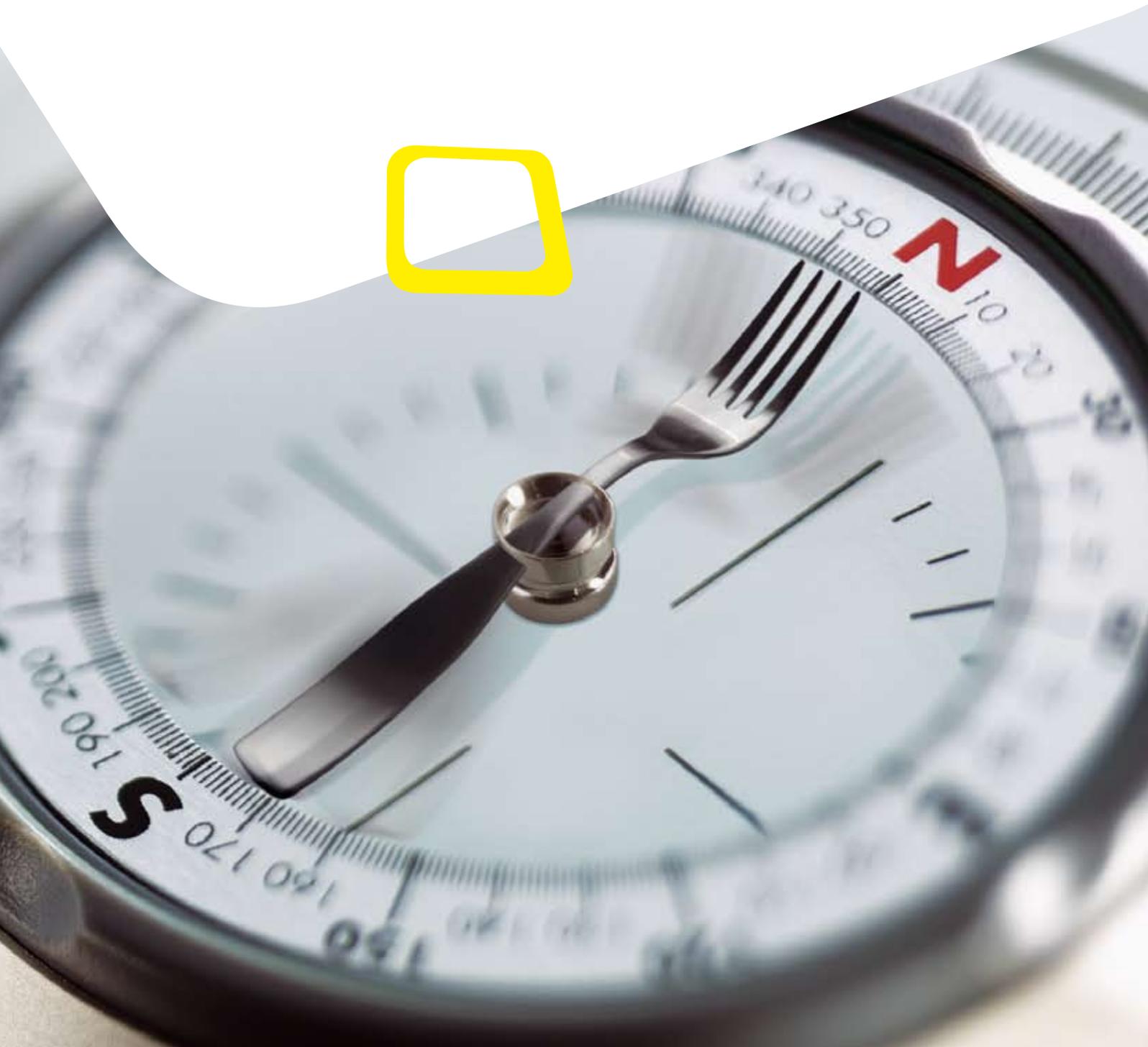


Food and nutrition sector strategy report

Finland – a competitive forerunner in healthy nutrition



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Editor Marjo Uusikylä, Info Plus

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Preface

The Finnish food industry has faced strong pressures for change during Finland's first ten years of EU membership. However, the sector has been able to adapt and develop in line with the challenges posed by the global competitive environment. The significant expansion of industry and trade to regions near Finland has proved that we have been able to work more efficiently and establish ourselves in new markets.

However, Finland's steady increase in food imports while exports are at a standstill is a sign of insufficient competitive strength in today's changing operating environment.

In 2004, the Finnish National Fund for Research and Development, Sitra, decided to launch the Food and Nutrition Programme, ERA. The motivation was, on the one hand, increasingly common lifestyle diseases partly caused by inappropriate diet and, on the other hand, the impact of changes in the global operating environment on the competitive strength of the Finnish food industry.

The ERA programme was launched in summer 2005 with a strategy process that sought to identify the areas where shared resources should be invested in order to enhance global competitiveness.

Experts and key players in the field, representing primary production, industry and trade, research, public health organisations and public administration, were invited to participate in the strategy process. This was the first time that the sector engaged in such extensive co-operation to lay the foundations for future competitive strength.

The team sought answers to several questions, such as how will the food and nutrition sector respond to changes in consumer demand? How should products and services be developed so that we can also offer added value to tomorrow's consumers? How can the Finnish food and nutrition sector strengthen its capacity for innovation?

This strategy report is only the beginning. Our goal now is to jointly undertake practical measures in order to strengthen the competitiveness of the Finnish food and nutrition sector.

I hope that the strategic intent and vision of the strategy team, as well as the measures planned for achieving that vision, will inspire discussion and ideas among the actors in the sector.

On behalf of Sitra's Food and Nutrition Programme, ERA, I wish to thank all those who participated in the effort. I would especially like to thank the numerous experts who participated in the preparation of the ERA programme and the chairman of the preparatory committee, Gustav von Hertzen, Honorary Counsellor, as well as the authors of the vision and content of the strategy report, the strategy team, for their commitment, and the report's editor as well as many other experts who have contributed to the final outcome.

Helsinki, 20th April 2006

On behalf of the ERA programme strategy team

Anu Harkki

Executive Director

Sitra's Food and Nutrition Programme, ERA

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Concepts

Food and nutrition sector – all corporate and other organisations in Finland involved in research, product development, production, trade and services related to the field of food and nutrition.

Functional food – food that beneficially affects one or more target functions in the body, beyond adequate nutritional effects in a way that is relevant to either an improved state of health and wellbeing and/or reduction of risk of disease.

Smart food – a concept that covers healthy food and sensible eating habits. Foods classified as smart food have a favourable effect on people's physical and mental well-being. Sensible eating habits are based on healthy choices; consumers make personal choices regarding food that is suitable for their well-being, tastes and the intended use. Smart food is ethical, safe, traceable and based on reliable scientific evidence and product development. Smart food is packaged in a manner that is appropriate for the consumer, and its health-promoting effects are clearly communicated.

Novel food – a food or food ingredient that has not been used for human consumption to a significant degree within the Community before 15 May 1997.

Regulation – a provision or a guideline included in legislation or other norms.

