



What's on your plate?

Overview of Deloitte research on food safety with a European perspective

April 2017



MENU



AMUSE-BOUCHE

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Amuse-Bouche

Introduction

The food industry occupies a unique and privileged place inside every single household. Food and beverages play a central role in our lives, for sustenance, health and pleasure. Collectively, Europeans assign 14 per cent of their expenditure to feeding themselves and their families.

Every day of the year, households are buying, storing, preparing and consuming an enormous range of food products – from basic ingredients to ready-made meals – which are produced and delivered by the largest manufacturing sector in the EU. In 2014, the food industry generated €1.2tn turnover and employed 4.2 million people.

Food companies and their employees work hard to earn that privileged place in the kitchen pantry – and competition is tough. In developed countries, the industry grew by just 2.6 per cent during the period 2012-14, in lockstep with population growth.

Across the entire food supply chain, all industry players are continuously facing challenging global trends and market forces. The dominant forces come from the consumers, who are increasingly considering new value drivers when making a purchasing decision, values like health and wellness, safety, social impact, experience, and transparency.

And they want all relevant information at their fingertips at the time of purchase, in both online and bricks-and-mortar stores: What is in my food? How was it made? Where does it come from? Many organizations struggle to keep pace with more informed, more connected, and more demanding consumers; and hence to optimize market penetration in order to create sustainable and constant growth.

Of course, with hard-won customer loyalty come great responsibility and risk. When food safety is compromised, the effects are far-reaching, as recent food scandals have shown – impacting consumers' health (in extreme cases posing a threat to life); influencing consumer opinion as well as that of government and regulators; and damaging brands' reputations and bottom lines.

When risks are well managed, the opportunities for growth are multiple and varied for those organisations that are willing and able to adapt to market forces and challenges, while retaining a competitive edge. How is your organization managing this continuously-shifting environment? How are you thriving with everything you have on your plate?



David Hearn

Ireland, EMEA Consumer & Industrial Products leader

"This Deloitte Point of View will provide you with an overview from all our recent research on the food industry and its regulations, with a European perspective – both as the situation stands today and how it will look tomorrow. We will provide you with a buffet of compelling and useful information, liberally peppered with research findings and fact-based evidence:

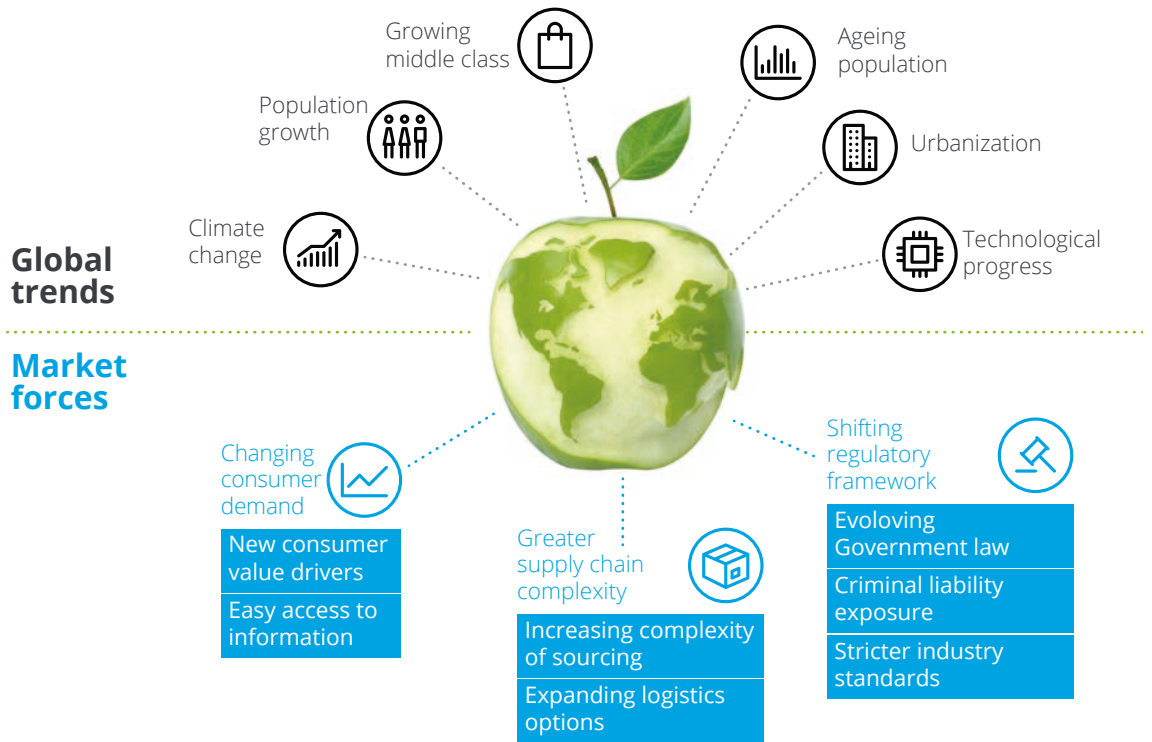
- *The key market forces and macro trends that are shaping the what, why and how of consumer buying habits*
- *The most important risks to food safety and resultant food crises*
- *The ten value drivers that every food company needs to consider*
- *How to assess your fitness levels to survive and thrive in the future*

Some of these insights may be hard to swallow. Nevertheless – bon appétit!"

First starter

Trends and market forces shaping the food industry and its future

Figure 1. Global trends and market forces affecting the food industry



Food companies and their supply chains – from input to the agricultural sector through farmers, traders, distributors and retailers, right up to the consumers – are constantly being challenged by global trends and market forces outside of their control, as shown in Figure 1. Increasingly they must deal with the consequences of climate change, rapidly-increasing populations and the rise of the middle class in the developing world, an ageing population in established countries, worldwide trend towards urbanization, and the disruptive force of technological progress.

Demographers expect a rapidly-growing population to reach 9.5 billion people by 2050, which will increase global demand for food by 60 per cent. These shifts are in turn driving new threats to our populations, systems and environment, with the agrifood sector responsible for 30 per cent of greenhouse gas emissions, and climate change increasingly threatening food systems.

Deloitte has been collaborating with the World Economic Forum (WEF) and their New Vision for Agriculture (NVA) team to focus on the challenges within the world's food and agriculture systems – and in particular how leaders across sectors can work together to make those systems more inclusive, sustainable, efficient, and nutritious.

[Building Partnerships for Sustainable Agriculture and Food Security: A Guide for Country-Led Action](#), is a 2016 report by Deloitte and the WEF arising from this initiative. It provides a practical reference for building multi-stakeholder agricultural partnerships between governments, local organisations, and the private sector. It is based on a model successfully used by the NVA in 19 countries in Africa, Asia, and the Americas.

The Deloitte team is also collaborating with the Consumer Goods Forum (CGF) on their [Health & Wellness Report](#). The CGF recognizes that improving the health and wellness of the world's population is an important mission for the food manufacturing and retailing sectors.

The World Health Organization has identified the rise of non-communicable diseases – related to issues such as under-nutrition, stroke, diabetes, and obesity – as a major worldwide challenge. CGF and its member companies have resolved to improve product formulation, provide meaningful product labelling, and institute responsible marketing, all with the goal of enhancing the well-being of consumers, employees, and communities. As part of this initiative, CGF member firms have, to date, reformulated 84,000 products, worked closely with more than 5,000 communities, and made a positive impact on the lives of 1.8 billion people worldwide.

Apart from the outlined global trends, market forces driven mainly by consumers have an increasing impact on food companies.

