast, and responsive, but also costly. Slower modes - ship and rail - are cost effective, but not very responsive. Since transportation costs are a significant operating cost within a supply chain, transportation decisions are important.*

Questions to ask:

- How should your inventory be moved from one supply location to another?
- When is it better to use which mode of transportation?
- What arrangements can you make with your transport agents to improve responsiveness/cost?

Outline the inventory that is needed, who supplies the inventory, how much is needed (and/or the frequency of its need), where it is located in your supply chain and what transportation modes are used to move it

<i>Inventory Needed</i>	<i>Supplier</i>	<i>Quantity of Inventory Needed / Frequency</i>	<i>Inventory Location</i>	<i>Transportation Mode/s Used</i>

# EXAMPLE

<i>Inventory Needed</i>	<i>Supplier</i>	<i>Quantity of Inventory Needed / Frequency</i>	<i>Inventory Location</i>	<i>Transportation Mode/s Used</i>
<b>Chocolates</b>				
X-Brand	ABC Importers	2 boxes (100 units) per month	On-shelf (Retail Store)	Aircraft (from UK), Road Transport (from Sydney, NSW, delivered to Retail Store)
Y-Brand	XYZ Local	4 boxes (200 units) per month	On-shelf (Retail Store)	Road Transport (picked up from XYZ Local)
Z-Brand	ABC Importers	1 box (50 units) per month	On-shelf (Retail Store)	Aircraft (from UK), Road Transport (from Sydney, NSW, delivered to Retail Store)
<b>Lollies/Sweeties</b>				
A-Brand	JKL Distributors	3 boxes (150 units) per month	On-shelf (Retail Store)	Ship (from USA), Road Transport (from Sydney, NSW to Distributor, SA; from Distributor, SA, delivered to Retail Store)

Continued next page

EXAMPLE

<i>B-Brand</i>	<i>DEF Local</i>	<i>3 boxes (150 units) per month</i>	<i>On-shelf (Retail Store)</i>	<i>Road Transport (delivered to Retail Store)</i>
<b>Savoury Snack Foods</b>				
<i>K-Brand</i>	<i>JKL Distributors</i>	<i>3 boxes (150 units) per month</i>	<i>On-shelf (Retail Store)</i>	<i>Ship (from USA), Road Transport (from Sydney, NSW to Distributor, SA; from Distributor, SA, delivered to Retail Store)</i>
<i>L-Brand</i>	<i>JKL Distributors</i>	<i>3 boxes (150 units) per month</i>	<i>On-shelf (Retail Store)</i>	<i>Ship (from USA), Road Transport (from Sydney, NSW to Distributor, SA; from Distributor, SA, delivered to Retail Store)</i>
<i>A-Brand</i>	<i>JKL Distributors</i>	<i>3 boxes (150 units) per month</i>	<i>On-shelf (Retail Store)</i>	<i>Ship (from USA), Road Transport (from Sydney, NSW to Distributor, SA; from Distributor, SA, delivered to Retail Store)</i>

Complete the Supply Chain Template below from the information you have gathered in the previous sections









## ALL PROBLEMS ARE OPPORTUNITIES IN DISGUISE

### Examining your supply/value chain map

There are several possibilities for your supply chain to 'step out' and thus become a future value chain. Multiple options may be explored to complement and diversify the existing supply chain.

#### At a strategic level ...

- Supply/Value chain maps support decision makers to better understand where value chains fit into value networks, informing the development of targeted activities and interventions;
- Supply/Value chain maps illustrate trading networks and market access issues, assisting in decisions such as whether a business or sector should globalise or work to establish unique 'home market' advantages;
- Maps begin to uncover areas for value chain upgrading, paving the way for discussion along the chain and agreements on how to improve value for the actors and ways to proceed;
- Ongoing updates to maps capture changes in value chain pressures, highlighting opportunities around processes, performance measures and capacity improvement;

It can be useful to create maps that present a picture of the desired or possible future states of the value chain. These can then be considered alongside the original supply chain, allowing users to 'zoom in' on relevant details.





# WHAT IS INNOVATION?

## Innovation - Newness

Innovation is usually referred to in respect to creating and implementing new products and services, but ... it also includes new relationships and methods of organisation, for example, new processes, communication strategies, etc.

## Innovation - Value

The entrepreneurial perspective of innovation is that:

- there must be a 'value add'; and
- value for:
  - the business (more profit)
  - the customer (more benefits)
  - society (improved quality of life).

A supply chain can be viewed from all these perspectives.

## 'Sustaining' innovation – application to the supply chain

Sustaining innovation in the supply chain provides processes that are very similar to existing processes but are typically 'faster, better, cheaper'. These new or amended processes are usually developed through incremental improvement processes (such as Total Quality Management (TQM)).

## 'Substantial' innovation – application to the supply chain

Substantial innovation involves a supply chain showing a significant improvement and there is a need for some change in the behaviour of the participants in the supply chain (e.g. new transport methods).

These improvements are usually developed through Research and Development (R&D) or market development processes. The supply chain actors are looking for a competitive edge through new markets, suppliers or technology.

## 'Disruptive' innovation – application to the supply chain

Disruptive innovation is unlikely to be common in a supply chain without other significant technological and social change. It is usually developed through R&D or substantial social change and a supply chain participant would be looking to develop whole new classes of products and business structures.

## ASSOCIATED RESOURCES & ASSISTANCE

Below is a list of resources that may assist business owners if they choose to undertake a series of allied business activities that may support the design and analysis of their supply/value chain.

- Using Value Chain Mapping to Build Comparative Advantage, (2015), Economic Development Board SA, Department of State Development, Government of South Australia <http://economicdevelopmentboardsa.com.au/wp-content/uploads/2013/06/2015-Value-Chain-Mapping-Manual-Final.pdf>
- Supply Chain Redesign: Transforming Supply Chains into Integrated Value Systems (2002), Handfield and Nichols, Prentice-Hall
- Fearne A. (2009), Sustainable Food and Wine Value Chains. Adelaide Thinkers in Residence, Department of Premier and Cabinet, Government of South Australia
- Fearne A. et al (2009), Sustainable Value Chain Analysis: a Case Study of South Australian Wine. Primary Industries and Resources SA, Government of South Australia

[www.rdahc.com.au](http://www.rdahc.com.au)

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This brochure is an initiative of Regional Development Australia Adelaide Hills Fleurieu and Kangaroo Island with the assistance of the University of Adelaide and the support of Primary Industries and Regions SA (PIRSA).



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