

# Food Safety Behavior Drivers' Study

## Study Report

Prepared by Behavior Insights Strategy and Communication Partners (BISC Partners) for the Center for Strategic Research and Development of Georgia

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*The content of the publication is the sole responsibility of text authors and does not necessarily reflect the views of the European Union, GFA and CSRDG.*

**Study Team Members:**

- Tinatin Stambolishvili, Executive Director & Integrated Communications Lead; BISC Partners
- Ketevan Gomelauri, Behavioral Science Lead; BISC Partners
- Tinatin Gogberashvili, Researcher; BISC Partners

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## Abbreviations and definitions

- **CSRDG** - Center for Strategic Research and Development of Georgia;
- **BISC Partners** - Behaviour Insights, Strategy and Communication Partners;
- **Behavior Insights (BI)** - an inductive multi-disciplinary approach that combines insights from behavioral science, behavioral economics, anthropology, social and cognitive psychology with empirically tested results to discover how humans actually make choices;
- **Behavioral Science** – the study of human behavior through the systematic experimentation and observation;
- **Pains** – existing difficulties / challenges;
- **Gains** – perceived benefit of change;
- **Comforts** – habit, routine;
- **Anxieties** – fears of change or novelty;
- **Jobs-To-Be-Done** – value goals;
- **Behavior drivers** – driving forces of behavior.

## Study Summary

Recently, in the context of an overall improvement in the food safety situation, consumers remain insufficiently aware of the importance of food safety. Accordingly, their interest in the topic as well as their participation in food safety control is negligible. The practice of reporting food safety violations is also weak, which creates significant barriers to early intervention. Promoting consumer behavior change is one of the important objectives set within the “Capacitated Agricultural Practices and Consumer Awareness” project by the implementing consortium member, Center for Strategic Research and Development of Georgia (CSRDG).

Promotion of behavior change is a complex process that may require using different approaches and tools, as well as engaging different stakeholders. However, for any effort to truly influence consumer behavior change, it is essential to examine from a behavioral science perspective both drivers of existing behavior, and factors that impede and promote desired behavior. This was exactly the purpose of the *Food Safety Behavior Drivers* qualitative study carried out by the team of Behaviour Insights Strategy and Communication Partners (BISC Partners) in frames of the above project. The study aimed to examine the consumer behavior from the perspective of behavioral science and determine both obvious and concealed incentives and obstacles influencing consumers’ decisions to choose and buy a specific food item, as well as their ability to perceive and respond appropriately to food safety related risks.

We believe that the findings presented in this report by BISC Partners are of interest and, most importantly, of practical value to all parties concerned with food safety issues.

### Why Behavioral Science?

As a branch of social sciences, behavioral science examines the structure of human judgment and decision-making; in particular, it explores social, structural, or cultural barriers as well as motivators of a behavior.

Nowadays, many cities, regions, and governments worldwide are employing behavioral science, also known as Behavioral Insights (BI), to transform food systems. Their efforts provide compelling evidence that taking into account contextual opportunities and constraints, along with a scientific comprehension of human behavior and decision-making, enables the development of strategies, policies, and measures that are more efficient, acceptable, relevant, and overall better suited to specific objectives, compared to traditional model-based policies. Moreover, the use of behavioral approaches in defining food safety policy that contributes to the sustainability of systemic change is referred to as *behavior food policy*. Behavior food policy is the result of analysis of data and evidence obtained over the past nine years.

The presented study is also fully based on principles and approaches of behavioral science. The main purpose of behavioral science and behavior insights methodology is to overcome the so called Intention Action Gap [1] – when there is a certain level of awareness (“food safety is important”), the institutional preconditions (institutional response mechanisms), and positive attitude (willingness to consume safe food), but no implementation at the level of action. The discrepancy between intention and action manifests itself in different ways, however, all these manifestations can be explained by the paradigm that the mechanism of human judgment and decision-making is often based on an irrational system. In most cases, it is due to forgetfulness, laziness, other priorities, the complexity or uncertainty of the process, irrational fear, etc., or because of deeper causes such as social unacceptability, ingrained myths, lack of social norms, and so on. Therefore, using the proposed approach we tried to understand the mechanism of consumer judgments and identify the extent to which an irrational system is involved while making decision to purchase a particular food item, or while assessing its safety. This will ultimately enable us to define tailored solutions to push people towards desired actions and ensure the sustainability of change.

To this end, based on the results of the study, we developed the Behavior Map, a document of behavior drivers and contextual analysis. In particular, we analyzed the factors that promote (*motivators*) and impede (*barriers*) human behavior related to choosing and buying food items as well as assessing their safety. The Behavior Map provides a crisp picture of current social and physical contexts and suggests what the theory of change can be based on.

The findings regarding motivators and barriers of the studied behavior may seem mutually exclusive at first glance. However, the context becomes clearer if we consider the fact that these are consumers’ perspectives identified through in-depth interviews and arranged in the relevant fields of the Behavior Map. For example, the difficulty of reading the information on a label is a problem that is often named among the motivators: the consumer has a desire to read the label, hence the difficulty that interferes with reading must be eliminated. At the same time, another part of consumers identifies the content of the label as a barrier – they do not see the need to know the content of the label, because they do not trust it. This factor is associated with fears, and it cannot be eliminated by solving the problem of complicated reading; that is why seemingly similar problems are presented in completely different contexts. A detailed review is provided in subsequent chapters.

## Jobs-To-Be-Done

To understand the factors that promote or hinder the desired behavior, it is necessary to view the problems from consumers' perspective. Their psychology, character, needs and desires should be taken as a starting point – what the consumers aspire to, what is most important and vital for them, what are their values that are met by the concept of food safety. These factors are called Jobs-To-Be-Done and represent some kind of umbrella motivators that should underlie any intervention, policy, or communication strategy. The study identified three types of the Jobs-To-Be-Done: functional (saving money and time; making informed decisions; taking care of health), emotional (caring for others by notifying the National Food Agency; restoring trust and overcoming fear; creating security through the implementation of European standards), and social (reporting food safety violations to the controlling authority is associated with European identity; caring about food safety and responding to violations is seen as a model of youth behavior – encouraging their participation is associated with desired change).

## Motivators of Studied Behavior

According to the Behavior Map, **existing difficulties and challenges (Pains)**, in particular those problems, or shortcomings that are accompanying the current situation or condition, are considered as motivators of studied behavior, as they demonstrate the inevitable desire for change (**the consumers have difficulty reading the label and feel that they do not know what they are consuming, hence their desire to solve this problem**). **What are those main problems or shortcomings that would help us to actualize the food safety issue?**

- Consumers *feel insecure and uncertain about buying truly safe products or making any meaningful changes in this direction*. However, if they were aware of the various food safety compliance and control mechanisms in place, along with the actions being taken to ensure food safety, this knowledge could greatly alleviate their sense of hopelessness.
- For consumers it is *difficult to read and understand the ingredients listed on the label*. The desire and effort to read the label is obvious, therefore it is important to simplify the process.
- *Food safety is closely linked to quality* for consumers, but the quality is expensive, and often not affordable, and in such cases finding a compromise is the solution. By understanding the core distinction between the quality and safety, consumers can adjust their behavior.

- *Strong negative attitude towards consuming canned food, sweets, and products with additives:* these types of products are considered more dangerous in terms of food safety compared with less shelf life. As a result, consumers often try to replace these products with alternatives they perceive as less harmful, which motivates them to pay closer attention to labels and ingredients.
- *The lack of confidence in food imported from specific countries* conditioned by current developments and/or existing bias and prejudices, makes consumers pickier during the grocery shopping and motivates them to read labels more carefully.
- *Distrust of products produced by the peasants or small farmers in the village,* stemming from personal contact with the production process: violation of hygienic and other norms disgusts respondents and strengthens their confidence that all types of products need to be controlled by the state.

**Perceived benefits of change (Gains)** are also regarded as motivators of studied behavior. In other words, if the desired behavior - *checking the food ingredients* - is carried out, then it creates the *opportunity to realize value* – e.g. *to choose safe food for kids*. According to Behavior Map, these values are associated with change and increase the motivation to perform the desired behavior. It was revealed that:

- For consumers, the concern for children is the main motive for checking food ingredients. They carefully read the label, can search for information on the Internet or on the website of manufacturer/brand, paying special attention to substances from the list of ingredients that they perceive as harmful.
- Consumers are motivated and interested in obtaining information on food safety from various sources, including the results of inspections conducted by the National Food Agency. Diverse information helps them to make decisions, which is an important prerequisite for implementing the desired behavior.
- Consumers' sense of improved food safety is linked to the attributes of minimum standards. Labeled food, hygiene in food facilities and refrigerators where perishable food is stored are the attributes that matter to the consumers, and through the presence of these attributes they assess the current food safety situation; all of this is an important part of the desired behavior.
- Consumers are interested in appropriate food storage conditions, which in their perception is directly related to food safety. This is a step forward in terms of raising consumers' awareness.



- Consumers are willing to pay a slightly higher price if they know they are buying safe products. The willingness to pay more indicates that food safety is important for them; therefore, they need help in identifying safe products for which they will pay a little more.

