

The image shows the exterior of a Walmart store. The word "Walmart" is written in large, blue, three-dimensional letters on a brown brick wall. To the right of the text is the Walmart logo, a yellow sunburst with seven rays. The sky above is blue with white clouds.

**Walmart**

**Frank Yiannas**  
Vice President - Food Safety

**Data Sharing & Usage – an Industry Perspective**

a new era of  
shared, digitized, & BIG data  
to advance food safety



The image features a monochromatic blue color scheme. In the background, the silhouette of an oil pumpjack is visible against a lighter blue sky. The pumpjack's long, angled arm is the most prominent feature, extending from the right side towards the center. Below the pumpjack, the word "DATA" is written in a large, white, sans-serif font. At the bottom of the image, the phrase "is the new oil" is written in a smaller, white, sans-serif font, positioned on a dark blue horizontal band.

DATA

is the new oil



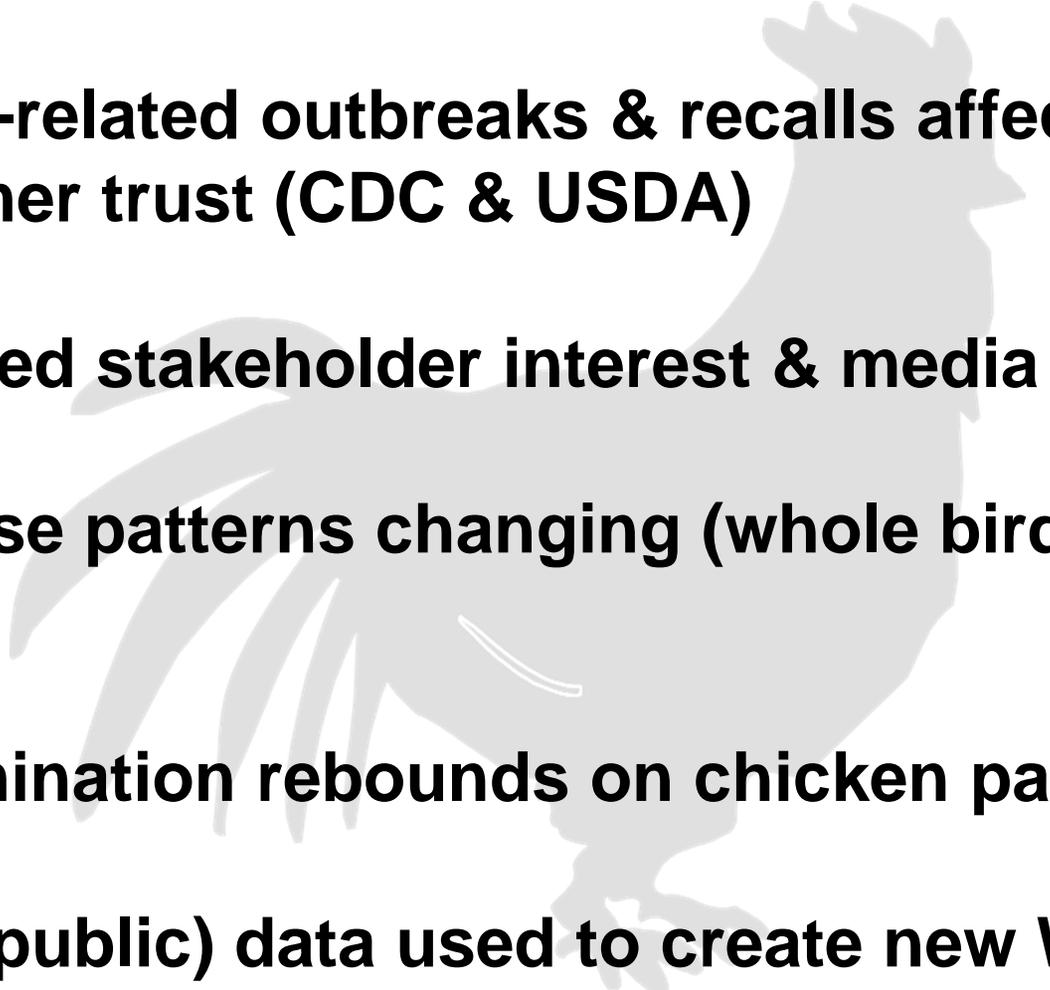
# Shared Data



USDA

FSIS

## Background (2014)

- **Consumers in U.S. shifting from beef to poultry**
  - **Poultry-related outbreaks & recalls affecting consumer trust (CDC & USDA)**
  - **Increased stakeholder interest & media scrutiny**
  - **Purchase patterns changing (whole birds vs chicken parts)**
  - **Contamination rebounds on chicken parts (26%)**
  - **USDA (public) data used to create new Walmart poultry safety specifications**
- 

