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**MACRO TRENDS IN THE FOOD & BEVERAGE INDUSTRY:
SELECTED ITALIAN M&A CASES**

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Introduction

«Food is the true fuel of history for two simple reasons: one is natural and one is cultural. The first one is obvious – humans eat to live. The second, and much more crucial, is that people live to eat» (Barilla, 2018)

Every year, the landscape tends to modify within the Food & Beverage industry, with crucial consequences for the industrial panorama. Understanding dietary patterns is extremely important as they are able to shape up businesses conditioning their way to do business.

Because of world's uncertainty, for Food & Beverage companies, regardless they are large or small, it is vital to be ready to change quickly their business models with an eye to the future and becoming more resilient in the face of an imminent change (Monteiro et al., 2018)

Going through uncertainties entails thorough consideration and planning for developments that are impossible to foresee. For this reason, the thesis presents two mainly possible scenarios namely, *Local is the New Global* and *Open-Source sustainability*, as a tool to explore futures, bearing in mind how amalgamations of key trends could result in different outcomes for businesses interpreting new global food tendencies.

What people eat and the way they eat it contribute to how we, as people, define our identity, both social and personal (Barilla, G., 2018). In the economic uncertainty the world is experiencing, the relationships that establish between humans and food is taking different patterns, and difficult to predict.

Because of the steady impoverishment of food regarding its value, it is important to understand what will be the most crucial features in the dietary scenario in the next years, not only to re-establish the concern in terms of humans' health that seemed to be lost in the current years, but also for all companies that need to be aligned with the trends in place to survive in the highly competitive globalized world we are living now (Barilla, G., 2018).

The abovementioned global scenarios of great relevance and current affairs extrapolated from the report *Shaping the future of global food systems: A scenario analysis*, *World Economic Forum*, give a true and fair view of current and expected trends in dietary context. In particular, clear space is given to elaborate on: i. propagation of policies in sustenance of healthy diets and sustainable choices regarding food consumption (local fresh and organic products, tailored nutrition); ii. healthy diets has the principal desire and strong attention to traceability of food including ingredients, system of production (food safety) and transparency of producers; iii.

innovations brought by technology advancement increases the efficiency of the farmers that are better off as value chain transit from being *long* to *short* and local producers are the main promoters of clean labels to reduce asymmetric information among market's players.

These trends are furtherly analysed and studied for the Italian panorama, to get an understanding of whether Italy is embracing them and how the Food & Beverage industry is moving to align with them, to not remain excluded in the battle for the "blue oceans" of the future.

Italy, for its culinary traditional, is known worldwide for being the cradle of good food, especially for its regional and local peculiarities that make it unique in the eyes of the globe. Given this, through this work, we try to get a concrete relevance of how the culinary landscape is changing, to embrace the new trends in the catering world, which thanks to the phenomenon of digitalization, are becoming more accessible and forcing companies in the industry to innovate to meet the new needs of consumers and above all the market.

For this reason, the paper presents, in its last chapter, six corporate cases that are redefining the national food & beverage sector with their innovative business models, far from tradition, and offering value propositions close to the needs of the modern consumer, who wants to take back his life, eating healthy and optimizing the times, to recover the freedom that very often, for business and other reasons, is disfigured.

Chapter 1 - Food & Beverage industry: insights and overview

Objectives

In this first chapter will be given a brief introduction on the state of the art of the Food & Beverage industry at global level.

The thesis opens up with a brief excursus regarding how it is perceived, formally, the Food & Beverage industry and from which categories of product it is composed. Further, will be illustrated how population matters when thinking about this industry, in terms of the identikit of the consumer of the future (especially Millennials) and its physical distribution across World Regional Markets, that according to their “saturation” will be more or less hit by the future population growth (first objective).

Furthermore, the second objective in the middle of the first chapter, will be to thoroughly illustrate the state of the art of the Food & Beverage industry for each World Region (Asia Pacific, Europe, Middle East & Africa and Latin/North America), highlighting what drives their growth in the sector and seeking to understand their differences for category of products by comparing their data.

The final objective of the first chapter will be to understand what could be the current and especially the future trends of the industry such as the greater demand for naturally healthier and “free from” products. Moreover, will be seek to inform the reader on the possible future opportunities and challenges that the industry could offer, analysing what could be, regarding this argument, the future success factors that companies will have to embrace to be aligned to the future trends which are currently in place.

1.1 Food & Beverage – A Global Industry Overview

The food and beverages industry comprise all companies that follow a precise modus operandi: the process of raw food materials, packaging and distribution. This activity includes a great variety of products such as fresh, packaged foods, prepared foods and alcoholic and non-alcoholic beverages. To be categorized within this industry, the essential feature is the scope of the product, that should satisfy a human need through its consumption, aside pharmaceutical products.

Generally, the food and beverage industry is ramified into two major segments: these two are the production and the distribution of edible goods.

Meats and cheeses processing, soft drinks creation, packaged foods, alcoholic beverages and other modified foods goes within the production branch, excluding any referral to foods directly produced via forms of agriculture as the latter would position itself inside the agriculture branch.

The second branch, distribution, is totally focused on consumers, as the aim of this activity is the delivery of food products directly into the hands of whom decided to consume them. At this stage, the industry is much more concentrated on technology, striving to improve the value of the products by creating more value added.

Distribution's category includes all companies involved in the shipment of food to consumers, restaurants and retail.

As stated before, this market is made up by several segments in which companies could be labelled and these segments are: beverage, dairy, fruits and vegetables, cereals and pulses and grain, meat and poultry and seafood, sugar and confectionery.

Beverage includes companies that produce ice, alcoholic beverages, bottled water, and carbonated and noncarbonated soft drinks.

Dairy is comprised of companies that are involved in the manufacturing of dairy-based products, milk processing and dairy substitutes.

Fruit and vegetables are a segment dedicated to the distribution of herbs, vegetables, fresh fruits and herbs. Companies' role within this segment is to link producers and consumers, distributing the products.

Cereals, pulses and grain englobe companies that process rice, malt grains and flour.

In the meat, poultry and seafood segment are located wholesale companies that manage wholesale meat and seafood products.

Sugar and confectionery represent a segment where raw sugar is being produced from sugar cane and beet sugar is produced from sugar beets. These products easily find industrial and commercial use.

1.1.1 Global Food & Beverage: population growth matters

When we think about food, the word “population” is not always the first that come in mind.

But this term is particularly relevant to study matters that perceive it as cause’s object.

In fact, practitioners argue that the demand across the globe for processed and packaged food and beverage (F&B) is set to increase because of the rapidly growing and highly urbanised population. (Gulfood, 2018)

The identikit of the new ideal consumer for the next decade is described as young, under 30 years old and positioned in the new urban areas of Latin America, Asia Pacific or Sub-Saharan Africa. As depicted by Gulfood, 2017, *“this group is the fastest growing and largest contributor to value sales growth with their increasing purchasing power and love of westernised, convenient and easy-to-prepare food and beverages”*.

Companies that produce food products in single-serve packaging are, without any doubts, the firsts to conquer the appetite of the consumer of the future, even though strong attention is inevitably given to healthier products because of their consciousness of nutrition and long-term dietary benefit healthy food can bring to their body and mind.

On the other side, Europe and North America represent more mature markets, and the description of the consumer of the future for these regions will change too. In fact, population’s growth in these areas is not growing as much as in the emerging regions and because of life expectancy is getting longer, the new average consumer will be over 50 years old and will be careful on what he/she will eat, with preferences for organic, local produced, high-quality fresh products.

1.2 Global Food & Beverage: a World Regional overview

If we split the word into four main regions, that is, Asia Pacific, Europe, Middle East & Africa and Latin/North America, it is acknowledged that the former is the region which is growing faster than the other ones, in terms of consumer spending. In fact, approximately, the average annual growth was set at 9.8% between 2006-2016 whilst a lower forecast is expected for the 2017-2026 period, peaking at 7.5% (Cushman & Wakefield, 2017).

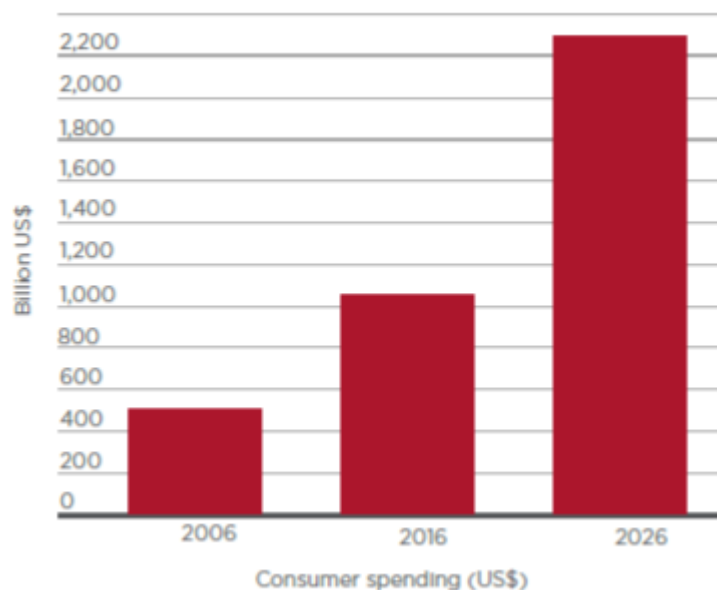
India, Pakistan, Indonesia and China are the main actors that account for the most growth of the Region because of the incredible economic expansion these countries faced in the past decade supported by growing incomes and a rapidly escalating middle class that contributed to more spending in edible products and lead to an innovative shift from unpackaged to packaged food, the growth of fast food and dedicated coffee openings.

Furthermore, an increasing concern for healthy food products has developed because of the increasing interests around obesity and life-long well-being that triggered a change in people's preferences for traditional natural ingredients.

As far as packaged food is concerned, the abovementioned shift from unpackaged food products was allowed by a culture for modern retail that became to be accessible to more and more people because of a well-developed chain infrastructure for fresh, chilled and processed food.

These elements, taken together, easily prove evidence about the striking growth the Food and Beverage sector witnessed in the last few years for the Asian Region.

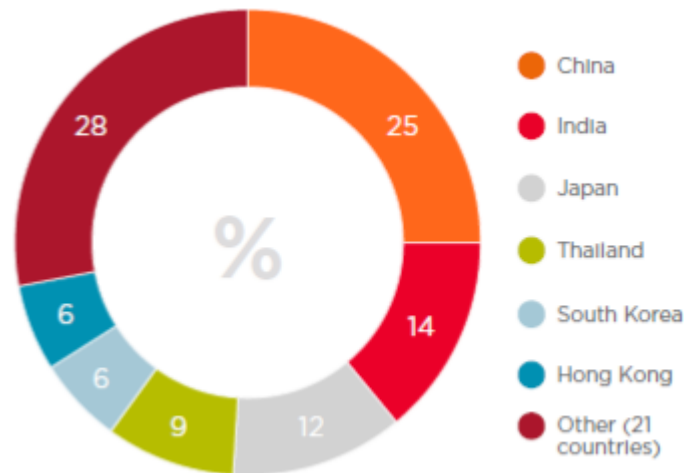
Figure 1: Evolution of consumer spending on Eating Out



Source: Cushman & Wakefield, 2017

This figure depicts the total consumer Eating Out spending (includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) for the Asian Pacific region in USD billion from 2006 to 2026. The average annual growth has been 9.8% from 2006 to 2016 and 7.5% from 2017-2026. (Cushman & Wakefield, 2017).

Figure 2: Top Markets based on consumer spending on Eating Out in 2016



Source: Cushman & Wakefield, 2017

This figure illustrates the Asian Pacific countries that spent most in Eating Out ((includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) based on USD PPP (current prices) in 2016. China, India, Japan and Thailand demonstrate to be the top four markets.

The second fastest growing region in terms of consumer spending is Middle East and Africa, with average annual growth of 7.4% between 2006-2016, while from 2017 to 2026 is forecasted an average annual growth of 7.3% (Cushman & Wakefield, 2017).

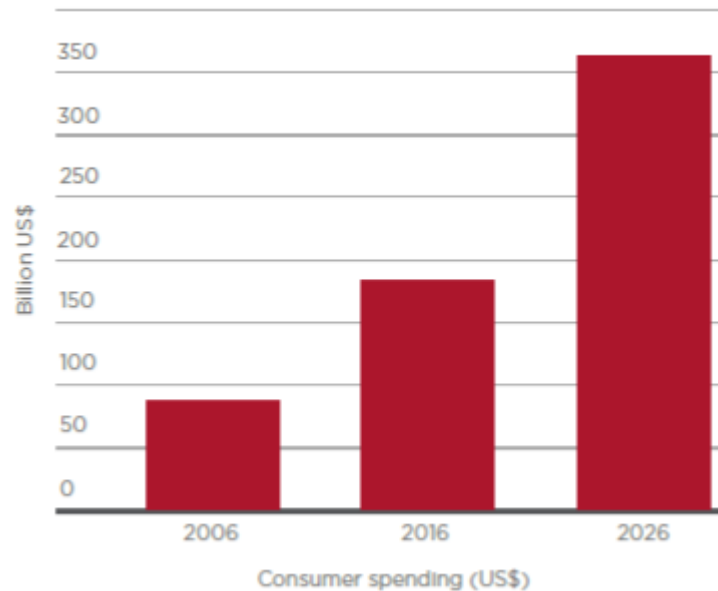
In the Middle East & Africa region food and beverage sales are witnessing a great deal of influence from the changes that are socially undergoing. Not only high disposable incomes, but a rapid urbanisation and new consumers (principally young professional and families with young children) are shaping the industry, triggering the product’s premiumisation. As wealth consumers and middle-class consumers increase, a growing need for high-quality products established, so that producers started to ask premiums for the first-class quality delivered.

Moreover, thanks to the entry of many international chains, foodservice is growing too, influencing in-home consumption of food and beverages coming from western countries. Especially, the demand for bottled water rose and expanded in the more populated cities across these regions, as potable water systems did not develop in line with the demanding needs of rapid urbanisation.

Another phenomenon these regions are facing is the spread of cold chain services that gave popularity to frozen processed meat and poultry, cold drinks and flavoured milks.

At the same time food delivery in Sub-Saharan Africa is expanding because of the birth of internet-based services that provide a direct communication channel, from companies and producers to consumers.

Figure 3: Evolution of consumer spending on eating out

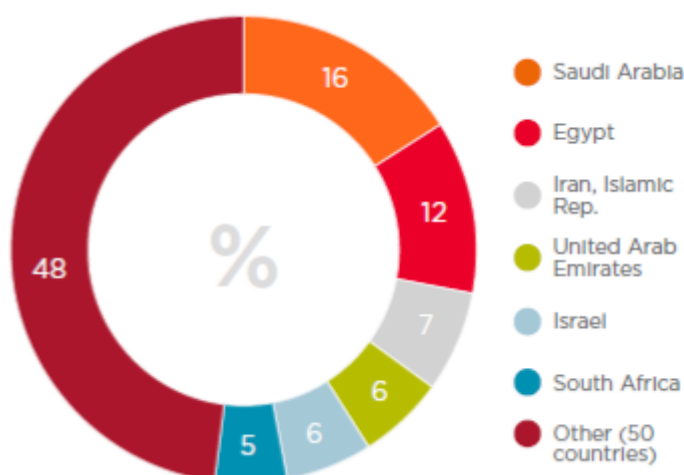


Source: Cushman & Wakefield, 2017

This figure depicts the total consumer Eating Out spending (includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) for the Middle Eastern and African region in US billion from 2006 to 2026.

The average annual growth has been 7.4% from 2006 to 2016 and 7.3% from 2017-2026. (Cushman & Wakefield, 2017)

Figure 4: Top markets based on consumer spending on Eating Out in 2016



Source: Cushman & Wakefield, 2017

This graph illustrates the Middle East & Africa countries that spent most in Eating Out ((includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) based on USD PPP (current prices) in 2016. Saudi Arabia is the largest F&B market in the Middle East & Africa region, with USD 28.4 billion (PPP) spent on eating out by consumer. (Cushman & Wakefield, 2017)

North America, specifically USA and Canada, have the most mature retail markets in the world. Because of it, their growth from 2006 to 2016 blocked at 6.1% and 4.2% respectively, as their markets were more saturated before 2006.

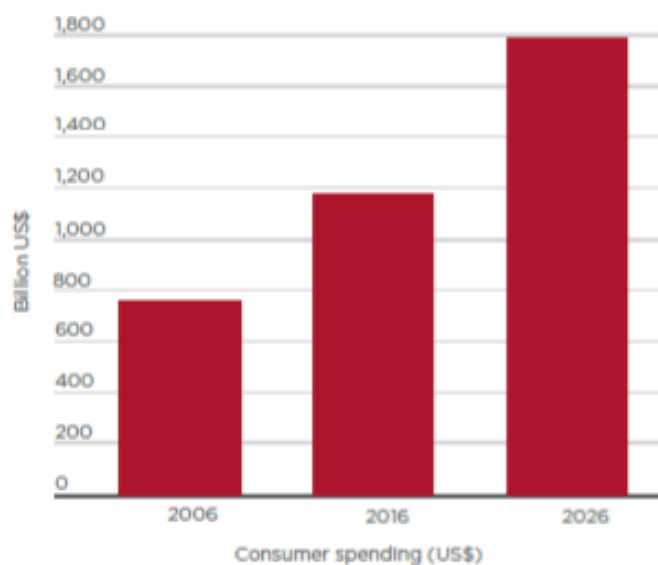
For the next period, that is, from 2017 to 2026 has been foreseen a positive but lower forecast, reaching 5.5% on average for both (Gulfood,2018).

Latin America is observing a modernization in terms of modern retail especially in smaller countries such as Chile and Colombia, even though Brazil keep on being the country that has been most highly influenced by the consolidation of modern stores aimed at stocking fresh dairy, meat and seafood (Gulfood,2018).

Furthermore, a growing consciousness for the healthy food product's world is spreading out, particularly in countries like Chile, Argentina, Mexico and Brazil where mindfulness of the content of the food is delicate due to levies and government backed campaigns to diminish diabetes' levels (Gulfood,2018).

For this reason, edible products without sugar and gluten and sugar-free carbonates are being produced even more, becoming popular among those consumers that has strong concern on their well-being and who prefer natural healthy ingredients in their packaged food.

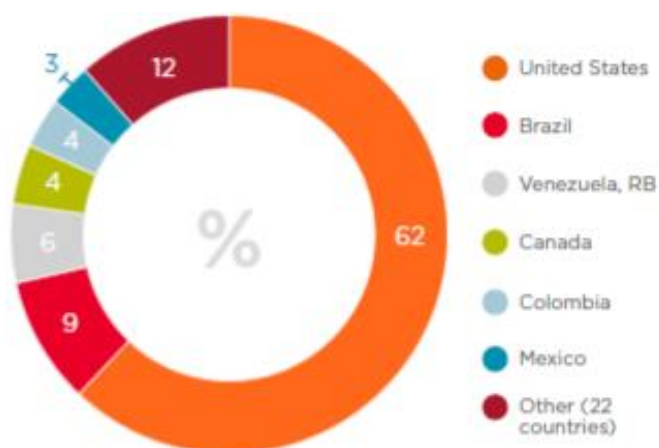
Figure 5: Evolution of consumer spending on Eating Out



Source: Cushman & Wakefield, 2017

This figure depicts the total consumer Eating Out spending (includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman & Wakefield, 2017) for the Americas in USD billion from 2006 to 2026. The average annual growth over the last decade starting from 2016 has been 6.1% whereas the future predicted growth until 2026 peaks at 5.5%.

Figure 6: Top markets based on consumer spending on Eating Out in 2016



Source: Cushman & Wakefield, 2017

This circle graph shows the countries that constitute the Americas that spent most in Eating Out ((includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman & Wakefield, 2017) based on USD PPP (current prices) in 2016. The United States was the largest F&B market in the Americas as well as globally,

with consumer spending on Eating Out reaching USD 729 billion (PPP) in 2016. (Cushman & Wakefield, 2017)

Europe represents 25% of the total sales realized in the food and beverage sector in 2017.

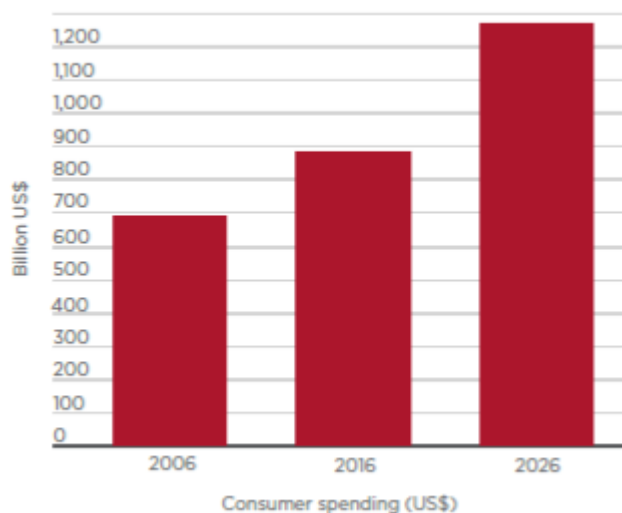
What is socially undergoing within the countries that literally makes this Region of the World is a change in habits and preferences. Consumers shift their tastes for healthier products (local food, slow food, fresh and organic food) augmenting their scrutiny toward labels and searching for companies with transparent production methods. Similarly, another trend that will take place soon and linked with the dimension of the total population, will be the raising interest in vegetarianism, healthy snacking and beverages because the number of over 50 years consumers will augment to 42% over the overall inhabitants of Europe up to 2030.

Moreover, an important role is played by media and national campaigns, regulation and unsubstantiated packaging claims that are challenging consumers' purchasing decisions.

Even though online services as food delivery is becoming well-established, consumers still like to touch, feel and test new products in local retailers.

In terms of growth, the average annual growth in consumer spending for Europe established at 4.2% from 2006 to 2016, whilst a better forecasted has been foreseen for the period between 2017 to 2026, where the average annual growth reached 4.9% (Cushman & Wakefield, 2017).

Figure 7: Evolution of consumer spending on Eating Out

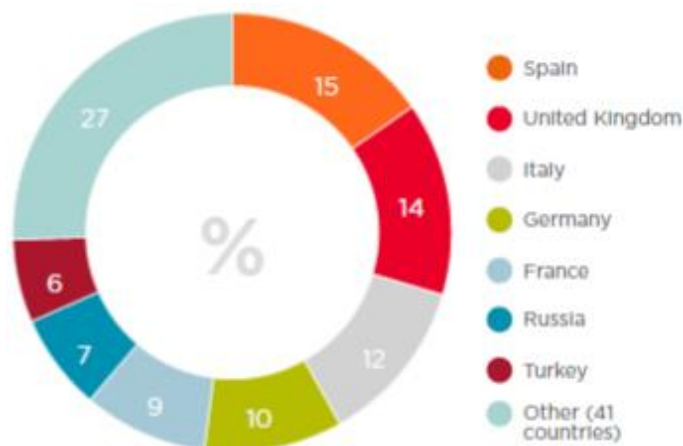


Source: Cushman & Wakefield, 2017

This bar graph depicts the total consumer Eating Out spending (includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) for the European region in USD billion from 2006 to 2026. The

average annual growth has been 4.2% from 2006 to 2016 and 4.9% from 2017-2026. (Cushman & Wakefield, 2017).

Figure 8: Top markets based on consumer spending on Eating Out in 2016



Source: Cushman & Wakefield, 2017

This circle graph illustrates the European countries that spent most in Eating Out ((includes restaurants and cafes, in addition to catering services provided by restaurants, cafés, buffets, bars and tearooms; Cushman and Wakefield, 2017) based on USD PPP (current prices) in 2016. Spain represents the biggest Food and Beverage market in Europe, with consumer spending on Eating Out reaching USD 133 billion (PPP) in 2016.

1.2.1 Global Food & Beverage: overview by category

Beverage, dairy, meat and poultry, cereals, pulses and grains, fats and oil (which principally comprise edible oils, olive oil, palm oil, soy oil) demonstrated to be the key segments for the F&B industry.

Among all, beverage is the largest category and soft drink dominates the overall sales.

According to Gulfood, 2018, the stronger growth will be witnessed in the hot drinks segment, with 2.5% CAGR to 2021, as people’s awareness toward their health status is increasing thus choosing the healthy benefits of tea, eastern coffee and other hot drinks.

On the other side, the soft-carbonate drink market is boiling down as people prefer healthier products than high levels sugar carbonated drinks preferring hybrid juice drinks and low-flat flavoured milks.

Dairy, which consist of butter, margarine and spreads, cheese, processed cheese, various types of milk including soy and yoghurt, thanks to the improved cold chain infrastructure in the more

emerging markets such as Latin America, Middle East & North Africa, is becoming more important and nowadays producers found the way to fit these products in people's diet, serving their interest in healthier food. The expected CAGR to 2021 is forecasted to be 2.3%.

Cereals, Grains and Pulses comprise all breakfast cereals, including flaked cereals, muesli and granola, and ingredients like pasta, rice, noodles and pulses that are limited to leguminous crops harvested only for dry grains, excluding crops harvested green for food, which are vegetables (Gulfood, 2018).

Growth in this category equalizes the one for Dairy products and its importance is remarkable, as it is a cornerstone for a balanced diet. Consequently, their use in foodservice is increasing, as it is demonstrated by the constant use of food products such as quinoa, ancient grains like spelt, farro and kamut to satisfy the changed needs of customers that even more require healthier alternatives. Sub-Saharan Africa, particularly for its diet tradition, is the Region of the World where these cereals grow most, although people in Latin America and Middle East & North Africa are becoming more demanding, increasing their consumed daily quantities.

Meat and Poultry consist of processed meat including shelf stable meat & poultry, chilled processed meat & poultry, frozen processed meat and meat substitutes. Its growth, in terms of value share is established at CAGR 1.3%, the slowest of the industry, as the number of people that declare themselves as vegetarians and vegans augmented.

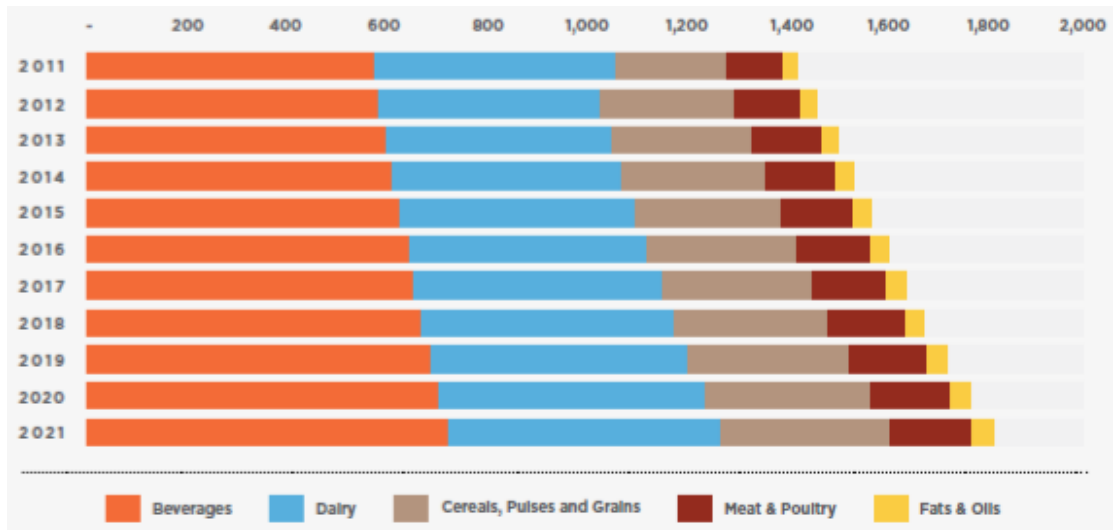
Another element to consider and that it is a cause of the slowest pace of the abovementioned category, is the appearance of a healthier lifestyle, for which manufacturers are trying to wider their portfolio of products toward plant-based protein and meat substitutes.

In emerging markets, because of the expanding of a cold chain infrastructure, beef and poultry sales are expanding, as chilled and frozen products obtain broader availability.

Fats and oil basically comprise edible oils, olive oil, palm oil and soy oil, are witnessing the faster growth because of the cumulative effects of growing demand, prices and volume sales globally. Olive oil is the most dynamic category responding to growing health concerns worldwide as the demand for natural, low processed, pure oils increases in all markets (Gulfood, 2018).

They are becoming popular especially in the emerging countries because of population expansion, even though palm oil and soya are suffering from poor perception as they are supposed to be as heavy processed and scarce in terms of healthiness.

Figure 9: Global Food & Beverage value share by industry, 2011-2021



Source: Gulfood, 2018

This horizontal bar graph depicts the forecasted global F&B value share by industry for five key categories, named Beverages, Dairy, Cereals, Pulses and Grains, Meat & Poultry, Fats & Oils, from 2011 to 2021.

1.3 Global Market Trends in the Food & Beverage industry

Nowadays, since body and health attention has never been greater, consumers are shifting their usual food preferences for products free from artificial ingredients, sugar and salt, triggering a transition that will influence the next decade. Such trend generates partiality for organic, natural food's constituents, the search for original recipes, exotic tastes and suitable packaging and product distribution (Gulfood,2018).

Internet constitutes an innovative tool to trade products for manufacturers. GDO triggered the home food delivery market and start-ups started to offer packaged ready meals. Furthermore, Internet not only allowed the birth of the home-delivery market, but also the access to local brands and short order supply (Gulfood,2018).

The F&B Industry is a highly competitive market because of the wide array of manufacturers that offer a countless number of the same products, and all of them, try to comply with the trend to remain competitive and not loose pace, striving to bring to consumers reliable products that must be of high quality and appealing and obey to defined standards, across the global markets.

Figure 10: Trends' impact on each industry



Source: Gulfood, 2018

These circles (moons) indicate the level of direct influence of determined trends on each industry. The more complete is the moon, the higher the trend's weight on that category.

For instance, as well described in the precedent paragraphs, beverages, dairy, meat & poultry are facing a great cold chain expansion whereas Fats and Oil are particularly stimulated, with Olive Oil as well as Cereals & Pulses & Grains, with farro and kamut, by that trend, or bundle of people, that ask for naturally healthier and free from artificial ingredients products.

The latter are especially prominent in the trend that ask for clear policies about sustainability and transparent farming techniques.

Responses to these trends are coming from different part of the world, from a range of start-ups and reputable companies. For instance, NutriAsia, a Philippines' leading producer, marketer and distributor of high quality condiments and sauces, is now considering expanding into

beverages. The company, proprietary of a well-known brand of quirky juice, has now extended into food trucks vending a great variety of locally fruit-based beverages (Gulfood,2018).

Kellogg acquired RXBar protein bars from a Chicago Bar company producer to boost their portfolio of healthy snacks. Kellogg has also reformulated some of its foremost goods by introducing healthier varieties with higher fibre content, counting All-Bran, FiberPlus and Nutri-Grain cereal bars traded in North America (Gulfood,2018).

1.4 Global Markets Challenges and Opportunities in the Food & Beverage industry

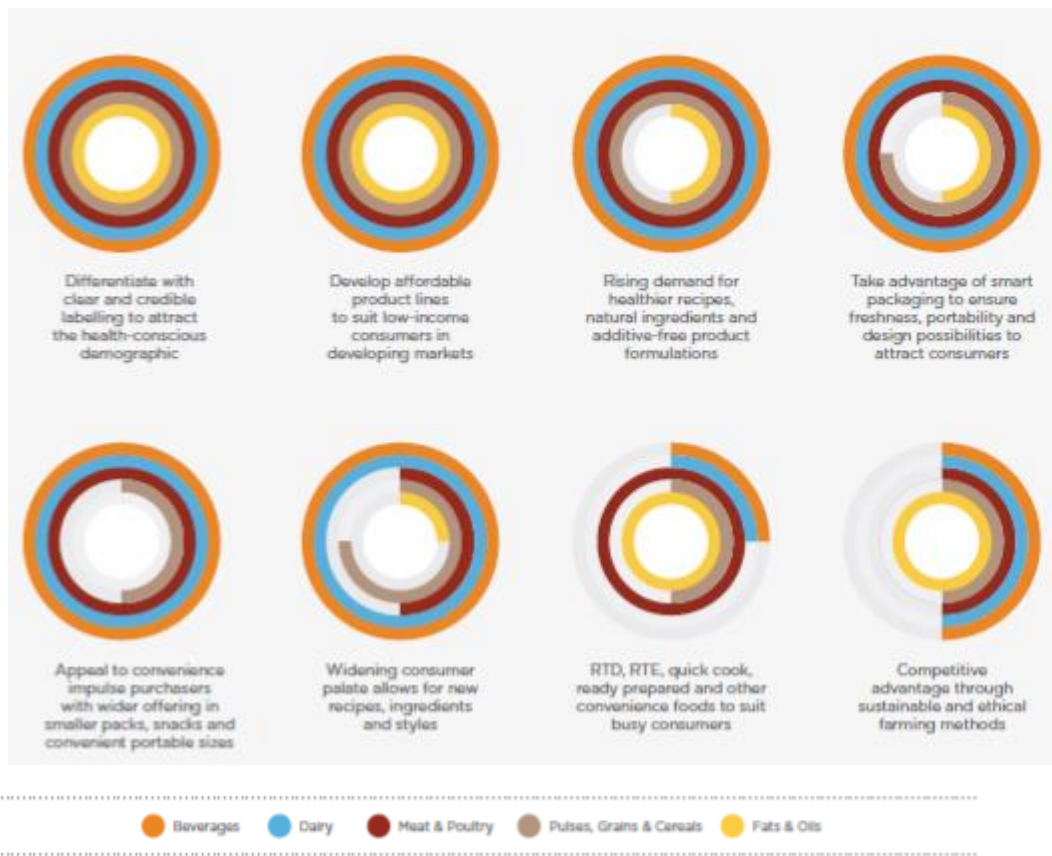
The value consumers attach to brands will be the key differentiator for the contemporary economy.

The attention to natural, healthier products is a movement that can't be stopped so easily, and moving countercyclically is unprofitable and destructive. For this reason, companies strive to create and differentiate brands with clear and credible worth to attract health-conscious people. Additionally, emerging economies as the ones of the Asian Pacific region & Africa will bring to the market one billion more consumers by 2030, characterized by a low-income status. Consequently, corporations will be careful about this new income-class, developing product-lines to suit low income clients in evolving markets (Gulfood,2018).

Future's winners will be those that will see, in these changes, opportunities to create new blue-ocean markets, new innovative products that will respond to the demanding and fast-changing consumers' needs.

Technology will have a primary role in supporting these market needs ' fluctuations. Scaling up to meet this request by leveraging know-how, both blockchain and consumer-facing expertise, will be decisive. Besides, capitalising in the supply chain and delivery logistics will be vital to satisfy not only the demands of the early-aged people, but as a pathway to meet the upcoming demand for tailored products of the 2030's customers (Gulfood,2018).

Figure 11: Opportunities' impact on each industry



Source: Gulfood, 2018

These circles (moons) indicate the level of direct influence of key opportunities on each industry. The more complete is the moon, the higher the opportunity's weight on that category. Dairy products, Meat & Poultry products as well as beverages, are the three categories that will mostly take advantage of the opportunities described above.

What about challenges?

Opportunities, although allow the creation of new value for consumers, bring also the need to define acceptable standards on the production of food and beverages.

