



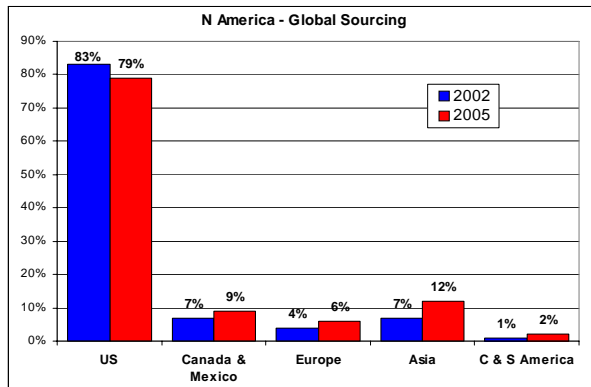
# **Building a smarter food supply chain**

## Full Value Traceability

**Clifford Patrao**  
**25<sup>th</sup> Nov 2010**

# Outsourcing and globalization have increased supply chain complexity and are creating risks and fostering consumer distrust

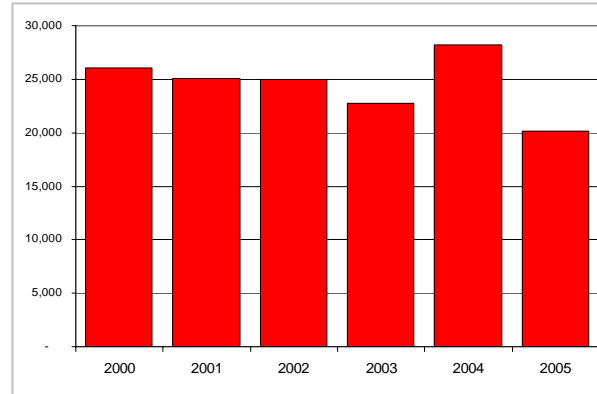
## Growing Scope and Complexity of Supply Chain



- CP companies continue to explore low cost sources of materials and labor
- Canada, Mexico and Asia continue to gain at the expense of U.S.
- More companies outsourcing logistics, distribution, and transport

Source: IBM research

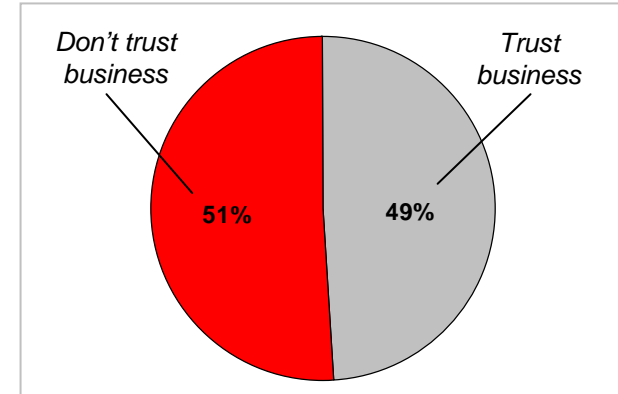
## Continued High Number of Product Recalls



- Foodborne diseases cause ~76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the U.S. each yr.
- Numerous high profile, costly incidents impacting top brands in last 18 mos.
- Difficulties identifying source and isolating products

Source: U.S. Centers for Disease Control & Prevention

## Continued Consumer Distrust of Business



- More than 50% of consumers don't trust business to do what is right
- Corporate scandals and frauds have eroded trust
- Proliferation of new products and claims and conflicting study results confuse consumers eroding trust

Source: "2006 Annual Trust Barometer", Edelman

# This distrust is hindering efforts to connect with today's 'Omni Consumer', who craves trusted information

## Today's 'Omni Consumer'

- Omniscient** *Incredibly informed, aware and concerned about all aspects of products*
- Omnipotent** *Has the power and has developed the capability to actively and passively tune in or out messages*
- Omnipresent** *Purchases products through an ever growing, changing number of channels*
- Omnivorous** *Purchases and consumes a wider range of products than ever before*
- Omnifarious** *Doesn't fit into neat boxes or descriptions - diversity and fragmentation are king*

