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Overview of Consumer Trends in Food Industry

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Table of Contents

| | | |
|------|---|----|
| 1 | Introduction | 4 |
| 2. | Health | 5 |
| 2.1. | <i>Functional foods</i> | 6 |
| 2.2. | <i>What will the trend mean for actors in the food chain?</i> | 7 |
| 3. | Convenience | 8 |
| 3.1. | <i>Bundling</i> | 10 |
| 3.2. | <i>Ready-to-eat (RTE) meals</i> | 11 |
| 3.3. | <i>What will the trend mean for actors in the food chain?</i> | 12 |
| 4. | Pleasure | 13 |
| 4.1. | <i>What will the trend mean for actors in the food chain?</i> | 13 |
| 5. | Sustainability | 15 |
| 5.1. | <i>What will the trend mean for actors in the food chain?</i> | 16 |
| 6. | Authenticity | 17 |
| 6.1. | <i>What will the trend mean for actors in the food chain?</i> | 17 |
| 7. | Conclusions | 18 |
| 8. | References | 20 |

1 Introduction

A strong market orientation and integration of consumers in the product development process are essential for successful innovation policy in the food market (Sparke and Menrad, 2011, p. 125). If a link between current demand and lack of consumer products or services in the product palette can be identified, this link may support the creation of innovative products and services that address tangible and intangible consumer benefits (Schenk et al., 2011).

Technological advances in the food industry are attracting considerable interest from food producers, marketers, product managers, retailers, media, and public policy makers (Baourakis et al., 2011) because of the promise to provide safer and healthier foods, make efficiency improvements, and to make operations more sustainable. However, if the technologies implemented by the stakeholders do not resonate with consumers' needs, beliefs and concerns, it may lead to increased consumer distrust in the food chain and new product rejection. Consumer acceptability is thus crucial in the innovation process. Early identification of consumer acceptability of new technologies and of the forms in which these technologies can be delivered to the end-consumer is of prime importance. Consumer acceptance develops on the basis of (current and emerging) consumer needs, which may make technologies more or less appealing.

The aim of this Deliverable (Task 2.1 in WP2) is to identify those emerging consumer wants and needs that may have relevance for technology acceptance. To this end, the task consisted of three stages.

- First, the scientific evidence on emerging consumer wants and needs was collated through a comprehensive study of the consumer behaviour and marketing literature with applications to food.
- Second, new insights were added to the document on the basis of grey literature.
- Third, the document was completed on the basis of conclusions from group discussion with members of the Collaborative Food Innovation Forum (CFIF) (Task 1.4a).

The document discusses general consumer trends, developments within specific product categories, the way producers and retailers are recommended to respond to these trends, and implications for technology acceptance. We identified five main consumer trends: health, convenience, pleasure, sustainability and authenticity.

2. Health

Consumer's increasing awareness of links between food and health has been one of the most important social developments in the recent years. A significant body of scientific literature documents that consumers nowadays are more interested in healthy food products to prevent diseases and maintain healthy living (Krutulyte, 2010). Consumers choose healthy products that satisfy their underlying values, such as living a long and healthy life. Health awareness continues to rise with the increasing availability of health information, going hand in hand with the ageing of populations and increased risk for lifestyle diseases (Kearney, 2010).

The availability of health information (e.g. based on the product labels) and interactive health communication (e.g. through Internet) is perhaps the most important driver of consumer health awareness. Increasingly, consumers engage in health information seeking during food purchasing (Hansen et al., 2010) and via the Internet (Cline and Haynes, 2001). However, some findings suggest that increased information seeking for product-specific health information only occurs if consumers are also involved in the specific product category (Hansen et al., 2010).

The increased focus on health has also been related to the demographic changes in society (Labrecque & Charlebois, 2011). An important demographical change is the shift in the age profile of consumers towards a relatively large share of elderly people compared to young people (Labrecque & Charlebois, 2011; Linneman et al., 2006). Generally, elderly consumers are more concerned about health, wish for a longer life and are therefore more motivated to buy healthy products (Bech-Larsen & Scholderer, 2007; Shiu et al., 2004).

The changes in lifestyle (e.g. less physical activity) and the prevalence of chronic non-communicable diseases (e.g. CVD, type 2 diabetes, obesity, etc.) have also contributed to consumer concerns and reduced quality of life (EU Report, 2010).