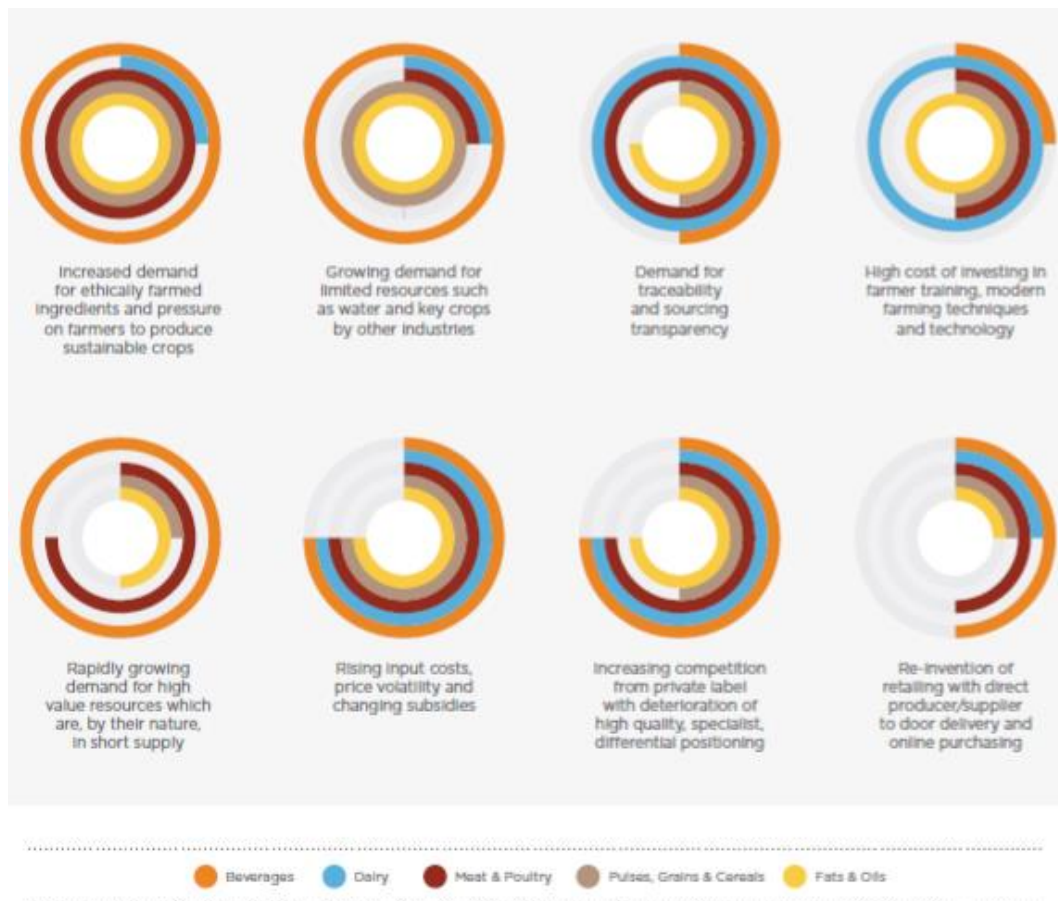
Consumers ask for the supply chain be ethical, from the demand for ethically farmed ingredients and sustainable crops, to the demand of traceability from farm to table and transparency (Gulfood, 2018).

Pressure to invest in modern farming techniques, training and technology will be high especially for the dairy products and cereals, while the demand for limited resources such as water and key crops by other industries will augment, which are, by their nature, in short stock.

Furthermore, other elements of destabilization will be the hard competition between retailers and manufacturers: something that will be perceived along the overall supply chain, where the main quest will be to lower the input costs to the formulation of an innovative supply chain to exploit the latest technologies (Gulfood, 2018).

Some of the important future challenges are depicted below:

Figure 12: Challenges’ impact on each industry



Source: Gulfood, 2018

These circles (moons) indicate the level of direct influence of key challenges on each industry. The more complete is the moon, the higher the challenge’s weight on that category.

As illustrated, rising input costs, price volatility and changing subsidies will be the main challenge almost all product ‘ s categories will face in the near future.

Some categories are not hit by some prospective challenges but this depend on by the nature of the problem, that is specific to particular products.

1.5 Global Critical Success Factors in the Food & Beverage industry

Success in the food and beverage industry does not come overnight. It is a mix of finance and effort. Research constitutes an essential role in learning about the consumer and factors that made predecessors successful in the industry (Gulfood,2018).

Furthermore input costs are rising, new and changing government regulation are appearing and cost tensions in the supply chain have never been so high. For this reasons, the successful food and beverage manufacturer of the future will have to focus on production efficiency, the manage of the supply chain and on the changing government regulations (Gulfood,2018).

As far as production efficiency is concerned, someone should say why it is so vital to understand its role for winning in the future. First of all, according to the Drink and Food Federation, more than three quarters of manufacturers expect input price to rise in the remainder of 2018. More than half of those producers had seen increased ingredient costs (62%), increased packaging costs (61%) and increased energy costs (51%) because of the exchange rate volatility and increasing commodity prices. In fact, in the last quarters, some basic primary needs products increased such as lamb and beef 12%, poultry 27%, butter 36%, milk 8% (Deloitte UK, 2018). Secondly, the F&B industry is well-known for its high volume/low margin features that does not fit properly with rapidly augmenting input costs (Gulfood,2018).

For this reason, producers have to invigorate processing productivity by concentrating on managing input decreasing waste and inventory control. In fact, according to The Answer Company, 2018, - Information systems with capabilities that deliver optimization calculations of product mix, tracking of inventory levels & cost and automated quality controls will enable companies to control costs and increase profit margins, improving production efficiency -.

Managing the supply chain will be the crucial part of the right plan to succeed. Relations should have to be managed with both consumer and suppliers. The important will be the control of the relationship's value (Gulfood, 2018).

However the supply chain innovation that will be an integral part for the leading companies of the future, will be accomplished by capitalising in new knowledges, starting from working in a reciprocally valuable partnership with suppliers.

Government regulations are a continual and serious concern for fruitful food manufacturer.

The food and beverage producer of the future will have to be reckless and flexible to integrate new regulation once approved (Gulfood, 2018).

These protocols touch all companies in the industry, leading to a small but considerable range of prospects to familiarise faster than other players. Since the weight falls on manufacturers to guarantee excellence and care, forward-thinking enterprise information systems, can integrate

new rules with current business processes confirming acquiescence in food processing along with managing performance and tracking inputs.

Finally, health issues will affect the consumption of the future. In fact, companies should come up with differentiated products to keep pace with the new trends which can answer consumer's needs.

For instance, ingredients contained in many soft drinks are themselves sources of concern, for example, caffeine, when consumed in excess.

Consequently, the successful companies of the future will be the ones that will align its products with the consumer ' s needs of the next decade, that is, attention to natural, organic, healthy food will be essential to survive (Gulfood, 2018).

Chapter 2 - Managing uncertainty: food system scenario analysis and solutions to its unpredictable outcomes

Objectives

In this second chapter will be given particular importance in illustrating the macro trends, at a global level, which are redefining the global food systems and in detail, two precise scenarios have been highlighted: "Local is the New Global" and "Open- source sustainability".

The first objective of the chapter, therefore, will be to illustrate to the reader which are the two main global scenarios in the field of Food & Beverage, the signals that have created the link between being theory and becoming reality and their possible implications.

The second main objective will be to describe to the reader how the companies are currently taking the first steps to redefine their business models with the aim of embracing and therefore adapting to the two new main world scenarios in place, where the first is linked to the return of local realities with the adoption of "local food" (short food chain) as a source of new "value propositions" for businesses with great concern for "clean and clear labels" whereas the second one is connected with the propagation of policies in the sustenance of healthy diets and sustainable choices regarding food consumption (natural, free from, organic) along with technologies advancements that started the call for transparency and traceability in the Food & Beverage industry.

The final objective will be to explain to the reader about a new way to think about food value chains, highlighting the importance that nowadays the digital world has in our lives and how technologies brought by digitalisation could be implemented to improve the value along the chain and thus optimizing the wealth 's distribution among the players of the food value chain.

2.1 Macro trends will shape the future of the Global Food Systems

According to the FAO definition, a food system consist of all the steps a human makes to keep himself fed: growing, harvesting, packing, processing, transforming, marketing, consuming and positioning of food.

It also embraces the inputs desired and outputs produced at each of these stages. A food system works inside and is inclined to be influenced by social, political, economic and environmental backgrounds. It necessitates human resources that offer education and research. Food systems could be labelled as conventional or as alternative based on their prototypical of food lifecycle from root to bowl.

Conventional food systems work with the economies of scale, that is, they prioritize models concentrated on maximizing efficiency with aim to lower costs for consumers and production increase. They are based on the availability of fossil fuels, necessary for mechanized agriculture, the production or gathering of chemical fertilizers, the dispensation of food products and the activity of packing foods (FAO,2014).

On the other side, what is not conventional agriculture, could be labelled as alternative food system.

This category is divided into two sub-categories, that is, local food systems and organic food systems.

The former embraces networks of production and consumption of food that is aimed to be globally and economically available and straight. They operates with not as much food transportation as industrial food systems, including fewer intermediation between farmers and consumers.

Examples of local food systems consist of farmers markets, farm to school programs and community-supported agriculture (FAO,2014).

The latter are known for a reduced necessity of chemicals and a higher interest for transparency and information.

Chemical pesticides are aborted as well as fertilizers of industrial food systems.

Finally, there is fair trade, a social movement that appeared in global food systems to generate balance between the cost of producing food and its price, ensuring that producers could have better control over trade's conditions and gather a greater portion of the sale price.

Food systems shape the world because they are an integral part of human life, they are fundamental for the health of the people and the sustainability of the planet (FAO,2014).

In reaching the Sustainable Development Goals (SDG) (a set of 17 global goals set by United Nations in 2015 including zero hunger, clean water and sanitation and climate action) food

systems will play a key role, because they will have some sophisticated features such as inclusive (ensuring economic and social inclusion for all food system actors, including smallholder farms, women and youth), sustainable (minimizing negative environmental impacts, conserving scarce natural resources and strengthening resiliency against future shocks), effective (producing adequate quantities of food for global needs while minimizing loss and waste) and nutritious & healthy (providing and promoting consumption of diverse nutritious and safe foods for a healthy diet) that will help in paving the pathway toward the objectives (World Economic Forum, 2017).

However, these features won't be achieved so easily. In fact, some macro trends will challenge the world's food systems in the future, including: demographic shifts, inequality of wealth, malnutrition, scarcity of natural resources, geopolitical dynamics, innovations and emerging technologies.

Shifts in the demography are increasing and altering the demand for food. 8.5 billion people are expected in 2030 and people within the middle-class range are expected to grow to 4.9 billion by 2030 whereas by 2050 more than half of the world total population are projected to live in cities.

Wealth inequality will be a major macroeconomic trend for the future and will impact food systems.

Thinking about global poverty, 800 million people live below the global poverty line in the agricultural sector and the 1% of the richest people in the world are wealthier than the rest of the world combined.

As far as malnutrition is concerned, it will remain a challenge for the future. Over nutrition and micronutrient deficiencies are considered challenges especially for developing countries, because can easily lead to mortal diseases.

Although agriculture is fundamental for the human being, it could be its worst enemy if agriculture practices don't change from being unsustainable to sustainable. "The food sector accounts for 70% of water withdrawal and agriculture, forestry and other land use accounts for almost a quarter of global greenhouse gas emissions", according to the World Economic Forum. Geopolitical dynamics influences food making it more vulnerable and insecure. In fact, destabilizing political as barriers to trade as tariffs and levies are an obstacle to international trade and fair price.

Emerging technology innovations will shape the future as food systems will be immensely impacted by the new instruments available such as bio-innovations, big data and artificial intelligence.

Nowadays, hunger in the world is a serious issue. Almost 49% of the population of the world is not in the condition to eat a right nutritious diet.

The agriculture sector should be innovated because no longer the Planet Earth can absorb the enormous quantities of greenhouse gases, deforestation and water scarcity produced by that sector.

Tons of food are wasted every year, especially in Europe and USA and because of climate change, problematic weather events are growing as well as food prices (World Economic Forum, 2017).

Considering all these problematics, the World Economic Forum wondered about if, the world, could rely on the current food systems to feed 8.5 billion people in 2030, in a healthy and nutritious way.

To make world's leaders notice about the issue, the World Economic Forum and its Partners built an array of scenarios for what the world' food systems might correspond in 2030.

The WEF offered this report as part of its System Initiative on Shaping the Future of Food Security and Agriculture, one of 14 key initiatives in order to generate universal alteration on world-wide challenges.

2.2 Four scenarios for the future of Global Food Systems

A scenario analysis is built upon some uncertainties that are so strong that have the power to impact the central question, that is, "How will food systems nutritiously and sustainably feed 8.5 billion people in 2030?".

For this report, experts decided to consider two important uncertainties: demand shift and market connectivity.

As far as demand shift is concerned, it embraces the upcoming request for agronomic commodities and food, with special focus on the ecological footprint and consequences on people's health stemming from the choices made by consumers (World Economic Forum, 2017).

Environmental sustainability and healthy diets are considered too, because of their vital importance.

The uncertainty associated with demand shift is consequently based on whether demand will be more resource-intensive against resource-efficient.

Unlike demand shift, market connectivity encompasses all those matters concerned on the trust in and sustainability of commodity markets, how much the trade is open and the no-exclusion of technological upheaval (World Economic Forum, 2017).

As markets, across the world, are relatively connected, some could expect to find both vulnerabilities and openings linked to the future of global food systems.

Consequently, this uncertainty is focuses on whether, these markets, could be defined as with high connectivity or low connectivity.

Taking into account these uncertainties in the elaboration of scenarios that could represent serious consequences for people at global level, experts came out with four possible scenarios for the future of the global food systems (World Economic Forum,2017). In this thesis, will be provided in depth details just for the third and fourth scenario, thus excluding the discussion about the first and the second (they will be presented limitedly below) because they are not in line with the scope of the thesis, that is more concentrated on trends concerning the “local” as the new world paradigm and “sustainability” as what the world should embrace to make food systems prosper.

The first scenario is called Survival of the Richest and consist of a world in which world’s markets are profoundly disconnected and a resource-intensive consumption is prevalent. People are distinguished between who “has” versus who “has-not”.

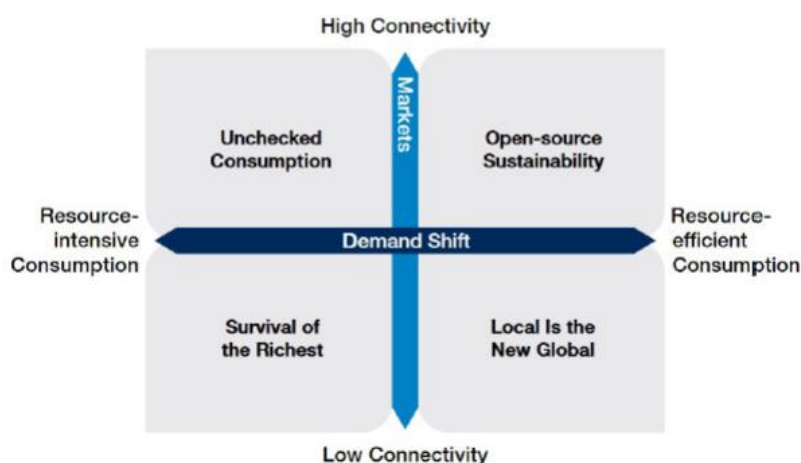
The second scenario is called Unchecked consumption. Unlike the first scenario, it presents a strong market connectivity but the same grade of resource-intensive consumption. Moreover, it is characterized by high GDP growth and high environmental costs (World Economic Forum, 2017).

The third scenario is called Open-source sustainability and embraces a world in which, because of highly connected markets and a resource-efficient consumption, international cooperation and innovation have never been so high, although this progress might be detrimental for someone.

The fourth and last scenario is called Local is the New Global. It encompasses the vision of fragmented markets but with a resource efficient consumption, where richer countries are based on local foods whilst those regions that are by definition import-dependent, constitute hunger hotspots.

Below is visible a graphic representation of the scenarios:

Figure 13: Four potential future worlds



Source: World Economic Forum, 2017

This Matrix depicts the four possible scenarios that would be constituted and influenced, as visible along the Cartesian axes, by the uncertainties foreseen in the construction of the model.

These scenarios do not only represent pure theoretical argumentation distant from reality, but they could really happen if leaders around the world do not take actions that could shape in a better way the entire world. In particular, the food system will be heavily hit by the careless mind of the human being. In fact, thanks to this report, leaders are incentivized to pursue a food system transformation: the strength of this analysis is to depict the opportunities present in the market for investing in nutrition, health and technology to solve the environmental and social weaknesses in food systems. Furthermore, greater importance could be defined for the ecology and its footprint in the food system, influencing people's culture about their food aspirations and thus leveraging the necessities of future consumers (World Economic Forum, 2017).

On the other side, consumers might have their role in this transformation by changing their way to think of food and starting eating more resource-efficient diets.

Producers should shift from a quantity mentality to a quality one. If leaders want to make people more concerned about their healthy through the consume of healthier foods, agriculture should have a role too, offering sustainable products not for their quantity but for their quality.

Furthermore, climate change caused by human activities, produce natural resource degradation that, in the long term, could hurt the productive capacity of food systems.

Finally, the New Industrial Revolution that is going on across the globe will generate undistributed consequences on how we manufacture, handle and claim food in specific markets (World Economic Forum, 2017).

2.2.1 Scenario Number Three: Open-Source Sustainability

This scenario depicts an improved situation for the ecosystem and the human being.

Markets are completely connected and populations consume in a responsible manner as resources are utilized in an efficient way; this combination enhances transparencies in markets and business (World Economic Forum, 2017).

Notwithstanding markets works in a such a way that they can preserve the ecosystem, as they are extremely interconnected, can be easily threatened by weather events and other shocks of political or economic nature. Despite this fact, there is a propagation of policies in sustenance of healthy diets and sustainable choices regarding food consumption as food sources increase, boiling-down the increasing reliance on a few breadbaskets of the precedent scenarios. People move towards tailored nutrition and healthcare, using mobile apps to determine their spending and eating behaviours (World Economic Forum, 2017).

As a result, the entire food system is advantaged improving its pliability over more supply chains.

As far as the ecosystem is concerned, governments of the countries treat to fight the climate change that is underpinning the continue unpredictable extreme weather events.

If some asked who would be winning in this scenario, the first answer some should say would be: almost everyone (World Economic Forum, 2017).

Actually, governments profit from trade agreements and through the data access are constantly informed about effective police design undertaken by manufacturers.

Companies has seen an increased surveillance in the manufacturing process thus generating costs and changes in the near term, despite the fact that plenty of them saw benefits in terms of production and more consistent sourcing (World Economic Forum, 2017).

At the bottom of the pyramid, advancement in technology helped farmers rising productivity and accessing services and data ready available.

On the other side, this scenario leaves room for losers that appear not for their willingness, of course, but as a consequences of the progression in technology. In fact, many farmers, especially those that remain outside the interconnected economy, are left behind. Furthermore, companies are less incentivized to invest money in R&D as information that is available as open-source disincentive those long term commitment (World Economic Forum, 2017).

Given that, this world creates winners and losers. Being part of one category rather than the other one depends on the means of the people.

Broadly, some key points could be extrapolated from this scenario.

First of all, technology plays an important role in the systems of food. Innovations brought by technology advancement increases the efficiency of the farmer's means that become interested in its adoption. Furthermore, technology improved value chain traceability with the mean of sensors and alleviate climate problems through carbon storage. As far as the latter is concerned, thanks to world-wide determination and shared best practices, climate change is somewhat alleviated. Certainly the Paris Agreement plays its role in the climate change mitigation. Although extreme weather events still happen, food system resilience is strong enough to let it survive. (World Economic Forum, 2017)

Secondly, population modified their food preferences as policies, business practices and exertion by society upsurge the people 's access to food with high nutrient thus reducing the appealing of food high in fats, sugar and salt.

Healthy diets has become the principal desire of the youngest and strong attention to traceability of food such as their source, ingredients, system of production and transparency of producers. This abovementioned scenario make reference to a world that could not be so far from reality due to the main events that are now shaping the world. In fact, food loss and waste diminished to five per cent world production due to taxes and efficiencies in the market perpetuated by the progress in the field of technology (World Economic Forum, 2017).

Rural economies are acquiring even more weight in the new economy due to urban migration reduction and capital access for farmers especially in developing countries.

The number of agricultural entrepreneurs using data system to inform consumers or intermediate about their production scheme amplified as well as smallholder farmers investing in modern techniques of production to keep pace with the progress underway (World Economic Forum, 2017).

2.2.2 Scenario Number Four: Local is the New Global

In this world, countries behave egoistically for the self-maintenance consuming resources efficiently, markets are not highly connected thus leading to disjointed food systems.

Food sustainable demand is increased by consumers as there is more propension in consuming local food and more importance is given to diets produced locally. Food waste is also reduced as people matured respect for food (World Economic Forum, 2017).

From a physiological point of view, government policies enabled the human being in good shape because lowered the price point for healthier diets compared to unhealthy ones, driving to a change towards diets that are balanced with constant decreasing in the obesity rate and diseases.

Generally proliferates, as markets are less integrated, the assumption that the mechanism of the comparative advantage is getting lost because countries that relied in other nations to sustain their primary needs now struggle to deliver its citizens adequate agricultural resources. As a consequence, this self-sufficiency policy foster the birth of hunger hotspot (World Economic Forum, 2017).

In this scenario, winners are those countries abundant of human capital (K) and natural resources (N).

These nations are those that help smallholders farmers in meeting local demand encouraging diversity that is not more obtainable from outside (World Economic Forum, 2017).

Likewise, more value is being attributed to home-grown assets and all the communities strength their connections because the focus is the local and its potential. As a result, these community integration reveals new entrepreneurial spirit for food production in both vertical and urban farming.

Real losers in this future are import-dependent countries such as Nigeria and Costa D’Aorio with their emerging mega cities, that struggle to feed their increasing population and fighting undernourishment and diseases. Besides, farmers at industrial level risk to be left outside the market if they find difficulties in serving a market that call for greater variety of local crops. In addition, international food companies could be negatively impacted by local food actions in terms of sale, as they motivate consumers in acquiring awareness for local labels.

This future brings some varied implications: richer countries with a productive capacity above the average would enjoy food completely rich of nutrient and healthy diets in line with the demanding needs of consumers, whereas as markets work separately rather than connected, this situation would bound others to enter the market (World Economic Forum, 2017).

A weakness of the local food system will be the one for which they would not be able to generate economies of scale and how it was not enough, poor regions that would face a loss in comparative advantage would see the price of food augmented. It goes without saying that this scenario would hit regions in a disproportionate manner.

Agriculture s ‘impact on environment is reduced due to resource efficient consumption, despite the fact that climate shocks keep on persisting. Smallholder farmers would enjoy profit and good economic conditions until there will be local demand for what they produce despite the fact that, in the future, they will easily face high not sustainable pressure because the impossibility to reach foreign markets, if food demand from locals should drop consistently (World Economic Forum, 2017).

Actually, something similar is happening in the real world. As an example, world is witnessing a decrease in trade among poorer and richer regions and that is why, WTO and World Bank lower their international trade growth predictions.

Local movements increased their importance and their power as social actors able to gather political consensus and increase their influence. In fact, globally, traditional diet movements appeared to foster an healthy mentality and to satisfy the local and urban nutrition request, sponsoring the growth of urban farming and new forms of innovative agriculture, as aquaculture.

Globally, national governments decided to contrast natural resources ' depletion by increasing the water and carbon price, so that a free vital natural resource as water could be less treated by humans exploit and minerals as carbon could be less used, thus discouraging their usage in industry contexts.

Finally, cooperation between poorer and richer countries diminished as food aid budget proposed in the past from developed countries to deliver life quality in the poorest regions of the world, decreased, as now domestic interests are prioritized (World Economic Forum, 2017).

2.3 Implications of the scenarios: are they possible?

The future of our world is completely uncertain. These scenarios, and in particular their early signs, demonstrated that all of them are possible in the future, as all of them are nowadays present across the globe, though with different density.

In the past two years the world witnessed to destabilizing geopolitical events that for their unpredictable nature, are not so easily to detect together with the effects they bring with them. The destabilization brought could comprise the worldwide connectivity of the markets and causing their international fragmentation (World Economic Forum, 2017).

If global leaders do not take actions, people in the world will be the victim of a system that won't be able to lock sustainable nutrition and health with his means as they are, currently, and will be even more, in the future, jeopardized by human activities. We need to shift our short-term mentality to a long-term one because the need to make something more and valuable for our planet has never been so high (World Economic Forum, 2017).

The scenarios make light on different patterns the world could undertake: which pathway will be chosen will depend on different incentives such as proactive policies and business models will be provided in different contexts (World Economic Forum, 2017).

What is critical is moving global consumption from a resource-intensive demand to a resource-efficient demand by shifting the consumers' choices so crucial that are able to shape the whole

food system, from farm to dish. With the aim to converting current feeding patterns towards healthier, more nutritious and more ecologically sustainable diets, consumers should be educated and put them in the condition to aspire to a healthier life that is reachable and inexpensive at the same time.

In order to promote healthy eating, the entire food production system should be reshaped and it englobes how food is produced, a critical change from focus on quality rather than on quantity produced that could define again what is valuable in agriculture, allowing diversified diets for consumers and alleviating risk for supply chains.

A redefinition of the whole food production system is further necessitated because as illustrated by the scenarios, relying heavily on highly connected market based only on few type of crops, it would entail plenty vulnerabilities.

The number breadbaskets should be increased to improve the resilience of the food system to unavoidable shocks.

It is acknowledged that we are immerse in the Fourth Industrial Revolution. It is a disruptive movement that introduce new innovations and technologies designated to revolutionize food systems though will present new challenges (World Economic Forum, 2017).

They will alter the way in which food is produced and managed in selected markets, but their effect won't be distributed equally. In particular, the agricultural value chain could be particularly involved in this revolution, for instance, CRISPR technology possibly will invent seeds again, farming techniques could be modelled in a more efficient way by big data and ICT, robotics could ease the harvesting process, sensors might lower wastes in food transportation and personalized diets might shape consumer's preferences again.

But this future evolution brings with itself drawbacks that can't be avoided. The fact that vast majority of the world's population will face difficulties in keeping pace with the progress, technology in food systems raise questions of access and control (World Economic Forum, 2017).

In the Open-Source Sustainability scenario, for instance, proprietary R&D is totally disincentivise because the general-scale participation in the search for innovation could more efficiently address long-term challenges. Again, these scenario highlight that technology has the power to increase inequality if not led with critic thought at the necessities of a world-wide population.

Every scenario illustrate both winners and losers: the key point is reaching a balance between them. Now, even though is almost impossible that everyone could win in every context, at least would be needed to reduce disparity between nations and inside them because if world ' leaders

do not dedicate enough attention to this worldwide issue, it will become more difficult to restore equality in the future.

Urban poor and farmers are most likely to suffer from inequality situations, especially created by a disconnected ecosphere of more resource-intensive demand (World Economic Forum, 2017).

The outcome of it will be the spreading of malnutrition and poverty in rural environments whereas growing food prices in urban contexts will make the access to healthier diets and sustainable food choices more unaffordable (World Economic Forum, 2017).

This examination of our likely futures discloses that lot of their most problematic elements are a product of procrastination – stressing the threats of a “business-as-usual” style.

Acclimatizing to any of the scenarios will entail tough verdicts, trade-offs and investments in the near term. Still, greater will be the cost of indecision in the long run but benefits enjoyed will follow in line.

It is consequently determinant to take a broader view, starting the examination from the whole system in order to reconfigure it, taking into account all the stakeholders’ decisions for the future of our food systems.

The form of this reshaping could englobe changes defined as structural for their nature and more attention to what individuals want to guarantee a cheerful future to food systems (World Economic Forum, 2017).

2.4 How businesses are re-shaping their business models to embrace then new global scenarios’ trends

The presented scenarios have highlighted several trends that are shaping and will shape the world in the future, with the direct participation of both consumers, companies and governments for their correct realization, to give future generations better and innovative solutions to build a better world. These trends can be summarized on three fronts: i. propagation of policies in sustenance of healthy diets and sustainable choices regarding food consumption (local fresh and organic products, tailored nutrition); ii. healthy diets has the principal desire and strong attention to traceability of food including ingredients, system of production (food safety) and transparency of producers; iii. innovations brought by technology advancement increases the efficiency of the farmers that are better off as value chain transit from being *long* to *short* and local producers are the main promoters of clean labels to reduce asymmetric information among market’s players (World Economic Forum, 2017).

Taking them into account, it seems plausible to stress that, as explained by Singer, C., 2018: ” *there are a variety of opportunities for growing food and beverage businesses up to know, but staying on top of changing customer needs, understanding millennial preferences, leveraging new packaging and employing key technology and acquisition strategies will all be essential in a competitive marketplace*”.

A lot of companies are introducing new product lines, modifying existing products or totally redefining their business models to keep pace with these trends and to remain profitable in the long term, as now it is likely they will last for long time.

Sometimes, companies seem preferring creating collaborations with other companies (JV, equity partnerships etc.) to obtain such skills and/or tangible and intangible assets to develop the right products for the consumers ‘ demanding needs that require that particular ingredient or type of food (organic, “free from” etc.) (Singer, C., 2018).

Along with these trends for which companies need to create contractual collaborations among them, it is acknowledged that they need to re-invent the way the used to communicate with consumers, in terms of selling channels. Today, it is particularly important to define the people to target making the selling channels attractive, especially for the new category of consumers that will populate the future, Millennials (Singer, C., 2018).

Nowadays, the predominant selling channel is demonstrating to be the e-commerce platforms with third-party websites or direct-to-consumer sites. Since the acquisition of Whole Foods perpetuated by Amazon, the online delivery has been living its best moments.

Online demand for food and beverage and online subscription delivery services of healthy products such as organic, free from additives and preservatives, or with labels that could guarantee their freshness and local production, are augmenting exponentially as consumers demonstrate their willingness for doorstep delivery (Singer, C., 2018).

As Millennial population will increase in the next decade, it is plausible to say that consumers, in ten years, will express their food choices via mobile App, and this phenomenon will serve also to foster local and regional production as farmers are being introduced in the development of innovative operations to meet the needs of consumers (Singer, C., 2018).

Companies and start-up are trying to leverage on these new trends in order to meet what the new consumers of the future want.

According to the well-known Consulting company Deloitte & Touch, companies could capitalise on these trends in two ways:

- i. Expanding the product portfolio: food companies could foster internal research for guarantee a good product innovation. As a reported example, the Dutch-based company Rijk Zwaan “*has seized growth opportunities through in-house product*

innovation – a plant breeding company by concept, they have invested significant research and development in genetics and production” (van Overveld et al., 2018).

- ii. Food companies could exploit their networks to build agribusinesses mergers, acquisitions or joint venture to become perfectionists in what they do by expanding their current portfolio with new products developed with key partners (van Overveld et al., 2018).

These strategies should be capitalised in an optic of digitalisation. We live in a world where consumers tend to ask information before they buy and social media contributed to make extremely easy comparing different information about products (ingredients etc.) Successful food and beverage businesses will need to take into account this, putting as much attention as possible in the two way interaction with consumers through e-platforms, not only to sell a products, but to grow and maintain its loyalty (van Overveld et al., 2018).

From this, companies, has stated before, initiate to change their business models and, in this F&B context, is thus digitalisation and lifestyle changes of consumer that led the online delivery business model. Consequently, this new form of business, in a *Porter's* definition, has drastically reduced the barriers to entry, and subscriptions and direct-to-consumer business models are “picking up the pace”.

In this circumstance the trend of “personalized nutrition” surged thanks to the increasing digitalisation and the birth of hundreds of companies that started to offer personalized diets to consumers, tailored to their health requirements. Personalized nutrition is a main growth opening for food and beverage enterprises as consumers progressively turn to individually-tailored diets.

Startups raised a lot of money and are scaling up this trend because of the expectations that this tailored program of delivering nutrients is creating. Thanks to the progress in research, personalized nutrition will become much more sophisticated because it will include diets based on the unique characteristics of the individual, through DNA tests, microbiome check or blood analysis (Cartagena, I., 2017).

What is going on now, is that the industry is capitalising into the personalized trend in three ways: i. through portfolio brands creation to meet different consumers diets preferences; ii. companies are investing in several platforms for offering dietary advices and support to consumers; iii. they are investing in e-commerce because of the increasing digitalisation of the industry (Mellentin, J.).

As far as Italy is concerned, this trend seems to be particularly understood by Nutribees, one of the key start-up for personalized nutrition that is mirroring what the industry is doing right now.

In fact, its peculiarity is trying to solve some people's problems as stated :” *For those who work, for those who have a family or simply for those who have a passion that takes a long time, eating well and healthy outside the home becomes increasingly difficult: fast pace, little choice, little desire. Furthermore, do the shopping, get in the kitchen, wash dishes for those who are not passionate can be real torture; NutriBees was born for this, to help those who have little time to eat better having more time*” (Nutribees, 2018).

The truth is that technology, and in this case digitalisation, help customers in their life to save time and to restore an equilibrium that with all probability they had lost much time ago.

One of the mentioned trend that are currently shaping the world is the passage from long food chains, rich of intermediaries that increase the final prices for the consumers, to short food chains, that directly link farmers to consumers, with the former able to setting prices independently without considering the option to submit to the market dictate.

According to Lorenza, A., 2018:” *the term digital farmers' markets describes a new concept that uses the internet as a marketplace for agricultural products. Their aim is more than just to “digitally shorten” the distance between producer and consumer.*”

In fact, the primary aim of virtual markets (see Direttoo) is to disrupt the distribution structures upside down and obtaining fairer prices for small producers, so that farmers result independent and autonomous over prices and conditions of production, consequently being able to keep pace with foreign competition (Lorenza, A., 2018).

Digital farmers' markets are becoming popular among countries around the world because better is the perception about the products sold in this marketplace. In this way, farmers earns higher incomes and they at the same time can offer at reasonable prices, fresh, regional and seasonal products for customers, diminishing drastically the time this food products have to travel thus guaranteeing their supreme quality (Lorenza, A., 2018). At local level, this digital platforms represent a good alternative to supermarkets especially for restaurants ' owners.

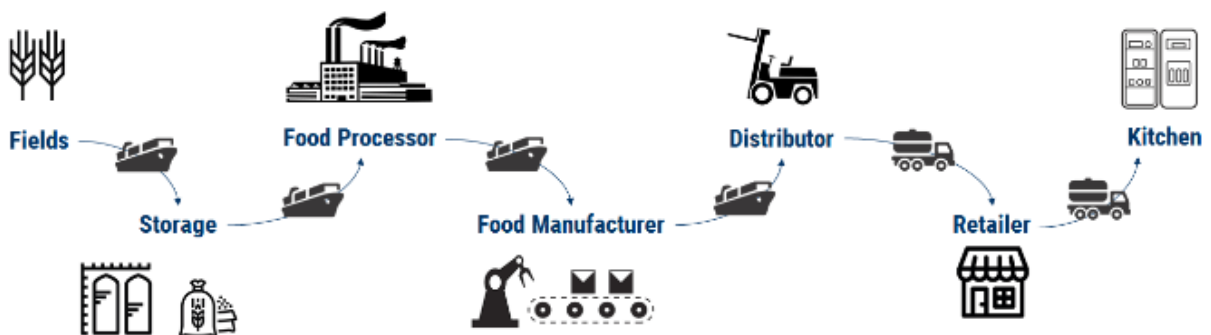
Consumers are at the heart of the change. Value chains are being disrupted from innovations in agricultural production to start-ups organized for food delivery, and that have created several opportunities to approach more consumers.

Digital technologies proved that it was feasible for companies in the food & beverage industry to apply more control along the supply chains and to reach directly consumers through e-commerce business models. All together conducted to an improvement in particular business areas such as inventory management, production methods and more transparent system of production as well as accountability (De Kerros, T.).

Transparency has become an important area of innovation. People want to know the story behind the product across the value chain and a sure technology that can enable it is blockchain. By means of it, companies strive to assure traceability from the source to fork, and it also demonstrate to be an efficient way to manage all the actors along the chain, from producers to distributors (De Kerros, T.).

A growing number of start-up dedicated to food blockchain is expanding, for instance as Provenance, Ambrosus and Arc-Net. Below is depicted a clear figure that illustrate where the battlefield for food transparency is played (De Kerros, T.):

Figure 14: The complex global food supply chain



Source: CBIInsights

The figure illustrate the complexity of the global food supply chain, thus the passages food products must follow from Fields to Kitchen.

Within this portrayal, according to De Kerros, T., :” *As consumer behaviour continues to shift, and new technologies embrace the potential of click and mortar, collaborations between food corporates and start-ups will become increasingly mission-driven and a strategic imperative for sustainability and success.*”

Start-ups will have the advantage to create new business models and generate value by creating blue ocean markets: agriculture, systems of food production and distribution will be innovated that in the future the line will keep blurring, and big food companies will try to exploit their innovation skills to keep pace and monetize it (De Kerros, T).