## Barriers to Studied Behavior

The existing routine, the tried and tested path is accompanied by a sense of security that is always difficult to break. **The consumers tend to buy the regularly consumed food in the same place, avoid diversity, because diversity requires additional efforts to achieve a sense of security.** That is why, according to the map of behavior, **a habit, an established routine (Comforts)** is usually considered a barrier to the studied behavior. What is this sense of consumers' security based on? It turns out that:

- Consumers try to create a sense of security in the simplest possible way, for which they routinely buy only familiar brands and "factory-made"[2] goods in the same large retail chains - they trust them, they do not need extra effort, there is no need to check the label for the expiration date. Even a small change in this routine requires additional actions and therefore breaks *Comforts*.
- Just checking the expiration date is enough to make the consumer feel that the food is safe, and if the food is nicely labeled and packaged, it doesn't even need to be checked, it is regarded as safe.
- High price is related to quality, and quality is related to safety. Consumers prefer to effortlessly pay more for a "quality" product, expecting it to be harmless.
- Personal acquaintance with a food manufacturer or retailer is a sufficient reason for a consumer to trust unlabeled or "non-factory" products. The recommendations of friends and acquaintances are also highly trusted, and in this case too, the consumer does not see the need to make additional efforts to check the safety of the product.
- Rural products (grown by a farmer in the village) are automatically perceived by consumers as natural /organic, so their reliability in terms of quality and safety is not questioned.
- There is an expectation among consumers that Russian products are safe and could be trusted, because Russia has "a huge landmass and enough resources" and therefore "they do not need" to use chemicals and other harmful additives in food production.
- There is an attitude among consumers that concern for food safety is the sole responsibility of the state and official bodies, and not the consumer.

- Due to the visual abundance of the agricultural market, consumers feel that it is impossible, with such a variety of choices, not to be able to choose healthy food.

According to the behavior map, **anxiety caused by fear of change or novelty** is also defined as a barrier. Uncertainty is associated with danger, risk or anxiety, which may be quite conscious and real, or caused only by some gut feeling. **What kind of fear or anxiety is impeding the change?**

- There is an information avoidance practice among consumers when they prefer “to know less and sleep well”. The information is complex, requires in-depth knowledge and is mentally “beyond reach”.
- A pronounced fear of industrialization - consumers have a feeling that in case of introduction of European food safety standards, the production of natural food in Georgia may be called into question and completely replaced by an industrial model associated with artificial additives.
- Fear of cheap or discounted products: safe and healthy food cannot be cheap, and if the price of expensive food items is significantly reduced - something is wrong. The concepts of quality and safety are mixed up.
- Fear caused by distrust of the label information.
- Consumers are aware that when it comes to food safety, they need to act; yet it is difficult for them to respond properly to a violation (and that includes calling the National Food Agency hotline), because such behavior is still socially unacceptable.

Motivators and barriers to the studied behavior, including the main motivator - the value goals (Jobs-To-Be-Done) are discussed in detail in the following chapters.

## Recommendations for Stakeholders



**Customer journey** is divided into three stages:

1. Searching and planning;
2. Grocery shopping or eating out;
3. Consuming the food at home.

The motivation to receive information on food safety and report food safety violations to the National Food Agency is generally high, however, correct behavior drivers are needed to activate the desired social norm. It is important to carry out interventions at **so-called high-potential moments of the customer journey**, where the probability of individuals performing a certain behavior is the highest simply because this behavior is *relevant*, and individuals have sufficient *time* and *motivation* to perform it. The high-potential moments include grocery shopping, food poisoning, caring for a child (0-10 years). Since it is very much desirable for these moments to happen frequently, childcare and grocery shopping (or eating out) are the most favorable to this end.

## Behavior Interventions

The recommendations are provided regarding two desirable behaviors: a) searching for/increasing the demand for food safety information - turning the issue top of mind of the consumer (creating and raising awareness) and b) increasing the number of violation reports to the National Food Agency.

When designing interventions, we utilize an **EAST framework** that allows tailoring solutions to identified barriers (comfort, fears) and motivators (jobs-to-be-done, benefits, challenges). Within this approach, for the desired behavior to occur, it needs to be simple (**Easy**), appealing and motivating (**Attractive**), socially acceptable (**Social**) and reminders to exercise behavior need to be made in moments of high potential (**Timely**).

## **MAKE IT EASY**

People tend to engage in behaviors that are easy to perform and require no time, money, or cognitive effort. Access to information related to food safety should be free, diverse (communicated through various channels) and immediate.

**The process of reporting at National Food Agency should be as simple as possible:**

- **Hotline alternatives:** e.g., mobile app;
- Visibility of the National Food Agency hotline is quite low, it is difficult to find it on a NFA webpage; therefore, it is advisable to have a **special hotline** to serve exclusively those who are interested in this specific topic;
- **Labels are hardly readable** due to very small print; therefore, technical solutions are needed to overcome this difficulty (please, see the illustrative intervention “labeling and QR code”);
- **Structuring the information** by breaking it down to simple actions that would help to understand / consume the information, and by organizing it into sequence of “steps”;
- The information about the time of the last inspection of the object should be easily accessible (see above the app/website);
- **Defaults:** This principle implies the development of measures that make actions automatic, for example: imposing regulations or otherwise obliging businesses to display in the interior of the facility documents describing food safety standards or containing the results of the inspection, or to hang posters with National Food Agency hotline number or application logo. As for manufacturers, they should put this information on the label. Almost in parallel to these measures, active communication with consumers is necessary so that they are aware, prepared and willing to request food safety information from the seller or manufacturer.

## MAKE IT ATTRACTIVE

Attractiveness is determined by two factors: **salience** – something that stands out, does not fit into standards, deviates from the usual format, and **incentives** – financial or intangible rewards.

### **Salience:**

Any information intended to attract attention should be visually distinguishable (salient) and serve as a signal - for example, discount vouchers on the shelves attract consumers' attention. Food safety signs - hotline number, application name, labeling (see illustrative interventions, etc.) – can be placed similarly.

### **Incentives:**

**Gaming** - contests and the expectation of a reward increase the motivation, and can be used, therefore, to improve food safety practices both in the business sector and among citizens.

#### *In Business Sector:*

- **National Food Agency award** for an enterprise or entrepreneur that complies with food safety requirements (e.g., during the recurring inspections); in addition, awards contribute to public recognition (see below “principle of commitment”);
- **Incentives for business companies**, such as grants to entrepreneurs to raise standards, development of a list of preferred suppliers, tax incentives, technical assistance programs (training and education) and so on;
- **Ratings:** ratings could be created using the existing statistics both by an official state agency and by any non-governmental “watchdog” organization. It would be useful to ensure media coverage of the ratings.

#### *Among citizens:*

**Food Safety Champions:** Contest sponsored by the state agency or non-governmental organization that will highlight active citizens and display their contributions to the food safety issue. See also the demo interventions (online game). Such contest will also emphasize social norms (see below).

## MAKE IT SOCIAL

Any behavior is conditioned by the **social context** – the degree to which it is accepted or approved by society. Emphasizing social norm always increases motivation.

**Communicating Social Proof:** reporting of food safety violations should be presented as desirable and acceptable behavior. See also “reframing” in demo interventions.

**Principle of commitment:** this principle of behavioral change is an efficient tool for promoting the food safety practices, because stakeholders recognize the importance of food safety standards and make commitment to the society to follow the rules. In this way, awareness will transform into a habit, into an acceptable norm. There are several factors to consider while applying the Principle of Commitment:

- **Public commitment:** it is advisable to communicate the willingness and determination to meet the standards *publicly*;
- **Public commitment with the hope of future recognition:** bringing in game elements described above to identify later the best contestant / leader;
- **Wide communication of public commitment:** displaying it in the facility interior, promoting through social networks, etc.;
- **Involving opinion leaders in public commitment.**

#### **MAKE IT TIMELY**

Interventions at Moments of High Potential – see above the “High-Potential Moments”.

## Preface

A variety of factors influence the decisions people make when buying food. Over the past decades, policy makers, practitioners and researchers have been striving to determine how food systems can be made more sustainable and efficient to benefit humans' well-being. Evidence collected over the last 9 years confirms that behavioral approaches in policymaking contribute to the sustainability of systemic change. This approach is called behavior food policy. Today, many cities, regions, and governments around the world systematically use behavioral science (BI) to transform food systems. Results of their work provide compelling evidence that taking into account contextual opportunities and constraints, along with a scientific comprehension of human behavior and decision-making, enables the development of strategies, policies, and measures that are more efficient, acceptable, relevant, and overall better suited to specific objectives, compared to traditional model-based policies. Therefore, the use of BI approach will help to increase the efficiency of the expected results within the project and ensure sustainable changes in the behavior of all key stakeholders, including consumers affected by food safety policy.

The implemented study also fully takes into account the principles and approaches of behavioral science to determine what explicit and hidden motivators and barriers influence the decisions of consumers when they are choosing and buying a particular food product, of when they are assessing its safety, and properly responding to identified danger.

Using the behavior science and behavior insights methodology, we will try to determine, whether there is the so called Intention-Action Gap [1] in consumers – in other words, when there are intentions: a certain level of awareness (“food safety is important”), the institutional preconditions (institutional response mechanisms are in place), and positive attitude (willingness to consume safe food), but these intentions are not followed by appropriate action. Depending on a challenge, the discrepancy between intention and action manifests itself in different ways, however, all these manifestations can be explained by the paradigm that the mechanism of human judgment and decision-making is often based on an irrational system. In most cases, lack of action is a result of forgetfulness, laziness, other priorities, the complexity or uncertainty of the process, irrational fear, etc., or has deeper causes such as social unacceptability, ingrained myths, lack of social norms, and so on.

Therefore, using the proposed approach we tried to understand the mechanism of consumer judgment and decision-making and identify the extent to which an irrational system is participating in the decision to purchase a particular food item, or to assess its safety. This will ultimately enable us to define tailored solutions for pushing people and stakeholders towards desired actions.

## Methodology

The study of factors that determine food safety related consumer behavior, was carried out using the BISC Methodology, which is a combination of several proven models of behavior change, namely, b=mat [4], COM-B [5] and BASIC [6].

The BISC Methodology usually includes four stages: 1. Behavior Analysis; 2. Intervention Design; 3. Solutions Testing and 4. Change Strategy (developing the change strategy for scaling). The presented study was conducted within the first stage – Behavior Analysis – of BISC Methodology.

