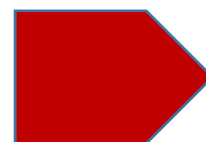
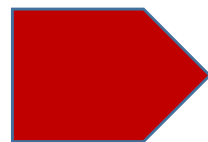


Value chain analysis - Case study

Value chain analysis in consumer focus improvement A case study of the UK red meat industry

Zokaei and Simons (2006)



01/10/2015
Sara Moggi
University of Verona

AIM of the case study

- This paper contributes to the debate on the importance of supply chain effectiveness by linking to **consumer** value at every stage of the supply chain.
 - the importance of customer's satisfaction and consumer loyalty
- a case-study of a UK **red meat supply chain**
- Food Value Chain Analysis (**FVCA**) methodology for improving consumer focus in the agri-food sector

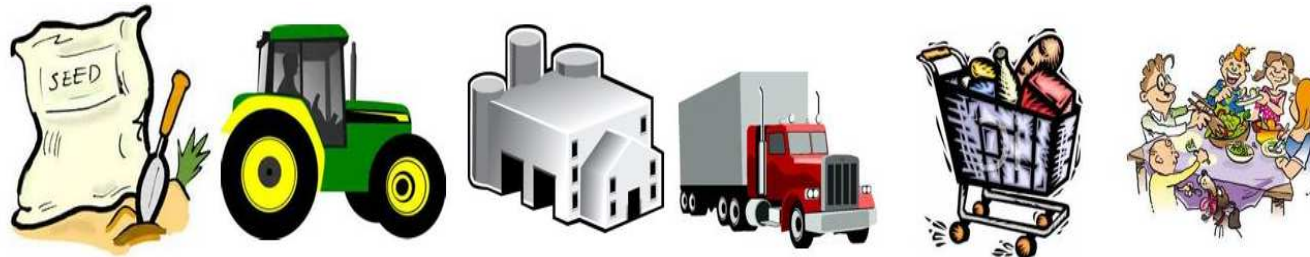


Food Value Chain Analysis (FVCA)

- not only the product but also **the entire chain** of business activities should be effectively managed to deliver the end-consumer's value
- To achieve improved customer focus in the **agri-food industry**, the Food Process Innovation Unit (FPIU) at Cardiff University has developed the “**food value chain analysis**” (FVCA) methodology



FVCA projects look at the whole food supply chain – from farm to the point-of-sales – covering different market channels (supermarket, food service, public channel) and products (commodity and value-added).





The Context



- Agriculture in **Europe** and North America in contrast to most other countries is heavily supported by government intervention and protected by trade barriers. In Europe, the **Common Agriculture Policy (CAP)** producer support payments represent a large proportion of European Union expenditure
- Several **crises** and extensive change due to the mad cow disease during the 1990s, followed by an outbreak of foot and mouth disease in 2001



Regulations to improve traceability and hygiene (e.g. beef labelling scheme and hygiene assurance at critical control points), has begun to create a **more efficient food production chain**

A more efficient food production chain

Companies should generally excel in the following four

KEY FACTORS:

1. Effectively **capturing** the consumer requirements
2. Focusing on **adding value** to consumer across the whole chain
3. Developing **strategic collaboration** with customers and/or suppliers
4. Striving on **continuous improvement** by means of various techniques and pursuit of best available practices to improve efficiency and reduce costs of meeting consumer expectations