## Concerns of the 'Omni Consumer'

### Product & Packaging

- Does it deliver health benefit
- Does it contain trans fats, DHA, whole grain, peanuts...
- Is packaging recyclable

### CP Company

- Is it environmentally sensitive
- What do NGO's say about them
- Is management responsible
- Do actions match message



### Retailer

- Does it stock healthy & organic
- Are employees paid fairly
- What prod.info is available
- Do I feel good shopping

### Suppliers

- How are animals treated
- Are growers paid fairly
- Is harvesting sustainable
- Who certifies operations

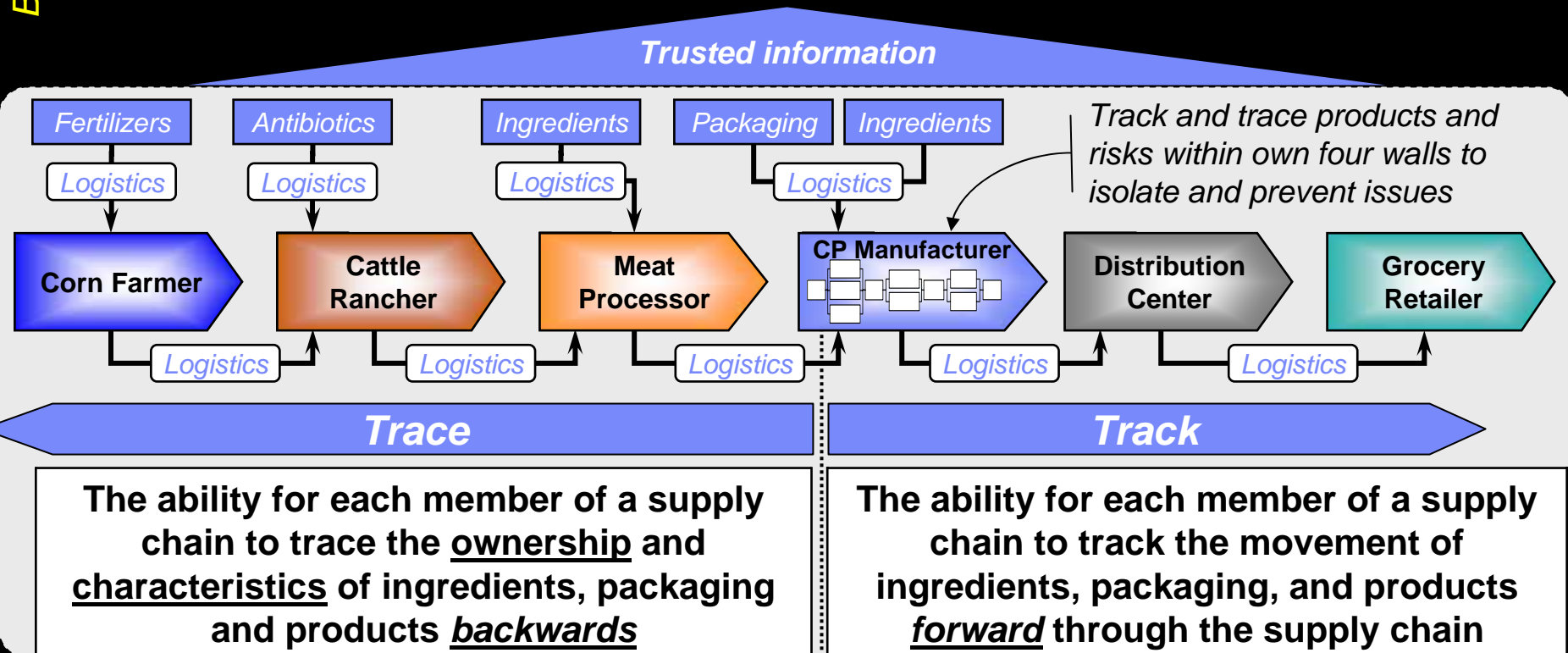
Who is trusted source of information

?????

Traceability solutions can serve as that source of trusted information allowing companies to connect with the 'Omni Consumer', and realize other benefits

Benefits

- i Brand Empowerment
- ii Supply Chain Efficiency
- iii Risk Mitigation
- iv Compliance



Source: Economic Research Service, United States Department of Agriculture



## The need for better food traceability is clear

# 70%

The percentage of the world's fresh water supply used by agriculture.

