Future of Food Safety in the Poultry Industry

Walmart

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ILLUSTRATION: GABRIEL PUNSALANG FOR BLOOMBERG BUSINESSWEEK

“world is changing”

The History of Food Processing

- 2000 B.C. - Here, eat this food quickly before it spoils.
- 500 B.C. - That food spoils fast. Here, salt it.
- 1845 A.D. - That salt tastes bad. Here, place that food on ice.
- 1850 A.D. - That ice melts fast. Here, place that food in a refrigerator.
- 1864 A.D. - That food still spoils. Here, pasteurize it.
- 1980 A.D. - That pasteurized food doesn't last long enough. Here, irradiate it.
- 1997 A.D. - That irradiated food is bad for you. Here, eat this "all natural fresh" stuff.
- 2000 A.D. - That "all natural fresh" stuff goes bad. Here, eat this food quickly before it spoils.

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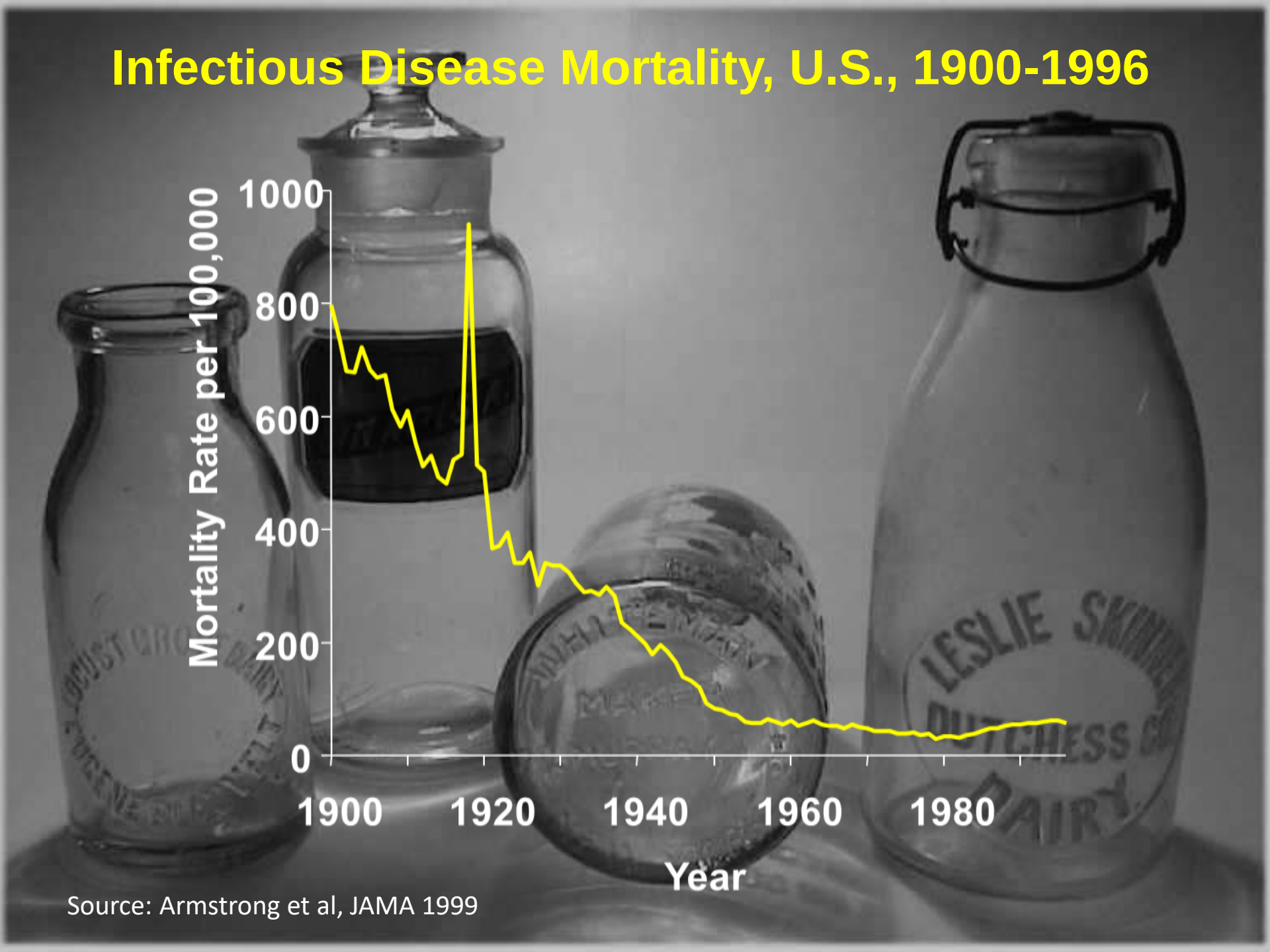
Are we WINNING
the battle against
foodborne disease?