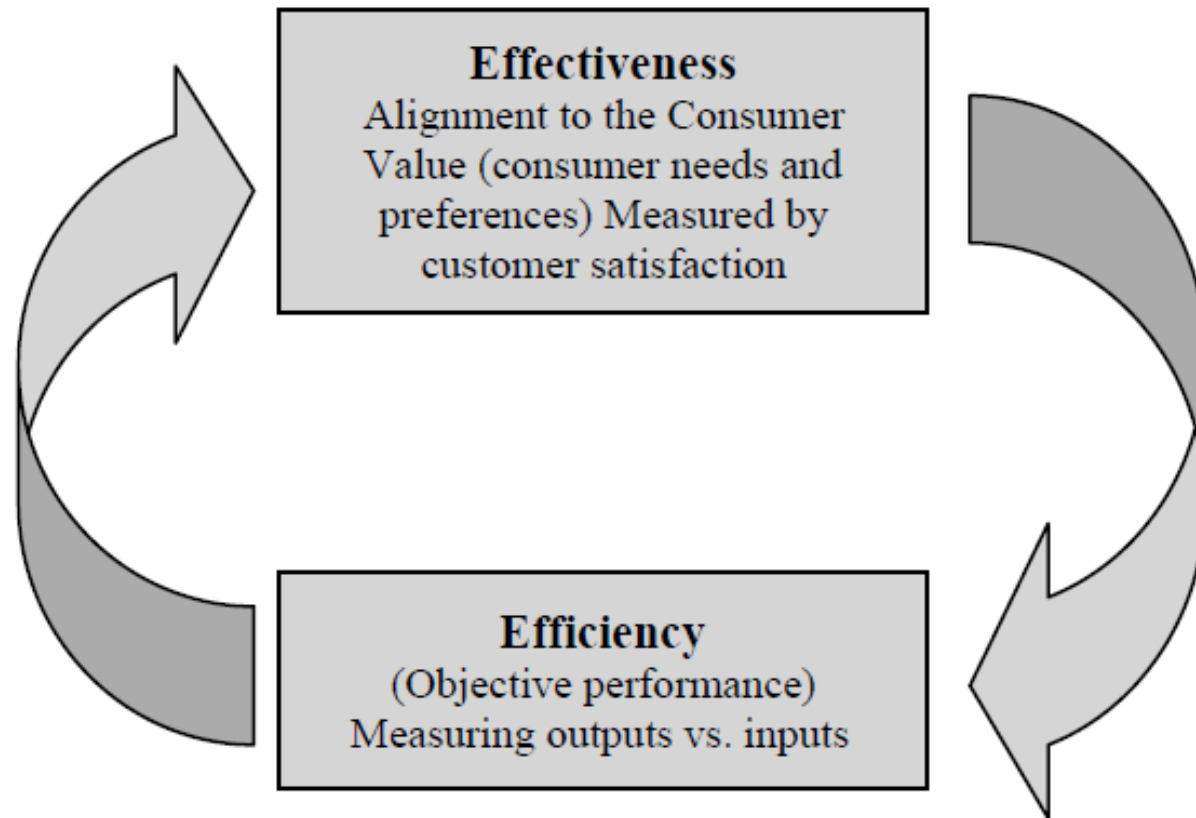
?Holistic collaborative supply chain?

- **Collaboration** is only possible in situations of buyer dominance or where power is equally distributed between buyer and seller to create interdependence
- **Power** is not necessarily inhibitive to relationship forming and management of the food chains; in fact, the proposed **VCA** method is conducive to formation of supply chain relationship under **power imbalance conditions**.
- The aim to deliver **better value** to the consumer at the **lowest possible cost**.

Efficiency and Effectiveness (1)

- Supply chain **effectiveness** relates to the preference of the end-consumer and its sole indicator is consumer satisfaction
- Supply chain **efficiency** relates to the objective performance of processes; efficiency indicators measure an output level against an input level, e.g. productivity which is units produced against labour time
- **Efficiency** is about doing things right and **effectiveness** is about doing the right things

Efficiency and Effectiveness (2)



Efficiency and Effectiveness (3)

- **Effectiveness** can be improved through enhancement of the value proposition; for instance new features could be added to a product to fulfill an unmet consumer need.
- **Efficiency** is improved through waste elimination, i.e. reducing the input levels while increasing the output levels.
- This study focuses on the effectiveness improvements in the supply chain and explains the possible overflows on the supply chain efficiency – **in terms of cost savings**.