# In the News





United States  
Department of  
Agriculture

Food Safety  
and Inspection  
Service

Office of Public  
Health Science

Microbiology  
Division

# The Nationwide Microbiological Baseline Data Collection Program: Raw Chicken Parts Survey

January 2012–August 2012



Pathogenic Organism				
<i>Salmonella</i> <sup>(3)</sup>	End of Production Line	2,496	657 <sup>(3)</sup>	26.32%
<i>Campylobacter</i>	End of Production Line	2,496	534 <sup>(4)</sup>	21.39%

Table 2. Distribution of Quantified *Salmonella* Samples in the RCPBS

Range, MPN/ml	Number of Samples <sup>(1)</sup>	Percent of Total	Cumulative Number	Cumulative Percent
< 0.030	201	30.6%	201	30.6%
0.030 - 0.30	316	48.1%	517	78.7%
0.301 - 3.00	102	15.5%	619	94.2%
3.01 - 30.00	38	5.8%	657	100.0%
> 30.01	0	0.0%	657	100.0%
<b>Total</b>	<b>657</b>	<b>100.0%</b>	<b>-</b>	<b>-</b>

LOD < 0.030 MPN/ml

(1) Only positive samples are included regardless if under LOD



# Poultry Safety Initiative

## Consultation, Collaboration, & Stakeholder Summit



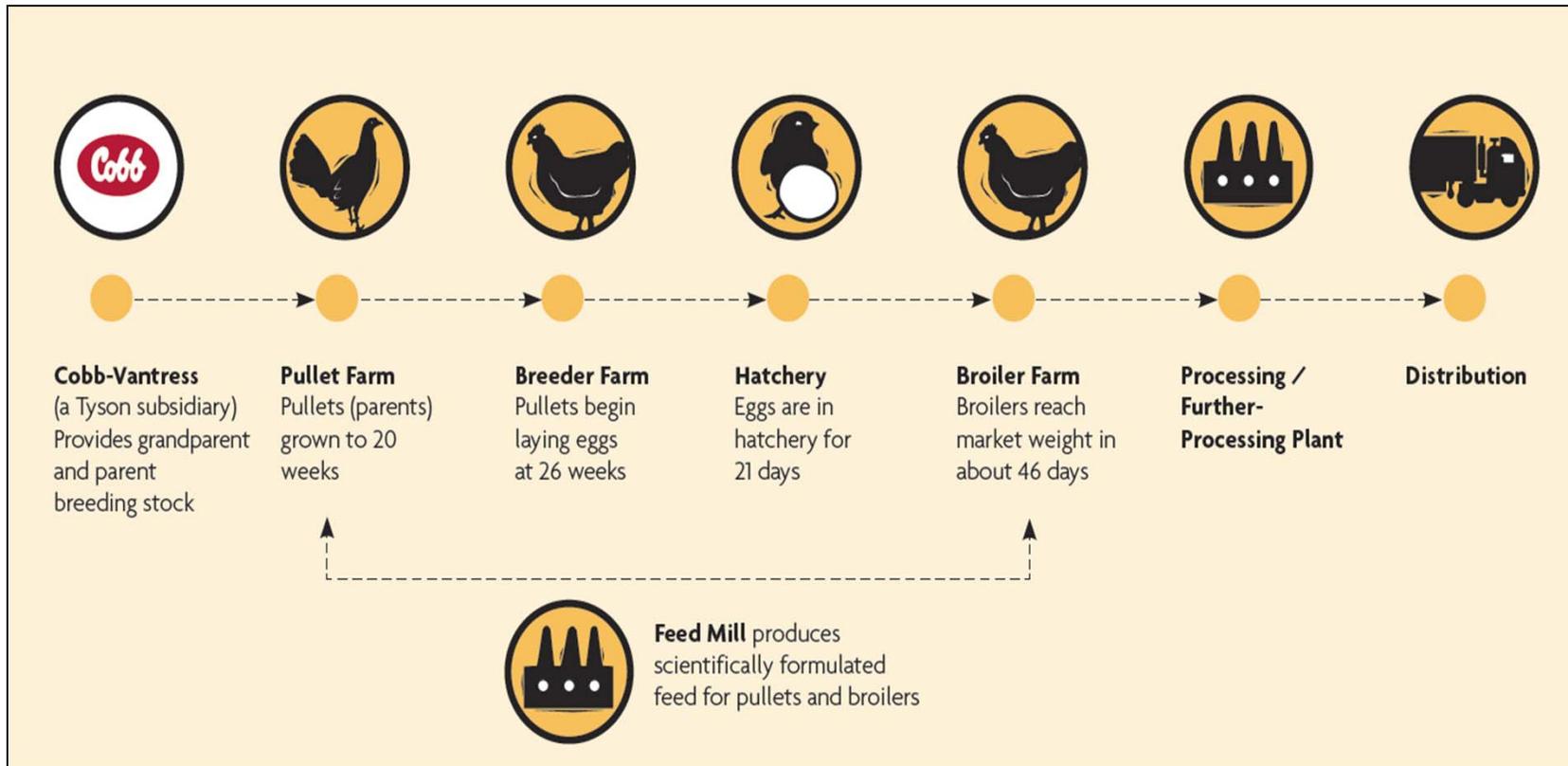
The University of Georgia



Ministry for Primary Industries  
Manatū Ahu Matua



# Chicken Supply Chain



Source: Cobb-Vantress

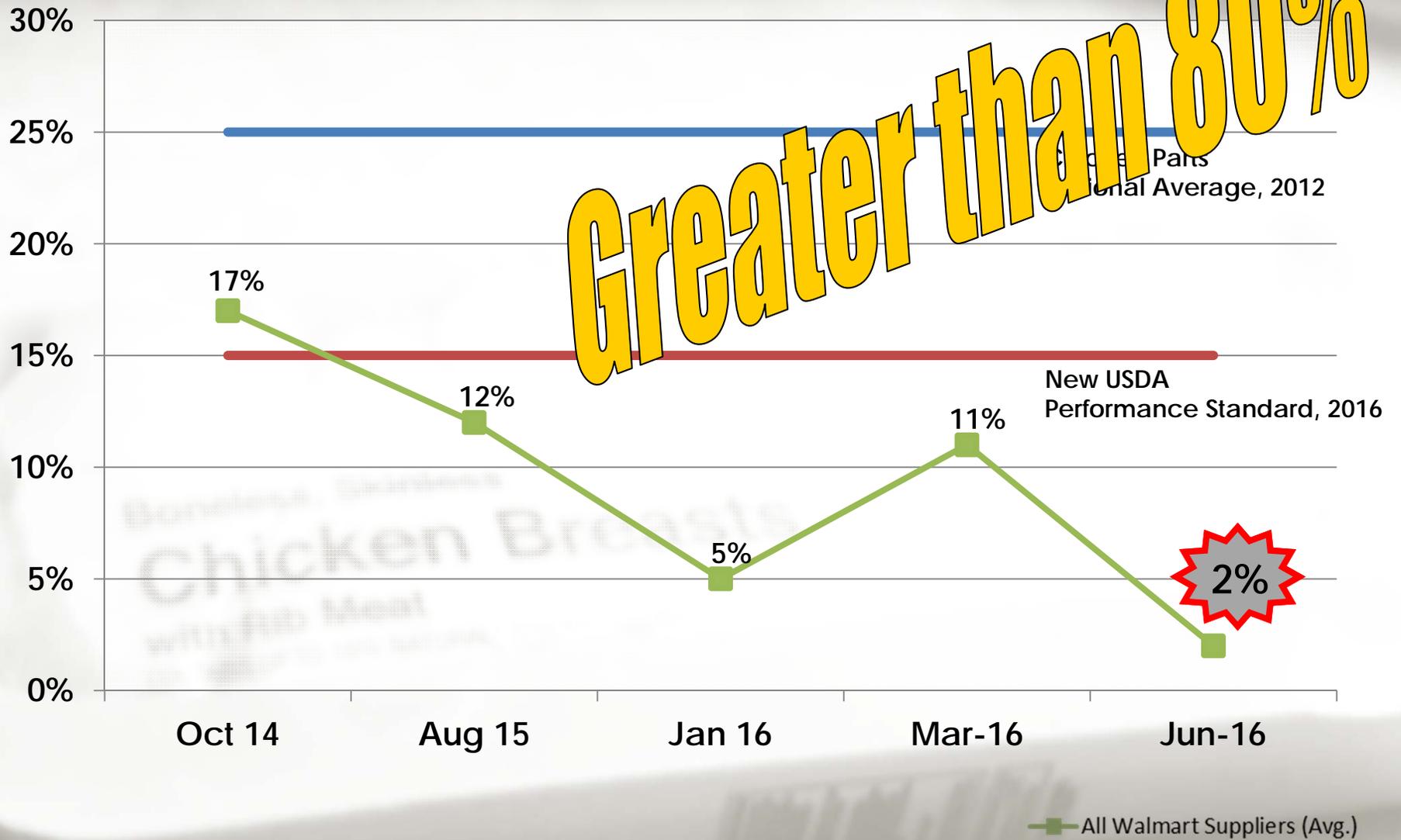
# Poultry Safety Initiative

## 4 Point Plan

- **Primary Breeder Stock**
  - Reduce vertical transmission of Salmonella to broiler flocks
  - National Poultry Improvement Plan (USDA)
- **Bio Control Measures**