Behavior Analysis seeks to identify one or more actions or behaviors, known as Key Behaviors, focusing on which will enable to achieve significant large-scale impact. Behavior Analysis is made exactly in the context of these Key Behaviors and basically implies the study of the so-called drivers of desired or target behavior. Behavior Analysis (study) provides predictive indicators of actions that will form the basis of the concept of change. The study is carried out by means of in-depth interviews, the so-called *user research* - survey that observes consumption patterns on the example of a real user (usability testing) and identifies shortcomings or positive aspects. The main objective of an in-depth interview is to explore current or past experiences, rather than desires for the future, because, as noted above, stated intentions or desires, for the most part, will not result in actual actions/outcomes. Access to models of future behavior is possible by identifying subconscious barriers or emotional and psychological factors, which will subsequently form the basis of a “Behavior Map”, namely [7]: a) cognitive priorities; b) biases, c) mental model and c) difficulty of decision (friction points).

For in-depth interviews, we selected 36 respondents [8], distributed across target regions according to the respective totals of population:

<b>Tbilisi</b>	16
<b>Kakheti region</b>	
Telavi	3
Large village	2
<b>Racha-Lechkhumi and Kvemo Svaneti</b>	
Oni or Ambrolauri	1
Lentekhi	1
<b>Imereti</b>	



Kutaisi	5
Zestaponi	3
Large village	2
<b>Guria</b>	
Lanchkhuti	1
Ozurgeti	1
Large village	1
	<b>36</b>

During the planning phase of the study, a guide for in-depth interviews was developed.

Interviews were conducted from 24 April to 11 May 2023; the study ultimately involved twenty-one women and fifteen men. The gender distribution was originally planned to be equal but had to be changed based on the availability of respondents. The age of respondents ranged from 25 to 83 years. Each interview lasted 60-70 minutes.

As a result of the process above, we developed Behavior Map – the document analyzing behavior drivers and context. Using this methodology, through the observation of models above and conducted surveys, we identified factors that promote the desired behavior (motivators) or, on the contrary, create barriers to it. At the same time, the Behavior Map provides a clear understanding of the existing social and physical context and suggests possible basis for change theory.

## Behavior Drivers

### Motivators of Studied Behavior / Action

<p><b>Existing Difficulties and Challenges - PAINS</b></p>	<p><b>Perceived Benefits of Change - GAINS</b></p>
<p>The problems or shortcomings that accompany a situation or state and cause an inevitable desire for change. <i><b>What are the main problems or shortcomings?</b></i></p>	<p>Realization of aspirations and values that are associated with change and increase motivation. <i><b>What additional values can be linked to change?</b></i></p>

### Barriers to Studied Behavior / Action

<p><b>Habit, Routine - COMFORTS</b></p>	<p><b>Fear of Change or Novelty - ANXIETY</b></p>
<p>The existing routine, proven and beaten path is accompanied by a sense of security, which is always difficult to destroy. <i><b>What is this sense of security based on?</b></i></p>	<p>The unknown path is associated with a sense of danger, risk, or anxiety. It can be conscious and real, or it can be subconscious and driven by the gut feeling only. <i><b>What fears and anxieties are associated with change?</b></i></p>

It should be noted that the BI study also included an ethnographic component, which allowed us to observe the habitual purchasing behavior of consumers in their respective socio-cultural environment. Within the ethnographic component, we discussed:

- Whether oral statements or intentions are carried out at a level of behavior;
- How do consumers behave in their socio-cultural environment;
- What is obvious and what is not being said;
- Language and symbols, rituals and common meanings associated with the respondent's world.

A special checklist for ethnographic observations was developed.

A total of four (4) ethnographic observations were carried out - 2 in Tbilisi, 1 in Ozurgeti (Guria region) and 1 in Telavi (Kakheti region). Consumers for observation in Tbilisi were selected according to the following criteria: the first one was a consumer living in the central district of Tbilisi, whose behavior model implied grocery shopping in large chain stores; the second was a consumer living in the outskirts of Tbilisi, with a free model of behavior, which in this case meant shopping for groceries in various facilities, including street vendors. In the case of Telavi and Ozurgeti, respondents were selected from consumers residing in large settlements.

Ethnographic observations were carried out in Tbilisi on April 26-27, in Telavi on April 29 and in Ozurgeti on April 30.

## Value Goals: Jobs-To-Be-Done

To understand the factors that facilitate or hinder the implementation of desired behavior mentioned above, it is necessary to view the problems from the consumer's perspective. The starting point should be the psychology / character of the consumer, their needs, desires, goals, and ambitions. People do not act aimlessly; when they behave in a certain way, they try to achieve the goals that carry value for them. Accordingly, in the present report paper we refer to the main driver of desired consumer behavior as "value goals" or "jobs-to-be-done" [9] – the reasons why consumers engage in food safety control and the "scale" by which they eventually evaluate the quality of an action and the level of satisfaction with its outcome. Using this vision of consumer psychology as a starting point, we tried to explore:

- *What are those jobs-to-be-done that will ensure involvement of consumers in the food safety control, and*
- *How will the achievement of this objective be impacted by current contributing and impeding factors?*

We identified **functional**, **emotional**, and **social** types of *jobs-to-be-done* that consumers seek to achieve when they engage with food safety issues.

**Functional jobs-to-be-done** include the following:

- making an informed decision when choosing food;
- getting clear information about the safety of the selected food items simply by reading the label;
- caring about health by buying safe and reliable products, even if these are slightly pricier;
- saving time and money while shopping.

**Emotional jobs-to-be-done** include the following:

- a sense of caring for others, when responding to food safety violations and notifying appropriate authorities as necessary;
- overcoming fears and gaining confidence by learning the results of food and facility controls;
- feeling secure as a result of the European standards' implementation.

Food safety interest and responding to its violations are instrumental in achieving the **social jobs-to-be-done**, specifically:

- notification of a food safety violation to a relevant authority is associated with European identity;
- concern for food safety and response to violations are viewed as models of youth behavior; encouraging youth participation is associated with desired change.

By defining jobs-to-be-done, we were able to gain a better understanding of how to evaluate consumers' potential to achieve the desired behavior.

## Consumers' Behavior Towards Food Safety

Using the Behavioral Influence Framework, we mapped the drivers of existing consumer behavior to define its psychology/character (see map visualization below). The below findings are not just opinions of the majority of respondents, but important points of view identified as a result of in-depth interviews and arranged in the relevant fields of the behavior map as contributing or impeding factors of the studied behavior.

According to the behavior map, the **existing Pains** - problems and shortcomings that accompany the current situation or state, are considered to be the motivators of the studied

behavior, as they evoke an inevitable desire for change (**consumers find it difficult to read the label, and feel they do not know what they are consuming - so they want to solve this problem**). What are the main problems or shortcomings that will help us actualize the issue of food safety?

- **Consumers feel insecure, they do not feel that food products sold in markets and stores are safe.** *However, if they were aware of the existing mechanisms of food safety control and of actions that are taken in this direction, this sense of hopelessness could be significantly reduced.* Consumers talk about lack of information, they are not confident that food safety is controlled in any way, they find it difficult to name the state agency that is primarily responsible for the food safety policy and control. When asked about state control, the majority of respondents can only recall the TV Show of Madonna Koidze “Public Control”. Consumers note that the food safety situation has not improved, there are few positive changes in terms of respecting food shelf life, but more control is needed. As an illustrative example they cite the small groceries in the neighborhood where hygiene is often not observed, the sound of working refrigerator is not heard and in general, it seems that no one controls these vendors. Significant part of consumers is not aware of state requirements regarding the food safety, and when asked about the agency responsible for the food safety policy, they usually cite the Ministry of Health instead of the Ministry of Environment and Agriculture; at the same time they cite Ministry of Internal Affairs as being responsible for the food safety control together with Ministry of Health. Given the low visibility and lack of information about food safety control, respondents do not expect any changes, even if they begin to respond to violations. They say that healthy natural products are exported from Georgia and replaced by cheap imports. This reinforces their sense that harmless products are no longer available on the market.

Consumers think that inspection and testing results cannot be trusted in Georgia. They question the objectivity of the results and explain this by the peculiarity of the Georgian mentality:

*“After all, this is Georgia, and inspections are often biased.”*

*“I know that the law does not protect me in my country, so I have to turn a blind eye to violations.”*

- **Product labels are difficult to read and understand** - consumers report both content-related and format-related problems of labeling. Some of them talk about coding used on the label that does not tell them anything - consumers do not know

what the specific codes mean or how they might affect the safety of a particular food. In addition, consumers do not understand the meaning of specific terms / substances used on labels, and even more so do not understand what effect those substances can have on their health. Finally, consumers note that despite the desire, the text on the label is written in such small print that it is almost impossible to read it. The desire and effort to read the label is evident, it is important to simplify the process.

- **Food safety is closely linked to quality for consumers, but the quality is costly and often not affordable; in such cases finding a compromise is the solution.** In other words, food safety is not accessible because quality food is expensive. By understanding the core distinction between quality and safety, consumers can adjust their behavior.

It is difficult for consumers to draw a clear line between food quality and food safety. Therefore, when they talk about the high cost of a *quality* product, they mean the availability of *safe* food. For low-income families, the price is important in the first place, and then the quality. Rural products are also associated with luxury, and consumers note with disappointment that they must buy cheap products instead of the natural village goodies. Similar to costly products, cheap products are also linked to food safety, with *cheap* meaning *risky* in this case.

Almost all respondents noted that at least once they bought genetically modified products, intentionally or unintentionally. Most consumers consider genetically modified foods dangerous from a food safety standpoint, but they have to compromise and buy them, partly because they have no other choice, partly because they do not know how to identify genetically modified products.

Uncontrolled street trading is also a matter of compromise, and is generally unacceptable to the majority of respondents, although, given the current social problems and the economic situation, it is difficult for them to talk about completely banning it. It is expected and desired that the state, both at the central and local levels, offers an alternative solution for street vendors and their consumers. Another important factor mentioned was related to the compliance with storage and hygiene standards in such facilities as farmers' market, outdoor trade facilities and wholesale facilities. While relevant demand, at the mental level, is high for large retail and catering facilities, for chain stores this demand is weak or completely absent.