While originally serving local markets, food companies expanded to a global scale and thus could serve standardized products to a standardized consumer. Under this setup, consumer business companies were the major force in deciding which consumers get which products to choose from. However, recently there has been a shift in power away from the big consumer companies, towards consumers and retailers. In the following section we will present the most relevant of these drivers.



Changing consumer demand

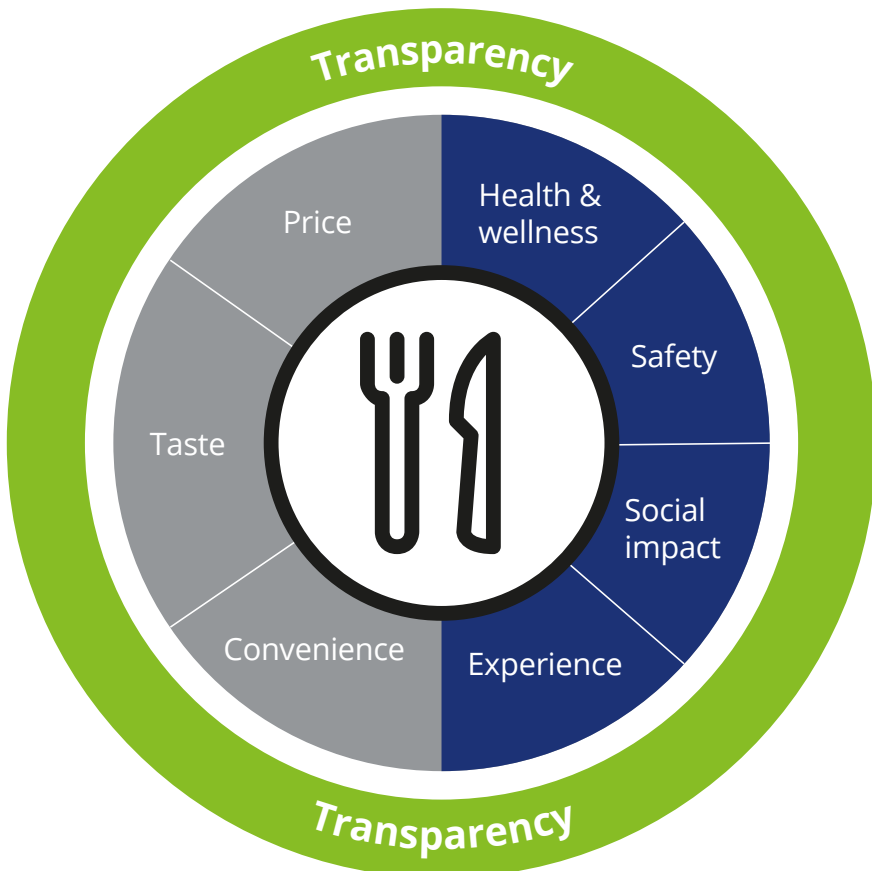
New consumer value drivers - The shifting consumer value equation

A study by Deloitte in collaboration with the Food Marketing Institute and the Grocery Manufacturers Association found that while consumers still pay attention to the traditional drivers of price, taste, and convenience, "evolving" drivers are becoming significantly important when making a purchasing decision. These drivers are: health and wellness, safety, social impact, experience, and transparency.

The results of this study are documented in our report, [Capitalizing on the Shifting Consumer Food Value Equation](#). These changing market trends are making consumer product companies sit up and take notice.



Figure 2. The consumer value driver plate with traditional (grey) as well as evolving (blue) value drivers



■ Traditional value drivers ■ Evolving value drivers

Source: Deloitte food value equation survey 2015, Deloitte analysis

Easy access to information – The growing power of consumers

Transparency is a value driver deriving from consumers' increasing demand for information, and the ability of today's information systems to provide it.

With rising device ownership, quicker connectivity speeds as well as well-developed social media networks, key information is at the consumers' fingertips, which also allows them to share it effortlessly with a broad audience.

In the [The Deloitte Consumer Review – The growing power of consumers](#), we provide evidence that, while consumers have always had the ability to vote with their feet, or with their wallets, they now have more power to influence not only what they buy, but also what others buy.

In the first place, consumers seek information through the product itself. They expect a reference or an easy-to-scan tag on the product that leads to detailed information. In fact, manufacturers cannot include all the amount of information requested by buyers and regulatory authorities, and have to link the packaging to a richer source. A typical example is in the US where in 2015, over 30 major companies began participating in a new SmartLabel™ initiative, designed to offer greater transparency, and offering consumers more product information and details using QR labelling and Web-based landing pages.

Furthermore, our analysis from the [Deloitte Consumer Food Value Equation Survey](#) reveals how consumers with higher preference for evolving drivers (health and wellness, safety, social impact, experience, and transparency) in their purchase decisions are using and relying on social media, mobile apps and digital channel twice as much as consumers preferring traditional drivers.

Do you actively look for information on food / beverage topics in the media (incl. news, websites, blogs and social media)?

Looking towards the future, in the [Deloitte Consumer Review: Digital Predictions 2016](#), we review six technological trends which are likely to have the biggest impact on the consumer business sector this year. From cognitive technology to touch commerce and photo-sharing, digital advances are fundamentally reshaping relationships between consumers and companies.



JN Hill

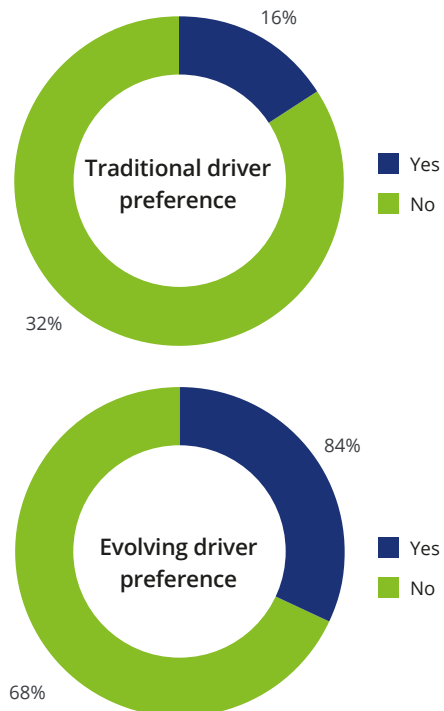
Switzerland, EMEA Food Safety and Supply Chain lead partner

"Social media channels enable consumers to broadcast their experiences and perspectives around the world within seconds. This amplifies both the opportunities and risks on any business.

While the shift in power towards the consumer is real, today's food companies have great opportunities to leverage these technologies to their benefit and :

- Engage and build trust through social channels by providing greater transparency in their products so consumers become brand advocates to their networks
- Monitor those social networks to help identify when an issue occurs as this will probably be the first point of contact
- Have proactive campaigns across all channels including social media to communicate the truth and potential risks of any occurrence"

Figure 3. Do you actively look for information on food / beverage topics in the media (incl. news, websites., blogs and social media)?



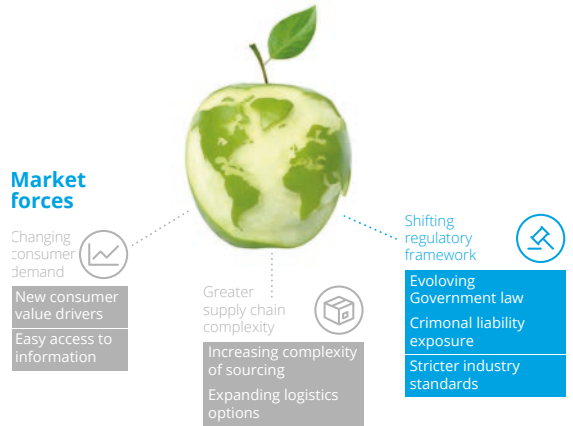
Source: Deloitte consumer food value equation survey, 2015

Shifting regulatory framework

The food industry has had to contend with a large number of new regulations and standards in the past few years. Implementing and adapting to new regulations has been a struggle for a few major players – and there's more to come.