The author, furthermore, explains that, in the context of venturing partnerships that this trend is triggering :”*The wave of corporate venturing will continue to grow and expand, as heavy-weights demonstrate the strategic and financial value of swimming with the little fish. The future*

will see record-amounts invested, as well as an increase in acquisitions. Start-ups seeking to collaborate with Big Food companies should focus on a clear value proposition that solves very real business challenges and should focus on a niche within the food value chain in order to compete effectively” (De Kerros, T).

As far as sustainable healthy policies is concerned that is one of the main trend that were mentioned before, it is notable to stress that the European Union has launched Health 2020, *“the new European health policy framework. It aims to support action across government and society to: “significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality” (Euro.Who.net).*

The main mission of the program is to guarantee equality in nutrition without gender distinction for all citizens of the EU, and making affordable the access to healthy balanced food diets.

The European Union is going to implement this health program with a comprehensive package that include tools, services, written materials to support the policy development and the engagement of different stakeholders for bettering health and well-being up to 2020.

The program, Health 2020, recognizes that countries’ governments can improve the quality of their health if they build strategic relations across countries’ stakeholders that aim at two main strategic objectives:

- i. Reducing health inequalities.
- ii. Improving health for everyone and government plays a major role in assuring it.

As it has been stated throughout the chapter, the world is witnessing is major change in the Food and Beverage sector and we, as prominent promoters of the change, can’t avoid to make our part for assuring the well-being of the transition toward a better healthy world.

2.5 Food value chain analysis for the Food & Beverage industry

The concept of value chains consist of two key words: value and chain. The former states basically for “value added” in the study of value chains as it identifies the additional value of a subsequent product generated from processing a product. The word chain refers to actors and processes involved in a supply chain that are active within it from conception of the product to its disposal (FAO,2014).

The value chain analysis could thus be recognized as that bundle of required activities that accompany a product from its conception through its physical transformation to delivery to consumers and disposal after use.

Generally speaking, the food value chain is made up by producers that manage the actions of researching, growing and trading food commodities; processors that act in the manufacturing and market food products; distributors, such as wholesalers and retailers that sell food; consumers that acquire and consume what they buy; NGOs and regulators that supervise the whole food value chain from all players englobed.

Nowadays collaboration among various players within the network became fundamental: the interdependencies are only between the stages most nearly connected along the chain anymore but can embrace stakeholders all over the network. Phenomenon as food safety and traceability raise importance because of trends towards sustainability and healthy diets as well as because national supply chain turned into global (FAO,2014).

As a consequence, in order to give value to whom consume every actor along the chain must be responsible for the handling, tracking and quality control of production since every mishap might jeopardize the reputation of a company. Furthermore, efficiency in the network can be improved through knowledge and data sharing (i.e. , food storage, levels of inventory) among collaborating actors.

Superior vertical integration describes another important way to progress along the value chain. In fact companies in the food and beverage sector are now extending their expertise up and down through forward integration, backward integration or balanced integration.

The former strategy happens when a producer performs its own distribution, thus in this case this manufacturer is applying a forward integration strategy. As an example Daily Table, the American chain of grocery stores well-known for its low pricing policy that retails food nearer to its expiring date, implemented this strategy by selling healthy “food past its prime” through their own stores.

Backward integration occurs when a company acquires a key supplier. An example in non-alcoholic beverages is Starbucks, that developed purchase agreements with Coffee growers, it has its owned bean roasting plants, its warehousing and distribution facilities and a coffee bean farm in China and Costa Rica (FAO,2014).

On the other side some companies decide to be more suitable for a balanced integration strategy that englobe various actors of the supply chain under one corporate name. The Tyson Foods, Inc. is a multinational American corporation based in Arkansas, leader in the processing and market of chicken, beef and pork that decided for a full unified supply chain for its chicken production, from its egg hatcheries to distribution centres.

A major trend that practitioners, governments and stakeholders are studying to re-invent the food value chain for the future, is the development of a sustainable food value chain.

Taking this into account, developing sustainable food value chains can be another tool able to bring humans towards important pathways out of negative scenarios especially for less developed countries and align all the players along the value chain to the same level.

For this purpose, having described in the precedent paragraph what the descriptive or structural definition of value chain is yet, the focus shifts to normative or strategic definition that describe how a value chain (VC) should be. Consequently, a sustainable food VC is illustrated as “ the full range of farms and firms and their successive coordinated value-adding activities that produce particular raw agricultural materials and transform them into particular food products that are sold to final consumers and disposed of after use, in a manner that is profitable throughout, has broad-based benefits for society and does not permanently deplete natural resources” (FAO, 2014).

In this definition, coordination among actors define moves that go beyond a series of traditional market transactions in fact it included some degree of vertical coordination in some part of the chain reputed as non-adversarial. The inner implication is that competition occurs between whole chains rather than individual firms. Coordination increased as modernization in food systems lead to modernized value chains led by processors and GDO although is commonly relevant for the development of VC for staple foods that still is commercialized in an informal way.

The notion of value added is dominant in the explaining of the functioning of a value chain because it illustrates where value is created and how is incremented by and among actors inside VCs.

The value that can be added to an intermediate agri-food product comes not only from its processing but also by its storing (value increasing over time) and its transporting (value increasing over space).

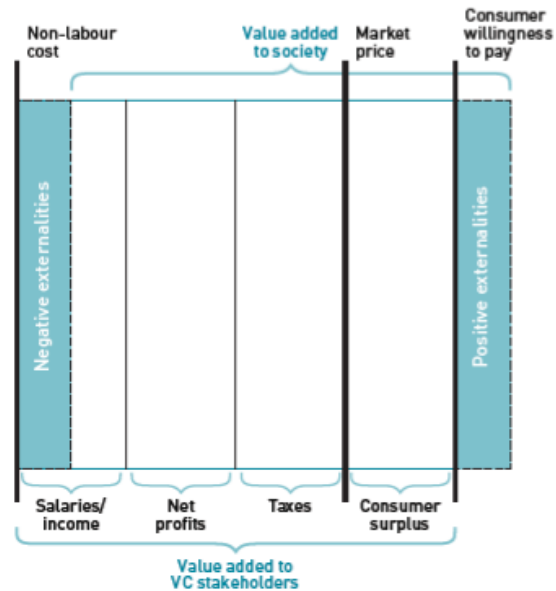
As far as VC stakeholders (farmers, agribusinesses, consumers and the government) is concerned, value added is described as the variance between the non-labour costs (all expenses other than salaries) sustained to produce and deliver a food product and the maximum price the buyer is eager to pay for it.

Intrinsically, the value that is generated in a value chain is captured in five ways (FAO,2014):

- ❖ Salaries for employees
- ❖ Asset owners ‘ net profits
- ❖ Tax revenues

- ❖ Consumers surplus
- ❖ Externalities, that can be negative as air pollution generated by an economic actor for which does not pay for or positive when create a benefit to society as agribusinesses bring to environment, but are not getting paid for.

Figure 15: A breakdown of the concept of value added



Source: FAO, 2014

The figure illustrate the value added broken down for its components.

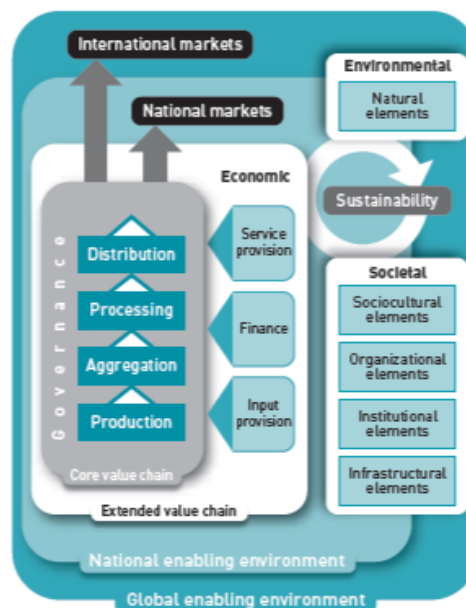
The main objective of a VC is to capture in an efficient way value in end markets in order to generate higher profits and make equally satisfactory results for all farms and businesses intricated in the VC from creation to feeding and disposal. Additionally, it should be distinguished that value can be added or lost at each step or point of the chain, e.g. post-harvest losses may happen during storage and packing.

The sustainable value chain plays inside a framework that consist of different complex environment that condition the behaviour and performance of agri-food businesses and farms. First of all, four core functions inside the core value chain can be distinguished named production, aggregation, processing and distribution where the external element “governance” impacts on the life-cycle of the actors. In fact, governance is defined as the nature of the connections both between actors at particular stages in the chain (horizontal connections) and within the total chain (vertical connections). It englobes elements such as information exchange, price determination, standards, payment mechanisms and contracts.

Outside the core value chain is traceable the extended value chain that includes all the businesses that help through the provision of services the core value chain 's actors in the value creation process and furtherly actors are surrounded by a national and global enabling environment composed by societal and environmental elements such as regulations, laws, policies, biodiversity and natural resources.

Finally, value is determined by the consumers that will choose which items to buy in the national and international markets (FAO,2014). The concept is explained graphically below.

Figure 16: the sustainable food value chain framework



Source: FAO, 2014

To summarize, the sustainability of the value chain is considered concurrently along three extents: social, economic and environmental. On the economic dimension, an existing or planned advanced VC is measured sustainable if the required actions at the level of each actor or support provider are commercially feasible (profitable for commercial services) or fiscally viable (for public services). On the social dimension, sustainability refers to socially and traditionally acceptable outcomes in terms of the distribution of the welfares and costs related with the amplified value creation. On the environmental dimension, sustainability is determined mainly by the aptitude of VC actors to display little or no negative effect on the natural environment from their value-adding activities.

The fundamental goal of sustainable food value-chain developments is to guarantee a significant contribution to advancements in the wellbeing of a society, for both current and forthcoming generations.

For the particular situation of value-chains in the food system, the value is incremented in five ways:

- ❖ Salaries for employees
- ❖ Asset owners ' net profits
- ❖ Tax revenues
- ❖ Consumers surplus
- ❖ Externalities on the environment

Breaking down the value added in this way, enables for performance evaluations to deviate from competitiveness and inclusion of smallholder farmers. Its impact is evaluated in three different dimensions of sustainability: economic, social and environmental.

Value chain development could not be the lonely answer to all issues in the food system. Public interventions and nationally developed strategies are necessary to solve these challenges. Yet, these interventions and strategies are widely financed by means of revenues on taxes created by value-chains thus placing value-chain approaches and sustainable food value chain development especially, at the centre of any strategy with the scope of alleviating poverty and hunger in the long-term.

Concluding, it is indispensable saying that sustainable value-chain analysis is still emerging as a tool in nutrition intervention and, without doubts, has the power to inform actions towards the promotion of nutrition concerns and its improvement.

Having a comprehensive view of the basic pillars of a value chain analysis towards nutrition, how it has been constructed in diverse fields, and how its fundamentals could be applied to answer nutrition-related questions is important, in order to take the maximum from its utility for policies directed to nutrition goals. analysis to generate positive outcomes (*Morgan, Hawkes, Dangour and Lock, 2018*).

2.5.1 Digitalisation: a new way to think about food value chain

The manner digital technologies are redesigning the relationship between consumers and brands has been fervently debated over the past decade, with much debate over the reforming of the

advent of multichannel marketing and the influence of smartphones and the mobile Internet on consumer behaviour. An even greater opportunity has been ignored. By making use of big data and advanced analytics at every stage in the value chain from field to fork, food businesses can harness the potential the digital has for sustainable value creation. Digital can support them using resources in a more ecologically responsible way, refining their decisions, and implement circular-economy solutions in the food chain (McKinsey&Company, 2016).

For whom produces food, the advantages in the use of BDAA (Big data and advanced analytics) are located both upstream and downstream along the chain. At the upstream level are located dairy farmers and their agricultural practices could result in large alteration in commodity costs in an market, or industry, where raw materials embody sixty per cent of COGS (Cost of goods sold).

Big data and advanced analytics represents a good opportunity to tackle several challenges encountered by the upstream stages of the value chain. For instance, the opportunity to optimize farming operations could be reached by the use of BDAA through “precision agriculture” based on measuring and optimizing granular field operations; moreover, supply chain transparency could be enhanced by augmenting forecasting accuracy with collection and analysis provided in real-time as well as by integrating planning across the value chain for reducing risks and time of response.

At the other side of the food chain, BDAA can be utilized to improving downstream activities as waste management. Through the granular data collection of waste streams in households, food produced for human consumption could be lowered (McKinsey&Company, 2016).

Furtherly, as we live in a world where one third of food loss occurs during both in emerging economies and developed economies reducing postharvest losses in half would generate enough food to feed a billion more people. Making use of technology to better areas such as climate forecasting, planning of demand, and the management of end-of-life goods could bring huge economic and environmental advantages. For instance, the French start-up Phenix runs a web-based marketplace to link supermarkets with end-of-life food stocks to NGOs and customers who could utilize them. The platform allows supermarkets to save the costs of disposal, provide consumable goods a second life, and improves some of the environmental problem of waste.

More developed countries can use BDAA to improve food safety, sourcing decisions sustainability, and the environmental footprint of companies. The safety of food could be guaranteed by the adoption of consumer food scanners that analyse a dish through spectroscopy and provide consumers information on its composition (ideated by the Israeli star-up Consumer physics, which raised 5 Million through crowdfunding and Venture Capital funds). Furthermore, “Philips Design” proposed in 2009 the concept of “Diagnostic Kitchen” that

perfectly matched with the trend towards enhancing transparency for consumers, by designing a scanner that would state the effect of a new meal on the body in advance. Sourcing decisions could be more sustainable by adding yield-forecasting and risk-assessment tools to agronomic modelling systems to evaluate the influence of hyperlocal weather predictions on a particular plant's yield and soil circumstances. This would enable world-wide food producers to not only choose the finest regions and countries to source from, but to acclimatize their sourcing routes to weather challenges too (McKinsey&Company, 2016).

Environmental footprint management could be addressed through the use of means to trace food products back along the chain of production, from fields to shelves. Through the scanning of a code on packaging, users will be connected to a website that offers a thorough analysis of each stage and process experienced by that good's precise manufacture batch.

On the other side, less developed countries or emerging economies could exploit digital's potential in the food chains through interesting advancement such as precision agriculture, agriculture-focused payment systems and supply chain efficiencies.

Precision agriculture refers to farming management that measures and analyses the fields and crops' necessities. By enabling farmers to apply personalised care and manage water more efficiently, it enhance production, better economic efficiency, and reduces at the lowest possible level waste and environmental effect. As stated before, two technological trends are impacting it: big-data and advanced-analytics capabilities on the one side, and robotics—aerial imagery, sensors, precise local weather forecasts—on the other. Concretely, the start-up CropX ideated sensors that provide farmers systems to adjust irrigation to the necessities of their soil, while the Californian start-up Blue River utilizes computer vision and robotics to regulate the needs of every plants (McKinsey&Company, 2016).

Payments is a further area where digital technologies can improve food chains' efficiency.

For instance, the Kenyan Sokopepe offers a platform for trading agricultural products and its peculiarity is that it is able to connect small-scale companies to retailers and wholesale purchasers via mobile-phone messaging. A further Kenyan initiative, MFarm, provides up-to-date market prices through an app or SMS and links farmers with purchasers, delivering an assemblage selling tool for those ones too small to market to a bulky buyer by themselves.

Finally, supply chain efficiency could be augmented through the implementation of automated systems displaying the status, performance, and probable limitations of crucial equipment in real time can be used to improve the management of motor vehicles, thus improving delivery consistency and avoiding spoilage (McKinsey&Company, 2016).

Broadly speaking, digital technologies may have the potential to subvert the entire supply chain and influencing retailers by creating a bridge that could link consumer in a more directed way

to the producers of food, as short value-chains or direct purchases become values for consumers in themselves. The reduction in costs of transaction and the growing rise of e-business as mainly future feature of the food industry, might augment the consumers ' power, as a great variety of food products and producers of food might be made obtainable at a reduced cost (Ingunn Midttun Godal, DNV GL).

Further, social media generates a deep opportunity for open innovations, by involving customers in the development of a product. Keeping this in mind, much of the food purchases in the near future will be done through the use of e-retail solutions (online groceries) or through start-ups that through thorough apps deliver your desired food directly to your house.

Chapter 3 - Italy: Signs that signal a shift to these scenarios between local and organic food, sustainability and food-chain innovation

Objectives

The third chapter of thesis has the main aim that of introducing the main real signals (from the scenario of chapter number two) evident in the Italian landscape.

From the scenarios explained in chapter two, have been extrapolated the main trends that Italy is currently encompassing for the Food & Beverage industry, and that are referred to the Government policies in favour of shaping people's awareness toward eating habits that could encompass an healthier life-style (healthy diets), consumers ' preference for local, organic food and healthy and personalized diets (tailored to their physiological needs, nutrition requirements), the technological advancements that are shaping the agri-food chain with strong attention for the "clean labels" (farmers can become better off) and the extreme modern concern for more transparency from producers and traceability in the market as guarantee of safety and sustainability (consumers call for an innovative economy where technology could help getting to know what they eat and thus in get to know the story behind each consumed product).

The objective will be thus to understand whether the features of the scenarios can be visualized in the Italian panorama, their impact for the economy and society and whether companies in the Food & Beverage industry are responding to the new trends brought by the signs of the scenarios.

3.1 The role of Government in supporting healthy diets, business practices and nutritional incentives

Scientific studies demonstrate it: people's health is something that is built on table, on the basis of what usually people eat. Consequently, giving the right importance to a diet that is balanced and equilibrated is particularly important, characterized by the balanced consume of different nutrients. Eating is considered as one of the life's pleasures although for eating in a responsible manner, a correct dietary style is needed and strong efforts should be made to avoid unhealthy dietary components.

Nationally speaking, in the last years Italy witnessed to a strengthen of incentivization policies for organic markets that basically leverage consumes, even tough their role remain infinitesimal compared to the entire normative and programmatic body.

The principal action that was elaborated and currently promoted in order to incentivize the development of organic markets and to spread the health dietary culture is the "*National strategic plan for the development of the organic system*", developed by the Ministry of Agricultural, Food and Forestry Policies in 2016 with effects prolonged until 2020. This work was inspired by the Action Plan for the future of organic production in the European Union COM (2014) final of 24th March 2014, by which the European Union wanted to give a reference portrayal to sustain sector's growth.

The work was developed on four distinct area of operation, named:

- i. Development policies
- ii. Simplification
- iii. Research and Innovation
- iv. Controls and Surveillance

After a detailed elaboration of the proposals put on table for discussion, ten operative strategic actions were individuated, and all of them were deputed to define objectives and lead the strategy.

The objective of the national strategic plan under examination bases its foundation on the individuation of macro objectives of high profile shared along the whole agri-food chain and from the subsequent association of concrete actions and coordinated of initiatives of policy in the sector.

In fact, the general aim of the Strategic Plan is to augment the awareness of the organic food culture and to develop and strengthen the organic food system. In order to reach this important

objective, a consolidated relationship between national institutions and regional administrations is essential, where together coordinate the work with their tools to achieve the abovementioned objective. To measure the result (as depicted in the table below) of this new programme toward the development of the organic food system, two key indicators were taken into consideration for their easiness to be compared with the current situation: i. the increase of the biological surface, ii. the turnover produced by the organic market.

Table 1: Key indicators

Indicator	Unit of measure	Value on 2014	Value on 2020	Variation
Surface invested for organic activity	Ha	1.387.912	2.100.000	50%
Organic market	Mld	3,88	5	30%

Source: Mipaaf

To reach the expected results that the new programme should achieve, ten strategic operative actions (as stated in the precedent paragraph) were individuated and all of them are in support of specific objectives: i. the strengthen of the production phase, ii. the strengthen of the vertical relations, iii. the strengthen of the horizontal relations that will contribute, up to 2020, to the achievement of the general objective, that is, the development of the food organic system. Specifically, three strategic operative actions, one for each specific objective, will be presented (Mipaaf):

i. Supply chain policies

It is essential, according to this Strategic Action, to valorise the role of the Italian agricultural production through a better structuring of organic supply chains. It is necessary to put in place initiatives that could favour the aggregation in the production's world and stable relations with all the actors along the chain, from transformation to distribution, by means of the realization of specific associative forms (for instance, organization of producers) able to increase the trade of organic products.

ii. Organic in rural development plans

Particularly important is building behaviours that could foster the organic agriculture in the areas considered specifically vulnerable, as well as finding realistic solutions to balance all the

forecasted interventions in other fields that could slow down the development of the organic food system.

Concretely, in order to coordinate the progress for a growing organic market and other measures of interventions, several initiatives were put in place by Regions to convert people and firms to organic food, such as cooperation, consultancy services, investments in agricultural firms for young entrepreneurs. This initiatives operated by the Regions of Italy were supported by the policy for rural development of the European Union for the years 2014-2020, with the goal to face the growing economic, social an environmental problems of XXI century (Mipaaf). Often called “the second pillar” of the common agriculture policy (PAC), it is financed by the European Agricultural Fund for rural development (FEASR) for an amount of 100 Mld. In this line, Member States and Regions elaborate their respective programs of rural development for their territories taking into consideration specific priorities of the European Union and of their population. In this optic, the Italian Regions assignee part of these given resources to *Measure 11- Organic Agriculture* for favouring a strategy for the conversion and maintenance of the organic agriculture and amounted for this period considered at 1,7 Mld, that represents the 9.5% of public resources designed for the Rural Strategic Plans in Italy. The Italian Region that decided to invest more in organic agriculture was Calabria that destined 22% of their funds, while the Autonomous Province that chose to invest less was the Province of Trento with only 1.7% of its funds (Mipaaf).

iii. Organic food made in Italy and institutional communication

European rules for organic food labels point out the obligation to indicate on the label where the product comes from. The valorisation of Italian organic products could be easily implemented for those products that already have on label the obligatory reference to Italy, according to European rules. Operationally, it could be fostered the introduction of a distinctive sign, in order to recognize an organic product produced in Italy, in compliance with the actual European normative of organic and origin. As far institutional communication is concerned, it is imperative to communicate, through the MiPAAF, all the positive externalities that organic agriculture generate, thus conditioning the consumers ‘ choices in a positive way.

Another important programme, developed nationally by the Ministry of Health, is called “*Guadagnare Salute*”. This initiative were promoted by the Government to control healthcare costs associated with pure diets primarily, secondly it aimed at fighting health diseases produced by bad habits of life, such as excessive consume of tobacco and alcohol (Mipaaf).

This programme is focalized on communicating the message to Italian citizens that although they are responsible for their choices, the Italian government is responsible for creating the necessary circumstances for taking decisions that have a positive impact on people’s health.

Regarding the fostering of healthy food choices, this programme incentivises: i. healthy products promotion, ii. promote healthy consumption. In detail, this campaign asks for improving the food composition, where food producers should progressively diminish the total fat components, including sugar and salt. Policies for agriculture aimed at the incentivisation of fruit and vegetables trade should be implemented through reducing tariffs that limit their commercialization. Local traditional diets, rich of nutrient, should be valorised for its positive effect on health, and local producers should be fostered to maintain high quality standards. In relation to the augment of agri-food chain competitiveness, it should be fostered the creation of shorter food-chains that guarantee the access to organic food products in urban markets and of an efficient logistic that could facilitate the handling of particularly perishable food products. In order to promote an healthy consumption, this campaign aims at educate about conscious consumption, through delivering information to the consumer on the importance of the varieties of the traditional diet (that must be rich in vegetables, even organic farming) and that it can contain other foods from our agri-food heritage, to be consumed in a conscious way (Mipaaf).

3.2 Why do consumers prefer local, fresh products and personalized healthy diets: current scenario and strategies of a growing market

Italian's attention for what is brought on table is increasing. It not just a matter of food and beverages consumed, the focus is on the ingredients inside what is being consumed daily, in fact, according to the *Global Health and Ingredient Sentiment* (Nielsen), 67% of Italian population declare to be worried about the long-term impact that artificial ingredients could have on people's health; the 53% would be eager to pay more for specific food that is not made up by undesirable ingredients despite the fact that only the 37% would be eager to pay for something healthier but less flavourful.

In the last years the Country is witnessing a consumers mentality' change that think about food as source of wellness and decide more wittingly which food to select, with a growing interest towards healthier products. This necessity is driving toward new model of consumption, that see the average consumer to start preferring diets with low contents of fats and carbohydrates and avoid food with high contents of artificial colours, artificial preservatives and artificial flavours. Consequently, the behaviour that is currently developing is towards the single components present inside the food acquired products, with the vast majority of Italians preferring those producers and distributors that apply the maximum transparency on modality and origin of production of the own products.

In contrast to food' sophistication and as an answer to a call for authenticity, within the population is more and more evident a tendency for discovering again the nature and natural products. This tendency for natural products should be meant as minimal reduction of manipulations and interventions along the phases of the agri-food chain thus as an attention deputed to the sustainability of agricultural models. It is acknowledged that the notion of "natural product" coincide with the choice for organic food, produced by organic agricultural practices, thereby from an agricultural model that exploit the natural fertility of the soil and favour limited external interventions. Organic farming, in fact, promotes environmental biodiversity, minimizes the use of synthetic products in various stages of production, processing and storage, and excludes the use of organisms genetically modified.

The principal factors that drive the ascend of organic food consumption in Italy are product expansion, growing demand for high-priced and premium products, along with changing habits of consumers towards food. Consequently, consumers in Italy have initiated to put their attention on healthy food, thereby prioritizing quality over quantity, and preferring buying less but premium and natural food, as they also represent a sustainable and environmentally friendly choice. As stated by AnaBio, the association that represents farmers of organic products in Italy, consumers are eager to pay as much as 15% more for a product that is labelled as organic than for its standard counterpart.

This will to buy organic food is easily demonstrated by last year's dynamics, where the organic market proved to be a driver segment for the Italian Food & Beverage market. According to Nomisma (a consultancy Italian company for economic studies), organic food sales have reached 3,5 Mld € for the domestic market (+15% than 2016 and +153% than 2008) along with export data for organic made in Italy that is worth 2 Mld € and it counts for 5% on the total agri-food Italian export. Wholly considered, organic sales have overcome 5 Mld € (+9% than 2016 and +238% than 2008).

What is furtherly driving the ascend of organic food is its sale in supermarket chains (+16,6%, sales volume of 1.451 Mld, according to Nielsen) with +14% as direct sale in hypermarkets and +18% in common supermarkets and compared with the food & beverage growth in 2017 (2,8%), these numbers are sign of a driving sector.

A further relevant trend that is pervading Italy and consequently deserve to be mentioned, is the rediscovering and appreciation for local and regional food.

The tendency toward local and regional consumption refers to the relation between food and territory, where it makes reference to the proximity between the place of production and that of consumption of a product, as a guarantee of authenticity.

In a world that is becoming more and more linked, thus global, a search for a regional and local identity is emerging. Products' traceability is the new consumers' desire as the ethical outlook that encompasses organic food production and concern for animal welfare is growing. Furthermore, heavy is the role of media in displaying the benefits of local, fresh, organic and good quality food. Local food production is acknowledged to guarantee higher nutritional values when compared with imported food that suffered from lengthy transport times.

So therefore, in a circumstance so characterized, ideological movements ascend favouring the consumption of food produced in the vicinity, such as, for instance, the so-called "Zero-km expenditure" which fosters the trade and consumption of products characteristic of the territory, which must not travel long distances before arriving to the consumer.

Another local diets international movement with a strong presence in Italy is Slow Food, an organization founded in 1986 in Italy by the hand of Carlo Petrini that promotes local food and traditional cooking. Its scope is striving to preserve traditional and regional cuisine and encourages farming of plants, seeds of the local ecosystem. The further goal is to foster the sustainability of the local agriculture and in parallel it goes against its globalization along with fast food and industrial food production.

As stated by the previous viewpoint, consumption of local products is beneficial, as it contributes to ecological sustainability and to promote agri-food heritage regionally, as well as ensuring a fresh, healthy and seasonal product. The concept of seasonality is, actually, implicit in that of proximity. Furthermore, the search for local and seasonal foods pushes consumers to change their habits purchase, favouring experiences in which there can be direct contact with producers. The connection between the place of production and the place of purchase of a food constitutes in effects a further guarantee of authenticity.

Nowadays, by means of the Internet, Italian consumers can access to a variety of food products: from the artisanal local production to agri-food chains of a different Continent. The Global Brand-Origin Survey conducted by Nielsen in 2017, whereby more than 31.000 online interviews, has investigated the impact of "Made in.." on acquisitions' choices in the Food sector. The interesting result extrapolated from the survey regards fresh products, in fact, Italian consumers tend to prefer acquiring fresh food products nearby the place of origin such as fruits, vegetables and dairy products. The shift towards local brands could depend from different factors: being distort the story of a product or put simply, all is due to consumers growing' s affinity with local producers. The latter could be the most plausible solution as a greater and greater number local producers are entering the market through different channels, both online and offline.

In this context, the main trend that is taking place and that new food producers are immersing in, is food tech, and in particular, the healthy food delivery. Ready meals usually do not always have been chosen by people careful to healthy food. The idea that eating properly would embrace the reality of eat food ready yet, to conserve in the fridge and with a long conservation, and that it could also comply with the ingredients balanced composition, it would have been something unthinkable. Typically, what people associate to this kind of food are the words “comfort” and “rapidness” but with the awareness that they would have lost something in terms of savour, quality and freshness of the ingredients composing the meal. In the last year though, the thought toward ready meals has widely changed. Taking into account the new necessities of people that live a rat race and the acquire an increasing awareness and research for gourmet food and healthy, the major current producers in this field consequently adjusted their value business models, making it available, both through GDO and ad-hoc services creation, fresh ready meals without preservatives and immediately available to be consumed without further preparation needed. This trend is recognizable by visiting, for instance, the fruit and vegetables segment of whatever supermarket: in few years, ready salads, cereals mix and ready soaps surged at an incredible high rate. Producers in this sector start to be several and to provide much varieties that could satisfy the last food trends and to consumers’ request even more demanding: in fact, among all the offered products, is easy finding organic, gluten free, vegan food meals. Even in the frozen counter the segment of ready meals has evolved but remaining a little more anchored to the old canons and above all being not very convenient for an office solution. Gourmet Italia, is a great Italian example in the frozen counter segment that innovated to offer consumers an experience in accordance with the last trends. In fact, through this brand the company developed new frozen product lines that could be an answer to the new healthy styles and follow the rigorous canons of healthy food, thus utilizing only excellent food raw materials, natural and fresh ingredients to guarantee a “as-home” experience. Considering what it has been said until now, in the next years the country will witness to an incredible explosion on the ready meals segment, with different realities that will taste diverse receipts and business models able to serve in the best way that segment of people interested in eating properly (healthy) but with little time to get in the kitchen and cook unique and balanced dishes.

Even using this type of meals, it will still be important from time to time to go to the stove to not completely lose contact with the raw materials that become in fact an integral part of our body and build our well-being.

This phenomenon that is englobed in the wide sphere of food delivery, is answer of a tendency from aware consumers that look for an healthy style and quick market responses that could keep pace to their growing working paces.

In the last years different both international and national start-up are increasing their interest for healthy food and finding useful ways to bring the product directly to consumers ' houses. Thus, we could distinguish different typologies of healthy food delivery based on the adopted methodologies of delivery and preparations:

- i. Weekly box delivery of ready meals to heat: this methodology of healthy food delivery was the first to be introduced in Italy, from NutriBees. Through a sous-vide preparation and a conservation in a protect atmosphere, the ready meals last long periods and thus they can be delivered throughout Italy with an isothermal packaging. The final consumer must only conserve them inside the fridge and heat them before consumption. Compared to the other methodologies, this form could result more useful because whom wants eating well and it does not have time to cook, he could have all the ready meals inside the fridge without ordering time by time reaching thus a greater flexibility.
- ii. Daily delivery of hot meals through subscription: this healthy food delivery methodology is more similar to true diet: every day is brought home the necessary to follow a daily balanced diet with fresh products.
- iii. On demand delivery of hot meals: this form of delivery is probably the more spread: services that deliver home only one healthy meal selected for the day. It cost is generally more adapt to be methodical so less practicable in short periods of time and they are active services only in big cities.

The spread of these services is considered as welfare for the society because they help different typologies of people that otherwise cannot be eat better and maintaining a healthier style of life. The principal category of people that is revolutionizing the food & beverage industry toward this directions are Millennials. Also called Generation Y, its definition embraces all people birth between 1980 and 2000. These people, compared to precedent generations, are eager to spend more on healthy food and demonstrate to be more informed on what they eat. Their preference for organic food and attention to sustainability is growing along with entrepreneurial activities aimed at satisfy the demanding healthy needs of these new part of population. In particular, the generation of native digitals, pay much attention to product's quality and to all the nutritional benefits they can extrapolate from food products. It has been estimated that nearly 2/3 of them want to know more about food origin and food traceability and 77% of them is eager to exclude from diet everything bad for health.

The vast majority of Millennials put at first place the food of the region they come from that necessarily must be fresh and organic. Another important element that characterize this generation, is the notion that these young people do not have times and a balanced food rhythm: they avoid breakfast almost two times per week and they do prefer for rapid and practice meals.

Moreover, fundamental is the Internet connection linked to food by which, through App' use, they can order meals at their preferred times. Millennials are three times as likely to order in than their parents, and food delivery apps are now on average in the top 40 most downloaded apps in major markets (Forbes, Andrea Cheng). Generally speaking, vegetarian, vegan and gluten-free menus and dishes, and in many other health-related variations, are becoming more and more popular with food orders at home, as stated by the evidence that in the last year, healthy-food requests in Italy have jumped over 120%.

For instance, among the most ordered foods online in 2017 there are also fruit that - with five tons delivered between fruit salads, smoothies and mixed fruit - marks a 23% increase in the last 12 months and the salad (18 tons) , with a + 38% compared to the previous year.

Merit, in this last case, also of the numerous variations proposed: from the Chicken bowl with quinoa and avocado to vegetarian or vegan meatballs, from the famous Cesar salad to soups and the velvety ones.

Positive performances, then, record the centrifuged detox and energizing, which grow by 48%, and the vegetarian burgers that collect a 35% more orders.

For 41% of Italians, the choice of "healthy" food represents the opportunity to taste new or unusual tastes and ingredients, while 33% means to alternate healthy food with other greedy ones without giving up home delivery and for 18% simply receive good food. Finally, 8% consider it a valid system to avoid losing the diet.

Milan is the city where more healthy food is ordered and in 2017 it showed a real acceleration with a considerable 530% more orders; in second place Florence with 72% more, which precedes Rome with + 173%. Following Turin (+ 16%) and Bari (+ 36%), while Genoa saw double orders and Palermo almost (+ 46%).

Each territory, then, has expressed its preferences and, if in Bologna goes the Cesar salad, in Milan, the chicken bowl quinoa, in Turin the centrifuged and in Palermo the veggie burger (ItalFruit, 2018).

Food, technology and start-up. These are the main three words that are so powerful they are revolutionizing the food sector. Thanks to the Internet and the new technology introduction, the average consumer is able with much more simplicity and comfort to acquire, order, cook, consume and sharing food in a way that it was unthinkable in the past years.

Consequently, the changes brought by technology are throwing a challenge to the sector: finding answers that are useful and appropriate for pool of consumers more and more competent in a continuum (Marino, 2017).

Specifically, this trend is largely getting marriage with Millennials, in fact, is principally promoted by startupper that develop "value propositions" for their business that are adapt to

solve the concern of healthy eating and they seem to have captured the momentum by implementing the idea of digital food delivery, the new phenomenon that is taking action in Italy and around the globe. The case Foorban, for instance, is a fascinating example of a start-up created by three millennials (under 30). Foorban is the first digital restaurant in Milan, and the first food delivery able to control all the process, from production to delivery, in an intelligent way. The aim of the start-up is to offer to the largest number of individuals healthy flavoured foods, in the simplest possible way. Through a nutritionists and chef team, every week a different balanced menu is created, always maintaining the attention to organic and seasonality, and delivered to the consumer as fresh ready meals. Generally speaking, the market for fresh ready meals in Italy is growing: according to a precise research conducted by IRi, up to 2018, the abovementioned market registered a total turnover of 351 Mln Euro, with a growing rate that peaked at 11.4%. Again, the market for ready meals has acknowledged an incredible development with an increase of more than 140 Mln Euro in the past three years.

