

# Six Sigma and the Value Chain at Maple Leaf Foods

Value Chain Innovation Forum 2012

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## Six Sigma at Maple Leaf Foods

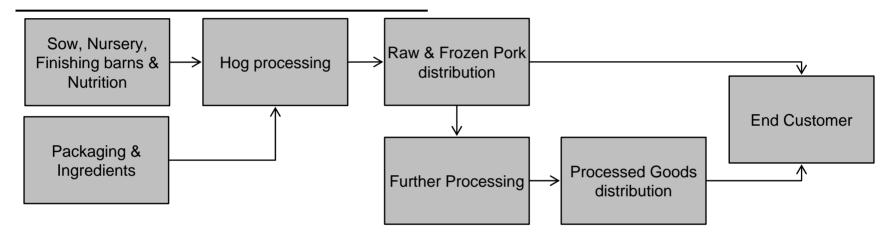
- Six Sigma began at Maple Leaf Foods (MLF) in 1999.
- Six Sigma is the "DNA" of MLF and is how the organization approaches continuous improvement.
- The methodology & tools have been used in hundreds of projects and in our day-to-day operations.
- While we employ Six Sigma Black Belts to drive large improvement projects, all salaried employees are expected to participate in, or lead, their own Six Sigma projects.
- While Six Sigma is the core methodology used for continuous improvement, our philosophy is to include a broad set of best practice tools within that framework; i.e. lean tools, change management tools, analytical tools.



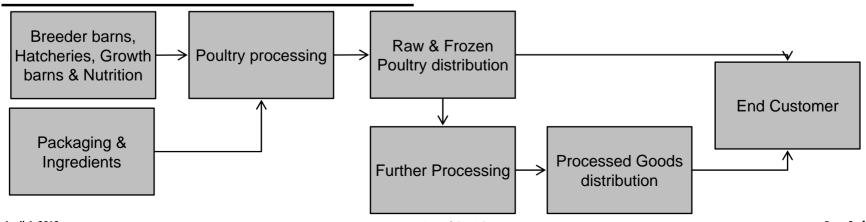
# The Value Chain at Maple Leaf Foods

There are two primary value chains at MLF: Pork and Poultry. The Pork value chain is primarily vertically integrated. Live poultry is regulated by Supply Management.

#### **Pork Value Chain**



#### **Poultry Value Chain**



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## **Approach to Problem Solving at Maple Leaf Foods**

Six Sigma is the problem solving methodology at Maple Leaf. Appropriate tools are used within the methodology framework to find uncommon solutions.

#### Define

## Measure

## Analyze

## Improve/ Design

## Control/ Verify

Define the problem properly so that you solve the right problem right

Measure the as-is process in order to characterize the problem or estimate the requirements for the to-be process

Hunt for clues using analysis and experience; hypothesize new process

Test hypotheses and get a repeatable solution or design the new process Keep new process locked in and/or verify that the new/improved process is stable & predictable

- Objective & Problem
  Statement
  Project scope, resources, risks
  Governance, key stakeholders
  Voice of the Customer (VOC)
- Process & behaviour baseline
  Critical to Quality
  (CTQs) defined
  Graphical view of
- Benchmarking

process behaviour

- •Hypotheses of root causes
- •Analysis of critical factors (x's); impact on Y's & behaviours
- •Improvement of existing process
- Detailed design of chosen solution
- Behavioural change impacts designed inConfirmation of
- •Confirmation of solution

- Control plan
- New process map
- •Transfer to process owner
- Project scorecard
- Close project



## **Value Chain Project Examples**

There are several value chain focused projects that improved or will improve a segment of the value chain through total value chain cost savings or innovation.

- Optimize the flow of hogs into the Brandon plant
  - Driven by the need to provide a specific number of hogs to the Brandon plant and move from vertical coordination to vertical integration
  - Involved stakeholders from across the hog procurement value chain to optimize flow of hogs
- Development of antibiotic free chicken for Prime brand & private label
  - First, driven by the need to innovate the Prime brand, then driven by customers demand
  - Involved stakeholders across the entire Poultry value chain to feasibly grow antibiotic-free birds for sale
- Needle free injection for hogs
  - Driven by the opportunity to improve meat quality through reduced tissue damage, improved animal welfare, and reduced environmental waste
  - Involved industry partners, veterinarians, and government contacts to find a new solution
- RFID pilot
  - Driven by Loblaw and IBM to pilot the technology in consumer packaged goods supply chain
  - Involved multiple manufacturers to look at ROI potential for each player
- Network transformation in the protein business
  - Driven by the need to remain competitive in North America with a CAD at par with USD
  - Involves stakeholders across the entire Prepared Meats value chain to drive value in the Supply Chain

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### What has worked well

Internal collaboration across independent business units and an external focus have driven more value chain thinking. Improvement is accelerated when there is a common purpose and trust amongst the players.

- Alignment of profit goals and a specific organizational mandate to work across business units has accelerated improvements across the value chain.
- Having an external focus with suppliers, industry groups and customers.
  - Industry groups to collaborate on hog & poultry production best practices
  - Agristats for industry benchmarking and discussions with competitors
  - Deeply understanding our customer strategies and VOCs
- When a common purpose can be found by all players, it will accelerate the innovation.
  - A new innovation for a specific customer that can be profitable for manufacturer and customer, and meets the needs of consumers
  - An internally driven priority that requires collaboration across functions and business units and recognizes the need to define "what's in it for me"
- Fostering strong relationships between individuals in the value chain.



## **Challenges**

Common goal alignment, impatience to see results, competitive vs. collaborative nature have been the most common challenges in innovating across the value chain.

- Competition between internal business units for profit and/or resources can impede progress toward value chain optimization.
- Projects that focus across a significant segment of the value chain typically require more time, resources and patience to realize results.
- Relationships with suppliers is not always viewed as a partnership and therefore the trust required for transparent collaboration is not present.
- Lack of knowledge of the impact an improvement can have on another part of the value chain.