MIRHAMI 2030
“Future Images of Food Consumption”
Phase II: Global Summary and Analysis

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SECTION I: INTRODUCTION

EXECUTIVE SUMMARY

As we approach 2030, there are the following value creation and growth from biotechnology in agriculture opportunities to be seen:

- To meet economic, population growth, ageing and globalization challenges we have to apply biotechnology as safely and as widely as we can.
- $35 billion exists in new value creation from animal and plant biotechnology innovations.
- Agricultural biotechnology is needed to meet the worlds 21st Century food demands.

Four "macro drivers"

Four global trends/"macro drivers" place food security at risk in other parts of the world and raise food prices; they will drive the demand for new products of "pharmafoods" and Nutraceuticals:

- The industrialization of Asia. China will be the largest economic power in the world with 1.61.7 billion consumers.
- Aging of the baby boomers. There are 87 million in the North America and it's a generation driven by a desire for long life and good quality of life. They will live longer, they have more money and they will spend it. All countries in our study are experiencing the "prestige" requirements of food.
- Use of genetically altered plants as alternate manufacturing sources for industrial products will become pervasive. It is scientifically proven that high value proteins can be produced in plants. Genetically altered canola is being used to produce a peptide; the value creation of that farm area was $1.1 million opportunity.
- Sustainability of the environment limits livestock operation.

The question is how many people and animals can be put on any one piece of land? There are environmental and disease pressures; air and water pollution is one of the consequences.

On the verge of many changes

We are on the verge of economic and social change and convergence that will impact the development of the food industry and biotechnology. Health, nutrition, information, and genetics are all converging. The aging population is computer literate; they will take control of their wellness which results in major transformations in the medical community. We will end up with two classes of food: pharmafoods (supplements, regulated similarly as they are now) and "lifestyle oriented" designed or functional food products.

Impacts on food come from newly applied technologies that cannot be slowed or stopped. Genetic sequencing in animal and plant species, nutrition, information technology all are coming together. Some of Alvin Toffler's comments "Future Shock" on the "fourth wave" are materializing. The convergence of information technology and the revolution of biotechnology when they converge, there will be an explosion of economic and social change beyond anyone's imagination (within the next two decades) and this is where the opportunities are now and in the future.
We estimate that the competitive factors determining success in the food industry include convenience, privacy, price and product performance as well as the distribution, advertising, promotion and brand name recognition of the marketer.

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These and niche segmentation, major companies, and recommended points of entry are some of the relevant issues for Finnish food companies that are provided in the study conducted by Finpro in conjunction with the Finland Futures Research Centre (FFRC) in 2006.

Significant market potential exists for imported agricultural products to Japan, Russia and China.

1.1 PURPOSE & OBJECTIVES

Our main objective is:

- To provide the Mirhami companies with food for thought, ideas, and issues that break conventional thinking
- To provide Finpro $ personal insight including views and strategies
- To indicate potential driving forces
- To indicate trends
  - Megatrends and their effect to 2030
  - Weak signals that indicate probable change

- To indicate probable behavioral aspects across various segments
  - Consumer
  - Retailer
  - Industry
  - Key current issues in various cultures & countries
  - Futurists and industry experts

To take a broad visionary approach then focus to narrow approach – leading to the effect on the Finnish Food Industry – and the focus groups and workshops.

The purpose of this report is to uncover specific foresight indicators weak signals, trend and drivers relevance to the Finnish food industry. It examines these within the context of the report written by Finpro Trade Offices in America, Russia, Germany, China, India, and Japan. We believe that each segment described in this report offers an unusual outstanding opportunity for high market growth within the next twenty-three years, to 2030. The analysis is arranged to provide the reader with an overview of the market segments that are poised for high future growth.

Moreover, this report provides and overview of the various global market segments, including the latest information regarding exciting new products and industry trends. Foresight of the market and analysis of products will provide a basis for understanding the significance of past developments and future possibilities

The principal objectives of this report are to:

- Obtain an understanding of the chief high-growth opportunities within the context of trend identification with a view to that of relevance and importance to the Finnish Food Industry cluster of companies.
- Discover feasible market opportunities via an identification of high-growth applications in different markets, with a focus on the biggest and expanding markets for the Finnish food industry. This portion will be conducted in the focus groups and workshops to be held in Fall 2007 and in 2008.

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1.2 SCOPE & METHODOLOGY

This report is formatted from the current situation (report analysis) to the future (assumptions and recommendations on key trends, mega trend, and how the report analysis fits into the scope of super trends).

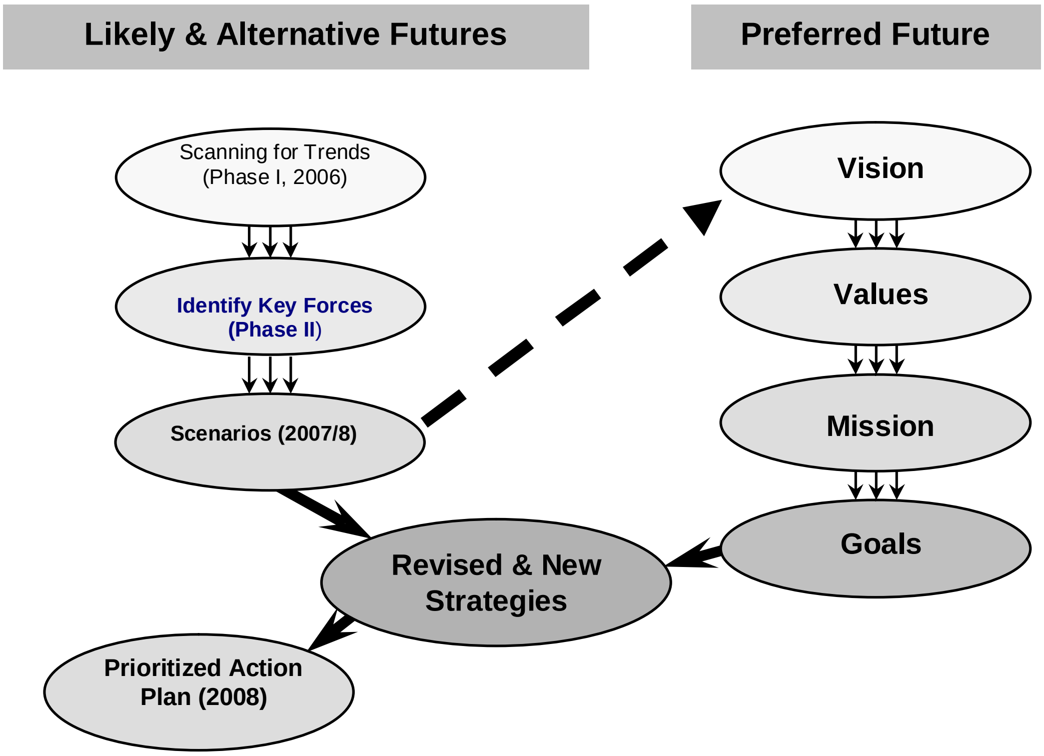
- Section I the Executive Summary provides a synopsis of our ideas of relevance to the Mirhami companies. This section also contains the purpose & objectives, and the scope & methodologies used in the 2006 research.
- Section II the global report summary and analysis is a compilation of the research from the 2006 reports supplemented by additional research in August/September 2007. This section contains economic and industry insight.
- Section III provides the foresight including weak signals and trends identified which lead to our conclusions of the driving forces. This is supplemented by the six supertrends to further our visions of the year 2030.
- Section IV is the assumptions and conclusions section which is taken from the global studies as well as our ideas.

Meetings between FFRC and Finpro were conducted regularly throughout the year in 2006 in person in Helsinki and by telephone with FFRC for the Phase I country reports. In 2006 two separate teleconference groups were conducted: (1) led by Jaana Tapanainen and including China, Germany, India, and Japan; and (2) led by Sharon Vegh including America and Russia to finalize Phase I. The reports were sent to FFRC in January 2007, with the exception of the Germany report which was received in July 2007.

In early 2007, China (Maarit Ahola) joined the 2nd group. In spring 2007, an interim meeting was held in Turku to discuss summarizing the global reports. The Mirhami program was reassigned to the restructured Life Science Team led by Meria Heikelä in Summer 2007. The outcome is this global summary managed by Maarit Ahola and conducted together with Sharon Vegh. Maarit Ahola now sits on the Steering Group. The project was conduced in June to September 2007. The result is the content of this report, Phase II.

Due to time restrictions, the complexity of the field, and continuous research and commercialization in the countries studied, and in Finland, intensive comparative analysis is outstanding and should be conducted.

Graphically, the scope of this work, Phase II, is depicted in the diagram below:



Finpro has scanned for trends in the 2006 reports (Phase I), and this summary and analysis is extracting those tends to identify the key forces. The scenarios are conducted by FFRC in the focus groups and workshops as are the subsequent "preferred futures" conducted, together with Finpro in the workshops to be held in 2007/2008. The ultimate outcome is the goals which lead to revised and new strategies and subsequently a prioritized action plan.

The methodologies used in 2006 by country are briefly described below.

1.2.1 The methodology used in America

The ultimate objective is to obtain "fresh and renewed" ideas for the Finnish Food Industry Workshop participants at the Finland Futures Research Center through interviews. As such, geography is not of primary importance, what is critical is to obtain a representative sample from each of the following areas:

- Industry
- Academia
- Government
- Futurist thinkers
- Consumers viewpoint

The order of importance is assumed by Finpro America and confirmed by FFRC as indicated above. Each Finpro participant was instructed to conduct the interviews within the relevant cultural and geographic scope. Finpro America decided as this is the "first test" interview to conduct the interview in the proposed format by FFRC and from that determines if any modifications were required.

An initial long list of prospective interview candidates was submitted to FFRC on September 19, 2006. The final list of those contacted and interviewed numbers 31.

The prospective candidates were obtained through secondary research. The Primary (one-on-one) discussion). As of January 22, 2007; 9 were interviewed and the list was expanded to 32 contacts. All 32 were contacted, some refused to interview, others would not respond, two requested confidentiality, and finally, 11 agreed to interview. Of those who agreed, two could not subsequently be reached after several attempts. The final result is 9 interviews.

The second component of the assignment in 2006 was a literature search. We were to secure and deposit relevant literature in our database and use Web CT as the platform. However, the Finpro project manager in 2006 was concerned about issues of privacy and we did not more forward. Thus an appendix to documentation was attached to the final report.

The complete interview list and summaries are provided in the final report revised and completed on January 30, 2007. The work was conducted by Sharon Végh and covered the geographic scope of Canada and the United States of America (USA),

1.2.2 The methodology used in Russia

Observations were made to identify the consumer's habits in nutrition, behavior of customers and the changes induced by different recent events, including possible ones in future.

The main sources are:

- Information from different media, including newspapers, magazines and TV shows
- Topics covered at the industry events, such as Food exhibitions, seminars, etc.
- Observation of people behavior and different phenomena reflections in "common sense" understanding of the tendencies.

Studies made by companies to make some forecasts of the Food market behavior and development in next years.

The "Driving Forces in an Economy of Transition" was the main focus of the Russia report. This was discussed and agreed to by FFRC as Russia was in a different economic position as compared to the other countries studied. Interviews were not conducted with experts as the "food value chain" is at the initial stages of fast growth.

During last 15 years Russia passes through a great changes in it's political, economical and cultural life initiated by transition from old Soviet type economy to the modern economy based on the fundamental changes in all aspects of the life. The most significant fact is the great decrease of the manufacturing started in 1991 and lasted till 2000, when the growth started.

At this moment Russia in general approaches the starting level of economic reforms in terms of general production volume. Such a great decrease in the first period of economic reforms found it's reflection in the consumption of food products in general. The consumption was shifted to the most inexpensive and available products, such as bread, potatoes, different grain products, etc.

"Kacchalov and partners", the company who studies the relations between income and food products expenses and it's development in time provided data on income development.

1.2.3 The methodology used in Germany

Finpro Germany report was carried out by three persons. An expert list of 7 possible interview partners was prepared. The list included food & agriculture experts, politicians, future research scientist, journalists and nutritionist. Interview candidates received an invitation for the interview but only one agreed to participate. The aim was to organize at least one interview with each category.

The team observed food consumption habits and nutrition related phenomena s of: different age groups (children, adults, and elderly), subgroups such as immigrants (German has about 4 Mio. immigrants from Turkey and the Middle East and they have brought their eating habits and food consumption and has an impact on the food industry in Germany), aging process of the population (how will the aging process influence the food habits and consumption), social aspect (family life styles and singles lifestyles, doe the growing single household influence the food industry) .

The information was retrieved from newspapers (Focus, Financial times Germany, Süddeutsche Zeitung), food related magazines & scientific reports (Lebensmittelzeitung, ZMP, Lebensmittel Spezial), and market studies (Euromonitor).

Fair visits & Seminar outcomes
Internal workshop and brainstorming for example during the RIT meeting (Germany, Poland, Ukraine).

1.2.4 The methodology used in China & Hong Kong

The persons involved with the Mirhami China study were placed in Shanghai, Beijing, Guangzhou and Hong Kong. The study covers 5 interviews of academic research, food industry, nutrition, medical treatment, advertising and marketing experts, and consumers in Guangzhou and Hong Kong. We had difficulties to find future research specialists. Political sciences and macro economists are studying future issues but we couldn t find any consumer, nutrition or food research specialist who would have a future perspective in his or her research. The Chinese time line thinking is more towards past and present, not towards future.

Group discussion about changes in participants 'food habits from the childhood to the present, trends, lifestyle, children s nutrition were carried out. Participants were 5 members of Finpro s China Life Science Team from Guangzhou, Beijing, Shanghai and Hong Kong the facilitator being Finnish. (China Life Sciences Team 18.10.06, Nanhai, Guangzhou).

We used also observation technique: Maarit Ahola visited to three Hong Kong homes and cross-cultural comparison with Finnish kitchen (Kowloon City and New Territories: Fanling, Shatin).

Questionnaire about food habits and daily eating were sent to consumers in Beijing and Guangzhou (colleagues and their friends and relatives).

Media follow-up: Newspaper and magazine clippings. We have collected newspaper clippings already within a longer than this study period (South China Morning Post and other newspapers)

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Market reports (Euromonitor, our previous works on consumer behavior, retail trade, food safety issues etc.) were also used.

Seminar and fair outcomes, food advertising, promotion

1.2.5 The methodology used in India

Expert Interviews
Potential interviewees were collected in September. Based on earlier contacts, our existing network and desktop work we compiled a long list of interviewees. Out of that list the most interesting candidates were contacted and their initial interest in contributing to the research asked. A list of candidates – with those willing to participate at the beginning of the list – was submitted to the Finland Futures Research Center on September 19, 2006.

In October Delhi-based candidates were contacted for a test-interview. Due to the peak holiday season the first test-interview could be scheduled only for 30th October. The other interviews took place during November and December 2006 and in January 2007.

Observation of Phenomena
The other part of the data collection until included Finpro India's observations on the current trends. Articles from newspapers and magazines have been collected, statistics studied and research papers read. In addition, we have been observing food advertising along with eating and shopping habits of the people. Discussions on these issues have been carried out. Observations have mainly been restricted to metropolitan cities, especially to New Delhi and to some extent Chennai and Mumbai.

Some articles and magazines collected during the observation will be sent by courier.

1.2.6 The methodology used in Japan

Interview candidates were selected from food related government, governmental organizations, industry organizations, and opinion leaders. Japan took the "generalized" versus specific approach as the interviews proceeded. The candidate search was through collecting information from food related books, magazines, and publishes theses. Many of the interviewees approached, although qualified in the literature search, referred Japan to other experts. The final outcome was three extensive interviews with government agencies conducted in person.

Mr. Tatsuji Koizumi, Policy Research Institute-Ministry of Agriculture, Forestry and Fisheries-Japan.
Mr. Takao Sikine-Chief Researcher Management Director-Food Marketing Research & Information Center.
Mr. Fujino and Mr. Maekawa - Agriculture & Livestock Industries Corporation.
The report indicates several other contacts that were unable to answer.

The study was supplemented by extensive and interesting phenomena related to food which is summarized in the report. These phenomena include Shokuiku-Food Education and the "Basic Law on Shokuiku".