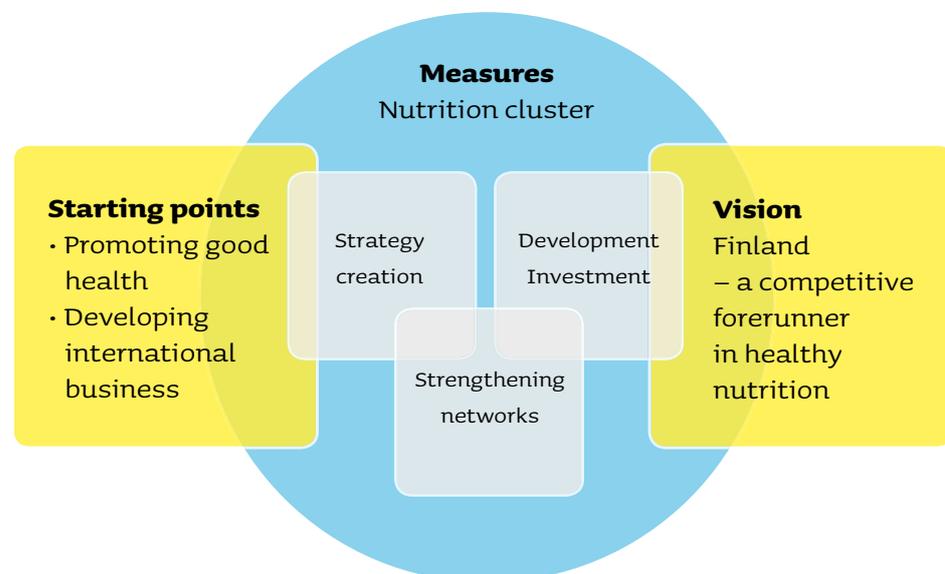
1 The food and nutrition sector strategy process and the creation of a vision

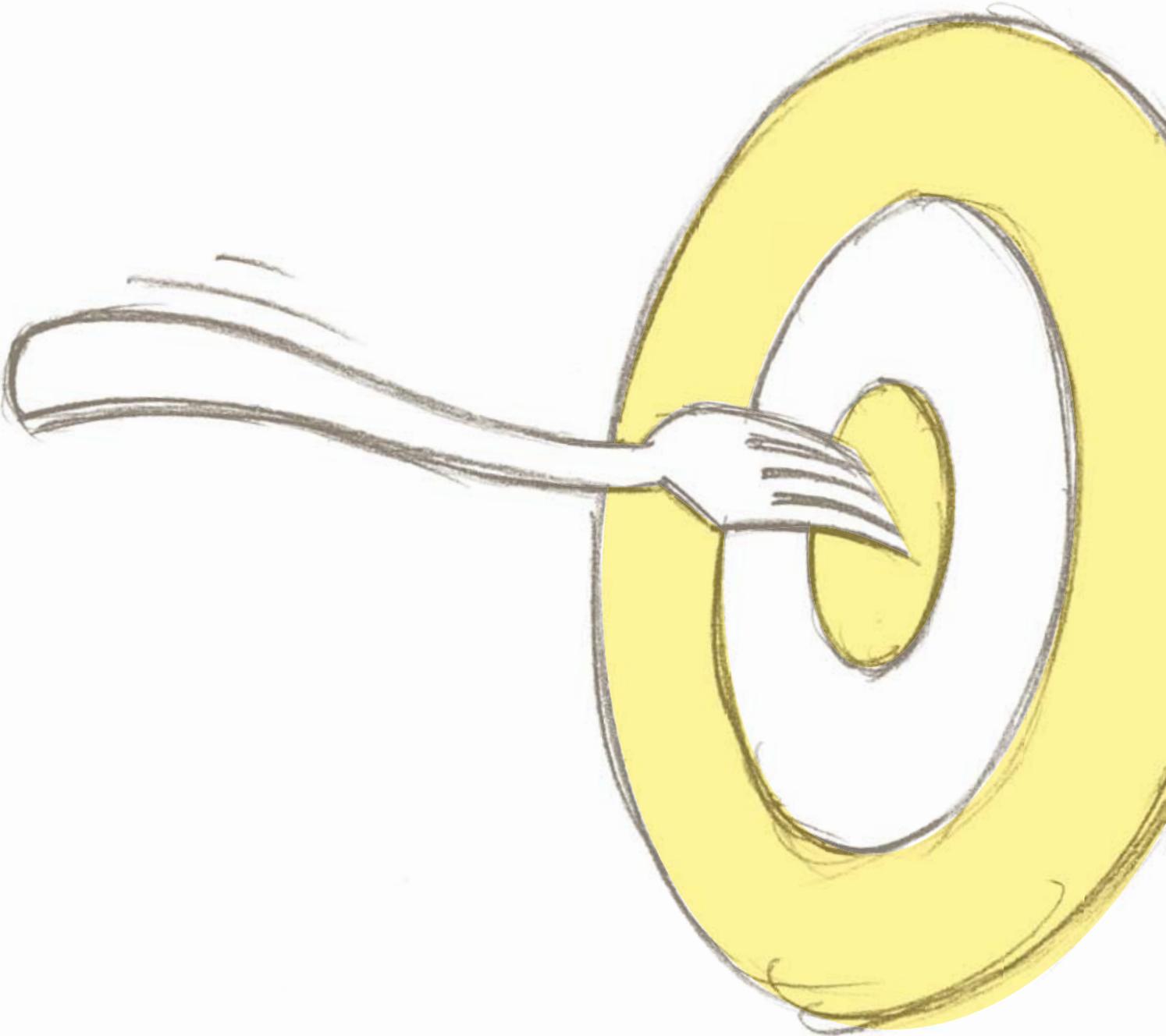
In spring 2005, Sitra launched its Food and Nutrition Programme, ERA. The goal of the ERA programme was defined as enhancing the sector's international competitiveness, promotion of health through nutrition and establishing a strong nutrition cluster (Figure 1). The programme will conclude in 2008.

The process to create a strategy for the food and nutrition sector began as an ERA project in summer 2005. For the first time, the entire sector from primary production to trade collaborated extensively. Process participants included 30 experts from primary production, research, large- as well as small- and medium-sized food companies, trade, public administration and public health organisations (participants, Appendix 1; workshops and excursions, Appendix 2).

The six-month project defined the target and vision – how the sector should develop by 2015. In order to strengthen the international competitiveness of the Finnish food and nutrition industry, the strategy team envisioned measures on which to focus joint resources. The action plan is based on Finland's strongest competence areas and the international trends and business opportunities of the food and nutrition sector. The process also produced an outline for building a strong food and nutrition cluster.