Thus, appetite for delivered food at home or at office is perfect for consumers seeking convenience that starve for time, despite the fact that a different point of view of the matter is emerging. In fact, some wonder whether this behaviour could definitely kill home-cooked meals and kitchens in the near future. UBS 'report "Is the Kitchen Dead?" point out towards this direction: by 2030 most meals will be ordered online instead of home-cooked and delivered from restaurants. Business models introduced by online technologies have disrupted the sector and the world could be at the first stage of meal production and delivery industrialization. In fact, the cost of cheap labour, drones delivering food and robots making salads, as an example, would amount to a sum that would be lower than the cost of home-cooked food or beat it on time terms. Kitchens would become growingly underused, and to respond to the desire of millennials new houses could be built as social, with shared accommodation and a common kitchen, where they could share their online ordered meals together, as it happens in most of Student Hotels around the world including Italy. Although home delivered food is on the rise, other factors could alleviate the progress of the beforehand scenario, like meal kits. For meal kits delivery is meant food delivery service that offer food box with weighted ingredients and often already ready, in order to start cooking rapidly gourmet meals. Its convenience is found on ingredients ' quality (freshness) and an optimal delivery service, without forgetting to keep up with other typologies of diets, such as vegan, vegetarian and gluten free. Through the indications inside the meal kit, it is possible to cook meals easily and with the guarantee to use fresh products as well as the satisfaction to prepare a meal by its own. Reasons for the success of this new way to think about food are several: they are an alternative to look for fresh ingredients to consume at home and the same time optimizing free-time, cooking meals that are

healthy for the mind and the body and that otherwise, with current work-paces, people would not have the time to cook. Consequently, it is acknowledged that they represent an useful service for the modern consumer, that has little time to cook or to personally invest in looking for healthy ingredients to benefit his health. In Italy, the piedmontese Fanceat represents an innovative start-up moving in this direction, in fact it offers everything is needed to cook gourmet meals, rigorously following the roots of the Italian kitchen: local ingredients and quality. Nowadays it is difficult to understand if the meal kit trend will grow in the future or whether its future will be negative: a lot of doubts are still present, such as the unsustainable packaging or the excessive cost but for sure, this innovative service has all the possibilities to be improved.

The meal kit argument is the springboard for the introduction of personalized nutrition. The self-chosen diets are an incredible growing opportunity and fundamental for both old and emerging food companies because consumers want more and more tailored diets. Personalization, for them, means taking again the control, to feel more protagonists in the definition of healthy habits. The growing awareness that diet is a personal matter, and it is increasing the idea that just one diet recommendation for everyone is setting. According to Mellentin, the industry could exploit this trend in three different ways: the first one, refers to the notion that companies and start-up may create a brand portfolio, realized to satisfy the needs of different diets and of consumers' preferences. Secondly, investing in a tailored approach that could support and offer healthy tailored advices. This means creating collaborations with public or private entities that offer diet consultancy. Finally, they should invest in e-commerce, as several start-up are doing yet, to reach consumers 'niches (FoodExecutive).

Apart from industry' motivations in pursuing these possible business models, there are several further reasons around the preference for a personalize nutrition, and thus the fact of not having to do the shopping and cooking but to receive dishes ready to be heated leads to a series of consequences useful for following a diet (Nutribees, 2018):

- i. Not doing the shopping you avoid buying additional products for pure gluttony (e.g. biscuits)
- ii. Having already the dosed portions you have a "physical" imposition of how much you should eat without the possibility of adding "a little more" of that ingredient.
- iii. All dishes are ready according to the indications of the nutritionists who pays a lot of attention to maintaining a low level of salt, sugar and on the other hand to use whole grains and "good" proteins such as bluefish, white meat and vegetables (Nutribees, 2018).

Concretely, several start-up in the years and especially recently, have emerged offering personalized food services, based on balanced diets prepared directly from professional nutritionists. To mention some of them, in the Italian portrayal are distinguished Nutribees, Diet-to-go, Feat Food, as an example. All of them are linked for the notion that they strive to offer a nutritional service for the demanding healthy needs of consumers, that are acquiring even more awareness of their health status. Practically, they operate, thus provide and customize the service, through the app the service that delivers the weekly supply prepared by a chef in collaboration with the nutritionist: it begins with the collection of customer data (through online testing), from the study of its food needs to the development of a personalized menu. All that remains for the user is to sign up for a subscription to receive dishes delivered in a vacuum and made using innovative technology that allows storage at controlled temperatures. The recipes are coordinated with a reference nutritionist who studied dishes that are generally complete and that comply with the Mediterranean diet: they almost always include an integral cereal, a protein (fish, white meats, legumes) and a vegetable, according to the logic of the single dish (GamberoRosso, 2017).

This is why the service is aimed not only at those who want to respect the diet without the task of organizing pre-arranged meals and spending, but also for those who want to experiment with a balanced and healthy table without being in the kitchen. And the menu usually also includes vegetarian and vegan dishes, or proposals for allergy sufferers, as well as a section of healthy snacks designed to break hunger (dehydrated vegetable chips, rice bars, herons, mixed toasted seeds, fruit bars, most of the times). In short, everything you would want from a nutritionist, but at home (GamberoRosso, 2017).

3.3 Innovation of the agri-food chain: shorter food chain and clear and clean labels

Logistic and distribution are two key arguments that are in the spotlight. Despite the fact that to food world are commonly connected concepts such as quality and typicality of the products, nowadays it has become clear that because of globalization that enhanced competition, to be a winner in the national and international market, it is fundamental playing not only on local and quality, but also on the efficiency of moving goods at the lowest possible cost. A match where too often Italian agriculture enterprises loose compared to international candidates at success. The Italian association Federalimentare and the prestigious Sda Bocconi conducted an analysis to obtain a current photography of the Italian situation on the agri-food transformation sector: the food industry in Italy is made up by 120 Mld on total revenues and counts more than 400.000 employees. The main problem that small enterprises in the agri-food sector have to face is the

low selling power they have compared to the logistics operators, that result to be even more aggregated and concentrated, thus augmenting their contractual power. The strength of the latter, that are able to concentrate huge amounts of activity, win against the fragmented strength of the agri-food sector, being thus able to obtain more advantageous contractual conditions. If the agri-food chain was less fragmented, costs would not increase so disproportionately and would be fairer. More efficiency and transparency when it comes to talk about distribution costs and margin for farmers. Here come into plays the long and intense concept of short agri-food chain, an social innovation that would enable to establish fair contractual powers among actors along the food value chain (Zaghi, 2009).

The debate on the short chain, more than twenty years after its start, has entered its maturity stage. Originally, at the end of an era of strong evolution of the food system, first led by the food industry and then by large-scale organized distribution, short supply chains were interpreted as 'resistance' by weak subjects, first of all farmers, threatened by marginalization (Van der Ploeg et al., 2000; Brunori et al., 2017). At that step, the short chain signified for small farmers, and particularly for some pioneers, protagonists of a first wave of 'return to the earth' that began around the 80s, an instrument for the re-appropriation of shares of value added that in the course of modernization, understood as a tendency towards specialization and standardization for the purposes of market integration, they had been eroded by strong players in the supply chain (Brunori et al., 2017). The opportunity of disengaging from the dominant technological and market trends has favoured the development of systems of innovation from below that meet emerging needs of consumers, such as the quality of products linked to their origin, respect for the environment and the ethical principles of production and distribution (Brunori et al, 2017). Gradually, short supply chains appeared as food networks that constituted an alternative, commercial channels appropriate for the marketing of high value-added differentiated products, able to remunerate better the family business and at the same time communicate to consumers values (rural culture, the relationship with nature) that conventional systems were not able to communicate. From the study of short supply chains as 'peasant resistance', this paragraph wants to highlight the study short supply chains as an example of potential for triggering a social economic transformation (Brunori et al, 2017)

If the "alternative food networks" have grown, maintaining a robust conceptual component and the radicalism of the origins, basing its focus on innovative organizational forms such as joint purchasing groups or community supported agriculture (Fonte et al 2011, Brunori et al. 2012), the success in Italy and at the international level of Slow Food (Leitch, 2003), has transported many of the concerns dear to the aforementioned Networks in the institutional treatise. The incorporation of these issues was considered by Slow Food, a movement focused on the

enhancement of biological and cultural diversity. Under this last facet, the action of Coldiretti has contributed to the further legitimization of short supply chains also through a decoupling of these from the other founding elements of the "alternative food networks", and in particular from organic farming (Brunori et al, 2017). With the movement of Campagna Amica, for instance, which today has a very dense network of farmers' markets and points of direct sale throughout Italy, the issue of convenience for consumers and a 'win-win' relationship between consumers and producers has become central (Brunori et al., 2017). Through Campagna Amica, 'alternative' farmers in conceptual terms find in the short supply chain a market suitable for a small business model, whose advantages are linked to the decrease for the farmer of formal duties related to the access to markets (for example it is not necessary to formalize an association) and at the same time to be able to benefit from the visibility linked to the Campagna Amica brand (Brunori et al., 2017).

Conversely, faced with the increasing sensitivity of consumers towards food, the conventional system has been changing its business models, accepting the challenge of quality and diversity, in many cases incorporating messages and organizational models introduced by the short supply chain (Brunori et al., 2017). From the success of Eataly to the initiatives of the main supermarkets for the promotion of local products, from the entrance of the industry seed in the organic and "traditional wheat" market, without forgetting the recent purchase by Whole Foods from Amazon, it is clear that the conventional system has now accepted the challenge of sustainability as business strategy (Brunori et al., 2017).

Nowadays, the short supply chain is interpreted as a 'niche of innovation', capable of introducing elements of innovation from into a system otherwise blocked by the modernization paradigm, and therefore potential object of support policies aimed at system innovation (Seyfang and Smith, 2007; Brunori et al., 2008; Brunori et al., 2017). It is no coincidence that support to the short chain is, in the most recent strategic framework for rural development, explicitly mentioned among the possible priorities of the rural development plans (Tarangioli, 2012, Brunori and Bartolini, 2013; Brunori et al., 2017).

One of the striking aspects of the short food chain is the possibility to create a different approach based on disruptive production system and distribution system: from one hand, the local product is reassessed disentangling it from the logic of industrial production, whereas on the other hand an important link between producers and consumers is built, getting rid of long intermediation chains that augment the price of the products without increasing the "value" delivered to consumers. The travel that food products (fruits and vegetables in particular) must complete, negatively impact on product's freshness and entails lost on important food nutrients. Consequently, short food chains are a solution to these issues, in fact, they allows a consistent

save on the final price of the product. A short food chain can be realized through four principal ways:

- i. Direct company selling
- ii. Collective selling where producers meet
- iii. Consumers' organizations that form purchase 'groups
- iv. Home-delivery of fresh products

This impulse is generating the birth of different innovative start-up ready to exploit the innovation in the agri-food chain, deputed to the short food chain sustainability in the long term. The principal characteristic of the short food chains is to be highlighted by the regret of the principal features of traditional agri-food chains, that is, extremely exploited productive capacity, industrial organization and standardization, to favour instead aspects such as quality, product origin and product's naturality. Thus, the short agri-food chain is an agri-food policy that abandon the productivism approach to encompass that of sustainable development. Italian food 'system is thus changing: actors at the top and at the bottom of the value chain are approaching, bringing social positive consequences. Firstly, a direct relation is built between producers and consumers. If in the long chain these figures seem far and anonymous, local markets give rise to immediate and personal relations, all surrounded by a shared space. These relations can contribute to the creation of a community of producers and consumers, that tend to develop a social system focused on food ' value.

At economic level, the surge of short agri-food chains is seen as an answer difficulties encountered in the traditional agri-food chain such as low revenues, demand instability and impossibility to directly determine the final price, role deputed to intermediaries. In sum, short food chains realizes when producers and final consumers become aware of having the same objectives, that can be reached by creating new opportunities in order to strengthen local food networks (FondazioneSlowFood)

Whether for pure survival or for diversification strategies of its own offer, direct selling in the short food chains context signifies a chance to guarantee a secure income or to increase and supplement that deriving from primary production (Aguglia, 2009). For instance, there is the opportunity to find a commercial outlet for products by companies located in marginal areas or small producers, such as those who grow for self-consumption, which sporadically has surpluses to sell or increase the value added of primary assets for those who also implement a transformation activity (Aguglia, 2009). Economically speaking, the physiognomies of seasonality and territoriality that differentiate direct sales allow savings in terms of production

costs. The possibility to respect the natural cycle of the seasons allows to limit the use of the necessary energy. With the sale of products on a local scale, long-distance transport is avoided, thus saving costs of storage, packaging and fuel (Aguglia, 2009).

Advantages on the farmer are studied by (Bigi, 2005) and illustrated as higher revenues, the stability of demand, the possibility of directly affecting the price. The absence of intermediation have a key impact on the price factor, so much so that products channelled via direct channel are usually cheaper for consumers than those offered by old-style channels (Aguglia, 2009).

All at once, this saving for consumers corresponds to a possibility for the producer to obtain a remuneration deemed more adequate than the production factors used and to re-appropriate a part of the value that is usually lost along the various steps in the supply chain. Also, it is likely to guarantee transparency on the price formation that the consumer can evaluate, which becomes complicated in the case of supply chains with numerous intermediaries (Aguglia, 2009). In sum, short food chains is a concept that if implemented allows to small enterprises to create independent chains from GDO. Cutting off some intermediate passages between producers and consumers (distribution), it becomes easy to create something new, thus a new profound relation between the agricultural and urban world.

Certainly, also as a result of the economic crisis, over time the one linked to savings seems to be making space between the dominant motivations (Aguglia, 2009).

There are several features that can attract consumers to direct channels and furtherly, there are also those of an environmental and socio-cultural nature. Always from abroad comes the expression that has now become part of our common language of "food miles", that is to say of food "at zero kilometers". It is an indicator used in the Anglo-Saxon countries to calculate the environmental impact of food, based on the kilometers travelled from the place of production to the place of consumption. Attention to this aspect allows to attribute a connotation of environmental sustainability to food expenditure (Aguglia, 2009). Another contribution to environmental responsibility derives from the lower impact of direct sales with regard to the elimination of waste and residues connected to the use of the packaging required by modern distribution. Moreover, often the direct sales channel becomes the ideal tool for the diffusion of organic products and integrated agriculture, obtained by definition with less use of chemical inputs (Aguglia, 2009).

As stated before, an important phenomenon that is fortunately growing in the Italian panorama is the increasing concern among young entrepreneurs for this trend. These ones, having understood the benefits that the short food chains could offer in terms of business and sustainable development, are the main promoters of new business activities that conjoint the new digital business models of Millennials ' Era with short chains principles.

New food start-up in the Food & Beverage sector are simply following the necessity of consumers to eat healthy, fresh and local, so entrepreneurial activities augmented incredibly in the past years. Consequently, the first online platforms to service producers and consumers have birth, to join offer and demand in a one unique place, incredibly reducing intermediation costs. Consumers, by establishing a direct contact with whom produces food, could become the ring of conjunction between environment, farmers' wellness and relative costs.

This triggered trend aim at solving one principal problem that heavily hit players in the food market, where consumers result as victim: asymmetric information along the agri-food chain.

When the optimal output have not been reached among parties, a market failure exists, and among the main causes of it, asymmetric information is the most plausible. In fact, it occurs when the parties in a transaction are not similarly informed. The agri-food sector is particularly exposed to market failures as lack of information on price, safety and quality are present along the chain, from producers to consumers. Possible solutions to contrast asymmetric information along the food chain consist in acquiring information, even though this action implies expenses that augment in parallel with the level of accuracy (Minarelli et al.). Another solution would be to implement vertical integration or through contracts or finally through adoption of food standards, insurance and certifications guaranteed by third parties (Minarelli et al.).

The agri-food chain can be divided into some stages as agricultural production, processing of raw material, industrial transformation, distribution, consumers (Stringer et al., 2007). Thus, the abovementioned solutions could be allocated in different steps of the chain to find a solution for the market failure. However, this solutions demonstrated to be only partial and incomplete on solving the problem (Minarelli et al.)

This is the reason why, as stated before, business models that could prevent market failures have birth, and, for instance, Direttoo is an example. In fact, the latter is an Italian start-up that was able to reduce the length of the agri-food chain (consequently, reducing asymmetric information between producers and final consumers) through an online platform where consumers could be better informed about producers and their products by establishing a direct contact with them thus removing all the intermediate stages of the chain (this case will be explained detailly in the following chapter).

As far as agri-food start-up is concerned, Italy ranks third at global level for new start-up density linked to agri-food and sustainability, where only Israel and Spain rank higher. However, the average funding these start-up can obtain is below the average (300.000 \$) whereas the global average is 2.4 Mln \$, thus the new entrepreneurial activities struggle to reach economic stability and an optimal scalability point. In the meantime, successful cases can be seen for those start-up that looked for improving the integrity of agri-food chain and passing at more responsible

ways of production and consume (Pinton, 2018). Furthermore, those that follow sustainable objectives, beyond being useful in generating product and process innovation, are protagonist in bringing ahead business models able to fight negative externalities in the economy and society, implementing company's activities able to generate positive effects on environment and society as well. The most common business model among young entrepreneurs that undertake entrepreneurial activities is the one referred to the development of innovative solutions in order to maximize efficiency in resources utilization (38%), followed by the ones connected to structural changes of the supply chain for short food chains models (27,5% of start-up involved) (Pinton, 2018).

Pointing toward this direction, short-food chains are seen as a factor of innovation for the changing future and a factor or re-equilibrium for the entire system. First of all, short food chains' commitment in improving system' sustainability will be greater also compared to what long agri-food chains can offer. This assertion could imply that rigorous system of performance measurement could be adopted to understand their effectiveness in enhancing the welfare of farmers and consumers (Brunori et al., 2017).

Secondly, short food-chains will play a major role in shaping urban food systems. Vital is the consolidation of the latter as even more people will move to urban areas in the future. Government's policies will need to face emerging macro themes such as the relation between food and nutrition, food waste and including third parties for food responsibility (Brunori et al., 2017).

In the near future, cities will be the environment for the change. When it comes to study macro themes as those ones bounded to environment, culture related to food, health and competitiveness of production systems, cities are more adopted to their handling. On this thought, short food chains could represent a crucial element (Brunori et al., 2017). By choosing the fresh production compared to the one that has been transformed and proposing a tailored communication between farmers and consumers and stimulating the interaction among consumers, short food chains strengthen the building of sustainable styles of consume. As an example, the set up of new business models able to disentangle the long food chain in the food market where otherwise a GDO would prevail, will guarantee freedom of choice to consumers, exposing them to new product lines and reducing asymmetric information compared to other tradition channels (Brunori et al., 2017).

Furtherly, the presence of a consolidated short food chain in urban areas will be the tool to foster farmers' participation to urban policies on food, triggering synergies and collaboration for the sharing and realization of public scope (Brunori et al., 2017).

A major trend that is now prevailing along with the ones illustrated and explained in the precedent paragraphs, is referred to clean and clear labels.

Nowadays, consumers especially in countries defined as “industrialized”, are increasing their concern about information on methods of production and also the same ingredients (components) of the food products that they are used to eat, and much more of how they had been in the past thirty years (Asioli et al., 2017).

The perception about the methods of production has changed, for instance, conventional agriculture is thought as less natural than other forms, whilst some food ingredients are not considered anymore as components of a balanced and nutrient diet, because perceived as “unhealthy” or they have lost familiarity (e.g. artificial additives) (Asioli et al., 2017). This mentality change triggered into consumers’ minds is named “clean label” trend, and has driven the change in communication that the food industry and thus the companies that makes it had to comply with to respond to the demanding needs of consumers, that wanted to know whether a specific ingredient or additive was not inside or if the food was produced using a natural production method, that is, organic agriculture (Asioli et al., 2017).

When it comes to define what is a clean label, several definitions come into play. A common definition that englobe all the different interpretations has not been established yet: as an example, one can refer to Michael Pollan, that in his famous book *In Defence of Food*, defined what precisely consumers should avoid:” *..eat anything with more than five ingredients, or ingredients you can’t pronounce*” (Pollan, 2008;Asioli et al., 2017). Shifting the attention to a more precise illustration of the definition, Ingredion (2014) indorses to consumers that “*a ‘clean label’ positioned on the pack means the product can be positioned as ‘natural’, ‘organic’ and/or ‘free from additives/preservatives’.*” Moreover, the same author proposes that food producers “*using a ‘clean label’ positioning means using ingredients that are generally accepted by consumers – those that they might find in their kitchen cupboards. The ingredient list should be short, simple and feature minimally processed ingredients where possible. It should not include names that sound like chemicals or e-numbers.*” (Asioli et al., 2017).

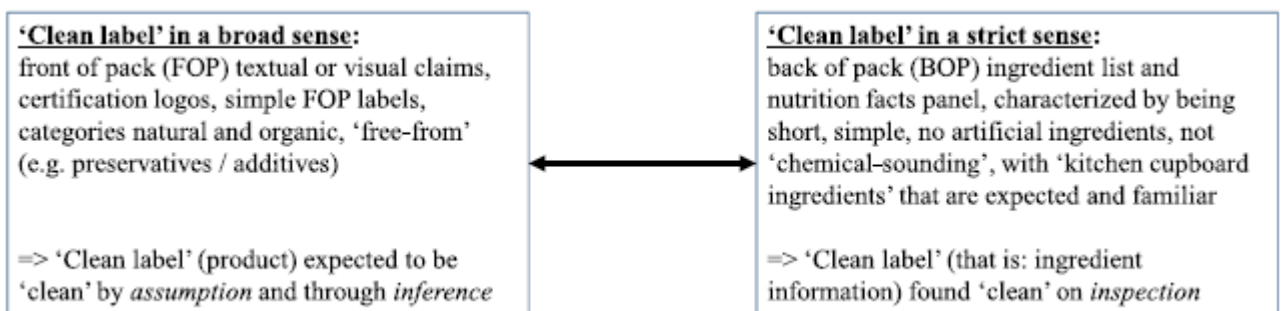
Furthermore, Edwards (2013) describes a clean label “*by being produced free of ‘chemicals’ additives, having easy-to-understand ingredient lists, and being produced by use of traditional techniques with limited processing.*” (Asioli et al., 2017).

The reported definitions are certainly conditioned by subjectivism as it might depend on the familiarity that consumers have with certain products, thus their ingredients and methods of production. According to (Asioli et al., 2017):”*...the above mentioned definitions or interpretations also show that some authors might describe clean label as if it links directly to*

certain food categories or ingredients, while consumers' perception as resulting from the communication on the package (the nutrition label, or any other cue) in interaction with the consumer's processing and individual preferences, is the underlying key to the trend."

Normally, consumers seek information about a specific food product on the front-of-pack or on the back-of-pack. According to the FOP (front-of-pack), consumers assume that a product is a clean label by means of assumption (textual or visual claims or logos) and these are defined as clean label products in the *broader sense* (Asioli et al., 2017). On the other hand, through BOP information, consumers define a product as clean label with inspection by looking at the ingredients that compose it and nutrition facts. These food products are both expected to be familiar with consumers and find its definition in a *strict sense* (Asioli et al., 2017). Below, a graphic representation of the argument:

Figure 17: A proposed definition and concept of clean label



Source: Asioli et al. (2017)

The figure depicts and explain the two proposed definition of “clean label” proposed according to Asioli et al., 2017.

According to the thoughts of Augusting et al., 2016 and what has been reported by Asioli et al., 2017..:”*Overall, the clean label trend emerges driven by factors such as modern health worries and concerns related to modern and high technology processing, perceived risk and skepticism towards certain ingredients, processing techniques, but also lack of trust in regulations. It appears that certain advantages of food processing for health and sustainability might likely be overlooked by consumers.*”

In this optic, relevant seems to be what has been stated by *Frewer et al., 2011*: policy makers and food processors should be engaged in consumer education regarding determined ingredients that could be taken as misleading for their health. Again, they would necessitate to obtain

greater consumer trust in protocols and guidelines and food production processes in response to the features that shape the clean label trend (Asioli et al., 2017).

According to Asioli et al., 2017 that incorporated in his assertion the thoughts of Rollin, Kennedy, & Wills, 2011, policy makers should point toward *"the creation of measures that allow prices for clean label to decrease, so that all groups of consumers can afford such products, given price appears to be an issue across all categories. Consumer understanding and acceptance of technologies yet appearing unfamiliar, but providing consumer benefits needs to be understood and tackled."*

Another great trend for Italy is clear food labelling. Consumers have no time to dedicate but want at the same time make the best purchases in the fastest way. Clear labels respond to this necessity by furnishing information that is quite easy to detect and to read. Particular attention is given on nutritional information that should be easy to be understood so that both children and adults have the possibility to make the right choice when it comes to define what is healthy and what is not (Lorkins, 2018).

Millennials in particular, are considering to acquiring more information than ever when it comes to consider the food ingredients. They state the desire to get to know more than the typical clean label claims of front of pack thus seeking information on sourcing of ingredients and manufacturing process. They seek the story behind the product and usually display rigid constraint for what they will not be eager to accept their food (trulyfoodgoods, 2017).

Given these demanding needs, consumers and retailers demand themselves how they could be more effective in building efficient packaging communications. Based on clear labels case's history, communicating the message on clear labels can be difficult because as assumption, chemicals names that are complicated or difficult to pronounce are categorized by consumers automatically as unhealthy. But consumers are certainly not the ones that look for perfection in a product name, they seek for transparency. Probably, producers should focus on explaining the reasons behind those ingredients, consequently leaving consumers to decide for their comfortable purchasing (trulyfoodgoods, 2017).

For sure, transparency in labelling is not only matter of niche products and the natural sector. It is a trend that is pervading industry's demand and now is essential food industry's adaptation to these demands in their development of product, processing and packaging (trulyfoodgoods, 2017).

Food labelling represents an argument of strict relevance in the Italian panorama. The theme is particularly important for all those commercial operators, especially for those in the European

Union, that constitutes one of the principal market at global level for the food & beverage sector (Bird&Bird,2018).

The interest for this theme emerges from the harmonisation, wanted at European level and put in place from the EU n. 1169/2011 Regulation regarding the furniture of food information to consumers.

This Regulation establish in fact the general principles that each Nation has the obligation to adopt concretely, despite the fact that each State will be free to decide on the matter of how to apply it (Bird&Bird,2018).

Generally, it exists one main concern to consider with the introduction of the new legislation, that is, the Art. 26.3 of the Regulation, that gives precise indication of what precisely and furtherly (respect to what has been written yet) must be indicated on label. Specifically, the Art. 26.3 establish that what will have to be written on label will be, as extrapolated by Bird&Bird, 2018, *“the place of origin of the primary ingredient of a food in the case it is different from the country of origin of the same”*.

Again, as stated by Bird&Bird, 2018, *“Pending the implementation of EU legislation, Italy has presented and approved several legislative decrees specifying the methods of indicating in the food label of the place of provenance of primary ingredients such as milk (Legislative Decree of December 9, 2016), rice and pasta (legislative decrees of 26 July 2017).*

A draft of the regulation regarding the “implementing legislation” that regulate precisely and in detail the indication of where the primary ingredient of a food (in food labels) comes from has been prepared, and ready, according to the draft, to be applicated from the 1st April 2019 (Bird&Bird,2018).

According to it, this proposal seems to be in line with Italian disposition pronounced on the matter, and *“establishes the obligation to indicate the place of origin of the primary ingredient of a food, where it is different from the place of provenance of the finished product (for instance, it will be necessary to indicate that the wheat used to prepare pasta produced in Italy comes example, from a non-EU country)”* (Bird&Bird,2018).

The regulation that the European Union is striving to make it approved as soon as possible to *“preventing misleading food information which implies a certain origin of a food, when in fact its true origin is different”* or to guarantee that *“Those rules shall ensure that such information is sufficiently precise and meaningful”* or again to ensure that *“The relevant indication should ensure comprehensible information to the consumer”* as explicitly written in the draft stating rules for the application of Article 26(3) of Regulation (EU) N° 1169/2011, present two important limitations, in fact it excludes is application in two specific contexts, as indicated by Bird&Bird(2018):

1. *“Foods designated and protected by Geographical Indication”*
2. *“Foods distinguished by trademarks registered in the EU as required by Directive 2015/2436 in which reference is made to the geographical origin / origin (e.g. which bears an Italian flag or with Italian-sounding names, etc.)”*

In reference to the second point of the limitations individuated in the draft prepared by the Commission Implementing regulation, it has aroused a lot of critiques in Italy.

Specifically, the second point could mislead the consumer regarding the origin of a product, because it has been highlighted that thousands of products have been registered with Italian-sounding brands, thus misleading (or with brands that make reference to Italy) or food products which the primary ingredients it is not even remotely from Italy, nor is Italy or EU present in the development chain of that product (Bird&Bird, 2018).

In the meantime, with the aim to fight “fake food” and defend people’s health, protect the economy, fight speculation and defending the Italian agriculture, Coldiretti, in collaboration with Campagna Amica, has launched a project to recover as much approval as possible from population (through personal signs) against the new regulation that will find application on 1st April 2019.

As it has been reported by the famous Panorama Journal and so stated by Coldiretti :” *the Commission would have missed the opportunity to fight fake at table with a transparent label that obligatorily indicates the origin of the ingredients used in all foods.* ” (Cordasco, G., 2018)

In fact, what principally is contested is the lost opportunity to increase transparency at market level, considering the fact that, as defined by Panorama *“the new label discipline will not apply to Dop, Igp and Stg foods, nor to those with a registered trademark which, by means of their brand or with graphic signs, already indicate the origin of the product”*.

As clearly defined above, the provision leave a lot of doubts regarding its interpretation, spreading uncertainty among whom live, as Italian producers, to offer the best possible fresh and clean products to consumers, differently from the fake ones from abroad (UE or Extra UE). Because of it, the European Commission contrary to its pre-fixed objective in considering the regulation, is, in approximative way, leaving without modification the asymmetric information between producers and consumers. The latter will find the same level of difficulty in detecting the real products from the fake ones and, as stated by Coldiretti *“ this constitutes the opportunity to promote multiple disputes and reduce the expectations of transparency of consumers”* (Cordasco, G., 2018).

Recently, of important relevance, the text concerning the organic production and labelling of organic products has been published in the Official Journal of the European Union.

The new EU regulation No. 2918/848 concerning biologic agriculture that has been approved by the European Parliament and the Council of the European Union, will find application from the 1st January 2021 and in legislation terms, it abrogates the Reg. (CE) n. 834/2007.

As stated by the new regulation and summarized by Suolo & Salute, 2018, the regulation aims at achieving:

i) High quality of organic products

- *Rigid and contamination-based controls throughout the supply chain.*
- *All products imported from non-EU countries will have to comply with EU standards.*

ii) Increase organic production in the EU

- *Increase the supply of organic seeds to meet the needs of farmers.*
- *Mixed farms to encourage production: farms that produce both conventional and organic products continue to be licensed*
- *Easier certifications for small farmers*

iii) Avoid contamination by chemical pesticides or synthetic fertilizers

- *Precautionary measures: growers and other operators in the supply chain will be obliged to apply a series of measures to avoid contamination;*
- *Member States that currently apply maximum thresholds for unauthorized substances in organic foods, such as pesticides, may continue to do so, provided they allow organic products from other EU countries that comply with Union rules, to enter in their market*

Despite that, the reform triggered discontent among parliamentarians, producers and representatives of the category. In fact, the same Coldiretti Association affirmed: *“the new rules, allowing states to maintain less restrictive thresholds for pesticide residues, cause serious damage to the biological sector, especially in countries such as Italy that have very high standards and it will be necessary to speed up the national label for Italian organic products”*, considering Italy comes out damaged from the European Regulation because it applies higher standards (Suolo&Salute,2018). Concluding, I would like to report something that is emblematic and that critically can, in my opinion, summarize the matter, as written by Rizzo Nervo, E., 2018:” *Paolo De Castro, the vice president of the Agriculture Commission for the European Parliament, has reported that “the outcome of the negotiations to give new rules to organic production in Europe represents a missed opportunity.”*

3.4 Technology applied to food: a question of transparency, food safety and traceability

I would like present this chapter quoting what has been said by David W. MacLennan, Cargill' Chairman and Chief Executive Officer:" *Innovations in technology – as well as policy, financing and business models – are essential to nourish the world in a safe, responsible and sustainable way. To improve global food security and nutrition, different players and stakeholders must come together to acknowledge gaps and share approaches for addressing them. We have an incredible opportunity to work together to use technology and innovation to create more inclusive and sustainable food systems*" (WorldEconomicForum;McKinsey & Company, 2018).

The globalization processes that are underway have demonstrated to have two important features in the past decades, that in sum, are consequences for the entire world. On one hand, globalization helps in reducing commercial distance among different countries, on the other, it generates to several issues connected to the origin and quality of imported goods, thus it becomes a national concern of public health (Marandino et al., 2018).

In the last years, several have been the food cases that have been brought to the general attention, and in particular, the theme linked to the food safety, thus prevention, safety control and organoleptic and microbiological quality of food placed on the market (Marandino et al., 2018).

Technology will play, in the future, a major role in guaranteeing the realization of a world in which every person could feel sure about what is going to eat, in terms of quality, ethic and safety.

Several emerging technologies will have the ability to redefine consumer behaviour about consumption and their diets so that they could significantly positively shape in a good way, food systems. For instance, the World Economic Forum, in partnership with McKinsey & Company, in its report Innovation with a Purpose: The role of technology innovation in accelerating food systems transformation, illustrated some possible technologies that will be applied from farmers and consumers: "*smart appliances and indoor or urban farming can enable consumers to eat healthy and affordable home-cooked meals with the convenience of processed ready-prepared foods. Embedded microscopic electronic devices such as radiofrequency identification tags and genetic markers, as well as hyperspectral imaging, could be the barcodes of tomorrow. Used in combination with mobile phones, they could put information regarding the authenticity, freshness, ripeness, shelf life and nutritional content of food at people's fingertips. Advanced analytics, along with nutrigenetics, could allow people to get nutritional advice tailored to their ability to digest certain foods, dietary and health*

needs, and taste preferences. Connectivity technologies such as social networks, peer-to-peer networks and online e-commerce could provide platforms to significantly influence consumption patterns and increase access to nutritious foods. Aware of the environmental and nutritional implications of the production and consumption of certain foods, consumers may demand that their food meet minimum sustainability and health requirements, information which can be made available to them by blockchain” (World Economic Forum; McKinsey & Company, 2018).

One important aspect of tech applied to food, is given by the new food trend called Nutrigenetics. Studying genetic variations to understand how people respond to nutrients is not only a trend, but a new field of study. Through quick DNA analysis by means of data analytics and progresses in computer, nutrigenetics aims at delivering a personalized nutrition, that is, the possibility to personalize people’ diets based on their genetic make-up. Through this new implementation, doctors and nutritionists will guarantee diet recommendations potentially bettering the people consumption’ path.

Some entrepreneurs decided to take advantage of this disruptive trend, setting up a new start-up named Habit. It is a personalized nutrition start-up based in USA (CA) that give consumers unique personalized food advices suited to their DNA. Simply, consumers collect samples of their DNA and send them to the facility adapt to their elaboration. Consequently, biologists, once data has been elaborated, provide a personalized diet plan via a mobile application (World Economic Forum; McKinsey & Company, 2018).

Another type of technology that is disrupting the market and that started from the rigid financial environment to approach the more savour food context, is blockchain.

The new blockchain technology, that found its primary application in cryptocurrencies, smart contracts and banks, transformed into a powerful tool to guarantee the growing need of transparency in the agri-food market (informamuse, 2018).

Thus, the aim of its application in the abovementioned market, is at building a direct bridge between farmers and consumers, based on values such as honesty, trust and transparency by following the product along its chain (informamuse, 2018).

Several causes bring the application of this technology from speculative uses to more ethic uses based on the aforementioned values such as climate change, overpopulation, low product remuneration, that together caused the collapse at global level of quality production (informamuse, 2018).

The huge quantities of product asked from the increasing population has created a rush among producers to serve consumers in the fastest way and mass products, losing in terms of quality, freshness and nutrients (informamuse, 2018).

Especially with Italian food, most of producers decided that the abovementioned global causes could justify their food fraud, by contaminating food and drastically reducing the safety of products. Here are reported some examples of food fraud in Italy (informamuse, 2018):

- i. Sophistication: it occurs when external substances are added to better appearance and fostering genuineness
- ii. Adulteration: both commercial and health issues are the main causes of this practice that consist of adding or subtracting own elements of a food.
- iii. Counterfeiting: with particular inventiveness, the original product is completely renovated by replacing the original substances with fake ones.
- iv. Alteration: because of long storage or due to not proper treatment perpetuated by the producer, the original product alters due to a degenerative phenomenon.