  - Vaccinations of Broiler/Breeder Flocks
  - Disease Prevention Best Practices
- **Whole Chicken Process Control**
  - Regulatory Approved Intervention(s) to achieve 4 log<sub>10</sub> reduction of *Salmonella* spp
- **Chicken Parts Intervention**
  - Approved Intervention(s) to achieve 1 log<sub>10</sub> reduction of *Salmonella* spp



# % Chicken Parts Positive for Salmonella



# Enumeration of Salmonella Chicken Parts (MPN/g)



The image features a perspective view of a tunnel formed by multiple rows of binary code (0s and 1s) that recede into the distance, creating a sense of depth. The code is rendered in a light gray color against a white background. In the center of the tunnel, there is a dark blue rounded rectangular box. Above this box are three orange, teardrop-shaped icons arranged in a slight arc. The text "digitized data" is written in a bold, orange, sans-serif font inside the blue box.

digitized data

**“Data on a piece of paper is a dead end; data in digital form is the start of meaning action.”**

**- Bill Gates**





# Minutes instead of Days



# Walmart IBM





**BIG data**



Big

a

# Paper to Digital



Club/Store \_\_\_\_\_ Date / / 20\_\_

### Daily Temperature Log

**Cook Temperatures**

Rotisserie Area Cook Temps (Min 160°)				All other cooked items (Min 165° F)											
Item	Time	Temp	Initials	Item	Time	Temp	Initials	Item	Time	Temp	Initials	Item	Time	Temp	Initials