- **A sharply negative attitude towards canned food, sweets, and products with additives** - from the point of view of food safety, perishable products are named among the products with the greatest risk, although the respondents are also wary of products that are associated with the possibility of provoking various serious diseases and fatal poisoning. Canned food is most often mentioned as a potential source of deadly

botulism, as well as sweets and various additives as contributing to the development of serious diseases. Consumers are trying to replace such foods with those that are less harmful.

*"I'm trying to choose gluten-free food for my child. Gluten slows down the mental development of the child. I'm trying to buy sourdough bread."*

*"I never buy canned food. I'm aware of botulism and many other toxic substances."*

*"I avoid foods containing vitamin E, fast food, chips, foods with emulsifiers."*

- **Distrust of food products imported from specific countries** - consumers find it difficult to argue about food products of which particular countries they strongly distrust, and why. However, a certain negative attitude towards the produce of several countries was revealed. The attitude towards Turkish food products is generally neutral, however, during the conversation it was noted that there is a big difference between foods imported into Georgia and foods sold directly in Turkey; imported foods are not credible. There is an ambiguous attitude towards food imported from Iran; distrust is mainly caused by bad experiences in other areas:

*"I do not trust Iranian production. From my personal experience, the quality of their building materials is very poor, foods might be the same".*

India and China were also named among the unreliable countries, although it was difficult for respondents to give a specific explanation why they would not buy their products. Despite a generally benevolent attitude, respondents question the safety of food currently produced in Ukraine - mainly due to daily explosions and associated pollution:

*"Countries refuse Ukrainian food due to smoke (ongoing military operations). I also very rarely pick Ukrainian production. I do not really like their products recently, there is no control in the country and standards are not respected."*

This problem motivates the consumer to take a closer look at the label and identify the country of origin.

- **Distrust of the products produced by a peasant or a small farmer in the village is caused by personal experience of observing the production process.** This experience strengthens the consumer's confidence that state control is needed regarding all types of production.

Consumers note that after they personally got acquainted with the "inner kitchen" of rural production, their attitude changed to the negative. They are no longer guided by the habitual feeling that the products produced in the countryside are organic.

*"It seems to me that rural products are more natural, but they need to be checked. Various fertilizers and pesticides are used uncontrollably."*

*"The more closely I looked at the production of village produce, the more I learned how irresponsibly they act. They add dyes even to Churchkhela."*

Uncontrolled use of fertilizers and pesticides, according to respondents, is associated with low awareness of farmers. Those who are knowledgeable in agriculture note that today it is very difficult to grow fruits and vegetables without spraying. Therefore, it is important for a farmer to know how to use chemicals correctly, otherwise the safety of their products will be on the agenda.

*"Nothing is harmless, both fruits and vegetables contain nitrates. When peeling potatoes and apples, I peel off a thick layer of skin."*

**Perceived benefits of change (Gains)** are also regarded as motivators of studied behavior. In other words, if the desired behavior - *checking the food ingredients* - is carried out, then it creates the *opportunity to realize value* – e.g. *to choose safe food for kids*. According to Behavior Map, these are value realization aspirations that increase the motivation to perform the desired behavior. It was revealed that child protection is one of the most important motivators of food safety behavior:

- **Care for children is the strongest motivator to check the food composition/ ingredients.** Consumers are particularly meticulous when it comes to baby food. They talk in detail about the contents of the label and about substances they consider dangerous to the health of the child. They are cautious about the content of fats and carbohydrates, they try to keep the content of chemicals, starch, and sugar in food at the lowest possible level. Consumers say they strive to buy products for children that are as close to natural as possible. Unfortunately, they do not always succeed, but they spare no effort and do not mind overpaying. This is the case when consumers for real perceive the importance of food safety and do not equate it with quality in the context of a high price.
- **Consumers are motivated and interested in obtaining information on food safety issues from various sources, including the results of controls conducted by the National Food Agency. Diverse information helps them to make decisions,** which is an important prerequisite for implementing the desired behavior.



Consumers believe that access to food safety information will help them make decisions related to food purchase and consumption. In their opinion, the results of controls of food enterprises should be open to the public, which, on the one hand, will increase public confidence, and on the other hand, promote healthy competition and thus motivate food enterprises to meet the requirements. Positive results of a food enterprise control increases trust, a sense of security, and confidence that this or that particular food item is safe.

Consumers who are aware of the role of the National Food Agency note that they follow the results of controls, but there are very few such consumers. The majority talk about the need to simplify access to information about controls. For example, if for better visibility, the safety control marks (“checked for safety”) will be placed in food facilities or directly on the food products, consumers believe, this will contribute to the higher sense of security. As for the communication channels, consumers mostly prefer social networks and television (the latter one was preferable for those living in regions).

- **Consumers' sense of improved food safety is linked to the attributes of minimum standards.** *Labeled food, hygiene in food facilities and refrigerators where perishable food is stored are the attributes that matter to the consumers and through the presence of which they assess the current food safety situation; all of this is an important part of the desired behavior.*

Even though a significant number of consumers find it challenging to identify the specific minimum food safety standards and requirements for food manufacturers and suppliers, when asked why they think the food safety situation has improved, they actually describe the very same circumstances that these standards and requirements aim to fulfill. For example, food labeling was named as one of the attributes that contributes to the feeling of improved food safety. The presence of chain stores was also mentioned, where cleanliness and proper food storage conditions are clearly visible, and a wide selection of safe products and reliable manufacturers is available. The opening of new food manufacturing facilities, as well as good information coverage that allows consumers to see the clean and organized situation inside the facility, also reinforce this feeling. The feeling of improvement is stronger in those consumers who witnessed Georgia in the 1990s and can recall the times when, as they put it, not only food safety, but also food availability was a big problem.

- **Consumers are interested in observing the appropriate food storage conditions, which in their perception is directly related to food safety.** This is a step forward in terms of raising consumers’ awareness. Storage compliance is a domain of food safety where

consumers easily see the difference between food safety and food quality. The difference is obvious, since in this case the price and quality attributes of the product, including the packaging, are of no importance from the point of view of food safety. First of all, consumers are interested in the refrigeration of perishable food, and then in the general sanitary and hygienic conditions of the facility. Particular attention is paid to the placement of meat and dairy products in the refrigerator; then the general cleanliness of the facility is noted. When it comes to storage compliance, consumers are also interested whether the appropriate storage conditions are ensured during the food transportation process, and in this case food products imported from remote countries are of particular concern. Regardless of the level of development of supplier country, the ambiguity of the issue causes anxiety in consumers, and we will discuss this in the following sections of this document.

- **Consumers are willing to pay a slightly higher price if they know they are buying safe products.** The willingness to pay more indicates that food safety is important for consumers; therefore, they need help in identifying safe products so they can buy them at a relatively high price.

Consumers note that they have chosen grocery stores where they can save some money; with these savings they want to buy healthy food, even at a higher price. The word "quality" in the quotes below is used in the context of "safe".

*"I prefer to buy less, but better in quality, such as cold-pressed oil."*

*"I'd rather pay 5 tetri more to buy a quality product."*

*"I avoid foods with high content of vitamins, I'd rather pay more."*

The existing routine, the tried and tested path is accompanied by a sense of security that is always difficult to break. **The consumers buy the same proven food in the same place, avoid diversity, because diversity requires additional efforts to achieve a sense of security.** That is why, according to the map of behavior, **a habit, an established routine – Comforts** - is usually considered a barrier to the studied behavior. What is this sense of consumers' security based on? It turns out that:

- **Consumers try to create a sense of security in the simplest possible way, for which they routinely buy only familiar brands and "factory-made" goods in the same large retail chains** - they trust them, they do not need extra effort, there is no need to check the label for the shelf life. Even a small change in this routine requires additional actions

*and therefore breaks Comforts.* Consumers explain their loyalty to large retail chains by a sense of security, which is caused both by the proper environment and the expectation that large retail facilities are checked more often, so hygiene, as well as terms and conditions of food storage are always observed there. As we have already mentioned, consumers directly associate food storage conditions with food safety, which is why they feel that grocery shopping in large chain stores is the safest choice. For them, it is enough to check the expiration date of the product a couple of times, after which they no longer do this and pick products from shelves without additional checks. In addition, they believe that large retail chains have more resources, and therefore more opportunities to equip a retail facility with proper food safety infrastructure.

*"I buy frozen food from large chain stores. I know their refrigerators won't turn off due to a power outage, so I'm safe."*

Consumers, especially those who are trying to save time, are comfortable with following a routine and buying a significant portion of groceries without much thought or effort.

The same routine behavior is observed in relation to food brands. Consumers have more trust in well-known brands that have been on the market for a long time. This trust comes from both personal experiences gained over the years and the presumption that because of better access to resources, food brands are better able to ensure a safe manufacturing process. Consumers note that since they constantly buy products from the same brands, most often they do not even check the expiration date or ingredients.

*"I usually check the expiration date when I buy dairy products, although if it's a brand I'm familiar with - I don't."*

Such an attitude towards large retail chains and familiar brands is a habitual comfort that reduces the consumer's desire to search for something new. They feel safe and see no need for further action. In the same context consumers mention the "factory-made" products, especially when it comes to dairy. For them, "factory-made" means processed, bacteria-free, and therefore less harmful. It is enough for them to know that the product is manufactured at the factory to feel safe, and they do not delve into the details. Just knowing that the product is manufactured in a factory is enough for consumers to feel safe, and they do not delve into further details.