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SECTION II: GLOBAL REPORT SUMMARY & ANALYSIS

In this section we describe:

- A description of the countries
- Consumerism: global versus local
- Other
- Changes in lifestyle
- Food habits and patterns
- Retailing and industry
- Futurists and food industry experts 'views
- Current key issues in various countries / cultures

2.1 ECONOMY & DEMOGRAPHICS

- The slides in the PowerPoint presentation give a basic profile of the countries studied:
- Population, ethnic groups
- Population growth figures, expected life time years
- GDP per capital, GDP growth %
- Go to www.finpro.fi/maakansiot. Country reports give basic information about countries of concern.

The countries are studied and summarized in order of geography: (1) America (Canada & USA) –often combined as cultures and economic prosperity is quite similar; (2) Russia; (3) Germany; and (4) Asia including in alphabetical order: China, India, and Japan. Most of the content of this section was summarized, and when necessary, analyzed as well as supplemented by further research for consistency in reporting. We first provide information on global economies for comparatives.

Economy of Studied Countries
(and select Scandinavian Countries for comparative purposes)

Rank	Country	GDP (millions of USD)
-	Gross world product	48,144,466
-	European Union	14,527,140
1	United States	13,244,550
2	Japan	4,367,459
3	Germany	2,897,032
4	People's Republic of China	2,630,113 [2]
8	Canada	1,269,096
11	Russia	979,048
13	India	886,867
19	Sweden	385,293 [1]
22	Republic of China (Taiwan)	355,708
33	Finland	210,837 [1]
36	Hong Kong, PRC	189,538

Sources:
International Monetary Fund, World Economic Outlook Database, April 2007: Countries, World & EU. Data is from the year 2006.

Notes:
Note 1: Estimated by IMF staff
Note 2: Figure excludes the special administrative regions of Hong Kong and Macau. The World Bank lists Macau as #94 with GDP US$14,285 Millions.

Gross world product (GWP) is the total gross national product of all the countries in the world. This also equals the total gross domestic product.

A region's gross domestic product, or GDP, is one of the ways for measuring the size of its economy. The GDP of a country is defined as the market value of all final goods and services produced within a country in a given period of time. It is also considered the sum of value added at every stage of production of all final goods and services produced within a country in a given period of time. Until the 1980s the term GNP or gross *national* product was used in the United States. The most common approach to measuring and understanding GDP is the expenditure method:

$$GDP = consumption + investment + (government\ spending) + (exports - imports)$$

The World's Largest Countries

Rank	Country / Territory	Area (km^2)	Notes
—	*World*	148,939,063	Total land coverage
1	Russia	17,098,242	Prior to its dissolution in 1991, the Soviet Union had an area of 22,402,200 km^2.
2	Canada	9,970,610	Total surface area is 9,984,670 km^2
3,4 *(disputed)*	People's Republic of China (PRC)	9,598,086[1] 9,640,821[2]	Total of separate UN figures for mainland China and the Special Administrative Regions of Hong Kong (1,099 km^2) and Macau (26 km^2). Both values exclude the disputed territories of Taiwan, Penghu, Kinmen, and Matsu which the Republic of China (Taiwan) has continued to govern after the PRC replaced it on the mainland. [1] Excludes all disputed territories. [2] Includes PRC-administered area (Aksai Chin and Trans-Karakoram Tract, both territories claimed by India), Taiwan is not included.
	United States of America	9,629,091	Includes the 50 states and District of Columbia, and Indian Reservations.

A great power is a nation or state that has the ability to exert its influence on a global scale. Great powers characteristically possess economic, military, diplomatic, and cultural strength. Nations often consider the opinions of great powers before taking actions of their own. After the dissolution of the USSR, the newly formed Russian Federation emerged on the level of a Great power, leaving the United States as the sole superpower.

The Group of Eight (G8) is an international forum for the governments of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States. Together, these countries represent about 65% of the world economy. The group's activities include year-round conferences and policy research, culminating with an annual summit meeting attended by the heads of government of the member states. The European Commission is also represented at the meetings.

Finland has a population of 5.3 million, spread over an area of 338,145 square kilometres (130,559 square miles). The majority of the population is concentrated in the southern parts of the country. Finland is the sixth largest country in Europe in terms of area, with a low population density of 15.5 persons per square kilometre, making it the most sparsely populated country in the European Union. Finland ranks #33 in the world in terms of GDP at over US $210 BILLION.

2.1.1 America: Canada & USA

The United States of America is a federal constitutional republic comprising fifty states, one federal district, and fourteen territories. At 3.7 million square miles (9.6 million km^2) and with over 300 million people, the United States is the third or fourth largest country by total area, and third largest by land area and population. The United States is one of the world's most ethnically diverse nations, the product of large-scale immigration from many countries. Its national economy is the largest in the world, with a nominal 2006 gross domestic product (GDP) of over US $ 13.2 TRILLION.

Canada is a country occupying most of northern North America, and is the world's second largest country by total area. Extending from the Atlantic Ocean in the east to the Pacific Ocean in the west and northward into the Arctic Ocean, Canada shares land borders with the United States to the south and northwest. A federation now comprising ten provinces and three territories, Canada is a parliamentary democracy and a constitutional monarchy with Queen Elizabeth II as its head of state. Technologically advanced and industrialized, Canada maintains a diversified economy that is heavily reliant upon its abundant natural resources and upon trade. Canada is one of the world's wealthiest nations with a high per capita income, a member of the Organisation for Economic Co-operation and Development (OECD) and Group of Eight (G8). Canada has the world's second largest reserves of oil behind Saudi Arabia. Canada is one of the world's most important suppliers of agricultural products, with the Canadian Prairies one of the most important suppliers of wheat, canola and other grains. Canada has the highest per capita immigration rate in the world. Canada ranks 8th in the world in GDP at over US $ 1.2 TRILLION.

2.1.2 Russia

Russia, also the Russian Federation is a transcontinental country extending over much of northern Eurasia (Asia and Europe). With an area of 17,075,400 km², Russia is by far the largest country in the world, covering almost twice the total area of the next-largest country, Canada, and has enormous mineral and energy resources. Russia has the world's ninth-largest population at 142,499,000. Formerly the Russian Soviet Federative Socialist Republic (RSFSR), a republic of the Union of Soviet Socialist Republics (USSR), Russia became the Russian Federation following the dissolution of the Soviet Union in December 1991. After the Soviet era, the area, population, and industrial production of the Soviet Union (then one of the world's two Cold War superpowers, the other superpower being the United States) that were located in Russia passed on to the Russian Federation. After the breakup of the Soviet Union, the newly-independent Russian Federation emerged as a great power and is also considered to be an energy superpower. Russia ranks 11th in the world with GDP at over US $ 979 BILLION.

2.1.3 Germany

Germany, officially the Federal Republic of Germany, is a country in West-central Europe. It is bordered on the north by the North Sea, Denmark, and the Baltic Sea; on the east by Poland and the Czech Republic; on the south by Austria and Switzerland; and on the west by France, Luxembourg, Belgium, and the Netherlands. Germany is a parliamentary federal republic of sixteen states (*Bundesländer*). The capital city and seat of government is Berlin. With over 82 million people it has the largest population among the EU member states. The Federal Republic of Germany is a modern great power. Germany is the world's third largest economy by nominal GDP, the world's largest exporter of goods, and the world's second largest importer of goods. The United States ranks first, China 3rd, Japan 6th, Canada 9th, India 16th, Russia 17th, and Finland 32nd. Germany ranks 3rd in the world with GDP over $ US 2.8 TRILLION.

2.1.4 China & Hong Kong

The People's Republic of China, commonly known as China, is the largest and fastest developing country (the average 8-10 % annual growth in GNP) in East Asia and among the

largest countries in the world. With over 1.3 billion people, is the most populous country in the world. Its capital is Beijing. The area is 9,598,086 or 9,640,821 km². 500 million of 1300 million Chinese live in cities, and government wants that figure to rise to 800 million by 2020. The one-child-policy from 1977 has had far-reaching effects on China's population structure: the growth rate of total population is declining, but the population still increases year on year, because of the large population base.
The Eastern coastline from the Northern Beijing area to Shanghai region and down to the Southern Guangdong province including Hong Kong and Macao are wealthy, densely populated, industrialized areas with the high economic growth rate.

Hong Kong is very different from Mainland China. Its 7 million's population is packed on 1000 m2 area. 20 million tourists visit the country annually. The ever-moving Hong Kong is one of leading trendsetters with Asian spices in the world. Hong Kong people adopt very quickly new styles and trends especially within food, clothing and electronic devices areas. Hong Kong is the biggest foreign investor in every region in China. When China is the manufacturing factory Hong Kong is the business integrator (investments, logistics, managerial skills, trading, financing). China's GDP is over US $2.6 TRILLION.

2.1.5 India

India, officially the Republic of India, is a sovereign country in South Asia. It is the seventh-largest country by geographical area, the second most populous country, and the most populous democracy in the world. India is the world's 4th largest economy in terms of purchasing power and the 12th largest economy at market exchange rates. India has made rapid economic progress in the last decade. Although the country's standard of living is projected to rise sharply in the next half-century, it currently battles high levels of poverty, illiteracy, malnutrition, and environmental degradation. A pluralistic, multi-lingual, and multi-ethnic society, India is also home to a diversity of wildlife in a variety of protected habitats. With an estimated population of 1.12 billion, India is the world's second most populous country and is expected to be the most populous by 2030. India's GDP is over US $ 886 BILLION.

2.1.6 Japan

Japan is an island country in East Asia. Located in the Pacific Ocean, it lies to the east of China, Korea and Russia, stretching from the Sea of Okhotsk in the north to the East China Sea in the south. The characters that make up Japan's name mean "sun-origin", which is why Japan is sometimes identified as the "Land of the Rising Sun". Japan comprises over three thousand islands, the largest of which are Honshū, Hokkaidō, Kyūshū and Shikoku, together accounting for 97% of land area. Most of the islands are mountainous, many volcanic; for example, Japan's highest peak, Mount Fuji, is a volcano. Japan has the world's tenth largest population, with about 128 million people. The Greater Tokyo Area, which includes the capital city of Tokyo and several surrounding prefectures, is the largest metropolitan area in the world, with over 30 million residents. Japan ranks 2nd in the world, after the USA, in GDP of over US $ 4.3 TRILLION.

2.1.7 Production Comparatives – Agriculture

The OECD Food, Agriculture and Fisheries (within the Department for Trade and Agriculture) produce a compilation of "Producer and Consumer Support Estimates". The table below is excerpted from the latest data (2004).

	Canada	China	EU (all) incl. Finland & Germany	Japan	Russia	US
	CAD $mn	LC mn	EUR mn	¥ bn	Rb mn	US $ mn
Production: Total Value at farm gate	31,450	2,440,890	250,933	8,904	930,863	225,437
Consumption: Total value at farm gate	21,548	2,698,029	249,329	13,107.4	1,163,317	206,594
Variance (production less consumption)	+ 9,902	- 257,139	+ 1,604	- 4,203.4	- 232,454	+ 18,843

Data not available for India.
Data for the European Union is combined, not separated.
2004 data except China and Russia (2003 data).

By looking only at this table, in 2003/2004 those countries with and excess of agricultural production are the USA, Canada, and Europe. Those countries with an agricultural deficit are China, Japan, and Russia. This conforms to the comments supplied in the 2006 global reports analyzed by Finpro.

2.1.8 Import structures

Simple ratios showing the shares of imports as a percent of total final demand, and intermediate consumption in particular, provide an indication of the degree of integration/interdependencies of economies in the global supply chain, although some care is needed in interpretation as flows of intermediate consumption of domestically produced goods are measured gross and because comparisons are not made at constant prices. Nevertheless the tables provide a strong indication that these interdependencies are growing, indeed since the 1990s these ratios have increased in 29 out of 31 countries, with, not surprisingly, a negative correlation between the economic size of a country and these ratios.

Country	Intermediate		Final Demand	
	mid90s	early00s	mid90s	early00s
Canada	24.2%	26.4%	18.6%	21.0%
* China	7.9%	9.6%	6.4%	7.7%
Finland	20.0%	23.9%	15.7%	17.3%
Germany	15.3%	20.0%	11.1%	14.8%
Japan	6.4%	7.8%	4.7%	5.8%
Unites States	6.7%	7.6%	5.8%	6.7%
* Russia	12.6%	14.3%	11.7%	13.5%

* Non OECD Member, source: OECD I-O tables.

2.2. CONSUMERISM: GLOBAL OR LOCAL?

Foreign impact/globalization:

- Large population centers attract global/foreign commercial players, especially supermarket and restaurant chains like McDonalds, Pizza Hut, Starbucks, Subway, etc. who are present in China, India but cover not the whole country. In Germany, Hong Kong, Americas, Japan the penetration rate of these restaurant chains is nationwide.
- Super market chains haven t integrated worldwide in a similar way to the local markets like restaurant chains are.
- National fast food restaurant chains have been established, the idea is same but food is more localized. The business concept is cloned but simultaneously localized. Big global have learned to localize their food range (rice cakes in China, smaller portions).
- Expansion of cafe culture in China, Japan and Russia interesting.
- Ethnic restaurants and international dishes have found their way to all these countries:
- In today s Canada, USA, Germany, Russia, Japan and in urban India and China all kinds of cuisines are available. You can get Chinese, Japanese, Continental, Lebanese meals.
    - In China the foreign restaurant trend has started from big cities like Shanghai, Suzhou (Kotipizza), Beijing, Guangzhou.
    - Hong Kong is a Mecca of Western, Chinese and Asian kitchens. Japanese, Indian and Thai restaurants are extremely numerous and popular.
    - Germans are used to eat exotic food: Italian, Greek, Turkish, Yugoslavian and Chinese food is popular because of emigrants. In last years Japanese, Arabic, Indian kitchen have accessed German cities.
- Cross kitchen popular: several different international dishes on menu.
-

International food trade:

- Ingredients trade is global: additives, flavoring agents
- Fruits and vegetables
- Frozen meat
- Fish
- Rice, soy beans, plant oils
- Ethnic food products go strongly international (Chinese, Japanese, Thai, Italian, quasi Indian)
- Gourmet food (e.g. olives, cheeses, sweets, chocolate, yoghurt; French, Italian, Japanese)

Packed food:

- In highly developed/developing countries international foods and brands are numerous on supermarket shelves (China, Russia, Hong Kong)
- Trading circles & politics, trading heritage are influencers
- Hong Kong: Chinese, Asian, Canadian, British and Australian foods and materials available

Global and international food brands:

- Foreign food ingredients and products enter first restaurant kitchens and kiosks (e.g. 7-Eleven in Hong Kong), afterwards home kitchens.

- Concept brands (coffee and fast food chains) drink and confectionery brands first in the new market.
- Continental (Asian, American, and European) brands like Japanese Lotte sweets and chewing gums are well known in the most of Asian countries.
- Nationwide brands considered ethnic brands when they cross borders.
- Global brand, local manufacturing: many beers (Carlsberg), drinks (waters, beverages), fresh produce (yoghurt).
- Local drink brands go international though ethnic restaurants/bars (Chinese TsingTao, Thai beers, Mexican beers).
- Big brands will get always imitators who transfer the taste and brand closer the local taste.

Organized retail trade:

- Retailers go international. Big players like US Wall-Mart or French Carrefour or German Metro look for growth markets (China, Russia). In well established countries they haven't been able to access (Hong Kong, Germany).
- India and rural areas of China the international supermarket chains haven't yet penetrated into. Price level prevents this in the first phase. Germany and Japan has been greatly saved from expansion of foreign chains, partly because they are early adopters.
- International retail chains import part of their food products from their suppliers if the local legislation allows. Fresh food is bought from local suppliers. Chain brands are used partly to guarantee the quality image of products.
- Organized retail trade is growing in all developing markets like Russia, China and India. In all these countries there are local and international food retailers. The Indian retail market can be entered only though strategic alliances with local players and on wholesale sector (German Metro).
- Growing organized retail trade and media are important drivers for internationalizing eating habits.

Impact of media:

- Advertisement
- Food magazines, TV's food programs, internet are present in all countries
- Marketing of food, food in media: advertising, promotion, food and restaurant editorials in newspapers and magazines (HK).