Figure 1.
Food and Nutrition Programme
ERA's operational model





1.1 Vision

The strategy is based on the following vision:

Finland – a competitive forerunner in healthy nutrition

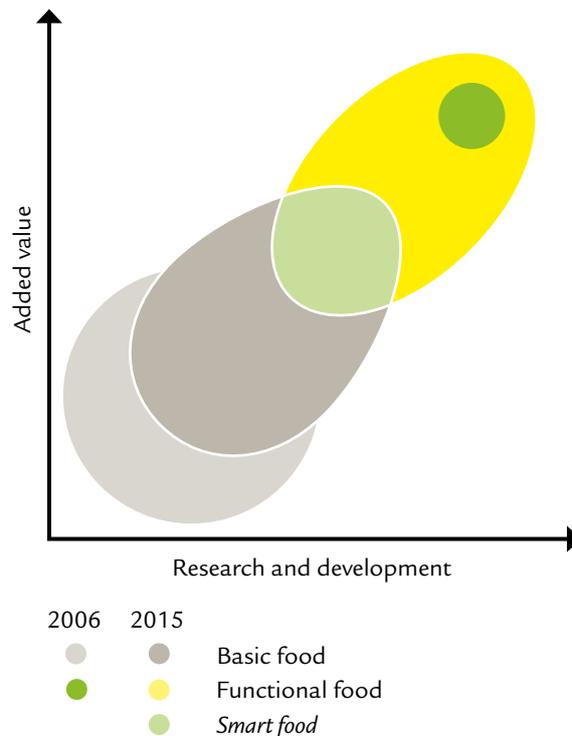
Finland has a solid foundation for becoming a competitive forerunner, as it is already internationally known for a well-implemented health-care system, know-how in concepts promoting public health, school meals, health-promoting raw materials and products, as well as high-quality research into them.

Most of our current foods consist of good basic foodstuffs. In addition, we have functional and other innovative foods, the development of which has required a great deal of research and development resources.

The vision is based on the assumption that basic foods and functional foods will gradually converge. The demand and market for functional foods are on the increase and meeting the demand requires cutting their prices. Simultaneously, basic foods are expected not only to taste good and be of high quality, but also to promote health and well-being. A new, growing demand sector, smart food, will emerge between basic and functional foods (Figure 2).

Figure 2.

The food and nutrition sector vision is based on the assumption that the currently marginal market for functional foods will grow and become more similar to that of basic foods. Consumers expect basic foods to have effects on health and well-being. The middle ground will be taken over by a new sector, *smart food*, which will have increasing significance.



The special focus area of the Finnish food and nutrition sector will be the development of foods that fall between basic foods and functional foods. The aim is that consumers will associate smart food with safe, traceable raw materials and production methods, and the utilisation of health-promoting innovations.

Research and development plays a key role in making Finland a competitive forerunner in healthy nutrition. The focus areas of research must be defined and commercialisation become a key development area so that the innovation capacity within the food and nutrition sector can work towards the realisation of the vision.

Implementing the vision requires a firmly established food and nutrition cluster. The cluster will need to become a strong, competitive international force in the business of foods and nutrition innovations. This will stimulate exports throughout the sector.

The implementation of the vision for the food and nutrition sector requires that:

- the total volume and value of the Finnish primary production, food industry, trade and service sector grows
- Finnish food is widely known in the neighbouring regions and Russia
- Finnish smart food is known in the EU and other big markets
- innovation in the sector is at a high international level

1.2 Strategy

The vision of Finland as a competitive forerunner in healthy nutrition is based on the view that the demand for well-being will grow strongly. The food and nutrition sector will answer this demand by developing foods that enable consumers to make choices that promote health and wellbeing from a wider and more diverse range of products. The development is supported by improved online services, which people increasingly use to search for information on health and well-being and the ways to promote them. People's awareness of their own health is also continually growing, thanks to the rapid progress in medicine and diagnostics.

The aim is to promote business in the food and nutrition sector by developing Finnish basic food production, by increasing the amount of functional foods that require the application of high technology and by becoming a forerunner in the development of smart food. Smart food combines nutrition innovation with the properties of Finnish basic food – it tastes good, it is safe and free of contaminants, and the high quality production chain can be traced from the field to the consumer's dining table. The strategic aim of the food and nutrition sector is to make smart food, a strong point for Finland and to become a global forerunner.

Finland aims to become a global forerunner in the smart food sector

Smart food provides various actors in the field with opportunities for developing new products and services. Other targets for development include different support services, such as related ICT solutions as well as packaging and nutrition technologies.

Finnish research and development competence in basic research as well as advanced biotechnology applications in the food and nutrition sector will be exploited on a larger scale and more extensively. On the other hand, developing a single innovative *smart food* product does not necessarily require similar investment in research as the development of a new functional food.

The strategic guidelines for the development of the food and nutrition sector are:

- identifying the strategic focus areas of research and development in the sector and becoming a forerunner in those areas, increasing national and international networking in research, directing education to the focus areas and making the innovation chain more efficient
- strengthening co-operation within the food and nutrition sector and establishing a cluster to advance the goals set for the development of the sector after the closing of the ERA programme
- strengthening international competitiveness
- changing regulations to promote a healthier diet and improve the competitive strength of the Finnish food and nutrition sector
- enhancing co-operation between food and nutrition actors and the authorities and working on attitudes in order to develop legislation
- creating an image of Finland as a forerunner of healthy nutrition both nationally and internationally





2 The Finnish food and nutrition sector in the global economy

The development of the Finnish food and nutrition sector is greatly influenced by trends of change in the global information society.

Food chains from primary production to industry and trade and on to the consumers have traditionally been local in character. Consumers still appreciate locally produced food but the concentration of trade, price pressures and efficiency requirements for the distribution chain are replacing this operational model, which, as such, seems sensible and supports sustainable development. Multinational corporations have become strong actors in national markets. On the other hand, globalisation also expands the market for Finnish companies. Finland's neighbouring regions, or even all of Europe, can be seen as a domestic market.

People's increased mobility and use of information technology have spurred on globalisation. These changes and efficient news reporting also have an impact on consumer demand. However, consumers do not always have a positive perception of up-to-date and efficient health communications because it can upset the consumers' knowledge base on the links between health and nutrition and can seem confusing.

The food industry and trade play an important role in shaping opinions. Product advertising and the range in supermarket shelves and restaurants influence demand more efficiently than systematic health communications aimed at consumers. The means of marketing vary from country to country and between cultures, which also makes it more difficult for the consumer to sift out reliable information from the flood of information. The industry and trade are also expected to be efficient. Consumers who follow information on healthy nutrition should be able to find health promoting products in supermarkets.

The ageing of the population has two sets of implications. The number of retired people and the share of aged workers of the entire labour force are on the increase. The effect of this on the national economy is seen in increased health-care expenditure. Maintaining and improving the health of people of all ages is one of the key challenges facing welfare states. The present situation does not look promising – as material welfare improves, lifestyle diseases are becoming increasingly common.

2.1 The food and nutrition sector today

Since the Finnish food industry relies heavily on domestic raw materials, viable and efficient agriculture is a prerequisite for a strong food industry. The market share of domestic foods in Finland is 85 per cent. According to international estimates, approximately 5 per cent of food production passes national borders. Primary production, the food industry and investments in them comprise 10 to 15 per cent of Finland's GDP. This is supplemented by catering and distribution services. The food chain employs approximately 300,000 people, which is 13 per cent of the employed labour force. Table 1 presents the development of the net sales, employment and international trade of the Finnish food industry in the past ten years.

