



“Report on the impact of economic policies and strategies in the lifelong learning system”

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SUMMARY OF THE REPORT

1. General Introduction
2. Economic policies
3. Strategies of companies, governments, the behavior of market (globalization as accelerator.)
4. Impact in the Lifelong Learning System.

I. INTRODUCTION

Development of employees' skills is a key issue for the European food sector as excellence of the human resources brings competitiveness to companies and allows permanence. A globally competitive industry requires a wide range of skills, knowledge and expertise.

The main goal of eTNA Project is to identify the needs of Food industry in Europe through two enormous changes: the increasing regulations of the governments and the new world scene.

The European food industry: presentation and figures

The European Food Industry is the largest manufacturing sector in the EU with a total turnover of 965 billion Euros (12,9% of total European industry turnover). The 310.000 European food companies employs more 4, 4 millions people.

This very fragmented industry, made up of 99% of SMEs, keeps on recruiting despite of the crisis. The employment is stable, and the high number of employees retiring that has to be replaced raises the question of the attractiveness of the sector.

A study of the European Food Federation (CIAA) shows that 2 of 3 jobs are progressives in the sector. Moreover 66% of the positions are common to different sub-food sectors. Therefore to switch from a sub sector to another is easy.

Globalization, markets, policies and Europe, a cocktail of impulses

Around Europe gravitate a pull of environmental, technological and sustainable aspirations that make of this piece of occidental ground one of territories with more laws and regulations all over the world. Many of them are made to protect the consumers, others are made for the industries, but all of them have to be observed.

Besides the economic policies of the European Parliament and the influence of European Food and Drink Industry (FDI) have a strong impact on the sector developments.

On the other hand, the enormous competence in world terms, with multinationals and SME'S in the same game board, with a logistic capacity able to compete in every region draw a global and very quick food sector.

That is why the actual adopted strategies have a strong impact on the skills and competences needed by the PROFESIONAL IN FOOD INDUSTRY and, as a consequence, on the Lifelong learning system.

Two main streams of influence are going to be describing in this report:

- The influence of economic policies into the **Food Security, Sustainability in the food sector, Food and health and Food Quality**
- The influence of strategies of companies, governments, the behavior of market

eTNA Project: Online Training Needs Assessment

The eTNA project aims at facilitating the training needs assessment for all food companies, especially SMEs.

The first step of the project has consisted in identifying the mid terms strategies of 3 sub-sectors, chosen for their importance in Europe and more specifically in the 6 countries represented by the eTNA partners (Austria, France, Ireland, Italy, Romania, Spain), to forecast their coming training needs.

The three chosen subsectors are the preserved vegetables sector, the wine sector and the preserved meat sector.

(See annex 1 for definition of these three sectors)

Methodology

The eTNA partners have searched in different scenes and they have concluded some keys:

- analyzed sectorial **mid terms strategies** in their own country and in Europe
- identified the **main positions** and **required skills** in these 3 sub sectors
- defined the corresponding **new skills needed**
- identified the **competent training structures** at national and European level

II. ECONOMIC POLICIES

To know the impact of economic policies and strategies in Lifelong Learning system, first of all we have to decide the policies that affect it most. After studying documentation related with Lifelong Learning system, we have considered that the next subjects are the most important:

1. Food and Feed Safety
2. Sustainability in the food sector
3. Food and health
4. Food Quality

1. Food and Feed Safety

Food security¹ is a concept largely used in the public debate. According to the 1996 Declaration on World Food Security, food security exists when “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life”. Therefore, according to this definition, in addition to supply, food security includes dimensions such as access, utilization, stabilization and tailor to the need.

Feed safety continues to be a priority issue for government, industry, academia and the consumer. Safety scares and incidents relate to (micro) biological (e.g. Campylobacter, Listeria, noro-viruses, BSE), chemical (e.g. crop protection agents, veterinary pharmaceuticals), physical contamination and allergens. Food scares may relate to animal diseases that have no direct relation with food safety themselves (food and mouth disease, avian influenza). Food processing is now a global industry and, therefore, the consequences of contamination can be potentially very widespread, causing harm to human health and damage to the credibility of manufacturers, regulators, and ultimately to the reputation of processed foods.

To meet the challenges of global food security:

- **Boosting world production of agricultural raw materials is the first priority.** Increasing investments in agriculture leading to higher yields and promoting the use of cultivated lands for food production sustainably will contribute to this primary objective. This will also help securing supply for EU food and drink manufacturers.
- **Supporting measures to decrease post-harvest losses and food waste is also a priority.**

The EU food and drink industries are doing several things in relation to food security:

a) Role linked to the essence of the food and drink industries

- Food and drink industries are the partners in the food chain, between farmers and retailers, which process agricultural raw materials to produce safe foodstuffs, with

¹ To be differentiated from security of supply for EU food and drink companies.

a long life-shelf, in a form more easily available especially for the (increasing) urban population.

- The industry adapts its products to local nutritional needs and tastes.
- Worldwide, the food and drink industries are major providers of jobs in rural areas. In the EU, food and drink companies employ more than 4 million people across the 27 Member States. The long-term viability of agriculture and the food industry goes hand in hand in most parts of the world.

b) Food and drink involvement in agricultural activities

As an important stakeholder² in the global trading system, the EU food and drink industry is impacting global food security to a certain extent. Although European food and drink manufacturers are not directly involved in farming activities, they maintain close contacts with suppliers of agricultural produce. Food and drink processors play a positive role, in the EU and at global level, in view of:

- Supporting innovation and technological transfer,
- Stimulating sustainable³ agricultural practices, in particular through efficient use of resources,
- Strengthening competitiveness of farming system,
- Contributing to improving farmers' knowledge, e.g. for a better management of volatility,
- Improving socio-economic conditions of local communities.

The European food and drink industries are involved in a series of agricultural initiatives worldwide which share the common objective of contributing to improved sustainability. Some of these initiatives are based on a public-private partnership for providing investments⁴ in agricultural sectors of developing countries.