Research, including several projects funded by the European Commission (EC), has led to the identification and understanding of the potential mechanisms of biologically active components in food, which could improve health and possibly reduce the risk of disease while enhancing our overall well-being (EU Report, 2010). This research has led to an increasing attention in the concept of functional foods and their benefits. Although healthy food comes in different forms, the functional foods category has been growing in importance as a field of research, and the functional food industry has experienced significant growth in recent years (Boer et al., 2002).

2.1. Functional foods

The specific understanding of functional food differs between regions, but in Europe it is generally used to refer to foods produced to promote health (Niva & Mäkelä 2005). Functional foods are food products enriched with a bioactive ingredient to provide consumers with health benefits (Krutulyte, 2010; Labrecque & Charlebois, 2011; Niva & Mäkelä 2005). Functional foods are considered the result of the process of enhancing the product by removing *or* adding components to increase healthiness (in contrast to, for example, organic products which are the result of a non-enhancing process).

Functional foods have great acceptance among consumers because of increasing life expectancy, higher prevalence of non-communicable diseases, increasing healthcare costs and the acceptance of the strong link between diet and health (Kearney, 2010). Still, a significant segment of consumers are sceptical about the “healthiness” of functional foods, their health-related claims and their efficacy. For instance, scientific evidence exist that consumers avoid functional products due to their perceived ‘unnaturalness’ (Labrecque & Charlebois, 2011; Lähteenmäki et al., 2010; Niva & Mäkelä, 2005; Ronteltap & van Trijp, 2007). According to different studies, consumer perceptions of functional products depend significantly on the technology used to transform the product. Consumers are particularly sceptical towards new technologies of food production, which are perceived as less natural and by implication as less healthy (Niva & Mäkelä, 2005). Based on a total sample of 4612 respondents from the Nordic countries, Lähteenmäki et al. (2010) found that health claims on functional foods mostly have a negative impact on the perception of product attributes such as attractiveness, healthiness, taste, ability to reduce risk of disease, and in particular, on the perceived product naturalness.

Low-fat products are a sub-category of functional foods that has proliferated significantly over recent years. Influencing factors for the acceptance of fat-reduced food products are related to health concerns due to the increasing number of people suffering from obesity (facilitator), the product’s fit with personal dietary behaviour (facilitator), household members (facilitator/drawback), perceived sensory properties (drawback), and scepticism towards the products (drawback) (Hill et al., 2002). The increased focus on healthy living and its relation to a healthy diet has led to an increase in the number of food technologies within the areas of reduced fat. Fat reduction technologies range from skimming fat from milk to replacing saturated fat with other and less dangerous types of fat. As with functional foods in general, evidence exists that low-fat products are often perceived with scepticism by consumers due to lack of trust in the food industry, particularly with regard to product claims and concern for additives. For instance, in one study (Hill et al. 2002), consumers perceived the ‘low fat’ labels as a way for food manufacturers to advertise their

products and some consumers considered reduced-fat products as being less healthy due to the replacement ingredient (Hill et al., 2002).

2.2. What will the trend mean for actors in the food chain?

The technology is developing continuously, but it is not enough to be able to convince consumers about the healthy properties of the new healthy food products. The challenge, therefore, is to develop effective synergies between science and food product development for the benefit of the consumer and consumer understanding and trust. According to some EU Reports, aspects of health linked with some of the most developed aspects of nutrition science are:

- better early development and growth;
- health maintenance (e.g. immune function, gastrointestinal health, mental health, health in ageing, physical performance);
- reduced risk of obesity;
- reduced risk of chronic diet-related diseases (e.g. cardiovascular disease, type 2 diabetes and metabolic disease, musculoskeletal disease).

This trend requires major changes in the nutrition education when promoting the product, legitimate medical support about product properties and corporate responsibility in term of the product claims made, and clear communication strategies geared towards improving consumers' trust and knowledge about the new healthy products. For a health claim to be truthful and not misleading to consumers, its basis and its wording must be fully consistent with scientific evidence (EU Report, 2010).

3. Convenience

Convenience is one attribute of a food product for which demand is increasing (Buckley et al., 2005). Some researchers have found that convenience orientation is just as important as attributes like taste, health and price in determining a consumer's preference towards food-related behaviours (Candel, 2001).