Table 1. The net sales and employment of the Finnish food industry and food imports and exports in 1995, 2000 and 2004. Source: Finnish Food and Drink Industries' Federation www.etl.fi/tilastot

	1995	2000	2004
Number of companies *	1780	1927	n. 2000
Net sales, billion € **	7,9	8,0	8,6
Employees	42 800	39 400	37 700
Food exports, billion €	0,7	1	1
Food imports, billion €	1,3	2,0	2,3
Net sales from neighbouring regions, billion €***			1,3

* Data for 1995 and 2000 according to the 1995 standard industrial classification, data for 2004 according to the 2002 standard industrial classification

** gross value of production

*** estimate by the Finnish Food and Drink Industries' Federation

The food industry is the third largest employer in Finland. In 2004, the industry employed on average 37,700 people. Measured by both gross value and value added, the food industry's production is the fourth largest of Finnish industries (the Finnish Food and Drink Industries' Federation www.etl.fi/tilastot). Finnish food corporations have established themselves in Russia and the Baltic region. In 2004, the net sales of these companies (1.3 billion euros) exceeded the value of food exports.

Investments in food and nutrition research in Finland have remained on the same level in the past ten years and are low compared to most other Finnish industries. However, the food industry's research and development investments are at the top EU level in per capita terms.

In trade, the share of food of the total sales of daily consumer goods amounts to approximately 80 per cent. In 2004, an average of 92,000 people were employed in the wholesale, retail and department store sales and logistics of daily consumer goods. In 2004, the value of Finnish daily consumer goods trade exceeded 20 billion euros (the figure includes alcohol sales and restaurant sales based on prices charged to customers. Source: Daily Consumer Goods Trade 2005–2006, a Finnish Food Marketing Association publication).

Competition within the daily consumer goods trade, migration within Finland, increasing motorisation, wider product ranges and the development of information technology have resulted in a major structural change in the sector. Compared with other European countries, the daily consumer goods trade is very concentrated in the Nordic countries, Sweden and Finland in particular.

Efficiency, logistics management and price competition have played a major role in the concentration of trade. If the only competition taking place in the shop aisles is price competition, Finnish production will face a loss of competitive advantage.

2.2 Changes in demand

The factors steering consumer demand are changing and vary between increasingly fragmented consumer groups. Consumers' choices are influenced by factors such as income, price of food, household size, age, information associated with food, prevalent values in society, and ethical and health aspects. Besides nutrition, food provides consumers with enjoyment, even a trendy pastime. This is evidenced by shop and restaurant ranges, which have become more varied and offer even exotic alternatives. A hectic lifestyle causes people to favour fast food and convenience foods on weekdays, but they invest time and effort in culinary delights at weekends.

Consumer's interest in healthy nutrition is a rising trend.



Consumers are well aware of the connection between nutrition and health and monitor their own health. They seek to improve it holistically through nutrition, exercise and other lifestyle choices. Consumers investing in their health are interested in nutrition innovations, such as functional foods. Their development requires considerable investments in research and development, but pioneering consumers are prepared to pay a higher price for them.

For the past twenty years, Finland has invested in the healthiness of foods by increasing the amount of fibre, reducing the amount of salt, reducing the amount of fat and replacing unhealthy fats with healthier ones. In addition, the needs of special groups have been catered for with lactose- and gluten-free products as well as products that reduce cholesterol levels and blood pressure. The discerning consumers investing in a health-promoting diet steer demand. This is evident in Finnish supermarkets, which offer a wider range of healthy and functional foods than those on mainland Europe. Yet the demand for functional foods in the USA, Europe and Asia is also growing faster than the demand for basic foods.

2.3 The operational environment of the food and nutrition sector

Consumers must be given the opportunity to receive all relevant information on foods so that they can make informed choices in terms of their health and well-being. The competitiveness of the food industry must also be ensured. The slow and bureaucratic approval process of novel and functional foods prevents the supermarket ranges from developing sufficiently fast to meet the expectations of consumers interested in their health. It can also prevent the industry from developing products that would meet the demand even if it identified the need. Activities are delayed by the EU Novel Foods Regulation of 1997 and, as yet, the lack of legislation on the use of nutritional and health claims in the marketing of foods. The European Commission approved a proposed Regulation on nutrition and health claims made on foods in summer 2003, and political consensus on the matter is currently being sought.

The Regulation is estimated to enter into force in 2007 at the earliest. Europe as an operational environment should support the development of the market equally as well as its competitors, the USA and Asia. The approval procedure of novel foods takes significantly longer in the EU than in the competing markets. The functioning of the EU internal market is a key issue in improving global competitiveness.

Changes are necessary in the food legislation in order to safeguard the competitive strength of the industry and the development of products that meet consumer demand.

3 Nutrition and public health in Finland

There is a clear connection between diet and health risks. This is also supported by numerous epidemiological studies by the Finnish National Public Health Institute, such as the Health 2000 study and the National FINRISK Studies of 1997 and 2002. The number of people suffering from high cholesterol levels, high blood pressure, type 2 diabetes and excess weight is on the increase in our welfare society. The problems also tend to accumulate: being overweight increases the risk of diabetes, and diabetes and being overweight increase the risk of cardiovascular diseases.

According to the World Health Organization, WHO, the most important risk factors behind mortality in western countries are, in order of importance: high blood pressure, smoking, high blood cholesterol, being overweight, low fruit and vegetable consumption, too little exercise, and alcohol.

It is estimated that the number of type 2 diabetics in Finland will increase by approximately 70 per cent to reach half a million by 2010 if the current trend continues. The aim of the Development Programme for the Prevention and Care of Diabetes, DEHKO 2000–2010, is to seek measures to prevent the estimate from becoming a reality.

In Finland, approximately 66 per cent of working age men and 50 per cent of working age women are overweight. One fifth of the entire age group are obese. Obesity is becoming increasingly common among men and women of all age groups. Finnish children are becoming overweight even faster than adults and even children suffer from type 2 diabetes. Therefore it is important to promote healthy lifestyles in childhood and school. This would also promote the equality principle of public health.

Health-care costs have in recent years increased by 5 to 7 per cent per year, which is about twice as fast as the GDP. Economic prosperity can only be secured by looking after the health of the population.

New concepts must be developed to combat lifestyle diseases. Such concepts also provide opportunities for international business as the trend is similar in other EU countries and non-European countries experiencing strong economic growth.

The health and well-being of the population is also the foundation for economic prosperity.





4 Measures for implementing the vision

Making Finland a competitive forerunner in healthy nutrition requires extensive collaboration within the food and nutrition sector even after the ERA programme ends in 2008. The strategy process envisioned a number of key measures for implementing the vision (Figure 5, p. 27). The measures and the organisations responsible for their initialisation or implementation are presented in Appendix 3 (p. 32).

4.1 Research, development and commercialisation

The different links of the food and nutrition sector innovation chain (basic research, applied research, technology transfer, corporate research and development, commercialisation and marketing) do not currently function seamlessly together, or some links of the chain are missing or functioning inadequately. Strengthening the innovation chain requires the collaboration and joint investment of many different actors. Speeding up product development and commercial exploitation must be accommodated at both the research–corporation interface and within companies. We need new models that will make it possible to consider corporate needs sufficiently early on in research.

The Finnish food and nutrition sector is facing an urgent need to enhance internationalisation and the export of health-promoting foods and nutrition services and technologies.