Infectious Disease Mortality, U.S., 1900-1996



Source: Armstrong et al, JAMA 1999

LIVE | Top Stories | My News | Mo

Salmonella outbreak in 26 states linked to raw turkey

USA Today

3 days ago

CDC Reports Widespread Salmonella Outbreak From Eating Turkey

Yahoo

3 days ago

Salmonella outbreak linked to turkey hits N.J., 25 other states

NJ.com

2 days ago

Nationwide Salmonella Outbreak Linked to Turkey

Action News Now

2 days ago

40 Hospitalized in Salmonella Outbreak Linked to Raw Turkey

NBC 5

2 days ago

Salmonella Outbreak in 26 States Tied to Raw Turkey Meat

Good Housekeeping

2 days ago

BEST NEW TABLETS
CARS THAT PAY OFF OVER THE LONG HAUL
SAVE HUNDREDS: KNOW WHEN YOUR APPLIANCE IS TOAST
ConsumerReports
EXCLUSIVE TEST RESULTS
Is Your Chicken Safe to Eat?
CAUTION
The alarming truth behind the latest outbreak
How to protect yourself
Hot List Top cameras, phones & TVs

Bloomberg
SUSTAINABILITY
Poultry Causes Most U.S. Food-Related Deaths, Study Finds

USA TODAY
Salmonella outbreak linked to chicken prompts call for action
SALMONELLA BACTERIA FOUND IN CHICKEN

REUTERS
EDITION: U.S.
HOME
BUSINESS
MARKETS
WORLD
POLITICS
TECH
OPINION
Hundreds sickened in U.S. from salmonella outbreak linked to raw chicken

PFGE, Credit Cards, & Google

COVER STORY: ANATOMY OF AN OUTBREAK: How salmonella sleuths solved a deadly mystery

By Moni Basu, Michelle E. Shaw
The Atlanta Journal-Constitution
Sunday, March 15, 2009

Credit cards led investigators to source of E. coli outbreak

Published Mar 26, 2009

Online tools may have warned of listeriosis outbreak: study

Last Updated: Thursday, March 12, 2009 | 5:07 PM ET

The Race

In Common?