Another important contribution of food industry in this respect is the reduction of post-harvest losses by introducing modern collection, processing, storage and transportation methods world-wide.

So the EU and the countries members have a wide range of regulations and laws and agencies about this matter:

1. Agencies:

² The EU is the largest importer and exporter in food and drink products, part of which is further processed by the food and drink industry.

³ Industry's approach to sustainable agriculture encompasses all 3 pillars of sustainability, i.e. environmental, social and economic.

⁴ Companies investing outside the EU provide for instance their local partners with support of agronomists and training assistance to farmers, information on sustainable fertilization, irrigation, pest management, harvesting techniques etc. In some cases they set up training centres, demonstration farms and specific facilities or work with schools to improve drinking water and hygiene facilities.

- The **European Food Safety Authority (EFSA)** is the keystone of European Union (EU) risk assessment regarding food and feed safety. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent scientific advice and clear communication on existing and emerging risks.

- The **Spanish Food Safety and Nutrition Agency (AESAN)** was created in 2001 to ensure the highest level of food safety, as a fundamental aspect of public health, and to promote the health of citizens; as well as to generate confidence among citizens in the food consumed and to provide them with the necessary information to be able to choose.

- The **Institute for Food Safety RIKILT (Nederland)** is an independent research institute in the area of safe and healthy food that carries out high-quality research into the detection, identification, functionality and effects of substances in animal feeds as well as plant-based, animal-based and composite foodstuffs.

2. EU regulatory framework:

- The General Principles of Food Law, Regulation (EC) 178/2002, regulation of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Authority, and laying down procedures in matters of food

- White paper on food safety (COM (1999) 719 final)

- Green Paper on food law (COM (97)176 final)

-. Genetically modified (GM) foods

Genetically modified (GM) foods can only be authorized in the European Union if they have passed a rigorous safety assessment. The procedures for evaluation and authorisation of GM foods are laid down in Regulation (EC) No 1829/2003 on GM food and feed, which came into force in April 2004 and in Directive 2001/18/EC on the release of GMOs into the environment, which came into force in March 2001.

In December 2008 the Environment Council concluded that the implementation of the EU legal framework for GMOs should be reinforced. Along with the other partners involved including the European Commission and Member States, EFSA is taking a number of relevant actions within its remit as outlined in this section, through an ongoing process of applying the latest scientific knowledge and assessment approaches. EFSA's actions are detailed in the document below.

2. Sustainability in the food sector

Sustainability is beginning to transform the food industry with environmental, economic and social factors being considered, evaluated and implemented throughout the supply chain like never before. The transition towards a sustainable food chain is a challenge for the total food sector. Future food chains should operate in synergy with environmental, social and economic aspects, meeting the requirements and needs of consumers for sufficient, safe, affordable and high quality foods.

Our raw materials: Sustainability at the start of the food chain

- Farming systems are the startpoint of the food chain. The EU food and drink industry purchases about 70% of EU agricultural produce. It is therefore crucial for the long-term health and prosperity of the food and drink industry that farming systems are sustainable.
- While agriculture accounts for a notable part of the environmental impacts of the food chain, farming systems - if managed sustainably - can also benefit the environment in many ways.
- The food and drink industry, although not directly involved in farming, is engaged in a series of concrete initiatives to support sustainable agricultural practices in the EU and globally.
- The industry promotes a holistic approach to sustainable agriculture aimed at securing safe food supplies, both in quality and quantity, protecting the natural environment and improving socio-economic conditions of local communities.

Resource efficiency & waste management: Making the most of our raw materials

- Resources used in the food and drink sector are of agricultural origin. Due to their biological nature, virtually every part of an agricultural crop has a useful application. There is both an imperative and an immense potential to use these resources in a highly efficient manner.
- The first objective of the food industry is to use 100% of agricultural resources wherever possible and, in so doing, to reduce waste to the absolute minimum. Food and drink manufacturers are increasingly acting as bio-refineries, in which agricultural resources are transformed into a broad range of different products, including co-products and by-products, all of which serve useful applications including not only food, but also animal feed, fertilizers, cosmetics, pharmaceuticals, bio-plastics and bio-fuels.
- While the food industry is fully committed to source reduction, a minimum amount of waste is unavoidable and food companies progressively implement sustainable recycling and recovery methods to reclaim resources embedded in waste, and to divert waste away from landfill.

Energy & climate change: Improving energy efficiency - cutting emissions

- The food and drink industry fully supports the promotion of energy efficiency as an important driver for industrial competitiveness and to reduce emissions of greenhouse gases (GHG).
- While the food and drink sector is characterized by relatively low energy intensity compared with many other industrial sectors, sharply rising energy prices have become a notable cost factor in several sub-sectors.
- Food and drink manufacturers are demonstrating genuine leadership in energy and carbon management. This includes voluntarily cutting energy use, fuel switching, investing in energy efficient and low carbon technologies, participating in national or sector energy efficiency schemes, and carrying out detailed energy audits and feasibility studies.

Water: Conserving the source of life

Access to water is critical for the food and drink industry, both in terms of quantity and quality. Clean water is not only a prerequisite for agricultural sustainability; it is also an important product in its own right, a main ingredient and key processing element. The challenge for the food and drink industry in terms of water use is twofold:

- Continuously reduce levels of water consumption in its processes by improving water efficiency without compromising strict food hygiene requirements.
- Promote the responsible use of water and maintain sustainable water supplies throughout the food chain, including agriculture.

Packaging: Protecting what's inside

- As major user of packaging, the food and drink industry recognizes its responsibility to reduce the environmental impacts of packaging along the life-cycle.
- At the same time, packaging is essential to ensure product quality and food safety. By avoiding food waste, packaging also protects the environment.
- Sociological trends (e.g. more single households, eating outside home) are driving significant changes in the demand for packaging, which sometimes counter-balance technological improvements in packaging waste prevention.
- The main challenge lies in the reduction of packaging materials without compromising food quality, safety and consumer needs, while ensuring sound recovery and recycling of packaging waste.