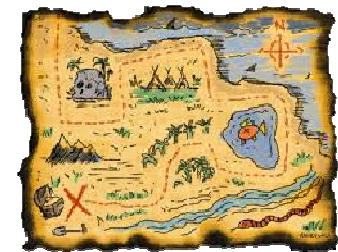
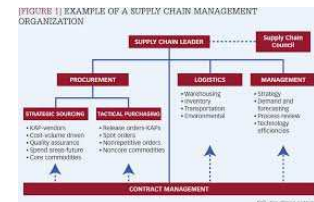


Food Value Chain Analysis (FVCA) – in practices

A systematic MAP

Value chain analysis is a structured method of analyzing the effects of all the core activities on cost and/or differentiation of the value chain

SESSION	EVENT	METHODOLOGY
1	Initial Workshop	<u>Lean concepts</u> and VCA/principles for benefit sharing/supply chain structure map
2	Workshop current state	Select a product for mapping/creating generic big picture current state map of the value chain
3-4-5	On-site mapping	Current state mapping: farm, abattoir, processing plants, distribution centres and retail store/identification of internal operational improvement opportunities at each facility



(Lean Management)

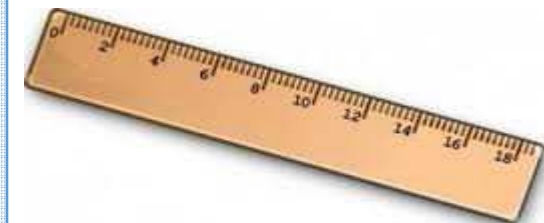


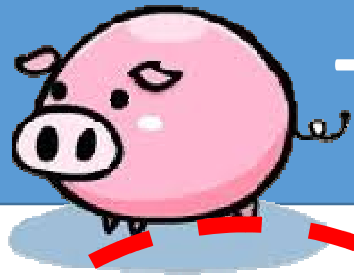
- Lean manufacturing was developed by the Japanese automotive industry, with a lead from Toyota and utilising the Toyota Production System (TPS), following the challenge to rebuild the Japanese economy after World War II.
- The concept of lean thinking was introduced to the Western world in 1991 by the book “The Machine That Changed the World” written by Womack, Jones, and Roos.
- Lean is a philosophy that seeks to eliminate waste in all aspects of a firm’s production activities: human relations, vendor relations, technology, and the management of materials and inventory.

Food Value Chain Analysis (FVCA) – in practices

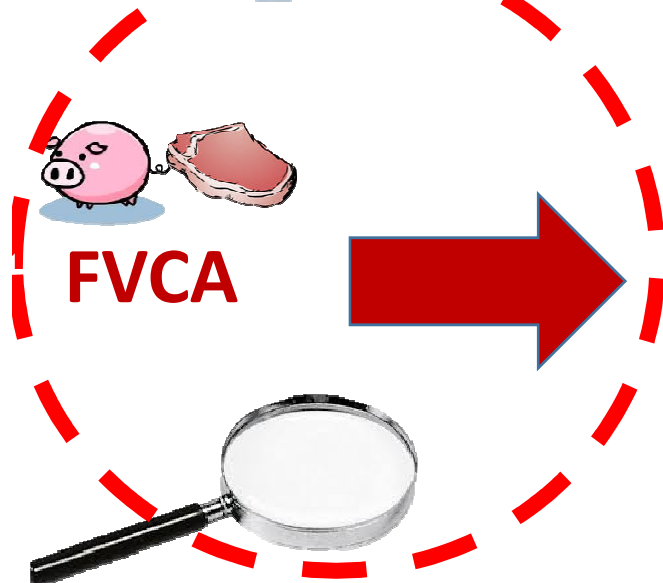
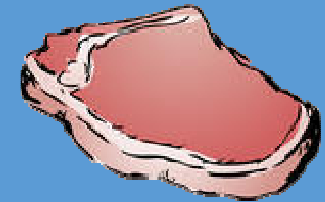
A systematic MAP (2)

SESSION	EVENT	METHODOLOGY
6	Workshop: full chain ideal state map	Ideal state mapping: identify consumer value/identify key performance Indicators of the consumer value/creating the ideal state of the whole chain
7	Off-site	Internal consultation framework on strategic opportunities
8	Workshop: future state map	Rationalise ideal to future state/identify key projects towards the future state/link key projects and key performance indicators of the consumer value to identify the vital few projects for the whole chain
9	Prepare presentation	Firm proposal with project owners, benefit allocations and milestones
10	Presentation	Joint presentation of recommendation to senior management of all companies/decisions taken as to which improvement projects to progress