Multicultural attitude towards food:

- Hong Kong people have absorbed habits and festivals from surrounding countries: Christmas, Buddha's Day, and Easter.
- Canada is another good example of multicultural approach.
- In Germany the ethnic groups like Turkish, Greek and Serbs.

Local

- Even though international foods, brands, retailers, and restaurant chains are making their way to the cities of Asia, local cuisine is important and dominates, also in the future. Chinese enjoy different food ingredients, cultures, tastes, influence around China.
- Important is to notice that at home people mostly cook local or localized international dishes using local ingredients and local taste.

- Local foods = fresh food: meat, poultry; seasonal vegetables and fruits. Local food might be not produced locally like rice in Asia (e.g. China and Japan import rice).
- In geographically wide countries like China and India food eaten might be very local/provincial because manufacturers are not able to cover the whole country due to huge demand and/or poor warehousing and transportation technology.
- In Germany where the person is surrounded by many international impulses at home, in supermarkets, restaurants and from media, local, fresh and organic food is one of the trends. Partly this is trend against using of high technology in food processing, e.g. functional foods and attempt to avoid long distances between producer and consumer. Sustainable local production is valued.
- Every state of India or province of China has its traditional diet and local foods, which are rich in taste and in nutritive value. Citizens are able to control better their diet when they use material and foods they know. Losing the control and lacking the knowledge to compile their daily menu using new ingredients, obesity and diabetes are the outcome.

2.2.1 America: Canada & USA

America (Canada & USA), as relatively new nations, are composed of multicultures. It is quite difficult to depict modernity versus tradition as the various cultures have various traditions. The holidays, the most significant to American borns are: Easter, Thanksgiving, Christmas, and New Year's. Traditionally, these occasions are spent with family and the main food mainstay is bird (turkey), or pork (ham), with a variety of side servings of vegetables and potatoes, and including appetizers.

In America we can assume that the consumers follow global habits of consumption due to ethnic diversity.

While the majority of our country reports indicate a move away from family meals, the general trend in America seems to be a move back towards the family setting at mealtime. Individual eating has been the norm with restaurants, both luxury and fast food, as a typical eating place for a variety of functions. Television plays a prominent role in this society and it is clearly evident that a major proliferation of entertain at home, home decoration, home renovation, cooking shows, etc. is now the norm.

2.2.2 Russia

The most significant aspect of consumerism in Russia is the transformation of the economy. It is currently in a transformation period of growth and change.

2.2.3 Germany

In Germany, where the person is surrounded by many international impulses at home, in supermarkets, restaurants and from media, local, fresh and organic food is one of the trends. One strong trend in recent years has been the rediscovery of regional cuisine under the guise of trendy eating. Partly this is trend against using of high technology in food processing, e.g. functional foods and attempt to avoid long distances between producer and consumer. Sustainable local production is valued.

However the other strong trend is that "International" food is becoming more popular every year. There are Asian, Turkish and Arab food stores and supermarkets in every German town. There is a demand for "exotic" cooking and eating out, as Germany moves away from its traditional diet of fat-rich meat and sausage. German palates have been tempted away from their traditional "schnitzel and roast" culture since the 1950s, when the first wave of Gastarbeiter (Turkish, ex-Yugoslavian countries, Italian) has brought spaghetti and pizzas to the country.

2.2.4 China & Hong Kong

Large population centers of China and Hong Kong have attracted foreign commercial players, especially supermarket (Wall-Mart) and restaurant chains like McDonalds, Pizza Hut, Starbucks, Subway. They have first established in big cities: Beijing, Shanghai etc. and then moving to provincial capitals, but cover not the whole country. In different parts of Hong Kong these global restaurant chains are already numerous. National fast food restaurant chains have been established, the idea is same but food is localized with some international features (Fairwood in Hong Kong). The business concept is cloned but simultaneously localized. Big global have learned to localize their food range (MacDonald's combine rice cakes with their meals, smaller portion sizes).

Hong Kong is different from other parts of China. Many Hong Kong people have multicultural attitude towards food: they have absorbed habits and festivals from surrounding countries: Christmas, Buddha's Day, Easter in addition to their own and Chinese festivals.
Foreign food ingredients and products enter first the restaurant kitchens and kiosks (e.g. sushi restaurants, gourmet food stores, 7-Eleven in Hong Kong), afterwards home kitchens. Eating out is dominant in Hong Kong but some people regard trendy to cook at home. In HK there are numerous TV programs preaching the style of cooking yourself. Cooking and be innovative on cuisine are part of the city's lifestyle.

Concept brands (coffee and fast food chains), drink and confectionery brands have entered China (Starbcuks) and the concepts are copied. International (Asian, American, European) brands like Japanese Lotte sweets and chewing gums are well known in the most of Asian countries.
Food is marketed in media: advertising, promotions, food and restaurant editorials in newspapers and magazine.

2.2.5 India

Today's kids are used to international food. However, all the Indians love their own cuisine. Consumption of international food will be very common in 2030, but the dishes will certainly have Indian "spark". This will lead to fusion kitchen: e.g. pasta with Indian spices. Exotic foreign dishes will be used to acquire status and stand out from the crowd.

Despite tremendous changes and numerous opportunities it has to be stated that in 2030 there will still be millions of Indians who will be eating the same dishes in the same way as today – and 50 years ago.

In urban areas globalization has played an important role in the transformation of food consumption patterns of Indian households. Foreign restaurant chains, like Mc Donalds, Pizza

Hut, Subway and Domino's, are nowadays common in cities. For instance in Delhi new foreign outlets are being opened almost daily.

Starbuck's and Burger King just recently announced its entry into Indian market. Foreign food brands are also available in many stores, and consumers have access to varieties of food that were not previously available to them. You can find products like Greek olives, Mexican salsa, French cheese, Swiss chocolate etc. in several shops located in metropolitan cities.

India has a large repository of traditional foods which have a health benefit – huge opportunity to commercializing of traditional health foods into ethnic and functional drinks, herb products. It is difficult to design for Indian and Chinese taste: understanding the palate across regions and role played by texture, rheology, mouth-feel and other characteristics to make appeal the people. India is a treasure house of medicinal aromatic plant spices:

- 9500 spices of medicinal and aromatic plants classified and documented.
- More than 50 types of spices with annual production of 3.02 million tons, India is the largest producer, consumer and exporter of spices.
- Major spices produce are black pepper, cardamom (small & large), ginger, garlic, turmeric, chili, etc.

Large Indian cities have attracted global commercial players, especially restaurant chains but cover not the whole country. Metro is the only foreign wholesaler in India. Fast expansion of electronic and printed media in India.

Rural India
More than 50% of Indians still live in remote locations in the countryside without newspaper-coverage or other media-connectivity. Their lifestyles haven't changed that much, and eating habits are based on seasonal availability of crops. Also advertising – even if available – does not often reach the hundreds of millions of illiterate people.

2.2.6 Japan

Japan is facing a transformation from traditional to modern (Western style) mannerisms of eating behaviors. This is influenced significantly by the fact that children often eat their meals alone, due to two family incomes and complicated further by the Japanese custom of children going to a second educational institution in the evening and on weekends.

Having said this, the government takes a prominent role in encouraging more health eating styles and behaviors.

2.3 CONSUMERISM: CHANGES IN LIFESTYLE

PEST (Political, economic, scientific or social, and technological) transformations are a "mega-trend", they affect all the countries studied in the Mirhami program: Some to a lesser degree, some to a more significant degree (such as the developing economies of China, India, and Russia).

All are experiencing lifestyle changes as globalization proliferates. The developed economies are experiencing the proliferation of "individual" eating patterns including "fast food" and convenience food consumption.

2.3.1 America: Canada & USA

As the popularity of flavors shifts, sectors that stays on top of these trends and position their products as thoroughly compatible with these new culinary discretions will thrive. From citrus, berries and raisins to table grapes, tomatoes and salad greens, opportunities about to marry existing crop portfolios with world flavors and thereby hold the attention of America's menu developers and innovators.

The impact of new flavors from around the world and the movement to more healthful menu fare is two converging foodservice trends shaping the US food system.

With the increasing influence of chefs in foodservice chains and other volume operations, suppliers are looked to as a source for product and help with tested menu ideas. Those who understand how food fits into flavor and nutrition trends and are willing to help the chains create products and menus to differentiate enjoy a competitive advantage.

New Latin, Mediterranean and Asian preferences are sweeping America.

Consumer demand for bold flavors is found in the growth of ethnic grocery departments, ethnic supermarkets and specialized farmers markets.

Sophistication about these flavors also is growing. From fine dining to casual chains, menus are reaching out to specific geographical regions within larger arenas of flavor. Countries that previously were overlooked are enjoying interest in their cuisines.

Interest in Japan is broadening among American consumers and chefs as sushi becomes a supermarket staple and the New York restaurant world embraces Japan as the next France. Thai curries to Vietnamese to modern Indian cooking, much of the excitement in the American culinary world is moving to South and Southeast Asia.

The indicators of the strength of this trend are sales of cookbooks and food network ratings: they are sky rocketing, riding the crest of the flavor wave. The acceptance and movement of these ethnic flavors will be shaped by wherever they play out. Expect the most action initially in fine dining, the fast-casual chain sector and noncommercial foodservice. The college and university foodservice market has become an early flavor tend adopter market to watch. From Stanford in the West to the University of Massachusetts at Amherst in the East, college students are feasting on an unprecedented buffet of global flavors.

As innovation in flavor surges, nutrition trends are proving to be just as important. From obesity concerns to warnings about.

One thing is certain -- retailer strategy will be more fact- and consumer data-driven. The closer suppliers are to the end-consumer, the more market intelligence they have on their products, the more value they bring to the party. Internet technology now allows us to converse regularly with our best consumers – those who use or care most about our products or category. According to repeated citations in industry reports, about one third of consumers in any given product line purchase the majority of products. They are potentially a company's most vocal product advocates – if they are empowered by the company to be. The Internet provided the opportunity to foster relationships with hundreds of thousands of these customers the way grocers did years ago when they knew individual customers by name.

The idea of creating conversations with your best consumers instead of simply relying on one-way advertising and promotion rings well with today's skeptical consumer. Trust in anything and everything is shaky at best.

Numerous opinion research studies suggest that the most important driver of consumer trust is a history of delivering top-quality products and services to meet consumer expectations. But it's an increasingly uphill battle. One study released this year from New York-based research firm Brand Keys shows consumer expectations rising two times faster than the average brand's ability to keep up.

As consumers seek brands they can trust, they want to know more about the company or companies behind the brand -- who they are and for what they stand.

Evidence continues to grow demonstrating the appeal of an emotional connection between the consumer and the farmer growing his or her food. It's an answer to the demand by some consumer segments for authenticity -- who is growing my food and how? There are high-end restaurants, like the French Laundry in the Napa Valley, that list preferred suppliers on their menu. Dorothy Lane Markets, a small grocery chain in Dayton, Ohio, is also creating romance and differentiation around special suppliers.

2.3.2 Russia

The key trends found in the Russian market are the emergence of confectionery, convenience food, beverages (including juices, beer, coffee and teas), cafés, restaurants and catering are all growing segments.

Confectionery
Chocolate and chocolate candies are growing in consumption due to the increased of the offering during last decade. Different cakes, pies, biscuits and candies are offered more and more, and the last trend among the most advanced consumers is the search of the low calories products, such as yogurt based cakes.

Convenience food
The biggest growth in the cities is in the segment of convenience food. This is a part of the general trend when people are spending less time in cooking at their kitchens at home. As the urban life gives more and more opportunities to spend the free time, and the incomes are growing, convenience food is becoming more and more popular as it can help to save a lot of time. This food segment includes ravioli, the most common convenience food, frozen vegetable mixes, pizza, instant oatmeal, dry and canned soups and Asian-influenced foods such as spring rolls (ready to eat and frozen); and ready to eat main dishes (frozen which require short time microwave preparation).

It is expected that the consumption of the convenience food will grow, but one of the important conditions is the better taste and quality.

Restaurants, Cafés, and catering

- There is significant growth of public catering in big cities and include cafés, restaurants, and catering.
- Cafes. This is a very new development of last 5 years, main chains have been started in Moscow during last 5 years, and this tendency is followed by big cities with a significant delay, reflecting the difference in personal incomes. Major cafes chains are now expanding to the regions and the traditions of high quality coffee consumption will grow as soon as more people can spend their money for these purposes.
- Restaurants are experiencing substantial development, due to the benefits of private enterprise initiatives. They are the popular place for the celebration of different events (anniversaries), such as birthdays. Restaurants are becoming an essential part of the weekends in the big cities, becoming a place for the meeting with friends, unlike the old soviet times famous for the "kitchen meetings of friends".
- Catering. It is still difficult to find a reasonably priced place for the lunch, this is typical for Moscow. But in the regions, the prices and availability can be better, but the situation will depend a lot on the general economic situation. It is interesting to mention that catering has become an essential part of the big shopping centers in Moscow, and people visit such places not only for shopping, but also just to have a lunch there, especially during weekends. Such big shopping centers are becoming the places of entertainment, including cinema theaters, playgrounds for children and other facilities. In big cities they are promoted as the places for family rest. Catering is also becoming an essential part of office centers, and the consumption habits are changing from eating of food brought from home to public catering. This is valid for Moscow and will be followed in the other big cities as long as new modern office centers will be built there.

2.3.3 Germany

Some regard German food habits as most traditional in Europe. German consumers are naturally price conscious; therefore e.g. discounters like Aldi and Lidl have rather high market share. Food prices are mentioned to be lowest in Europe and Germans are highly price-consciousness, but!

Different age groups seem to have a lot of differences in their food behavior. Young teenagers value branded products: confectionery and potato crisps from discount brands are accepted at home, but only Coke and Pringles will do among their friends. Teenagers spend the largest share of their disposable income on magazines, CDs, food on the go (including fast food). People of studying age are prime users of bars, cocktail bars, festivals, cafés and lower-price restaurants such as Pizza and Pasta and Thai or Oriental restaurants. Middle aged adults are interested in wellness, sport and keep-fit, as well as healthy food and organic produce. The 40-59 age group is the main customer of the health service and pharmacies. Most magazines, from TV listings to women's magazines, carry health information as a matter of course. There has also long been a strong interest in Germany in alternative medicine; with homeopathy the most widely used complementary method. In Germany the 50+ generation have a relatively high income and they are quite ready to spend and are interested in innovations.

Restaurants suffered a decrease in sales in the first year of the euros and have never entirely recovered. Eating on the go is on the increase, and children spend a large part of their pocket money on fast food, snacks and ready meals. The "fast-food-no-sports" attitude is considered much more "cool" than healthy eating; so many children are now obese and suffering from diabetes and/or high cholesterol.

Since the BSE scare, there has been a shift in consumption from red meat to poultry and even fish. In 2005 and 2006, major scandals about rotten meat being sold to restaurants and meat that had passed its sell-by date being re-labeled and sold in supermarkets rocked the food industry. This reduced sales of meat, but not as much as the industry apparently feared. Singles and men are the main consumer group of ready made dishes. Working parents buy e.g. frozen pizzas for supper to their children. Also elderly people have given up cooking and willing to buy ready dishes. Content of German lunch has changed from the male to the child oriented. People eat more often with their friends and colleagues that with their family and relatives. Mixing food styles begins to be typical: Germans eat sushi in the morning sushi and Bavarian in the evening. The rise of the TV chef has acted as a boost to home-cooking, while at the same time restaurant visits have been going into an unprecedented decline.

2.3.4 China & Hong Kong

People's living standards rose dramatically in the 1990s, when both the economic and political environments were stable enough to accommodate rapid development. Both personal gross income and disposable income have demonstrated a sharp growth during the past 10 years. The group of high-income families is increasing rapidly. E.g. young women can spend more time and money than in the past because of increases in income and social status and without the burden of family and children. In contemporary Chinese society, educational level is the most important criteria to judge a person's social status.

Chinese like eating and talking about food. New ingredients, restaurant/fast food eating is part of urban Chinese lifestyle. Chinese like a lot of their own dishes and ingredients from different regions of China. The Eastern coastline of China (Beijing, Shanghai, and Guangzhou) differs much from other parts of China. Hong Kong is a global food city; there you can find restaurants and foods from around the world.