# 300 million

Pounds of meat and poultry recalled in the U.S. in the past fifteen years.

# 1600 miles

How far a typical carrot travels before it is purchased by the consumer

Typically associated with food safety, most traceability systems today fall short of either protecting brands from recalls, or empowering them to make new claims



Traceability systems capture, store, access, aggregate and communicate product, supplier, customer, handling and processing information to

- Credibly support new marketing claims, and
- Prevent, identify and isolate product contamination issues

## Current Gaps / Shortfalls

### Data:

- Limited breadth and depth of information captured
- Critical elements not available internally or to 3<sup>rd</sup> parties:
  - Data elements not standardized to facilitate sharing and comparisons
  - Relevant data stored in disparate systems
  - Data collected not aligned internally

### Organization / Culture:

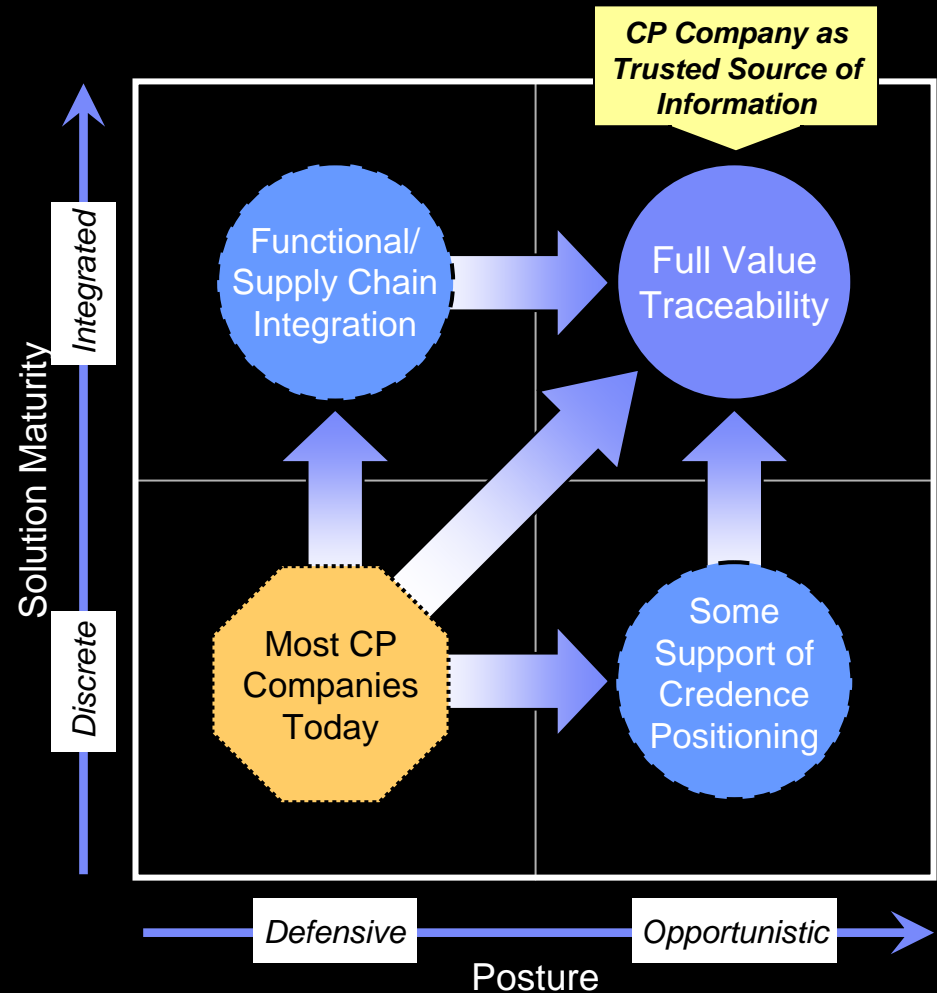
- Compliance driven mindset - only invest where necessary
- Limited ability to track / trace outside own four walls
- Downstream tracking capability usually stronger than upstream