Blockchain is generally thought in the primary mean, thus, as *“a growing list of records, called blocks, which are linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data”*(Wikipedia).

Thus, how can it be implemented for having a positive impact in the agri-food market?

It is acknowledged that when it comes to Bitcoin, the virtual money, what is transferred is information on the owning of virtual money, while, when it comes to apply this concept to the food market, what is transferred among market participants is the information that refers to the production of a specific product produced by farmers, a process that is able to connect, even at long distances, all the actors that form the agri-food chain.

Suppliers, processors, distributors and farmers represent the nodes of the Blockchain (informamuse, 2018), that have the task to enable the creation of the product's history, registering and certifying all the passages along the chain, to build a transparent agri-food chain. Nowadays, it is particularly difficult to guarantee exactly the certification of origin of the products, especially if imported (informamuse, 2018).

Having these data, it would permit to track products and defining which have followed the right path along the chain and which are not in compliance with the law and that could be contaminated, that is, they could have been manipulated according to the aforementioned fraud scheme (informamuse, 2018).

Blockchain technology, through its innovativeness, would register *“a series of cards, impossible to tamper with, which guarantee greater levels of food safety, traceability and control over the entire food chain”* (informamuse, 2018).

For sure, this seems to be, contrary to the past, the right path to follow to create the chance for adding value to food products, given the huge quantity of Made in Italy asked by consumers. All the products that report “Made in Italy” on their label are symbol of excellence and they became as they are today thanks to magnificent savour and attention to preserve the incredible quality they can boast, and according to informamuse, 2018, from this context started “*the birth of quality labels issued by the European Union: PDO, PGI, PAT, SGT, DOCG, IGT, a series of brands that for the sake of redundancy no longer transmit signals of consumer confidence*”. Saving the quality of the products in each stage of the chain, that start from farmers (sowing and harvesting), to go further from conservation to transportation, and finally from distribution to consume, thus intercepting the date and place of possible contaminated components of the products, or giving the chance to consumer to exactly know the history of that product, guaranteeing values such as trust and confidence and safety in a world where the trade in counterfeit foodstuffs increases exponentially from day to day, would permit to return to the food sector, by means of a certified technology as Blockchain, the transparency and security that was deteriorating, due to human action (informamuse, 2018).

As stated by Pasqualotto, S., 2018, journalist for the Italian Journal Repubblica, “*For this technology to be really effective, however, it is necessary that all actors in the food supply chain are willing to share a series of information and thus be transparent. An attempt succeeded by the English company Provenance, which offered its blockchain-based technology to some operators in the fish supply chain who chose to stand against illegal fishing by providing reliable information on the fish they sold*”.

Consequently, three main advantages can be highlighted from the usage of this technology:

- i. The new Industrial Revolution (4.0) will bring, together with the Internet of Things, a new way for farmers to provide quality products, guaranteeing the Made in Italy and by monitoring the first life-step of the food product.
- ii. Obtaining data in real-time regarding the phases of the production, that start from transportation to distribution, in such a way that transparency and traceability of the product is guaranteed.
- iii. Using smartphones it has never been so useful: with a simple App, it will be possible, for the consumer, to track all the product’s history, discovering all the passages that the product faced to reach its hand.

According to informamuse, 2018, multinationals and PMI in Italy “*have already started Blockchain technology in their sector, from agricultural products to fish products, from milk to wine, from health to insurance*” because, as they explained, “*it is a technology that simplifies*

transactions by encouraging secure and transparent relationships between all the actors involved.”

An example of Italian success in this context, is demonstrated by FoodChain, the Italian start-up that exploit blockchain to guarantee transparency in the food sector, where Marco Vitale is the co-founder and the CEO. The objective is to allow the average consumer to get to know the story of the product, from seed to shelves (Moraca, S., 2018).

FoodChain is working to “write” the story of the products, augmenting the protections for consumers, in terms of transparency and traceability, making the product reliable at consumer’s eyes and authentic. The start-up was set up through a merge between two companies, Block and Kaboom and each of them contributed with intangible assets (know-how) to the new start-up.

By means of QR-code technology and a further application that until now is under development, it will be possible to make unique the information that each product carries on its code label, so that the consumer will obtain different and reliable information about the article (Moraca, S., 2018).

The technology that the start-up is promoting and that have created, collect all the primary data concerning the status of a product such as globalization, photos and video guaranteeing its origin. The process is implemented for each stage of the food chain, obtaining and enhancing a good level of transparency within it. After the distribution step, once the product will be on the shelf, the consumer will just have to use its smartphone to detect the QR-code to get access to the primary information of the product developed along the chain (Moraca, S., 2018).

The business model thus find its roots on the sale of unique codes and services, aiming at the integration with the information systems of each client company. The application of this technology, explains Vitale in an interview for the famous Italian Journal “Il Sole 24 Ore” will follow all the markets : *“where there is a need to optimize the supply chain and the exchange of data between the various players in the supply chain, up to the final consumer”* (G. Rus, 2017). Buying products thus become clever, and awareness is the first ingredient of intelligent spending. The technology will also enable to reduce the cost of frauds, that cost approximately 40 Mld Euro each year (Moraca, S., 2018) and, according to Harry Smit, Rabobank ‘s senior analyst, *“when the global transparency mechanism will start, companies will have to adapt quickly, otherwise the risk will be to lose competitive capacity”* (Interviewed by Moraca S., 2018).

Technology applied to food is not only about blockchain. Over the past decades, consumers increased their will of fresh food for their natural nutritive values such as flavour and taste

(Bansal et al., 2015). Consumers thus started to ask for minimally processed food, that is, "minimal processing" technologies shape food that allow to propose organic food products to consumers in which the alteration of organoleptic characteristics or nutritional impoverishment is minimized (AlceNero).

The purpose of minimally processing are several despite the fact that the general acknowledgement given to them is to allow a faster and quicker preparation of the food products. In sum, the benefit brought by the usage of this technology are: i. convenience in terms of meals preparation, ii. maintain freshness and quality of the product, iii. maintain the nutritive values of the product, iv. the processed method is less mechanized (Bansal et al., 2015). To give a clearer view of the concept, (Bansal et al., 2015) include them in the table below, as it is:

Table 2: The purposes of minimally processed food

Minimally processed foods
<ul style="list-style-type: none"> • Include all the operations (sorting, washing, peeling, slicing, etc.) that must be carried out before blanching in a conventional processing line
<ul style="list-style-type: none"> • Include value addition, such as chopping, husking, coring, low level irradiation, and individual packaging
<ul style="list-style-type: none"> • Maintain quality attributes similar to those of fresh products (i.e. fruits and vegetables) or similar to the products' characteristics when consumed (i.e. part-bread, cook-chill, cook-freeze, sous-vide, ready-meal)
<ul style="list-style-type: none"> • Include procedures that cause fewer possible changes in the foods' quality (keeping their freshness appearance), and provide enough shelflife to transport it from the production site to the consumer

Source: (Bansal et al., 2015)

The table provides an overview of the purposes of minimally processed food.

According to Bansal et al., 2015, “*minimal processing can be broadly divided into two categories: the first one is based on plant source, such as fruits and vegetables, and another one animal based, such as meat, fish and sea foods. In addition, other categories (i.e. combinations of different sources) are also appearing in the market, such as part-bread, ready-meal, cook chill, cook-freeze products.*”

The quality aspects of minimally processed food are guaranteed by the techniques utilized named thermal treatments, non-thermal treatments and low temperature storage. At the same time, this techniques assure that the product acquiring better visibility compared to other products in the market securing market acceptance by consumers. Organoleptic characteristics

that embraces nutritional and health components of the minimally processed food product are enhanced too.

This is way consumers, in an era where technology is predominant, try to exploit the benefit that it brought in order to better their life, changing their consumer habits toward more responsible ones. Consequently, consumers initiate to prefer freshness and safety other than preservatives and additives. The vision for the future is that minimally processed foods will overcome the “normal” food products in the market, and, according to (Bansal et al., 2015), *“the introduction of latest and reliable technologies such as non-thermal treatments assists in minimizing the quality degradation of foods and making full usage of the available resources.”* The market grew rapidly in recent years thanks to the health benefits linked with these foods. The same author, Bansal et al., 2015, explains that *“the consumerism tendency depends on multi-factors as nutritional value, simplicity, safety, and convenience. All these characteristics must be considered in minimal processing. Minimally processed foods have formed the well-established market and engulf the capital investment. The various schemes of research and development targeting the agricultural products have been established that provides long life to short life perishable and improves the quality of short life foods.”*

Chapter 4 - Italian start-ups and business alliances as a way to interpret the new global scenarios

Objectives

The main objective of this chapter is to highlight how the Food & Beverage market is concretely, via the set up of start-up and business alliances, interpreting the new trends that are re-shaping Italy.

The thesis started with a clear illustration of the state of the art of the industry to go on and explaining two main emerging scenarios that are currently shaping the future. It went further by seeking to understand whether early signs of the global scenarios could be visible as trends in the Italian panorama. Finally, in this chapter, the objective is to bring evidence that something of concrete is being done in the market, by food companies, to align with the trends in place.

For this reason, this chapter will illustrate two main points.

The first one relates to make the reader notice that new forms of business are emerging, and with them, new business models, with the intent to re-define the old value proposition of the world of analogue catering, with a new way to communicate with consumers thanks to digitalisation.

In fact, these new business models proposed are the mean through which companies try to concretely bring to consumers all the trends illustrated in chapter number three.

In doing so, food companies, under the business form of start-up and sometimes as business alliances, are in the right path to re-shape positively the healthy eating in Italy, through their vision that mirror the demanding needs of a consumer more and more aware about their health status as aesthetic and interior beauty, along with all the necessities that high rhythms of work entails like the need to find time to cook.

The second point, refers to the illustration of six business cases (each one with its singularity), which through that they have to offer to the market (in terms value proposition and mission) englobe the trends seen in the Italian market.

4.1 Start-up and strategic alliances are redefining healthy food in Italy

There is no surprise that entrepreneurs are so attracted by the current food and beverage industry. After all, everybody needs to be fed to survive. Several opportunities have been growing in the last years for who want to set up a business in this full of opportunity sector, and, one of them are start-ups that are becoming a *must* for the food business world.

Since some years ago, everybody talks about start-ups. Web sites and national journals are full of histories from prominent entrepreneurs, young and with great will to be successful in their life (Pozzoli, R., 2018). These entrepreneurs use the new technologies, especially those linked with digital, to set up enterprises where innovation is the cornerstone of the venture. The new entrepreneurs have ideas that by means of platform, marketplace, e-commerce and different software invent new business models, and with them, help building up the new Italy, younger and at forefront.

This type of venture model is perfect for entrepreneurs eager to spread the digitalization in the business world.

Digitalization defined as “*optimizing business processes through the adoption of a host of new digital technologies—big data analytics, IT/OT convergence, Digital Twin, Artificial Intelligence, even 3D printing and robotics. Elements of digitalization (or digital transformation or Industry 4.0)*” (Smart industry, Siemens) is a perfect tool to find solutions for all the issues the Food & Beverage industry faces such as quick demand change, consumers preferences change, quality restrictions and scalability. Digitalization should be understood as a perfect enabler: it allows to change business models quickly in response to different scenarios linked to entrepreneurial innovation and its ability that are principal factors of success in the industry. To fully take advantage of this transforming period, according to the SmartIndustry report (Siemens), Food & Beverage companies must exploit digitalization advancements in every stage of the supply chain and thus value chain to contribute to its reshape trough virtualization to capitalize the full advantage that digital and IoT (Internet of Things) can offer. The increasing demands of connected markets are incrementing the complexity of all players of the supply chain, including the quality of the product and a timely delivery (SmartIndustry, Siemens).

The demand for products personalization and one-day delivery, especially for fresh products, are making companies obliged to operate in different innovative ways. Companies must work on the scalability of their offers and thinking globally while ensuring the right speed and flexibility and innovation within their services. The most innovative of these companies, start-

ups, are utilising the advantages brought by digital innovation to revolutionize their business and improving their connection with consumers (SmartIndustry, Siemens).

In fact, according to the Siemen's report, *“digitalization can unlock unlimited potential for consumer products companies by enabling them to deliver consumer preferred innovation, at a speed they never thought possible, with productivity and profit that deliver top and bottom line results”*.

The above sentences explain in brief why start-up is more and more inserted in the food industry and they are reshaping it with technology.

Start-ups seem to be the perfect tool to take advantage from and implementing the digitalization to be applied to a sector that in this case is the food & beverage. As a recall, start-ups *“are a newly emerged business venture with an high degree of innovation that aims to develop a viable business model to meet a marketplace need or problem”* (Wikipedia; Conte). They are set up by Millennials or entrepreneurs with previous or no history in entrepreneurial activity. This business venture is the most suited to take on high risks in the tentative to respond to specific trends in the market and thus serving demanding consumers. In doing so, high are the failure rate in the case the business model implemented by the founder will demonstrate unfeasible with market's requirements. What entrepreneurs want is to build a temporary organization that seek for a repeatable, scalable and profitable business model.

Start-ups, with their innovative business models, are small realities with great potential. Therefore, they are invested by Venture Capital, Business Angels and crowdfunding platforms: these investors want, with their investments, to unlock the potential the “value proposition” and the “vision” of the entrepreneurs have to offer to the market, to consumers.

All these considerations illustrate the reason why start-ups are the form of business suited to ride the wave of digitalization and applying it to the Food & Beverage industry.

People in the world, in every industrialized country, are absorbed by intense work rhythms and have little time to think: here are countless initiatives, or business models, created by entrepreneurs, to respond quickly and efficiently, with the maximum possible possible, to the new needs of the average worker, who has little time to devote to fitness and to choose what to eat or not to stay healthy.

Furthermore, consumers that are more concerned about their health now look for more accessible organic options, and at the same time they look for convenience, in terms of cooking (see Meal Kit products) or preferring delivery online platforms to not wasting time and having to wait.

Italy has a great tradition in the food industry that it would be a waste not exploiting the competitive advantage it has compared to other countries, less known for their culinary tradition.

Therefore, in Italy many start-ups created has something to do with the food industry in terms of *value proposition*, from food delivery of organic, healthy or “free from” products to personalized healthy diets and food value chain innovation.

According to Marino, F. (economyup), “*market opportunities are therefore converging towards innovative models mainly linked to hyper-local solutions, which give the opportunity to customers to have access to all the variety of Italian food and wine products*”. On a different perspective, restaurant app model (see the digital restaurant Foorban) is becoming the new popular business venture, particularly thanks to its capacity to integrate the different ways of delivering food with users' eating habits (Marino, F., economyup). As an example of the types of business models that are emerging, Cortilia is a great digital marketplace that innovate the food supply chain, creating an alternative to GDO. “*Cortilia is the first agricultural market where you can shop online buying seasonal products and a short supply chain from trusted farmers, taking advantage of the convenient home delivery service*” (Cortilia). Again, I would like to report these following sentences that perfectly describe the value proposition of the venture: “*the strengths of this start-up, based on the model of the short chain, are therefore a dense network of local producers and logistics organized to limit as much as possible the steps between producer and consumer. All this together with a centralized marketing and management of the platform*” (Cortilia).

At the same level, it is notable to mention another Italian start-up which objective is to link the producer directly to consumers in an optic to disentangle the complexity of the food value chain. This start-up is Foodscovery, founded by Mario Sorbo which has received 1.6 Million of total funding principally from venture capital funds (Fatto, Digital Magics) (Crunchbase).

Its mission is to value only authentic productions, connected with the territory they come from and limited to their seasonality to guarantee and increment their sustainability.

Important pre-requisites to sell products by means of the e-platform is unicity and traceability of the products along with DOP and IGP certifications. Through its innovative way to sell food products Foodscovery “*connects the best producers of artisan excellence with the final consumer, eliminating any unnecessary costs in favor of a direct relationship: anyone can visit the virtual workshop of each producer and order unique and authentic products at local prices*” (Foodscovery). In sum, this start-up help selling niche products such as those labelled as bio, “free from”, vegan, vegetarian and slow food without intermediation, linking producers to consumers, consequently eliminating distributors and retailers from the value chain.

In the same terms, another Italian start-up that bring the consumer and deliver it directly to the hand of whom cooks it is Foody. It is birth in Genova a year ago and it has been named the new frontier of tourism. This start-up has a specific objective: making available to tourists of a particular city culinary experiences directly in local inhabitants 'houses, enabling them to taste traditional local food of the place. Its business model is particularly relevant because it is disrupting the food service market (e.g. restaurants) by shifting the usual definition of tourists from "normal restaurants' consumer" to "inhabitant's house consumer". The business model they are utilising to promote their vision is incredibly innovative and if everyone in the future would work in this direction, we could assist to a gradual disappearance of restaurants. The incredible news from this business is the possibility for tourists to cook with local host thus helping in meals preparation. Currently, Foody serves with its service Rome, Bologna, Florence, Genova, Naples and Palermo.

On the other side, a start-up that is disrupting the Italian market with its new business model along with others is Fanceat, a venture that realizes food boxes containing all the fresh necessary ingredients to prepare a gourmet meal in less that 30 minutes. Because of the partnership with stellar chefs, it is possible to prepare chef meals in little time.

Parallely, similar ventures have been developing. For instance, it is important to mention the case of My Cooking Box, an innovative star-up that offers as a core service the delivery of meal boxes, that contain all the necessary to prepare an Italian gourmet food according to notable chef receipts. But its service includes most of the regional receipts of Italy, to be prepared with local and regional ingredients exclusively labelled *Made in Italy*. Their aim is to value the traditional Italian receipts to offer an incredible "culinary travel" to consumers.

At the same level is visible Quomi, one of the first start-up that introduced the meal kit formula in our country and that announced the closing of a 600k round from private investors recently. This start-up was founded by Andrea Bruno and Daniele Bruttini and the aim of it is to promote an innovative and healthy solution to all people that have no time to buy ingredients and cook. As directly stated from the website "*Quomi allows you to always try new recipes, giving the possibility to vary your diet according to the principles of the Mediterranean diet. The service allows you to receive a box directly at home with fresh and pre-dosed ingredients, ready to be prepared*" (economyup). Quomi has more than 2500 consumers and it has currently delivered more than 45 thousand meals (economyup) and its competitive advantage is evident from what they offer: only receipts with seasonal ingredients, fresh selected products, flexible subscription.

At the same length is placed FeatFood, that is an online restaurant with online delivery of fresh ready meals, balanced under all points of view and made up by high-nutrients.

According to Ragusa M. (ristorantiweb) Featfood *“It is a new start-up that is not limited to delivering the meal but offers an "integrated service" that starts from the production of the dishes in-house by executive chefs within the company. This is where the difference triggers. Thanks to the fact that the whole supply chain is under a single control, a menu with a specific identity can be proposed. In this case, based on a formula that could be defined as "salutismo gourmand", with healthy and balanced dishes from a nutritional point of view but with a high-quality profile.”*

Their mission is to make easy the daily life of the people, through a service that enable them to get food and beverages to keep the body health. They offer four different food lines that consumers may choose to satisfy their needs: Detox, Light, Power and Vegan (Featfood).

Start-ups, as forms of business, are not the only way to interpret the current and future global scenarios that will shape the world soon, because several companies are considering another “tool” to start a new business or to leverage the existing one: business alliances.

A business alliance is intended as an agreement between two companies, where underlying it are present motivations that concern costs reduction and/or improved services for consumers, most of the times. Often, alliances are coordinate by a project team which aim is to assure the functioning of the alliance and the compliance with the its structure. All parties in the business alliance share the same opportunity in terms of gain and risk, proportionated to their contribution to the alliance that will depend on the type of alliance chosen. In fact, there could be five types of alliances: i. sales, ii. solution specific, iii. geographic-specific, iv. Investment, v. Joint Venture (Wikipedia).

By analysing the Italian landscape, the last type of alliance seems to be the more widely used in the food & beverage market.

To give a simple definition of what is a joint venture, it is acknowledged that it is meant as a business entity created by two or more parties and defined with strict features such as shared ownership, shared risks and returns and extensive normative on governance.

Usually this type of alliance is undertaken to enter in new markets and thus diversify or leverage the existing business, or simply for gain new useful skills and capabilities for the existing business from a competitor and gaining scale and efficiency.

As far as the food & beverage sector is concerned, we should say that nowadays *“eating often has cultural connotations and new consumption behaviours are introduced in the constant search for healthy food, produced according to ethical values, a source of both well-being and health”* (Seguso L., mark-up).

These trends are accompanied by the growing demand for product innovation that can combine a high service content made of practical use and time savings, a guarantee of healthiness and environmental sustainability that only organic can offer. It is plausible to say that, according to this framework, business alliances have been birthing to satisfy the abovementioned demand for innovative health products: it is the case of FAN Spa, the Joint Venture set up by Farno, Italian producer specialized in gluten free products, and Alce Nero, a leader company in the organic Italian market. The reality created from these two companies is centred on a productive unity with latest technologies to produce high quality organic baked goods (instoremag).

Marco Santori, FAN's president, acknowledged that this business model is singular in its genre, but that from this alliance is visible how two companies share their competences to consolidate their competitive position in the market (instoremag).

Currently, the factory has an automatic production line set up to produce organic shortbread with a production capacity of 600 kg of biscuits per hour. The production is focused on sweet bakery, but it is in anticipation of a major expansion with new lines and enlargement to the salty bakery (instoremag). Products are characterized to be clean and healthy and the Italian market is the only starting one to a further export in the future over thirty countries across the globe.

A further joint venture that is shaping the Italian landscape and consequently deserves to be mentioned is the one set up by the Canova Company (Apofruit Group), Italian leader in the organic market and OrtoRomi, a cooperative agricultural company that is leader in the IV gamma sector (it operates in the sector that produce fresh, washed, packaged and ready-to-eat fruits and vegetables).

This alliance was established to revolutionize the food products ' proposal of IV and V organic gamma for the great distribution and that will involve references such as "*soups, minestrone, ready meals and fresh extracts of fruit and vegetables obtained with the HPP cold extraction technique, a technique that allows to preserve all the taste, flavour and aromas of the fruit and vegetables used in the preparation*" (Seguso L., mark-up).

All the products will be marketed with the well-known brand Almaverde Bio to guarantee a good penetration of the product and to satisfy the scope of the collaboration, that is, meeting the organic products 'demand of high health content that today represent the true drivers of modern life-styles (Seguso L., mark-up).

Another JV which scope is to combine forces and expertise to support local farmers in delivering freshly picked seasonal produce directly to your home is the that created by "Take my things", the delivery network born in Piedmont that uses the network to quickly transport objects throughout Italy, and Orto and Porto, the Lecce' s start-up that connects agricultural producers and consumers, innovating the food chain making it shorter (foodcommunity).

Orto and Porto offer a disrupting service that connect farmers with consumers: through an e-platform, the small producers will be able to sell their high-quality products without intermediation costs and all deliveries are guaranteed in a frame of 24 hours. This service, through the alliance with Take My Things will expand into new cities such as Turin, Milan and Rome (foodcommunity).

Given what has been treated so far, I want to stress in the next part the selection criteria adopted in the selection of the corporate cases that will be illustrated in the next paragraphs.

The case of *Direttoo* has been selected to illustrate a new trend and thus an approach to re-define the food value chain and all the benefits that derive from its implementation. In fact, this start-up insert itself in the new paradigm ready to re-shape the manner to think about the chain through which value is distributed: the short agri-food chain.

Therefore, it has been chosen because with its innovative business models it englobes several features of the short food chain such as that of obtaining advantageous contractual conditions that bring to fairer margins for farmers, of elimination of all the players that exist between them and consumers along with their costs, of transparency on the price formation that the consumer can evaluate, of creation of a community of producers and consumers, that tend to develop a social system focused on food value.

Another element taken into consideration in the selection was the fact that I wanted to demonstrate the re-birth of the importance of local products, and this start-up marries this proposition: its marketplace offers only local products from certified farmers/producers carefully selected and doing so it contributes to the general re-assessment of the local production, disentangling it from the logic of industrial making. Furthermore, *Direttoo* marries with the increasing need of transparency that is required in the market as consumers want to know exactly where products come from, both under the country and producers perspective.

In sum, the case of *Direttoo* has been chosen because, in accordance with the trend in place, highlights the birth of a new profound relation between the agricultural and urban world, between farmers and consumers.

The cases *Nutribees*, *Diet-to-go* and *Foorban* have been all selected because they respond to one of the main trend that the thesis is aimed to demonstrate: the new consumers ' preference for local, organic products and personalized healthy diets, widely delivered as ready meals.

All of them insert themselves in the new scenario that is driving toward a new model of consumption, that see the average consumer to start preferring personalized diets with low contents of fats and carbohydrates and avoid food with high contents of artificial colours, artificial preservatives and artificial flavours. The context of this trend has to be found in the principal factors that drive the ascend of organic and local food consumption in Italy, that

principally are the product expansion, the growing demand for high-priced and premium products, the changing habits of consumers towards food. Consequently, consumers in Italy have initiated to put their attention on healthy food, thereby prioritizing quality over quantity, and preferring buying less but premium and natural food, as they also represent a sustainable and environmentally friendly choice. The three start-up have also been selected to understand the importance that new business models have as disruptors of such a traditional industry as Food & Beverage.

Therefore, the success of their way of doing business derives essentially from the positive reception of the same by consumers, who appreciate the novelty brought by the digitalization as regards the system of choice of products to be consumed and the rapid method of delivery, which is combined with the modern goals of a customer who needs to eat quickly but in a healthy, quality and balanced way. In sum, a combination of the understanding of the real needs of the consumer, a digital technology applied to solve them and culture of food, is the correct receipt to englobe, inside the proper value proposition, the main trend that is shaping the Food & Beverage industry: eating healthy.

The start-up *Quomi* represents an interesting case, and it is an expression of different trends that come together to create a single value proposition that is able to bring benefits not only to the consumer but to the same society, and this is why it has been chosen to be reported as a case.

First of all, this start-up marries with the current trend regarding the advent of short food chain as a new way of think about value along it, in fact it eliminates three important layers of the food value chain that often are those that not guarantee the freshness and quality of the ingredients: wholesaler, sorting warehouse and supermarkets (*Quomi*).

Secondly, it uses ingredients that are well-known for their high quality, therefore are fresh and respond to all the pre-requisites of excellence directly from expert producers in their field of production.

Thirdly, this start-up is capable to solve many general problems that consumers face in this current years such as the slowness in cooking and the search for ingredients, the low amount of time at disposition for workers, whereas, all at once, it marries with the will of consumers that have the desire to learn how to cook more sophisticated dishes from informal and delightful recipes (*Quomi*).

Alce Nero Fresco S.p.A is an Italian case of Joint Venture that has been chosen to be presented inside this elaborate because it englobes, within its mission and value proposition, the wide current trend of the ready meals, putting as much attention as possible to consumers' necessities that want to eat healthy and quickly. This JV that is fruit of a business alliance among three companies in the same sector, furthermore marries with the current necessity of a market that

establish clear preferences for organic products and fresh ingredients. The JV, moreover, is one of the promoter of the carefully use of technology for food products, implementing minimal processing technologies that allow consumers to propose organic food products in which the alteration of organoleptic characteristics or nutritional impoverishment is minimized. At the same length of Direttoo and Quomi, I have personally chosen Alce Nero Fresco S.p.A because it demonstrates to be one of the national promoter of the short food chain, by creating integrated companies' network that cooperate together.

4.2 The case DIRETTOO

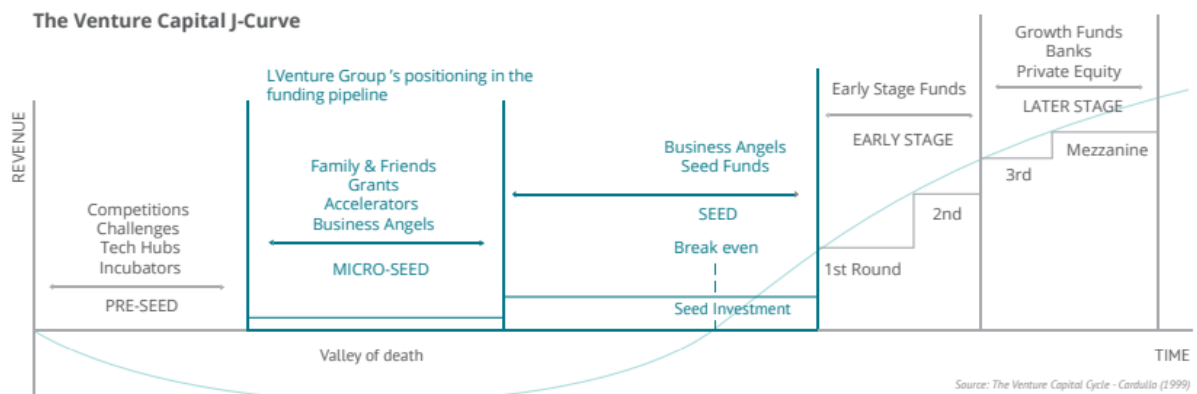
Direttoo is the first digital platform that organizes, in vertical way, all the business relationships that can be established between producers and restaurateurs. Direttoo's vision is to renew the agribusiness supply chain by scaling down the role of wholesalers and distributors (crunchbase).

Direttoo was founded in 2016 by the hand of Diego Pelle, a restaurateur, and Chiara Mastromonaco, a wine producer and marketing and fashion expert with a specialization in the luxury sector. Its headquarter is in Rome and up to now it has received 285k of total funding over two rounds on July 6th 2016 and February 2nd 2017, principally from LVenture Group and Angel Partner Group.

LVenture Group is a holding company listed on the MTA of Borsa Italiana. It invests in digital companies with a global degree of innovation and business. The business model is based on the capital gains deriving from the exits of the start-ups in the portfolio, which can take place through M & A or IPO transactions (LVenture Group). The activity of the investment group focuses on Micro seed and seed investments: for Micro seed financing, the Group invests in 60 thousands euros in exchange of 9% of the shares under the form of SFP (Strumenti finanziari Partecipativi) in the initial phases of development of start-ups of future success. It supports the launch of the product through the LUISS ENLABS acceleration program. As far as Seed investments is concerned, LVenture invests in up to 250 thousands euros acquiring a minority equity stake in all those start-ups that successfully exit from the LUISS ENLABS acceleration program. Strategically, LVenture Group invests in start-ups with high possibilities of growth in the digital technologies' sector. Currently, it counts more than 45 start-ups for its portfolio.

Angel Partner Group (APG) is an association of professionals, managers, entrepreneurs and corporations who believe in entrepreneurship and innovation as drivers of economic growth (Angel Partner Group). It counts about 30 start-ups for its investment portfolio.

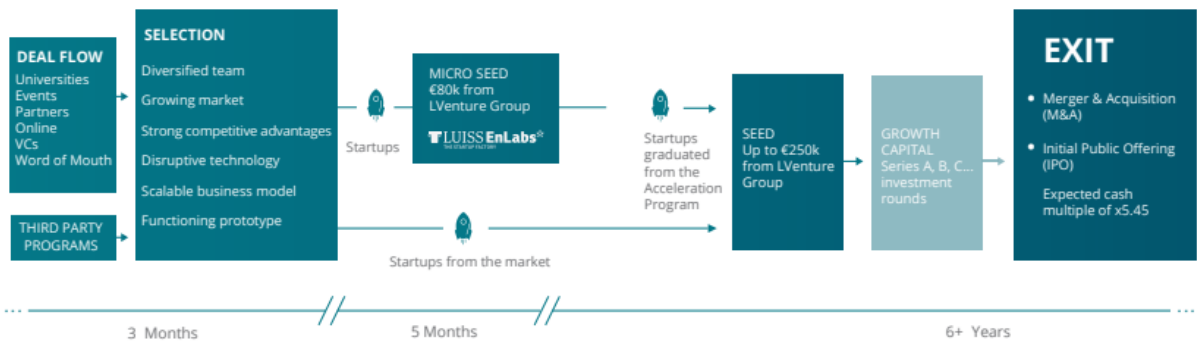
Figure 18: Market overview according to LVenture Group



Source: LVenture Group

Figure 19: LVenture Group's business model

Business Model



Source: LVenture Group

Direttoo's history, thus, has had light from a simple commercial relation between Diego and Chiara, where the former bought for its restaurants Chiara's wines. From this, together have worked to create a new business that will redefine the entire agri-food chain in the near future for the Italian market.

Everything started from how the co-founder, Diego Pelle, together with Chiara Mastromonaco started to think about the market: they both realized how much important was to reduce the agri-food chain. In fact, they thought that especially in the foodservice industry, there are present too many players. Direttoo has the right objective that goes opposite the latter direction:

to become the unique virtual place where people could buy every product, by optimizing not only producers from producers ' point of view but from the one of consumers too (ayming, 2018).

This idea presents several advantages such as that of having a more transparent market, reduced waste because consumer buy what effectively is consumed and less importance is given to intermediation; value chain, as the tool that distribute value from farmers to consumers become short and maximised by removing not useful steps that increase the value for distributors and retailers and not for consumers (ayming, 2018).

Often are the same intermediaries that decide which brand to promote in the market according to the one that for them can produce the best appeal and thus generate greater personal advantage (ayming, 2018).

The male co-founder got to this idea especially thanks to their personal and professional path: Diego comes from a roman family of strong origin in the foodservice industry, and, after his studies, decided to enter the business of the family, but slowly introducing the pathway toward innovation with the scope to leverage existing processes. After that, he moved to London to study the business models of English catering and was exactly this experience abroad that build the fundamentals for the birth of Direttoo for the Italian market (ayming, 2018).

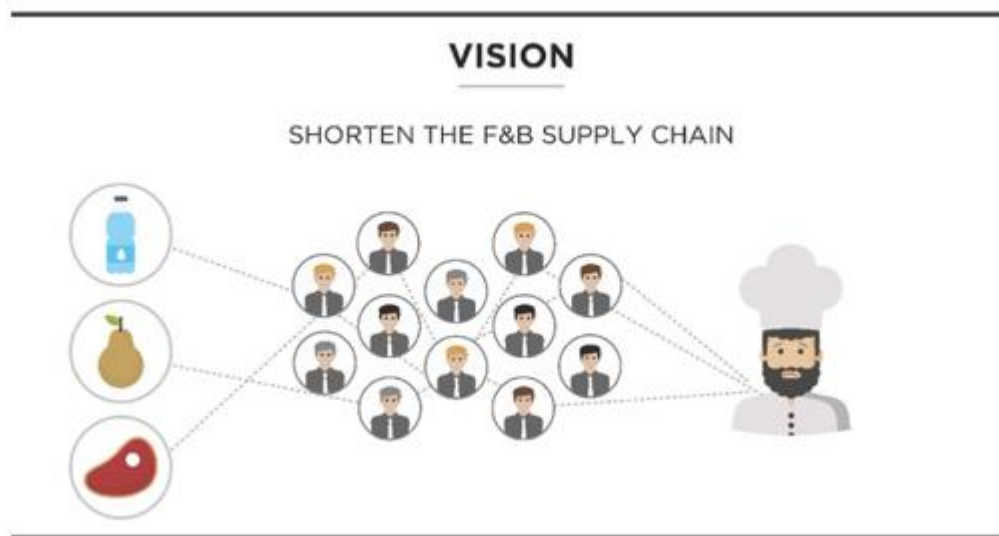
4.2.1 Value proposition and strategy of DIRETTOO

What does really motivated the birth of Direttoo? I wanted to answer this question along with further ones directly by interviewing Marco Puglioli, a millennial that at the age of 27 is now project manager of Direttoo.

According to Mr. Puglioli, the value proposition of the start-up is as stated :” *providing a unique digital tool aimed at facilitating the work of the restaurateur and suppliers (saving time and money) thanks to the digitization of a sector that is still analog*”.

First of all, as stated before, Direttoo was set up by Diego Pelle that, as wine buyer, understood that wine prices were extremely inflated respect to the prices that food producers establish for intermediates. From this, Diego decided to invent a way to cut the chain and making it shorter, making it digital.

Figure 20: Direttoo's vision



Source: Direttoo

At the beginning, the e-platform was used to link producers with restaurateurs, then it was implemented to englobe the whole market, in fact, the platform was defined by the same Mr. Puglioli as a “*marketplace tool where the restaurateur can find both new producers and suppliers with also features that exploit machine learning, calculation of the full cost to calculate and guarantee the supply; while for the producer / supplier it is an opportunity to find new customers and get access to useful management functions (accounting for example)*”.