In Mainland China urbanization and modernization are key trends which have influenced on eating habits. However, especially in Mainland China home cooking is still traditional. Working women do cooking but men are cooking more. Restaurant eating is getting more and more popular (fancy Chinese, Asian or Chinese for dinner and special occasions) in Mainland China. Thousands of restaurant and food stalls are available with different images and prices from cheap to impossible prices. Cafes and bars are relatively new places for eating with more western culture. Generally, young people spend much more time on work and social activities. For them, the time saved from preparing meals in the kitchen outweighs the added cost of eating out. For many, eating out with friends is a kind of social event in itself. Small restaurants and takeaways are popular among people who do not cook often for themselves. For rich and young people who follow fashion, there is a trend nowadays to have dinner in a private restaurant in big cities. Prestigious eating (expensive ingredients: shark fin, abalone, salmon, sauces etc.) is valued in special occasions and when treating clients and friends.

In Hong Kong, eating out of course is the mainstream. However, there is a trend especially in young couple to cook at home on weekends and on holidays. This in some sense is reflecting they are tired of dining out as well as they want to eat in a healthier and in a natural way; cooking at home is their ultimate choice. There are numerous TV programs preaching the style of cooking yourself. Cooking and be innovative on cuisine are part of the city's lifestyle. It is regarded a trend too in Hong Kong. Hong Kong absorbs very quickly global and Asian trends. Changes have been noticed e.g. in Hong Kong meal times are 1-2 hours later than in Mainland China. Chinese normally drink green tea on meal but nowadays it begins to be replaced with sweet drinks e.g. lemon ice tea, coca cola. They may eat a bun and milk coffee to go in the morning, Chinese noodles for lunch and sit together with friends in sushi bar in the evening. Dessert hasn t been part of Chinese meal at all but is on restaurant menu nowadays.

With increasing health awareness, Chinese people are more knowledgeable about organic and healthy foods than they used to be. Influenced by health information through the mass media and education, people pay much more attention to health food. There is a variety of healthy food, green food and natural foods on the supermarket shelves. More rich and well-educated people now prefer to eat more fresh fruit and vegetables, replacing meat and alcohol. Moreover, people's exercise habits are more established. As the government invested a lot on the infrastructure in communities for people to exercise after work, more and more people in the different age groups have increased the time they spend on exercise each day. Many pharmaceutical industries have also produced new medicines especially to treat obesity and its relative diseases, which could help people to improve their lifestyles. Health food and herbal medicines (Traditional Chinese Medicine, in Chinese "health-care food") have played an important role in the Chinese society for centuries. Chinese believe that many foods have special functions of improving physical health.

The rural traditional diet is considered to be natural and healthy; urbanization has brought problems to manage the daily diet. Citizens have lost their touch how to choose foods and how to compile their daily meal. This causes health problems: growing figures of diabetes, obesity and coronary heart diseases which begin to prevalent especially in Mainland China. Poor eating habits are the main reason for obesity. With steady economic growth in the past two decades, however, Chinese people have a higher protein intake, especially meat, eggs and poultry, and the prevalence of malnutrition and nutritional deficiencies has dropped. Instead, people are eating less vegetables and fruit than they used to. The obese population is increasing, especially among children.

Meat, fish, and vegetables are the main food stuffs for Chinese people. The consecutive food safety problems (Avian flu, SARS, Streptococcus suis in pigs, use of non approved chemicals or excessive additives, malachite green in fresh fish, artificial juices, fake baby milk powder) occurred recently in China have had a great impact on the people s health, food supply and business of respective sectors as well as food control and regulations. The Avian flu outbreak in 2004 gave people a lesson about proper handling of poultry. New preventive measures and remedial actions have been taken by Chinese Government (Centralization of the slaughtering, separation of human and poultry, invention of quick test and vaccine for bird flu). The newest cases of Streptococcus suis in pigs and malachite green used in fish farming are turning food and health authorities to improve the control of the value chain and to create better standards for animal breeding or cultivation.

2.3.5 India

Indian report was presented in the future oriented form (2030). India s population is expected be above 1.4 billion in 2030. According to estimates 41 percent of Indians will be living in urban areas by 2030. The question raises how to feed the urban population. This will require huge improvements and investments in logistical chains and preservation techniques. It is estimated that due to lack of proper facilities of transportation and storage, about 33% of produce, about 20 million tons, especially fruits and vegetables is wasted nowadays. The rapid diversification of the urban diet cannot be met by the traditional food supply chain. It requires the commercialization and diversification of domestic production systems and/or increased food imports.

By 2030 economic growth and changes in mindsets will have altered the structure of the labor force in urban areas: increased female participation in the labor market will have important consequences for the family diet. Working women won t have time to prepare all the meals and demand of ready-made food will increase. As the labor costs increase not all the middle-class families can afford to have a cook or servant at home.

Low income levels used to be the constraint for the diet: people ate what was available at the rates suitable for their wallet. Nowadays more and more people can choose what they want to eat without thinking of the costs. People have increasingly started to eat for enjoyment – not for just getting enough nutrition to survive. This trend is likely to continue, and still in 2030 food will be a status symbol.

The structure of core meal is likely to remain the same, but the consumption of associated products will undergo a change. Peanut butter, packed juices, dairy-based products, corn chips are now available, but the demand and supply will definitely grow. The composition of the diet is changing: The share of basic food is decreasing in both urban and rural areas, and the share of processed food in diet increasing. Also the quality of food, like nutritious food, fruits and vegetables, is improving. Share of the carbohydrates in diet is decreasing but the share of proteins and fats (processed foods) increasing.

The consumption patterns in rural areas have changed due to a rise in income levels. Rural population can afford to buy kitchen appliances like gas-stoves and refrigerators which affect the quality of life and food consumption habits. The rural economy is nowadays rather commercial. People have the opportunity to buy food whenever they need to, and thus there is no need to stock food for the whole year. Poor people imitate middle-class s celebrations, eating habits etc. Middle-classes are imitating Westerns: New Year celebrations, wedding-anniversaries. Food is a status symbol: if you eat what middle-class eats, you belong to it.

Eating out has become quite common amongst upper- and middle-class Indians. Eating is mostly done in Indian restaurants, but especially younger generations are influenced by new foods and new international food chains. For many Indian eating in a fast-food joint is considered "fine-dining". Families and group of friends go to McDonalds to celebrate birthdays etc.

Alcohol consumption is on rise, but young people are mostly hanging out in coffee shops instead of pubs and bars. These modern coffee shops in certain urban areas stay open until early morning hours.

Articles about food, restaurant reviews etc. are common in Indian newspapers. Receipts, often for foreign dishes, are published in leading English newspapers. There are also magazines available about food and lifestyles. Articles about nutrition and nutritious food are easy find in ordinary magazines and newspapers. Instructions about healthy lifestyle, dieting and how to stay fit are published in weekend editions of the largest newspapers. Food is one of the largest categories being advertised both in TV and printed media. Advertisements tend to be informative telling the potential customers about the benefits of the products. Number of

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cooking books can be found in bookstores located in up-market neighborhoods. Most of them contain Indian recipes, but Italian, Mexican, Oriental, Chinese etc. cooking books are also available. They are, however, a niche category, since at home people usually do not cook by following the recipes in the books. Bookshelves at Indian homes are definitely not filled with cooking books. Cooking is learnt from one generation to another.
Consciousness about healthy food and health food is increasing. Still, it is very difficult to find low-fat, low-sugar or low-salt products in ordinary supermarkets. Health-food segment is definitely going to increase. Alarming number of urban upper- and middle class youngsters is obese. Furthermore, the consumption of saturated fats is predicted to double by 2030. In 25 years there will be millions adults suffering from obesity and related-diseases – many of them since childhood. Obesity, which is already a problem, will have to be fought in a big way.

On the other hand, in next few decades million of new Indian will climb up to the middle-class. Sugar and fat are still luxuries for these people, and they cannot afford to eat ready-to-eat food like soft drinks, biscuits, pizzas etc. or eat out in restaurants. In 2030 many of them can buy these items and/or eat out in restaurants, fast-food chains etc, which still are of symbolic value. There is a risk that even tough awareness grows and obesity-levels decrease within current upper- and middle-classes, the new group of people will start suffering from those.

Men's participation in household chores will be increasing when women increasingly join the labor force. Men start to do more grocery shopping and take a responsibility in cooking as well. When there is not time for cooking during the week days, cooking will appear as a hobby.

Consumption of alcohol will increase. There are already signs of people's attitudes towards alcohol consumption getting more relaxed. Additionally, young people will increasingly move out from their parents 'homes (due to work etc), and the control of family will decrease. Also the traditional family values will change. By 2030 local wine production most probably has taken up, it will be more common to drink wine along with the meal. Other products will also be of demand. Duties on alcohol are still extremely high, but these are expected to come down already in near future.

2.3.6 Japan

Background of Shokuiku (Food Education)
The Basic Law defines Shokuiku as acquisition of knowledge about food as well as the ability to make appropriate food choices. Behind the law, there are a variety of food and nutrition issues such as a lack of proper concern for food; an increase in irregular and nutritionally unbalanced meals; a raise in obesity and lifestyle- related diseases; an excessive desire for being slim especially among young females; outbreak of a series of incidents related to food safety; over-dependency on food from abroad; and, loss of traditional food culture in a globalization movement. Some might criticize that eating is such a personal thing that government should not regulate by a law. However, Japanese situation over food had already reached to a crisis point, and that a law had to be enacted in order to address these issues.

Nutritional balance Issue in Japan
The Japanese dietary pattern, which consists of rice as staple, combined with a variety of other food, such as fish, meat, vegetables, fruits and milk, was formulated by around 1980. This dietary pattern was well balanced from nutritional point of view. However, today we find that the ideal dietary pattern has been totally eroded, especially among males in their thirties to sixties of age group who tend to consume excessive amounts of fat. According to the National

Health and Nutrition survey in fiscal year 2003, about 30% of males in thirties to sixties of age group are overweight, and in all age groups, expect for the twenties, overweight male is increasing. Meanwhile, excessive desire with acquiring a slim figure .the skinnier, the better is becoming widespread mainly among young females, due to cultural influences from TV and magazine, and has become a social issue.

Dietary Habits

Skipping of breakfast has surfaced as a problem. About 30% of males in their twenties start the day without breakfast, and this trend is also growing among children. Skipping breakfast is thought to be associated to a number of negative effects, including disorder due to insufficient energy supply in the morning; the potential for overeating at other mealtimes, which could induce obesity and other lifestyle-related diseases; and many more problems.

Importance of food education

Needless to say eating is integral to human life, regardless of age. However, we have gradually failed to feel about the importance of people who cook, transport or produce food for people. And also, we don t usually care about the benefits of nature like soil, the suna and the ecosystem that enable us to cultivate food. We human have sought the convenience since ancient times and we.ve materialized it. However, the very convenience has tended to make us complacent and lazy, and contributed to lose gratefulness toward nature and decline in good eating habits.

The basic concept of the Basic Law on Shokuiku

Shokuiku should have the purpose of promoting people s health in body and in mind, as well as enriching human lives; Care should be taken to induce people to develop greater appreciation for and understanding of their diets, including the various roles played by the natural environment and the people who produce, transport and prepare food Nationwide, voluntary movements for promotion of Shokuiku should be developed.

Especially parents, educators and daycare providers should actively promote Shokuiku among children. Understanding of dietary issues should be reinforced by taking advantage of all available opportunities, such as at home, in schools and in the community or everywhere, to offer a variety of food-related experiences and activities.

Awareness and appreciation of traditional Japanese food culture as well as food supply/demand situations should be promoted, and opportunities of interaction between food producers and consumers should be created, in order to revitalize rural farming and fishing regions, and to boost food self-sufficiency in Japan. Appropriate information on food safety should be offered, in order to help people to practice proper diets.

The Basic Plan for Promotion of Shokuiku

The law stipulates that Shokuiku shall be encouraged through formulation and implementation of the Basic Plan for Promotion of Shokuiku (hereinafter referred to as the .The Basic Plan.). The Basic Plan is to be formulated by the Shokuiku Promotion Conference, chaired by the Prime Minister. It should be noted that The Basic Law calls for prefectural, municipal, town and village governments to come up with their own local-level Shokuiku promotion plans, based on the national basic paln. The Basic Plan is expected to be formulated by four elements; fundamental policies, objectives, comprehensive measures for promotion of Shokuiku, and other requirements for comprehensive and consistent implementation of the plan.

The Basic Plan is expected to implement the following measures in the Comprehensive measures for promotion of Shokuiku: promotion of Shokuiku at home, in schools, in daycare facilities, and in the communities; development of a national Shokuiku movement; promotion of interaction between food producers and consumers; support for activities designed to preserve traditional food culture, promotion of research and studies on diet, including food safety and nutrition, and promotion of information offering and of knowledge exchange activities.

To promote Shokuiku, deep connection between concerned government offices, such as the Cabinet Office.s Food Safety Commission (FSC), and the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Health, Labour and Welfare (MHLW), and the Ministry of Agriculture, Forestry, and Fisheries (MAFF), is essential. It is worth noting that, under the leadership of the Cabinet Office (CAO), those government offices will share a common understanding about Shokuiku in order to develop and implement necessary measures in a comprehensive and consistent manner. Local governments are also expected to have appropriate connection between related departments or institutions to work on Shokuiku progresses.

From an international perspective, the comprehensive approach based on such a wide-ranging concept is considered to be unique to Japanese Shokuiku, whereas in the West, more limited approaches such as nutrition education programs aimed at reducing obesity and organized participation in agricultural education farms are practiced. For this reason, Japanese government transmits the concept of Shokuiku to foreign countries actively in accordance with the Basic Plan.

2.4 CONSUMERISM: FOOD HABITS AND PATTERNS

By culture
Similarities between different cultures?
Trends in changes of food habits
Food habits (consumption habits, daily meal schedules, eating alone or together with the friends/family, who is cooking/buying*), changes, reasons for change

- for all these items we don t have answers in our reports

2.4.1 America: Canada & USA

After decades of decline in the simple ritual of family dinners, there is evidence that many families are making the effort to gather at the dinner table. A random nationwide survey by the National Center on Addiction and Substance Abuse at Columbia University found a recent rise in the number of children ages 12 to 17 who said they ate dinner with their families at least five times a week, to 58 percent in 2005 from 47 percent in 1998 (Kitchen Gardner s International).
LOHAS Consumers
Consumers of the LOHAS (Lifestyle of Health and Sustainability) market segment, or Lohasians, are concerned with health and fitness, the environment, personal development, sustainability, and social justice. Lohasians make up approximately 16% of the American adult population, or 35 million consumers. This group regularly purchases eco-friendly products and plays an active role in protecting the environment.

LOHAS consumers can be further segmented into two smaller but especially important categories, LOHAS leaders and LOHAS followers. LOHAS leaders remain the primary target market for the LOHAS industry as they are opinion leaders for the green movement and early adopters of new sustainable products. LOHAS followers, in contrast, are slightly less progressive than their leader counterparts, but remain large consumers of green products and supporters of sustainability.

Naturalites

This segment regularly consumes organic and natural products, particularly those in the food and beverage category. Naturalites are not, however, dedicated to the green movement or large consumers of environmentally friendly durable goods (e.g. hybrid cars, energy efficient appliances). This group comprises 25% of the adult American population, or 54 million consumers.

Drifters

Although this consumer segment would like to act more environmentally responsible, other factors influence their decisions and actions more so than the green movement. The 50 million drifter
segment in the United States, or 23% of the adult population, remains fairly price sensitive.

Conventionals

This consumer group does not have a green outlook but does practice some green behaviours, such as recycling and energy conservation. Conventionals make up 23% of the American adult population, totaling 50 million consumers.

Unconcerned

The remaining 14% of the American adult population, or 30 million consumers, do not practice environmental responsibility. This segment is not a key target market for the LOHAS industry. Canadian producers through to exporters should monitor the burgeoning LOHAS market and take advantage of the shift toward green by implementing and in turn marketing their sustainable practices to such green consumers.