There are different meanings of the word "convenience" referring to time utilisation, accessibility, portability, appropriateness, handiness and avoidance of unpleasantness. Convenience in the context of food can be defined in terms of reductions in time and effort (mental and physical) spent buying, storing, preparing and consuming food. Convenience foods are defined as any fully or partially prepared food in which significant preparation time, culinary skills or energy inputs have been transferred from the homemaker's kitchen to the food processor and distributor (Buckley et al., 2005).

Lifestyle trends such as the growth in the number of single-person households have resulted in an ever-increasing demand for convenience. More facilitators discussed in a literature review (Buckley et al., 2005) are: ageing population (IGD, Business Publications, 1998), changing household structure (Khan, 2000), female participation in the labour force (Traill, 1997), longer working hours (Traill, 1997), consumer prosperity (Bonke, 1992), moves towards healthy eating (Mintel, 2000), desire for new experiences (Mintel, 2000) and individualism (IGD, 1998). Furthermore, declining cooking skills (Furey et al., 2000), breakdown of traditional mealtimes (IGD, 1998), and the desire to expend less time and effort on food-related activities, e.g., shopping (Swoboda and Morschett, 2001) and meal preparation and clearing up (IGD, 1998) also impact on the desire for convenience foods.

Consumers demand convenience, but they are not willing to compromise with the quality (e.g. Boer et al., 2002). They still want fresh and high quality products. This can, for example, be achieved with packaging technologies and preservation technologies increasing the shelf life without compromising the freshness of the product. However, this demand for freshness and high quality are not always aligned with the demand for convenience foods. A study by de Boer et al. (2002) revealed that the importance of freshness has a negative influence on the purchase of ready-meals and take-away food. On the other hand, the catering business sees expansion of celebrity chef-based cuisine catering at locations traditionally dominated by fast food outlets such as airports and shopping malls (Henderson, 2011).

Often, consumers feel that they are not able to eat healthy at the same time as making eating convenient. According to Leipämaa-Leskinen (2007) convenience in cooking is difficult to achieve at the same time as eating healthy. Furthermore, De Boer et al. (2002) find that the importance of health is negatively related to purchase of take-away meals. However, this contradiction might be decreasing. Convenience can be positively related to health. Through the use of food technologies such as enrichment (functional foods) and personal nutrition, eating healthy has become much more convenient for consumers (Biström & Norström, 2002). This link is also a trend recognized by many food manufacturers such as Unilever who is investing a lot in food technologies integrating health and convenience (Pool, 2009). This opinion is further supported by de Boer et al. (2002), who state that health is one of the main drivers of new product development within the food sector and that the demand for products that are both healthy and convenient is increasing. Consumers are increasingly aware of the relation between diet and health and this issue has a major impact on the development of convenient food products (Buckley et al., 2007).

According to some studies, the older generation of consumers tends to be more conservative in their food choices (Buckley et al., 2005), which might negatively influence their demand for convenience (Saba et al., 2007). The older generation is more concerned about their health and will be more willing to buy health oriented food products (Shiu et al., 2004), which can also have a convenience aspect in form of e.g. functional food. On the other hand, older people might have more physical difficulties with meal preparation and therefore convenience can help them to obtain a varied and healthy diet (Saba et al., 2007). Elderly people are motivated to adopt food innovations if they find it compatible with their lifestyle.

Convenience and homemade may be a bipolar food consumption-related contradiction that can influence consumer behavior with regard to food. Homemade cooking is highly appreciated but it requires a great amount of care (Leipämaa-Leskinen, 2007). Consumers valuing homemeal preparation have a negative attitude towards convenience food (Buckley et al. 2007). Today, consumers are moving more and more towards convenience solutions, but homemade is still valued (Leipämaa-Leskinen, 2007).