Political Scandals

Recall

Improved Poultry Safety

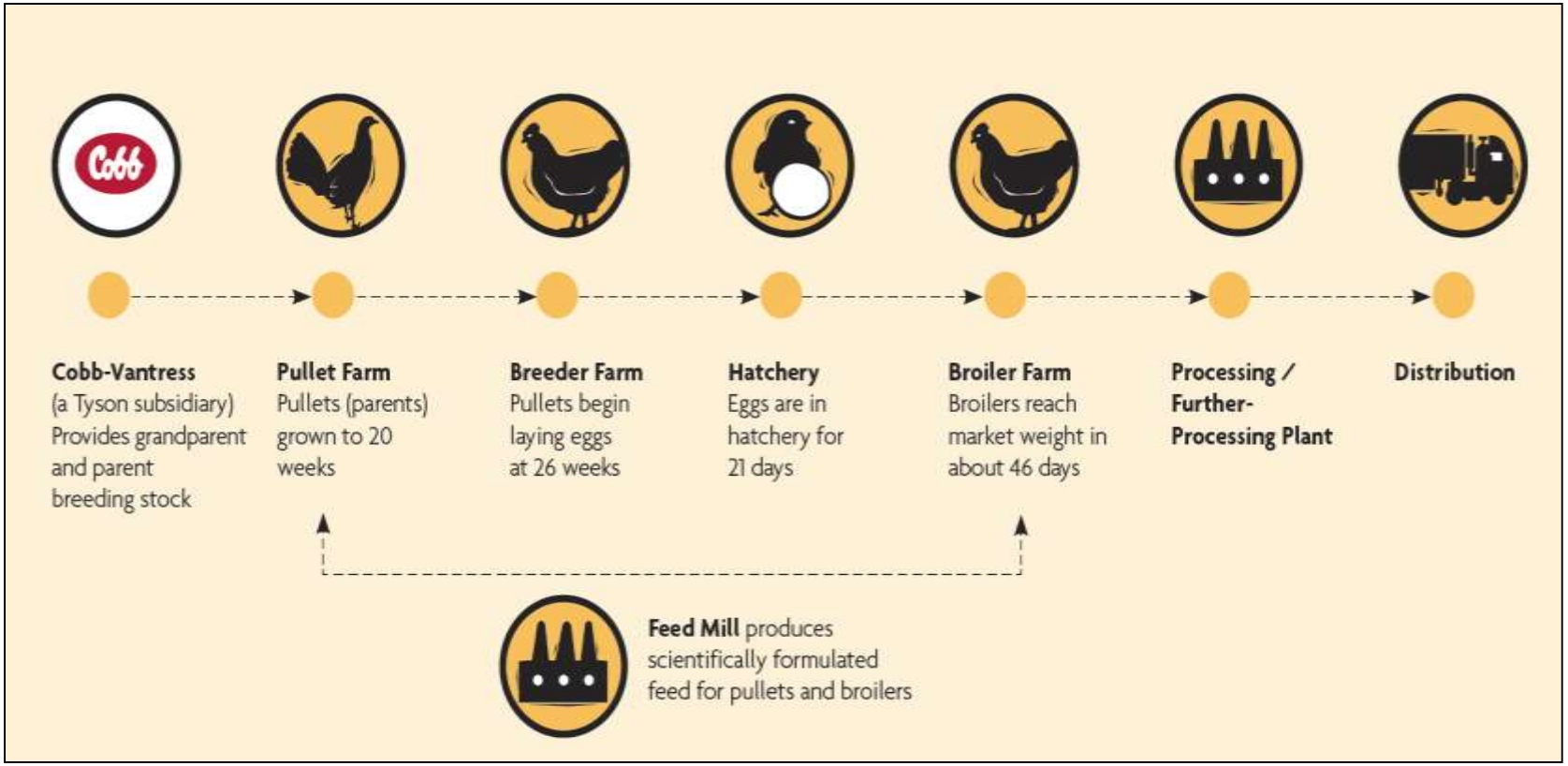
Background (2014)

- Consumers in U.S. shifting from beef to poultry
- Poultry-related outbreaks & recalls affecting consumer trust
- Increased regulatory interest & media scrutiny
- Purchase patterns changing (whole birds vs chicken parts)
- Contamination rebounds on chicken parts (25%)
- No USDA performance standard for chicken parts

Poultry Safety Initiative

Listening Tours, Consultation, & Stakeholder Summit

Chicken Supply Chain



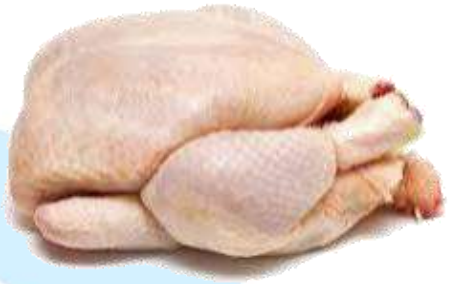
Source: Cobb-Vantress

Poultry Safety Initiative

4 Point Plan

- **Primary Breeder Stock**
  - **Reduce vertical transmission** of Salmonella to broiler flocks
  - **National Poultry Improvement Plan**

- **Bio Control Measures**
  - **Vaccinations** of Broiler/Breeder Flocks
  - **Disease Prevention** Best Practices