Summary

With the green trend and consumer demand for sustainable products not looking to slow in the foreseeable future, an increasing number of opportunities are presenting themselves to the North American food industry. Furthermore, as North Americans continue to consume a large amount of high quality food products; they are increasingly prepared to pay a premium for sustainable goods, creating additional opportunity for Canadian producers.

Based on past and current consumer demand trends, sustainable agriculture, eco-friendly products, energy conservation and greenhouse gas reduction initiatives are expected to be major drivers of market growth. Furthermore, NMI research has identified that LOHAS consumers are increasingly interested in organic, natural, energy efficient and sustainable products. Therefore, Canadian producers through to exporters that focus in on such green priorities will likely be noticed by consumers and see positive results reflected in customer loyalty and market share.

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2.4.2 Russia

The study of the changes of general food consumption in Russia in the period of 2000 – 2005 was presented by Institute of Marketing and Social Studies "GFK-Rus", a part of international GFK group.

The basic findings are:
The habits and the structure of consumption has greatly changed during last 5 years. Speaking about basic products, consumption of milk products, vegetables, fruit and meat increased, and the share of bread and potatoes decreased.
More and more people are eating outside of home, visiting restaurants, cafes, although the part of people who practice this has increased only from 30% to 36%. The main meal is dinner, although in some groups the main meal is supper. The importance of the second breakfast and lunch is increasing. Irregular meals are mostly met among business people – 37%, students – 36% and unemployed – 30%

Another tendency is in the decrease of the role of basic products and the increase of the role of the products of the second row. For example, the consumption of meat has grown a little, but the consumption of meat convenience foods has grown by 74%, meat paste – 45%, meat delicacy – 32%. Products for fast preparing of food have increased by 32%.

The changes of the food consumption habits are also linked with the changes in retail – the market is developing towards the modern forms of retail. The share of the modern trade formats has grown in Russia from 5% to 14% during 5 years. The role of the open air markets, kiosks and street trade is greatly decreasing.

The changes of the food market took the consumers to the changes of the behavior at the food market. First of all, the information space has greatly changed. There is more and more information from advertising, and in some cases the customer is overloaded by it. The studies of last 4 years showed that one of the specific features of today's market is the loss of the customer in the info space.

Dominating are the rational reasons of the buying, but in a lot of cases the emotional motivation or traditions are playing a big roles.

People are trying to reach the level of the "premium" segment, and even when they don't have enough money for it, they try to reach it, at least a little bit. Another motivation is to demonstrate their own achievements.

Men are becoming more and more involved in the shopping process; they start to learn more about the products outside the traditional products of men's interest – home appliance, cars, etc. Now they participate more in food choice and in the process of shopping.

Brand has become and will continue to be very important, the share of customers that are using brand as a choice criteria has grown from 30% to 45% during the period of 2000–2005.

2.4.3 Germany

Germans are more health conscious in their eating habits than ever before. Consumption of vegetables and fruit have doubled and tripled respectively since the 1950s. Consumption of vegetables and fruit, especially organic, is on a rising trend. However, attitudes towards healthy eating have much to do with education; the less educated eat the less healthy food. The people with lower incomes and less money buy fast food and ready meals, even though these are more expensive than self-prepared meals. 68% of the population tell that they eat fresh foods and reject ready meals and industrially produced ingredients.

Consumption of fish and pulses has increased. Consumption of fruit remains but sales has declined for all fruit except pineapples and grapes. The amount of red meat eaten in Germany has decreased, while poultry has seen a 16.5% increase. Consumption of beef and veal fell by 37%, while that of the nation s favorite, pork, dropped by 4.6%. Chilled ready meals are increasingly appearing on supermarket shelves. Tasty meals can be prepared using convenience products. Further growth is predicted for the premium segment.

While older people tend to take a hot lunch cooked at home and something like bread and cheese in the evening, younger people often have a sandwich, a snack or fast food for lunch and a full meal in the evening. Cooking and baking at home may once again be on the rise. Cooking is regarded as a hobby.

2.4.4 China & Hong Kong

Food and eating is central and social part of their life. Friends and relatives, young and old get together around the meal: at home, cheap and fancy restaurants. Chinese people eat very seldom alone. The habit is sharing the meal. Chinese food habits differ very much within the country and very much from Western habits, even though raw materials e.g. from Canada, USA, Australia, Germany, France, New Zealand are available.

Eating habits differ from area to area in China. Rice is the staple food, though people from North consume more flour products than people from South. Meat, fish, and vegetables are the main food categories. Chinese people consume less red meat compared to people from other countries. People living along the coastal cities consume seafood regularly, including all kinds of fish and shellfish. The price of seafood is relatively high in inland cities. Seafood is considered to be a luxury food and usually served to treat important guests in inland cities. Chinese people don t typically eat fresh foods including vegetables without cooking them.

Usually people eat three meals a day. Snacking doesn t belong to traditional eating, but is getting more and more popular. All foods, dishes simultaneously at table or served in the order they are ready in the kitchen. All dishes are preferred to be shared by meal participants. People pick up pieces with their chopsticks. Small tableware and chopsticks are used.

When the society is well-developed and affluent like Hong Kong is, new kind of behavior phenomena captivate citizens 'minds: luxury is struggling with sustainability. One example could be moon cake boxes. People like to eat expensive ingredients. Bird nest, fine fin soup, abalone, Shanghai crab. Some fish species are even in danger to disappear because of their gourmet food popularity. Many are prepared to pay much more about dinner than what is typical in Finland. They also want to test different restaurants. The easiest possibility for foreign ingredients to the market is restaurants. You are able to find very expensive foods and ingredients in supermarkets from different parts of the world.

2.4.5 India

When thinking of Indian food consumption and food patterns it has to be kept in mind that India is a huge country, 10 times larger than Finland with 1.1 billion people. Demographic factors: age, education, social class, income level, religion: Hinduism, Islam, Buddhism, Christianity and geographical location: North vs. South; East vs. West, Coastal areas vs. inland etc, City vs. countryside have influence on eating habits. Since early 1990s India is in a phase of rapid economic and demographic transition. Current GDP growth is approximately 8.5 %. According to current estimates around 200–300 people belong to middle-class which means that they can afford to more than only the basic necessities. Poverty levels have declined, but there are still 260–290 million people who are surviving below 1 USD / day. Despite increasing income levels malnutrition has not declined. On the other hand, millions of Indians are obese. Both hunger and obesity problems exist side by side.

64 percent of Indians are nowadays non-vegetarians. Consumption of meat is on rise. However, this does not mean that more than half of the population eats meat: fish and eggs are usually considered non-vegetarian food as well. Furthermore, most of the non-vegetarians stick to vegetarian food in their everyday lives and cook only vegetarian food at home. Meat dishes are saved for special occasions.

Food is prepared mostly at home by women. Cooks are rather common at upper and upper middle class families. Food is prepared from the scratch – ready-to-eat-food has just made entry to the market and still not very common. The composition of meals is of course very different in different parts of the country. Usually Indians have three meals a day: breakfast, lunch (usually 1–2 PM) and dinner (around 9PM). Snacking between the meals is common. Sweet milk tea is consumed in large quantities over the day. Foreign dishes, food brands and restaurant have made their way to Indian cites, but still most of the meals consumed are Indian. Most of the shopping is done at small neighborhood shops and vendors.

2.4.6 Japan

Food Faddism

The term Food Faddism and fad died are terms which refer to the tendency for idiosyncratic diets and eating patterns. A fad diet is supposed and promoted to improve health but may do nothing at all, or even have the opposite result if it is nutritionally unbalanced and unconfirmed by scientific studies.

There are three categories of food fads:

One virtue of a particular food or food group is exaggerated and purported to cure specific diseases, and is therefore incorporated as the main constituent of an individual's diet
Foods are eliminated from an individual's diet because they are viewed as harmful
An emphasis is placed on eating certain foods to express a particular lifestyle.

Some food fads may incorporate a combination of categories. In Japan, this concept of Food faddism was introduced by Prof. Kuniko Takahashi in around 1998. According to Prof. Takahashi, there are several condition will be needed as become phenomenon among people.

- luxury level in economy
- the age of gluttony
- tend to disregard of traditional culture
- inundation of technical/special scientific word. in general, and the lack of people knowledge of understand the real meaning

Japanese Case

It have been seen this phenomenon of this food faddism among Japanese consumer. The consumers tend to believe the information provided by media easily, which introducing good for the health food through TV program. The media power is very strong toward consumer and even effect to the business aspect and thus the business side is always paying attention what kind of food /products introduced by the media such as TV program, magazine. If one TV program introduces one product, the sales of this product increase 20-30% up compare to in regular sales. In that sense, the food company tries to take every opportunity as much possible to utilize such information in order to increase the sales. When the things go too far, the things will go wrong. The following is one case of gone over the edge.

TV program and magazine introduce the article regarding the certain tea, which believe to have function of reduce fat. Thus the female especially younger generation jump at the article and the products become well selling product all of the sudden. One day after the certain time passed, several people start to complain about the change of physical condition. Some of their physical condition went wrong and some of them died. One of the component effects to the body and those who are weak of this effect died. This typical example of faddism shows that seriousness of food faddism problem. The consumer tends to believe the convenient information easily and would not consider the negative information.

Food Safety

Japanese consumers have always been highly concerned about food safety. In recent years outbreaks of BSE (mad cow disease) and bird flu, incidents of pesticide residue in vegetables and false county-of-origin labeling have further heightened consumer suspicions and anxieties. These movements are accelerating to create traceability systems that give priority to confidence in food safety by disclosing production histories, ingredients and additives not only for fresh foods but also processed foods. In addition, consumers are becoming extremely health-conscious, and emphasizing the health benefits of food for preventing lifestyle disease etc. has become a key element of success in the food business.

Isolate Eating / Individual Eating

I can find may article relate Isolate Eating/ Individual Eating in everywhere. This entire article concluded that there is some kind of connection reflecting on the recent social problem such as crime, etc. Isolate eating will lead lack of communication between Individual Eating: there are 2 meaning of this term. One of the recent eating habits is to r dine individually. For example, eating the dinner with family however the each of them eat different menu. The food is packaged as one portion.

Isolate Eating

There are many children taking supplementary private school after the regular school.

They usually study until very late at this supplementary private school. So they can not eat dinner at home with other member of family. Those children buy the bento box.

Naka Shoku (home-meal replacement)

Naka Shoku (home-meal replacement) has been rapidly increasing in Japan. Naka Shoku is the term use as home-meal replacement. It's categorized as between Uchi shoku (cook meal at home) and Gai Shoku (eat outside). Naka Shoku defines as; buying cooked food such as deli to home dining instead of cooking meal at home. There are 3 types of Naka Shoku:

§ Take out: buying lunch box, deli etc to home
§ Delivery: delivery pizza, delivery sushi etc.
§ Catering: cook by famous restaurant chef at home

The reason for the increase of Naka Shoku is the increase of nuclear family, individual eating, and the rates of women who work out-side, etc.

Home expenditure for home-meal replacement has been rapidly increasing. The expenditure on home-meal replacement for each family was 48,361JPY (312 EUR)/year in 1980, it's been creasing and 2003 was 101,287JPY (653EUR) /year. It's almost doubled in 20 years. Comparison with other food related expenditure, the rate of increase is remarkable. This trend seems to be continuing.

2.5 RETAILING

2.5.1 America: Canada & USA

In the past 20 years, the relative importance of British and French origins has diminished in Canada. Citizens with exclusively British or French backgrounds now make up less than half of the population and present immigration trends will only decrease that figure. This changing ethnic mix is affecting the demand for food. There is a need for research on the ethnic communities that are fast-growing, large enough to be viable, and whose food demands are potentially less well-known to Canadian food producers, processors and distributors.

Three of Canada's five fastest-growing ethnic communities are Asian--Chinese, South Asian and Middle Eastern origins. These consumers have different food spending habits than the general Canadian population--East Asian/Chinese consumers spend more on foodservices and at specialty stores, but less at supermarkets; South Asian-Canadians spend less on foodservices; and Middle Eastern-Canadians spend less on foodservices and at supermarkets, but more at specialty stores.

These ethnic consumers generally spend more on fresh foods and less on processed products. In many instances, food products are imported to satisfy the needs of these and other ethnic markets.

Large ethnic communities are predominately found in the country's major urban areas— namely Toronto, Vancouver and Montreal--which also tend to receive the greatest number of new immigrants. The changing ethnic mix places different ethnic communities in contact with each other and introduces consumers to a host of new ethnic dishes and food styles, some of which eventually become part of the mainstream. Consequently, the demand for new ethnic-dish products and new ethnic foodservice outlets is not expected to stagnate (Opportunities in Selected Ethnic Markets in Canada).

2.5.2 Russia

Retail trade has been one of the strongest growing sectors since 1999. In 2006 the turnover of the retail trade grew by 13 % (327 MUSD). The share of foodstuffs was 45,6 % of total turnover of retail sector. 80,4 % of turnover origins from organized retailing, 19,6 % from food market places (5800 in Russia). Retailing has moved from market places and bazaars to retail outlets, this trend will continue. Especially number of hyper and supermarkets will increase. Competition begins to be rather high among retailers. Foreign retailers have entered and several domestic chains appear. So far foreign chains have been in Moscow and St. Petersburg. These cities are short of business space therefore other cities and regions begin to be more and more interesting. Pjaterotshka Group (X5 retail) is the largest retail group; among others Tander, Sedmoi Kontinent, Paterson, Kopeika and Viktoria. Foreign retailers: Ramenka (Ramstor), Auchan, Metro Cash & Carry, Rewe Billa and e.g. department store Stockmann in Moscow and St. Petersburg. Tradeka has 3 Siwa stores in St. Petersbourg.

In 2005 the average Russian family spent 33,2 % of their income on food (in 2000: 47,6 %)

The retail sector is growing rapidly in Russia and must be a factor in U.S. exporters 'strategy of what products and packaging will satisfy consumers' demand for quality goods.

According to market experts, per capita monthly income in Russia will keep growing and will reach $600 in Russia and $1,500 in Moscow by 2012. Per capita income in large Russian large cities will increase twofold over the same period of time. This represents a large future growth in consumption of food because of Russia's large population.

One analyst believes that Moscow now rivals New York City for its overall consumption of food.

Moscow and Russia are important markets for future imports. Only hard work and further attention on the part of U.S. companies will determine whether this growth is captured solely by European competitors.

2.5.3 Germany

The German retail landscape has changed dramatically since the early 1960s, when the first supermarkets opened. Entire sectors of retailing have disappeared from inner city areas. Most of the outlets in inner cities belong to large chains. Edeka Zentrale (market share 6,3 %), Rewe Group (5.2 %), Metro Group (5 %), Lidl&Schwarz (5 %) are the biggest retailers. Traditional outlet formats have been replaced by new forms of retailing, such as supermarkets, hypermarkets and discounters, and, particularly in the non-food sector, by specialist stores. Shopping complexes in both out-of-town locations and inner cities have grown in popularity since German unification.

The retail sector show signs of polarization, with the lower end of the market consisting of discounters and the premium end of the market growing. The trend is also towards larger outlets, due to consumer preference for these, which has forced smaller outlets to close down. Germany has a well-developed and well-established retail sector, which shows a high degree of saturation.

2.5.4 China

China's annual retail growth is ranked first among 12 major countries in Asia. Urbanization continues to drive retail sales growth. China is not a single market due to regional differences. China's top 100 retailers account for only about 8% of the market in the year 2002. Outstanding domestic hypermarket retailers include Shanghai Lianhua Century Hypermarket, Shanghai Hualian Hypermarket, Beijing Hualian Hypermarket, Shanghai Nong-gong-shang Supermarket group and Suguo Hypermarket. Their sales in 2003 reached 200.8 billion, accounting for 4.5% of the total retail industry. The growth of hypermarket sales in 2002 and 2003 was at 19.8% and 17.8% respectively. Independent grocers are the most important business format in the retail industry due to its sheer contribution to total retail sales in China. There are over 300 foreign retailers arriving from (almost) all continents (Wal-Mart, Carrefour, Parkn 'Shop, 7 eleven, Ito, Daiei). No truly "national" brands are available in China, as provincial governments want to protect their local businesses.