Convenience in packaging can also be in conflict with environmentally sound behavior since it often leads to waste. One study conducted in Finland (Rokka & Uusitalo, 2008) showed that the largest consumer segment favoured environmentally friendly packaging as the most important criteria in their choice. However, previous studies suggest that the level of abstraction tends to have an impact on results; when consumers are asked about their attitudes to packaging in general, there seems to be a tendency to associate it with negative environmental effects, whereas when asked about a specific package, consumers tend to

emphasize the positive, functional characteristics of the packaging (Bech-Larsen, 1995 cited by Rokka & Uusitalo, 2008). Packaging is an important aspect of convenience food because it can help save time and effort for the consumer in food preparation (Marsh & Bugusu, 2007). Attributes considered convenient by consumers are: ease of access, handling and disposal, product visibility, reseal ability, microwave ability and they that have a major influence on package innovation (Marsh & Bugusu, 2007).

Convenience food comes in different forms, but bundling and ready meals categories are two of the most important developments.

3.1. *Bundling*

Bundling is a sales strategy that involves offering several products for sale as one combined product, referred to as package deal or compilation (Sharpe and Staelin, 2010). According to some researchers, the strategy is aimed at persuading consumers to purchase items that they would not ordinarily purchase if the items were only available individually (Stremersch and Tellis, 2002). The bundling literature offers three major reasons for a seller to bundle products: i) cost saving (e.g. transaction and distribution costs involved in the selling process whenever seller-side bundling simplifies the shopping and shipping processes) (Bakos and Brynjolfsson, 2000); ii) bundling as a tool for price discrimination (e.g. bundling reduces heterogeneity in buyers' valuations (Stigler, 1963) and iii) bundling as a tool for competition (Chen 1997). From a consumer perspective, however, bundling is about combinations of different food products with service elements to deliver meal solutions for different situations and to different consumer segments (Krystallis et al., 2011).

There are very few studies on consumers' attitudes towards bundling. Most of the initial work on bundling comes from the economics literature and takes the perspective of the firm (Sharpe and Staelin, 2010). However, several studies on this topic investigated the actual consumer behavior towards bundling and how consumer values a bundle. In one recent study taking the fast-food industry as the context, Sharpe and Staelin (2010) shows that the demand for French fries increases when a bundle is offered. For example, 15 per cent of customers who did not purchase fries in an à la carte-only offering purchased fries when a bundle was present; 26% of the sample who had originally purchased fries à la carte increased their portion sizes when a bundle was offered.

3.2. Ready-to-eat (RTE) meals

In the scientific literature, ready-to-eat (RTE) meals refers to a food that is ordinarily consumed in the same state as that in which it was sold or distributed, and does not include nuts in the shell or whole, raw fruits and vegetables that are intended for hulling, peeling, or washing by the consumer (Bae et al., 2010).

In a study by Costa et al. (2002), Dutch consumers expressed their beliefs about ready meals. Positive feelings towards ready-meal consumption were associated with being relaxed and spending less time and energy on cooking. In contrast, negative feelings towards ready-meal consumption were determined by a sense of guilt, regret at not preparing meals from scratch, concerns like eating junk food or being incapable of preparing a proper meal by oneself, being afraid to be, or appear to be, lazy, laid-back or careless. The consumers also felt that ready-meals were more suitable for people living alone. In another study (Costa et al., 2003) on the feelings, emotions and experiences associated with home meal replacements, it was found that the participants felt that the frequent use of ready meals not only jeopardized their relatives' and friends' current regard for their cooking skills, but could also be a source of reproach and concern from others.

In Swedish research study, Ahlgren et al. (2004) investigated the prototypical attributes of ready-meal consumers to establish which beliefs exist and whether they have any actual basis when compared with self-reported behaviours of ready meal consumers. Respondents described what they considered to be common attributes of ready meal consumers. Results show that two frequently mentioned attributes, "being/eating alone" and "no interest in cooking or food", were confirmed by respondents consuming ready-meals in the actual eating situation, but not by their life-style and beliefs in general. For example, the belief that ready meal consumers were alone was confirmed in the respect that many consumers had no company while consuming these products, but it was not confirmed in terms of ready-meal consumers living alone to a greater extent than the non-ready meal consumers. Another confirmed belief was that the ready meal consumer felt "stress and time pressure", although findings did not show that the respondents consuming ready-meals felt more stressed than the non-ready meal consuming respondents did. Overall, although it cannot be generalized to the overall population due to a rather low sample size, the Swedish study concludes that ready-meal consumption is purchased for necessity and not out of enjoyment and even if the ready meal products are eaten because of certain reasons, these reasons are most often situation-specific.