### Process:

- Processes not standardized
- Process steps not effectively monitored
- Manual processes dominate data collection
- Processes not optimized with IT infrastructure

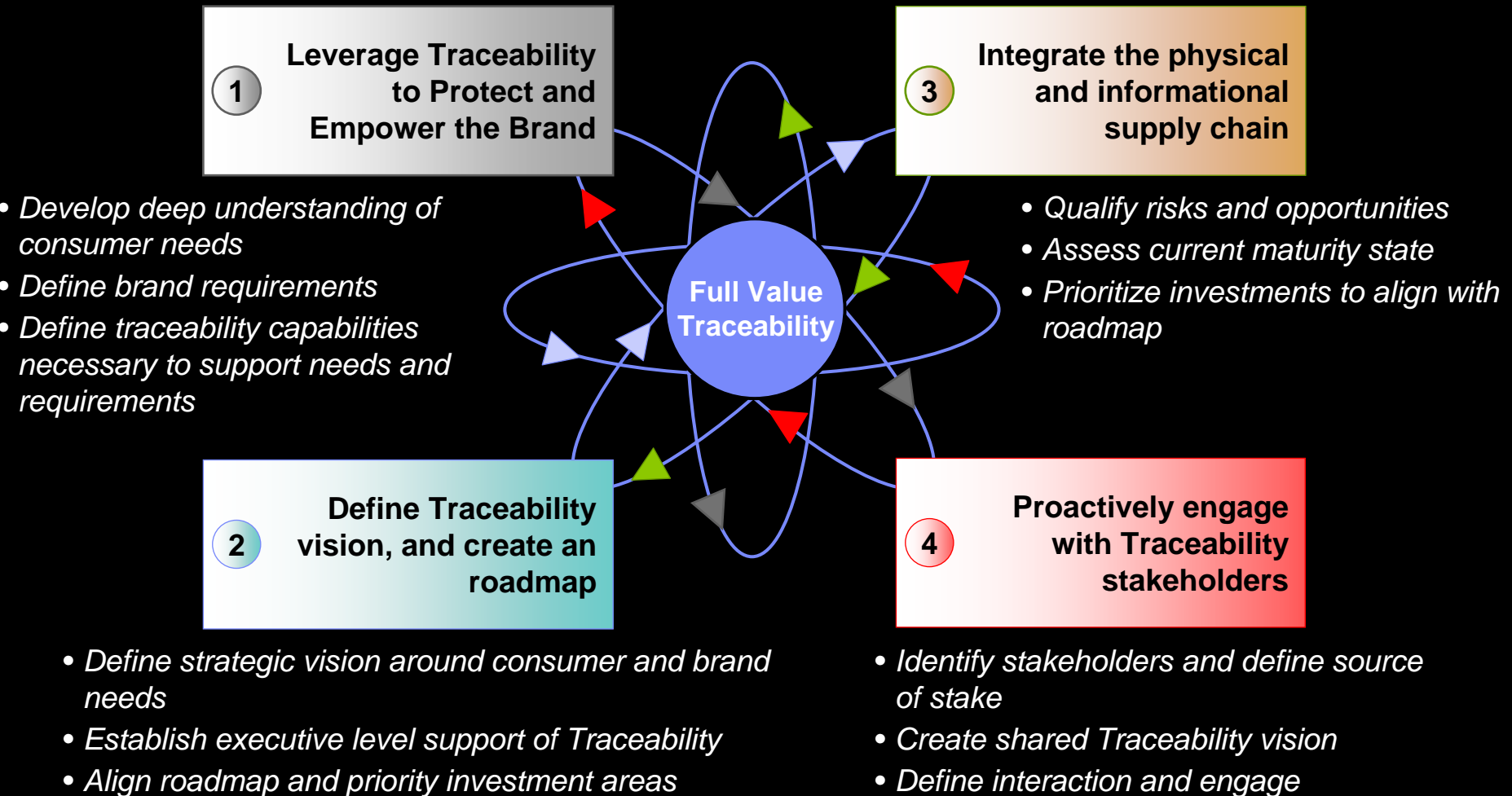
## CP companies can reclaim their position as trusted source for product information by beginning the Full Value Traceability journey

