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Closing the Trust Gap: Technology and the Food Supply Chain

The path toward better food safety through traceability and improved consumer confidence

Contents

1-Minute View

About the Study

The Zebra Vision Study Report on technology and the food supply chain checks the pulse of industry and public perception around safety, traceability and transparency. We've captured the views of consumers, and food and beverage industry decision-makers, from all over the world. The picture they've painted highlights the challenges around information for businesses in the supply chain and how technology can solve them.

Consumers are increasingly worried about illness or allergies caused by the food they consume. Consequently, they're concerned about the source, quality and safety of their food. This could be a make-or-break issue for companies throughout the supply chain as consumers don't believe they are sufficiently informed. However, technology can deliver the enhanced traceability needed to inspire greater consumer trust and at the same time enable improved operations for your business.
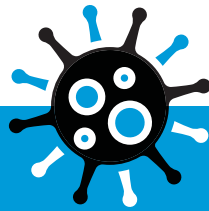
The Impact of COVID-19

This study was conducted prior to the global COVID-19 pandemic, which is likely to cause long-lasting changes in consumer demands. The sharp focus on human health, along with the health of the food supply chain, may further increase demand for food traceability through the provision of information and transparency.
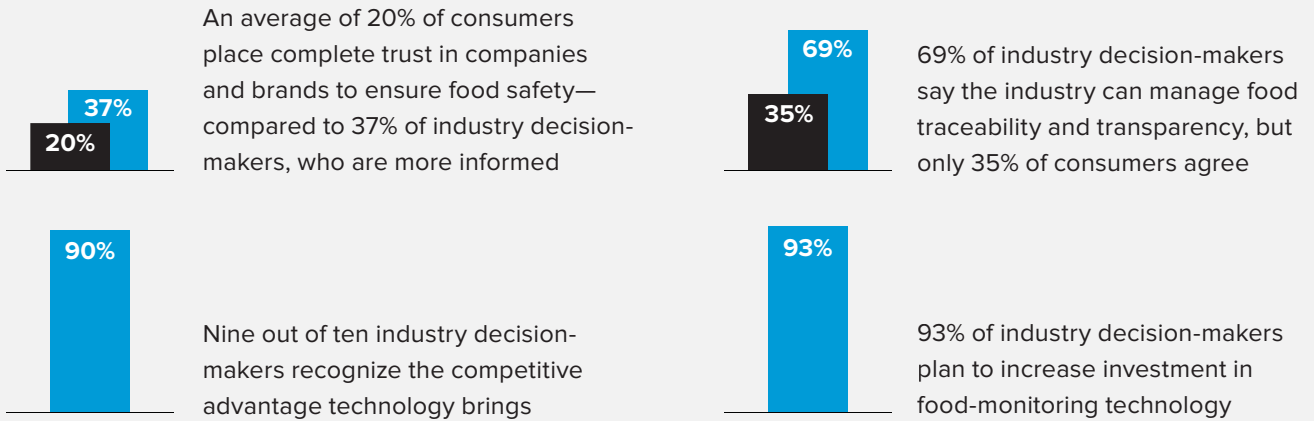
Major shifts towards curbside and e-commerce deliveries will only add to the pressure, but technology can play a key role in meeting these demands by optimizing food supply chain resilience. Using technology to extend traceability capabilities can help maintain food safety and security during this and other public health crises, as well as better manage supply chain imbalances caused by market disruptions.

The Story in Numbers

37%
20%

An average of 20% of consumers place complete trust in companies and brands to ensure food safety—compared to 37% of industry decision-makers, who are more informed

69%
35%

69% of industry decision-makers say the industry can manage food traceability and transparency, but only 35% of consumers agree

90%

Nine out of ten industry decision-makers recognize the competitive advantage technology brings

93%

93% of industry decision-makers plan to increase investment in food-monitoring technology

Identifying the Gap Across the Globe

Over 5,400 Respondents

4,957
Consumers

representing adults across several generations (age 18+) and genders.

462
Industry Executives

representing food and beverage industry decision-makers across manufacturing, transportation and logistics, wholesale/distribution and retail.

15 Countries Represented

North America

Canada
United States

Europe

France
Germany
Italy
United Kingdom

Asia-Pacific

Australia
China
India
Japan
New Zealand

Latin America

Brazil
Chile
Colombia
Mexico

Market Watch: Consumer Faith in Food Safety is Low

In the food and beverage industry, ever-increasing consumer demand for unlimited choice, fast availability and lower prices leads to reduced profit margins. This generates pressure to maximize production levels, pushing manufacturing systems to their limits—and sometimes beyond. In this situation, food safety can easily be compromised, with potentially serious consequences.