4.1.1 Creation of a research and product development strategy

The food and nutrition sector needs a research and product development strategy to strengthen the innovation chain. The strategy defines the research focus areas that Finland will invest in. The work has a solid foundation in the Academy of Finland's international evaluation of Finnish food sciences and related research, and in its recommendations. Jointly agreed focus areas of research and development will also improve the chances of the Finnish food and nutrition sector to influence matters such as the contents of EU research framework programmes.

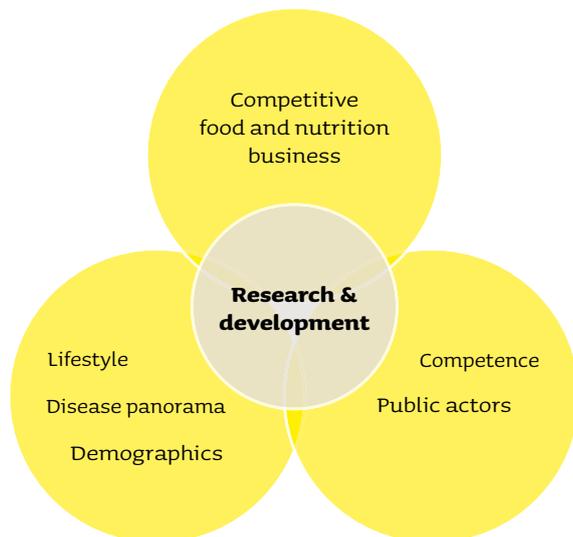


Figure 3.

Research and development activity in the food and nutrition sector is founded on the surrounding market, consumer needs, food technology and nutrition research. Biotechnology and medical competence must be applied in food development more than before. These aspects will help define the focus areas that support the food and nutrition sector vision, and on which research and development in Finland will then concentrate. The vision can only become a reality through consumer-oriented research and widespread commitment to shared goals.

Research on food and nutrition is carried out in several universities and research institutes. They have numerous research teams but co-operation between them is sporadic and uncoordinated. The teams decide upon the focus areas of their research mostly independently, though Finnish funding models have somewhat increased co-operation and co-ordination between the various research organisations and teams. Yet more improved co-operation is required to avoid problems such as overlapping research. The focus areas for polytechnics and technology transfer organisations should also be defined in co-operation. This will guarantee the availability of the highest competence to benefit corporate product development.

In addition to actual food and nutrition research, the research and product development strategy will include research that promotes business in the sector (consumer behaviour, business know-how, IPR, internationalisation, marketing, foresight) and technology transfer. The strategy will thus embrace the entire food and nutrition sector innovation chain. The research and product development strategy stems from corporate needs based on consumer needs, on the one hand, and Finland's strengths in the sector, on the other (Figure 3).

The challenge in the food and nutrition sector is to convert research and development into successful products and business. Commercialisation of research results has so far been the most serious bottleneck in Finland. In many fields, our research is of top international quality, but the translation of research results into products and products into business is still inadequate. Collaboration between the industry and universities and other public research institutes must be intensified. Commercial know-how must also be improved.

A research and product development strategy will be created for the food and nutrition sector to define focus areas for research and to strengthen the innovation chain.

The food and nutrition sector needs Strategic Centre for Science, Technology and Innovation.

4.1.2 Establishment of Strategic Centre for Science, Technology and Innovation

The aim of the food and nutrition sector is to fulfil the criteria set by the Science and Technology Policy Council of Finland for a Strategic Centre for Science, Technology and Innovation.

There is a clear need to establish a virtual centre of excellence as an integral part of the food and nutrition cluster to implement the research and product development strategy and to support the product development and commercialisation of innovations. The centre's tasks include focusing and organising research and development, co-ordinating research funding, supporting the commercialisation of innovations and assessing education needs ranging from research competence to business know-how.

Such a centre of excellence is necessary for bringing together Finland's top-level know-how in the focus areas defined in the research and product development strategy. Under the concentration's co-ordination, it will be possible to elicit commitment from the actors in the sector to co-operation that supports the strategy and to involve the business life and its financial resources in research and development activities (Figure 4). The centre will facilitate good international research networks and channel the necessary know-how that Finland now lacks to benefit companies operating in Finland. It will also make the Finnish food and nutrition sector better known and contribute to the sector's international image as a forerunner in healthy nutrition.

Resources

- companies
- research institutes
- universities
- financiers

Figure 4.

The tasks of the virtual Strategic Centre for Science, Technology and Innovation include co-ordinating research, education and funding in the food and nutrition sector, as well as eliciting commitment to co-operation from companies, universities, research institutes, financiers and other actors in the sector.



4.1.3 Increase of knowledge transfer

The food and nutrition sector must enhance knowledge transfer between business life, the authorities and research organisations. There is a clear need for incentives that will boost fixed-term employment in partner organisations. Such mobility will promote the formation of a shared view of the sector's needs among the various actors.

Fixed-term employment of researchers in the private sector should be made attractive to both researchers and companies. The Academy of Finland funds the completion of doctoral dissertations of postgraduate students working in the private sector, but this opportunity has seldom been seized in the food and nutrition sector. The Academy of Finland is also currently funding a new scheme for post-doctoral researchers to switch from a research organisation to a business enterprise or vice versa for a maximum period of one year. International professor-level top researchers are attracted to Finland with the Finland Distinguished Professor Programme (FiDiPro), jointly financed by the Academy of Finland and the Finnish Funding Agency for Technology and Innovation (Tekes).

Private-sector employees with doctoral degrees should be more involved in university teaching. This would improve interaction between business life and the universities as visiting lecturers from the private sector could use business-life cases to supplement theoretical teaching on commercial exploitation. It is also worthwhile to consider expanding the system to polytechnics.

Circulation of business know-how. The Food and Nutrition Programme, ERA, employs mentoring to develop the SME sector. An experienced mentor assists a company seeking growth and aiming at international markets to identify the crucial development targets and to begin the development measures. The mentor and the company agree on the extent and depth of the co-operation.

4.1.4 Improvement of IPR know-how

Finnish research organisations and businesses have inadequate skills in immaterial property rights (IPR), which encompass both intellectual and industrial property rights. The standard of IPR management in the food and nutrition sector must be improved to ensure better protection of Finnish innovations with patents and to acquire licensed technology to Finland. Education in the food and nutrition sector must include IPR management.

Technology transfer organisations should be more active in acquiring immaterial rights for Finland and be prepared to seek alternatives, such as licensable technologies, for companies.

The exchange of information and experiences boosts innovation. Mobility of people between research organisations, businesses and public administration must be promoted.

Technology transfer organisations are expected to be active in acquiring immaterial rights for Finland.

4.1.5 Mini-clusters – success through co-operation

The mini-cluster concept, which promotes SME co-operation and internationalisation, was launched in spring 2006. Companies involved in the mini-cluster work in close co-operation and will gain synergy benefits e.g. in marketing, subcontracting and raw material acquisition and through manufacturing under one trademark. The mini-clusters will turn into clusters of companies, the operations of which will be based on mutual trust and shared interests.

In addition to SMEs, the mini-clusters may also involve large companies that can support their operations. The mini-clusters will act as pilots in developing a model for deepening corporate co-operation, particularly to promote internationalisation. The mini-clusters launched in 2006 will each be established on a different premise. The Coeliac mini-cluster will be problem oriented while the Berry mini-cluster will be based on raw materials and the Russia mini-cluster on a shared market.