- Most CP companies view Traceability as:
  - A food safety initiative,
  - A 'cost of doing business', or
  - A compliance issue
- **Full Value Traceability** leverages an integrated, whole supply chain solution enabling CP companies to:
  - Deliver trusted information to the 'Omni Consumer'
  - Support and enable credence attribute driven claims of products and brands,
  - Realize supply chain efficiencies,
  - Maintain compliance with regulations, and
  - Effectively address food safety





# There are four critical and mutually supportive imperatives for achieving Full Value Traceability





# Dannon has revolutionized the yogurt category by communicating detailed information about their growing portfolio of functional products, thereby effectively building consumer trust



Growing portfolio of 'functional foods' to address specific needs:

**Activia:** Improves digestion and 'regularity'

- Launched with "Activia Most Irregular Cities Ranking" survey of irregularity
- Wholesale sales of \$130 million in the 12 months after launch

**Crave Control:** Satiety benefit via unique combination of ingredients

**Carb & Sugar Control:** with "85% less sugar"

**Danacol®:** Active ingredients control cholesterol

**Danactive®:** Probiotic culture boosts immune system

- Detailed information provided about active ingredients
- Detailed information provided about functionality delivered
- Comprehensive, user friendly websites detail product benefits and independent research supporting product claims

## Group Danone

- Stock has significantly outperformed S&P 500 over past 2 years
- Stock has also outperformed many other leading CP companies



Source: Company website, [www.danonegroup.com](http://www.danonegroup.com)

# Tom's of Maine practically created the natural oral care category and built strong consumer trust in their products by communicating extensive product and values information



- Company was founded in 1970 on the concept of natural personal care
- Established strong connection to consumers by providing detailed ingredient and processing information on packaging and inserts:
  - Source and function of ingredients
    - What is it?
    - What does it do?
    - What are the alternatives?
    - What are the risks?
  - Specific standards adopted for natural, sustainable, and responsible ingredients, products, and packaging
  - Animal welfare practices
  - Environmental practices
- #1 Oral Care Brand in natural segment
  - 60% market share in health and specialty trade channel
- Privately held until 2006, when 84% stake sold to Colgate-Palmolive for ~\$100 million

Exhibit 10.1  
**Tom's of Maine Ingredient Statement**

How do we define *natural*? By *natural* we mean that the product contains no artificial preservatives, artificial dyes, or artificial sweeteners (like saccharin) and is created with minimally processed ingredients originally sourced in nature. On each box we list our ingredients, their purpose and source. We believe you have a right to know.

Active Ingredient	Purpose	Source
Sodium monofluorophosphate	Decay prevention	Fluorspar (calcium fluoride), an ore
<b>Ingredient</b>		
Calcium carbonate	Mild abrasive	Purified calcium from the earth
Glycerin	Moistener	By-product of vegetable oil soap (Kosher)
Water	Consistency	Branch Brook
Sodium lauryl sulfate	Disperse the calcium	Derived from coconut oil
Carrageenan	Thickener	Seaweed
Cinnamon & peppermint oils with other natural flavors	Flavor	Cinnamon & peppermint plants