*"I prefer to buy factory-made, readily available products. They are labeled with release and expiration dates. I feel more secure. Rural products require much more attention and caution."*

Consumers are not interested in product ingredients if they buy baby food from a pharmacy, believing when the product is sold in a pharmacy, it is harmless by default. For example, if the same cookies are sold in both the store and the drugstore, buying from the drugstore makes consumers feel more secure.

*"I feel more secure when I buy [for a kid] porridge, cookies or yogurt at the pharmacy."*

- **Checking the expiration date is associated with caring about food safety, while the label and packaging, along with the expiration date, are associated with safe food** - it is enough for the consumers to simply check the expiration date to feel that they care about food safety, and if the food is labeled and packaged then it does not need to be checked, it is considered harmless. It can be said that checking the expiration date is a habitual behavior most often mentioned by consumers. By itself, the habit of checking the expiration date is not bad at all, if not for the fact that consumers' concern for food safety is limited to it alone. When talking about the food safety attributes, consumers primarily mention the date and ingredients, however, they admit that at a level of behavior, during the grocery shopping, they mainly check the date only.

*"I always look at the expiration date, but I don't read the composition of the product."*

*"I pay attention to the production date. I can't read all the labels."*

For consumers, a product that is labeled and well packaged is associated with safe food. There is nothing wrong in this regard either, however, since consumers rarely read the contents of the label, limiting themselves only to checking the expiration date, it turns out that the mere visual existence of the label is enough for their peace of mind, and they do not see the need for an additional food safety behavior.

*"The label must be well attached, must not move, the packaging must not look suspicious."*

*"The product must have an expiration date and a label. In some cases, trust is critical. I don't pay much attention to the composition of the product."*

In the case of buying ready meals and convenience food, the feeling of security is created by hygiene, smell, and taste. However, taste is still the most important for consumers:

*"Georgians are people with taste, cleanliness is everywhere."*

- **For consumers, paying higher price is a sufficient condition to feel that they are buying "harmless" food.** The expensive food is associated with quality, and the quality is associated with safety; according to this logic, safe food is always expensive. Therefore,

when saying they are ready to pay for “quality”, consumers feel that they are buying “safe food”.

- **Personal acquaintance with a food manufacturer or retailer, as well as recommendations of friends or acquaintances are enough for a consumer to trust unlabeled or "non-factory" products.** In this case too, consumers do not see the need to make additional efforts for checking the safety of the product – the human factor is a key when buying the meat or dairy “non-factory” products. On the one hand, consumers trust people whom they have discovered and tested themselves; on the other hand, they trust those who are recommended by friends or family. And even though the food production process is often invisible to consumers, human trust is so powerful that food safety issue is never questioned and completely delegated to other party.

*“I bought cheese but I’m sure the seller would not give me a bad product, so I did not look at anything. We’ve known each other for a long time, I trust them.”*

*“I don’t check products, because we buy from our long-standing suppliers. If necessary, they will whisper to me: this meat is not for you.”*

*“I know well the family from whom I buy the cheese. If I buy it at farmers market, then only from a person I trust.”*

- **Trust in products produced by peasants in the villages is high in terms of quality and safety** – rural produce is automatically perceived by consumers as safer and more nutritional, because it’s more natural /organic, contains less chemicals and additives. The reliability of rural food in terms of quality and safety is not questioned.

*“I feel that rural products are more natural, there is a very noticeable difference between rural and industrial eggs.”*

*“I consume rural products more often than factory ones. I feel like they are more natural and have fewer chemical additives.”*

Consumers’ trust and feeling that rurally produced food is natural is determined by their perception that the Georgian peasant is not “spoiled”.

*“They don't even know how to use chemicals, haven't learned it yet.”*

- **Food products made in Russia are safe and reliable, as they do not contain chemicals and other harmful additives** - consumers who consider Russian food products to be harmless sincerely believe that Russia is large country with plenty of resources – lands,

livestock, therefore it does not need to use chemicals and harmful additives. However, consumers do not feel the same way about other big countries like China or India.

*"I think Russian products are healthier than Turkish ones, maybe because I heard so in my childhood. In addition, Russia has resources, there is milk in there. They don't have to come up with all sorts of harmful stuff."*

*"GMO foods are banned in Russia (and Belarus), so I think their products are safer than European ones."*

- **There is an opinion among consumers that the responsibility for food safety lies solely with state and official bodies, and not with consumers.** Consumers feel that their participation is not necessary to keep expired products from reaching grocery store shelves. In their opinion, such issues should be directly controlled by stores.

*"Store manager must monitor the quality and expiration dates of the products to maintain the prestige of the store."*

Respondents have also pointed out that for people who live in poverty and have to think about their daily slice of bread, food safety is not so important; they should not be expected to become involved in this process.

*"Food safety should be controlled by the state; how can regular citizens do that?! You cannot give these tasks to citizens of a poor country; they have some many other things to worry about. When there is poverty, people do not care about beauty, they care to have at least something to eat. "*

- **Due to the visual abundance of the agricultural market, consumers feel that in such a variety of choices it is certainly possible to choose reliable food** - Diversity of produce in the agricultural market creates a feeling among consumers that here they can make a desired, rather than a forced choice. Furthermore, the agricultural market offers fruits and vegetables that are cultivated in rural areas and are sold at a rapid pace, all of which convinces consumers that their choice is safe.

*"The farmers market is improved now, the products are laid out nicely and cleanly, there is a good choice, the appearance of the products is also good; and besides, most of the villagers sell their produce here. The meat is also well sorted, and you can choose it normally, compared to other places."*

*“As for food safety, who knows, what our generation was eating during the war? I try to feed our future generation so that they do not get sick, I try to support them with food, to find clean products. They say food is checked better in the stores than in the agricultural market, but to be honest, I do not think so. For example, they sell Golden [apple] in the store, but the seller does not know whether it is treated or not with chemicals. And on the market, there is big variety of products, it is entirely possible to make the better choice there.”*

According to the behavior map, **anxiety caused by fear of change or novelty** is also defined as a barrier. Uncertainty is associated with danger, risk or anxiety, which may be quite conscious and real, or caused only by some gut feeling. **What kind of fear or anxiety is hindering the change?**

Consumers’ fears related to change include the following:

- **There is a practice of food safety information avoidance among consumers.** “The less I know, the better I sleep” is the best quote that explains such type of consumer behavior. Consumers do not want to know more, because then it will be difficult for them to make a choice. Accordingly, they deliberately avoid receiving information related to food safety, they are not interested in the results of inspections. While visiting groceries and catering facilities, they try to convince themselves that everything is perfectly arranged there, and nothing threatens their health.

*“I often go to one of the restaurants and deliberately do not look into their kitchen. I convince myself that the kitchen is ideal there. While eating there, I convince myself that sanitary standards are observed, that the meal was cooked by a clean, handsome person. If I think for a second that cook did not maintain cleanliness, I won’t be able to eat a single bite.”*

*“I heard that starch is harmful, but I intentionally didn’t check this information. Of course, our food is not 100% safe, but we buy whatever is offered at the farmers market, since we have no other choice. I try not to think about the rest. Neither rural nor factory products are 100% safe.”*

The information is complex, requires in-depth knowledge and is mentally “beyond reach”; this complexity is one of the reasons for information avoidance. It is hard for consumers to understand what specific substances are harmful and must be avoided, they struggle to comprehend unknown words and abbreviations.

- **A pronounced fear of industrialization** - Consumers have a feeling that the introduction of European food safety standards is not really safe for Georgian reality. They believe that with new European standards, food production in Georgia might be completely rebuilt on an industrial model, which scares them. The fear stems from their misguided notion of industrialization; they think that small countries (developed Europe) lack resources and land, so they became adept at using chemicals, as well as producing proven fertilizers and genetically modified products; all of these, if introduced in Georgia, will harm Georgian genetics.

*“It is necessary to introduce stricter norms than European standards. I’ve been there, and I know precisely how things are. We have a belief that everything is very neat and tidy in Europe, but that is not the case. Many people there use crude methods to prepare goods. Today, I trust Georgian products because less chemicals are used, although chemicals are already being imported here little by little, and this might damage our genetics.”*

For our respondents, industrialization is associated with products that have a long shelf life, palm oil, emulsifiers and dyes, soy grown with pesticides, milk powder, out-of-season fruits and vegetables that consumers consider dangerous to health. Accordingly, the prospect of industrialization becomes a matter of concern.

*“EU standards are needed if they are better than ours, but I know that the crop harvested on our land is the best. I do not think anyone has it better than in Georgia.”*

- **Fear of cheap or discounted products:** If the expensive food mostly evokes a sense of security for the consumer, then in the case of cheap or discounted food, its safety is called into question:

*“When the price is this low, I start wondering if the conditions were met and if the product is natural.”*

*“I do not consume sausages. Meat is so expensive, and sausages are cheap, are they really made with meat?!”*

All the above suggests that in the perception of the consumer, food safety and quality are inextricably linked to each other.

- **Fear caused by distrust of the label information** - The label lies, consumers say, and this time they do not mean the difficulty of reading and understanding the content of the label, mentioned previously among the problems; they mean their distrust of the



information read on the label and the fear induced by this distrust. The consumer reads the label but does not believe it.