Shopping for food is very much a female activity but signs to do it together appear. Men might follow the wife's shopping list. (This is the identical shopping habit as in America). Food shops are normally very close to homes therefore people don't store food ingredients at home. Kitchens are small. Chinese prefer fresh food stuffs and want to buy them as fresh "even alive" (hen, fish) as possible.

2.5.4 Hong Kong

A.S. Watson Group and Dairy Farm Group are two the most important and dominating holding groups in Hong Kong's wholesale and retail. They operate varies giant store chains. They both play very significant roles in Hong Kong's market. A.S. Watson Group evolved to international retail and manufacturing business. It operates Watson's Your Personal Store, PARKnSHOP supermarket chain, TASTE food galleria, Great Food Hall, Gourmet boutique style fine food hall, Fortress electrical appliance stores, Watson's Wine Cellar and Nuance-Watson airport duty free shops. ASW is also a major producer and distributor of water products and beverages. A.S. Watson Group is a part of Hutchison Whampoa Limited in Hong Kong. Dairy Farm Group operates stores in Hong Kong, Taiwan, mainland China, and some South Asia countries. In Hong Kong, they operates Manning, personal stores, Wellcome supermarket chain, IKEA furniture, 7-Eleven convenience stores, GNC health care stores, Oliver's food hall, and Maxim caterings.

Wet markets (torit, kauppahallit) are also popular shopping places. Live fish and hen, fresh slaughtered meat (during previous night), fresh vegetables and fruits and Chinese specialties (tofu, rice sorts, spices, seaweed, and mushrooms) are bought there. Hong Kong imports most of its food from surrounding countries. Food brands from Europe (esp. UK, France and Germany), North America, Japan, China, Thailand and Australia are available on food store shelves even Finnish brands can be found: Finn Crisp, Panda, Benecol, Battery.

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2.5.5 India

Distribution, wholesaler, transportation and retail store network is extremely scattered in India. At present organized retail accounts for 3 % of total retail, by 2010 this share will reach 10 % level. There are 12 million small retail shops (4 % bigger than 4 m2), supermarket chains are exceptional. In Delhi it is impossible to find a large supermarket: the supermarkets are usually the sizes of neighborhood stores. Most of the shopping is done at small neighborhood shops and vendors. There is no supply chain integrator or channel master for Indian retail chain. Change will be expected: 150 shopping malls are planned to be constructed during next 3 years. The number of department stores has grown by 26 % and their sales by 36 % a year. Foreign chains are able to set up their stores only though joint ventures and franchising, e.g. Wall-Mart opens a retail chain together with the tele operator Bhart. 100% FDI Cash&Carry wholesale trading is allowed (German Metro AG; Shoprite of South Africa). Big real estate developers like Reliance invest millions of dollars on retail development.

Consumer groups aged between 20-45 years are emerging as the fastest growing consumer group. Change is beginning from cities of Southern India: Cities like Bangalore and Hyderabad in Southern India have recently become hubs for IT- and BPO-businesses. Thus lots of young people, both male and female, have moved to these cities. Shopping is often the task of the housewife or servant, but due to long working hours, there is no time for many working females to purchase groceries in multiple places. This may have boosted the coming up of supermarkets, which in Southern parts of the country are also larger in terms of their size.

2.5.6 Japan

- Fast structural change in infrastructure of retail shops within last 10 years: corner shops are giving space for bigger super market chain. Traditionally the share of corner shops has been 50 % of consumer goods market.
- Products of corner shops are mostly Japanese; Supermarkets, department stores and big retailers are more open to foreign products.

The department (food court) is the source of the all consumer's trend information. The supermarket chain is studying from department food court or deli what kind of food is popular among the consumer then sells similar type of food with lower price in supermarket. The convenience store is also taking such information from super market in order to select the display products.

Other aspect of analyzing consumer's trend is making the strategy with looking at long term span. They are forecasting the future trend what, how it would be. There is one example of one of the major supermarket approach.

This supermarket has been researching situation of future beef production. From their research, they made prediction that the production place of beef will be monopolized in Hokkaido area and Kyushu era in 20 years or so. They made a contract with one of the cattle farmer to be their house beef brand (private label) and have been started to do the sales promotion in order to establish their future brand.

Looking at role of future retail store, they have been putting a lot of effort on food safety and peace of mind in order to get continuation of future business (e.g. GAP: intensive product control). This store activity will bring up store royalty to the customer.

However this is only looking at consumer aspect, the food producer such as farmer's aspect needs to be concern as well. The load to the producer has been increasing due to excess system of food safety etc. e.g. 100 detailed check list require to be submit every week. Only putting heavy load to the producer will lead to future major concerns.

Other role expectation to the retail store is; some changes or reform of their business style. If they going to reform the structure, the reform need to be something we never see or something like destroying already existing business category. However there are already some germs of change have seen such as Natural Lawson and Lady's convenience store (ampm).

§ Happily (lady's convenience store) is one of the ampm convenience store chain targeting Female consumers. The store is differentiated from regular ampm convenience stores since the ordinary convenience store customer is mainly male. The product range is also focusing on women's taste.

§ Natural Lawson: This convenience store has unique product lines which focus on organic food, health food etc. and make it differentiate from regular Lawson convenience store.

Traditionally, the men do the shopping and a "for women only" store has recently emerged for the women's market.

2.6 INDUSTRY

2.6.1 America: Canada & USA

Retail and Food Industry Sales

Retail and food service sales in the USA are monitored by the US Department of Census. Sales are very high (as a global comparative) ranging by month (January 2006 to August 2007 data) in 2006 from $359.254 US Million to 377.615 US Million in August 2007. Sales figures are generally increasing steadily monthly.

The latest annually compiled and released sales figure estimates are for the year 2005.

Total retail and food services sales in 2005 were $ US 3,199,724 Million, (over $3 trillion). The breakdown of this total by this report's areas of interest is:

- § $ 516,851 US Million – Food and beverage stores (NAICS* Code 455)
    - § $463,580 – grocery stores
    - § $34,386 – beer, wine, and liquor stores

Food Services and Drinking Places

This industry comprises establishments primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises. This industry does not include food service activities that occur within establishments such as hotels, civic and social associations, amusement and recreation parks, and theatres. However, leased food-service locations in facilities such as hotels, shopping malls, airports and department stores are included. (NAICS: 722)

- $ 394,601 US Million – Food services and drinking places (NAICS Code 722)
  - $172,241 – Full-service restaurants
  - $169,684 – Limited-service eating places
  - $14,610 – Drinking places

- * NAICS = North American Industry Classification System

Prominent Food Companies

- Monsanto is a leading producer of pesticide, seeds, and other farming products.
- Both Archer Daniels Midland and Cargill process grain into animal feed and a diverse group of products. ADM also provides agricultural storage and transportation services, while Cargill operates a finance wing.
- Bunge is a global soybean exporter and is also involved in food processing, grain trading, and fertilizer.
- Dole Food Company is the world's largest fruit company. Chiquita Brands International, another US based fruit company, is the leading distributor of bananas in the United States. Sunkist Growers, Incorporated is a U.S. based grower's cooperative.
- Tyson Foods is the world's largest processor and marketer of chicken and the largest beef exporter from the United States. Smithfield is the world's largest pork processor and hog producer.
- Nestlé is the world's largest food and beverage company. The Altria Group owns 88.1% of Kraft Foods, the largest U.S. based food and Beverage Company. Unilever is an Anglo-Dutch company that owns many of the world's consumer product brands in foods and beverages.
- Sysco Corporation, mainly catering to North America and Canada, is one of the world's largest food distributors.

A list of Americas top 20 retailers is provided in the Finpro Americas report (pages 26-30), dated final January 30, 2007.

Canadians are spending more on eating out

From fast food joints to fine dining, the popularity of eating out has created a surge in food services. Canadians are both eating out more often and spending more of our income on restaurant meals. In 2003, Canadian households spent an average of $1,487 on food purchased from restaurants, a 27% increase from 1997 (data source: Statistics Canada).

In 2004, sales from food services— a wide range of businesses that includes restaurants, cafeterias, street vendors, caterers and drinking places— totaled nearly $37 billion. Despite increased sales, profit margins declined from 5.8% in 2001 to 3.3% in 2003. The reason for the shrinking profits was that expenses— mainly food and labour costs— was rising faster than revenues.

The food services industry employs more than one million Canadians, and almost one-half of them are aged 15 to 24. In fact, nearly one in five young workers is employed in food services. With the popularity of drive-through, take-out and delivery services, the percentage of meals prepared in restaurants but eaten elsewhere increased to 61% of all food services meals in 2004, up from 53% in 1994.

Some more facts and figures about food services:

- On average, Canadian households visit a restaurant for a meal or snack 520 times a year.
- More than 90,000 food services and drinking places operate in Canada— about one for every 350 Canadians.
- Canadian households spend an average of 30% of their food budget on food services, compared with 42% for American households.
- The average check size at a restaurant is $6.12, including taxes but excluding tips.
- The most popular food and beverage at Canadian restaurants are French fries and coffee.

2.6.2 Russia

The turnover of food processing has continuously increased during last few years. The value of investment for food industry is on the second place after oil and gas industry. Food companies have modernized their production and purchased modern technology. Due to this investment Russian food industry begins to be on equal level with the foreign industry. Net income of Russians have grown already nine years in row which fact has a good impact on consumer good market. In spite of growing own production need to import food products is large. However from 2005 to 2006 the growth of imports of foodstuffs decreased from 25,6 % to 23,9 %. 23 of Russian`s food companies are on top 300 biggest companies in the country. The biggest is Wimm-Bill-Dann (dairy company). Brewing industry is mostly owned by foreign companies, the biggest of them is Baltika.

2.6.3 Germany

The value of Germany`s domestic food and beverage industry was 106,1 billion Euro (+1,8 %) and exports 31,1 billion Euro (+9.2 %). The food sector is one of the most important industries in Germany. Its 5900 companies are engaged in intense competition as the high degree of maturation. The sector generates over 23 % of its turnover abroad. The share of meat products is 22,8 % of total food industry turnover, dairy 16 %, alcohol beverages 9,3 %, confectionery 8,4 % and bakery products 8,3 % in 2006. Food production and food imports grew strongly in 1990`s in Germany.

2.6.4 China

Food industry output 2003 was 1.24 trillion Yuan (149.4 billion USD), which meant + 20 %.

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Industry's sales reached 838.3 billion Yuan (10.1 billion USD) from January to July, +28.3 %
In many food industry sectors China is one of world's largest manufacturer and consumer (pork, beef, poultry, beer), this is because of the large 1, 3 billion consumer base. Analysts still see growth potential on many sectors like baking, beverages and processed food. Manufacturing and retailing is getting more and more sophisticated features. Chinese are quick learners and willing to absorb the newest ideas (food processing and packaging technology).

China exported USD 10.69 billion worth of food products in 2003. Imports soared by 50.6 % to hit USD 11.47 billion, producing a USD 780 million deficit.

China's food industry and food chain suffers from some problems: Food poisoning cases, fake milk powder scandal, fake foods are common news. The Chinese government has given top priority given to food safety and nutrition. Demands of consumers for safe food improve quality control Other problems are surging prices of raw materials, power shortages and trade barriers.

China's food industry has fixed its development targets for the next five years:

- The sugar-refining industry: product quality and product variety.
- The fermented food industry: upgrading of equipment and technical renovations, clean production.
- The food additive industry: development of nutriments, sweetening preparations, antiseptic fresh-keeping preparations, high-grade spices and multi-functional food additives.
- Dairy firms will mainly develop yoghurts, pasteurized milk and dairy drinks.

Hong Kong's food economy is based on imports mainly from Mainland China (pork, poultry, fish, vegetables, noodles), Canada/USA (prepared foods), Australia (dairy, meat), Philippines (fruits), Thailand (fruits, prepared foods, rice), and Vietnam (rice, seafood). Own industry is composed of beverage, bakery, chilled and semi finished foods for home and restaurant use, slaughtering (live animals are transported from Mainland China and slaughtered in Hong Kong. Hong Kong companies have factories in Guangdong province/Mainland China (e.g. Kowloon dairy).

Number of foreign food importers (Canada, UK, France, Malaysia etc.) remembering the migration to North America in the 90's and British ownership until 1997.

2.6.5 India

Agriculture is a backbone of Indian economy but under developed. Agriculture contributes 27% of GDP and accounts for employment of 67 % of the Indian population. However, the country is self-dependent in food production – small farms cultivate food for own use or local market. The land productivity is low. Value added agriculture has not yet caught on with in the Indian scene.

Agricultural production has been saved from international competition using import quotas and customs tariffs. Anyway the country is opening to international players.

Vast areas of India have tropical and agro-climatic conditions which are well suited for cultivation horticulture (24 % of Agriculture GDP) and plantation crops. Rice, durra, sorghum, corn, wheat, barley, sugar, peanuts, cocoa, tea and spices are the most important plants. India is the biggest producer of milk, beans, sugar cane and tea in the world and second largest in milk, rice, wheat, fruit and vegetables, 5th in egg and 6th fish production. Only a couple of percentages of fruits and vegetables (90 % onions) are imported. 30 % of yield is spoilt during transportation. Marine food and spices together contribute more than 70% of export earnings.

The Indian agricultural sector faces many complex problems and conflicting issues like high consumer prices with low farm incomes, unnourished population, and inefficient supply chain, high marketing fees of intermediaries, poor quality and wastage due to contamination at post-harvest stage, low technology inputs and sub scale plantation sizes, too many processing units with small and medium capacities which lack supply chain management capacities, lack of large organized sector participation limiting the market size for processed products.

Today processed food is considered an elitist item and is taxed heavily. India’s share in world’s processed food production is 1%. India’s share in global agricultural export is 1.6% of $520 billion.

70% of food processing sector is dominated by small scale and unorganized sector. Industry is lacking of access to world class technology, processing varieties. Production sector is unorganized, bulk of production in small & marginal holdings. Producers are getting only 30% of produce value, trade intermediaries getting rest 70% without any value addition. Producers are not linked to the processors. Supply chain is unreliable. India is looking for investment in infrastructure, packaging and marketing.

2.6.6 Japan (USDA Food and Agriculture, 2006 Japan Report)

Source: (United States Department of Agriculture: 2006 Japan Retail Report)

Two parallel trend lines have been emerging: food and beverage consumer purchases are migrating toward larger supermarkets featuring a wider assortment of merchandise at lower prices, and also toward convenience store locations, with their easy –if somewhat more expensive –round-the-clock product availability.

With the exception of an uptake in 2003, total retail food sales have been falling over the past five years. The supermarket and convenience store (CVS) segments have enjoyed continuous growth over the period, but the overall market has been driven down by falling sales at department stores and smaller operations such as mom-and-pop stores. Thus, two parallel trend lines have been emerging: food and beverage consumer purchases are migrating toward larger supermarkets featuring a wider assortment of merchandise at lower prices, and also toward convenience store locations, with their easy –if somewhat more expensive –round-the-clock product availability.

In 2005, department store food and beverage sales fell 2.2% from the previous year, to $18.4 billion. Sales floor renovations and in-store events had a positive impact on sales, and department stores enjoyed an increase in sales of gift products during the mid-year gift-giving season (chugen). However, these developments were not enough to offset negative factors including sluggish corporate chugen gift demand and slumping sales of perishable foods.

Total supermarket food sales were virtually flat at $61.9 billion in 2005. Sales of perishable food fell, pressured by declining market prices for vegetables and other agricultural produce.

Japan's five biggest trading companies are aggressively investing in capital alliances with the wholesale and retail industries to build an integrated distribution system linking upstream (import), mid-stream (wholesale) and downstream (retail) operations. Historically, the trading companies have primarily been involved in the import and sale of basic food such as wheat, but they are now working to extend their influence to wholesalers in the middle of the supply chain and the closest link to the consumer, retail businesses such as convenience stores and supermarkets. The move is driven by the trading companies' realization that there is no more growth to be squeezed out of what have been their bread and butter, the raw material import segment of the distribution chain, without linking to the other segments.