Transport & distribution: Moving to sustainable connections

- Transport impact is overwhelmingly in the areas of road congestion, damage to infrastructure and road accidents. There are also impacts on greenhouse gas emissions, air and noise pollution.
- Following the general trend, the food and drink industry has experienced an increase in transport operations over the past decades. This is driven by structural changes affecting global supply chains, including a shift towards fewer, more efficient production plants and distribution centres, as well as “just-in-time” delivery.
- Food transport sustainability depends on an integrated approach, based on environmental life-cycle thinking and an understanding of the wider social and economic implications. Simplified concepts that measure sustainability solely in terms of distance travelled are misleading and should be avoided.
- The industry pursues a range of initiatives to optimize transport efficiency and sustainability, such as inter-modality, lowering impacts of individual modes, investing in new technologies and cooperating with key supply chain partners.
- To achieve further improvements, all stakeholders must join in intensified action to address the challenges we face. The environmental impacts of food transport should be reduced through a combination of fewer and friendlier kilometres. As there is no single solution, all possibilities should be explored.

Regulations, laws and agencies related with this matter:

1. Agencies:

- The **Institute for European Environmental Policy** (IEEP) is an independent research organisation concerned with policies affecting the environment in Europe and beyond. Its aim is to disseminate knowledge about Europe and the environment and to analyse and present policy options.

The Institute has eight research areas spanning the key European and related national policy agendas: agriculture & land management, biodiversity, climate change & energy, environmental economics, governance, industrial pollution, resource use, waste, chemicals, water, marine & fisheries

- The **Food and environment research agency's** purpose is to support and develop a sustainable food chain, a healthy natural environment, and to protect the global community from biological and chemical risks. (United Kingdom)

2. EU regulatory framework

- Communication from the COM to EP, the Council, the European Economic and Social Committee and the Committee of the Regions of 25 June 2008 on the '*Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan*' (COM (2008) 397 final)
- Commission Communication of 15 May 2001 '*A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development*' (Commission proposal to the Gothenburg European Council) [COM (2001) 264 final – not published in the Official Journal].
- Commission Communication of 13 December 2005 on the review of the *Sustainable Development Strategy – A platform for action* [COM (2005) 658 final – not published in the Official Journal].

3. Food and health

There is a need to develop food and nutrition policies, which protect and promote health and reduce the burden of food-related disease, while contributing to socio-economic development and a sustainable environment. Major objectives of the health sector are to promote health through a well-balanced diet, the avoidance of nutritional deficiencies and the control of food-borne diseases.

A multisectoral approach, embracing agriculture, the environment, the food and drink industry, transport, advertising and commerce is, therefore, essential to help position food and nutrition policy high on the political agenda.

Improvement in health should be an expected outcome from food and nutrition policies and should contribute to the success and profitability of the relevant commercial sectors. Close collaborations between those responsible for nutrition, food safety and food security will be necessary to develop comprehensive, intersectoral policies and effective concerted actions.

Regulations and laws and agencies about this matter:

1. Agencies:

- The **Executive Agency for Health and Consumers** (EAHC) supports the Commission in the management of Community programmes and measures in the fields of health, consumer policy and training in matters of food safety. It is also responsible for implementing the programmes of Community action in the field of health, the programme of Community action in the field of Consumer policy and food safety training measures, with regard to the legislation on foodstuffs, animal feeds, animal health and animal welfare, as well as plant health rules.

- The **Food Standards Agency** (United Kingdom) is responsible for food safety and food hygiene. It provides advice and information to the public and Government on food safety from farm to fork. It also protects consumers through effective food enforcement and monitoring.

- The **Austrian Agency for Health and Food Safety** (AGES is responsible for carrying out diverse tasks related to public health and food safety. AGES carries out research, analyses, and inspections in accordance with the provisions of Austrian and EU legislation. The main areas of responsibility of AGES are the prevention and control of diseases in plants, animals, and humans)

2. EU regulatory framework:

- Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.
- Commission Regulation (EC) No 669/2009 of 24 July 2009 implementing Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards the increased level of official controls on imports of certain feed and food of non-animal origin and amending Decision 2006/504/EC [Official Journal L 194 of 25.7.2009]

4. Food Quality

Understanding of the concept 'Food Quality' in Europe has changed significantly over the years. From the basic availability of food, via uniformity, food safety, and production circumstances, food is now increasingly associated with enjoyment, health and anticipated well-being. Changes in society and demographic development (increased participation of women in the workforce, smaller families, increased households, ageing society and increases in proportion and integration of ethnic groups in many EU Member States) have all impacted significantly on the ways in which food is currently prepared and where it is consumed.

In addition to the importance of the health effects of food, taste remains a crucial factor in securing the consumer's preference and ensuring repeat purchases. Moreover, taste is an enabler that facilitates the intake of healthy products.

Convenience is another obvious factor that plays an important role; indeed this characteristic was associated with the highest growth rate in innovation in 2004. Grazing, eating on the move, ease of container-opening for children and the elderly are other examples of demands that increase the enjoyment of food. Food is increasingly consumed away from home, in canteens, catering establishments and restaurants. Nevertheless, an EU survey found that 25-33% of consumers consider that the quality of food products has deteriorated over time. Changes in eating habits in conjunction with a clear demand for improved quality food create opportunities for primary producers to add value to their produce and for the food processing industry to develop new and personalized foods.

Diversity will be of key importance for future food production and product developments; the latter by itself will be insufficient to create the required innovations. Increased R&D investments are necessary to develop new process equipment, processing lines or distributed manufacturing systems.