There are numerous European Commission (EC) projects, national programs and industry initiatives under way, attempting to address the issues surrounding the authenticity and integrity of food products:

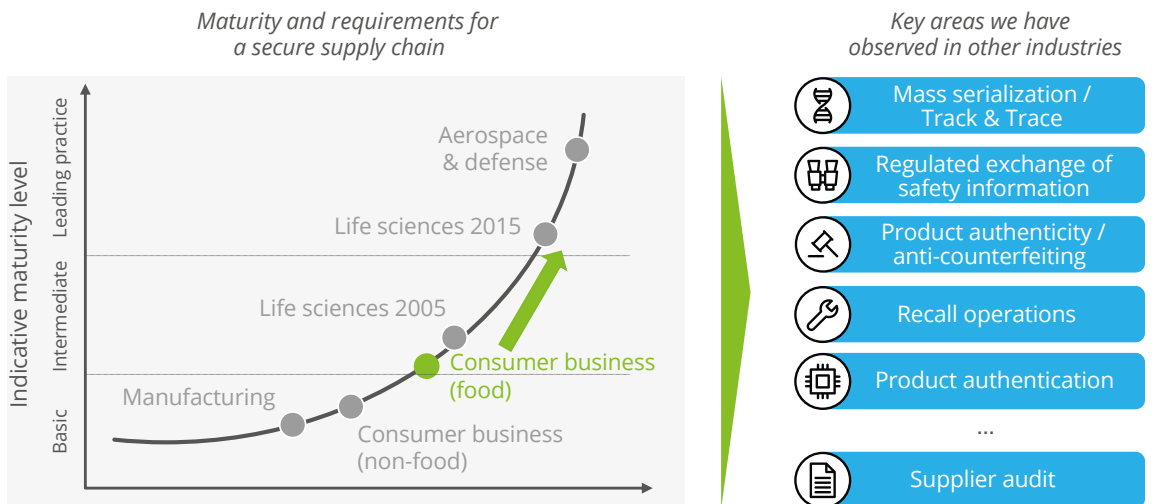
- FoodIntegrity 2014-2018 is a project funded by the EC aiming at the integrity of the European food chain and focusing on food authenticity of European products in Europe and abroad
- Horizon 2020 Authent-Net, also EC funded, is coordinating information collaboration for European research and funding agencies for food authenticity
- the EC Food Fraud Network – set up in the wake of the horsemeat scandal of 2013 – is a pan-European mechanism to ensure the rapid exchange of information between national authorities and the Commission in cases of suspected fraudulent practices
- United Kingdom (UK) Food Crime Unit – works with partners to protect consumers from food and drink that is either unsafe or not authentic because of serious criminal activity. The UK Food Crime Unit has been set up in 2013 after the horsemeat scandal.



We believe that the pharmaceutical and life science industry serves as a leading indicator in what is to come in the food industry. Across the US and Europe many new bills or directives regarding drug safety mechanisms (pharmacovigilance) and supply chains have been introduced (e.g. prevention of entry into the legal supply chain of falsified medicinal products, track & trace or product safety). Regulators are expected to focus more on the food industry to implement similar requirements.

Figure 4 illustrates the maturity levels of consumer business companies with regard to regulation and its expected evolution.

Figure 4. Maturity of requirements for a secure supply chain and likely future drivers



Source: Deloitte Analysis

By 2019, all licensed pharmaceutical products sold in Europe – except for Belgium, Italy and Greece starting in 2025 – will need to be marked with a serial number under supply chain security measures set out in the EU Falsified Medicines Directive (FMD). This will allow complete tracking of all parts of the finalized product from the raw materials to the end product.

Similarly, although subtly different, serialization requirements will come into force in the US in 2017 under the US Drug Supply Chain Security Act (DSCSA), which is part of the Drug Quality and Security Act (DSQA) signed into Law in 2013.

In line with the pharmaceutical and life science industry, regulatory interventions expected to affect the food industry in the coming years are the following:

- More government-enforced regulations
- More extensive industry standards and certification requirements
- Stronger penalties enforced against non-compliant parties

Evolving governmental law – Driven by consumer demand

To protect public health, food production is strictly regulated by national and international legislations. Recently, extensive governmental laws, such as the “US Food Safety Modernization Act” (FSMA) or the Canadian “Multi-Year Regulatory Modernization Plan”, have been passed, or are now in full deployment phase.

The European Commission passes legislation on behalf of its member states and the General Food Law Regulation (EC) 178/2002 gives food companies the primary responsibility for food safety, while member states deliver surveillance and control. It provides the general principles of food safety, which include:

- The requirement on food businesses to place safe food on the market
- Traceability of food
- Presentation of food
- Safety measures up to withdrawal or recall of unsafe food placed on the market

Most of these laws and recent amendments have been introduced in response to mounting concerns about food quality and safety. They continue to involve:

- Increased requirements for product documentation
- More stringent supplier oversight
- Increased government oversight and financial penalties



Tom McGinnis

USA, Food Safety and Supply Chain lead partner

“The U.S. Food Safety Modernization Act (FSMA) contains the most sweeping changes to food safety regulations in decades.

Companies along the farm-to-fork continuum must now use risk-based preventive controls, verify that foreign suppliers adhere to food safety standards equivalent to U.S., implement produce safety standards, and safeguard against intentional contamination, among other provisions.

Supplier management and traceability are key, and FSMA provides the U.S. Food and Drug Administration (FDA) with power to halt production, initiate mandatory recalls, and commence investigations.

As a result of these changes, organizations need to ensure they are taking an enterprise and operational risk view to their Safe Food Program and embrace contemporary approaches to risk management.”

Criminal liability exposure – what every CEO should know

Governments and regulators around the world are also increasingly pursuing criminal charges resulting from new concerns about violations of public trust, especially where food fraud and food-borne illnesses are involved.

In Europe, the General Food Law also creates criminal offences for breaches of its articles and lays down potential penalties including fines and imprisonment of up to two years.

In the US, the Food Safety Modernization Act (FSMA) created new kinds of criminal violations for:

- Operating a facility not in compliance with the FSMA Preventive Controls Regulations
- Failure to comply with the FSMA Produce Safety Regulation
- Failure to comply with the FSMA Food Defense Regulation
- Refusal or failure to comply with an FDA recall order
- Knowing and wilful failure to comply with consumer recall notification requirements