Collectively, the industry recognizes that food safety management can be improved. Across 13 different types of companies and brands within the supply chain, ranging from distribution and warehouses to grocery stores, quick-serve and full-service restaurants...

37%

20%
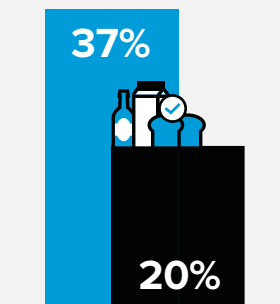
...only an average of 37% of industry decision-makers place complete trust in the industry to ensure food and beverage safety.

But more concerning is that this figure drops to just 20% among consumers, exposing a significant gap in levels of trust.

Decision-makers are actively engaged in the industry, and so naturally have access to more information than consumers, who could place greater faith in their food sources themselves if they had access to similar information.

Consumers' Top Five Food Safety Concerns

1	Restaurant kitchen staff hygiene
2	Foodborne outbreaks
3	Illness from contaminated food
4	Food and beverage recalls
5	Restaurant wait staff hygiene

The Business Consequences of Food Safety Incidents Around the World

Financial

Businesses responsible for, or connected to, food safety incidents may be forced to stop trading or be barred from selling their product for periods of time. This can have a devastating effect on income streams extending throughout the supply chain.

Reputational

High-profile and/or widespread incidents can attract negative publicity that can damage a brand and discourage consumers from purchasing from them in the future. The power of the internet and social media means this bad publicity can quickly spread worldwide.

Legal

Consumers who are affected by an incident may take legal action against a business involved for compensation, while authorities may also investigate businesses if they believe food safety laws have been broken.

Regulatory

Repeat incidents in similar areas, or a single incident that garners significant public interest, may prompt changes to laws and regulations that can affect how businesses operate long-term, with potential economic and practical consequences.

Co-operative

If a business becomes known for bad food safety, then its partners across the supply chain may wish to dissociate from it in order to protect themselves. This could cause major disruption to operations while alternative and willing partners are sought.

The Information Challenge Ahead

Consumers want to know where their food comes from.
In addition, how food and ingredients are manufactured, prepared and handled is highly important to 70% of consumers—more than any other type of information.

Their quest for knowledge is fear driven.
More than any other driver, fear of foodborne illness or disease is the biggest motivator for consumers to learn more about the origin of their food.

Faith in food safety is low.
Less than a quarter of consumers (22%) say they have complete confidence in the safety of their food, based on the information currently available to them.

Consumers feel the industry isn't prepared to meet the challenge.
Over two-thirds of decision-makers (69%) say the industry is ready to manage food traceability and transparency—but only 35% of consumers agree.

Why Meeting the Challenge Matters

83% of consumers say the industry has an important role to play in implementing food safety solutions

82% of consumers say the industry has an ethical responsibility to ensure food safety

60% of consumers would never visit a restaurant again after contracting a foodborne illness there

51% of industry decision-makers say meeting consumer expectations will continue to be a challenge in five years

The Key Technology Enablers

Food and beverage enterprises have recognized that they need to do more to win consumer trust, and technology is considered key to delivering increased and more transparent information to consumers. Nine out of ten industry decision-makers feel that technology geared towards improving safety and traceability could drive competitive advantage. They cited several potential areas of benefit, including:

Reduced risk through proper handling, transportation, storage

Tracking of product perishability

Food supply chain optimization

Compliance with food quality and safety guidelines

Intake management of raw materials and ingredients

More transparency in the food supply chain

All of these areas can be assisted by devices and technologies for digital tracking of items and related information, and industry decision-makers have identified the specific technology solutions that can assist. Rugged handheld mobile computers with scanners, mobile barcode labels and thermal printers, and rugged scanners were identified as the top three most popular technologies for improving traceability.

As these figures indicate, decision-makers who have not already implemented these technologies expressed strong enthusiasm for doing so in the near future, with considerable growth in adoption expected over the next three years.

Device Adoption Rates

● Today   ● In 5 years

90%	88%	90%
39%	38%	39%
Rugged handheld mobile computers with scanners	**Mobile barcode labels and thermal printers**	**Rugged barcode scanners**
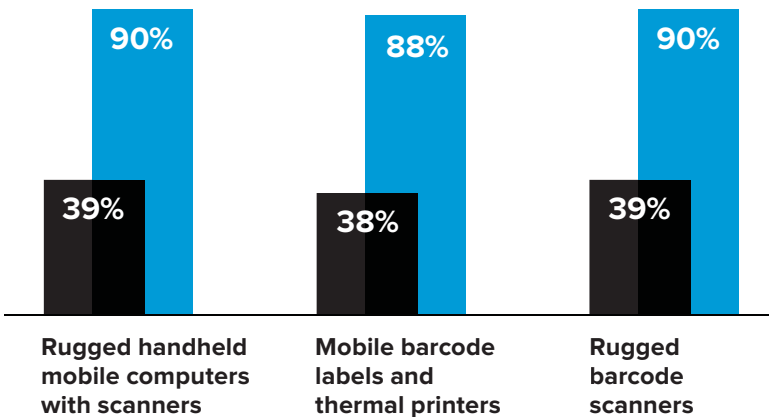
Additionally, it's expected that blockchain, temperature monitoring and sensing technologies, and predictive analytics will play an even more crucial role in the industry in the coming years.