3.3. *What will the trend mean for actors in the food chain?*

In order to provide appealing convenience solutions, actors in the food chain must be able to identify future demands for meal solutions and to develop food product combinations correspondingly. These solutions have to meet the requirements for business, public or home meals that require, e.g. short preparation times, veggie meals, meals that are heavy, light, sustainable, heated, cold, for the elderly, for specific diets, etc. (Krystallis et al., 2011).

Thus a crucial competence in order to exploit this trend will be knowledge of future motives and needs for meals in different situations – to envision the future “meal-scape”. Furthermore, this competence is relevant for actors at all levels of the food value chain since all may become involved in bundling: Primary producers meeting specific requirements, some even delivering direct to the consumer, food producers engaging in bundling with other food producers or together with the retail sector, and retailers providing food products marketed and sold as meal solutions (Krystallis et al., 2011).

Finally, the online channel is small but growing and evolving. In order to provide appealing online offers, actors in the food chain are recommended to focus on several key issues: product variety, control of website content and cost of delivery. The online shopping allows for convenient, home-based comparisons and makes pricing more transparent – which is valued by consumers. However, existing empirical findings show that consumers are worried with delivery issues, especially for food products. Improved logistics functions and distribution systems adapted to the online system will be necessary for e-commerce in the grocery retailing field to become a major sales channel (Boyer & Hult, 2006; Kornum & Bjerre, 2005).

4. Pleasure

In spite of the ongoing economic downturn, hedonic food experience remains a major decision criterion amongst consumers. Several sub-trends have been identified with regard to food and pleasure.

Consumers are expected to keep moving towards high quality enjoyable foods (Innova, 2011). This trend may possibly even be supported by the economic downturn, as food pleasures are considered to be small and affordable indulgences. This trend of allowing for selected food indulgencies has found its way into previously austere regimes such as health clubs (TrendCentral.com, 2009). Several websites report that 2012 will be a year with more focus on the fun of the dining experience than fine cuisine (e.g. The Hedonist.com, 2012), which is supported by scientific results showing that the quality of the food determines restaurant selection only to some extent, with atmosphere and consistency of presentation and theme also being very important (Sulek & Hensley, 2004).

There is a sub-trend aiming at sophistication in food consumption. This trend is linked to celebrity chefs arriving at the market in the mid of the 2000's (Halonen-Knight & Hurmerinta, 2010; Henderson, 2011), and continuing to branch out into shopping malls and airports (FoxNews; 2012). This has to some extent resulted in an interest in high-tech food preparation following molecular gastronomy innovations (de Solier, 2010; Mielby & Frøst, 2010; Van Der Linden, McClements, & Ubbink, 2008), although it is expected that the heyday of molecular gastronomy has already passed (Fourseasons, 2012). There is growing emphasis on authentic, local and pure ingredients that are increasingly seen as quality marks (Skuras & Dimara, 2004)(Innova, 2011; Supermarketnews.com, 2011).

4.1. *What will the trend mean for actors in the food chain?*

Demand for high-quality, enjoyable food will continue in retail. Specialty products will also remain in demand and retailers will be expected to provide this type of products to consumers. Distinct of brands or departments within the store that provide such high-end products are likely to remain present.

Consumers are likely to demand convenience without willing to compromise with the hedonic quality. They still want fresh and high quality products. This can, e.g., be achieved with packaging technologies and preservation technologies increasing the shelf-life without compromising the freshness of the product. This demand for freshness and high quality, however, is not always aligned with the demand for convenience food. De Boer et al. (2002)

revealed that the importance of freshness has a negative influence on the purchase of ready-meals and take-away food. On the other hand, the catering business sees expansion of celebrity chef-based cuisine catering at locations traditionally dominated by fast food outlets such as airports and shopping malls (Henderson, 2011)

5. Sustainability

The recent increase in food prices emphasizes the necessity to move towards a sustainable production method. From fork to farm, actors at all levels of the food chain are increasingly called upon to take responsibility for their actions and the wider repercussions of these actions. In developed countries, food consumption is no longer linked to local production and local resources as consumers to the same extent have access to buying and consuming products from around the world. Consumers have grown accustomed to having access to a broad and varied assortment of foods irrespective of time of year and seasons. Typically consumers do not pay attention to the consequences of their consumption practices with regard to climate change, public health, social and economic inequality (nationally and globally), bio-diversity, animal welfare or the use of scarce resources (e.g., energy, soil and water). However, this is beginning to change.