On the one hand, exporting traditional, regional products from the rich and diverse European cuisine, will be enhanced and supported through longer shelf life, obtained with mild preservation technologies provided by the leading European equipment manufacturers. On the other hand, new products will appear on the market based on novel ingredients and processes. New (natural) ingredients could be produced by improved, mild separation technologies, or by novel bioprocessing schemes. New structures and textures will be produced as a consequence of developments in micro- and nano-technology.

A challenge for the European food and drink industry over the next one to two decades is how to provide the consumer with the type of food that he/she likes at the right time and in the right place. Innovative processes, value-added products, new marketing concepts, novel ways of selling products and novel ways for the production and supply chain to co-operate to create products targeted at consumer needs should ensure that the consumer is provided with safe products possessing the required taste

characteristics and at maximum convenience - and always at an acceptable price. Modern technology can make an important difference in increasing the accessibility of food, both in terms of its availability and its affordability.

Regulations and laws and agencies about this matter:

1. Agencies:

The **French Observatory of Food Quality's (Oqali)** purpose is to centralize and process data related to nutrition (e.g. nutritional composition, claims) and socio-economic factors (average prices, market shares and consumption levels) in order to ensure the surveillance of the food supply for processed foods.

2. EU regulatory framework:

- Green Paper of 15 October 2008 on agricultural product quality [COM (2008) 641 final – Not published in the Official Journal].
- Regulation (EC) No 834/2007 on the production and labeling of organic products
- Council Regulation (EC) No 247/2006 of 30 January 2006 laying down specific measures for agriculture in the outermost regions of the Union.
- Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on agricultural product quality policy [COM (2009) 234 final - Not published in the Official Journal].

All this relevant regulations and law influences are reflected as well into the consumer insights; trends like Food and Feed Safety, Sustainability in the food sector, Food and health and Food Quality.

Annex 2- The Food Marketing Research Unit's (FMRU) Consumer Insights.
TEAGASC- Agriculture and food Development Authority.Ireland

III. STRATEGIES OF COMPANIES, GOVERNMENTS, THE BEHAVIOR OF MARKET

The actual situation

Economic globalization is argued to have gained importance in the last 20 years due to market liberalization and technological progress. What is the likely impact of economic globalization on the food industry? Precise data is missing but on average, we can anticipate that economic globalization in the food industry will increase both market concentration and density, due to worldwide consumer preference convergence and regional differentiation. As a result, the expectation is that large generalist food companies will grow and that the viability of small specialist food incumbents and newcomers will increase.

Globalization, market structure and firm strategy in the food industry

The question is how globalization processes, in conjunction and in interaction with other forces such as market liberalization and technological progress, affect the demand side's resource shapes and the supply side's exploitation economies in the food industry.

First, the development of exploitation economies is heavily influenced by technological progress. However, scale and scope economies are not ISOLated supply-side phenomena. After all, such economies will only materialize in markets where the demand side fits well with either type of economies – scale and scope.

⇒ *Globalization will increase the opportunities to reap scale and scope economies.*

The resource shapes in the food industry are said to change in two seemingly opposite ways: global convergence and regional differentiation.

⇒ *Globalization will increase the love for variety and taste convergence, implying larger peaks and expanded peripheries.*

Globalization is likely to produce trend effects in the food industry. That is, overall, the food industry is expected to reveal a number of general trends. The first one is that, due to the average convergence of consumer taste, market concentration will probably increase. This suggests that

⇒ *Globalization will increase market concentration in the food industry, from which a subset of the generalist food companies across the value chain will benefit.*

⇒ *Globalization will also increase market density in the food industry, from which a subset of incumbent and many newcomer specialist food firms across the value chain will benefit.*

Notwithstanding the growth of the world's leading food companies, the food industry is not going to be dominated by them – quite to the contrary.

⇒ *The density effect will be stronger than the concentration effect, implying that particularly specialist viability in the food industry will increase in the slipstream of globalization.*

By and large, two types of generalist strategies emerge as viable. Low-priced private label production. Premium-priced brand name portfolio. Indeed, the large global food companies are engaged in a continuing process of rationalization, cutting back their portfolio to core markets and core products.

In this way, as a resume, we can speak about some economics basis that are going to increase:

- In big companies the goal is scale and scope economies.
- Appears and consolidate the interest for variety, local and exotic food.
- Concentration and dimension as a slipstream of globalization.
- New producers in niche and long tail markets.
- Core products and basic prices.
- Retail products in front of the private labels.

So, as these conclusions define, a very non reliable situation is increasing into the food market like this article of Coface already told us in 2009.

Coface- World Credit assurance- financial Risk and International Trade.2009

“The major groups - Campbell and Kraft - that pervade the market in the United States and the very large European companies like DANONE, Yoplait, Panzani have adjusted to the changes by pursuing aggressive marketing policies enabling them to limit the decline in sales volumes. Some have broadened their range with low-price products, revamped existing formats by reducing the size offered, and relied heavily on advertising even at the expense of their margins. That strategy has enabled them to slow the soaring growth of distributor brands already well established with households before the crisis. Groups that hesitated to follow a low-cost model in the early stages of the crisis have latched on to the trend since then.

The situation has been more difficult for the relatively smaller European players. Positioned on niche markets they lack the room for manoeuvre to cope with the new paradigm. With a structural need to get financing for their working capital, they will likely suffer again in 2010 with conditions in the credit market expected to remain tight.

This context will spur the pace of mergers and acquisitions activity at the national and global levels: sell-offs of non-strategic activities and refocusing on core business (DANONE), buyouts of brands or new business lines (Pepsi and Coca-Cola in the biscuit and cereal segments - the attempted takeover of the British Cadbury by the American Kraft for its chewing gum business), development of economies of scale to



improve the competitiveness of products manufactured for the global market and strengthen the bargaining position in negotiations with megastores (listings and prices).

The weakened condition of smaller companies will increase the number of buyout opportunities available to larger groups and spur the concentration process.