**Hot Holding Temperatures (Min 140° F)**

Time	Item	Temp	Initials												
10 am-12 pm															
2 pm-4 pm				2 pm-4 pm				2 pm-4 pm				2 pm-4 pm			
6 pm-8 pm				6 pm-8 pm				6 pm-8 pm				6 pm-8 pm			

**Time Check**

Time	Item	Temp	Initials	Time	Item	Temp	Initials
10 am-12 pm				10 am-12 pm			
2 pm-4 pm				2 pm-4 pm			
6 pm-8 pm				6 pm-8 pm			

**Manager Verification**

**Cold Temperatures (Max 41° F)**

Time	Item	Temp	Initials	Time	Item	Temp	Initials	Time	Item	Temp	Initials
8 am-10 am				8 am-10 am				8 am-10 am			
4 pm-6 pm				4 pm-6 pm				4 pm-6 pm			

**VISUALLY OBSERVE TO ANSWER ALL QUESTIONS**

**High Five No. 1 - Be Clean, Be Healthy**

- Are associates using gloves or utensils to prevent bare hands with ready-to-eat foods?
- Are hand washing stations stocked, accessible, and used?

**High Five No. 2 - Keep It Cold, Keep It Safe**

- Are refrigerated cold holding areas at 41° or less?
- Are refrigerated cold holding areas with air flow not restricted?

**Hot Holding**

- Are hot foods in the service deli/cafeteria held 140°F or higher?

**High Five No. 3 - Don't Cross Contaminate**

- Raw food stored below and away from ready-to-eat foods?

**High Five No. 4 - Wash, Rinse, & Sanitize**

- Sanitizer being dispensed at correct concentration?
- Test strips available?
- 3 comp sink set up correctly?

**High Five No. 5 - Cook It & Chill It**

- Foods being cooked to correct minimum internal temperature?
- Are foods chilled correctly?