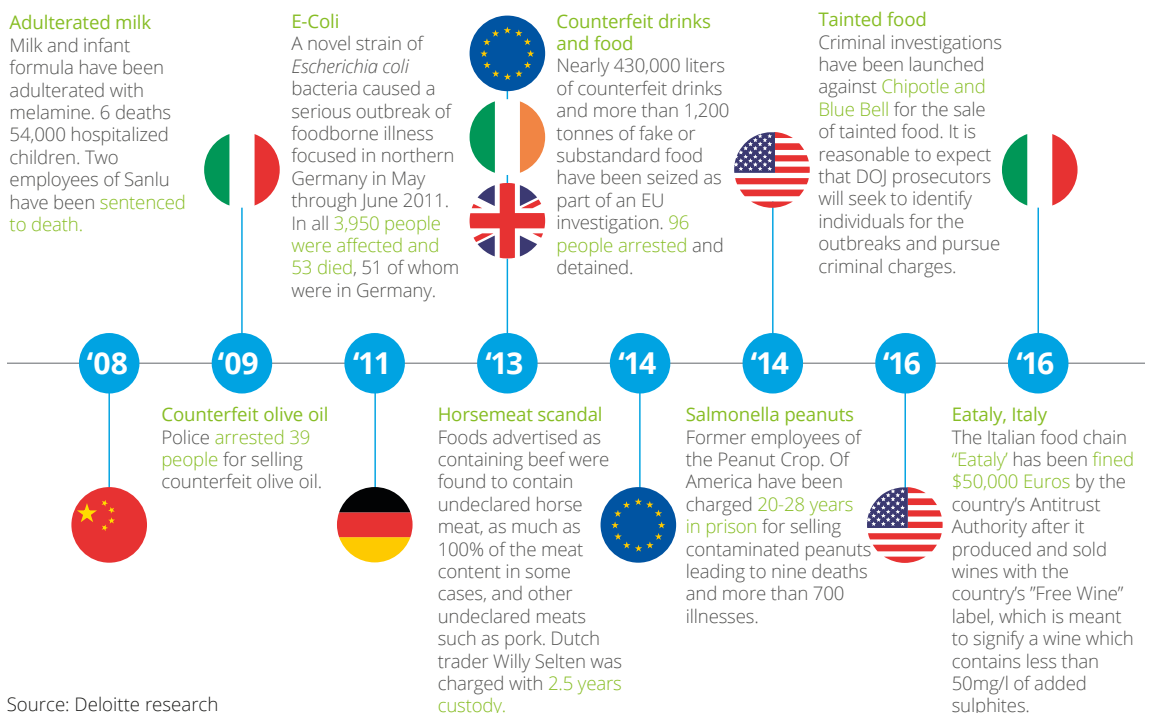
- The importing or offering for importation of a food if the importer does not have a foreign supplier verification program in compliance with the FSMA Foreign Supplier Verification Program Regulation
- Failure to comply with the Sanitary Food Transportation Act Regulation

These FSMA requirements and possible sanctions are also very relevant to the European Food companies exporting to the US, as they must demonstrate food safety programs that would also satisfy the US regulations.

This is not just a theoretical threat. In the last few years, we have seen some landmark criminal cases involving companies and executives for food safety violations. Compliance programs in the high-risk food industries can literally be a matter of life and death and judges are handing out tough criminal sentences when warranted, see Figure 5.

It is not hard to conceive of a scenario where the CEO of a food manufacturer, retailer or wholesaler involved in an outbreak is held criminally liable for violations of the FSMA in the US or the General Food Law in Europe.

Figure 5. Timeline of most relevant food fraud accidents between 2008 and May 2016



Source: Deloitte research

Stricter industry standards – collaboration between private and public models

In addition to the national and international legislations that regulate the food industry, food companies are extensively and voluntarily using industry standards and third party certification, to ensure food safety and successfully operate in certain markets.

There is a wide range of nationally- and internationally-recognized standards for product quality certification, for social and environmental sustainability certification, and for system and process certification – all applicable to different stages of the food supply chain. The major food safety standards and food safety management schemes are:

- GLOBAL GAP is the worldwide standard for Good Agricultural Practice (GAP)
- Organic Farmers and Growers (OF&G)
- Food Safety System Certification (FSSC 22000) is applicable to all food products, food ingredients and packaging food manufacturers
- International Featured Standards (IFS) is used for retailer and wholesaler branded food product suppliers and manufacturers
- British Retail Consortium (BRC) is used by suppliers and global retailers
- Safe Quality Foods (SQF)
- ISO 22000 is the global food safety management system standard for the whole food supply chain from growers and producers to processes and packaging, transport and point of sale

The trend towards certification is founded on solid business principles, and independent third party certification helps organizations to stand out from the crowd. While this is good news for consumers, it presents considerable confusion, complication and costs for those in the food industry who must navigate the differing paths to compliance in the geographies they serve.

The first good news for food companies is the Global Food Safety Initiative (GFSI) that was founded in 2000 by the Consumer Goods Forum (industry network representing some 400 retailers, manufacturers, service providers, and other stakeholders across 70 countries). Its main objective is to benchmark food safety certification schemes and to drive convergence between food safety standards. To date GFSI has endorsed nine standard schemes with worldwide recognition to cover most sectors of the food system. It is continuously working on the auditor's competence program to strengthen the credibility of audits against GFSI-recognized schemes.

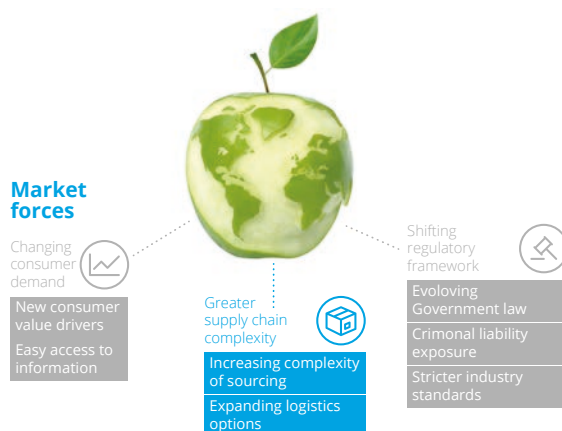
The second good news is that in a recent move, governmental bodies started to recognize that private certifications can play an important role for the industry to achieve food safety goals. The only pre-condition is that these certificates can be assessed as being credible, effective and aligned with public policy objectives.

A typical example is the Canadian Food Inspection Agency (CFIA). They are currently in a modernization process with the Safe Food for Canadians Act (SFCA): instead of re-creating new standards, they are leveraging private Food Safety certification (by an accredited third-party) as an input to regulatory risk assessment and inspection resource allocation processes.

In the future, governmental agencies like the CFIA will further foster the engagement with private food safety partners. We can foresee that third party certification will suffice for companies to meet, if not to exceed, compliance with regulations.

Increased supply chain complexity

For today's Food Companies, supply chain is in the crossfire of multiple and conflicting demands. Executives of food companies have to consider the impact of the above-mentioned consumer demand shifts and of the stricter regulatory framework across their entire value chain, from product development and design, to the product consumption or return. While each stage of the value chains has its role to play in ensuring food safety, we believe the increased complexity of supply chain is prevalent to a greater extent in the Source and Deliver stages.



Source – Supply Chain Operations Reference Model

Sourcing – Increasing complexity

As consumer purchase decisions are being driven by social impact attributes (encompassing company attributes such as local sourcing, sustainability, animal welfare, and fair treatment of employees) and as food companies are being held responsible for their suppliers' actions, the sourcing function is expected to be an increasingly important area for management of food companies.

Trends such as globalization of supply, increased difficulty of control, higher quality expectations, less farm land, more production outsourcing, higher corporate social responsibility standards, responsible sourcing and new consumer demand patterns are converging – making it even harder to source on time, in right amounts and at expected quality levels.

Food companies find themselves dependant on large networks of third party companies, including complex chains of suppliers and distributors as well as licensees, franchise partners, sales promoters or agents, customs brokers and other key advisors. As reliance on third parties continue to grow, so does concern at the number of headline stories depicting regulatory action and reputational damage arising from third party actions.