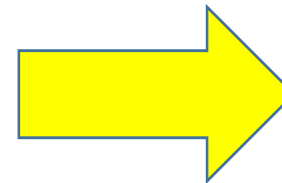
The case of UK red meat



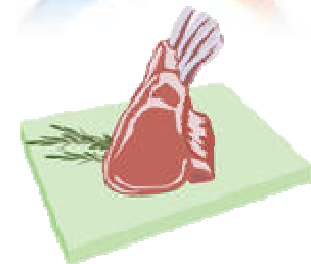
EVALUATION TEAM



**SPECIFIC FVCA ON A
PRODUCT**
to identify the GAP
between customer
needs and supply chain
activities



CHANGE in the Supply Chain



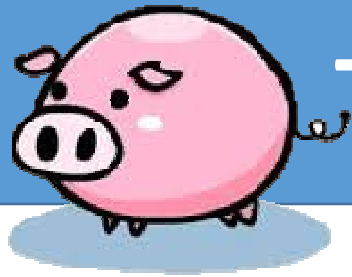
state of the
chain

future
development

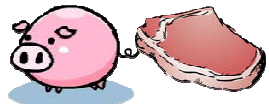
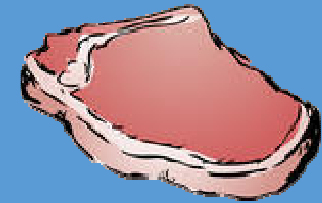
FVCA – UK red meat sector

- EVALUATION OF THE LACK OF EFFECTIVENESS in the red meat sector in the UK

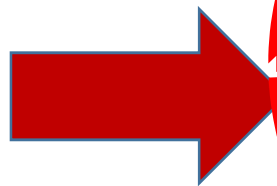
WHERE	DESCRIPTION
WHOLE CHAIN	Shelf-life of product is based on a technical assessment that is several years old. Improved process has reduced bacterial counts, but this has not been reflected in the shelf-life.
RETAILER AND PROCESSOR WHOLE CHAIN	Specification of different consumer products (e.g. pork chops; bacon, ham) that originated from the same species (i.e. pigs) was made independently by autonomous category buyers at the retailer which did not communicate with each other. The value proposition was passed through a number of parties along the chain with a real danger of blurring.
FOODSERVICE	Once delivered there was a disconnection between supply chain and consumer value. Only 76 % of product was cooked to the consumer's preference
PUBLIC SECTOR CUSTOMER &THE PROCESSOR	Product specifications were not reviewed since established in 1962.



The case of UK red meat



FVCA

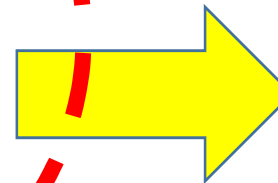


**EVALUATION
TEAM**

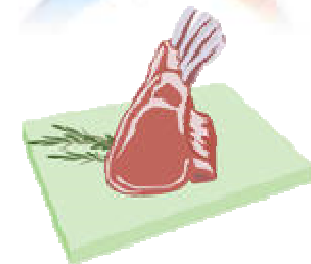


**SPECIFIC FVCA ON A
PRODUCT**

to identify the GAP
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**CHANGE in
the Supply
Chain**



state of the
chain

future
development



Application of FVCA on pork loins and legs



Introduction (session 1)

- The basics of the FVCA methodology and the principles of “**Lean thinking**” were introduced; and the team familiarised with the relevant lean tools and techniques for **value chain mapping** and **analysis**.
- One key step in the first session was to put in-place the principles of a benefit sharing agreement and to get all team members to commit to walk the whole supply chain.



Application of FVCA on pork loins and legs



Current state mapping (sessions 2-5)

- The team identified **two products** for mapping: pork loins and legs.
- A **generic map** of the supply chain was constructed starting with the attributes of the consumer value.
- The whole team walked **every stage** of the value chain and produced a detailed map of all physical and information flows, from farm to canteen. >> to systematically analyse the **performance of intra-firm** processes and also evaluate the inter-firm relationships.
- The supply chain activities were categorised as value-adding (**VA**) and non-value-adding (**NVA**).