Coeliac mini-cluster. Strong Finnish research input combined with networking and collaboration in the field provide a solid foundation for business development and success in the demanding international market of foods and nutrition suitable for people suffering from coeliac disease.

Berry mini-cluster. Despite top-level Finnish research related to berries, Finnish berry products are mainly traditional, low value-added products. The mini-cluster will seek models for turning the Finnish berry know-how into high value-added products for international markets.

Russia mini-cluster. Targeted at businesses interested in entering Russian markets, this project is implemented in co-operation with Sitra's Russia programme.

4.2 Finland to influence actively on EU legislation and to develop national legislation

4.2.1 Regulations to support market development

The national strategy for the food and nutrition sector will be supported by work on relevant legislation, that is, provisions and directives included in regulations and other norms. Changes in regulations are in many cases necessary to secure the competitive strength and development of the Finnish food production chain.

One of the issues to be addressed is EU food legislation, and particularly legislation on health claims and the link between health and nutrition. Another issue of importance is trade regulation including national restrictions on opening hours and the building of retail premises as well as the distribution of alcoholic beverages and pharmaceuticals. In Finland the VAT on foods is high, which directly weakens the competitive position of the food chain.

Finland to advocate EU-level liberalisation. “Currently EU bureaucracy greatly hampers the market entry of novel foods and the use of health claims. Development of health-promoting foods is delayed by EU regulations, which do not encourage European companies to innovate. The Confederation of the Food and Drink Industries in the EU CIAA has also drawn attention to this problem. The US Food and Drug Administration, FDA, acts considerably faster and its processes are transparent.

Europe is lagging far behind the USA, Australia, Japan and China in the marketing of new functional raw materials and foods. This development is extremely unfavourable to Finland in its aim to be a model country of healthy nutrition.

Bureaucratic barriers within the EU to developing functional foods and smart food must be removed. It requires determined lobbying on all levels by all actors (industry and trade organisations, health authorities, political parties). Liberalisation will benefit the Finnish food industry and bring more alternatives to consumers. In the long run, removing the barriers to development will also promote a healthier diet for the entire population.

The proposed EU Regulation on health claims will face its final readings during Finland’s EU Presidency in autumn 2006. This creates an opportunity for Finland to have a bearing on the proposal so that the final outcome is as close as possible to the original proposal of the Member States, which took the perspective of healthy food.

4.2.2 Temporary marketing permit for novel foods

It is especially important for innovation that “novel foods” can enter the market faster than at present in the EU. It is proposed that products be granted temporary marketing permits at a stage when they have been proven safe. The temporary nature of the permit would be indicated on the packaging. The temporary marketing permit would be a national procedure and would not enable temporary marketing in the entire EU.

4.2.3 Authorities to support consumer interests

Finnish authorities and experts, such as members of EU scientific committees must be familiar with the joint strategy and goals of the Finnish food and nutrition sector. The authorities should aim at supporting the development of nutrition along the lines of consumer interests. This requires an active approach in the EU and on national level, not only official supervision but also advisory services to food and nutrition sector actors.

The role of the Finnish Food Safety Authority, Evira. Evira plays a key role in health-claim issues. It should both supervise and advise. It is expected to define terms and expressions used in packaging and instructions, such as treatment of a disease, prevents symptoms, and reduces risk of disease. Evira should adopt an advance approval procedure for the use of health claims in marketing and sales promotion, or at least provide sound advice. Furthermore, Evira should provide companies with advice on matters pertaining to scientific evidence.

Deregulation of trade and competition in the entire food chain. Regulation of opening hours and building of retail premises affects the entire Finnish food chain. Limiting Sunday opening hours only to grocery stores with an area of less than 400 square metres reduces the Finnish foods' share of retail sales, as larger supermarkets, which have more shelf space than small shops for Finnish and local products, are closed on Sundays.

The lower limit for a hypermarket is currently at 2,000 square metres of floor space. This is too little for current needs and does not correspond to the expanding product ranges and demands of international competition. In future, an increasing range of functional foods and smart food will also further expand the product range in supermarkets.

4.2.4 VAT on food must be lowered

Finland's VAT on food is one of the highest in Europe. Lowering the VAT on all foods to 12 per cent is an absolute prerequisite for people to be able to promote their health through a balanced diet. The high VAT rate prevents the development of *smart food* as a means of promoting consumers' health and preventing disease.

Furthermore, a lower 8 per cent VAT is proposed for health-promoting products that fulfil clearly defined criteria (such as the Heart Symbol of the Finnish Heart Association). In the interest of promoting nutritional equality, the prices of functional and otherwise healthy foods should be within the reach of all citizens.

4.3 Collaboration in the food and nutrition sector

4.3.1 Establishment of a food and nutrition cluster

The Finnish food and nutrition sector is not accustomed to broad-scale co-operation. However, the food industry has engaged in some co-operation under the auspices of the Finnish Food and Drink Industries' Federation in particular. The strategy process was the first to bring various food and nutrition sector actors together on this scale. The process crystallised the sector's common view and established a clear need and the participants' commitment to extensive, continual collaboration in order to implement the shared vision and goals.

The food and nutrition sector wants to build a strong cluster for the implementation of the co-operation and the strategy created under the ERA programme.

The food and nutrition sector wants to establish a cluster that will bring synergy benefits to all players in the sector.

4.3.2 School and workplace meals projects

The ERA programme has begun two projects to support the food and nutrition sector strategy and to promote healthier eating habits. Public authorities are key to developing school and workplace meals.

School Meals Project. The School Meals Project aims to promote children and young people's health through nutrition. School meals can have a major impact on the adoption of healthy eating habits. The current allocation for school meals is so small that it makes it difficult to serve schoolchildren a healthy and tasty meal daily. Municipalities should therefore be obliged to increase school meal allocations.

While school meals are an important part of the nutrition of children and young people, they are still only a part. The project will collaborate widely with various interest groups to impact upon the entire everyday life of children and young people. The project will also pilot various technological solutions for the improvement of children and young people's nutrition and nutrition education, and test how the target groups receive them. The health benefits of exercise are also on the agenda. Furthermore, the project will include long-term follow-up of children and young people's health. The public and private sectors will co-operate to develop school meals.

Workplace Meals Project. The other ERA project addressing the promotion of healthy nutrition among Finns will seek a model to support healthy workplace meals.

Projects promoting citizens' health also contribute to Finland's international image as a forerunner of healthy nutrition. Should the projects prove successful, they can also be developed into export concepts.

4.3.3 Developing certificate of origin and quality

Finland has an efficient food production and marketing chain, stretching from the field to the consumer's dining table. The entire chain is based on quality management, which means added value to the consumers in the form of traceability and food safety. Consumers appreciate these properties but are not aware of how the quality chain works. Actors along the chain also get no higher a price for the quality work expected of them. A traceable high-quality production chain from the field to the table is a unique concept internationally and it could also be used more widely and visibly in marketing than is currently the case. Continuous development of certificate of origin and quality should be supported.