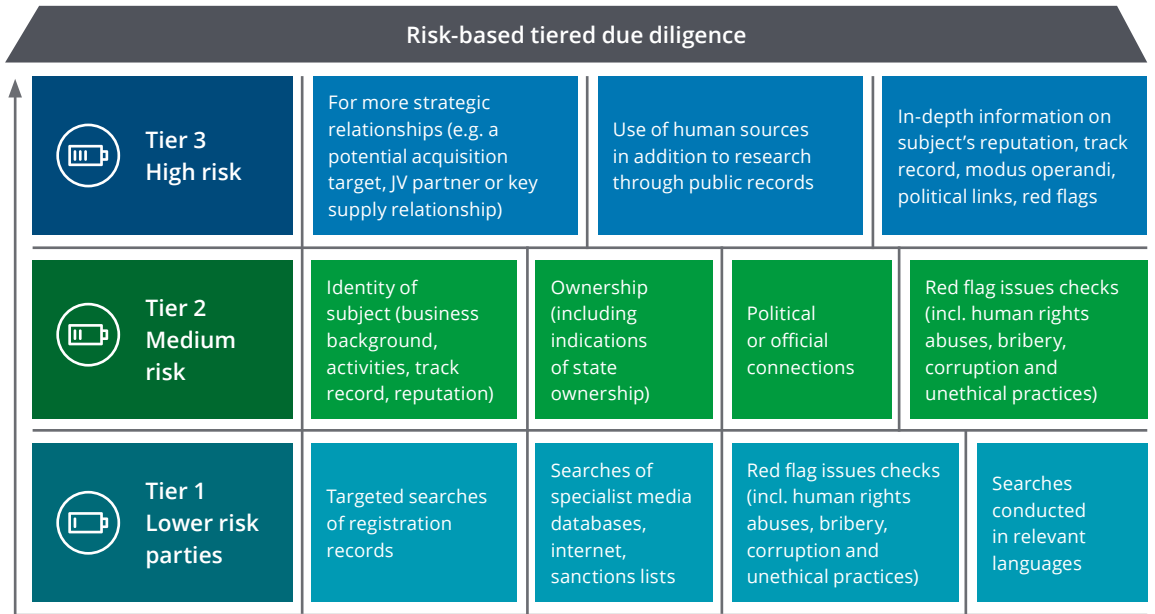
These are driving many organizations to reconsider how they approach the identification and management of the risks posed by third parties:

- **Integrity and corruption risks:** with anti-corruption legislation focusing on the identification and mitigation of third party risk, companies that rely on third parties in countries presenting a higher risk of exposure to corruption are having to take steps to identify these risks, both in relation to existing and future third parties
- **Financial and operational risks:** there are many sources of risks from macro-economic trends to local operational issues; increasing global competition is leading to cost pressures that often translate into quality issues for suppliers striving to compete

Establishing the vulnerability of suppliers – particularly those operating in higher risk jurisdictions – can be time-consuming and publicly available financial information is not only out of date but provides little comfort. Companies need to find more sophisticated ways to monitor and manage increased sourcing complexity.

While companies may have a keen understanding of the suppliers with the greatest spend levels, or those that have a direct impact on customer facing operations, they should perform an appropriate level of integrity due diligence on all third parties involved. Analysis should focus on the key risk factors, and the level of due diligence and research conducted should be proportionate to the risk presented by the relationship. Companies frequently adopt a three-tiered approach as presented in Figure 6.

Figure 6. Three-tiered risk assessment approach



Deliver – expanding logistics options

In terms of physical logistics, the demands are also complex and conflicting: on one hand there is a continuous push towards cost and environmental footprint reduction; on the other hand supply chains face increasing unit and inventory costs, due to more complex processes as well as smaller and close proximity retail points.

The very basis of logistics network design (facilities location and design, mix of modes and frequency of delivery) is changing in order to meet evolving consumer demand patterns.

- **Facilities:** The increasing need to be closer to customers necessitates additional brick-and-mortar facilities (e.g., distribution centres, cross docks). To speed up cycle time even further, robots, automation and advanced technologies will be required
- **Mode:** Look for increased reliance on unconventional transportation channels (e.g., Uber Fresh food delivery service, Postmates last-mile delivery service) with emerging advanced technologies (e.g., drones, future driverless trucks). Organizing and deploying idle assets (both humans and vehicles) represents virtually unlimited disruptive potential

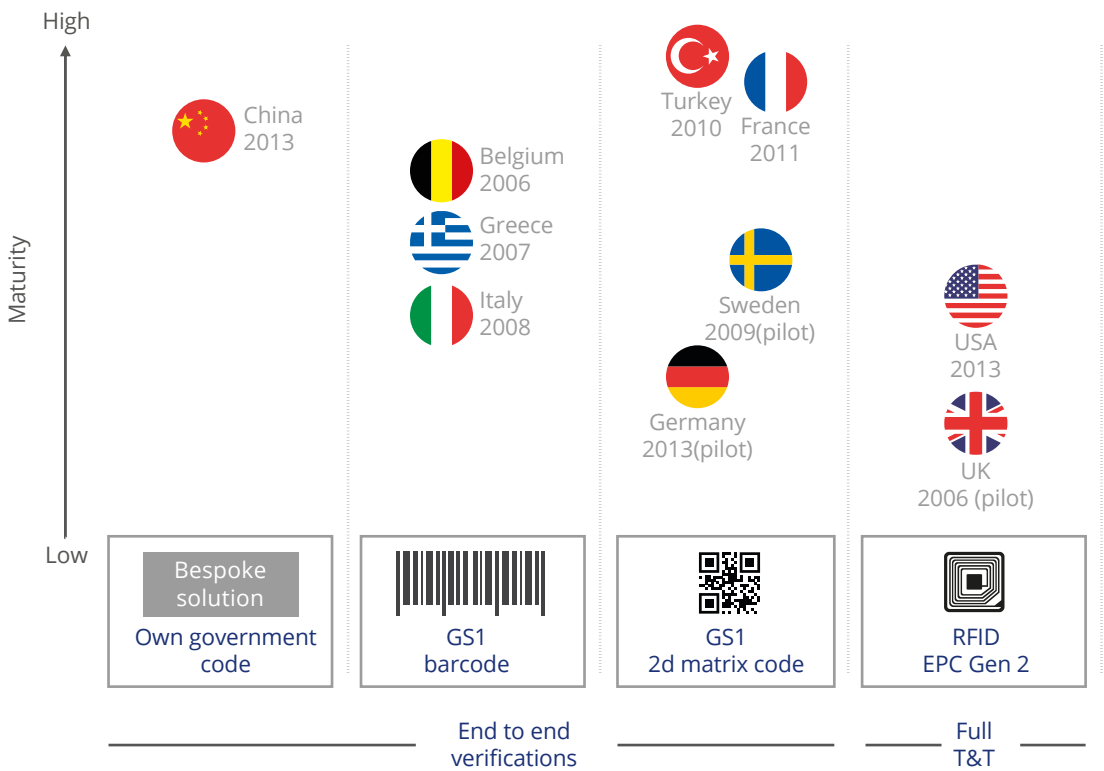
- **Frequency:** Recent pressures include shorter cycle and delivery times (e.g., same-day delivery) as well as longer hours for transportation service. Implementation has sometimes resulted in increased urban congestion, creating environmental issues
- **Capacity and rates:** Reduced driver and asset availability are driving up ground transportation rates. Median age of over-the-road drivers is 56, and the demand for qualified and willing drivers greatly exceeds supply, further pushing migration to supply chain alternatives, even away from 3PL and 4PL
- **Tracking:** As consumers and regulators request safer products and end-to-end traceability from raw materials, to end products, supervision of production and delivery via means of track & trace (T&T) technology becomes inevitable

In the pharmaceutical industry, these traceability requirements are driven by legislative changes such as the 'Falsified Medicine Directive' in the European Union or the Drug Quality and Security Act in the US. Both directives aim at making drugs safer by preventing counterfeit products, ensuring purity and quality of ingredients, tracking the entire value chain, and allowing customers quick access to relevant information.