In light of the new partnership between Pam and Amazon to deliver food products directly to consumers ‘ houses, Mr. Puglioli considers the use of a digital platform as extremely beneficial, despite the fact that they struggle to make under 35 people realize that an e-platform could be an advantage for their business.

From a strategic point of view, in order to gather new clients, Direttoo uses a digital marketing strategy, through social platforms as Facebook and Instagram although often the same restaurateurs, tired of the same suppliers, use the Google browser to find new way to get food products at small prices, finding thus Direttoo as a perfect answer for their problem.

Suppliers valorise the service provided by the e-platform because they can sell their products earning higher margins rather than selling them to retailers first whereas restaurateurs valorise obtain the same products as before but with less costs.

At the question “why do, in your opinion, venture capital funds decided to invest in your idea?”, Mr. Puglioli said: “*First of all, we are immerse in an industry, the Food & Beverage, that does*

not display correlation with economic crisis, in fact, it is strong and the food industry for the Italian economy is a cornerstone for the economy. Consequently, working in a reliable sector, I think they invested in us because we produce results beyond the normal investor's expectation and they think we are a winning bet, given the market, the product and their fit."

Figure 21: Total restaurateurs ' spending every year



Source: Direttoo

For the future, Mr. Puglioli frankly said that something will happen: up to know, big players (undisclosed for confidentiality) of the Ho.Re.Ca. sector noticed them and beyond them businesses other than foodservice found them appealing for possible future partnerships.

In the meantime, as stated by Mr. Puglioli, the start-up have been selected, with other fourteen start-ups among one thousand, to present their business to a pool of national and international investors (funds) to obtain a series A round (to fund the national and international expansion) as they received seed capital yet, that will close in the first months of 2019.

In sum, Diredtoo is a perfect case that demonstrate how it is possible to short the agri-food chain putting directly in touch suppliers and consumers. This dialog among them, will allow to have more guarantees on the quality of the products and will assure better earnings for whom produces and an improved quality for restaurant's clients (Green).

Consumers at restaurant will enjoy local food, something that before was unthinkable simply because local food products did not get to restaurants because of distribution and not for costs

as one may think, as local fresh products embrace a smaller market than that of the great distribution that for sure does not take the products from the local market (Green).

With the aim of guaranteeing savings and quality conservation throughout time, the additional service that Direttoo provides is the food products' delivery. Therefore, they opened up a hub that collect the food products and efficiently handle the delivery expenses reaching, for their clients, the restaurateurs (Green).

Concretely, the service is offered through an e-platform only for the B2B segment, that distinguish between suppliers and restaurateurs. Regardless the category people come from, it is indispensable to fill in a form to tell more about your enterprise in terms of products and segmentation. For instance, if the person that wants to know more about the service is a restaurateur, he/she has to send a list of the most used products to Direttoo that will contact him/her back to explore with the client a comprehensive list of highly selected products from already registered suppliers. The order that range from condiments to drinks, from dairy to first choice meats, from flours to fresh and dry pasta can be placed with either smartphone, tablet or pc (Direttoo). The start-up earns by withholding a fee on the cost of the transacted from the producer side, while retaining nothing from the restorative side.

Figure 22: How Direttoo 's business model works



Source: Direttoo, author

From the point of view of the supplier/producer, *“through Direttoo the manufacturer / supplier provides its customers with a single vehicle to order their products with a click and, at the same time, manages their business in an easier way”* (Direttoo). Therefore, the start-up has a well-established service function that permit suppliers or manufacturers to gain some advantages by

using the e-platform: i. using a well-selected clients portfolio widely eager to make ongoing purchases, ii. get to know well oneself ' clients, iii. introducing to the market niche products that will not be consider enough to be profitable in the GDO context (Direttoo).

Direttoo will also augment the visibility for manufacturers/suppliers: the clients portfolio is well-established and the platform, through consolidated marketing strategies, is growing rapidly. Moreover, through a system of online feedback, restaurateurs will build the reputation of the same producers in an organic and meritocratic way (Direttoo).

Concluding, I would like to highlight that Mr. Pelle and Mrs. Mastromonaco are producing a small but consistent revolution, because it tries to disrupt a well-established market, implanted on its hinges and pervaded by the old-style analog movement, grafting a change that will be seen in a safe way, positively by the new and future generations, who embrace with extreme astonishment and interest (Green).

Nowadays, innovating is worthwhile: opening up to the world of innovation by embracing a digital vision of the sales channel becomes a winner solution for young restaurateurs that seek for optimization as the increasing competition, taking into account that most of the new local openings are under the age of 35 (Green).

Together, the two founders, have created a business that already seeks sustainability with a view to optimizing resources, for example by using efficient logistics solutions through the use of electric cargo bikes that sort the goods deposited at the hub.

Therefore, being sustainable must be an indispensable "must". In order not to be crushed by the growing competition of the market, it is good to learn to use the new rules of the game in an intelligent way and above all to learn how to implement them in the shortest possible time. Today's businesses are experiencing a period of transition and those who will not positively approve digitization and sustainability will remain consistently behind their competitors (Green).

As announced by Diego Pelle, the co-founder, for Direttoo it is not an issue to invest in eco-sustainability and process optimization by means of digitalisation, because this strategy is already part of their way to behave respect to the market and competitors to always remaining ahead and not losing pace (Green).

Strategically, Direttoo can be read under some points of view.

First of all, the start-up enter the market with the advantage of being one of the first mover, so that it was capable to being one of the main promoters of the disruption of the market. Therefore, the agricultural market in Italy is heavily bounded to the traditional selling channels such as small retailers and GDO whereas Direttoo moved before competitors anticipating, by exploiting the advent of the digitalisation, the boom of direct products selling.

Direttoo offers unique tools at disposal of its client that make its offers unique at their eyes: its advantage is established in the software provided to restaurateurs (through which they are able to compare prices or quantify orders), something that it is difficult to copy in a short time and that guarantees sustainability to the business in general. On the other hand, it must be said that without considering the advantage assumed at the "immaterial" level, the winning value proposition of the start-up in question could attract potential entrants into the market that see a new potential in the blue ocean opened by Direttoo market still little explored and concentrated. Until now, however, Direttoo has taken on a brand advantage as a synonym for reliability and quality that protects it from competitors in the market.

Direttoo is a start-up founded by means of the digital technology and through it delivers value to its clients, minimizing or eliminating most of the costs that traditionally restaurateurs incurred through traditional purchases.

I think that Direttoo represents a winning solution because it is able to equate the contractual power of the suppliers with that of the buyers, or to put in equal advantage both the one and the other. Through the digital platform, Direttoo is a marketplace that is completely scalable because you can reach everyone, regardless of the geographic location of buyers or suppliers.

The idea is very similar to that of Amazon, a digital platform that allows to shorten the distances between buyers and suppliers in the B2C and B2B market and, similarly, Direttoo offers the same business but for the agricultural market, something innovative and unique that will surely attract many competitors. For sure, the business presents the limit to be linked to the Italian market: considering a future possible expansion abroad it is difficult because barriers to entry the market are low in terms of financials as the unique investments would be marketing the idea and the brand so that Direttoo would have to compete with players maybe bigger and more known. This is why it is strategically considering possible partnerships to disentangle the chains of the business model they have created.

4.3 The case NUTRIBEES

Nutribees is a start-up specialized in the production and delivery of healthy personalized food, that offer its services throughout Italy. In fact, it has been defined by the website The Food Makers, in collaboration with Start-up Italia, as *“an online service that integrates the figures and functions of nutritionists, chefs and home delivery through a process of collecting customer data, studying their dietary needs and preparing the menu in a single innovative platform. packed according to individual needs with delivery throughout Italy”*.

Figure 23: Nutribees’ products



Source: Nutribees

It was founded by Mario Villani and Giovanni Menozzi, two young Italians from Bocconi University. Mario Villani launched his career abroad, in Jakarta, and with a past working experience in Rocket Internet (food & grocery e-commerce) while Giovanni Menozzi launched his career in Boston Consulting (gamberorosso). The start-up was initially founded with proprietary money despite the fact that after a year, they left the 5% of the ownership (75k) to the ex-supplier of their kitchen that through this investment entered in the business, thus valuing the company 1.500.000 euros. For 2018, they expect a total turnover of 350k.

As yet defined, they are the founder of Nutribees, a start-up birth with the idea to provide a healthy personalized and balanced food service according to the nutritional and tailored needs of consumers. Through this service, the co-founders that meet each other at the times of Bocconi

University, found themselves working together on this project with the aim of creating a service that allows each person to exactly eat what his body needs (gqitalia).

According to Uccelli, M., journalist for *socialfoodtech*, *“the name of the start-up comes from the association of the words Nutri (Nutrition) and Bees (Api). In fact it is nutrition that plays a crucial role in the world of bees: the queen bee (which comes from a common bee larva) through a different diet, becomes the only fertile bee of the hive, assuming double dimensions compared to companions and reaching an average life 40 times higher than normal”*.

In an interview for The Food Makers (start-up Italia), Giovanni Menozzi briefly explained where the idea of Nutribees came from, motivating the creation of the young start-up from a health problem of his mother, da convinced him to re-consider its current dietary habits, that is, how it could have dealt with the prevention of different health problems that could arise in an unspecified moment of life. Moreover, in the United States of America, an interesting e-platform was being launched, Habit.com, that offered a personalized diet based on people's DNA and at the same time, Europe and Italy did not offer this type of e-service.

From this, the idea of Giovanni Menozzi and Mario Villani got married with the trend active in Italy at that time that saw an upsurge in the attention for the health and consumers started to prefer healthier dietary choices rather than quick fat lunches. Consequently, arose different trends such as organic, free of, vegan and vegetarian both among companies in the B2B segment that augmented their product lines and GDO in the B2C segment (thefoodmakers).

Nowadays, more and more people understand the importance of combining healthy sports with a balanced diet and both go hand in hand to achieve the desired result.

What I have personally understood, is that the co-founders grabbed the opportunity presented to him on the fly, climbing on a train that will take them far away, as they are combining two trends such as the explosion of e-commerce in the food & beverage sector and the offer of healthy but quick solutions in response to an increasingly hectic life, are playing with the role of "first mover" having in itself all the odds in their favour.

Just as trading is easier to generate profits moving with the current trend, so the two young entrepreneurs have created something unique and innovative related to a positive trend, booming and long lasting.

4.3.1 Value proposition and strategy of NUTRIBEES

What do customers value about the services offered by Nutribees? I decided to answer this question along with others directly by interviewing Giovanni Menozzi, a young entrepreneur

with an abroad experienced that ideated and co-founded, along with Mario Villani, the innovative start-up Nutribees.

Before illustrating the interesting interview, I want to stress the objective of Nutribees, that can be summarized in the offering of reliable solutions, accessible, that on the basis of the customer's information coupled with the most recent researches in the nutritional field, could serve him/her as in the most personalized way as possible (Nutribees).

First of all, I have chosen to start the interview by asking him which type of need(s) motivated the creation of the start-up, that according to him, to understand the real motivations behind it we should consider that :” *the United States of America are years ahead of Italy, not only in terms of number of start-up created, but especially in the way entrepreneurs and investors have the power to recognize and capture ahead trends not visible to others, and taking all into consideration, the idea was to build something similar in Italy that could be health and give comfort to users, according to the trend underway. [...] the trend that can be seen in the food industry and that the start-up aims to be answer are: i. the comfort for all people that have no time prepare home-cooked meals and that look for fast healthy ready meals, ii. increasing ingredients' attention and how they can better or improve out health, our performance both at work and while doing sports, iii. personalization, that is, the conception that not every person is equal to others, in fact some foods can be better tailored for people that display certain characteristics in terms of gender, age, practiced sport, work-hours and body composition. In Italy this trends are growing and because of throughout Italy was missing a business that could offer a 360° personalized service on healthy diets not only for losing weight”.*

Furtherly, I asked him about which customer target they selected and are still selecting for their business model, and the answer was that they provide the service mostly to people that can afford premium service as theirs, so, in terms of age, the target ranges from 35 to 55 years without gender difference. The average client lives in Milan, Rome and Northern Italy with small presence of clients in the South and, according to Mr. Menozzi, does not purchase Nutribees' meals for particular diseases but mostly for losing weight, as it occurred after summer vacations and Christmas holidays. According to him, the most interesting aspect when it comes to food delivery is that they even with simple and small couriers can also offer small neighbourhoods and hamlets, so not only the central part of large cities (in fact, the 45% of orders come from outside city centres).

Moreover, I decided to get a better view about the internal functioning of the service that the start-up offers, regarding the relation with nutritionists and the selection of the ingredients. For clearness, I will report his answer succinctly: the co-founder explained that:” *At menu level, Nutribees has approximately one hundred receipts that have been put into the production phase*

and every week we update the menu with almost thirty different receipts. Until now, Nutribees displayed more than one hundred different food solutions and they are elaborated and studied together with our nutritionist, Anna Villarini, one of the most famous nutritionist that work at “Istituto dei tumori di Milano”, so she has acquired good knowledge in tailoring healthy diets for the prevention of inflammatory diseases. Concretely, Nutribees work in this way: as a start-up, Nutribees elaborates a particular receipt because of fashion, clients’ requests or simply because we loved that food idea. In turn, the recipe is passed the nutritionist who processes it again, paying the utmost attention to the balance of the ingredients. Subsequently, the recipe goes to the kitchen that conducts a production test, tasting test and, in the case of positive feedback, it is ready to be commercialized.

At the level of ingredients, Nutribees prefers the choice to completely remove red meat, favours the exclusive use of whole grains and is thinking in the not too distant future of using organic products”.

According to what Mr. Menozzi reported, all the ready meals are produced in the same kitchen, located in San Donà di Piave (VE) in the Region of Veneto. Depending on how much a consumer has ordered, boxes containing the ready meals are prepared and assembled, ready to be delivered through a national courier in 24 or 48 hours. The freshness of the meals is guaranteed by the innovative packaging, which is an ice-filled polystyrene able to maintain the temperature up to 72 hours.

Furthermore, I decided to know Mr. Menozzi ‘s point of view about the increasing birth of start-up in the food & beverage sector in the last decade in Italy and his worries about a future possible saturation of the market for this type of business model offered. He reported that in all over the world, the food & beverage industry has been widely attacked (positively) by innovation, both in delivery services and in new technologies to produce new ingredients combinations. The food industry, in terms of size, is one of the largest segments of the market and where there is still space to innovate. In other sectors, to innovate, you need advanced skills, just think of the mechanical sector; this is not true for the food sector, which is widely accessible, in the sense that every person can undertake entrepreneurial activities, even with little experience and positively success.

Among some who have been able to innovate and take the train in the right track, that is, what leads to success, will reap the generous fruits. Those who will be defeated will be all those start-ups who have been wrong since the beginning of the implementation of the business model, because they are not scalable or because they solved the needs of only those who created the same start-up, without thinking about the common needs of people.

What is true is that, according to Mr. Menozzi, in the next few years we will see a phase of consolidation of the market, either by acquisition or merger between the various players of the industry.

Always according to the co-founder, expanding their services to englobe a comprehensive approach involving sport advices could be interesting, although Nutribees could be more interested in developing strategic partnerships to become the main solution for whom has to spend his food stamps or as a reference point for company canteens.

In terms of the development of the business model, I finally chose to ask a simple but sophisticated question to the co-founder himself, then asking why they chose to take the digital path: something that might seem rather trivial in our eyes, as consumers accustomed to interfacing now with devices that exploit digital innovation. However, as the catering sector is strongly analogical, that is, connected to the human relationship between restaurateur and customer, I asked myself what was behind the choice to bring to the consumer a different business model, new and innovative compared to the normal contact channel and of traditional sales. In his reply, Mr. Menozzi, reported that: *"We, as Nutribees, have developed an online system because it is essential given the prevailing technological advent now in the minds of consumers. We have not developed the service that we offer today through the App because we believe that, not being an on-demand service, like Just Eat, consumers will not download the application. In this context, having a site becomes fundamental because not having a physical point of sale, the only point of contact with the customer is through the web platform"*.

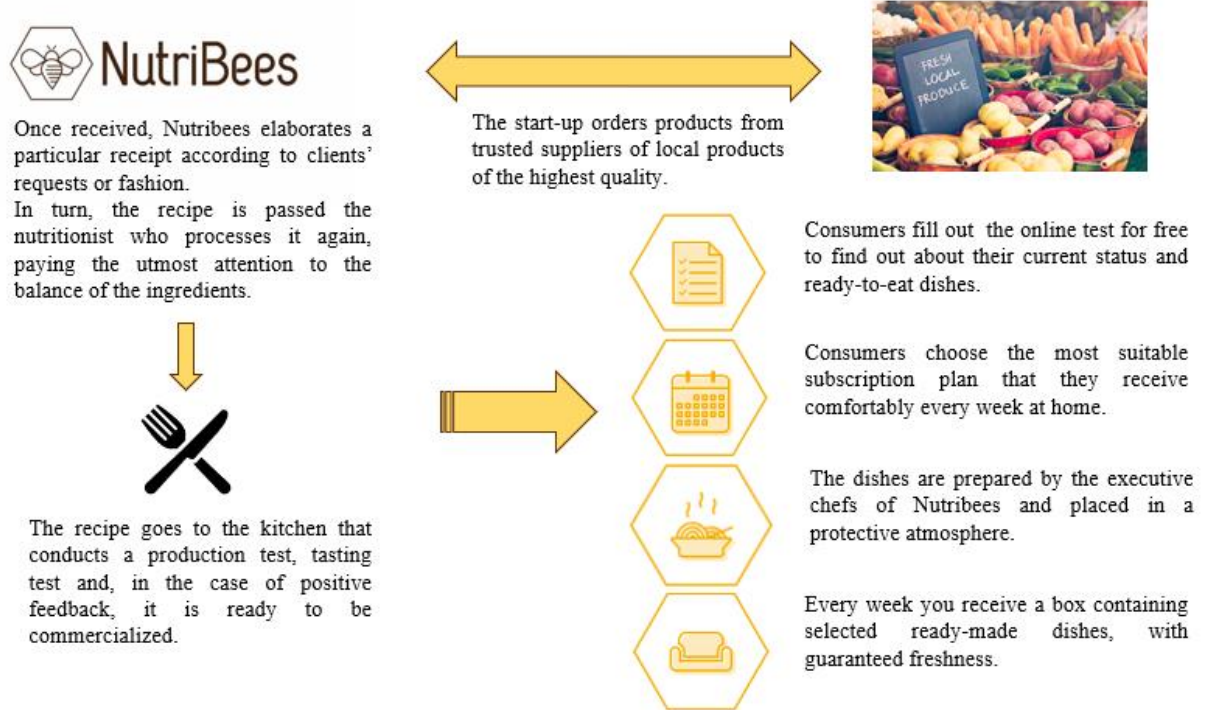
How does concretely Nutribees work?

First of all, a potential consumer should fill in an online test to receive an immediate feedback regarding its current diet. At the end of the test, the consumer is re-directed to the menu that Nutribees offers, and all the suggested meals (dishes) that are fit with the needs of the consumer will be highlighted (Nutribees).

Secondly, it comes to decide for how many weeks the consumer wants to subscribe the service, the type of diet (vegan, vegetarian and gluten free for instance) (Nutribees).

All the ready meals are prepared with selected food ingredients, fresh and according to seasonality. Trough an innovative process, it is possible to maintain the quality of the products for long hours and days, without the use of preservatives and additives. According to *gamberorosso.it*, *"With 10-12 euros you can receive a complete meal at home, indicating at the time of purchase up to 3 unwanted ingredients, and modulating your package as required: as the weeks increase, the price per single dish decreases"*.

Figure 24: How NutriBees ‘ business model works



Source: Nutribees, author

To summarize, Nutribees is an innovative start-up that through the studying of the last nutritional trends, offers a personalized service, tailored to the needs of the consumers thus according to their preferences, to deliver the best ready and healthy meals in a fast way, contemporary to the daily people problems, such as who does not have time to cook, to who wants feeling better, to who wants a personalized service according to his needs and finally, to who wants losing wait by eating in a balanced way (Nutribees).

All the meals are prepared not only through the collaboration of nutritionists but also according to the guidelines provided by OMS and Mediterranean Diet principles: all the dishes are prepared, as stated by Nutribees, *“according to the logic of the single balanced dish as suggested by the University of Harvard in order to balance all the components within a single meal: a portion of whole grains combined with healthy proteins (fish, white meat, vegetable proteins) and a generous amount of seasonal fruit and vegetables”*.

Nutribees through the use of an online platform and advanced and innovative dish preparation technology, helps to redefining people’s nutritional status and what habits to change, for all those people who have lost the right path to healthy eating.

Strategically, Nutribees fits into an average competitive market that meets the nutritional needs of a target of average career consumers (aged between 35 and 55) and where the sector in question presents a return on capital that is higher than the cost of capital. The market in

consideration is Food & Beverage, while the sector under the lens is that of personalized health food. In this sector there are many barriers to entry, especially related to the needs of consumers. In fact, to deliver value to today's customers in the food market requires a service that is reliable, fast and that precisely responds to customer requests, who prefer "tailored solutions" rather than "mass solutions".

The sector in which Nutribees offers its service is characterized by "premiumisation", which differs somewhat from the contestable sector logic in which prices and profits tend to be competitive.

In fact, this sector is mainly linked to the presence of fixed costs that cannot be easily recovered, such as investments for kitchens for the creation and production of personalized dishes and human reforms, which in the logic of small start-ups are vital for the success of the project mainly due to the synergies that are established between the production and work teams.

Barriers to entry as the capital requirements, product differentiation and logistics connected to the served distribution channel are the main limits connected to the potential entry of new competitors in the sector, which in the medium to long term can guarantee sustainability to the business model, which however based on a trend that nobody knows the end well.

The main problem of offering a personalized service linked to eating habits is in fact connected to customers, who can gradually abandon the way they treat their body due to financial difficulties (the services offered range from 100 to 130 euros per week by subscription) or because they prefer to opt for a different competitor or met The business of Nutribees is completely scalable as it can reach any consumer in the Italian scene. For an expansion abroad it would be necessary to quantify the demand for the offer that it proposes, since not all industrialized countries have a strong focus on healthy food. Italy, the home of good food, is the ideal environment for the birth of such ideas that will have to show differentiation from competitors. In fact, the skills of Nutribess mainly reside in the attention to the personalization of the service (through the online survey and nutritionist) as well as the goodness of their products for which they use first quality ingredients and fresh. In addition, reaching the consumer quickly and according to their customary needs for delivery (eg home or office) makes the service perfectly prepared to successfully interpret the needs of the modern consumer.

The solidity of the business model is certainly linked to the current trend, that of personalized health food, and to customer loyalty combined with the recognition of the brand and loyalty of consumers. Nutribees, in my opinion, offers a premium service because its only strength must be its ability to differentiate from the competitors of a market that due to the high technological availability of all is gradually being concentrated. Surely, if the start-up were to offer its service

at a price in accordance with the cost logic, it would be damaged, as catering is still a market in which the logic of "better spend and better eat" is in force. , and both would be perceived as poor (regarding the ingredients selected for its products) compared to other businesses.

4.4 The case DIET-TO-GO

Diet-to-go is an innovative start-up that prepares and delivers fresh dishes based on balanced menus to eat healthy and lose weight (economyup).

The start-up was founded in 2016 by the hand of Anna Zocco and Alessandro Costa, and immediately it has been thought as a “friend of health” who revolutionizes the home food sector, proposing only healthy products at zero Kilometres (startupmagazine). Currently, Diet-to-go exceeds half a million in turnover and makes about 60 deliveries of meals a day (Ronchetti, N.) Inside the company, beyond her, that cover the role of co-founder and CEO, Alessandro Costa is co-founder and sales and logistics manager, Gianluca Simondi is director of operations and marketing, Andrea Tibaldi is present as nutritionist and Luca Calia as head of scientific development.

Anna Zocco, after graduating in Business and Economics at the Bocconi University of Milan, for about a decade deals with the research of funding for the production of naturalistic documentaries for the main national and foreign broadcasters (Rai, BBC, Discovery Channel, Canal +, etc.). He then sold the shares of the company to undertake a new entrepreneurial challenge, the creation of Diet to go (Zocco, A.)

The roots of the idea date back to 2005, when the co-founder Anna Zocco, seeing what was happening in the United States of America in the same field, decided to try in her city, La Spezia, an new and innovative business that maybe it could have had succeed in the rest of Italy too. According to this, she started a collaboration with the current company’s nutritionist, Mr. Tibaldi, for some reasons: i. studying and meet better people’s needs, ii. being as efficient as possible in determining the correct diets to lose weight (startupmagazine). Consequently, the principal actors that contributed to the development of the idea were the nutritionist, that at that time was experimenting a new cooking method to obtain low-calorie diets but also dishes that could be highly liked by the average consumer; a cooking centre, known for the high quality, attention to the ingredients used and a refined taste and particular in the combination of food that was available for the preparation of the meals in a timely manner; a programmer that helped in the building and handling of the website through which the business would have taken place (millionaire).

At the beginning, in the selection of the best suppliers that could guarantee fresh ingredients of primary quality, Anna contacts a master who would make home deliveries of meals cooked and delivered still warm.

Initially, to gain proof that the idea could be potentially successful, Anna chose among her friends a test group willing to test the new product-service for two weeks at cost price. She

interviewed the fifteen friends day after day to assess the satisfaction of dishes, the sense of hunger or satiety and weight loss. The group was made up of people of different sexes, ages and overweight.

The test result was very encouraging. The males had lost up to 4 kg of weight, some females had reached 3 kg. Everyone enjoyed the dishes very much and did not struggle to follow the program (Zocco, A). This encouraging results gave start to the success of the company and guaranteed not only high customer satisfaction, but opened the doors to a proliferation of service not only in the big cities, but also in the provincial ones.

Diet-to-go presents itself as a digital platform by which, through a friendly user interface, is possible to order balanced and healthy menu composed by calibrated receipts, according to the one dish policy, and carefully managed by nutritionists and chef to mirror the demanding needs of consumers. The delivery takes place in a few hours, directly in the location preferred by the consumer, that can be at office or at home, and meals are delivered inside a personalized red bag that contains all the daily ordered meals.

Figure 25: Diet-to-go ' s products



Source: Corriere innovazione

4.4.1 Value proposition and strategy of DIET-TO-GO

“What is the raw customer need that the start-up serves, regardless of today’s offering?” (WorldEconomicForum, Bain & Company). To get an answer to question, I decided to complete this paragraph by interviewing Anna Zocco, co-founder of the innovative start-up Diet-to-go, by which she answered other questions connected to the motivations underlying the creation of the business, its strategy and functioning, and finally the vision it could have for the future.

A raw customer need is *“the essence of what customers value in a product or service, and digital insurgents, unencumbered by history, may more easily zero in on it and find a better way to meet it than other companies”* (WorldEconomicForum, Bain & Company)

According to Anna Zocco, what really customers value of her service is the fact that she is offering, through its start-up, a practical and effective tool to achieve effective weight loss that combines the need to lose weight of the consumer to a strong and continuous need for practicality, in accordance with modern standards of life, which prefer the speed and the healthy eating weight in the same way, and that if they were added as independent variables in an equation mathematics, would be multiplied by the same coefficient, without distinction.

The strong motivation that guided Anna in the path that will lead to the birth of this new entrepreneurial idea, the first to combine the analogical world of catering with a highly avant-garde and ever-changing world like the digital one, arose from the observation of a wide demand of consumers aimed at all those products and services which scope was solving the main problem of a modern consumer: the search for personal well-being (Zocco, A.).

As Anna Zocco reported, she noted how the weight loss diet was mainly implemented through solutions deemed unreliable by the most experienced, such as do-it-yourself or known by relatives, friends and / or acquaintances, up to the most sophisticated ones composed by experts in the field of nutrition, like those diets prescribed by the dietician. From the beginning, Mrs. Zocco explains that she was able to understand the real problems of the average and modern consumer who wants to follow a traditional diet, traceable in the choice of a feeding plan to be respected in the most absolute way, to the difficulty of combining personal needs with those of the rest of the family members for what concerns not only the expense, but also the preparation of food without forgetting the difficult discretion with which the diet is addressed when you decide not to consume a specific meal of the day at home (Zocco, A.).

Consequently, it was the understanding of these problems, probably already known, however, for which difficult to interpret in terms of the search for a concrete solution to a widespread problem but rather linked to the worldliness of a busy life and certainly conditioned by the great

Italian culinary tradition , that certainly, even if it allows to taste fresh ingredients, makes it difficult, given its local delicacies, to respect a strict diet to lose weight (Zocco, A.).

The objective therefore, according to what reported by Mrs. Zocco, is to guarantee the potential customer the purchase of a subscription that is composed of all that will have to eat, to obtain excellent results, during the daily period, thus precluding free will (positively speaking, as the beneficiary is the consumer) in terms of food choice that undoubtedly leads to the non-respect of three cornerstones of a diet: doses, quantities, adequate timing (Zocco, A.).

The interview proceeded on to study the customer target of the offer, and for this argument, Mrs. Zocco replied that Diet-to-go refers, or is addressed, to a variety of customers with seemingly different needs, but united by the need to lose weight and keep fit eating healthy and without giving up the main pleasure of life: the taste of good food.

Clearly, explains Mrs. Zocco, the service providing high costs especially for subscriptions under four weeks, is aimed at a medium-high economic level target (Zocco, A.).

Moreover, especially the lack of time and the predisposition of a person towards the well-being of the body as well as the care of their appearance, are elements of discrimination of the average consumer, which will therefore be self-selected in a completely natural way (Zocco, A.).

To understand the working of the start-up, I asked Mrs. Zocco for explaining the overall functioning and she was pretty clear in doing so, in fact, to summarize what was being illustrated, it can be said that Diet-to-go deliver every week a thermic box that contain all the meals of the day, just cooked, from breakfast to dinner. All the food prepared are rightly balanced from nutritionists: they do not offer tailored advices to consumers, but contribute to compose a balanced daily diet and carefully they assure that each day consumers do not eat more than 1200 kcal per day, if women, and 1500 kcal, if men. Moreover, she added that three different types of menu can be chosen: Mediterranean, Vegetarian and Detox.

All orders, online or from mobile, are received by Thursday and delivered the first day of the week after.

As reported again by Mrs. Zocco, furtherly :*”The kitchen enters the data into a program supplied by us that quantifies the grammes for each ingredient of each recipe. The cooked meals are cut down in temperature, placed in a thermal bag inside a cold room, waiting to be picked up by the conveyor. In the early morning the transporter picks up the bags from the kitchen and starts distribution to the customers, taking care to respect the time slots indicated by them when ordering”* (Zocco, A.) Clearly, the price decreases if the number of weeks for which subscription is requested augment, until getting to a price of approximately 30 Euro per day. Nowadays, the service is active in Milan, Monza and hinterland (Zocco, A.).

Figure 26: How Diet-to-go' s business model works



Source: Diet-to-go, author

Changing topic, I wanted to know whether the start-up had received some funds from external funds to finance the ongoing and future operations, and the fund Innogest represented the source of funds for Diet-to-go. Innogest is a venture capital fund that focuses, when making investments, on two specific sectors: digital and healthcare. They invests in scalable ideas unified with passion for digitalisation in the areas of fashion, lifestyle, retail, food, and finance. They are focused in identifying companies with global ambitions. On the other side, they have profound experience in investing in disruptive medical technologies, with a long history in backing companies in cardiovascular diseases, neurological disorders and oncology. In the last ten years they invested in fifteen healthcare enterprises that raised over €200 million, supporting through pre-clinical and clinical programs, market access initiatives, market development and exit (Innogest).

At this stage, Mrs. Zocco replied that:” *In June 2015 we were contacted by Innogest, the largest Italian venture capital, which is looking for start-ups in which to invest in the food and fashion sector. After several meetings, in December 2015, Innogest, in the person of Claudio Giuliano and I, as co-founder, signed the Term Sheet. Innogest decided to concentrate the investment only on the Milan market, a laboratory on which to experiment with new digital marketing techniques. [...] The agreement provides for an investment to be carried out in two separate*

phases. In the first phase, the investment will be € 20,000 by Innogest and 20,000 in work for equity by other interested investors. If the set objectives are achieved, a further injection of capital by Innogest of 400,000 euros will proceed thereafter. This gave rise to the establishment of a new company in which the majority of 60% will be maintained during the first phase of the investment” (Zocco, A.).

Through the team collaboration with Innogest, as explained by Mrs. Zocco, will be analysed on an ongoing basis new opportunities in the foreign markets and all the potential competitors, to verify whether are true all the conditions for the scalability of the project every time. Moreover, Mrs. Zocco added, the way by which food dishes are prepared will be improved in the future along with the shelf-life and a search for efficiency to lower transport costs.

Claudio Giuliano, in an interview released for *economyup.it*, briefly explain the motivation behind such investment; in fact, he explicitly said:” *Diets are spoken everywhere. The exceptionality of Diet to go lies in the long-term desire to innovate the concept of diet thanks to a rigorous scientific approach. Nobody today is still able to guarantee the result of a diet, but thanks to ongoing collaborations and the amount of data collected in recent months, Diet to go will be able to offer its customers an increasingly targeted product and increasingly predictable results” (economyup).*

Moreover, the same Innogest, as explained by Mrs. Zocco, have been the connector between Diet-to-go and Digital Magics, a famous Italian start-up incubator that provides start-up consulting and acceleration services to facilitate the implementation of business in the technological field. At this length, Gabriele Ronchini, founder and CEO of Digital Magics for the portfolio development, affirmed for *digitalmagics.com* the reason behind their collaboration with the start-up :”*We are working alongside Diet to Go with our high-profile incubation services to support the company's growth. In fact, we believe that the disruption in the food sector will be one of the main innovation trends in the coming years and Digital Magics wants to be the protagonist and engine of development. Diet to go proposes a new way of eating in a healthy and conscious way with a measurable objective, to lose weight, and an absolutely innovative way of fruition” (digitalmagics).*

Concretely, what Mrs. Zocco is waiting for the future, according to an interview this time released for the famous Italian journal “Il Sole 24 Ore”, is to expand its business principally in the cities of Rome and Turin for the Italian market, and London for the foreign one. In London, Diet-to-go, will concentrate its effort on the strength of food label “Made in Italy” to offer something that is particularly appreciated abroad, that is, the Mediterranean diet (Ronchetti, N.).

In sum, why does the method implemented by Diet-to-go work? Put simply, it works because it allows who consumes its products to reach and maintain the hoped weight through a food education path. Their mission, *“helping reaching the desire weight, living better and longer”*(diet-to-go), it is a combination of understanding the real needs of the consumer, digital technology applied to solve these needs and culture of food, to give taste to the most stringent needs. What Diet-to-go proposes is knowledge and optimization of processes at the local level, where before moving on to the next step it is essential to create and build repeatable and convincing case successes.

In my opinion, Diet-to-go was capable to understand the raw customer needs of the modern consumer for the food & beverage industry, creating capabilities in terms of dish creation, preparation and delivery, that are unique and difficult to copy for the clear synergies that are established among different team functions and members of the same team, without forgetting the loyalty spread over the territory covered by the service, fruit of a successful relation with the consumer.

Strategically, Diet-to-go fits into an average competitive market that meets the nutritional needs of a target of average career consumers and where the sector in question presents a return on capital that is higher than the cost of capital. The market in consideration is Food & Beverage, while the sector under the lens is that of healthy food.

In this sector there are many barriers to entry, especially related to the needs of consumers. In fact, to deliver value to today's customers in the food market requires a service that is reliable, fast and that precisely responds to customer requests, who prefer "tailored solutions" rather than "mass solutions" and that want a wide range of options to satisfy their culinary necessities.

The sector in which Diet-to-go offers its service is characterized by "premiumisation", which differs somewhat from the contestable sector logic in which prices and profits tend to be competitive. Taking into consideration the sector, it should be considered that customers have a relatively small bargaining power due to the differentiation of products offered by the various companies in the health food market, in which, by combining fresh and healthy ingredients, the possibilities of create unique and tasty dishes are almost endless (or almost). Given the importance of the product purchased for the health of the individual, it is easy to think that buyers who decide to pay the price of the service are not sensitive to market prices for the same products, as it would be impossible to even find two start-ups ideally offering the same dishes. The healthy food sector, as for Nutribees, is mainly linked to the presence of fixed costs that cannot be easily recovered, such as investments for kitchens for the creation and production of personalized dishes and human reforms, which in the logic of small start-ups are vital for the

success of the project mainly due to the synergies that are established between the production and work teams.