The general trading companies are accelerating the formation of a keiretsu-style vertically integrated structure in the wholesale industry. In 2004 Mitsubishi Corporation brought the wholesale operations of Meidi-ya Co. and leading confectionery and snack wholesaler San-Esu Inc. under its corporate umbrella, while Itochu Corp. increased its stake in another key food wholesaler, Nippon Access. Not to be left behind, Mitsui & Co. quickly formed a series of capital tie-ups with regional wholesalers. After all this consolidation, of the top 10 food wholesale operations, Ryoshoku and Meidi-ya are now tied in with Mitsubishi Corp.; Nippon Access, Itochu-Shokuhin and Nishino Co. are all in the Itochu Group, while Mitsui Foods is part of the Mitsui & Co. keiretsu. Only a few major independent wholesalers remain: Kokubu, Nihon Shurui Hanbai and Asahi Shokuhin. The industry has essentially split into a bipolar structure – Mitsubishi Corp. vs. Itochu Corp. – with Mitsui & Co. and its growing collection of regional players gunning for the leaders from behind.

Likewise, the trading conglomerates are vying for control in the retail food sector, through a series of aggressive investments. Without any major wholesale operations in its portfolio, Marubeni in particular positioned food retail distribution as a priority investment field, acquiring a 10.8% stake in Daiei, a 36% interest in Daiei-affiliated supermarket chain Maruetsu, and 12.5% of the shares of Tobu Store. In addition, Marubeni has a 20% interest in Metro Cash & Carry, the Japan subsidiary of German wholesale giant Metro Group. Meanwhile, Sumitomo Corp. owns 100% of the Tokyo area Summit food supermarket chain, and played an intermediary role in the deal that made Seiyu a Wal-Mart subsidiary. Mitsubishi Corp. acquired a 20% interest in Lawson in March 2003. In September 2005, the company also increased its investment to 20% in Life Corporation, a major supermarket chain based in Osaka. Early on, in 1998, Itochu Corp. acquired Family Mart from Seiyu. Mitsui & Co. formed an alliance with Ito-Yokado in 2001, and has since bolstered the relationship with Ito-Yokado holding company Seven & I Holdings.

All of this suggests that Japan's general company firms are intent on controlling the entire imported food distribution process, from the docks to the dinner table. Clearly, the key to increasing American food imports lies in finding ways to strengthen strategic partnerships with these powerhouses.

As large-scale general supermarkets evolve into still larger footprints, they seek to differentiate themselves by concentrating on ready-to-eat prepared food. Dishes with regional flair and flavor and food courts with an upscale feel are some of the hypermarkets' more popular offerings. However, most of today's general supermarket food sales space is nondescript. While the venues are invariably spacious, their grocery lineups mostly consist of the same national brand products, making it seem that except for low price, the chains are not particularly interested in competing with one another on a product basis. It is against this background that the stores have begun emphasizing take-out items as the ticket to separate them from the competition. Conditions are similar at food supermarkets, where national brands tend to dominate the stores' lineup of dry grocery products – canned goods, packaged foods and other long shelf-life items. For these retailers, fresh food and prepared food items can have an important role in the differentiation strategy. The same is true of convenience stores.

2.7 KEY CURRENT ISSUES IN VARIOUS CULTURES & COUNTRIES

2.7.1 America: Canada & USA

The key outcome of the discussion on emerging issues/weak signals is:

The indicators of growth

1. Baby boomers, those are people just turning 60, not the current seniors. Those people in America between the ages of 60 to 80
    a. want to look younger
    b. want to have more vitality
    c. want to be healthy without using pills
    d. want to be active

    This is a very large population in America

2. The young children are very overweight, what can be done about that in the future is uncertain. What will their needs bee in the future? There is no pre-determined answer to this issue. It will need to be developed by industry. We discussed the Sitra nutrition program, how they have developed a program for children in the schools. The problem in America is the requirement to provide food at the least expensive cost. Government now controls food in the school and in the future, government control will be challenged.

3. Men will be the primary purchasers of food products in the future, they will also be the primary household cooks. Why is this trend occurring? Due to the affluence of women. Men will become the stay-at-home parents. Women are/will be asking the husbands to stay at home.

4. There is a strong paradox: America has a hate for convenience foods, but with the fast-paced lifestyle it is required. Perhaps new methods of preparing "healthy" foods in a convenient manner are required.

5. Biotechnology in food will be of great importance. These include pro-biotic, fortified foods, etc. The problem is that the consumer is confused. A methodology will need to be done to convey the message to consumers. This will need to be initiated by industry. Industry needs to figure out how to market "bio" in the food sector.

6. Food safety will continue to be a major issue. In America, reconciliation between the FDA and the USDA is required. However, in America, food safety is a key priority and one of the best in the world.

7. Concerns regarding advertising to children will continue to rise.

8. The idea regarding global vs locally grown is a nice philosophical concept, but logistically impossible. Over 1/3 of the land in the USA cannot be cultivated, hence locally grown is impossible. The climate is so severe in certain areas.

9. Experts could not mention any specific Finnish food brands, however, when Benecol is mentioned, it is known. During the interviews, some key Finnish food companies' names were mentioned, but they were not recognized as familiar brands.

10. As a summary, responsible foods are required. They are VALUES DRIVEN PRODUCTS. These VDP's are socially responsible products, creating higher consumer satisfaction, and take into concern the environment.

11. Some of the databases used by Ketchum are Ropers, Vintel, Jaea Lauch and Trends data. She mentioned a combination of sources is required. The Mirhami program should consider these and other information sources— The Roper Center for Public Opinion Research.

Information on marketing to women between the ages of 25 – 54 should be of use to the Finnish companies during the workshops.

Women: A very interesting communications campaign "PINK".

PINK stands for:

- Power
- Passion
- Insight
- Inspiration
- Networks
- Knowledge

Today's women have emerged as a more powerful consumer force than ever before. They now control $3.3 trillion in consumer spending, are responsible for 80% of household buying, control more than 50% of the wealth in America, make 62% of all car purchases and take more than 50% of all business trips.

Yet many marketers fail to fully recognize and reach them, treating women as a niche instead of drivers of purchase decisions. Moreover, connecting to women and, especially, the critical demographic of women aged 25-54, grows increasingly challenging. This is because the average woman in this group mentally juggles a constant mix of career, family and self-care decisions at any one moment.

A new female-consumer concept that Ketchum defines as "multi-minding," *Women 25to54* delivers credible messaging that quickly and completely connects to this critical consumer audience.

Functional Food

Consumer health awareness continues to rise, the increasing availability of health information going hand in hand with the aging of populations and increased propensity for lifestyle diseases. The growing importance of the Senior (50+) demographic will influence functional food sales making it essential marketers cater for this audience's needs.

Functional food consumption is growing fast

The US market was worth US$21.3bn in 2006 whilst the European market reached US$8bn. The interest in functional foods and drinks has been fuelled by a desire for convenience, as well as health. Busier lifestyles are making it harder to meet nutritional requirements using traditional food and drinks.

Consumers are wary about health related claims on food and drink products and skeptical of their efficacy. The breadth of functional claims and the lack of governance and independent validation have fuelled consumer concern. Success in the market is increasingly dependent on establishing a relationship of trust with the consumer.

Today's Multi-Minding Woman

What is "multi-minding"? It is the perpetual state of mind for today's typical 25-54-year-old woman, who must constantly deal with the multiple dimensions of her life, whether she's sorting out a work project, helping with a child's school project or even relaxing in front of a TV show. At any one moment, she is thinking about choices related to career, household, spousal, motherhood and personal responsibilities. Consequently, these women have moved from "multi-tasking" to a new level of activity -- "multi-minding." As a result, these women have little time for commercial messages.

Ketchum has created the *Women 25to54* offering to precisely address this challenge. Building on a history of capturing media attention for some of the world's foremost brands and branded products, Ketchum's marketing and communications specialists break through to multi-minding 25-54-year-old women with a four-phase program that identifies, creates, disseminates and reinforces credible messaging for today's multi-minding women:

1. "What Really Matters" Credibility Index - The first phase concisely and accurately identifies the messages and messengers that will quickly and credibly resonate with multi-minding women.
2. "Quick-Connect" Messaging - The second phase creates "bite-sized," repeatable messaging for women by employing Ketchum's Quick-Connect Message Map.
3. "E-Surround" Programming - The third phase determines the right mix of editors, experts, equals, and entertainment marketing outlets to target with communications containing messages that blend with women's lifestyles and surround women with credible information.
4. Consistent Confirmation - In the final phase, post-program activities reinforce purchasing decisions and drive word-of-mouth endorsements.

THE GREEN TREND

The green trend no longer simply concerns environmentally friendly packaging, it has evolved into an entirely new mindset and approach to doing business that more and more retailers are embracing. This trend also affects the purchasing decisions of a growing population, with consumers increasingly demanding greener products from retailers and brands that have

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adopted green practices throughout the entire supply chain. Consumers and retailers are becoming increasingly conscious of where and how products are produced, to the amount of energy consumed during production and distribution, to the energy efficiency of retail outlets in which the goods are sold.

Major trends having recently emerged from this green push include the humane treatment of animals; sustainable agriculture; fair trade practices; organic and locally-grown and -sourced food; energy efficient equipment, transportation, and retail outlets; and eco-friendly packaging - all of which are having a tremendous impact on the North American retail food industry. The following points provide a snapshot look at the growth of the green movement and its impact on the North American food industry:

- The United States' green consumer market is estimated at 35 million consumers, or 16% of the adult population, who contribute to a burgeoning US$228.9 billion green industry (i.e. according to Lifestyles of Health and Sustainability [LOHAS] estimates outlined in the Green Consumers section).
- An overwhelming number of organizations throughout the North American food industry are adopting environmentally friendly practices; sixty-four per cent of American retailers are planning to construct more energy-efficient outlets in the future.
- The green food and beverage packaging industry is forecast to total at least US$42 billion by 2010 in the United States, with eco-friendly packaging expected to see 20% growth annually.
- Varying degrees of green consumerism exist in the United States, with the majority of the American adult population (i.e. 87%) having at least some knowledge of environmentally friendly products and a willingness to make green-conscious purchases.

Sustainable Agriculture

Sustainable agriculture, farming that encompasses protecting natural resources, ensuring profitable businesses for producers, and supporting the agricultural community, has become increasingly important to producers and consumers in recent years, as concern for the environment and safeguarding the food supply rises. Sustainable practices are being sought throughout the entire production process, and range from producing organic and natural food, to conserving natural resources and ensuring humane animal treatment, to reducing reliance on fossil fuels and decreasing greenhouse gas emissions. Processors are increasingly producing organic products, using bio- and diesel-fuels for farming and distribution of goods, as well as energy efficient equipment and technologies.

Humane Animal Treatment

One of the most recent trends to impact the green movement, the humane treatment of animals, is increasingly top-of-mind for consumers and processors alike. As more and more consumers become interested in where their food comes from and how it is processed, retailers are acquiring products from companies that maintain humane animal practices, while producers look to obtain voluntary certification. A number of independent certification organizations operate across the United States, and evaluate companies' animal-handling practices from acceptable health care to adequate food and housing standards. For example, Humane Farm Animal Care's (HFAC) "Certified Humane Raised & Handled" program, implemented in 2003, has certified over 50 companies' meat, poultry, egg and diary products to date. United States retailers have also begun to adopt humane animal treatment standards, with Whole Foods, the world's largest natural and organic food retailer, first starting the trend in 2003. The grocer has implemented its own animal welfare and food safety program, and only carries products that meet its standards.

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Green Packaging

With the trend toward green retailing not looking to subside in the near future, retailers are increasingly sourcing their products from suppliers with green practices.

Industry giant Wal-Mart, for example, has set a goal of reducing packaging across its supply chain by 5% by 2013. The retailer has begun evaluating its suppliers' product packaging and offering suggestions for eco-friendly enhancements. Nature's Path Foods has also recently implemented sustainable business practices by reducing packaging sizes by 10%, which translates into water and tree conservation, as well as a 20% reduction in transportation emissions.

Green packaging options are increasingly available for food and beverage products, driven by consumer demand for eco-friendly alternatives. The United States market for green food and beverage packaging is estimated to surpass US$42 billion by 2010. Processors are increasingly turning to greener packaging options as consumers are demanding biodegradable, recycled, reusable and minimal packaging solutions. Popular environmentally friendly options in the packaging industry include corn-derived PLA polymer, an alternative to traditional plastic bottle packaging; PET (polyethylene terephthalate) plastic bottles which can be produced from recycled materials; recyclable aseptic packaging, a paper product used for soup, sauce and wine products; recyclable corrugated solutions for fresh produce; and glass, which is 100% recyclable and contains many natural substances. New technologies and ongoing development are producing more of such sustainable packaging options, which are in many cases increasing cost savings and functionality for producers.

Consumer demand for green packaging solutions also recently had a major impact on the United Kingdom's retail grocery sector. The summer of 2006 saw a consumer backlash against a large increase in the amount of packaging for fresh produce. Items such as bell peppers were packaged in individual wrappers and tomatoes in multi-packs, while simple items like herbs were packed in plastic wrap.

There were a number of reasons for the apparent increase in packaging, one of the most important being a way to increase product freshness; however, retailers incorrectly judged that consumers would view prepackaged produce as a method of reducing the use of plastic produce bags. In addition, there was little promotion of produce items being shipped in reusable plastic containers in place of cardboard boxes. These green initiatives were lost on consumers who only saw "excessive packaging" at the time of purchase. This trend became a hot button issue with consumers and media alike, and forced retailers to the defensive and producers to promise to reduce the amount of packaging.

Energy-Efficient Facilities

Energy efficient manufacturing facilities are also gaining popularity, with more and more companies realizing the cost, environmental and social responsibility benefits associated with greening their production processes. Kettle Foods, for example, runs one of the largest solar powered plants in the Pacific Northwest region of the United States, with 616 solar panels generating 120,000 kilowatt hours of electricity per year, or enough power to produce 250,000 bags of Kettle Potato Chips. The company offsets its remaining electrical consumption by purchasing wind energy credits.

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Green Distribution

As the focus on green continues, producers, distributors and retailers alike are introducing environmentally friendly transportation systems in their businesses. Concerned with limiting their "carbon footprint" (i.e. the impact businesses have on the environment in the form of greenhouse gas emissions), players at all levels of the North American food industry are increasingly adopting energy efficient distribution equipment and vehicles, such as bio-fuel, diesel and hybrid options, while reducing air transportation of goods. Kettle Foods, for example, converts its factory waste vegetable oil into biodiesel to run the company's fleet of diesel vehicles; while Tesco, the United Kingdom's largest grocer, plans to limit air transportation of goods by sourcing the majority of products locally and regionally.

Green Retailing

The Food Marketing Institute's 2005-06 Annual Financial Review revealed that 87.5% of American retailers reported an increase in energy costs over the previous year. As a result, 64% stated they are developing more energy-efficient outlets when building or renovating, highlighting that greener retail outlets may be here to stay for the future. This retail "greening" mindset is being put into practice with an increasing number of food retailers converting their businesses into sustainable practices in an effort to conserve energy and reduce costs.

Wal-Mart recently opened its second high-efficiency Supercenter in Rockton, Ill., which is expected to consume 20% less energy than one of its regular Supercenters due to energy-efficient heating, cooling, refrigeration and lighting systems (e.g. skylights). This outlet is the second of four planned to open across the United States in 2007. Along with two experimental outlets designed to allow the company to test over 50 different environmentally friendly technologies and concepts, Wal-Mart is planning to introduce a prototype Supercenter by 2009 that is 25% to 30% more efficient and reduces greenhouse gas emissions by 30%.

Tesco has been demonstrating its commitment to sustainability by introducing green stores throughout Britain which feature wind turbines and solar panels, recycled rainwater for use in the outlets, and energy-efficient heating, cooling and refrigeration systems. Tesco is also planning to disclose to its shoppers the carbon footprint of all of its products, including the amount of energy used to produce them, as well as how far they were transported and by what method to each store. The grocer is also attempting to limit air transported goods to less than 1% of its products; an airplane symbol will be placed on each product distributed by air transport. More locally-sourced goods are expected to supply its outlets in the future. Such green strategies will likely be reflected in the company's Fresh & Easy Neighborhood Market outlets set to enter the United States in 2007.

Since an increasing number of companies, especially large producers and retailers, have and continue to green their businesses, national green building standards have been established in the United States and Canada. The US Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating System, and LEED Canada Structure are national programs that evaluate the sustainability of green buildings in each country respectively. More and more retailers continue to incorporate the program and obtain LEED certification when renovating existing or constructing new buildings.