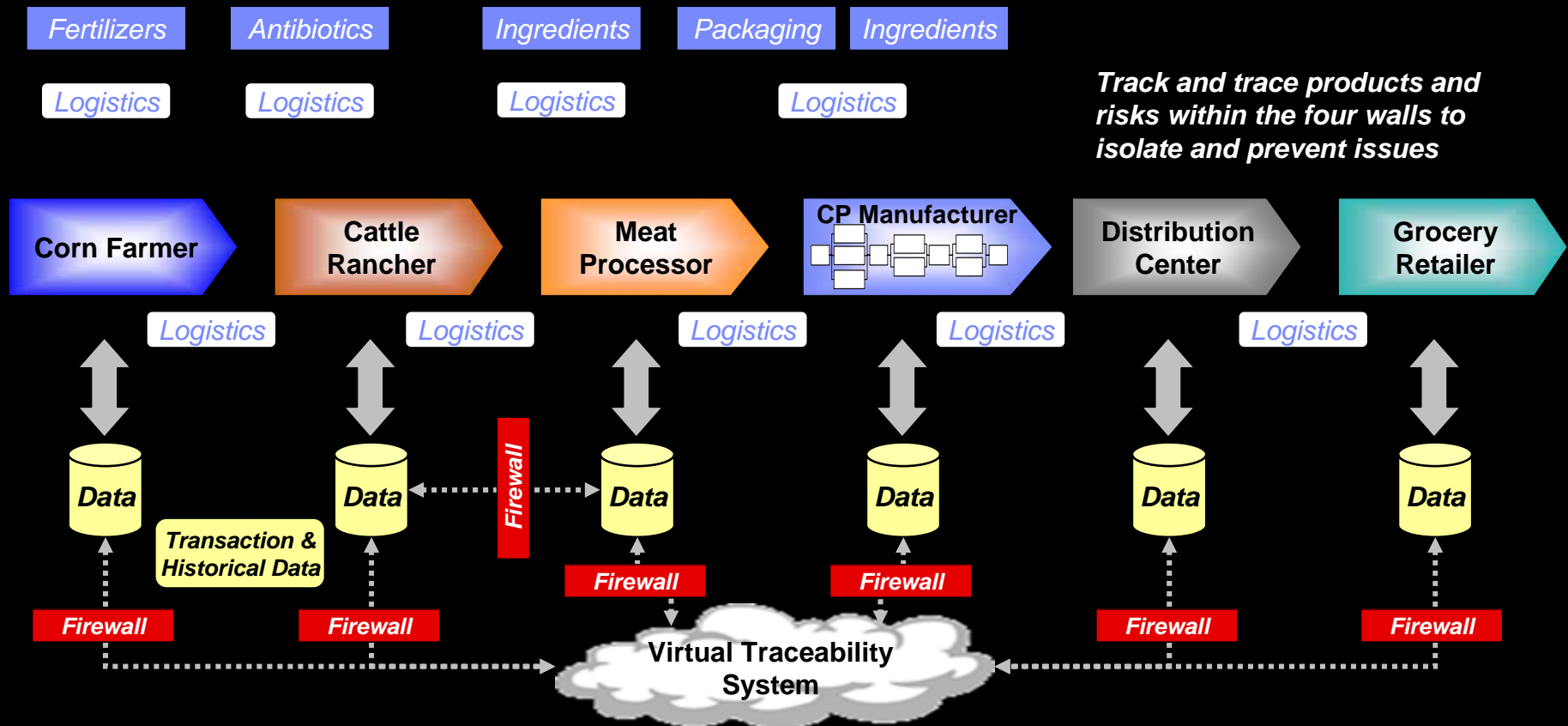
NO SACCHARIN \* NO ARTIFICIAL SWEETENERS OR PRESERVATIVES \* NO ARTIFICIAL COLOR OR FLAVOR  
NO ANIMAL INGREDIENTS

© Copyright 1997 Tom's of Maine, Inc.

*Source: Used with permission of Tom's of Maine*

**Full Value Traceability requires data on product, a) movements, b) processing activities, and c) attribute changes be captured both across and within each step in the supply chain**

*Each company maintains its own product information and record of transactions, making that information available on a permission basis to stakeholders*