*"It says it's powdered milk, but it could be something else, they just don't say that."*

*"I don't fully trust what the label says, it could be a lie, we love to cheat."*

*"Harmless food must have an expiration date; also, we must try our best not to list the wrong ingredients on the label. Yes, the composition is indicated here, but there was a case earlier when the actual composition was different from the written one and included vegetable fats, which they did not know about. Now they know."*

The distrust of the label is significantly influenced by personal experience of the consumers themselves or the experience of persons they trust. In addition to the fact that the consumer stops using products that they do not trust, the feeling of distrust and fear extends to other "doubtful" products too:

*"My husband worked at -----[10]. As the label contained the wrong information, and in reality there was a lot of yeast and dyes in there, my trust was lost, and since then I stopped buying it."*

*"The amount of meat in the sausage was minimal, I wonder what else was contained in there. "*

**Calling the National Food Agency's hotline is "scheming" and such behavior can "ruin a person's life."** Most respondents are aware that food safety violations pose a significant risk to human health. Accordingly, they consider it appropriate to respond to a violation and report it; however, they find it difficult to overcome the barrier associated with the widespread false social norm that reporting is tantamount to denunciation. While consumers generally agree that there will be positive changes if the number of people reacting to food safety violations increases, they admit that they are afraid of trouble and do not want to be called "schemers". It is even more difficult to overcome this barrier for consumers living in the regions, and especially in villages where everyone knows each other. Respondents say that if they notify relevant authorities about violation, they will no longer be able to appear in public, or will have to move to another place, because in the eyes of their fellow villagers they will become "schemers". Responding to violations is also hindered by the assumption of consumers that by doing so they can "ruin" a person's life. They point to the possibility of high fines administered as a result of the notice, which could seriously harm small family businesses and leave them without income.



## Ethnographic Observations

The primary goal of ethnographic observations was to, by way of surveying social-cultural environments endemic to the consumer, provide real-time validations of behavior models expressed through in-depth interviews. In addition to these behavior models, ethnographic observations allowed us to validate the persons presented below.

- **A 52-year-old consumer residing in Telavi stands out with a behavior model oriented towards budget-saving;** pricing is important for them, but quality within those prices can be crucial as well. They are discerning sales promotions and attempt to save money on some amount of produce to purchase afterwards imported cheese that is more expensive, at a higher-priced store. They classify stores based on the produce, starting with basic market goods, and ending with wholesale and street vendors. They are willing to travel to nearby villages to purchase meat, since they know it will be new, safe, and priced affordably. They purchase lamb meat in a village near Telavi. They purchase vegetables from ethnic Azerbaijanis. They purchase eggs from their student as they trust their student and feel no need for safety checks. They purchase Russian butter by weight, with additional sentiments towards Russian-made produce: they do not doubt the food safety – “why would Russia add chemicals to their food, their land is large enough to not require that”. However, they express mistrust towards industrial products imported from countries in Europe – places they visited personally and are convinced that use chemicals abundantly. Here too, we came across the widespread model regarding expiration dates – they verbally claim to check the dates regularly but have never physically checked the expiration date on a perishable product during the moment of purchase, based on implicit trust.
- **A 42-year-old consumer residing in the center of Ozurgeti is a budget-saving woman.** With a shopping list in hand that she has prepared in advance, she approaches the exact shelves that she knows contain the products she needs. She pays no attention to other produce - spontaneous purchases are not part of her behavior. She buys her food goods in chain retail stores, at agricultural market, and from street vendors. She bases her decision on low pricing, diversity of choice, quality of produce, and accessible parking space. She prefers Georgian products and avoids those of Russian and Ukrainian make. She purchases her meat at chain retailer, based on reliable personal information that this specific market always stocks safety-checked food, although she still looks closely at the color of the meat. Regarding dairy, we revealed a widespread model – she buys cheese based on personal acquaintance, while the rest of dairy is bought at chain retail stores. She buys her fish in chain markets as well, and meticulously checks the fish’s color and smell. She knows exactly how to examine it, and assuredly notes that the fish

that “has bulging eyes, is not fresh”. As for fruit and vegetables, she purchases those at the agricultural market, since the goods there are always fresh, available in a wide range of choices, and thus fall in line with her preferences. This is also a widely expressed model in frames of this study. Her behavior is very close to desired behavior; she closely discerns other products, including convenient foods, and knows how to identify pre-thawed products. Moreover, once she has even made a call to the hotline of the National Food Agency to report a violation of proper food storage, although her report was not followed up anyhow. Her time ran short, and she could not drag the issue further in order to “achieve final justice”, so she gave up.

- **A 33-year-old consumer residing in Tbilisi’s central district, in a privately owned house along with their large family.** Their primary motivator is their children, picking safe food options for whom is of their utmost concern. For this reason, they have well-defined parameters for what and where they purchase: once a fortnight they need to drive to Dighomi, so they purposefully go there to the large chain supermarket, where they seek products unavailable closer to their home – e.g., veal for their children. This is also where they purchase convenience food, including frozen goods; they have a feeling that large chain markets have more quality control, plus the food there seems to taste great too. They purchase dairy in this supermarket as well, wherein they check expiration dates on cottage cheese but not on sour cream; they trust that the latter will be made from healthy milk. For cheese, they discovered a cheese seller at a local shop based on social proof (a lot of people buying cheese there). For red salmon meat, they visit the frozen food wholesale facility, recommended by a friend – not for the better price, but for better quality. They purchase their fruits and vegetables in district stores nearby, with a preference to buy in smaller quantities to keep them fresh. They are prepared to pay extra to protect their children’s health, and will even call a hotline, if need be, although they do not know the exact number to dial.
- **A 31-year-old mother of two children lives on the outskirts of Tbilisi.** She is positioned closest to the desired consumer behavior. Children are the primary motivator for her as well. Healthy eating within budgetary constraints is very important to her. Because of this, she explores prices and tries to buy relatively healthy – in her understanding - products (she is checking for this). She has her grocery shopping points selected by product type, and primarily shops in chain stores, neighborhood shops and street vendors. She is well versed in her district’s shopping locations and knows exactly where to make a purchase based on pricing. She saves even more if she happens to be near the station square, which isn’t often, but she does know of a wholesale market there where

the same produce is available for cheaper prices (including European products, otherwise found in chain stores). She has never doubted the safety of those food items because of low prices. Before, she would buy meat produce in special (premium) stores, however nowadays those prices have hiked too much and she has switched to a trusted neighborhood shop, where she liked storage conditions and cleanliness. She buys meat and cheese here. For the rest of the dairy, she turns to chain stores and checks all the expiration dates. She too purchases fish at a frozen food wholesaler, while for fruits and vegetables she visits local shops - unless she's looking to buy large quantities, in which case she heads to the station square. For wholesale market purchases, she makes her visits early in the day to ensure the produce she's purchasing has not been on counters for too long. She is not a consumer of frozen goods and convenient food, substituting the latter with home cooking. She always voices her opinion of product quality and storage conditions to the respective stores, although she has no expectations that this will have an impact, because, as a rule, the buck stops with on-site consultants.

## **Behavioral Models – Personas**

During the consumer behavior mapping, several behavior models were identified that became the basis for Consumer Personas presented below. The Personas allow us to elaborate more specified target audiences for a behavior change communication campaign.

### **Soviet Citizen – Nostalgic Consumer**

They are 40+ years old, with a nostalgia towards the Soviet past: where everything was safe and of high quality. Despite not necessarily buying Russian produce today, they still believe in Russia's infinite resources. For some, this is a sweet childhood memory, while for others it was an inextricable part of their life at some point: "I lived there, and I've seen it with my own eyes." They would still be buying Russian produce if not for the current Russia-Ukraine war and the ensuing political climate. They avoid buying Russian, sadly passing by the counters with Russian produce. They find joy in every opportunity when they have to buy Russian products for lack of an alternative. Their conscience rests easy in these moments. They consume factory-made produce, and in cases where they yearn for rural goods, they will only turn to trusted acquaintances. They don't have high income, but they manage – in their mind – to purchase safe produce for their family members. This person can be encountered both in the regions, and in Tbilisi's outskirts and center. They don't trust official sources of information, exhibit irrational patterns of trust based on past experiences, and have a high level of self-confidence.

### **Consumer Scared by Industrialization**

This persona isn't limited by age and is frightened by all the novelties introduced by industrialization in food products. Part of this group cites personal experience as an argument – "I lived there, and I know precisely how things are. We have a belief that everything is very neat and tidy in Europe, but that is not the case. Many people there use crude methods to prepare goods." They believe that smaller countries lack the necessary resource and landmass and have thus resorted to, and mastered the use of chemicals. They believe that palm oil "kills", every non-seasonal food is drenched in pesticides, and that safe transport of frozen goods is impossible. Their current trust of Georgian-made produce stems from their belief that tested and approved chemicals are used less here, but that industrialization is nevertheless slowly introducing them. They believe this will harm our genetics. Along with trusting Georgian produce, they consume primarily Georgian as well, including butter and oil. Their irrational trust is high enough as to sometimes not check expiration dates, convinced that no harm will come to them before industrialization fully comes along. This persona is gripped with baseless fears, believes in urban legends and conspiracy theories, and exhibits a low-to-nonexistent level of trust towards the food safety management system.

### **Time-Savvy Consumer**

Another case where age isn't a defining factor, although this persona is primarily under 45 years old. When asked what their food choices are based on, they admit they never think about it. They "have no time" to be picky about what they buy, or to fuss about food safety issues. For their emotional and physical comfort, they go for a large chain store with an accessible parking lot, where they'll find familiar brands and don't waste time thinking. Everything is familiar, and their form of caring for food safety is mainly in checking expiration dates, although their level of trust is high enough for them to sometimes not do that either. This persona also encompasses someone who will enter any other chain store that is on their way and accommodates parking. This persona is either working full-time or has other sources of income. They have access to technology and can cross-check information. They have a relatively higher level of trust in the system.

### **Quality Oriented Consumer**

The most widely spread persona who selects shopping points based on desired produce. They approach their role of feeding their families with healthy food very responsibly. They typically own a car since their search for quality produce will likely take them to far distances. They do not lack diligence in seeking out specific stores for desired products, although if they are working, they have pre-defined days for those restocks. They have preferred spots for shopping for fruits and vegetables, meat, and cheese, although they are also open and interested in improving their options and getting off the beaten path for potentially better stores. Price is not as crucial for them as the quality of the goods; and quality is something they directly associate with food safety. This persona is very meticulous about food safety, guided by quality when choosing various outlets, and at the same time able to pay above the average prices for "reliable" goods. They are highly motivated to consume safe products and get more information about food safety.