**Corrective Actions**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Closing Manager Signature:**

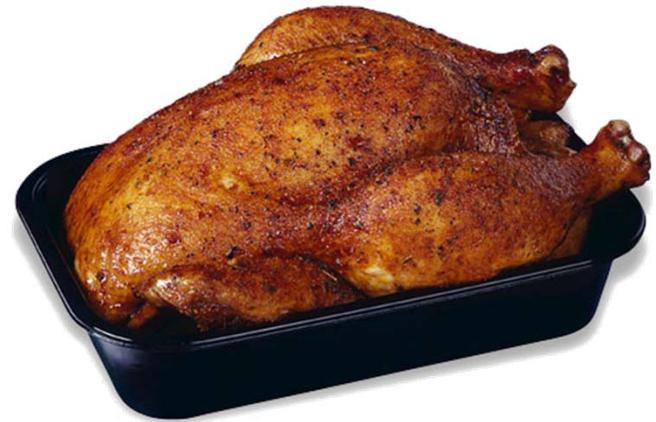
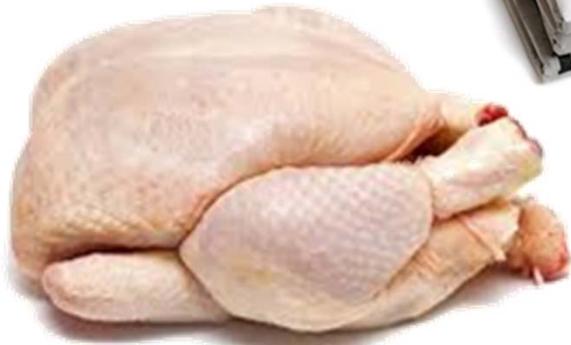
\_\_\_\_\_