According to Krystallis et al. (2011) the indicators that responsibility is an important trend include: (1) The growing sales of organic and/or sustainable food products in many western countries; (2) efforts to develop alternative channels of distribution for locally and regionally produced food products; (3) the growth of grassroot organisations and movements such as Slow Food; (4) major retailers try to position themselves as being responsible (examples include Bilka, Coop Danmark, Coop Schweiz, Irma, Retail Forum for Sustainability, Sainsbury's, Tesco, Whole Foods); and (5) the publication of numerous books and articles criticizing the current food regime and consumption practices (e.g., *Eating Animals* by Jonathan Safran Foer, *Food Wars* by Tim Lang and Michael Heasman, *Terra Madre* by Carlo Petrini, *The Carnivore's Dilemma* by Michael Pollan, *Fast Food Nation* by Eric Schlosser, *The Global Food Economy* by Tony Weis).

The success of organic production is less straightforward, with some decrease as a consequence of the economic crisis in some markets, especially the UK market (The Independent, 2009) while the market share of organic food continues to grow in other markets (Radio Netherlands Worldwide, 2010). Other sustainable practices are increasing, however, although no clear reduction in meat consumption appears to occur in western markets (Daniel, Cross, Koebnick, & Sinha, 2011; Narrod, Tiongco, & Scott, 2011; Nonhebel & Kastner, 2011). Nevertheless, vegetarianism is growing (Leahy, Lyons, & Tol, 2011) motivated, at least in part, by sustainability concerns (Hoek et al., 2011; Ruby). A trend related to the health megatrend is that of "flexitarians": Consumers who consciously choose a diet with meatless meals or days in the week tend to be, like vegetarians, more highly

educated (Forestell, Spaeth, & Kane, 2012), although the flexitarian trend is more attributed to a health than a sustainability motivation (Blatner, 2008).

In addition, perceptions and marketing of sustainability used to be largely based on organic and fair trade certification. Additional certification schemes have emerged in the last decade, often linked to the CSR policies of large companies (e.g. Utz, RainForest alliance – FAO, 2009). Corporate social responsibility is becoming a basic consumer demand; in other words, companies having no decent responsibility programs in place run the risk of losing their societal "license to operate" (Casimir & Dutilh, 2003), while the presence of such a responsibility program itself does not provide added value to products, as consumers expect this to be in place (Innova, 2011).

The main driver behind sustainability is growing awareness that current consumption and production practices are not sustainable in the face of a growing global population. This manifests itself in (1) changing consumer demands; (2) voluntary codes/guidelines for business practices; (3) stricter legislation and regulations incorporating both health and sustainability and (4) more risk-benefit analyses: What are the total costs and benefits for society and consumers?

5.1. What will the trend mean for actors in the food chain?

In the future, there will be more public pressure on food-related behaviours to move towards sustainability, which is likely to have a relatively large impact on health-related behaviours as well. All actors in the food chain will have to fundamentally rethink their business models and practices. In the future, companies will face both a clear, normative moral obligation to act responsibly and stricter regulatory requirements if they want to stay in business.

Retailers and producers will not be able to continue to hide behind consumers arguing that they are 'just' offering consumers what they want. Companies at all levels will have to optimise their use of scarce resources and to reduce the negative economic, social and environmental consequences of their business practices being able to document compliance with ever-stricter norms and regulations. On the positive side, this is likely to foster innovation and to reduce costs due to improvements in energy efficiency and reduced waste.

Consumers will also have to change their buying and consumption practices, as they will not be able to remain passive and defer responsibility to producers or retailers for the adverse consequences of their consumption practices without risking being socially ostracized.

6. Authenticity

Authenticity refers to truthful, honest, sincere, un-mediated and un-alienated. In the world of consumption, authenticity stands for everything that is natural, traditional or local. Growing emphasis on authentic, local and pure ingredients is increasingly seen as quality marks (Skuras & Dimara, 2004; Innova, 2011).