IV. IMPACT IN THE LIFELONG LEARNING SYSTEM

The European Commission's Lifelong Learning Program enables people at all stages of their lives to take part in stimulating learning experiences, as well as helping to develop the education and training sector across Europe. It couldn't be possible if the Training Centers all around Europe wouldn't answer to the different influences that the policies and the globalization have brought.

Food and feed Safety, sustainability in the food sector, food and health and food quality, have open the door to new priorities in the companies, in which the quality systems, the energy savings, environmental systems and many others relevant and sure process to assure the product and the satisfaction are necessary nowadays.

On the other hand the rivalry and the markets are hard fields where companies have to get the competences to survive and to highlight. Fields where it is necessary more than ever new abilities as follows:

Skills in finance and economic efficiency, as well it will be useful some training in marketing and customer focus, especially in knowing the customers and their needs. Abilities for product development and innovation, but at the same time for communicate and deliver the brands of the companies.

All those new knowledge in the companies have appeared into the training centers since the 80's, but they have specialized since the very first years of the XXI century.

The appearance of technological centers, in every region, that help the industries to make test and compare their products with others and submit to external agents, has become a pull over the industry. But we do not a good job if we don't learn as professional and try to implant what we learn.

In this way the universities, the food associations, the union trades, the business associations and other training centers has become to introduce in their curricula subjects as Lean production, financial management, total quality, environmental systems, marketing and digital marketing trying to reach the goals of the markets.

Some examples of this concern are a new kind of centers focused over the sector interest. We doesn't try to be exhaustive, because the whole results will be introduce in the eTNA tool. But some interesting examples are reflecting the reality. (See Annex 3 till 5)

V. HOW THE CHANGES ON POLICIES HAS INFLUENCED THE CATALOGUE OF THE TRAINING CENTRES

The changes on policies have introduced some new topics that the training centers are beginning to introduce into their catalogues. This new subjects are related both to the methodologies and to the contents.

On one hand: the methodologies are becoming more participative, new ways of teaching and learning. They are making a migration to work shops, forums, working groups, and some others methodologies that involve the students and the professionals into the class. These new methodologies allow students to learn the knowledge or skills easily.

On the other hand, the contents of the courses are making more focused into the efficiency in every function, and of course in quality and sustainable systems. In this way the principal topics are:

- Economic efficiency. This subject refers to the use of resources so as to maximize the production of goods and services and it's necessary to be competitive in the global market.
- Production efficiency. Like the previous concept, the production efficiency is one of the most import objectives of management. Nowadays, the efficiency in this area allows companies to product in a better way.
- Product innovation/Research & Development. The consumers are constantly demanding new products or services. To meet this demand the enterprises have to count on new department of innovation or research and development.
- Marketing and commercial skills. The success of a company also depends on its policy marketing. The marketing has developed in the last years and now enclose more topics for example marketing adapted to design and packaging and marketing distribution and communication.
- The implementation and enforcement of regulations about quality sustainability are now compulsory for food companies as the concern of the European governments in food, health and quality are increasing constantly.
- The management of the information and the control of the data. This topic is related with the efficiency of computers and technological resources, besides the management of data trough boards of control and indicators

Since some years ago, the training centers have started to adapt their catalogues to the new consumers and markets demands. This can be proved if we look the offer of the training centers all around Europe.

The previous topics are in the catalogues of several training centers around Europe, like the next examples.

SPAIN

There are several specialized centers:

Wine sector:

Instituto San Telmo – Sevilla.

Instituto para el Desarrollo del Conocimiento y la Innovación de Castilla-La Mancha
IDEKAM

UPV - Universidad Politécnica de Valencia

Escuela de Negocios Cámara de Comercio de Valladolid

ALITER Escuela de Negocios.

Universidad de La Rioja.

Club de Marketing de La Rioja.

All of them have in their training catalogue proposals for managers in wineries, as well as enologist and wine marketing, including digital marketing.

Preserved vegetables sector:

CNTA. National Center for technology and food safety

Centro Nacional de Tecnología y Seguridad Alimentaria.

Agrupación Española De Fabricantes De Conservas Vegetales (AGRUCON)

All of them have in their training catalogue proposals for managers in preserved vegetables, as well as production, quality, environmental systems and marketing.

Processed meat sector:

Asociación de Industrias de la Carne en España AICE

Centro Tecnológico de la industria cárnica

Asociación de Investigación de Industrias cárnicas

All of them have in their training catalogue proposals for managers in processed meat, as well as production, quality, environmental systems and marketing.

AUSTRIA.

Wine:

- 1.) Weinakademie Austria

<http://www.weinakademie.at>

This academy offers courses and seminars about wine. Especially with the focus on wine-economy, wine tasting and the cultivation of wine, both national and international. The prices are between 200 and 400€. Everyone can attend this academy even with no preexperience.

- 2.) Wein und Obstbauschule Krems

<http://www.wbs-krems.at/>

This school offers seminars and courses for winegrowers and winemangers. Not only technical knowledge is taught, but also innovative and marketorientated skills are developed. It can be attended by normal students are already experienced professionals in the field of wine growing. Some courses are for free, some have to be paid.

- 3.) Bachelorstudium Weinbau, Önologie und Weinwirtschaft

<http://www.boku.ac.at/1343.html>

This study offered by the Austrian University of Bodenkultur, offers knowledge in the fields of science, technic and economy related with wine. It also focuses on quality and sustainable development. The study is approved by the standards of the E.U. for wineeconomy. It lasts for 6 semesters and is free for any European citizen.

- 4.) VinAustria and fine Fooddays Messe

<http://www.vinaustria.at/>

This fair takes place every year in Salzburg. It is a fair for exhibitors and visitors interested in vine and food.

Processed Meat:

- 1.) Ausbildung zum Fleischermeister in der Fleischerakademie

<http://www.ooe.wifi.at/category.aspx?categoryID=1011>

This academy offers seminars and courses in the field of butchery. It gives interested people the possibility to get a diploma in this field, focusing on practical as theoretical inputs. It can be attended by everyone as a normal student for free, or some special courses have to be paid.