Application of FVCA on pork loins and legs



Future state mapping and the change process **(sessions 6-10)**

- The FVCA team generated a vision of an ideal state chain
- The team members brainstormed the issues of consumer value, categorised them and related them to a set of supply chain key performance indicators (KPI)



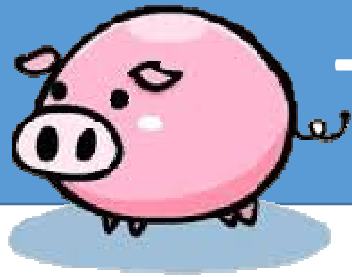
Application of FVCA on pork loins and legs



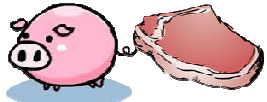
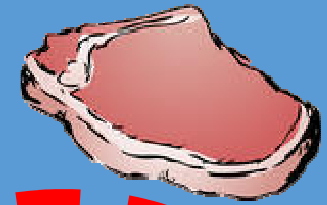
Future state mapping and the change process (sessions 6-10)

The team identified the following five projects to be implemented within a year:

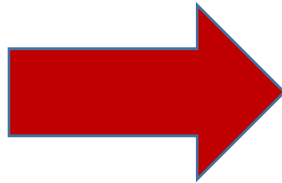
1. **Review of the product specifications**
2. Implementation of **electronic trade** between the distribution company and the public sector organisation
3. The team established that plenty of **opportunities** exist for backhaul to and from the central warehouse.
4. **In-house improvement** opportunities in the processing plant (improving the lay-out) >> a masterclass programme
5. **Standardisation** of the operations at the farm.



The case of UK red meat



FVCA

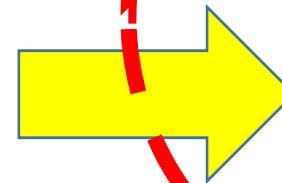


**EVALUATION
TEAM**

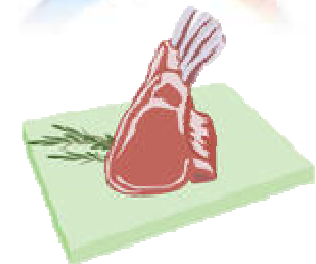


**SPECIFIC FVCA ON A
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**CHANGE in
the Supply
Chain**



state of the
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future
development

Changes in the supply chain

- **Review** of the product specifications -The team identified **three specific changes** in product attributes and supply chain activities: reforming chops, fillet pack size and boneless loin.

1. **reforming chops: eliminating reform process.**

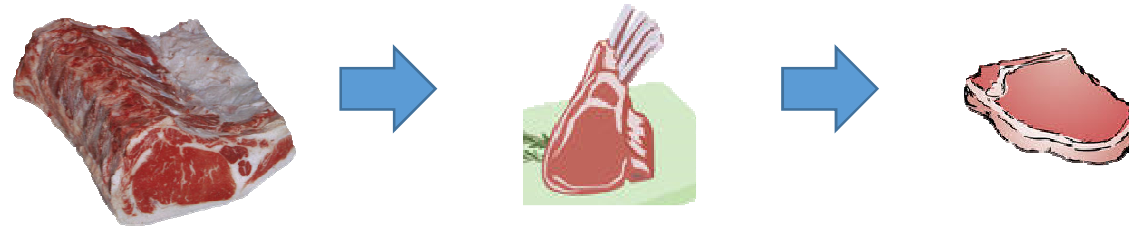
Chops were manufactured by cutting a loin into about 22 pieces. The old specification required the meat processor to reassemble and pack the chops back into the shape of the loin >>> packing the chops from loin into plastic bag



2. **fillet pack size**: the chefs in all canteens recommended the FVCA team that the number of pork fillets in one pack should be reduced from 15 to 5.

Finally: Changes in the supply chain

3. **boneless loin:**



- **Effectiveness gains:** The telephone interview showed that the final customer is more satisfied with the boneless product

- **Efficiency gains:**

- *The boning operation is time consuming at the canteen

- * Logistical savings: four bone-in loins were fitted in a box compared with six boneless products after the specification modification. So this resulted in 33 per cent fewer boxes and pallets of delivery which amounted to 96 pallets less every year.

Thank you the attention!



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