As the below Figure 7 illustrates, several countries are using different technical solutions to comply with these requirements. The US Food and Drug Administration (FDA) explicitly recommends the use of RFID chips, and European companies currently prefer serialization techniques based on machine-readable codes (e.g. barcodes or QR-codes).

Our hypothesis is that similar regulatory requirements will be a challenge for the food industry in the medium to long term as well in order to ensure supply chain transparency. Our recommended approach is to invest in serialisation and track and trace technology flexible enough to be tailored to each set of current requirements and also cater for measures scheduled to be introduced over the next decade.

Figure 7. Pharma Track-and-trace solutions by country and maturity



Michael Graf
Switzerland, Life Sciences Swiss consulting director

“Evolving track-and-trace technologies and new international standards to exchange safety relevant information will enable authorities to come up with improved requirements securing patient safety.”

Technical and regulatory development go hand in hand and will get extended to other areas – to ensure well-being of customers, but also to enhance control and risk management for companies enabling new levels of prevention and assurance of compliance.

I see the developments in Life Sciences as a blueprint for future standards in in the Food Industry.”

Second starter

Many risks and food crises continue to shake the industry

The risk sources are manifold, the exposure is getting bigger, but the food industry's capability to deal with disruptions has remained steady. This changing landscape unearths challenges which the industry is not sufficiently equipped to deal with, and increasing food recalls further reinforce this. There is a clear call to action for the food industry.

Origins of the food crisis – six key components

The frequency of food product recalls and instances of food crises have increased in the past decade. Risks associated with food pathogens are making national news regularly. Food pathogens have breached their natural reservoirs and are routinely reported in foods where they would not typically be expected. We define six categories of possible origins of food crises:

- **Food contamination** – Accidental/deliberate contamination
- **Operational** – Supply chain failure, breach of quality, facilities / equipment failure
- **Human** – Social unrest, human factor error, insider threat, tampering
- **Humanitarian** – War, human rights violations
- **Political / Regulatory** – Regulatory breach
- **Reputational** – Consumer backlash, NGO campaigns

The direct impact of the majority of these food crises are food recalls.

Our joint research with GMA titled [Recall execution effectiveness: Approaches to improving consumer safety and confidence](#), shows that consumers' purchasing behaviour is expected to further shift as result of a recall: over half of the population stopped eating a particular food, temporarily or permanently, as a result of a recent recall and this effect is expected to be more pronounced with the further digitalization of the community – not only in developed but as well in emerging countries.





E. Coli threatening Germany and Europe

Germany (along with 15 other countries in Europe and North America) was struck by an E.coli spread. The Escherichia coli O104:H4 (bacteria) strain was spread mostly by contaminated sprouts, and in just a few cases, from close contact with a sick person. It did not only cost European farmers a fortune, it also led to over 4000-reported infection cases and 50 deaths. Moreover, it triggered the 2013 EU regulation on traceability requirements for sprouts and seeds intended for the production of sprouts.



Horsemeat scandal

In 2013, a Europe-wide fraud network was uncovered. It had been falsely labelling thousands of tonnes of horsemeat, selling it as expensive beef. The issue was first picked up by Irish food inspectors, who announced in mid-January 2013 that they had found horsemeat in frozen beef burgers. The scandal did not only undermine consumers' trust, but also led to at least 50,000 tonnes of meat being recalled across the region. On the legal front, the European Commission took strong action (e.g. the creation of an EU Food Fraud Network) and created the 2013 draft report on the food crisis, fraud in the food chain and the control thereof.



Largest-ever seizures of fake food and drink in INTERPOL-Europol operation

More than 10,000 tonnes and one million litres of hazardous fake food and drink have been seized in operations across 57 countries in an INTERPOL-Europol coordinated initiative to protect public health and safety.

Operation Opson V resulted in seizures ranging from nearly nine tonnes of counterfeit sugar contaminated with fertilizer in Khartoum, Sudan to Italian officers recovering more than 85 tonnes of olives which had been 'painted' with copper sulphate solutions to enhance their colour. Involving police, customs, national food regulatory bodies and partners from the private sector, checks were carried out at shops, markets, airports, seaports and industrial estates between Nov 2015 and Feb 2016.

A number of arrests were made worldwide throughout the operation and investigations are continuing. Among the aims of the operation are the identification and disruption of the organized crime networks behind the trafficking in fake goods, and enhanced cooperation between the involved law enforcement and regulatory authorities.

Lack of food safety – the huge human and financial costs

Food contamination is a regular occurrence all over the world. The World Health Organization (WHO) reports an estimated 600 million people – almost 1 in 10 worldwide – fall ill after eating contaminated food and 420 000 die every year, resulting in the loss of 33 million healthy life years (DALYs).

In the US alone the financial impact of food contamination on health was cited as high as 15 billion USD. Furthermore 52% of all food recalls result in costs between 10 and 100 million USD, not including additional damage from loss of reputation and brand value. (Swiss Re – Food Safety in a globalized world).

The financial implications might be even higher than 15bn USD. In the UK alone food fraud is costing the food and drink manufacturers £11.2bn each year. [A report by the University of Portsmouth](#) claimed that companies in the UK could increase their profitability by £4.48bn or more than 34% by preventing food fraud.

The risk of financial costs can be seen in the example of a large retailer that lost £300m in market capitalisation when it was affected by the horsemeat scandal. Newspapers such as *The Guardian* reported that customers have lost confidence in the supermarket chain.

Companies are struggling to cope with the changing environment and the recent high-profile food recalls are symptoms of a system-wide crisis. The financial costs of mismanagement are considerable, as the cases above illustrate.

Consumer lack of trust – a growing concern for companies

Consumer trust can be a difficult thing to define or quantify. However, [Deloitte's 2014 Social Media Survey](#) found that consumers are 3.4 times more likely to harbour negative sentiments about food companies than a cross-industry average.

The tendency toward distrust appears particularly true of millennials. According to a recent [Mintel report](#), two in five US millennials (43 percent) agree they do not trust large food manufacturers compared to just 18 percent of non-millennials.



Laurent Claassen

Belgium, Corporate Compliance lead partner

"To comply with regulatory requirements and industry standards is YOUR 'license to operate'."

It is my experience that companies in the food industry do get fines or are facing reputational damage on requirements they do not even know exist.

Without compliance there is no sustainable business and the company is constantly at risk."

This lack of trust has direct financial implications for the impacted food companies. [Edelman's annual Trust Barometer](#) found that nearly two thirds of respondents refuse to buy from companies they do not trust and almost as many would criticize them to a friend or relative. However, 68% would recommend a trusted company to others.

A large fast food company has recognized this problem and is now actively trying to gain back the trust of millennials, who represent a target group as big as \$3.39tn per year. The company has attempted to address its brand problem and lure millennials back by launching various programs for example a virtual reality experience where consumers can follow the footsteps of people who grow, source and produce the food they sell. It has also launched a social media campaign, which allows people to ask questions about how the food is prepared, sourced or what it contains, via Twitter or Facebook.

Forward-thinking companies understand the importance of consumers' trust, and how lack of trust can affect the bottom line.

Transparency: the critical ingredient to build and maintain trust

Consumers' effect on changing demand and the dispersed nature of today's supply chains creates increasing levels of risk for multinational businesses, making transparency both critical and complex. Without effective visibility in their supply chains, executives potentially have significant blind spots in their enterprise risk management structure, from which substantial legal, financial, and reputational exposures could emerge.

Transparency is an increasingly important capability for companies. But as part of a company's broader attempts to build supply chain resilience and consumer trust, its role is pivotal.

Food and Beverage industry executives present at the [2016 GFSI Global Food Safety Conference in Berlin](#) overwhelmingly stated that the issue of trust represents a growing challenge for them. They rated 'Transparency and Traceability' as the most challenging food safety aspect within their business (28% of audience response).