2.) Lebensmittelakademie

Seminars for butchers

<http://www.lmakademie.at/index.php/fleischer>

This academy is a pool of knowledge for any enterprise working in the foodsector in Austria. Especially for butchery it offers a wide range of courses and seminars. The courses and seminars have to be paid and can be attended by everyone.

3.) Boku

<http://www.dlwt.boku.ac.at/dlwt.html>

The department for food sciences and technology provides through research in the national and international field, a lot of important information about the quality and processing of alimentation. It also offers special education in the fields of food, alimentation and health. It can be attended by everyone.

4.) Intermeat Fleischmesse

<http://www.intermeat.de/>

This fair takes place every year in Germany, Düsseldorf. It is one of the biggest fairs dealing with food and especially meat. The next term will be in September 2012.

Processed vegetables:

1.) Spezialausbildung für Gemüsebau

<http://www.landwirt.com/Spezialausbildung-fuer-Gemuesebau-startet-in-der-Steiermark,,8234,,Bericht.html>

This special course is for people who want to gain farming competences for vegetables. It is agreed that the farming of vegetables needs a lot of special care and knowledge, and to meet the growing expectations concerning the quality, this education was set up. It is located in Styria and lasts for 6 months.

2.) BOKU - Department für Nachhaltige Agrarsysteme

<http://www.nas.boku.ac.at/125.html>

The department for sustainable agricultural systems was founded in order to focus on ecological farming and biodiversity. It offers a lot of further education for interested people working in this sector and gives also different scientific approaches.

3.) WIFI Österreich Obst- und GemüsekonserviererIn (Lehrberuf) - Lehrzeit: 2 Jahre

http://www.bic.at/bic_brfinfo.php?brfid=311

This educational program will last for 2 year and can be attended by everyone. It focuses on activities dealing with the conservation of vegetables and fruits.

FRANCE

Centres de Formations Agroalimentaire - France - ALHIA

Wine:

1) Université de Bordeaux

L'Université de Bordeaux is one of the most specialize training centers in wine production in France. For example its Master Spécialité Oenologie et environnement viti-vinicole

2) Institut Français de la vigne et du vin

www.vignevin.com

(Formation a la carta)

3) Université du vin

www.universite-du-vin.com

This center teaches different subject related with wine, from technical subjects to marketing.

Processed vegetables

Centre Technique Interprofessionnel des Fruits et Légumes

www.ctifl.fr

Processed meat

Ecole Nationales Supérieure des Métiers de la Viande

www.ensmv.com

Le partenaire emploi-formation des industries alimentaires



www.agefaforia.info

IRELAND

TEAGASC- Agriculture and Food Development Authority

Annex 1

1- SECTORS INVOLVED IN ETNA PROJECT

Packaged and processed vegetables (no fruits or juice)

The processed vegetables industry is the transformation of agricultural products into products for intermediate or final consumption.

Food processing is the method or technique used to transform raw ingredients into food for human consumption. Food processing takes clean, harvested components and uses them to produce marketable food products.

There are different systems to process the vegetables: boiling, refrigerating, frozen, and canning... Also we have to keep in mind in this sector the prepared dishes that are boiled and cook and then refrigerated.

Type of vegetables.* see appendix 1

Packaged and processed meat (no raw meat)

The processed meat industry is the transformation of raw animal products into products for intermediate or final consumption.

Food processing is the method and technique used to transform raw ingredients into food for human consumption. Food processing takes clean, slaughtered and butchered components and uses them to produce marketable food products.

The sector is defined by the products that use the following methods: salted meat, cured meat, smoked meat, boiled meat, canned meat, meat paste, marinated or pickled meat. In this sector we have to include the prepared dishes that are boiled and cooked and then refrigerated.

Type of meat.* see appendix 2.

Wine Sector: wines produce in a defined region. (Bottled wine no bulk wine)

The wine is classified into three categories:

1.-Quality wines produced in a defined region

They are divided into: Original Location Certified and Original Location Certified and Guaranteed.

2.-Table Wines

They are split into two sub-categories: Table Wine and Table wine from Typical Geographic Area

3.-Aromatized and fortified wines

The Etna project will define the situation, strategies, professional profiles and training about the first category: Quality wines produced in a defined region.

Annex 2- The Food Marketing Research Unit's (FMRU) Consumer Insights.

TEAGASC- Agriculture and Food Development Authority. Ireland

Consumer insights at the product or category level can assist senior management in making more informed business decisions in the areas of market planning, strategic marketing and new food product development. It can help firms connect their brands with their target markets through an in-depth understanding of consumer trends, attitudes, perceptions, beliefs and values.

The Food Marketing Research Unit's (FMRU) consumer insight agenda focuses on five key sub-themes:

Consumer-led New Product Development (NPD)

Consumer insights at the product level make firms better able to adapt to changes in consumers' needs, reduces uncertainty in NPD, and can lead to higher levels of product quality and consumer satisfaction. The main areas of interest covered under this sub-theme include:

Consumer-driven development of new food products

Consumer acceptance of future-oriented novel foods such as GM foods and functional foods

Food for Health

Research on food consumption and health is needed ensure that food safety and nutrition policies at national and EU level are strongly evidence-based, and underpins innovation and competitiveness of Irish firms in the emerging health and wellness market. The main areas of interest covered under this sub-theme include:

Determinants of food choice and healthy eating

Food consumption trends and consumer insights

Strategic marketing of health and wellness foods

Food Quality & Acceptability

Understanding how consumers perceive products from a marketing/sensory perspective, and how these perceptions influence consumers' food choices, is essential for firms seeking to develop and market products that offer superior value, and meet with consumer acceptance. The main areas of interest covered under this sub-theme include:

Sensory preferences and consumer choice

The influence of new production methods on food quality and consumer acceptability

Insights & Behavioural Research.