Barriers to entry as the capital requirements, product differentiation and logistics connected to the served distribution channel are again the main limits connected to the potential entry of new competitors in the sector, which in the medium to long term can guarantee sustainability to the business model.

Looking at the sector, it should be noted that customers have a relatively small bargaining power due to the differentiation of products offered by the various companies in the health food market, in which, by combining fresh and healthy ingredients, the possibilities of create unique and tasty dishes are almost endless (or almost). Given the importance of the product purchased for the health of the individual and the differentiation among dishes, it is easy to think that buyers who decide to pay the price of the service are not sensitive to market prices for the same products, as it would be impossible to even find two start-ups ideally offering the same dishes. The expertise offered by Diet-to-go lies in its value proposition which is unique, it could be a first mover in this sense, as the start-up deals with delivering all the dishes (including snacks) necessary to cover the hungry for all the meals of the day. Its main competence is to succeed, with the help of a nutritionist, to create a package of healthy and balanced dishes that do not exceed a certain number of calories, both for men and women. It represents a digital alternative to the direct advice of a private nutritionist who would personalize the diet according to his studies.

Diet-to-go gives the customer the opportunity to choose between three different menus suitable for weight loss if followed for at least a month.

It would be difficult to think of a "cost advantage" strategy because, as already stated, high quality in cheap dishes would be difficult.

Regarding the sustainability of the business, it is difficult to think of an actual total scalability as the service may risk to be perceived as a "diet for weight loss" and not as "healthy eating" therefore those who have no diet problems but would like to eat healthy may prefer other alternatives not related to weight loss.

As far an abroad expansion is concerned, I would consider it a suitable idea as diet problems are everywhere but the start-up, small for the global market, would encounter bigger players that would overcome its idea by adding more scalability to the business model.

4.5 The case FOORBAN

Foorban, word birth by the merge of “food” and “urban”, represents the first digital restaurant of Italy. Its history dates back to 2016, when the start-up co-created by Riccardo Pozzoli, Stefano Cavaleri and Marco Mottolese debuted for the first time in a country as Italy, rich of ongoing changes brought by the countless number of start-up that were being created at that time. The scope of the start-up, when founded, was that of innovate the Italian restaurant scene by re-shaping the way the business was conducted, because of their intention to effectively control all the process from selection of ingredients, menu elaboration, meal preparation by hand of well-known chef, to delivery of delivery of still hot steaming dishes. Organically, Foorban is made up by a team composed by twenty-five members, which most of them are Millennials (all Italians) with much willingness to work for a young enterprise. Stefano Cavaleri, co-founder, is graduated in International Management with experience in a multinational company. Marco Mottolese, co-founder, is graduated Business & Management with a long international experience in catering for major events. Riccardo Pozzoli, co-founder, is graduated from Bocconi University in 2010 with a serial start-up experience, and the main person that launched the Chiara Ferragni (Italian fashion blogger) phenomenon (Foorban).

Foorban is thought as a service that deliver lunches and dinners directly in the most preferred location of the consumer, in the city of Milan, even though the co-founders, given the optimal results for 2017 (500 meals delivered per day, with a Net Income growth of 20% per month), see the possibility to expand the business even abroad, in multicultural cities such as Madrid (ES) and Amsterdam (NL) (Pozzoli, R., 2018).

Figure 27: Foorban' s product



Source: Foorban

As illustrated by Riccardo Pozzoli, co-founder, in his recent book (March 2018), *Non è un lavoro per vecchi*, the innovative characteristic of Foorban and especially its peculiarity that is source of differentiation compared to competitors, is represented by the minimization of delivery times, thus in line with the needs of the modern worker (in the circumstance of the lunch break most of the time) who does not give up a dish that is quick to eat, balanced in terms of the composition and quantity of ingredients, healthy and tasty. In addition, the fact that each dish is produced by Foorban's chefs and not by other restaurants or catering services (as with what is offered by Just Eat and other players of the market, for example), makes Foorban become a restaurant, but digital, with unlimited seating (or almost) for all that people that do not debate on renouncing the taste of the excellent fresh ingredients exclusively Made in Italy (Pozzoli, R., 2018).

4.5.1 Value proposition and strategy of FOORBAN

“We want to create a unique consumption experience with the help of technology, contributing to improve the habits and the food awareness of the modern citizen” (Foorban).

This is Foorban’s mission, and for sure the idea that co-founders have had, have not been created by the mind of a restaurateur, but from the farsighted mind of an innovator, able to (and I will write it by quoting the words of *Volo di Notte*, written by the French writer and poet *Antoine de Saint-Exupéry*.) evaluate “the forces on the way” and finding a creative solution to interpret them.

In fact, restaurateurs stuck to find a solution with a “traditional mindset” that most of the time focalizes on rewarding incremental improvements rather than disrupting innovation and that closes the mind of an entrepreneur inside a box rather than encouraging him “thinking outside the box”.

Foorban’ strategy, in fact, bases on a business model able to satisfy, in an innovative way, the need of a multitude of consumers that requires “food on demand” (millionaire).

Foorban positioned itself as a premium service. Their targeted customers are high-level professionals that are tired of eating a rapid junk food and the average price of their service is about 12 Euro per dish, excluding the delivery cost. Their slogan *“we cook, we ride, you eat”* englobes a comprehensive view and care of the processes to beat competitors and emerge as the most innovative digital restaurant in Italy.

Foorban defines its vision as *“enabling to how many individuals as possible to eat food that is healthy, tasty and balanced everywhere, quickly and simply”* (Foorban), and they do it, in fact they were able to think about something, an ideal image, and making it real (Pozzoli, R., 2018). Having such a vision, means thinking about the future: it is a tool that permit the individual to focus on a not precise piece of time, that is not the present, but a state of mind that that enable in helping forecasting, figurately, the future (Pozzoli, R., 2018).

Therefore, nowadays there are a lot food delivery companies that consider as assets what they have to offer: however, they should also think that what they consider as an asset today given their current offering, it could become a liability tomorrow, when they will be obliged to change their value proposition because of multi-factors, such as market saturation given the upsurge number of competitors (mostly start-up) in the food & beverage market, or because of a negative conjuncture of the economy so strong able to reverse the trend.

According to this, as Riccardo Pozzoli narrates in his recent book *“Non è un lavoro per vecchi”* (March 2018), the three Foorban ‘s co-founders, when started to think about this business, together acknowledged the fact that they did not want to create a new food delivery, similarly

to what offered by the competition yet, but they wanted to create a new manner to think of food, a new way to eat in the financial centre that is Milan. They started to see the future, and every force in the universe helping in achieving their goal because the right team, the right business model, the right vision, contribute together to turning the idea into a company.

Regarding the development of the project that is linked to the future strategy of the start-up, Foorban initially received the first round of funding, approximately 500k, from “family & friends”, and with this money they took care about the research into the kitchen and packaging of the products to maintain freshness of the ingredients and quality for consumers, and proposing in a year, more than 600 different receipts (millionaire).

Furtherly, they received a second round of investment of about 650k in 2017, from a group of private investors to consolidate their presence in the market of the city of Milan and to launch the service in other cities.

At the beginning of January 2018, Foorban received a third round of investment of about 1,5 Million, to increase primarily the team members and expanding the service, by adding to the portfolio a series of retail service offered to the companies (B2B) that firstly were offered only in the B2C market.

All considered, the amount that Foorban was able to obtain established at 2.7 Million, with a revenues increase of 800% per annum (thefoodmakers, 2018).

According to an interview released for The Food Makers by Stefano Cavaleri, Marco Mottolese and Riccardo Pozzoli, it is evinced that the three co-founders consider vital this third round of investment, because it allows Foorban to grow in the direction of omnichannel.

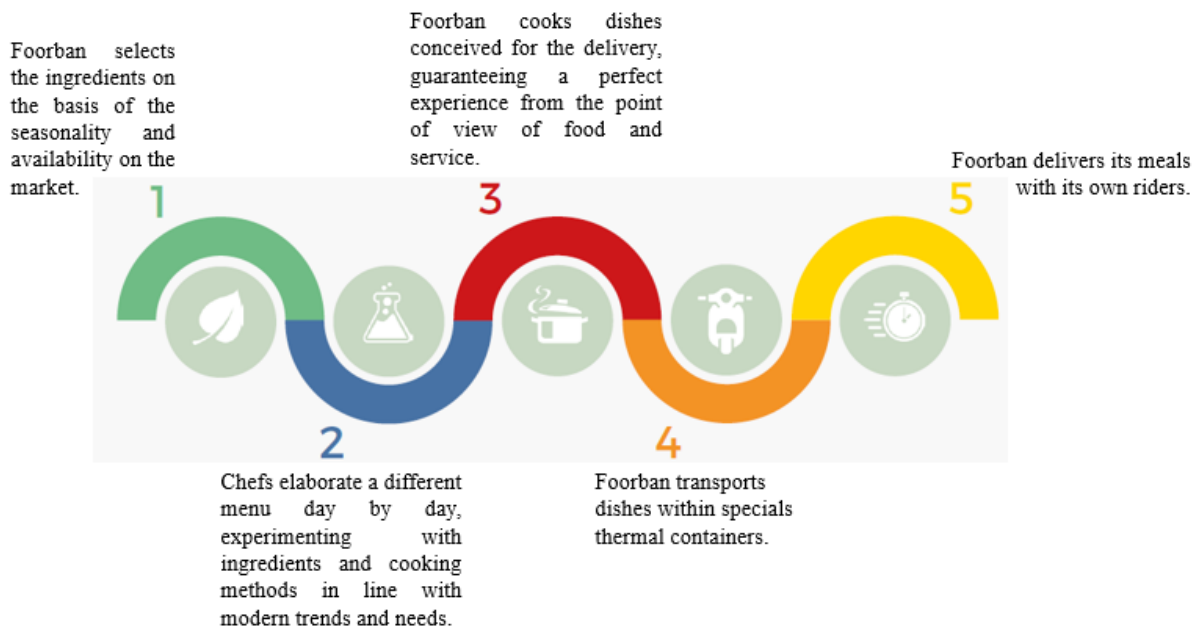
Furthermore, always in accordance with what has been said during the interview for The Food Makers, it is clear that first of all, they want, the three co-founders, give to the citizens a service that talks about a smart health-food, able to follow the requirements of the consumer careful to the quality of the products and with a sense of responsibility towards his body, both at home and at office. The challenge is becoming the primary solution for the B2B channel when it comes to think about a good quality menu, personalized and with extreme research in the selection of the ingredients utilised. The advantage for companies is that of initiate a partnership with a player that will become the leader in the digital restaurant segment, with premium prices that mirror the effort and the benefit obtained if the service was bought such as the rapidness, modernity and comfort, without forgetting the advantage for all employees, however, *mens sana in corpore sano*.

How does the service work?

Consumers have the option to order via the website or by downloading the web App for both Android and IOS devices.

Once downloaded, consumers will have the option to choose among different meals that mirror diverse life-styles and culinary needs: balanced, detox, healthy, energy, sport and gourmet. All the meals have a symbol that help consumers distinguish the different scopes of different meals. In the elaboration of the meals, Foorban takes inspiration from the one dish Harvard’s principles, “*the result is complete and balanced dishes, which combine attention to nutritional values with the characteristics of freshness, seasonality and controlled origin*” and all the ingredients used in the elaboration of the dishes come from Italy, are often local (Km zero) and organic (Foorban).

Figure 28: How Foorban’s business model works



Source: Foorban, author

From a strategical point of view, Foorban is inserted in an industry in which high is the demand for natural, organic and healthy products and where the sector in question grants a return on capital that is higher than the cost of capital for whom is capable to deliver higher value to consumers. The industry under examination is the Food & Beverage one, while the sector under the lens is that of healthy food delivery.

In this sector there are many barriers to entry, especially related to the needs of consumers. In fact, to deliver value to today's customers in the Food & Beverage market requires a service that is reliable, fast and that precisely responds to customer requests, who prefer "tailored

solutions" rather than "mass solutions" and that want a wide range of options to satisfy their culinary needs.

The sector in which Foorban offers its service is characterized by the "premiumisation" strategy, which differs somewhat from the contestable sector logic in which prices and profits tend to be competitive. As far as the sector is concerned, it should be considered that customers have a relatively small bargaining power due to the differentiation of products offered by the various companies in the health food market, in which, by combining fresh and healthy ingredients, the possibilities of create unique and tasty dishes are almost endless. Given the importance of the product purchased for the health of the individual, it is easy to think that buyers who decide to pay the price of the service are not sensitive to market prices for the same products, as it would be impossible to even find two start-ups ideally offering the same dishes.

The healthy food sector, as for the other start-ups considered until know, is mainly related to the presence of fixed costs that cannot be easily recovered, such as investments for kitchens for the creation and production of personalized dishes and human reforms (which in the logic of small start-ups are vital for the success of the project mainly due to the synergies that are established between the production and work teams) along with automotive properties if the "player" under examination is involved in the delivery process of the food products, as Foorban. Barriers to entry as the capital requirements, product differentiation and logistics connected to the served distribution channel are again the main restrictions associated to the potential entry of new competitors in the sector, which from the medium to long term can guarantee sustainability to the business model.

Foorban marries with a sector that was made scalable through digitalization and through it, it delivers value to consumers therefore its business model is centred on the use of a digital platform where users can order ready meals.

Substituted products in this market almost do not exist, as every start-up that deliver food prepared directly from their kitchens provide unique dishes elaborated with the help of different receipts and nutritionists, something that makes unique each offering.

The principals Foorban' s competencies lie in the ability to control every step of the service offered to the consumer, from the design and creation of the dishes, to their preparation and finally delivery. This feature makes them unique in the eyes of consumers and is also a source of differentiation compared to companies that offer the same service, which however sometimes outsource part of the product chain.

Moreover, Foorban has in full exploited the logic of "first mover advantage" as it has been called "the first digital restaurant", in fact, it is the first start-up to control all the chain of production.

I think that Foorban has been capable to unify the tradition with innovation with its business model because it has been able to acquire customers' confidence and trust, probably even of them that usually prefer to go to a normal restaurants. Foorban is successful because is synonym of brand quality, safety and traceability of the ingredients in its products. Whilst all the food companies in the Ho.Re.Ca segment compete for the shelves of supermarkets with their fresh ready meals of which little is known and often the label is not very reliable with regard to the ingredients used for the preparation of the dish, Foorban incorporating every production process becomes synonymous of reliability for consumers that think to establish a trust relation between themselves and Foorban.

The possibility to expand the business is high: in every city of Italy (and the same argument holds abroad) could be implemented Foorban kitchens that deliver healthy Italian food to people that take care to their body.

Technology applied to food offering and a perfect control of the food product chain have been the top ingredients that made the Foorban' s receipt working.

4.6 The case QUOMI

Quomi is the first Italian start-up that introduced, in January 2016 and for the first time, the meal kit to prepare dinners directly at home. The start-up was founded by Andrea Bruno and Daniele Bruttini and proposes an innovative way to think about food delivery: in fact, its service is based on meal kit delivery, *“a home delivery service that offers boxes with ingredients already dosed, and often partly prepared, to start immediately to cook delicious dishes”* (ninjamarketing).

Figure 29: Quomi’ s product



Source: Quomi

Until now, Quomi is consolidating its position in the Italian food & beverage market, where it has realized a sustained growth, registering about 5000 clients and more than 70k delivered meals (Quomi, press kit).

Quomi was ideated and concretized from two Millennials, Andrea Bruno and Daniele Bruttini (co-founders) when they both live in Berlin and they met in the same building, as they both were working for Zalando. As they were living abroad, they had the necessity to receive food products of high quality from Italy and not so available in Germany, as our *cuisine* can only be copied (badly) from foreigners.

Quomi was able, since the beginning, to register a good approval from consumer and food companies that understood the potential of their disrupting innovation, and for this reason, some Italian companies such as Accademia Barilla, Caffè Vergnano, Delicious and Perugina started to collaborate in the project (Quomi, press kit).

The path that Quomi undertook since the first year, was oriented to verify whether the market was able to receive such disruption considering the innovativeness of the service and to understand the real problem of consumers (Quomi, press kit).

Today they have the awareness to have build a solid food value chain, completely scalable and with partnerships with supplier of primary quality in the Italian panorama.

Quomi has been launched by the famous Italian start-up incubator Digital Magics (quoted on the AIM Italia market of Borsa Italiana) that has believed in Quomi' s project, that of solving the most difficult questions for a person that got back home late from work every day: what do I eat this evening?

Digital Magics is supporting it in its strategic development with its consultancy services and entered in Quomi with a total ownership share of 12.5%.

Digital Magics is a business incubator that help building and developing start-ups that offer high technological content, providing acceleration services. In 2013, it was listed on AIM Italy-Alternative Capital Market, dedicated to Italian SMEs with growth potential. Concretely, it offers *“to innovative start-ups all the support necessary to develop successful projects, from conception to IPO, and joins the Italian companies of excellence with strategic projects and services for the digital transformation”* (Digital Magics). It counts near 60 start-ups for its portfolio.

Antonello Carlucci, Partner of Digital Magics, in an interview released for Food Markers, talks about their investment in this way, saying: *"We are deeply convinced of the great potential of Made in Italy and specifically of quality food. We are also aware of the continuing need for innovation that is required by companies in the sector, but also by consumers, who are increasingly accustomed to new experiences in purchasing and enjoying food. For this reason we have recognized in Quomi and his team the right mix of innovation and entrepreneurial skills capable of creating 'disruption' in the traditional supply chain. We will work with the team to accelerate the growth path and make Quomi the player of reference in the sector "* (foodmakers).

The start-up won different awards and among others the one promoted by Alimenta2Talent, that brought the start-up to close the first financial round in 2016 with the piedmont fund Euroventures and other 600k from a group of private investors in 2017.

Euroventures “*is one of the longest-established and leading independent private equity and venture capital firms in Central Europe, with a proven ability to achieve international exits over two decades in a fast-changing environment*” (Euroventures).

The investment strategy adopted by the fund bases on seeking companies that seek from 1.5 million to be funded for technical development, investment and expansion. It counts fifty companies for its portfolio, approximately.

Quomi supports the Slow Food Foundation, an international movement that defend the real values of the food in the respect of whom produces it (quality and local).

4.6.1 Value proposition and strategy of QUOMI

It is has been acknowledged, from the national culinary critique and the former paragraphs, that Quomi is a personalized service that re-shape the way people used to cook at home. In fact, every week it allows to choose what to eat among different receipts, one per each day of the week. The advantage proposed by this innovative start-up is to use ingredients that are well-known for their high quality, in fact are fresh and respond to all the pre-requisites of excellence directly from expert producers in their field of production. Quomi is innovative because it allows to save time and money and respond to a trend that is particular prominent not only in Italy, but also abroad (digitalmagics).

The business model the use therefore, those of meal kit, is well-known and spread at global level: the market registered a total value of 5 Mld of Dollars in 2017 and its growth is expecting to rise, with global players as Hello Fresh in Germany or Blue Apron in the United States of America that overcome a total turnover of 1 Mld of Dollars (foodmakers).

In an interview released for *foodmakers.it*, Andrea Bruno, Founder and CEO of Quomi and Daniele Bruttini, founder and President of Quomi, explained that are following a strategy of growth and consolidation in the Italian food & beverage market with possible expansion abroad in the near future.

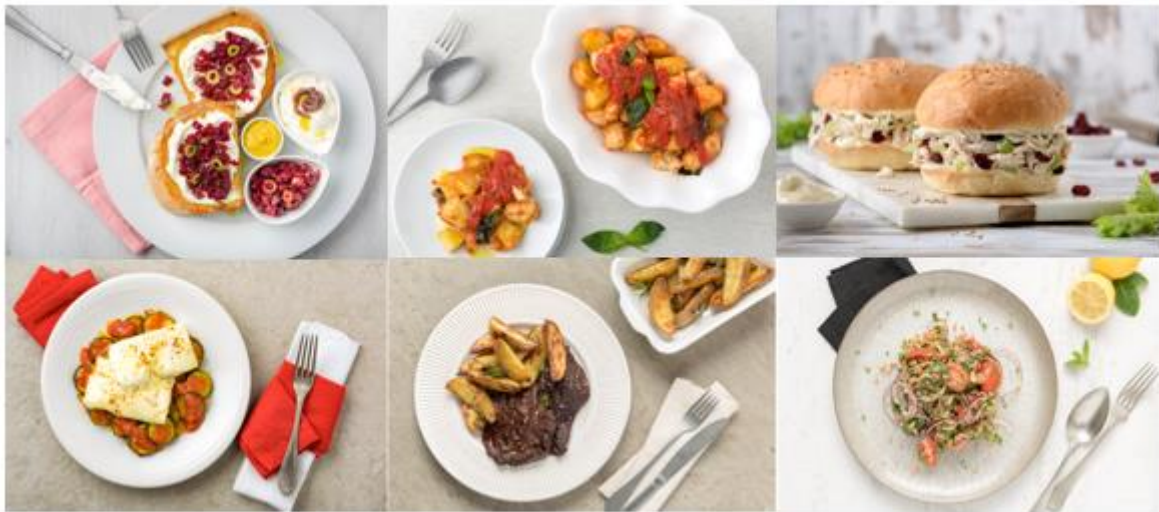
Their strategic movements are pillars for re-shape the way Italians do the shopping: the food digital market, and thus those of food innovation, is one of the new pillars of the economy at global level. In fact, according to an analysis elaborated by AgFounder on CrunchBase’ data, the last year has been fully successful for all funds that invested in start-up and food companies. Technology applied to food is a new frontier that wait only to be approached massively, as it has lot to give back as demonstrated by the future expected value that the segment should approach by 2020: 10 Mld of Dollars (foodmakers).

An important element of the Meal Kit strategy that Quomi exploit to make fully sustainable its offering, is again, the concept of short food chain. Therefore, it is clear when they affirm that *“we respect the environment, so we work with seasonal ingredients, mainly vegetables, not from intensive farming and little or no industrially transformed”* or when they state that *“we choose unprocessed, fresh and quality products, because in the kitchen you can see and know the individual ingredients and discover the magic of turning them into delicious dishes”*: what is profoundly innovative is their business model and how they put it in place. In fact, they choose to offer only ingredients that are Italian and that come from local realities (e.g. pistachio di Bronte, nocciole del Piemonte IGP, olio extra-vergine taggiasca quality, zafferano montefeltro and fregula sarda) selecting suppliers that do not offer their products to the GDO. Quomi, thus, eliminate three important layers of the food value chain that often those that non guarantee the freshness and quality of the ingredients: wholesaler, sorting warehouse, supermarkets (Quomi).

Consequently, Quomi contributes to make producers better off disentangling the chain of intermediation that does not result in incremental value for them but in split of the profit into more subjects, to the detriment of consumers that pay an higher final price compared to what they could have paid if there had not been intermediation.

Furthermore, Quomi insert its offering in a market full of trends and is able to align it with them according to what is better for consumers. In fact, this start-up is able to solve many problems that consumers face in this current years such as the slowness in cooking and the search for ingredients (without considering the amount of culinary journals bought and that remain there on the shelf unused for years), the low amount of time at disposition for workers whereas, at the same time, got married with the will of consumers that have the desire to learn how to cook more sophisticated dishes from easy and delicious recipes (Quomi).

Figure 30: Quomi' s receipts



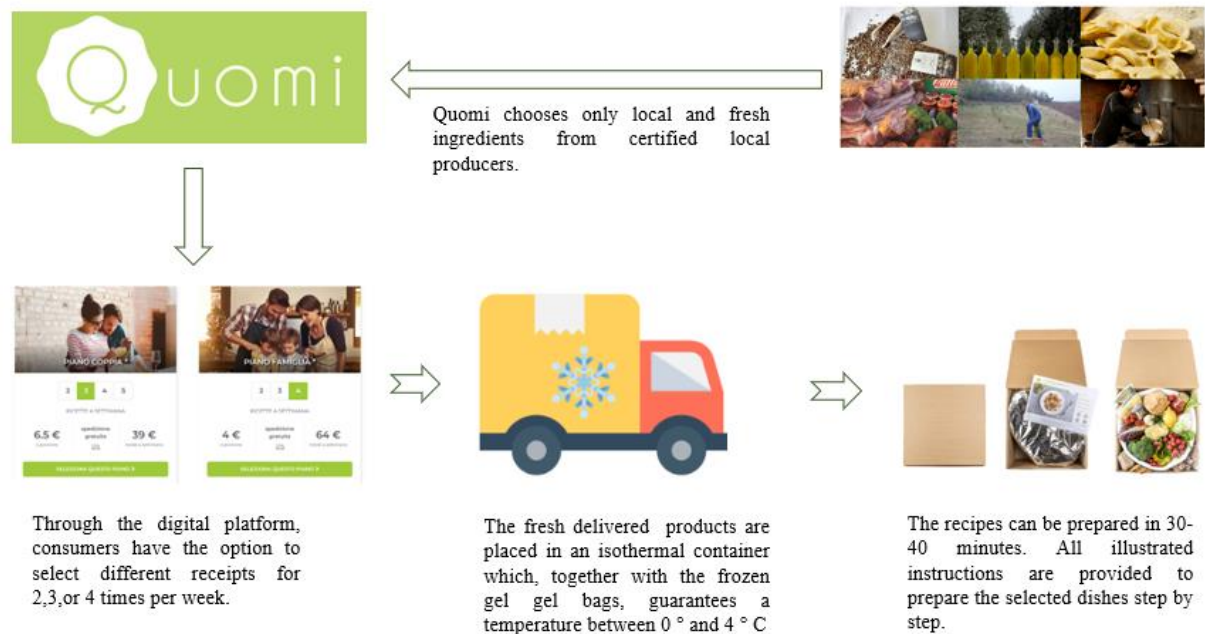
Source: Quomi

Quomi is also trying to innovate without forgetting the principal selling channels through which food is bought: GDO. In fact the path followed by the young start-up is inverse compared to the traditional food companies that first approach the traditional channel to follow the digital one once the first has been widely consolidated. Quomi is inverting this approach by starting from the digital channel and now approaching the traditional one, in fact, its products (Meal Kit) will be sold to the public in Milan also with the collaboration of GDO because it is important to “*explain all the benefits and advantages that we offer for a wider target so that augmenting the brand awareness Quomi*” (corriereortofrutticolo).

Their strategy basis on the omnichannel approach, as explained by Andrea Bruno for *corriereortofrutticolo.it*: “*we consider it essential to give our customers the opportunity to have a flexible subscription online but also to find ourselves at the same price at the supermarket*”. Moreover, the start-up is considering, thanks to the 600k fund received in 2017, to increase their partnerships at international level and by working on products for which they will have the global exclusivity.

As far the functioning of the start-up is concerned, it must be said that it is pretty simple and easy to understand.

Figure 31: How Quomi's business model works



Source: Quomi, author

From a strategical point of view, Quomi is inserted in an industry in which high is the demand for natural, organic and healthy products and where the sector under examination is populated by people with different needs, often connected with intense work rhythms that do not allow the career worker to eat healthy and calm most of the time.

Food & Beverage is the industry in which Quomi competes along with other food companies to grab the palate of consumers, while the sector under the lens is that of meal kit delivery.

In this sector there are some consistent barriers to entry because what Quomi does could not be easily repeatable because it occupies about the procurement of ingredients from certified suppliers, order management and packaging of ingredients in specific boxes and delivery through specific thermic boxes.

The relation that could be established with consumers is based again on the quality of the ingredients used for the preparation and especially on the easiness of the receipt, something that Quomi takes really care, as even the less experts must be capable to cook their dishes in less than 30 minutes.

For sure, the meal kit sector is not so concentrated as the healthy food delivery one, something that opens up the possibility to increase the margins in the future. Quomi marries this affirmation because through its new strategy founded on the distribution of their boxes inside

GDOs, it could expand the relation established with the market reaching out more consumers, leaving wide room for a future growth.

The sector in which Quomi offers its service is characterized by the "premiumisation" strategy. Quomi's products are sold at a premium price because consumers are not only buying something tangible, but they are buying their free time. In fact, Quomi's unique value proposition is based on solving the main problems of time in the purchase of ingredients in the supermarket and their relative cooking. These problems are of major concern, not only in Italy, but all over the world. This is why Quomi decided to undertake this type of business; because it knew that it had all the features to be scalable not only in Italy but even abroad, where the meal kit sector, especially in US is quite developed. In fact, a market strategy could be the one to offer Italian receipts abroad, exalting the quality of the Italian ingredients and the reliability of the high-quality Italian chef that tried them before selling.

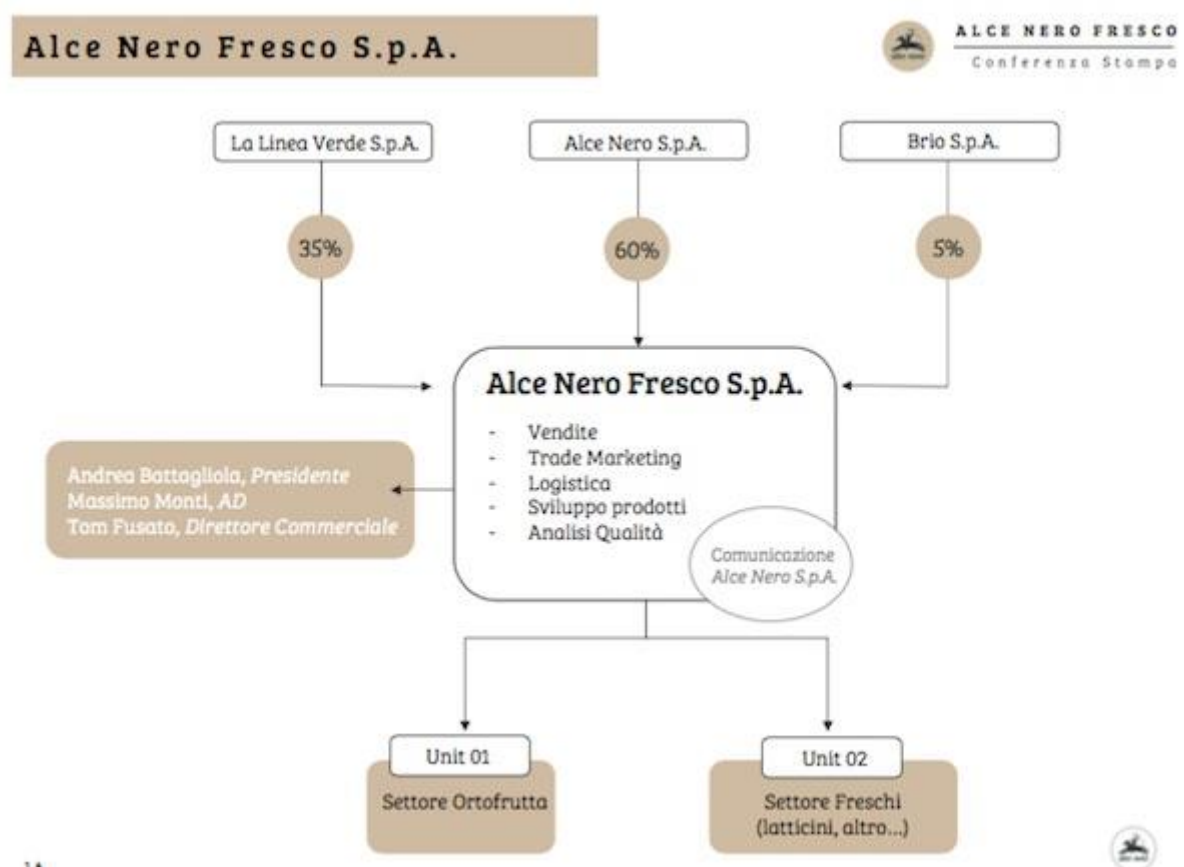
The uniqueness of Quomi is due to the choice of ingredients, exclusively from certified producers of fresh and local products, and the collaboration with high-level chefs who, before selling the recipe on the online platform, test it with the ingredients purchased. Moreover, the delivery is a crucial point for Quomi, which with the endorsement of the technology applied to the packaging, is able to deliver the ingredients while maintaining their quality from the outset. From what has been stated until now, Quomi has all the characteristics to be a sustainable business in which to invest money in, especially given its recent expansion in GDOs.

For sure, investors should ask themselves, after thoroughly have studied the financials, whether Quomi offers something that will be easily copied by big players in the Food & Beverage that will want to enter in the market and exploit their selling channels, and whether the industry is prepared for such a change, that is disrupting one of the most traditional market ever created by humans.

4.7 The case ALCE NERO FRESCO SPA

Alce Nero Fresco S.p.A. (start-up) is the Joint Venture that was formed by the hand of Alce Nero S.p.A. (60%), La Linea Verde S.p.A. (35%) and Brio (5%). The President is Andrea Battagliola (already commercial director for La Linea Verde S.p.A.), the Chief Executive Officer in charge is Massimo Monti (that has the same role in Alce Nero S.p.A.) and the commercial director is Tom Fusato (commercial director for Brio S.p.A.).

Figure 32: Alce Nero Fresco S.p.A



Source: Italiafruit

Alce nero S.p.A. loves to be defined as a group of “farmers, beekeepers and biological processors committed since the '70s in producing good food” (alcenero). They care about organic products, pursuing a strong commitment to extrapolate food products from campaigns free of chemistry and pesticides. Their mission is, being an Italian company, to focalize its work on value the quality, identity and typicality of productions.

They work to provide a sustainable economy in which both consumers and producers are better off in the respect of the environment and producing agri-products whose raw materials are obtained in a biological way and transformed with protective technologies of organoleptic and nutritional integrity (alcenero).

La Linea Verde S.p.A is a group of agri-companies, englobes production sites for fresh fruit and vegetables ready for consumption and a refrigerated transport company.

It is an important Italian reality spread from Northern to Southern Italy with a presence abroad in Serbia and Spain. The company commercializes salads ready in the envelope and with its own brand DimmidiSì, it sells fresh fruit and vegetables ready for consumption, fresh ready meals and fresh drinks (lalineaverde). The entire group had a total turnover of 238 Million Euros for 2017 with approximately 2 Million pieces produced every day (65k metres squared of productive surface). La Lina Verde 's mission is to bring to the tables of the Italian citizens products that are well-recognized for their quality, freshness and ready to be consumed. The objective in the Italian market is to become a cornerstone for the most prestigious brand of the GDO. Abroad, on the other side, the company seek to specialize as Italian producer of IV gamma and thus becoming partner as producer of ready fresh meals for European countries.

Brio S.p.A. was founded in 1993 with the scope to initiate a path in the commercialization of organic products and to sell them in each distribution channel. From the start, Brio was able to introduce, along with the fruit and vegetables division, the fresh division.

All the products are inserted in the market with the Brio brand and with the brand of the manufacturers, thus guaranteeing the control over the agri-food chain, to provide consumers a good range of healthy and organic products (briospa).

Brio's mission is to contribute the growth of organic agriculture, by commercializing products both in Italy and abroad, recognizing the importance of the freshness and quality of the ingredients to advantage the consumer.

In an interview released for the famous Italian journal "Il Sole 24 Ore", Mr. Battagliola explains that Alce Nero Fresco S.p.A. *"it is not an umbrella brand under which each of the individual companies works autonomously for its part, but a new society in which all the actors in question take a step back and challenge themselves to create a new reality whose potential is greater of the sum of the individual parts"* (ilsole24ore).

The idea of set up this strategic business alliance came about two years ago and the aim from that moment was to study the possibility to create a service that could be distinguished for its quality, freshness, innovation and high service directed to customers and consumers (ilsole24ore).

The JV was founded according to values that can be considered the roots of a tree that will give its fruits in a near future: care for the land, in terms of organic farming; all the raw materials come from Italy; rigid control over the agri-food chain, in fact, every activity is dealt internally, from the production to the development of recipes and logistics (ilsole24ore).

The main aim is to create and commercialize IV gamma products, whose market is growing fast, and fresh soups whose sales have increased by 30% in a year, with the scope to supply consumers globally. The products will mirror an organoleptic and nutritional profile, thus will be aligned with the current and most spread consumption trends (ilsole24ore).