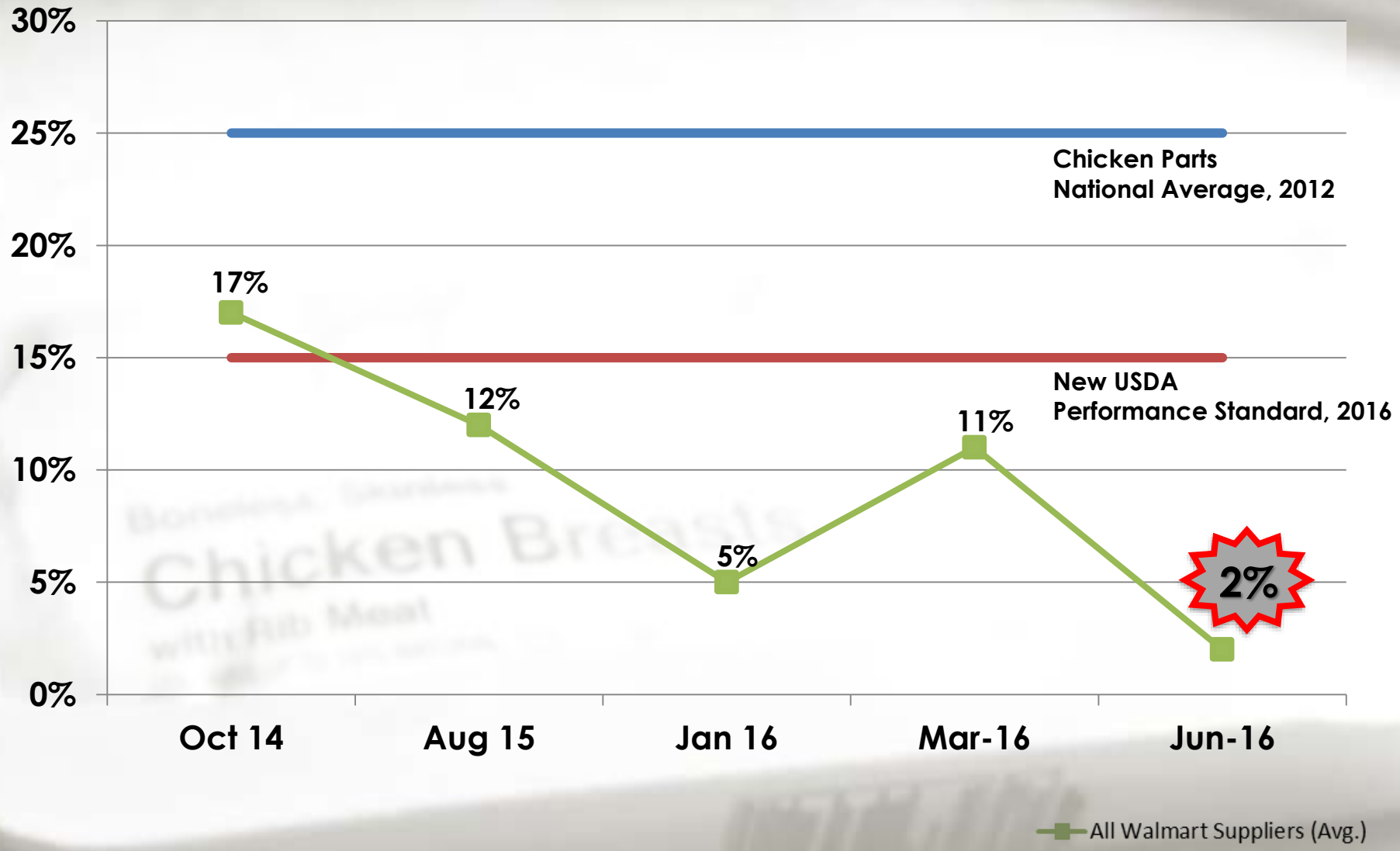


- **Whole Chicken Process Control**
  - Regulatory Approved **Intervention(s) to achieve 4 $\log_{10}$ reduction** of *Salmonella* spp