Consumer insights and behavioural research at the category level can assist firms anticipate and adapt more readily to changing and emerging consumer food trends, and consequently, develop and market new and existing products more effectively. The main areas of interest covered under this sub-theme include:

Consumer behaviour and food choice

Econometric modelling for insights into emerging food trends

Consumer-led market segmentation and strategic marketing

Consumer attitudes and perceptions towards novel foods and emerging food technologies

Risk Perceptions & Communication

An in-depth understanding of consumers' benefit/risk perceptions is essential to mitigate consumers' food safety concerns and to reduce the barriers to successful food risk communication strategies. The main areas of interest covered under this sub-theme include:

Food safety concerns and consumer behaviour

Food risk communication

Benefit/risk perceptions towards novel foods, processes and technologies

Annex 3- Example of Agrofood training catalogue in France.

2011- Catalogue Formations Agroalimentaire : - ALHIA

Traitement thermique...

Séminaires

Séminaire Nettoyage en IAA : comment réduire les coûts et les impacts environnementaux

Séminaire : Comprendre et assumer le risque pesticides en industrie de transformation des fruits

Séminaire : L'appertisation des produits en emballage souple et plastique

Séminaire : Maîtrise de l'eau en agroalimentaire

Séminaire : Micro-ondes

Programme TPI PMI Agefatoria

Ce que doit savoir un opérateur de production - Produit Procès Hygiène
Mener un projet d'innovation produit en agroalimentaire
Lancer une démarche de développement durable
Gestion de crise en agroalimentaire

Cycles de formation

Cycle Technologique de l'appertisation (procès fabrication des conserves)
Cycle Technologique de l'appertisation niveau 2 (procès de fabrication des conserves)
Cycle Sertissage : pratique et contrôle
Cycle Emballage alimentaire
Cycle Fruits et légumes IVème gamme
Cycle Qualité et sécurité des aliments
Cycle Maintenance des équipements et sécurité des aliments
Cycle Conserveur artisanal

Procédés Alimentaires

Formation Conduite d'autoclaves (stérilisateur, procédures de contrôle et de sécurité)
Formation Stérilisation emballage souple (plastique) en autoclave
Formation Mise au point des barèmes de traitement thermique (Stérilisation conserves)
Formation Optimisation des barèmes de stérilisation des conserves
Formation Pasteurisation des produits
Formation Pasteurisation par hautes pressions
Formation Cuisson et pasteurisation sous vide
Formation Technologies innovantes : micro-ondes, chauffage ohmique, hautes pressions
Formation Traitement thermique par microondes
Formation Traitement thermique par chauffage ohmique
Formation Traitements thermiques en continu pour les produits pompables
Formation Technologies des produits pompables
Formation Maîtrise de la surgélation
Formation Optimiser son atelier de fabrication de produits agroalimentaires

Microbiologie

Formation Microbiologie : Redécouvrez la microbiologie alimentaire sécurité et qualité des produits
Formation Microbiologie : Connaissance des bactéries sporulées et thermobactériologie
Formation Microbiologie : Explorez la microbiologie des produits appertisés
Formation Microbiologie : Pratiquer les contrôles microbiologiques des produits appertisés

Formation Microbiologie : Savoir déterminer la durée de vie microbiologique des aliments

Nutrition Santé

Formation Valoriser vos produits à travers la qualité nutritionnelle
Formation Etiquetage nutritionnel

Emballage et conditionnement alimentaire

Formation Pratique et contrôle du sertissage (boîtes)
Formation Pratique et contrôle du capsulage
Formation Maîtrise du thermoscellage des emballages souples (plastique)
Formation Critères techniques pour choisir un emballage de produit alimentaire
Formation Gestion de l'alimentarité : un challenge pour les fabricants et les utilisateurs d'emballage

Restauration

Formation Restauration : Hygiène alimentaire
Formation Restauration : HACCP

Fruits & légumes

Formation Transformation des fruits : jus, compotes et coulis
Formation Fabrication des confitures
Formation Formulation et fabrication des soupes

Foies gras & Viandes

Formation Foie gras : maîtrise de la matière première, foie gras entier, bloc de foie gras
Formation Transformation des palmipèdes à foie gras
Formation Travail des produits carnés : pâtes fines, mousses et pâtés

Plats Cuisinés & Sauces

Formation Formulation et fabrication des plats cuisinés
Formation Agents épaississants et agents de texture
Formation Formulation et production des sauces froides, chaudes, émulsionnées

Produits Céréaliers

Formation Techniques biscuitières

Formation Fabrication des produits céréaliers - à la carte

Qualité et sécurité des Aliments

Formation PRP (pré-requis)

Formation Bonnes pratiques d'hygiène

Formation Maîtrise du nettoyage et de la désinfection

Formation Traçabilité

Formation Agrément des ateliers de produit carnés et Plan de maîtrise sanitaire (PMS)

Formation HACCP mettre en place et à jour au regard de l'évolution réglementaire

Formation Gestion des allergènes

Formation Gestion des dangers émergents

Formation Prévention et détection des corps étrangers

Formation Les référentiels IFS BRC ISO 22000 : Faire le point pour rester acteur de votre démarche

Formation Audit interne en agroalimentaire

Formation Prévention et gestion des alertes et des crises

Formation Métrologie en industrie alimentaire

Formation Réglementation de produits appertisés

Formation Réglementation des produits alimentaires

Management de l'innovation

Formation Démarrer une veille technique et réglementaire

Formation Mener un projet d'innovation produit

Formation Mener un projet d'innovation emballage

Formation Méthodologie des plans d'expérience

Environnement Développement Durable

Formation Les bonnes pratiques environnementales

Formation Responsabilité environnementale

Formation Développement Durable : Sensibilisation

Formation Développement Durable : déchets, eau, réglementation

Formation Ecodesign des emballages agroalimentaires

Equipements et matériaux

Formation Choix et entretien des matériaux

Formation Conception hygiénique des équipements



Gestion des compétences

Diagnostic : Emploi Formation Compétence

Formation Formateurs internes et des tuteurs

Formation Accueillir et intégrer les salariés non permanents

Management des équipes de production

Formation Manager, motiver, animer ses équipes au quotidien

Annex 4- Example of FoodTraining centers in Spain.