### **Budget Oriented Consumer**

This is a persona who prioritizes healthy eating. They could be living both in rural areas, as well as the city center. Eating healthy without food safety is impossible for them. They don't have high income, so they are always aware of any ongoing promotions or sales, are very attentive to promotional text messages – especially from pricier markets – and try to purchase high-quality European produce. In order to afford European, they tend to purchase those products that are available at wholesale markets – grains, for example. If they live in a village, they will at minimum cultivate their own greens, along with chicken and pigs. If they live in the city, apart from European products, they associate with luxury the Georgian rural produce, which they cannot always afford but always aim to save for. This persona is also notably self-assured and is convinced they understand food safety, even seeing themselves as experts on where to cheaply purchase trusted produce. They deal with their cognitive dissonance by “accepting” possibly lower food safety standards when shopping at wholesale markets, agricultural markets, and street vendors.

<b>FOOD SAFETY BEHAVIOR DRIVERS</b>					
<b>Jobs-To-Be-Done (Value Goals)</b>					
<b>Functional</b>		<b>Social</b>		<b>Emotional</b>	
I want to make an informed choice including reading what's on the label.		By informing the National Food Agency of food safety concerns, we move closer to European standards (identity).		By informing the National Food Agency, I am caring for others.	
I want to take care about health.		Caring about food safety, including taking action when coming across violations, is a standard of conduct for new generation, for youth.		If I am aware of facility control results, I will retain my trust and overcome anxiety.	
I want to save time and money when purchasing goods.				I want the introduction of European food safety standards, as this will increase my sense of security.	
<b>Motivators</b>			<b>Barriers</b>		
<b>Pains</b>		<b>Gains</b>		<b>Anxiety</b>	
Problems / shortcomings describing the current state or situation and causing an inevitable desire for change. <i>What types of problems or shortcomings are important?</i>		Realizing aspirations and values associated with change, increasing motivation. <i>What are the benefits of change?</i>		Existing routines, habits, and well-worn solutions carry a sense of security that is always difficult to break. <i>What is this sense of security based on?</i>	
A feeling that safe food is unavailable and nothing essential is being done to change this.		The highest motivator is caring for children.		Information avoidance practices: a) Preference to know less and "sleep better at night"	

<sup>1</sup> In this case, unconditionally associated with safe.



The contents of the label are interesting, but difficult to read and understand.	Food safety attributes are simple: labels, packaging, visual state, hygiene level, and refrigeration.	It is enough for a consumer to check expiration dates to feel involved in food safety care; however, if the food is labeled and packaged, even that check becomes unnecessary; at that point it is considered safe.	b) The information is complex, requires in-depth knowledge, and is mentally “beyond reach”.
It is important to notify the National Food Agency of violations, but there is low awareness of necessary procedures to reach the hotline or send a message.	The consumer is willing to pay slightly more if they will know that they’re paying for safe food.	High prices are associated with quality, and quality is associated with safety.	Pronounced fear of industrialization – European standards might “extinguish” natural produce.
Food safety is associated with quality, which is an expensive luxury; the solution is to compromise.		Personal acquaintance with the manufacturer or seller is enough for the consumer to trust unlabeled or non-factory produce.	Fear of cheap or on-sale items – safety and quality concepts are mixed up. “Mark down food is no good”.
Sharply expressed negative stance towards use of canned goods, sweets, and products with additives.		For consumers, a rural produce (grown by peasants) is automatically associated with natural/organic.	Fear caused by mistrusting information present on labels.
Mistrust of food/groceries imported from specific countries (Iran, China, etc.).		There is an assumption in consumers that Russian-made produce is safe as an abundance of resources eliminates the need for use of chemicals.	
A mistrust towards rural produce by peasants or small farmers, emerging when looking deeper into the production process.		Responding to food safety is the duty of state and official state bodies exclusively, and not of the consumers.	
		With so many options to choose from, consumers feel like they can always find safe, healthy food in agricultural markets.	

## Recommendations for Stakeholders

**The customer journey breaks down into three stages:**

- 1. The searching and planning stage:** Consumers follow the usual routine and habits while choosing the grocery store. They may search for specific food item information on the Internet and social networks. For the most part, they come across familiar shopping facilities and regularly consumed products.
- 2. Visiting shopping locations or catering facilities for purchase:** they select a shopping location based on proximity to their home, or by picking out specific stores based on required types of produce (meat, vegetables, fruits, and non-perishable goods). They take note of expiration dates and visual characteristics, packaging. They primarily trust brands/manufacturers and chain stores. When purchasing natural products, they trust visual qualities and/or prioritize personal acquaintances.
- 3. Consuming food at home.**

In the mind of the consumer, the issue of food safety becomes critical when notable negative outcomes occur (e.g. food poisoning), however, in terms of risk assessment, we also revealed long-term and invisible anxieties that primarily stem from genetically modified foods, imports from “untrustworthy” countries, and industrial food. Additionally, certain anxieties were expressed in the consumer that are related to, in their understanding, harmful substances, however these can be difficult for them to identify. Trust towards labels is low, since consumers find it difficult to discern the fine print and identify ingredients. The issue of food safety is difficult to comprehend due to its complexity, especially in a climate of spreading misinformation and baseless fears. The motivation to receive information about, and then inform the National Food Agency of violations is high, but emphasis must be placed on correct drivers for activating desired social norms.

**When designing interventions for achieving desired behavior, several psychological and social factors are especially notable:**

**Excessive Optimism:** predisposition in people always leans towards positive expectations (“this will never happen to me”), which expresses itself in neglect of clear risks, especially if these risks aren’t of immediate nature and instead operate on a long-term, invisible bases.

**Halo Effect:** drawing conclusions from first impressions, based on visual characteristics and lacking in statistical or other provable data. Preferences in taste and visual condition will often outweigh safety factors and create a sense of trust that requires no validation.

**Confirmation Bias:** only believing the information that conforms to existing viewpoints. Forces you to only pay attention to beneficial opinions at the expense of counterpoints. For example, there are firmly set beliefs that rural produce is natural, safe, and not in need of checking; or that genetically modified products are harmful.

**Salience Effect:** evaluating an issue based on vivid examples from memory, like a particularly media-covered case of food poisoning. This causes a residual belief in people that all similar products are potentially poisonous, and they avoid consuming them.

**Social Norm:** a widespread behavior model in society, forcing you to conform to tendencies even if they go against your values and aspirations. Informing the National Food Agency isn’t commonly accepted practice and is viewed as “denouncement” and asocial behavior.

**Avoiding Loss:** people feel loss much more keenly than the reward from any gains. Accordingly, they will do everything in their power to avoid loss and even the slightest risk becomes not worth it. Despite the aforementioned “Excessive Optimism”, there is a well-defined perception of risk when it comes to products that are considered “contaminated” or manufactured in non-hygienic conditions. This feeling is particularly intense in consumers who have had personal experience with rural or crude (homemade or small farm) production processes.

**High-Potential Moments:** moments of high potentials are points in the customer journey that provide the highest chance of information retention and analysis, since the topic is relevant and pushed to the foreground. This occurs naturally in the moment-to-moment of behaviors, such as grocery shopping, going through food poisoning, caring for a child (aged 0-10), etc. It is preferable for this moment to occur often, which makes childcaring and store visits as most advantageous in this regard.

**High-Potential Personas:** Using the trust and capacity chart, several personas were identified who show the most promise for desired behavior intervention. These Personas are (arranged by priority): quality-oriented consumer, budget-oriented consumer, time-savvy consumer, and consumer scared by industrialization.

Aspirations of these personas are to be considered when creating the communication strategy; for elaborating specific messages that fit, and for identifying thought leaders (messengers).

## **Behavioral Interventions:**

*Recommendations relate to two desired behaviors: a) searching, as well as increasing demand for the information related to food safety – actualization of this issue in consumers’ minds (creating and raising awareness); and b) increasing the number of violation reports / notifications to the National Food Agency.*

When elaborating the interventions, we use the EAST framework, which allows us to adjust solutions to identified barriers (comfort, anxieties) and drivers (jobs-to-be-done, gains, pains).

Using the aforementioned approach, achieving desired behavior requires its implementation be Easy (simple), Attractive (motivating), Social (socially acceptable), and Timely (reminding to implement behavior at high-potential moments).

## **MAKE IT EASY**

People gravitate towards behaviors that are easy and do not require effort – be it financial, cognitive, or time-based. Even in conditions of high awareness a behavior will not occur if it is not simple. Several factors define this simplicity and considering them is crucial in elaborating interventions.

Information regarding food safety needs to be widely accessible (available through a variety of channels) and instantaneous:

- Wide accessibility: website or app tailored to the consumer, where information is readily provided, easy to filter through, and regularly updated;
- Instantaneous: information utilization needs to occur at the spot where the behavior happens, for example within the grocery or catering facility. After leaving the location motivation decreases and other priorities emerge for the consumer (see „Salience“ and “High-Potential Moments”).

## **Communicating and/or reporting to the National Food Agency needs to be simple:**

- Besides the hotline, other communication channels have to be added. An example can be a mobile app that can be used to file a report. This will raise activity in the younger segment, which, based on research, exhibit the highest motivation in the regard. Additionally, remote (not in-person through phone) communication tools will help alleviate the aforementioned social barrier. Reporting digitally allows someone to do this at any moment, not just during work hours.

- The National Food Agency’s hotline has low visibility and seeking it out requires the consumer to find the website first. Further, on the website the hotline isn’t immediately visible, is placed at the bottom of the page, and the answering machine informs us that we’ve called to the “Ministry of Environmental Protection and Agriculture of Georgia”, which can be confusing, since it isn’t common knowledge that the NFA is a subordinate agency to the Ministry. A separate hotline is preferable that will only serve consumers seeking help with food safety issues; this will both emphasize the importance of the issue and speed up the process.