4.7.1 Value proposition and strategy of ALCE NERO FRESCO S.P.A.

Alce Nero Fresco S.p.A, the business alliance (Joint Venture) that has been created between Alce Nero S.p.A., La Linea Verde S.p.A. and Brio S.p.A, will give the start to the production of organic products of high quality content, also in terms of innovation both for the foreign and Italian market (alcenero).

This alliance has been developed in an optic of “company networks” (it represents a mean through which different enterprises through the subscription of a contract, sign their commitment to collaborate, exchanging information and industrial, commercial and technical services and thus realizing the common objective of each company) (vt.camcom), that leverage on the strong points of companies inserted in the production of organic and no-organic products in the compliance with the values associated to the brand (alcenero).

The main objective of the Joint Venture is to respond to the new requirements of the market, in fact, according to Global Information Inc., the Europe Ready Meals market will probably augment its importance, expecting a CAGR of 10% along the forecasted period 2017-2023. Along with this, it must be said that the strategy adopted by the three companies is perfectly in line with the trend, as the rapid adoption of online retailing increased exponentially.

The JV will offer a high added value range of fresh and vegetable ready meals and more specifically (alcenero):

- i. will be put great attention to the quality of the products
- ii. will be put great attention to the freshness of the ingredients
- iii. minimal processing technology will be used and will consent to develop organic food in which the alteration of the organoleptic characteristics or nutritional impoverishment is reduced to a minimum
- iv. the access to products with high nutritional and dietary content will be enhanced, fostering the adoption of an equilibrated diet

The proposed offer will start with 6 ready-to-eat salads, 3 enriched salads and 4 fresh soups (alcenero). Alce Nero Fresco's offer intends to be perceived as a reference point also different types of customers such as vegetarians, vegans and all those who are looking for products that allow eating in a healthy way, without sacrificing taste while having minimum time to devote to the kitchen.

Figure 33: Alce Nero Fresco S.p.A 's objectives



Source: Myfruit

The business alliance is a sector 's strategy that is well embedded in the particular industry trend. In fact, the same Alce Nero S.p.A. has seen, in the last five years, triple its turnover, from 21 million euros to 61 million euros (2011-2016) growing more than the competition, more than the market, and becoming a reference point and absolute record holder. Clearly, from a point of view of image brand, many factors have contributed to its success such as being the reference brand of organic in Italy, its attention to the users of their services, and being a group of farmers that values the territory and respects the environment.

Considering the speech just reported, the company La Linea Verde S.p.A fits fully into the corporate vision of Alce Nero S.p.A. to deepen the knowledge of the market in fact, it is distinguished for its efficiency and innovative capacity in the market of the fresh vegetable ready market.

La Linea Verde S.p.A aspires to the total control of the supply chain to guarantee the correct distribution of wealth along it and to assure the quality of the product. Its role will be to care about the logistics and providing all the necessary know-how regarding the IV gamma products. Great attention will be put to the traceability of the products, with precise information on the origin and territory.

If for Alce Nero S.p.A, to have a partnership with La Linea Verde S.p.A means to deepen the knowledge of the market by increasing what they are already offering in the organic products segment, for La Linea Verde S.p.A. this business alliance means to become, assisted by Alce Nero S.p.A., protagonists in the organic sector (alcenero).

Brio will have, in its own small way, because of its participation will represent 5% of the control over Alce Nero Fresco S.p.A, the opportunity to increase the results and how much it has already to offer for its farmers partners. In fact, Brio will be entrusted with the task of creating, structuring and controlling the organic fruit and vegetable supply chains that will constitute the foundations of the joint venture.

Consequently, the raw materials will be produced by Brio farmers who have been working for years with the Alce Nero quality and safety standards and which have always exceeded the standards of control of the EU Regulation, both in terms of soil and plant analysis.

Through the commercial outlet of its ready meals, Brio can help to encourage the conversion of new companies to the organic sector, thus encouraging the appropriate use of agricultural land (alcenero).

The three companies have therefore chosen to combine their strengths to further develop a market that captures much of the evolution of Italian lifestyle.

In consumer choices, the pursuit of wellbeing and health, attention to the environment and sustainability, the identification of ethical criteria in the choice of products are becoming more and more established (agrintesa).

Eating healthy and living well is becoming more and more evident through the consumption of organic products that are attentive to the environment. Consumers are more sensitive, in fact, they prefer suppliers who are concerned to the environment and who ensure the fair distribution of value throughout the supply chain (agrintesa).

In sum, the three companies as well as the three partners decided to set up an entrepreneurial system based on the logic of the "business networks" which is the result of a spirit of innovation

and concreteness aimed at market leadership at the same time. It has great significance for the three companies, as the Joint Venture formed will be the launch pad for the global consolidation of the mission that each of them individually proposes, and which has the objective in addition to promote knowledge and diffusion of fresh ready meals, packaged according to low-tech logics. Furthermore, this alliance will serve to underline the importance of organic products and their consumption in our daily lives, as well as the guaranteed commitment to the recovery of biodiversity and the authentic taste of organic ingredients.

Personally, I think that the choice to form a Joint Venture between the three considered companies and according to what it has been stated up to know, is strategic.

The companies defined a real immediate opportunity and they understood that the JV was based on future real profit considerations and not on ego.

The co-created JV will not preclude the companies from doing what they do best, which substantially reduces the opportunity cost that would result if the alliance would limit the strategic activities of each. Since the structure of a Joint Venture determines its success and it depends and the same structure is ultimately related to the objectives that the parties have determined, I believe that, given the division of tasks within the strategic alliance and the specific facts surrounding the parties, they will reach the goal they are trying to complete, that is, bring a high representation of organic food products in the fresh market.

We could think about the current and future success of the JV according to the following terms:

- i. Compatibility:* they all contribute to the growth of the organic agriculture, pursuing a strong commitment to extrapolate food ingredients from field free of chemistry and pesticides. Their mission is, being an Italian company, to focalize its work on value the quality, freshness identity and typicality of productions.
- ii. Competence:* All the partners have the resources, expertise that are requested to the JV demonstrate to be successful in the sector of reference. Alce Nero is a leading company in the organic sector marketing own branded organic products, La Linea Verde is leader in the IV gamma products whereas Brio is a leader in the planification, commercialization and promotion of organic products.
- iii. Complementarity:* the three companies will fill everyone's' gaps. For instance, for La Linea Verde there will be the opportunity to become protagonist in a segment until know unexplored, the one of organic products. For Alce Nero it means fill in the gap in the ready meals segment in which La Linea Verde and Brio have deep know and expertise. Brio will fill in the gap of the commercialization of the ready meals segment, until now with little exploration from its part.

- iv. *Congruence*: There is common tension in a high-quality proposal, with a high service content, control of the entire supply chain, maximum attention to the quality of raw materials and the use of the least possible technological impact in favour of a winning organoleptic and nutritional profile in the finished product that must be absolutely good (alcenero).

4.8 The case CORTILIA

Cortilia is an Italian start-up set up in 2011, headquartered in Milan, and defined as an online marketplace aimed at creating economic relations between various figures operating within the agricultural market, such as farmers, breeders, artisanal producers and consumers, to make a new way of doing business a reality, no longer the large chains of distributions, but as in the country (Cortilia, press kit).

The lack of intermediation in the buying and selling of exclusively local products that are delivered directly to the home is the key point of the business model proposed by Cortilia, which combines healthy values such as the freshness of the products sold, their biodiversity and constant attention to health food consumers who decide to rely on Cortilia as a provider of healthy eating habits (Polloniato, 2013).

This start-up was conceived and founded by Marco Porcaro, forty-two, who covers the position of founder and CEO at Cortilia.

The idea of Cortilia arises from the need to sustainably sustain local consumption, far from the industrial logic of large retailers that are currently responsible for the lack of valorisation of the authentic products of our beautiful country (Polloniato, 2013).

Historically, the start-up is born through the spin-off of Viamente, a company founded by the same founder of Cortilia that has a web tool able to optimize the planning and management of corporate fleets. Once Viamente was sold to US entrepreneurs, Cortilia began exploiting the software of the newly-launched start-up to make efficient the system of moving goods from local producers to consumers (Polloniato, 2013).

With his avant-garde stamp, the entrepreneur has succeeded in demonstrating how much technology helps, in today's times, to help the food system and protect the territory, in the name of the short food chain.

This great work of Italian ingenuity has seen in digitalization the possibility of giving prominence to a now forgotten theme, such as that of local food, through the creation of multiple markets of virtual matrix in which, in a simple and affordable way, demand and offers have the opportunity to meet without resorting to expensive brokerage chains.

Cortilia, thanks to its raising disruption degree, raised the attention of multiple investors eager to take one piece of the equity stake of the company in an optic of future exit, given their venture capitalist's mentality (Polloniato, 2013).

Cortilia received its first funding round in 2012 when it was capable to obtain approximately 1 million euros from three different investors (dPixel, Club Italia Investimenti, Boox) that before anyone else discovered its potential.

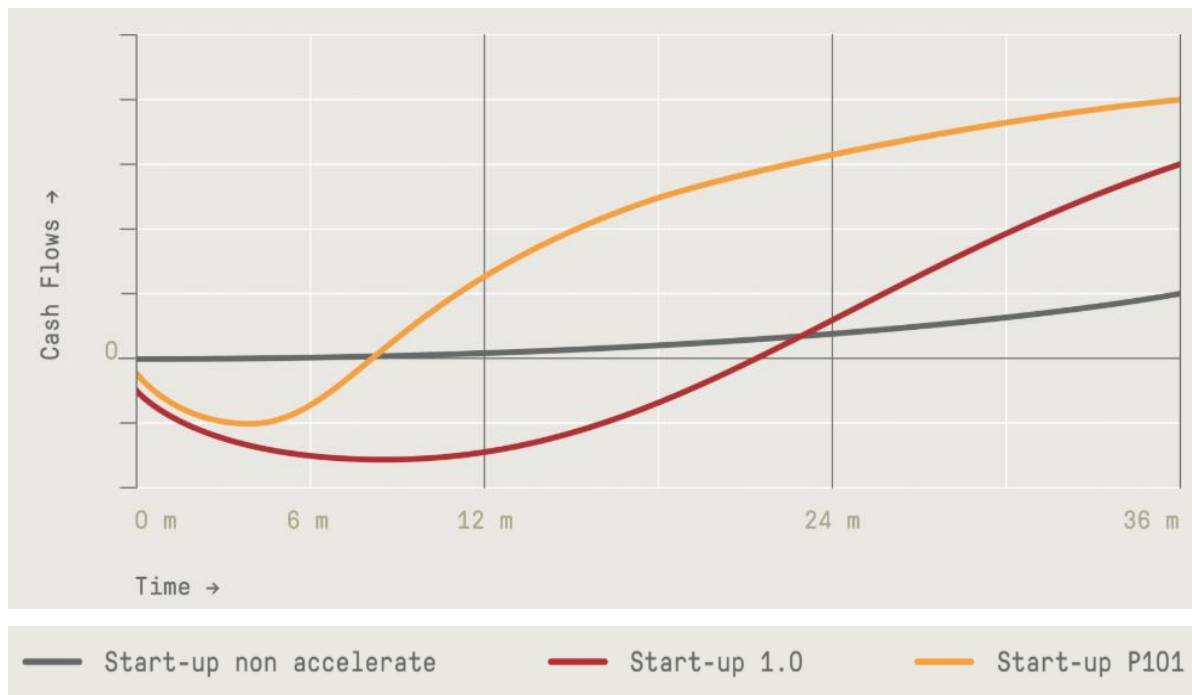
A second round of financing was obtained in 2014 from the well-known venture capital fund P101, specialized in early-stage investments in digital sector companies. In fact, The fund in the exercise of their interest acquired in companies which it invests provide expertise and know-how in all the companies that present and efficient business model that facilitate and enable the scalability of the idea.

According to P101 Venture, they do not invest in:

- i. *ideas or projects that haven't been backed up by a team, product or prototype and a market testing (P101).*
- ii. *in order to cover debt repayments or by buying shares of other shareholders. They provide fresh capital to support companies' projects (P101).*

P101 Venture takes care about metrics and scalability: they do control metrics and KPIs defining all the objectives in the medium and long term. Furthermore, they seek for companies with an international perspective with an high scalable business model and technology (P101). Concerning P101' s investments in Cortilia, they strongly believe so much in their business model that decided, along with another undisclosed investor to provide, in 2016, 1.7 million to the expansion of the business. Moreover, Cortilia received from the same fund other 2.5 million that Andrea Camillo, managing partner of P101, has so commented in an interview released for *economyup.it*:” *The opportunity that Cortilia is developing represents an exemplary case for a venture capital investor: a young company with strong growth revenues, a huge reference market and an innovative business model. With our investment and the resources we have foreseen, I believe that, in the medium term, we will be able to transform this Italian history into an international industrial model*”.

Figure 34: P101's investment model



Source: P101 Venture

Currently, the service offered by Cortilia is present in most cities of Lombardy, Piedmont and Emilia-Romagna. In sum, Cortilia intends to become a point of reference for online shopping in Italy promoting a global model of conscious purchases. Cortilia consider the technology as the best ally in terms of efficiency at all steps: *“from integrated management of farmers, to the supply chain using predictive models for the order planning, from proposing the right product to the customer at the right time, resorting also to artificial intelligence, up to the optimization of deliveries with a tool advanced planning”* (Cortilia, press kit).

4.8.1 Value proposition and strategy of CORTILIA

Cortilia is understood as a digital agricultural market that applies and projects the principles of the short chain directly on a digital platform, which represents an interesting case of innovation for a world, the agricultural one, considered one of the most traditional (Polloniato, 2013).

Cortilia's mission refers to *“bringing the best food products in the cases of the consumers that desire the excellence of raw materials”* (Cortilia, press kit).

The Italian start-up selects with minuteness agricultural producers and companies, creating from the moment of interaction with the customer, value for the consumer: Cortilia knows the

farmers who lie behind each product and their connection with the territory. It pays attention to the environments and methods of work, as well as to the conservation of the products themselves (Polloniato, 2013).

Moreover, a key point in Cortilia's strategy is knowing and being able to offer the fresh product in a very short time: all products are delivered fresh within 24 hours from the time of order thanks to a system that allows the mixing of the concept of short supply chain with modern technologies in compliance with the cold chain.

Figure 35: Cortilia's products



Source: Cortilia, press kit

The Lombard-based company functions as a joint purchasing group, in fact, consumers have the right to make multiple purchases directly from individual farmers, triggering buying loyalty and ensuring the benefits of sales volumes generated by the Group (Polloniato, 2013).

Cortilia therefore has a great deal of attention for the actors upstream and downstream of the short supply chain, ensuring greater profit margins for farmers and lower prices for consumers who, even if they pay a premium price for the service offered, have total security and traceability eating (Polloniato, 2013).

What do distinguish Cortilia from the competition lies in the fact that they are distributors, not wholesalers. In addition, the start-up is careful to rediscover the original taste of local flavours

and to raise awareness of the community on issues such as seasonal food. In order to guarantee this, Cortilia offers only local products such as seasonal fruit and vegetables for example or artisanal dairy products (Polloniato, 2013). *“Proposals are also available customized according to different needs: composite cassettes only of meat, only of cheese, meat and cheese or the box vegan or the mixed that allows savour different products”* (Cortilia).

To identify the best producers that can meet the requirements of genuineness, traceability and food safety, not only are parameters adopted with regard to production techniques and product quality, but the proximity between producer and consumer is in itself essential for the choice.

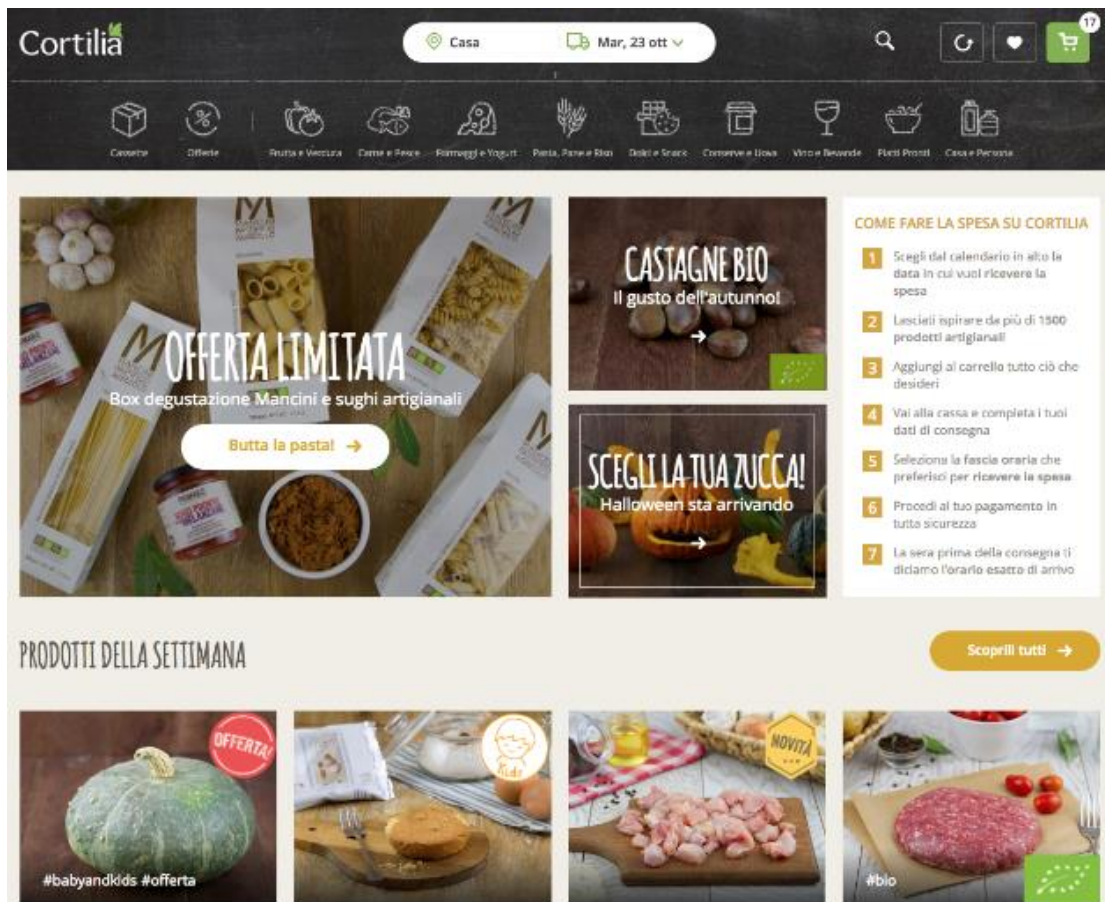
This is possible thanks to the software, that, by means of glocalization, according to the “Km 0” principles, privileges all that producers nearer to consumers (Polloniato, 2013).

Having said so, it is plausible that this argument has deep attention when it comes to treat organic products that Cortilia offers. Therefore, it becomes unfeasible to transport huge quantities of organic food products when distances among market’s players are high (Polloniato, 2013).

How does Cortilia work? Cortilia creates different markets according to producers’ proximity, variety of products offered and logistic optimization that enable to fast the home delivery of the purchased products. Simply, when the consumer register through the website he/she comes associated with the as nearer as possible market according to the indicated address at the moment of registration (Polloniato, 2013).

Cortilia offers two alternative ways of purchase: consumers can opt for a monthly or weekly subscription regarding fresh fruits and vegetables and available for three different quantities. In every case, Cortilia offers the possibility to complete the order with singular products from the list and market of proximity.

Figure 36: Cortilia's digital platform



Source: Cortilia, press kit

Logistically, all is done by the hand of Cortilia, but the service of transportation is given to third parties.

Producers have the possibility to set their own price for the products whereas Cortilia is currently elaborating a strategy for awarding the most loyal consumers with special discounts. On its side, Cortilia fuels its business model by establishing a commission from 20 to 30 per cent on the shipped food products although different options are still under examination.

Producers can gain from visibility and exploit the start-up as an alternative selling channel that guarantee fairer prices compared to the traditional ones.

Strategically speaking, Cortilia is a start-up very close to Direttoo, in terms of model of business used to deliver value to customers.

Cortilia, the start-up for the online purchasing of agricultural products, was the first online market, in 2011, to be set up for this purpose, generating strong appeal especially in the promoters of the short food chain and thus of the direct selling, disrupting the market.

The agricultural market in Italy is heavily bounded to the traditional selling channels such as small retailers and GDO whereas Cortilia anticipated every player in the market by using the advance of digitalisation to directly sell products to the B2C segment and offering niche products for people who are highly selective on their food choices.

Cortilia owns key competences that make it unique to consumers' eyes, such as the capacity it has to select certified producers, it knows the farmers who lie behind each product and their connection with the territory, it pays attention to the environments and methods of work, as well as to the conservation of the products themselves (Polloniato, 2013).

Moreover, a key point in Cortilia's competence is knowing and being able to offer the fresh products in a very short time: all products are delivered fresh within 24 hours from the time of order thanks to a system that allows the mixing of the concept of short supply chain with modern technologies in compliance with the cold chain. Its advantage is based on identify the best producers that can meet the requirements of genuineness, traceability and food safety, that are not the only parameters adopted in the selection of the producers, but what it counts is the proximity between producer and consumer is in itself essential for the choice.

This is possible thanks to the software, that, by means of glocalization, according to the "Km 0" principles, privileges all that producers nearer to consumers (Polloniato, 2013).

These are where the business has its roots and why they have implemented the business model with digital technologies, because they knew that their competences could beat the average competitor in the same sector and their immaterial assets such as the "human relations" with farmers/producers and the software are difficult to copy without huge invested time and financial investments.

I think that Cortilia's growth is particularly linked and based on if consumers and producers effectively recognize advantages in terms of money saved because of the elimination of the intermediation and they are happy with the quality of the products bought.

Its expansion thus depends upon consumers' loyalty and on the relations and trust that they can build with future possible farmers that would add more value to their digital platform in terms of products choice for consumers.

In sum, Cortilia represents a winning business model because it opened up a new market a especially it created a new selling channel for those products that before were linked to low margins for farmers, giving back more value to a sector, the agricultural one, that because of the advent of industrialization and globalization, it has been constantly ignored.

Conclusions

In this paper it is clear how the reflections on the global scenarios that will consolidate in the next years in the Food & Beverage industry are a highly current phenomenon of great importance not to be underestimated, especially in Italy, which is submerged by the trend wave that such scenarios imply.

Each trend is unique, with its distinctive features, and certain aspects of them could be depicted as opposite (it is presumed that by focusing on one of them will leave the others uncompleted) but to reach a balanced and positive approach to food, it is essential that these forces will move toward a new equilibrium, that is, a long-lasting and sustainable food dietary scenario.

In this direction, the paper examined whether Italian Government and Italian consumers are effectively embracing the global trends studied and whether Italian companies are able, by re-defining their business models, to create unique value propositions that could unify all those trends, or that at least they are taking the first steps towards their unification under one umbrella. First of all, it has been highlighted that the Italian Government is positively interpreting the new global food trends, in fact with the *Strategic national plan for rural areas*, it is promoting business practices and social initiatives aimed at educating people for a correct food culture, and building sustainable food markets that encourage the use of rural areas for the development of the organic sector, thereby increasing citizens' awareness of this segment of the market, in continuous expansion, as highlighted by Nomisma (a consultancy Italian company for economic studies), organic food sales have reached 3,5 Mld(€) for the domestic market (+15% than 2016 and +153% than 2008) along with export data for organic “Made in Italy” that is worth 2 Mld(€) and it counts for 5% on the total agri-food Italian export.

Furthermore, what has emerged from the proposed study, is that Italy is witnessing a consumers mentality change that think about food as source of wellness and decide more wittingly which food to select, with a rising concern towards healthier products. This need is driving toward new model of consumption, that see the average consumer to start preferring diets with low contents of fats and carbohydrates and avoid food with high contents of artificial colours, artificial preservatives and artificial flavours. Consumers have initiated to prioritizing quality over quantity, and preferring buying less but premium and natural food, as they also represent a sustainable and environmentally friendly choice.

In fact, according to the *Global Health and Ingredient Sentiment* (Nielsen), 67% of Italian population declare to be worried about the long-term impact that artificial ingredients could have on people's health; the 53% would be eager to pay more for specific food that is not made

up by undesirable ingredients despite the fact that only the 37% would be eager to pay for something healthier but less flavourful.

Therefore, the interest that is currently developing is towards the ingredients present inside the acquired food products, with the majority of Italians preferring those producers and distributors that apply the maximum transparency on the origin and modality of production of the own products.

The research undertaken by consumers for healthier products, bounded to the transparency on the methods of production and traceability of what purchased along the food value chain, boost their consciousness to start preferring regional and local products instead of mass products commercialized by GDOs. The preference of consumers toward this kinds of productions is sponsored by ideological movements that favour the consumption of food produced in the vicinity, such as, for instance, the so-called "Zero-km expenditure" which fosters the trade and consumption of products characteristic of the territory and Slow Food, an organization founded in 1986 in Italy that promotes local food and traditional cooking.

Local food, in which it is implicit the concept of short food chain, is emerging as a philosophy of food management able to guarantee the minimization of the information asymmetries existing between producers and consumers because, through intermediation (wholesalers and distributors), much information as fundamental as the process of creation of the food product and its nutritional information can be manipulated or at least definable as untrue. In this sense, in Italy the normative treatment referring to the "clean labels" for organic products, that means *"being produced free of 'chemicals' additives, having easy-to-understand ingredients, and utilising traditional techniques with limited processing"* (Asioli et al., 2017) is of great importance because it aims to fight fake food "and defend people's health, protect the economy, fight speculation and defending the Italian agriculture.

In order to guarantee the right transparency, blockchain technology has emerged from the carried out research as a vital and future important tool to reduce asymmetric information, in fact, the aim of its application is building a direct bridge between farmers and consumers, based on values such as honesty, trust and transparency by following the product along its chain (informamuse, 2018).

Italy is encompassing the blockchain trend applied to food, in fact, according to informamuse, 2018, multinationals and PMI in Italy *"have already started Blockchain technology in their sector, from agricultural products to fish products, from milk to wine, from health to insurance"* because, as they explained, *"it is a technology that simplifies transactions by encouraging secure and transparent relationships between all the actors involved"*.

Apart from having demonstrated evidence from the actions perpetuated by the Italian State to the consumers changing habits towards a healthier food culture and everything it entails, the paper focused on demonstrating that actually something is changing in the Food & Beverage sector, not only in terms of consumers preferences but regarding the business models used by companies to disrupt the traditional food industry, tied to the analogue mode of doing business. What traditional food companies and new form of ventures are currently doing demonstrate that they are effectively embracing them by offering unique ways to deliver what modern consumers want (especially Millennials).

According to (Pozzoli, R., 2018), exploiting the great culinary tradition of our Country and making it available to the vast majority of people is one of the path that entrepreneurs can follow: the same Foorban case (digital restaurant), for instance, prove that *“even the most traditional sector of the restaurant industry can be interpreted in a different way thanks to new technologies that allow it to meet the needs of customers in new and unexplored ways”*.

The paper in order to give proof that exist real company cases which are distinctive for how they deliver their value proposition following the trends and with the use of new technologies, proposed six M&A cases concerning innovative forms of business, that is start-up, and one further M&A case regarding a business alliance (organic market).

The presented start-up cases of Direttoo, Nutribees, Diet-to-go, Foorban, Quomi, Cortilia highlight the use of the digital technology in the field of Food & Beverage, that represents something innovative compared to the last decade. The Joint Venture Alce Nero Fresco S.p.A, set up by Alce Nero S.p.A, La Linea Verde S.p.A, Brio S.p.A (the business alliance case) instead, it reflects the importance that the organic sector has in Italy as a solution to the needs of the modern consumer, who likes to eat healthily, regardless of the time available.

What they cases in common, apart from responding to trends in place, is the clear attention to what consumers want now: eating healthy and quickly, optimizing their little time.

All of them, apart from Alce Nero Fresco S.p.A, use digital platforms to reach the expected result, the hoped mission, the vision they have for the market.

Personally, it seems evident to me they have understood the *raw customer needs*. A raw customer need is *“the essence of what customers value in a product or service, and digital insurgents, unencumbered by history, may more easily zero in on it and find a better way to meet it than other companies”* (WorldEconomicForum, Bain & Company).

These considered companies' cases were capable to understand the raw customer needs of the modern consumer, generating competences in terms of dish creation and preparation for some and delivery for others, that are unique and difficult to copy for the clear synergies that are

established among different team functions and team members. What I have observed in the studying of these companies' cases, was their culture, meant as their behaviour at scale.

I think that digitalisation has fostered the value as agility, innovation and collaboration transferring an advantage to those companies that act with these values in mind. Companies that are agile can act quickly based on the feedback provided by the market and the same customers, collaborative companies can use their synergies to deliver better value to customers and innovative companies can fill the gap left by other businesses in the same sector to give a better return to customers. When a company marries these values, establish a special advantage for itself in the market because it is able to detect the abovementioned *raw customer needs*.

Capturing the *raw customer need* is the first stage in creating a business model for the future (WorldEconomicForum, Bain & Company).

The success of these companies is not something that was build in one day, for sure, it is something that required time to understand the market and how it would have moved in the near future.

They had a vision (perceived as the quality that produce a *state of mind* that permit to understand the real motif behind the company) that transformed into a strategy, that dictated where the business should be going to be positioned as a winner “at the end of the game”. To put in place their strategy, they set up a winning business model that could satisfy the raw customer needs which was not given “voice” in the current market offer. They position their flexible business models in such a way that is relatively important to satisfy today's demand, albeit low compared to more traditional offerings, but fare more important to content tomorrow's offering, when the demand for their services will be high as the trend will be consolidated (World Economic Forum, Bain & Company, 2018).

In this paradigms, the start-ups' models of business have been put in place as customers require a new experience. An “as-a-service” offering, creates a daily cadence of tangible value. Food purchases that were made once or twice per week at supermarkets (buying products) or restaurants (direct consume) can now be completed every day. In this century, where subscription service abound, every relation established with customers becomes an opportunity to win them for life (maybe). Each as-a-service model requires companies to be every day winners in customers' life (World Economic Forum, Bain & Company, 2018).

Going on, what has emerged by studying their path, it was the importance that these start-ups gave to the “enablers”, or those factors that actually have and are helping the business models to be successful, now and in the years to come.

Enablers, identified as i. food chain innovation, ii. healthy food culture, iii. digital technology, iv. State's policies for a healthier food education, have all contributed to drive the forecasted

transformation as all of them are indispensable for the survival of the current trends on which the company's value propositions are based.

Finally, these start-ups succeed because they were able to englobe all people's necessities under one umbrella: their service.

Producers and consumers have multiple needs that these cases highlighted, albeit not explicitly. Take for instance the case of Direttoo: producers have the necessity to get paid a fair price for their products, whereas restaurant's clients need fresh and high-quality ingredients to satisfy their healthy habits. Direttoo, through its e-platform, guarantee a fair price to producers eliminating intermediation, whilst restaurateurs buy certified products of high nutritional content and quality from guaranteed producers, contenting their client.

This to say that these start-ups succeed because were able to orchestrate the scale of their service, responding to multiple trends in place, because they mirror what trends say.

The thesis highlighted also the fact that founders are not the only people that believe in those trends: external investors, either private or associated as venture capital funds or business angels group, marry the idea of the transformation of the industry (Food & Beverage) perpetuated by the selected and presented cases through their business models.

After what was reported during the telephone interviews conducted with the founders of some of the start-ups presented in the thesis as business cases and what was described by the investors themselves during the interviews given to famous national newspapers, it emerged that what was more appreciated by the same investors was the *disruption* capacity of the presented business models, which will surely represent the innovative trend of the coming years which supports what has been reported up to now. In addition, it was especially appreciated the mode and ability to use the service, which is completely scalable, repeatable and profitable in the long term. Along with it, it was recognized the unfeasibility of the traditional supply chain in this fast-changing word: investors seek for and need the right mix of innovation and skills capable to *disrupt*, because this is the key word driving investments.

Consumers look for new experiences in purchasing and enjoying food, so that investors are required to give them innovation to grab the value people assign to traditional offerings.

Concluding, it is clear that "*the timeframe for companies to respond to changes in the marketplace is shrinking*" (Holloman, D., 2018). Investors seek for all companies able to "*build an inclusive, agile organization that understands who its customers are and recognizes that consumer preference is a continuum*" (Holloman, D., 2018).

The opportunity for venturing investing in food tech companies has something similar with the ascend of the Internet at the end of the 90s, when an enormous wave of disruption was not yet

met by sufficient capital to sustain it. This is the moment to have a venture capitalist mindset and investing in this sector full of present and future opportunities.

Until now, the discussed arguments have highlighted how the future, for the Food & Beverage sector, will be pervaded by multiple trends that will be expressed and concretized in the unique *value propositions* inherent in every business model offered on the market.

In examining the trends considered, we should also ask ourselves whether the business models of start-ups related to healthy food, personalized healthy food and the promotion of a short supply chain model will be without challenges or will occur problems related to the future expansion of the start-ups offering these business models.

In my opinion, there will be some considerations to have before considering a bright future for the own business.

One important aspect is that related to scalability of the business models and their international approach.

The business models presented within the elaborate are strongly characterized by the national context that surrounds them, for what concerns the procurement of raw materials for some considered start-ups or the establishment of lasting relationships of a professional nature with suppliers when they represent the main element of the model for other ones.

The main difficulties for these companies, with a view to being positioned in an international context and/or of greater economic importance that requires significant investments on the operations side, will be precisely those of guaranteeing, on the one hand, large quantities of fresh food the variety of a wide demand, the other to guarantee the necessary logistics for the operation of the service that will be able to connect different points in a short time, and finally the maintenance of excellent personal relationships with suppliers, which at the same time (as rather local) will have to invest large amounts of money flows to ensure the necessary distribution of raw materials. This last aspect remains of particular relevance, because given the high quality of raw materials required by consumers in terms of taste, it will be a producers' task to find the necessary means to increase the production of these ingredients respecting the constraints imposed by the biological culture and seasonality of which start-ups make it a cornerstone in their value propositions. Thus, it will be a challenge for these start-ups, if they want to survive in this highly-competitive market, to invest in production capacity of their local suppliers/producers to guarantee their service to everybody, regardless of the amount of customers.

To be perfectly scalable, considering an hypotheses of future growth, it is thus essential to prioritize investments in technology and product, rather than building a price value proposition

where everyone could afford everything, because it would risk to fall in red oceans, where it is difficult to survive and the rate of failure is very high as companies strive for very low margins. In considering whether or not a rosy future exists for the types of business models considered, the aspect of competition on the market for the same type of service offered and the acquisition of consumer confidence must not be overlooked.

In relation to these two aspects, the future I see for the reference market is strong competition and difficulties in acquiring consumers' loyalty.

As demonstrated in the previous paragraphs, that linked to health food, is a trend that, for some time, is increasingly taking advantage of consumers, especially among the new proponents of healthy consumption: the Millennials.

For this reason, also given the huge investments by funds specialized in the growth of high-tech realities related to the world of food, as Millennials are the digital generation par excellence, I believe that in the future the market in question will be pervaded by countless entrepreneurial realities young people who want to grab a slice of the growing market, triggering a price war that, in terms of personalization service as a strategy of differentiation, is tearing.

On the other hand, I strongly believe that the fundamental question to survive in the market of the future will be to "tell" your value proposition with a story of inspiration, to retain the greatest number of possible consumers to their cause. The entrepreneur's vision will not be enough. It will be essential to know how to talk about themselves through an established strategy of positioning the brand that educates the consumer in reference to a topic in particular, because if every start-up is limited to portray in its value proposition their desire to create comfort and food quality for the consumer, it will be very easy to be copied and replaced. Furthermore, in addition to focusing on the "why" of the service / product offered, it will be a challenge for companies in this sector to focus on the "how" of their products, to focus communication on an efficient disclosure of all the steps of the service offered, to be transparent and to guarantee security, in accordance with current trends.

The challenges of the new market that will be created in the coming years are therefore attributable from an operative point of view, to the corporate adhesion of digital technology to market their products, to the implementation of a flexible logistics able to adapt in parallel with the growth of business, to a substantial production capacity designed for large numbers, even if we should consider to what extent we can talk about growth, since producers have limitations inherent in their own activities, such as the productivity of land for example. On the other hand, from a strategic point of view, it will be essential to look to the future of the market in a transparent and personalized perspective, to inspire loyalty and trust in consumers, as if the company itself had been designed precisely for their needs.

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