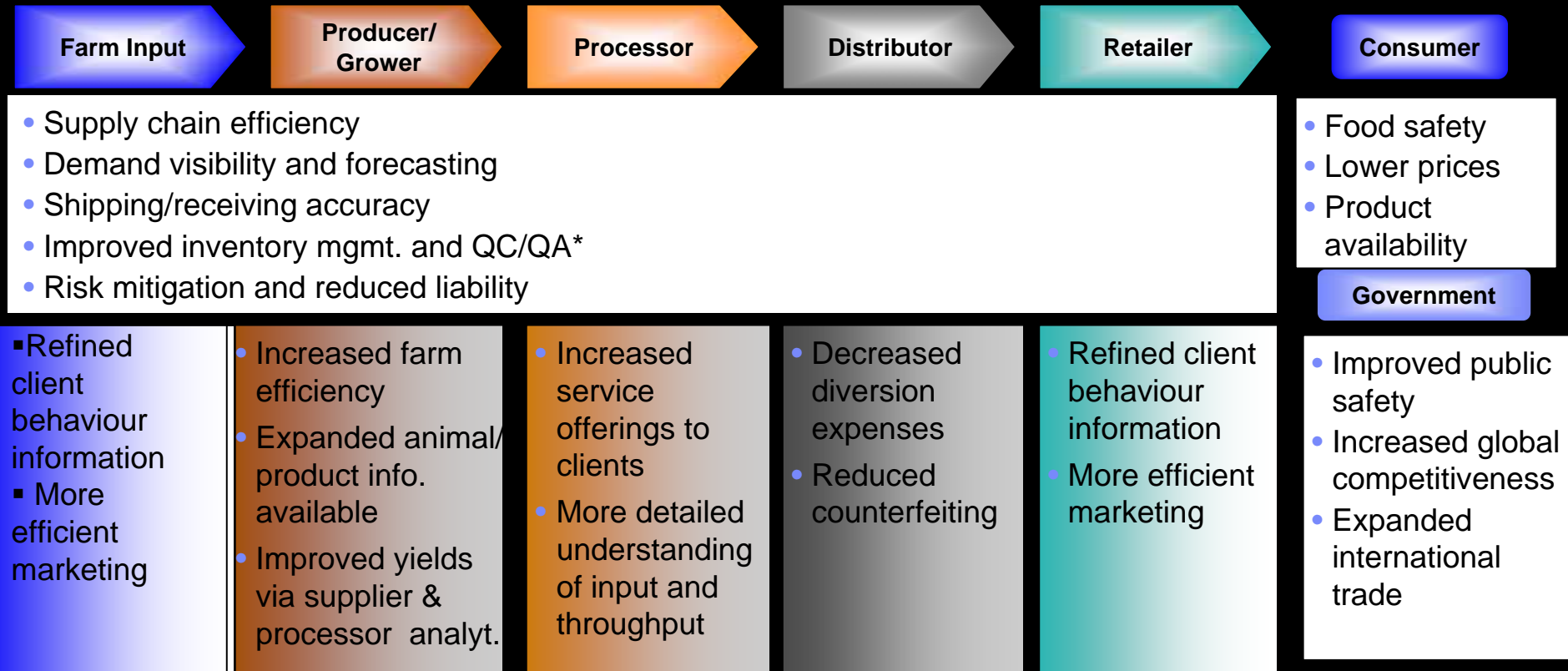
**Industry-wide efforts at creating central solutions are prone to long and difficult gestation periods; recommendation is creation of a virtual traceability ecosystem**

## **Virtual Traceability Ecosystem Characteristics**

- **Use distributed IT architecture**
- **Ensure open, standards-based**
- **Leverage existing assets, and industry/government initiatives**
- **Embrace best practices and adopt new technologies**
- **Establish government-industry partnerships**

## Collectively agreeing with key stakeholders on the source of their stake and their potential benefit areas establish buy-in to the Full Value Traceability proposition

### *Full Value Traceability benefits across the direct supply chain:*



\* QC/QA: Quality Control / Quality Assurance

Benefits can be either direct measurable (i.e., reduced inventory) and/or indirect and intangible (i.e., consumer trust in brand)



## Matiq From Farm to Fork Traceability

feeding your business  
**matiq**



Increases consumer  
confidence in the  
quality of meat they  
purchase

### **Matiq**

A subsidiary of Norway's largest food supplier uses IBM's solution to deliver the country's first of a kind farm to fork traceability



## Consumer Products Company Perishable Goods Tracking



**Goal: Reduce product waste by 10% per year**

### **Perishable Goods Wholesaler**

Food wholesaler uses IBM's solution to reduce product waste caused by temperature-related problems along the supply chain during transport and distribution.





## Summarise

- **Full Value Traceability can bring immense benefits to all constituents of the supply chain**
- **Need to identify traceability requirements, draw a roadmap, integrate physical and informational supply chain and engage stakeholders**
- **Consumer Product companies are making the first move to satisfy the “Omni Consumer”**



**Thank You**

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