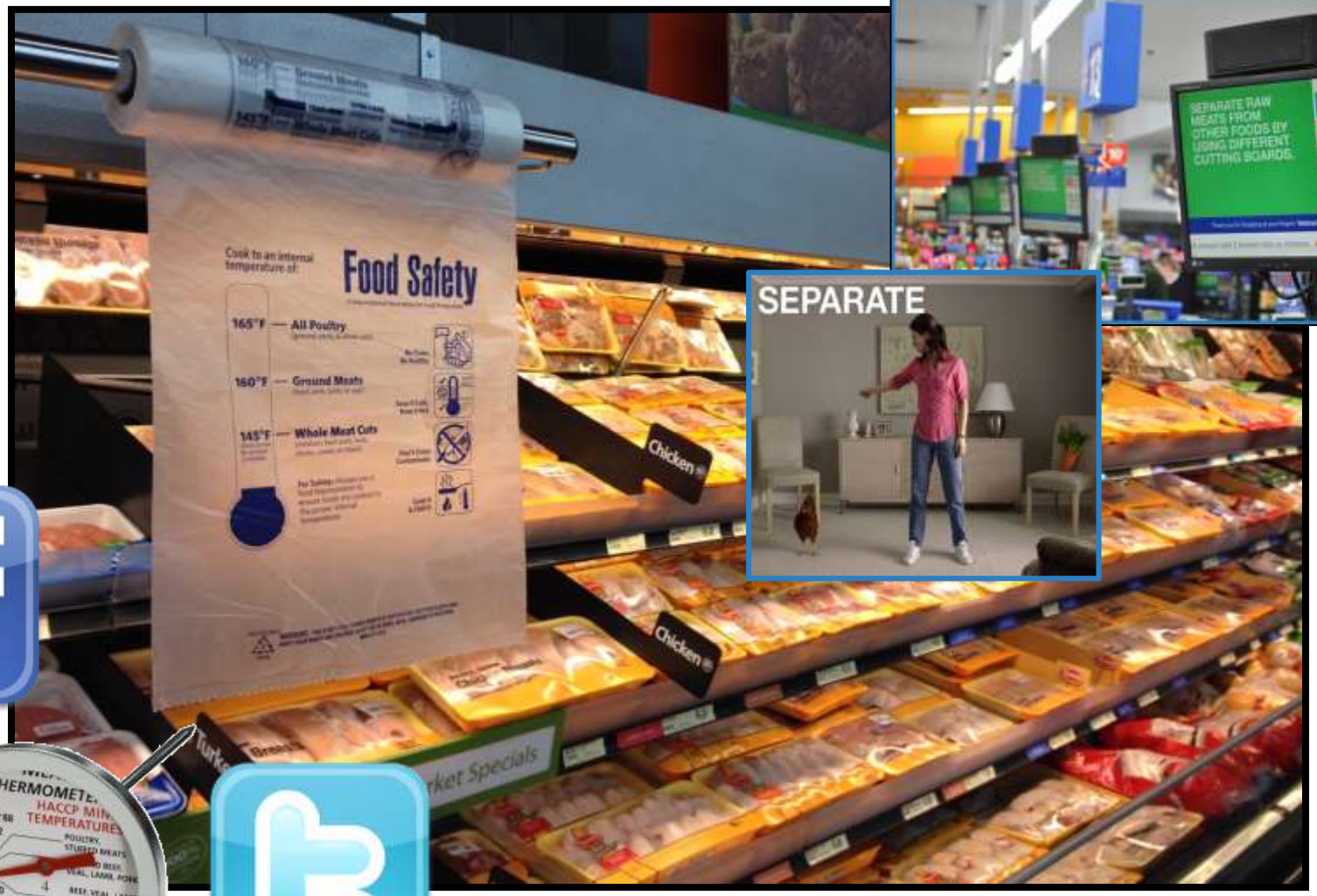
- **Chicken Parts Intervention**
  - Approved **Intervention(s) to achieve 1 $\log_{10}$ reduction** of *Salmonella* spp