Expanding the impact of the Heart Symbol. The Heart Symbol launched by the Finnish Heart Association is an indication of a product's nutritional value. It is already an established symbol directing consumers' choices. It is worthwhile to consider expanding its use to catering and new food groups. Health and nutrition communication targeted at consumers should be more effective and support healthy choices.

The profile of healthy and safe Finnish food should be raised.

The image of Finland as a competitive forerunner in healthy nutrition will build on co-operation between all the actors in the food and nutrition sector.

4.3.4 Enhancing food and nutrition sector image

The measures outlined in the strategy for the food and nutrition sector have an impact on the sector's image both nationally and internationally. The activities of the food and nutrition cluster will also include image creation. In practice, the sector's image will build on co-operation between all the actors in the sector. Good, focused and consistent internal and external communication plays a key role.

Communication co-operation. The measures outlined in the food and nutrition sector strategy process require long-term co-operation. Its cornerstone is good communication within the sector and externally, which will enable the creation of a uniform image of Finland as a model country and a forerunner in healthy nutrition. Co-operation will also encompass other sectors. The food and nutrition sector can exploit Finland's reputation in matters such as ICT or forest expertise. Likewise, expertise in the food sector and health promotion benefits Finland's image as a whole.

The image of good practices in healthy nutrition will be further strengthened by communicating about concrete measures undertaken by the food and nutrition sector in order to become a forerunner in the field

Project map

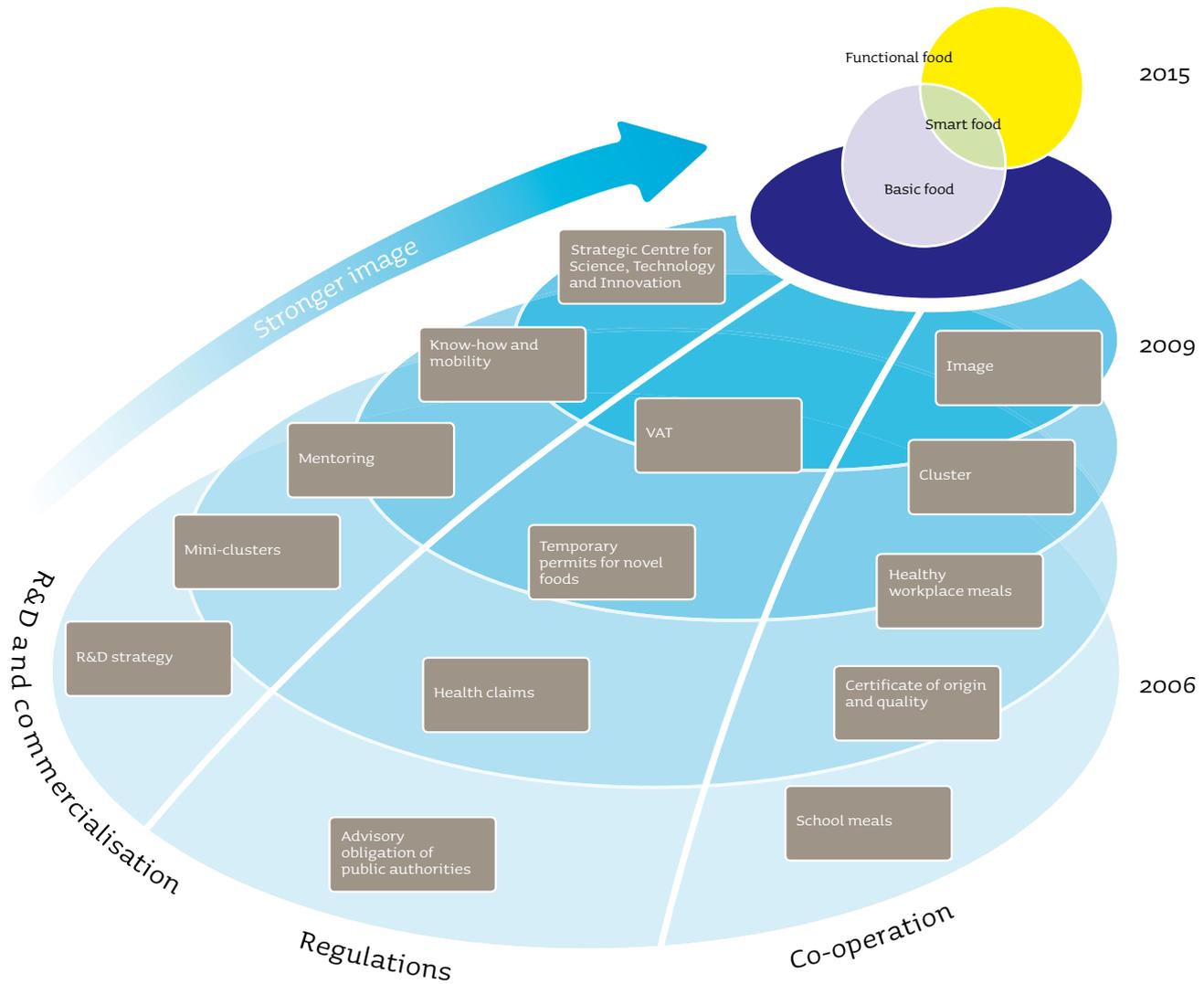


Figure 5.

The vision and the measures suggested for attaining it. The measures will target three sectors: intensification of research and development as well as commercialisation, liberalisation of regulations in order to improve the functioning of the EU market, and strengthening co-operation throughout the sector. The development of a food and nutrition cluster will create an image of the Finnish food and nutrition sector as a forerunner in healthy nutrition.

5 Monitoring the implementation of the strategy

Sitra has begun an evaluation project on all its programmes, including ERA. The evaluation is carried out by an external evaluation group and its aim is to find out what changes the programmes have achieved in their target areas and what economic and social impact the programmes have had and are likely to have. The external evaluation complements the monitoring activities within the programme and contributes to the achievement of the goals set for the programmes.

The impact evaluation and monitoring of the food and nutrition sector strategy is also carried out through Sitra's programme evaluation. Besides impact assessment, the evaluation will also gather reference data on the sector's international development. The ERA programme will produce the data. After the closing of the programme, the Finnish Food and Drink Industries' Federation and the Strategic Centre for Science, Technology and Innovation will assume responsibility for monitoring the sector's development.



6 Summary

The first project in Sitra's Food and Nutrition Programme, ERA, the Finnish food and nutrition sector strategy was created through extensive collaboration between the various actors in the sector. The strategy is based on the vision: *Finland – a competitive forerunner in healthy nutrition*.

Achieving the vision by 2015 as targeted requires strengthening and intensifying Finnish primary production, increasing the volume and value of the food industry, trade and service sectors, promoting public interest in Finnish food in the neighbouring regions and in Russia, and increasing the profile of Finnish *smart food* in the EU and in other large markets.

Smart food combines health-promoting nutrition innovation with the properties of Finnish basic food – it tastes good, is safe and the high quality production chain can be traced from the field to the dining table.

Business in the food and nutrition sector will be developed by strengthening Finnish basic food production, commercialising quality and traceability know-how, increasing the range of functional foods and becoming a global pacesetter in the smart food sector.

Attaining the vision requires more focused and efficient nutrition research, product development and know-how, working actively on relevant EU legislation, strengthening co-operation and creating an image of Finland as a forerunner in healthy nutrition. The suggested measures for achieving this are listed in Appendix 3 (p. 32).