Retain Log 6 Months  
See Instructions Page



# The Power of Big Data

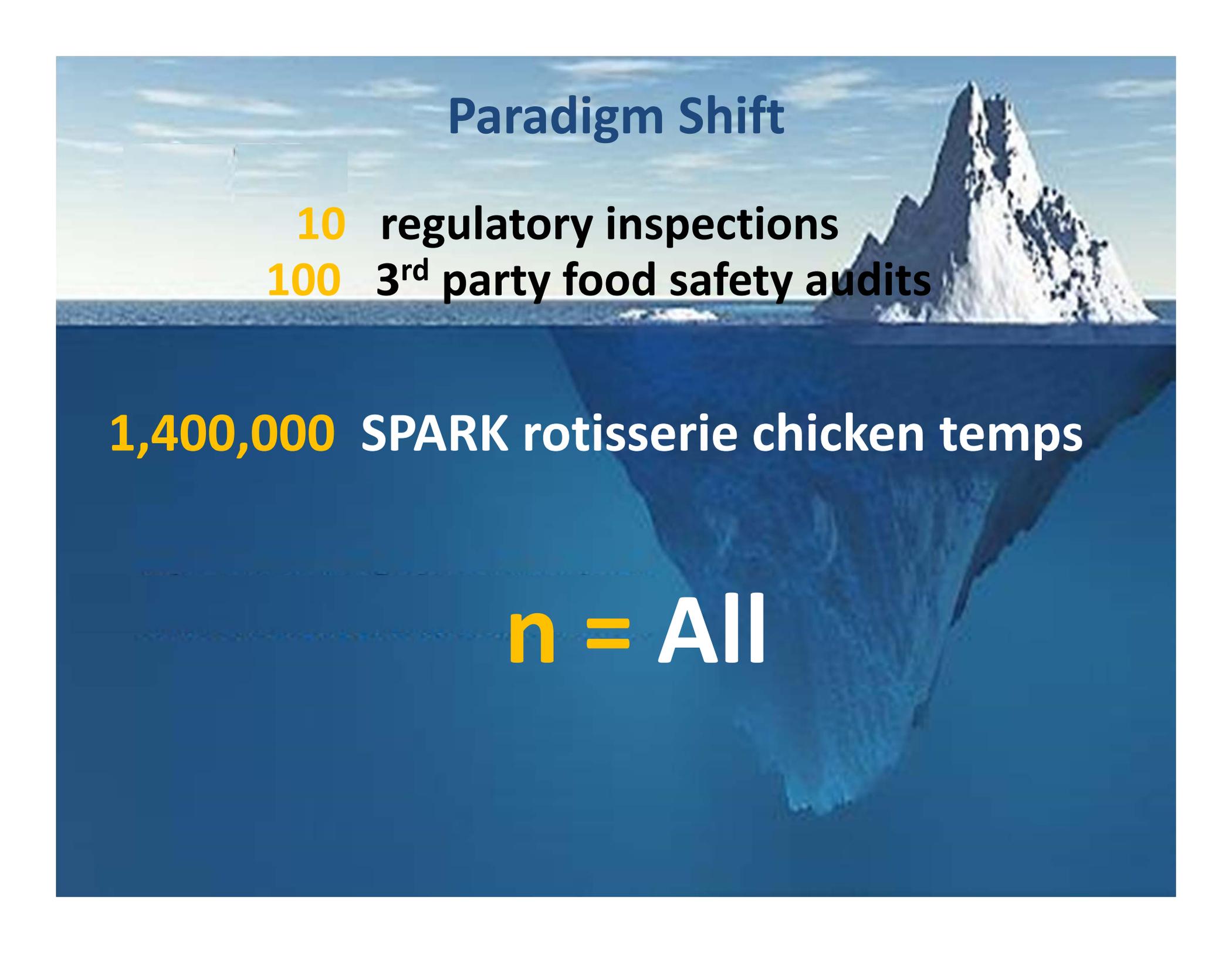
## Rotisserie Chicken Example



**Salmonella**  
**Campylobacter**



# Paradigm Shift

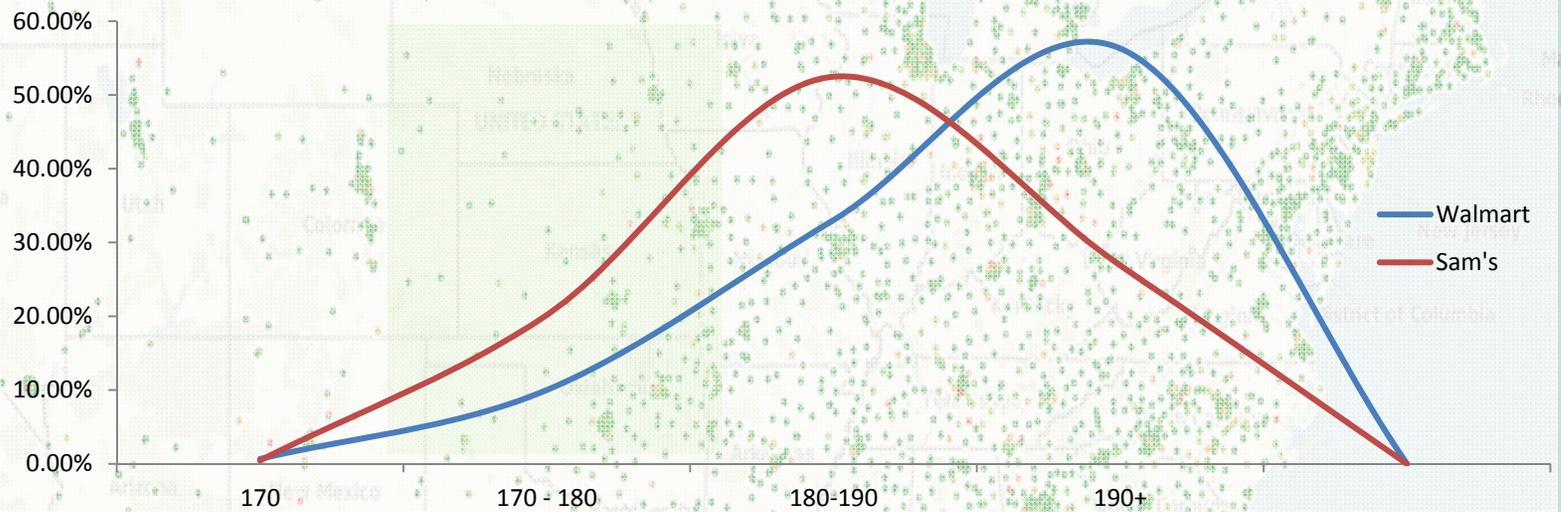
An iceberg floating in the ocean. The tip of the iceberg, which is visible above the water, is relatively small and jagged. The much larger part of the iceberg is submerged below the water surface. The sky is blue with some light clouds, and the water is a deep blue.

**10** regulatory inspections  
**100** 3<sup>rd</sup> party food safety audits

**1,400,000** SPARK rotisserie chicken temps

**n = All**

# 30,000 Foot View with Clarity & Granularity



# Benefits of Shared, Digitized, & BIG Data

- **Enhanced Food Safety**
- **Fresher Food**
- **Less Food Waste**
- **Deter Food Fraud**
- **Promote Responsibility**
- **Build Trust**



**Working together  
to provide safe &  
affordable food,  
so people can live  
better.**