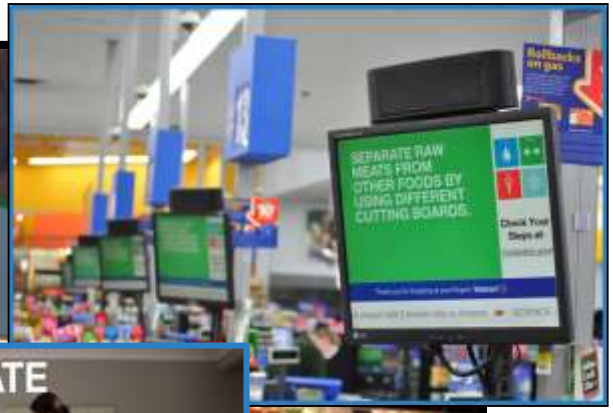
Dec 2014

% Chicken Parts Positive for Salmonella



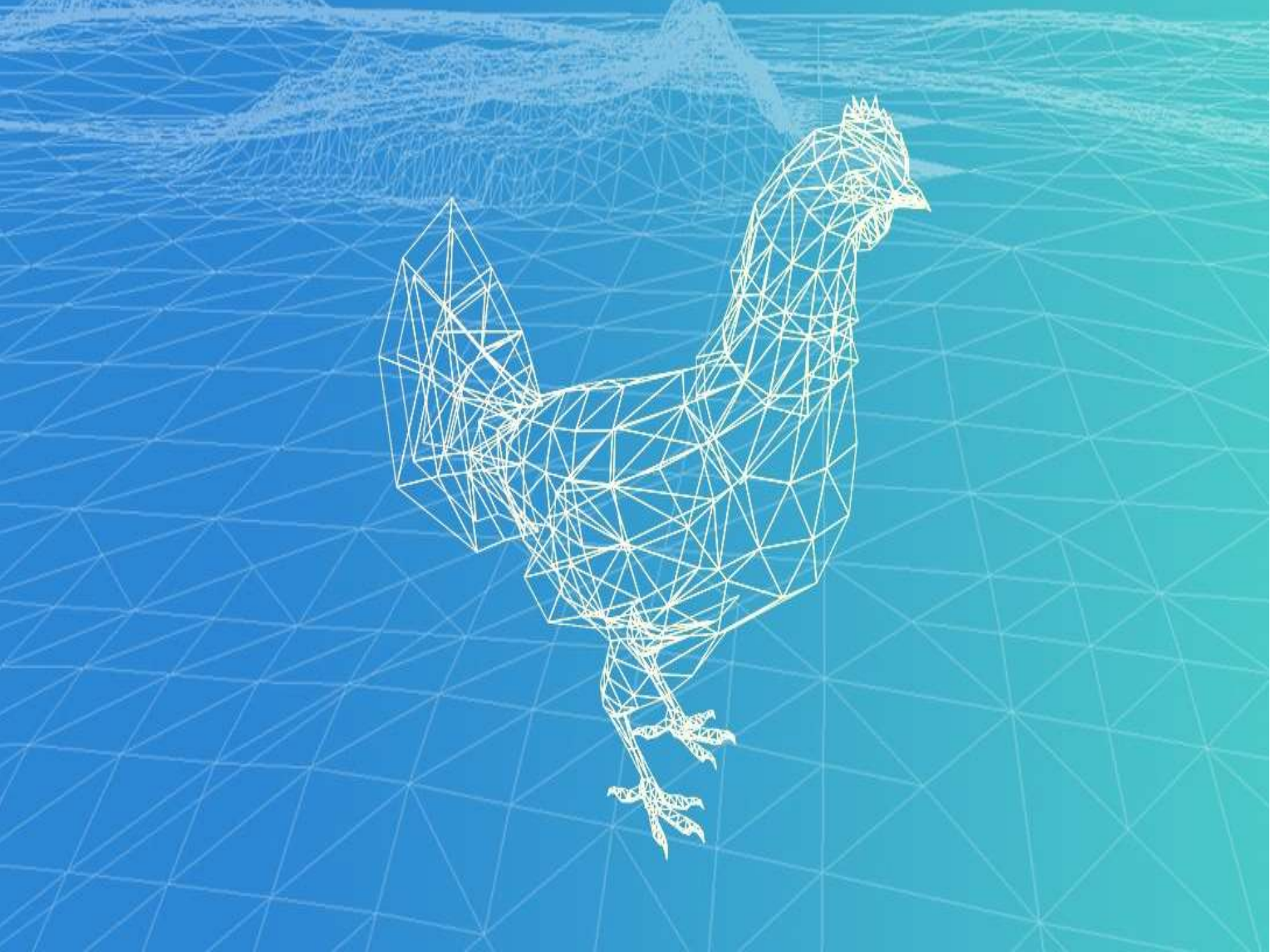
Consumer Education





Walmart Food Safety

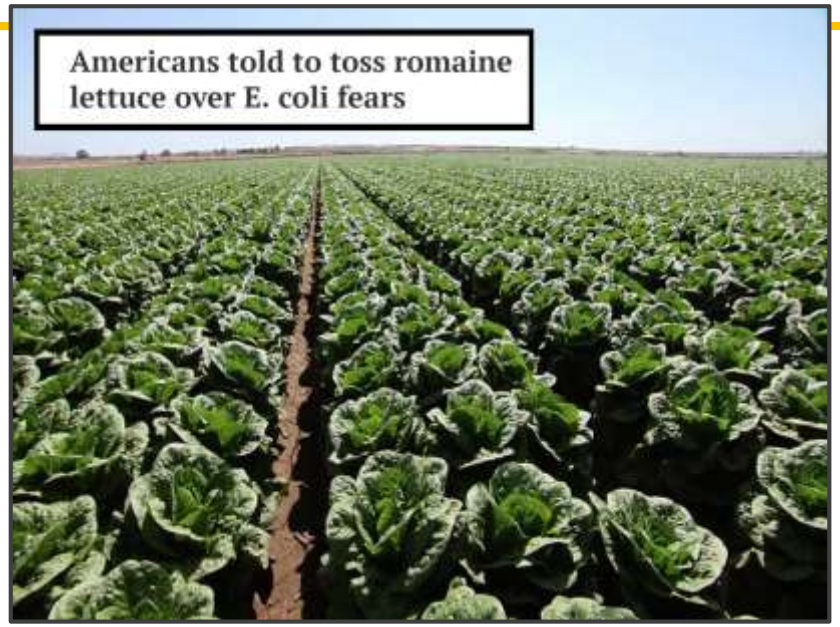
Riding in shopping carts and exposure to raw meat and poultry products are risk factors for salmonella & campylobacter infection in children younger than 3 years.
J Food Prot. 2010 Jun;73(6):1097-100

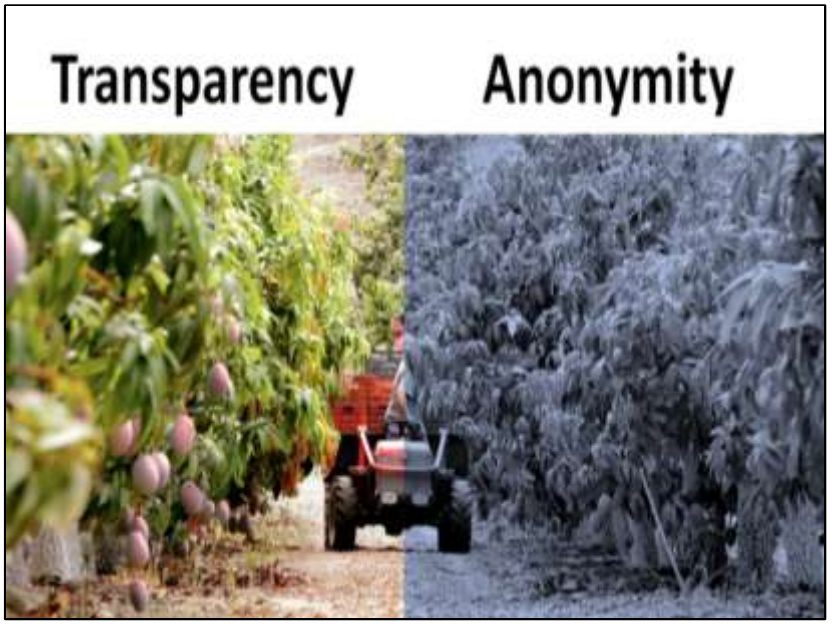


Why
Blockchain?

A New Era of Food Transparency

A New Era of Food Transparency Powered by Blockchain





SCALING TRUST

in the food system with blockchain

10

MAJOR BRANDS

Walmart, Nestlé, Tyson, Dole, Unilever, Driscoll's, Kroger, Danone, McCormick

20+

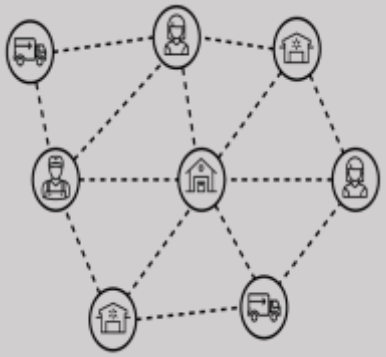
FOOD SKU'S TRACKED

Millions

FOOD PACKAGES TRACKED

100K

TRACEABILITY EVENTS



April 2018

safe, affordable, &
sustainable food,
so people can live
better.
Walmart