**Label is not readable** (due to the small fonts) and it is preferable to employ a technological solution to deal with this issue (see the illustrative interventions: “Labeling”, “QR Code”).

**Chunking of information:** highlighting several simple and commonly occurring behaviors to aid the understanding and use of information, and breaking it down into “steps”, for example: 1. Check the expiration date; 2. Look up or ask when the last inspection took place; 3. Read the list of ingredients; 4. Make sure that perishable foods are stored in the fridge; et al.

**Checking up the information about the last facility control is difficult.** The consumer has to download Excel files from the website of the National Food Agency, which is realistic only in case of very high motivation (e.g., for academic research). Information needs to be easily accessible (see above – app/website).

**Defaults:** this principle implies thinking up events that will automate certain behaviors, for example: introducing a new regulation or otherwise obliging the business to display a document detailing food safety control results, or the National Food Agency’s hotline and logo within the premises of their facility. As for the manufacturers – they must place this information on the label. All this should be communicated to consumers so that they are aware and willing to request this information later when visiting the facility or the manufacturer.

## MAKE IT ATTRACTIVE

*Attractiveness is defined by two factors: salience – whatever stands out due to being outside of established standards or formats; and incentives – financial or non-financial gain.*

### **Salience:**

Any information that we want to attract attention to has to be visually distinct and signal high priority. For example: on-sale labels at shelves are always noticeable, and similar methods can be used when elaborating and placing signs for food safety (e.g., the hotline number, app name, labeling, etc. See also: Illustrative Interventions).

## Incentives:

Gaming: contests and reward expectations raise motivation and can be used to stimulate growth of food safety practices both in the business sector and the citizenry.

### *Business Sector*

- A reward from the National Food Agency for the entity or manufacturer that is compliant with the food safety standards (e.g. during repeated inspections). This also contributes to public acceptance (see Principle of Commitment below).
- Develop incentives for business companies: grants for raising standards, shortlisting best-performing vendors, tax benefits, technical assistance programs (training and education), etc.
- Ratings: ratings can be created both by the official state agency and by a “watchdog” NGO based on official statistics. Involving the media in publicizing the ratings will be beneficial.

### *Among citizens:*

**Food Safety Champions:** Contest sponsored by the state agency or non-governmental organization that will promote active citizens and showcase their contributions to the food safety issue. See also the demonstration interventions (online game). Such contest will also emphasize social norms (see below).

## MAKE IT SOCIAL

*Any behavior is conditioned by the social context – the degree to which it is accepted or approved by society. Emphasizing social norm always increases motivation.*

**Communicating social proof:** highlighting the food safety violation reporting as a desired and accepted form of behavior. Communicating and providing wide media coverage of respective Agency responses creates a feeling that this behavior is the right one, and it serves a positive goal. See also “framing” in demo interventions.

**Principle of commitment:** this principle for behavior change is an active tool in improving and expanding the food safety practices; it is expressed in business entities recognizing the importance of food safety standards and making a promise to society to comply with those. Several factors are to be considered when using the principle of commitment:

- A public commitment: it is preferable to communicate the commitment to comply with standards publicly; for instance, by means of a media or social media campaign and by

using various other channels such as company websites or facilities to spread the message that they are part of this “movement”;

- Public commitment with the hope of future recognition: bringing in game elements described above to identify and celebrate the best contestants / leaders;
- Wide communication of public commitment: this refers to events such as displaying rewards or inspection results in the interior space of the business entity, sending a clear signal that they are part of the “movement” and reinforcing the commitment to comply with standards.
- Involving opinion leaders in public commitment: the effect of this principle increases when opinion leaders are involved in some form. Opinion leaders – people who are trusted in the eyes of the public, - either set an example and encourage others to follow, or publicly acknowledge the efforts of their audience in performing the desired behavior.

Interventions in high-potential moments (MAKE IT TIMELY) are described above in “High-Potential Moments” chapter of this report.

## **DEMO INTERVENTIONS**

We are presenting several specific intervention ideas, the scale up of which needs to be defined through testing with various methods. Several activities are already implemented and underway, albeit in need of improvement or refinement.

### **Intervention #1: A food safety app or website (technological solution)**

Due to the complexity of the issue, the consumers, as noted, have trouble retaining and analyzing large quantities of information. Awareness of harmful substances and the main determinants of food safety in general, is low. Additionally, the National Food Agency’s website isn’t very user-friendly, and navigating the control results is inconvenient. It is a positive fact that the UVNO app developed by the Europe Foundation is aimed at the same goal. It was used to browse through some parts of the results of controls carried out by the National Food Agency. Currently the app is not functioning. It would be beneficial to renew and upgrade it, to allow efficient access to all inspection results, as well as register consumers’ reports on violations. Below we have listed some of the functions the app may have:

1. **Search for specific products** (by name, by scanning its barcode, or by photo ID) that would bring up the following information:
  - a. Ingredients with explanations
  - b. Harm labeling (indicating with icons)
  - c. Safety rating (see below)
2. **A simple system for looking up specific manufacturers/facilities** (by name):
  - a. Control results for manufacturing processes/facilities
  - b. Relevant certificates or documents (e.g. ISO) present at the facility
  - c. Website
  - d. Safety rating – see below.
3. **Frequently Asked Questions**
4. **Simple food safety guidelines (infographics):**
  - a. Glossary of Terms
  - b. List of allowed substances (tagged with searchable keywords)
  - c. Safety determinants
5. **Tool for Reporting Violations:**
  - a. Uploading photos/videos
  - b. Optional feature to attach textual information.
  - c. Option to select possible violation from a drop-down list.

This intervention will serve to ensure: a) simple search for information; b) simple search of label information; c) easy access to the food safety information; d) awareness raising on food safety importance; e) simple process for reporting of violations and f) better visibility of the National Food Agency. Simple reporting process should increase consumers motivation as they will have a possibility to notify the NFA about violation directly from the store or catering facility they are currently visiting, and to support their message with uploaded photo proofs. A remote notification system is much more effective [12][13] than the currently available way of the phone call. An app is more efficient in terms of identifying a person; moreover, it is better adjusted for younger audience, which was notable in our study as being particularly motivated and self-conscious regarding the food safety.

## **Intervention #2: Safety Rating**

A simple methodology of food safety rating, which classifies food by criteria of ingredients and safety control results. It is possible to apply here the tested and approved international practices.



Ratings can be utilized in various ways, namely for a) looking up a facility on the website and seeing its rating (via the web-resource mentioned above); b) giving the manufacturer an option to display the rating on their produce or website, thus improving their visibility in terms of safety. Rating is a simple way of identifying safe goods, while also motivating both manufacturers and retailers to comply with standards and avoid low ratings.

### **Intervention #3: Labeling of Products (QR code)**

Based on the safety rating, a QR code is generated that leads to the following information:

- Safety rating;
- Manufacturer's website or name (if website unavailable);
- Contact information;
- Date of last control;
- Ingredients.

The QR code can be acquired through the National Food Agency, and the manufacturer can choose to use it by placing it on their labels. By scanning the code, the consumer will be able to view contents and other information on a product right at the counter. As an option, the QR code can be visualized like the "safety icon" and then intensively promoted through the relevant information campaign.

### **Intervention #4: Control Sticker and Certificate**

Displaying the National Food Agency's proof of evaluation certificate in the interior space of the facility, in a spot of high visibility, as well as placing a sticker on the entrance doors. This will serve to emphasize a social norm and push competitor facilities to acquire their own safety certificates. The sticker should be visually distinct, attractive, and be in line with the "safety icon" style.

### **Intervention #5: Reframing incentives for reporting violations to NFA**

Building up the communication campaign using the jobs-to-be-done, such as caring for others and modern behavior model. Promoting success stories (about reported violations) by means of storytelling, describing what possible problems were prevented because of reporting. Positioning reporting to NFA as a **citizens' responsibility and manifestation of European, civilized behavior model of collective responsibility**. Promoting food safety not as a fixed

concept, but as a **dynamic process** (similar to a weather forecast), which continuously needs recurrent control, as there is no constant data in food safety domain. The food safety app or other technological solutions are good means to achieving this goal; however, this campaign must be managed with care so as not to inadvertently increase the feeling of insecurity.

#### **Intervention #6: information and awareness raising campaign**

The campaign should aim to raise general awareness of food safety (e.g. promote the “safety icon”), especially in terms of raising the local produce standards. The campaign should be conducted through the aforementioned reframed approach and integrated communication strategy, and should preferably contain the following components:

- **Messenger**

Involving trustworthy and relevant opinion leaders, including integration with popular talk shows, engaging famous chefs, food bloggers, and doctors.

- **Gaming and Leaderboards**

A fun online game of food safety, which using quizzing and trivia testing awards users with points and ranks them on a leaderboard. Achievements should be sharable on social media, and food / catering facilities can be engaged to promote the game and motivate players by offering discounts or other gifts to winners.

- **Involving producers, manufacturers and food facilities in the “safety campaign”:**

By engaging them to publicly acknowledge the importance of the issue and to set an example by joining the safety rules and standards compliance movement. Spread the information via social networks and mass media, where businesses will talk about their priorities and implemented measures. Possibility for partnering with a media agency for this.

- **National Food Agency Award**

The possibility to introduce a new category in an existing competition (integration in responsible business contests or similar events) and highlighting outstanding manufacturers and facilities in various media.

- **Focusing on Youth**

Young people are a standout segment, and the campaign could be directly targeted at this group as well, by planning tailored events.

INTERVENTION	EASY	ATTRACTIVE	SOCIAL	TIMELY
Food safety app or website (technological solution)	√	√	√	√
Safety Rating	√	√	√	√
Labeling (QR Code)	√			√
Control sticker and certificate		√	√	√
<i>Reframing</i> incentives for reporting to the National Food Agency			√	
Information and awareness raising campaign	√	√	√	√

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[2] In this case, unconditionally associated with safe.

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