RFID Leads the Way in Innovation

41%

of industry decision-makers say RFID tags improve food traceability within the supply chain, more than any other technology.

However, only

31%

say they currently use them within their own organizations.

This presents savvy, forward-thinking businesses with a unique opportunity to gain a distinct advantage in the industry by adopting RFID technology before their competitors do.

Focused Investment in Traceability Technologies

Technology that aids traceability doesn't just benefit consumers by making them more informed. It also benefits businesses throughout the supply chain through greater efficiency, improved consumer confidence and a strong return on investment. This is driving a strong uptick in decision-makers wanting to lead the way by deploying these technologies:

93% of industry decision-makers say they're planning to increase investment in food monitoring tools within the next year.

These figures are especially encouraging when budgetary issues are taken into consideration. Almost half of industry decision-makers cited their budget as a barrier to technology deployment, second only to staff training.

The Changing Face of Operational Models

Once equipped with the right technology, enterprises can progress to adopting more predictive models for their supply chain operations. This can help them further increase efficiencies and mitigate potential problems before they happen.

62%
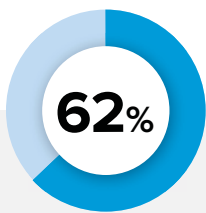
Twenty-one percent of decision-makers in food supply chain businesses expect to operate more predictively over the next five years, which is a 62% increase from where they are today.

Technology in the supply chain gives consumers the information and confidence they want, and gives food and beverage businesses the transparency and traceability they need.

Regional Findings

The study shows clear trends that emerge across regions. Businesses in Latin America take food safety and transparency much more seriously, while attitudes around the value of technology in regards to food safety are more relaxed in Europe. There is a startling gap between decision-maker and consumer perceptions in North America, and businesses in Asia-Pacific place less emphasis on the value of transparency and the competitive advantage it can bring.

North America

74% of decision-makers say the industry is prepared to manage food traceability and transparency, but only 25% of consumers agree.

On average, decision-makers trust their ability to ensure the safety of food and beverage 2.5 times more than consumers do.

Europe

62% of European consumers are concerned about foodborne outbreaks, but only 41% of decision-makers feel their company has an important role to play in implementing food safety solutions.

RFID tags are named as a technology that improves food traceability by 38% of European industry decision-makers, compared to just 20% naming real-time location trackers.

Latin America

79% of Latin American consumers find it important to have accurate and up-to-date information on the origin of their food and 58% of decision-makers' technology will help address consumers' demands for more transparency in the food supply chain.

A majority of decision-makers say rugged handheld mobile computers with scanners improve food traceability.

Asia-Pacific

68% of Asian-Pacific customers want to know how their food and/or ingredients are manufactured, prepared and handled. While 83% of Asian-Pacific decision-makers say transparency is a competitive advantage, this figure among executives in every other region is much higher (97% or more).

Almost half of decision-makers cite RFID tags as a technology that improves food traceability.

Close the Trust Gap: Information is Power

It's clear that the food and beverage industry acknowledges the value of technology to improve traceability. Investing in track and trace technologies promises that the industry will not only inspire trust and protect consumers, but will also benefit from greater operational efficiency and productivity.

About Zebra

Zebra (NASDAQ: ZBRA) empowers the front line of business in retail, manufacturing, transportation and logistics, healthcare and other industries to achieve a performance edge. We deliver industry-tailored, end-to-end solutions that intelligently connect people, assets and data to help our customers make business-critical decisions.

Build a Safer Food Supply Chain

Learn more about how Zebra can help your organization manage food safety at:

zebra.com/foodsafety

Five ways to maximize technology in food safety:

Identify gaps in food supply chain monitoring and highlight them as areas for improvement

Identify requirements and ensure new measures help meet supply chain regulations

Improve visibility and transparency with deeper information and stronger information flow

Improve traceability with the creation of a comprehensive log for food and beverage products throughout the supply chain

Deploy technologies like mobile scanners, barcode labels, predictive analytics and RFID solutions to enable a fully integrated system for traceability