The quest for authenticity manifests itself in various trends. Recent decades have seen a succession of these, including the rise of organic agriculture and other extensive production systems, the slow food movement and its various regional duplications, the microbrewery craze at the beginning of the new millennium, various waves of comfort foods designed to bring back our childhood memories and new types of certifications such as protected designations of origin (PDOs) and protected geographical indications (PGAs).

In product positioning, authenticity operates as a substitute for things that “actually” matter: health, ecological impact and responsibility for others. The logic is that of a halo effect, capitalising on the assumption that consumers will associate everything that is great and good with a product that is claimed to be natural, traditional or local. What is natural must also be healthy, what is familiar must be better than what is new, and the food we make must be better than the food others make. Much empirical research supports this assumption. Typically, consumers process product information heuristically and use mental shortcuts that are sensitive to such halo effects.

6.1. *What will the trend mean for actors in the food chain?*

Activists have denounced positioning strategies that rely on halo effects as unfair commercial practices. Certification and labelling systems were developed to curb such abuse, protecting true organic agriculture (such as the Danish Ø-label or the German/European BIO-label), local traditions (the PDO and PGA schemes), and more recently, evidence-based nutrition and health claims made on food supplements (Regulation EC 1924/2006).

The current draft of a new guidance document on the implementation of the EU’s unfair commercial practices directive (2005/29/EC) even contains a section on misleading environmental claims. Unfortunately, stringent regulation tends to encourage a search for loopholes. Since Europe’s introduction of a strict nutrition and health claims regime, the market has seen a proliferation of products positioned as “natural”, a claim that is currently under-regulated in the EU and the US. However, it may only be a question of time before naturalness claims find themselves under the regulatory spotlight. Whenever questioned

about the issue, the US FDA repeats its statement that action will be taken if the agency is provided with “consumer research that shows overwhelmingly that people are being misled”. An uncertain future may await authenticity claims.

7. Conclusions

The aim of this Deliverable (Task 2.1 in WP2) was to identify those emerging consumer wants and needs that might have relevance for food technology development and acceptance. In spite of the new consumer trends identified in this report, established food choice motivations, such as good taste and a reasonable price, continue to be essential attributes in consumer choice (Bryla, 2012; Kuznesof et al., 2012; Share & Stewart-Knox, 2012). For this reason, we argue that the emerging trends, such as health, convenience, sustainability and authenticity, will add consumer needs over the existing needs, tied up with product taste quality *and* price. With the emergence of new technologies, consumers are becoming very demanding. A more holistic trend can be identified which involves that all the previously mentioned trends are cumulative: the consumers ‘want it all’. The specific trends do not replace each other, but they just add to the requirement.

What will this holistic trend (‘Want it all’) mean for actors in the food chain? When developing business around products or services based on new technologies, actors in the food chain must realise that technologies aimed at serving emerging consumer needs should continue to address the classical needs such as price and taste. This issue is becoming clear for example in the case of convenience products, where consumers increasingly demand convenience and low price, but are not willing to accept reduced quality (Boer et al., 2002). For the actors in the food chain this issue means that addressing emerging consumer needs adds more challenges and opportunities beyond (rather than ‘instead of’) addressing long established consumer needs as taste and price.

A second important general trend is that it is not only about technology delivering relevant end consumer benefits (in terms of products), but also about interactions in obtaining products and services (i.e. relationship attributes). One of the key advantages that Internet provides over the traditional distribution and communication channels is the ability to interact with consumers by accommodating their new preferences and needs (Neelotpaul, 2010). The online channel helps food companies to establish long lasting relationships and design their products based on continuous interaction with the consumers. On-line consumers are active co-creators and trend-generators reducing significantly the control of

the producer over the product. Collectively the consumer voice can bring great changes to how food products are produced or processed. Therefore, the relationship building and interactivity as a result of continuous two-way communication between consumers and producers is considered to be(come) an important consumer trend.

What will this holistic trend (‘relationship building’) mean for actors in the food chain? The online medium including the IT applications (in store or out-of-store) will change the balance of power consumer – producer/retailer. Consumers are the ones that initiate the interaction and can judge based on the other users ‘experience if certain products are suitable to them. The image of a particular food technology and the overall technology success is very dependent on the consumers, as consumers can now instantly search for product information and performance in the existing information sources and provide immediate feedback.

8. References

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