Supply chain transparency is not easily achieved; it requires a solid foundation and continuous improvement over time. Even supply chain executives who understand the importance of transparency struggle to prioritise activities and build a transparency process across their entire supply chain.

In the Deloitte publication [The path to supply chain transparency](#) we present a practical guide to defining, understanding and building supply chain transparency in a four-step process approach:

- Identifying and prioritizing risks
- Visualizing risks
- Using transparency levers to close information gaps
- Managing and monitoring

Transparency in supply chains is also related to many value drivers that companies should focus on, in order to be successful. These value drivers will be presented in detail during the main course.



Craig Turnbull

UK, Partner Enterprise Risk Services
Data Analytics

"How sensitive is your advance warning capability? Consumers communicate directly with brand owners today. More compellingly, they share their opinions about brand experiences openly and freely with others in real time.

Capturing these sentiments and analysing their implications will often support a forward view of emerging risks for your brand. The connectedness of our digital world means opinions and issues can be global within minutes. This can be leveraged to work in your favor.

With the abundance of data available today within and beyond your business, fast moving companies can map their identifiable risk drivers and analyze the data predictively to foresee brand-killing risks before they fully manifest."

Main Course

Ten value drivers food companies must consider and how Deloitte can help

In a challenging environment characterized by rapidly changing consumer pressure, stricter regulatory requirements, and increasingly complex supply chains, the cost of inertia is too high for companies to remain on the side-lines. Organizations are forced to move with the times and may have to commit to fundamental changes across their entire value chains to survive in today's market.

An action plan for food companies – ten value drivers to consider

Excellent food companies are required to outperform in a wide variety of disciplines in order to be successful.

They must:

- Effectively handle internal and external risks
- Improve the visibility of their end-to-end supply chain
- Be able to guarantee complete safety
- Take measures to enhance their brand value and adhere to the highest ethical standards

In the *Deloitte Food Action Plan* we list ten value drivers companies should focus on to drive effective, lasting change throughout the organization.



Table 1. Action plan areas





Value drivers	Typical business questions	Relevance
Supplier Risk, Verification & Validation	“When did you last review your main suppliers’ safety standards?”	Companies must understand their entire value chain and are held accountable for its actors’ performance and standards. Regular assessments of supplier capabilities and performance enable companies to mitigate risks and quality issues along the extended supply chain. They are a prerequisite in a world of globalized supply.
Brand & Reputation Risk Management	“How is your company’s culture perceived by potential customers?”	In today’s market where customers are increasingly conscious and engaged with companies around the social and ecological consequences of their consumption habits, it is vital that firms protect their brand value by managing reputation risks.
Sourcing, Manufacturing & Logistics Optimization	“Should you focus on improving delivery performance or on reducing costs?”	By optimizing the end-to-end supply chain, companies can save costs and improve performance, thus tackling the conflicting demands of customers for quick and error-free delivery at lowest possible costs.
Crisis and Campaign Management	“When was the last time you rehearsed a contingency plan to prepare yourselves for a crisis?”	The increasing complexity of companies’ supply chains increases the likelihood of crises that may negatively affect the company’s brand. Crisis management is crucial to restoring credibility and trust and reaffirming the company’s brand in the face of a highly critical consumer society.
Food/Product Safety Assurance & Controls	“How can you reduce errors in your production processes?”	In-house safety assurance further reduces companies’ exposure to safety and quality risks and enables companies to maintain the highest standards to satisfy their customers’ requests.
Inventory Visibility & Traceability	“In case of emergency how do you carry out an effective product recall?”	Inventory Visibility and Track & Trace procedures assist companies to ensure product safety by enabling quick and effective recall actions in the event of product contaminations posing significant health risks for customers. Additionally Track and Trace helps minimize counterfeiting risks faced by high-margin products.
Emerging Risk Visibility & Monitoring	“How prone is your organization to supply disruptions?”	The globalized food and beverage industry is vulnerable to both internal and external risks. Companies must commit resources to identify and assess emerging risks, as well as design appropriate mitigation and contingency measures in case of emergency. Predictive analytics and comprehensive sensing capability will support a proactive approach to managing food safety.
Corporate Social Responsibility	“Are you committed to and can you demonstrate responsible practices along your entire value chain?”	Companies can enhance their brand value by addressing the social and environmental impacts of their business. Today’s customers expect companies to be good corporate citizens, neglecting corporate social responsibility can have serious negative consequences for guilty companies
Safe Food Culture & People	“How do you commit your employees to the highest safety standards?”	Implementing a culture of safety and quality within the organization helps maintain the highest standard in companies’ value chain. It also facilitates a drive towards constant improvement.
Regulatory Preparedness & Compliance	“What regulatory developments can you expect in the mid to long-term?”	Companies that go beyond compliance by proactively addressing expected future regulatory changes can reduce compliance costs and decrease the likelihood of sanctions.

How can Deloitte help drive change in your company?

For many years, Deloitte has partnered with its food industry clients to tackle their challenges. Based on this experience, we have developed a comprehensive solution framework to enable our clients to thrive in a dynamic and demanding environment.

Deloitte recognizes that rapidly changing customer expectations are causing shifts in derived value. This requires companies to reassess their processes, technological capabilities and organizational structures to satisfy evolving demand. Our four service offerings build upon the Deloitte Action Plan and encompass all the improvement areas listed.

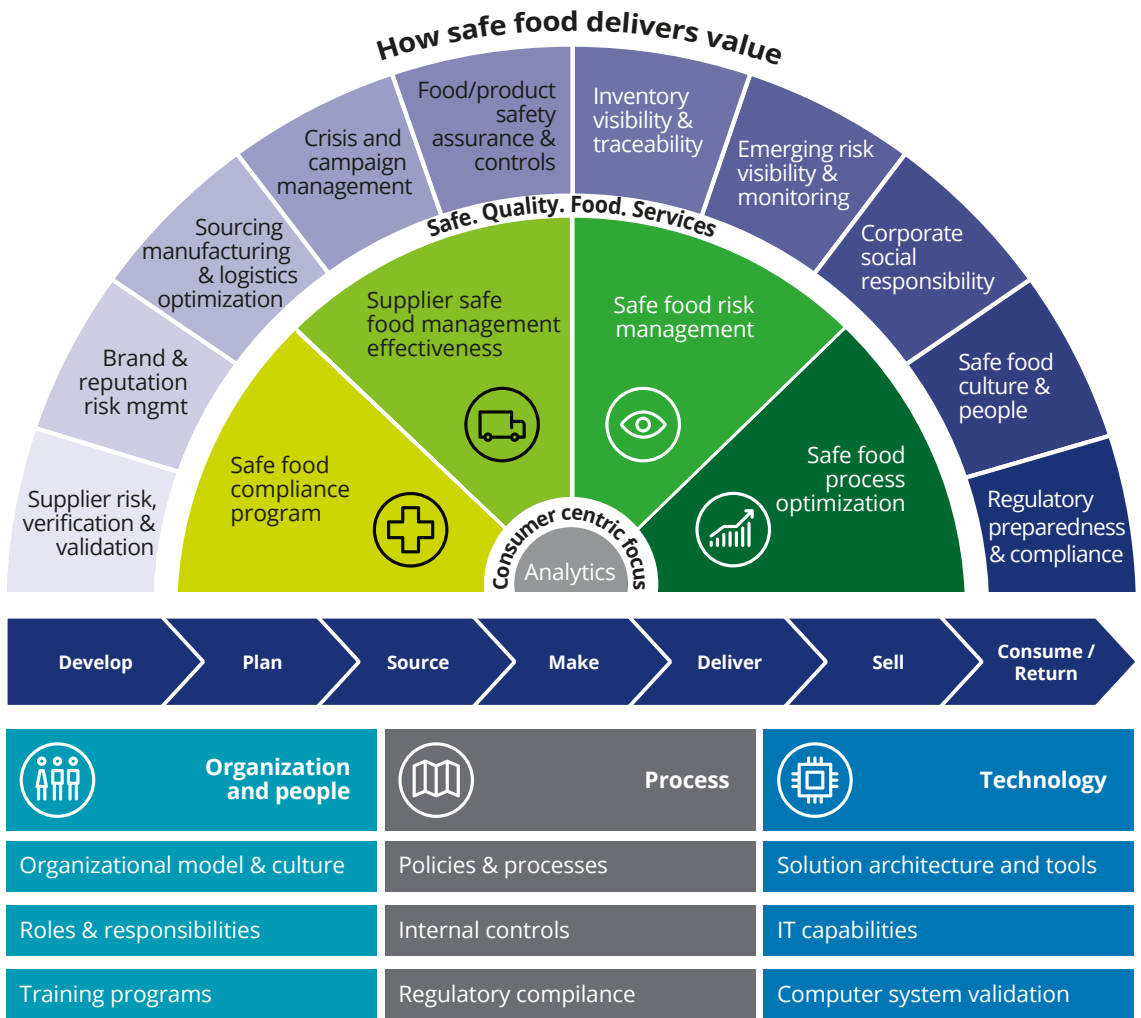
Table 2. Core service offerings to enhance the performance of food safety