Appendix 1

Strategy process participants

Aaltonen Jukka, Investment Director	Sitra
Aho Esko, President	Sitra
Ahvenainen Juha, Executive Director	VTT
Fogelholm Mikael, Director	UKK Institute
Halmesmäki Matti, CEO	Kesko Group
Harkki Anu, Programme Director, Chair of the Strategy Process	Sitra
Hirn Jorma, Ministerial Adviser	Ministry of Agriculture and Forestry
Hornborg Michael, President	the Central Union of Agricultural Producers and Forest Owners (MTK)
Juutinen Heikki, Director General	Finnish Food and Drink Industries' Federation
Kauppinen Heikki, Senior Adviser	Sitra
Keski-Kasari Timo, CEO	Juustoportti Ltd.
Klemets Rabbe, CEO	Raisio plc
Laine Osmo, Managing Director	Finnish Food Marketing Association
Lappalainen Matti, Managing Director	Vaasan & Vaasan Oy
Lindstedt Esko, Chairman of the Board	Agrifood Research Finland
Moilanen Juha, Managing Director	Moilas Oy
Moilanen Paavo, Senior Vice-President, Corporate Communications	Kesko Group
Paatelainen Seppo, CEO	Atria Group plc
Palokangas Simo, CEO	HK Ruokatalo Group Oyj
Pasanen Kari, Executive Vice President	Oy Sinebrychoff Ab
Piponius Kirsti, Vice-Chairman of the Board	Sodexho Oy
Puska Pekka, Director General	National Public Health Institute
Remes Antti, President	Tradeka Corporation
Rosi Liisa, Development Director	Sitra
Saarnivaara Veli-Pekka, Director General	Tekes
Salonaho Harry, CEO	Valio Ltd.
Sopanen Sari, Project Director	SOK Corporation
Stenholm Katharina, CEO	Polttimo Companies Ltd.
Vaittinen Jarmo, Permanent Secretary	Ministry of Agriculture and Forestry
Virtanen Erkki, Permanent Secretary	Ministry of Trade and Industry

In addition, the following people participated in planning the strategy process and editing the report:

Alfvig Sari, Programme Assistant	Sitra
Jarimo-Lehtinen Mirja, Project Manager	Sitra
Kurunmäki Seija, Communications Consultant	Kuule Oy
Mikola Markku, Project Manager	Sitra
Uusikylä Marjo, Editor	Info Plus

Appendix 2

Strategy process workshops and excursions

17 August 2005. Launch of the strategy process.

Workshops:

26–27 September 2005 and 17–18 January 2006, ASE Center, Helsinki

The workshops provided an opportunity for actors in the food and nutrition sector to network and discuss future challenges and opportunities from different perspectives. Important themes emerged in the workshops. Discussions lay the foundation for creating a vision, focus areas and action plans for research and development, regulations, co-operation and image. Some of the work was carried out in separate groups between the workshops.

Excursions:

25–28 October 2005 Italy

The themes of the Italian excursion were co-operation and brands. The delegation visited the European Food Safety Authority, EFSA, in Parma and got acquainted with the food cluster in the region. Finpro participated in organising the trip.

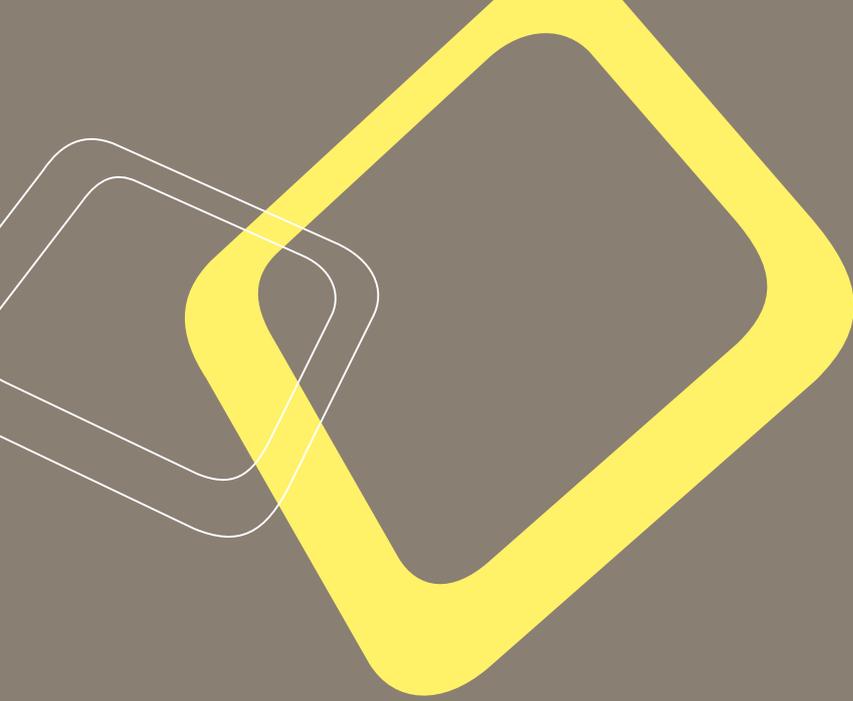
14–19 November 2005 USA/New York

In the USA, the delegation learned about FDA practices and various corporate concepts. Trends and consumer behaviour were subjects of separate seminars during the trip.

Appendix 3

Key measures in the food and nutrition sector strategy

Measure	Organisations responsible
1 Research, development and commercialisation	
1.1 Research and product development strategy	Sitra, research in the field and companies
1.2 Strategic Centre for Science, Technology and Innovation	The Academy of Finland, Tekes, the food industry
1.3 Know-how and mobility	The Academy of Finland, Tekes
1.4 Mentoring to support SMEs	Sitra
1.5 Co-operation and internationalisation through mini-clusters	Sitra, Finpro, Tekes
2 Work on legislation	
2.1 Adoption of health claims in the EU	Ministry of Trade and Industry, the Parliament, the Government, Finnish Food and Drink Industries' Federation
2.2 Temporary marketing permit for novel foods	Ministry of Trade and Industry, the Parliament, the Government
2.3 Advisory obligation of public authorities	Evira, Ministry of Agriculture and Forestry, Ministry of Trade and Industry
2.4 4 Lowering the VAT on food	Ministry of Finance, the Parliament, the Government
3 Collaboration in the food and nutrition sector	
3.1 Establishment of a food and nutrition cluster	Sitra, Finnish Food and Drink Industries' Federation
3.2 School Meals Project	Sitra, National Public Health Institute, the food industry
3.3 Working group to improve workplace meals	Sitra
3.4 Developing certificate of origin and quality	Ministry of Agriculture and Forestry, Finnish Food and Drink Industries' Federation, Sitra
3.5 Image creation	Sitra, Finnish Food and Drink Industries' Federation
4 Strategy monitoring	Sitra, Finnish Food and Drink Industries'



SITRA

Finnish National Fund for Research and Development

Itämerentori 2, P.O. Box 160, FI-00181 Helsinki, Finland
Telephone + 358 9 618 991, Telefax + 358 9 645 072
sitra@sitra.fi, www.sitra.fi