2011 Agrupación Española de Fabricantes de Conservas Vegetales.

Seguridad alimentaria

Aplicación sistema APPCC en empresas alimentarias
Seguridad e higiene en industria alimentaria (mf0310_2) d 60 h
Manipulador de alimentos p 10 h
Técnicas de manipulado de frutas y hortalizas p 15 h
Técnicas de envasado de frutas y hortalizas p 15 h
Limpieza y desinfección en la industria alimentaria p 20 h
20 aplicación sistema APPCC en empresas alimentarias t 55 h
25 legislaciones - normativa alimentaria t 55 h
28 trazabilidad en el sector agroalimentario t 30 h
29 alergias e intolerancias alimentarias t 55 h
31 dietética y nutrición t 105 h
48 microbiología de los alimentos t 105 h

Conocimientos específicos del sector

40 materias primas en el sector agroalimentario t 205 h
46 alimentos funcionales t 155 h
47 etiquetado de productos alimenticios t 205 h
49 curso de especialización en aditivos alimentarios t 155 h
51 ley de seguridad alimentaria y nutrición t 30 h

Administración y dirección

22 contabilidad financiera (mf0231_3) t 105 h
35 normas contables internacionales t 55 h
37 técnicas de mando y dirección de equipos t 80 h
52 esp. en responsabilidad social empresarial t 205 h
53 curso de especialización formación de formadores t 205 h

Calidad y medioambiente

12 Tratamiento de aguas residuales en la industria alimentaria p 20 h
21 certificación según ISO 22000:2005 t 55 h
24 gestión integral de la calidad, medioambiente y PRL t 55 h
26 los protocolos IFS y BRC en seguridad alimentaria t 30 h
27 técnicas de control y mejora de la calidad t 55 h
30 certificación según ISO 9000/2008 t 80 h
34 ISO 14001 t 80 h
39 control de calidad en la industria agroalimentaria t 205 h
41 calidad y sellos de calidad en los alimentos t 205 h
42 sistemas de calidad, ma y PRL en la ind. Aliment. T 230 h

54 auditoría sistemas de gestión en ind alimentaria t 230 h
57 gestión medioambiental europea: emas t 35 h

Mantenimiento y logística

2 gestión y control de almacén d 105 h
3 mantenimiento eléctrico y mecánico d 80 h
4 técnicas básicas de almacén d 80 h
5 electricidad y automatismos d 55 h
8 carretillero p 15 h

Comercio y marketing

50 publicidad y promoción productos agroalimentarios t 80 h

Gestion de rrhh

32 gest. Admtva de relaciones laborales (mf0237_3) t 215 h

Idiomas

16 inglés nivel básico p 20 h
17 inglés. Nivel medio p 40 h
18 inglés. Nivel medio alto p 40 h

Prevención de riesgos laborales

6 PRL nivel básico sector alimentación d 45 h
14 seguridad en la conducción p 10 h
23 emergencias y primeros auxilios (mf0413_3) t 65 h
33 gestión de la prevención (mf0408_3) t 155 h
36 prev. Riesgos ergonómicos y psicosociales mf0412_3 t 125 h
43 PRL derivados de condiciones seguridad (mf0409_3) t 185 h
44 PRL por agentes físicos (mf0410_3) t 125 h
45 PRL por agentes químicos y biológicos (mf0411_3) t 185 h

Informática y nuevas tecnologías

15 creación de blogs en el entorno empresarial p 20 h
19 informática (nivel usuario) p 40 h
38 Word 2007 t 35 h
55 ofimática 2007 (mf0233_2) t 195 h
56 posicionamiento de páginas web en buscadores t 20 h

Annex 5-Example of Food Training centers in Ireland.

TEAGASC- Agriculture and food Development Authority.Ireland

Food Industry Training Schedule 2011

FOOD SAFETY MANAGEMENT

HACCP in Food Safety (FETAC)

Trainer Skills – Food Safety & Hygiene (FETAC)

Food Law Update

Microbiology for Non-microbiologists (FETAC)

Legal Labels – Ireland

FOOD QUALITY MANAGEMENT

Food Standards Auditing (FETAC)

Implementing BRC Global Standard for Food Safety

Laboratory Auditing

Laboratory Auditing

Implementing ISO 22000 Food Safety Management Systems

Internal Auditing Bord Bia Standards (FETAC)

TECHNOLOGY AND PRODUCT DEVELOPMENT

Foundation Certificate in Sensory Principles (IFST, UK)

Principles of Thermal Process Validation

Butchery and Small Scale Meat Production Workshop

SEMINARS ON TOPICAL ISSUES

Food Packaging Seminar presented by Enterprise Ireland, Bord Bia and Teagasc

Shelf-life Seminar in conjunction with the Food Safety Authority of Ireland (FSAI)

Cheese Symposium September 28th & 29th

Simplifying Documented Quality Management Systems

Other courses that may be available on request

Advanced Hygiene Management in Food Safety (FETAC) (3 day)

Writing a Retailer Specification (1 day)

Hygienic Factory Design (1 day)

Lean Manufacturing Techniques for the Food Sector

Microbiology for non-Microbiologists (1 day)

Supplier Auditing & Supplier Control (2 day)

Internal auditing (1 day)

Laboratory Accreditation (2 day)

Techniques for Risk Assessment (1 day)

Technology & Business Development for Artisan Food Producers (2-6 days various modules)

HACCP for Animal Feed Producers (1 day)



Natural Cheese Making
Processed and Substitute Cheese Products
Spray Drying
Evaporation
Process Control and Management
Plant and Process Hygiene