Deloitte service offering	Business questions	Activities	Targeted benefits
<p>Safe food compliance program</p> 	<p>“To what degree does your existing safe food program support your quality and business objectives?”</p>	<ul style="list-style-type: none"> • Conduct strategic labs to identify gaps and risks along the supply chain • Provide diagnostics of current processes to identify opportunities for optimization • Conduct sustainability assessments • Assess current and future brand positioning strategies 	<ul style="list-style-type: none"> • Minimize risks along the supply chain • Optimize your processes to ensure highest quality standards • Improve your brand's positioning
<p>Supplier safe food management effectiveness</p> 	<p>“How well do you understand and manage the suppliers performance with regard to risks related to food safety and quality?”</p>	<ul style="list-style-type: none"> • Establish quality management framework covering internal and external suppliers • Assess and implement audit programs • Identify Safe Food management risks and optimization opportunities within the supply chain • Optimize and enhance sourcing and operational strategies • Assist with supplier contracts 	<ul style="list-style-type: none"> • Actively manage all your suppliers to monitor and prevent risks • Proactively identify and prevent risks along the supply chain
<p>Safe food risk management</p> 	<p>“How do you use client data as well as the latest news to predict and plan for potential risk events?”</p>	<ul style="list-style-type: none"> • Conduct risk scenario modelling and introduce mitigation plans across enterprise • Establish risk management plans and align with key stakeholders • Use data from within and beyond the organization to identify risks proactively • Assess system reporting capabilities • Leverage the connected world to improve risk sensing capabilities 	<ul style="list-style-type: none"> • Identify and pre-empt risks before they impact your business • Proactively identify and prevent risk scenarios • Design of specific plans for potential risk events to mitigate risks
<p>Safe food process optimization</p> 	<p>“How can food safety /quality processes and functions help you optimize operations, risk & compliance management?”</p>	<ul style="list-style-type: none"> • Analyze current system design and implement improvements • Monitor regulatory environment and provide direction to clients on emerging issues • Determine the integrity and quality of data and its protection 	<ul style="list-style-type: none"> • Ensure full compliance of your processes • High quality programs and data to improve your processes

Our safe food framework – a holistic view of safe food across the supply chain

Driven by our understanding of client value, encompassing the end-to-end supply chain and closely aligned with the technological, organizational and process related parameters of the organization, our framework seeks to help companies navigate industry and food safety challenges.

Figure 8. Deloitte Safe Food Framework



The Deloitte Safe Food Framework, associated with our proven methodologies and solutions, has helped clients identify and manage risk, reduce costs and complexity and gain competitive advantage despite challenging circumstances.

Dessert

The future of food safety

Based on our analysis of global trends and market forces, and our understanding of the food industry from working with the biggest names in the industry, we are foreseeing the following trends in the food industry and recommend you take action to prepare your organization:

Bargaining power in the food industry will continue to shift towards the consumer.

There will be a stronger focus on sustainable and healthy food as a key differentiator. As a result, large food producers might lose market shares to smaller brands and private brand manufacturers, which focus on more organic, local, and/or healthy food.

Food companies should adopt a stronger customer centric view, tailoring their corporate strategy around satisfying rapidly changing customer demand and engagement, alongside growing demand for food diversity.

Transparency will be a differentiator for companies in the food and beverage industry.

Transparency enables companies to build and maintain consumer trust, comply with existing regulations, prepare for future regulatory changes and effectively address evolving supply chain complexity.

The food industry should adopt leading practice from other highly regulated industries like Pharmaceuticals as a confidence building first step toward greater transparency ahead of being forced by regulators.

We expect the regulatory developments in the food industry to closely mirror that of the Life Sciences industry in the long term.

As a result we believe the food industry will be required to improve its capabilities in fields such as: track & trace, serialization, product authentication and anti-counterfeiting.

The definition of food safety will continue to expand towards a holistic and long-term perspective blurring the lines between safety, health and wellness and corporate social responsibility.

Winning food companies in the future will be tackling food safety and supply chain quality through cross functional teams that leverage specialist knowledge, and integrate risk identification and management across their entire operations.

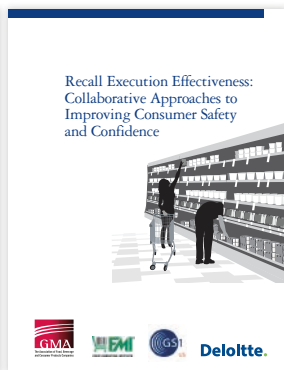
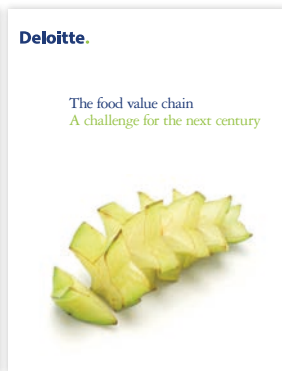
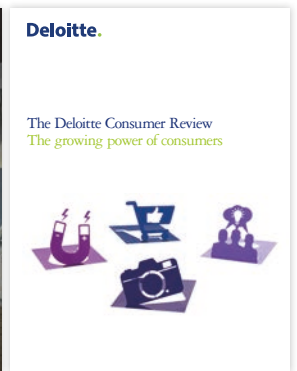
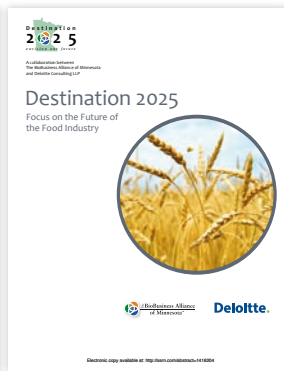
Start today to connect all possible internal and external risk drivers to data perspectives, make the whole supply chain visible and accountable for quality and safety.

Chef's recommendations

Deloitte eminence

Professionals at Deloitte member firms around the world gather and organize the knowledge and experience amassed by engagement teams working with companies in food safety. In the spirit of knowledge sharing, the Deloitte network continues to develop thought provoking publications that address

the issues that matter most to food executives. A sampling of the network's eminence includes the below. These papers have been inspirational in developing this point of view.



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