Retailers 'green initiatives are also impacting consumers at the retail level. New strategies promoting sustainability and a green focus include preferred parking for hybrid vehicles, as well as eco-friendly alternatives to the traditional plastic shopping bag. Greener solutions, such as biodegradable plastics made from plants (i.e. primarily corn), have entered the marketplace in

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recent years. Reusable cloth bags and collapsible plastic crates have also increased in popularity in place of plastic shopping bags, a trend likely borrowed from Europe where consumers have opted for such alternatives for years. Ontario recently announced a goal to reduce plastic bag consumption by 50% by 2012, while Leaf Rapids, Manitoba, has banned all plastic bags in a move to become a more eco-friendly city. Several Nova Scotian grocers are also considering banning plastic bags from their stores to promote the use of greener alternatives. San Francisco, California recently implemented a plastic bag ban, and Los Angeles, California is considering following suit. Many retailers also offer shoppers small discounts on their bill if they do not opt for plastic shopping bags at checkout. Food Basics, for example, is one of a growing number of retailers that are encouraging the use of reusable bags by charging consumers for plastic bags. Industry estimates forecast the market for environmentally friendly packaging may see 20% growth annually.

Note that in some other countries (Germany for example) this is not a trend at all but standard custom to recycle and reuse. In America (a disposable society), the concept of recycle is a major "new" trend now.

Green Consumers

As green becomes mainstream and an increasingly large number of consumers embrace environmentally responsible practices, green consumers are becoming a considerably large and lucrative target market. The American LOHAS industry, currently valued at US$228.9 billion, is a rapidly growing market for green products and services that targets environmentally conscious consumers who regularly make ecologically-sound purchasing decisions. The LOHAS industry contains three key sub-sectors of particular interest to Canadian agri-food exporters:

§ The sustainable economy sector, valued at US$76.4 billion, which encompasses energy efficient buildings, technology and products; as well as eco-friendly vehicles and alternative transportation.
§ The healthy lifestyles segment, valued at US$30 billion, which focuses on the sale of natural, organic and wholesome food and beverages; nutritional supplements; and personal care products.
§ The ecological lifestyles sector, valued at US$81.1 billion, which includes eco-friendly home and office products; organic and recycled fiber goods; energy efficient appliances; eco-tourism and travel.

These sub-sectors signify major trends in the green movement that Canadian agri-food exporters should be aware of and/or can capitalize on.

The green consumer segment is largely comprised of middle- to upper-income consumers, especially baby boomers and "yuppies" (i.e. young urban professionals). The Natural Marketing Institute (NMI) has also identified five segments with which to categorize the greenness of the United States adult population, i.e. based on attitudes toward health, wellness and sustainability. These consumer segments include:

2.7.2 Russia

In Russia the main issue is the current economic situation. The opportunities are in very high growth mode. However, the report concentrated on economics due to this variance. Other data may be found separately from the 2006 report.

There is a disparity in levels of income, there are very wealthy and very poor. The key centers of economic are Moscow and other large cities.

2.7.3 Germany

Germany š the aging population.
Wealthy 50+ generation
Price consciousness vs. quality consciousness – both strong in Germany
Role of agriculture: increasing prices of agri-products, food used for energy
Food safety issues

2.7.4 China

Urbanization, modernization: people cannot always scope with new foodstuffs, compose their diet in correct way.
Worry about food safety (food poisonings, forbidden additives and chemical found in foodstuffs, low quality food e.g. baby milk powders and drinking water, counterfeiting)
Recycling (emerging in China and Hong Kong), packaging (luxus vs. functional and recyclable, plastic bag tsunami – "a day without plastic bag" campaign)
Eating out (rarely alone, normally with friends, colleagues, family and relatives)
Take away food might an early sign individualization (eating alone at work desk)
Extensions of fast food restaurants in China (Burger King, KFC, McDonals, Fairfood, Starbacks Cafe)

- A lot of snacks in the market
- What is healthy food?
- Fitness & exercise
- Obesity, obese children
- Asian people š health
- Diabetes
- Gourmet food: chocolate, shopping places, boutique eateries
- Media is full of food articles, restaurant critics, numerous TV programs, cook books
- Marketing of food increasing but not at that level like in Finland or Germany
- School food policy

2.7.5 India

Obesity of children, middle-class women
Malnutrition. In India part of the population is suffering from malnutrition and nutritional deficiencies and the other part symptoms of over nutrition: obesity, coronary heart diseases, diabetes.

- Development of Indian agriculture, food processing industry and organized retail industry
- Guarantee food security, food safety after that but important
- Organic food is not an issue in India
- Eating out
- Urbanization

Loosing food roots (Both in China and India rural traditional diets are considered to be natural and healthy, urbanization has brought problems to manage the daily diet. Citizens have lost their touch how to choose foods and how to compile their daily meal. This causes health problems: growing figures of diabetes, obesity and coronary heart diseases.)
Rational and social marketing will still be of demand in 2030. After 25 years advertising will most probably be more appealing to emotions. Advertising / information does not reach millions of mostly illiterate Indians living in remote areas. However, the mobile network will soon cover the whole country. The number of users is increasing by 5 millions each month. In future mobile phones could be used for brand building, advertising and dissemination information. Indians are definitely not as brand-conscious as the Europeans. Price counts more. However, there are already signs of increased brand consciousness. In 2030 most food purchased will be branded and people will have their favorite brands they will get stuck to.

2.7.6 Japan

The main issue deciphered from the literature in Japan is the basic law to ensure children eat healthy. This law is explained below.

The role of farmers, fishermen and food-related businesses

The Basic Law on Shokuiku stipulates the responsibilities and duties of the national government, local governments, educators, farmers and fishermen, food-related business groups, and the Japanese public.

The law calls on farmers and fishermen, and their related organizations, to offer opportunities for people to experience a variety of farming- , fishery- and forestry related activities, in order to enhance their understanding of nature$ benefits and the importance of human activities in food production and distribution. Farmers and fishermen are also expected to .make sincere efforts to promote Shokuiku activities by collaborating with educators and other concerned parties.

From this clause, we can see that the law envisages a significant role for the farmers and fishermen who support our dietary lives, in counteracting the increasing tendency to devalue sensible eating in today$ busy social environment.

In some communities, there has already been a marked increase in the number of farmers and fishermen taking on this responsibility through direct selling to consumers; hosting educational tours by and providing on-site experience activities for local elementary school students; and supplying agricultural products for local school lunches. With the enactment of the Basic Law on Shokuiku, such exchange activities are expected to develop further, supported by expanded government assistance.

Meanwhile, food-related businesses are expected voluntarily and actively promote Shokuiku in their business operations, while making sincere efforts to cooperate with national government and local governments measures on Shokuiku promotion. Those business, even if they themselves consider they haven.t promoted Shokuiku up to now can work on Shokuiku soon by reviewing their existing activities such as factory tours, cooking classes (using their products), and Web-based information on foods from Shokuiku point of view.

SECTION III: FORESIGHT -IMPACT ON THE FUTURE: TREND EXTRAPOLATION

In this section we analyze with a view to the future. We begin with what we extrapolated from the global Finpro studies as weak signals. This is followed by assumptions on trends – the driving forces. Then we look to the future with ideas on supertrends with a view to our weak signals and drivers extrapolated from the reports. Finally, we provide our own thinking based on the signals, trends, and visions.

3.1 TREND IDENTIFICATION

In this section we first define trends (as we at Finpro see them) and then provide the trends we have identified in the analysis of the reports. This is required as the project is for the Finland Futures Research Center, who is experts in trend analysis and identification and as such, can further the analysis through that identified here.

3.1.1 Definitions

Mega Trends
Trends come in different sizes. A mega-trend extends over many generations, and in cases of climate, mega-trends can cover periods prior to human existence. They describe complex interactions between many factors. The increase in population from the Paleolithic period to the present provides an example of a mega-trend.

Potential Trends
Possible new trends grow from innovations, projects, beliefs or actions that have the potential to grow and eventually go mainstream in the future (for example: just a few years ago, alternative medicine remained truly "alternative". Now it has links with big business and has achieved a degree of respectability in some circles and even in the marketplace).

Branching Trend
Very often, trends relate to one another the same way in which a tree-trunk relate to branches and twigs. For example, a well-documented movement toward equality between men and women might represent a branch trend. The trend toward minimizing differences in the relationship between the salaries of men and women in the Western world could form a twig on that branch.

Life-cycle of a trend
When does a potential trend gain acceptance as a *bona fide* trend? When it gets enough confirmation in the various media, surveys or questionnaires to show it has an increasingly accepted value, behaviour or technology. Trends can also gain confirmation by the existence of other trends perceived as springing from the same branch. Some commentators claim that when 15% to 25% of a given population integrates an innovation, project, belief or action into their daily life then a trend becomes "mainstream".

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3.2 WEAK SIGNALS

- Can we see weak signals: emerging issues, first signs of change in a country - not yet seen as trends?
    - E.g. men become stay-at-home parents instead of wives; opposition against fast and convenience foods
    - The rise of "fast food"
    - The impact of economics on local food consumption

Weak signals and wild cards definition
In futures research "weak signals" may be understood as advanced, noisy and socially situated indicators of change in trends and systems that constitute raw informational material for enabling anticipatory action. "Wild cards" refer to low-probability and high-impact events. This concept may be embedded in standard foresight projects and introduced into anticipatory decision-making activity in order to increase the ability of social groups adapt to surprises arising in turbulent business environments. Such sudden and unique incidents might constitute turning points in the evolution of a certain trend or system. Wild cards may or may not be announced by weak signals, which are incomplete and fragmented data from which relevant foresight information might be inferred.

3.2.1 Changing sex roles

Men become stay-at-home parents instead of wives, become primary purchasers and household cooks (Canada)

- In India housewives continue cooking. Men may participate in the process, but having dominating role. Women make most of the brand decisions. But there will be more advertising targeted at male population spending more time outside the house.
- In China men are shopping and cooking more and more
- Opposition against fast and convenience foods
- The rise of "fast food"
- In India. Globals and locals (modification to local taste)
- The impact of economics on local food consumption
- In America a definite weak signal is the Brave New Man - The term "metrosexual" and the characteristics that define what it means are shifting the idea of today's average man to the "Brave New Man." The Brave New Man is looking for products and services that appeal to his unique brand of masculinity – a man in touch with his feminine side.

3.2.2 Important to be beautiful and healthy looking

- Chinese beauty surgery, SPAs, TCM, beauty food
- Wish for healthy and beauty (Germany)
- Demand of natural/original food
- Ecogastronomy: to protect heritage of food, culture, traditions. Slow food is good, clean and fair food. Slow food members consider themselves as co-producers not consumers (Germany)

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- Increasing income and educational level in Russia, China and India change global balance and has impact on working force, raw material resources (food, packaging material), prices of materials, energy use, traveling as well as trends globally
- Increasing number of high income, active, decisive 50+ age group (in 2020 49 % of Germans) interested in innovations, health care and traveling (Germany, Japan, Hong Kong)
- Big international food groups active in functional food (Nestle, Unilever, Campina)

3.2.3 New lifestyle for eating and exercise

- Since people have started paying more and more attention to their health, there has been a corresponding change in their eating lifestyle. More rich and well-educated people now prefer to eat more fresh fruit and vegetables, replacing meat and alcohol. Moreover, people's exercise habits are more established. As the government invested a lot on the infrastructure in communities for people to exercise after work, more and more people in the different age groups have increased the time they spend on exercise each day. Many pharmaceutical industries have also produced new medicines especially to treat obesity and its relative diseases, which could help people to improve their lifestyles. Nowadays, food products related to reducing tendency of contracting heart disease, cancers and etc. are becoming more popular. Lizhi (good source of antioxidant), concentrate of blue berries (good for eyesight), edible fiber (good for digestion) are added to food as functional ingredients.

- With increasing health awareness, Chinese people are more knowledgeable about organic foods and healthy foods than they used to be. Influenced by health information through the mass media and education, people pay much more attention to food health. Organic foods have already been introduced, and are popular among those with high income groups. There is a variety of healthy food, green food and natural foods on the supermarket shelves.
-
- Low fat, no added sugar, and 100% natural food are the most popular varieties. In order to maintain a healthy lifestyle, more organic and green foods are eaten, even though their prices are higher. There are also many new methods and products designed by manufacturers or imported from foreign countries which improve the quality of water and food. In all, natural is the keyword.

3.2.4 Demand of natural/original food

- Water supply (India, China)
- Indian agriculture needs more efficiency
- Differentiation of restaurants, foods, brands not by country but by region (Germany)
- Alternative sources of energy – food materials for energy: wheat, willows, poplar in Germany. Due to overproduction of food it more profitable to produce energy instead of food.
- Use of nanotechnology in food processing: e.g. indicating by color change whether the milk is spoilt.
- Nanotransponder, a tiny capsule, containing vitamins, coloring or flavor agents which would trigger e.g. by temperature (Nestle).

- Nano sensors, indicators for spoiling.
- Ultra convenience food, nano food, immortal food, taste, mood & mind food, Health food, I-food, no-food.
- In France and Netherlands certain health insurances give their clients bonuses if they consume yoghurt. On the other hand in Germany insurance companies have declined to subsidize any functional food.

In many ways the signals for the change are not weak – but rather strong. These strong visible signals include the changes taking place e.g. due to globalization of Indian economy, increasing income levels and urbanization. With regards to changing lifestyles India is to a large extent following the path developed world took earlier – and which in many ways is the opposite of the current Western trend (packaged vs. fresh; nutrition vs. enjoyment; local vs. global…) Additionally, the changes are taking place very fast, especially in the urban areas.

3.3 TRENDS IDENTIFIED IN THE ANALYSIS (DRIVING FORCES INFERRED FROM THE REPORTS-ENVIRONMENTAL SCANNING)

These are the trends identified; we have not classified them as mega-trends or key trends as they may be components of both.

Obesity is a global problem and a major threat to manufacturers. In the US, obesity is already at epidemic levels, with more than 60% of households where the main shopper is aged between 18 and 35 years, obese and overweight. There are key stages at which manufacturers can exploit opportunities that exist in solutions aimed at consumers dependent on both life stage and also weight profile.

Healthy eating is the key issue facing the food industry today as millions of overweight consumers face increased risk of diabetes and cardiovascular diseases. More than 17 million people worldwide now die each year from heart disease. We look at the "health" of each country and identifies the key new product development opportunities. Understand how the key factors driving the uptake and healthy food and drinks will impact on your strategies and identify present and future major markets for healthy food and drinks.
New trends in innovation and new product development (NPD) are emerging in the global food and drinks ingredients industry. The key trend of healthy ingredients is focusing on themes including weight management and functional food and drinks and the leading players have also identified new opportunities in areas from biotechnology to bio-fuel production.

Innovation is the most important factor for building competitive advantage in the global food and drinks market. However, most industry executives are unsatisfied with returns on investment achieved on their new products. Although breakthrough innovation is generally perceived to be the most profitable, incremental innovation and category repositioning could prove more effective strategies.

As the global population ages, fast foods become more prevalent and distrust of traditional pharmaceuticals grows, the pressure on the food and drinks industry to provide cost effective solutions for health problems is growing year on year.

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Direct your marketing and NPD strategies to a particular health trend and avoid those ingredients with little or no scientific credibility. Evaluate and exploit new opportunities from the use of novel nutraceutical ingredients within food and drinks products.

Brand loyalty is changing, under threat from the growth of private label and more promiscuous consumer purchasing habits. Food and drinks companies are beginning to question the strategic value of building brand loyalty over driving customer acquisition. While advertisers traditionally channel investment into brand awareness to capture the third to a half of customers unsure of which brand to buy, innovation and new marketing approaches provide the key to effective customer retention and profit growth.

Examine some of the key challenges to brand loyalty and provide actionable recommendations for strategic responses, drawing on opinion leaders 'ideas, best practice, case studies and a proprietary survey of top executives in the industry. Enhance your strategies for building and maintaining brand loyalty using the actionable recommendations.

These "current" key trends are "global" and significant as they affect all the countries in our study:

- Consumerism will be global due to external environmental and technological forces.
- In Japan the trend is towards "individualism" as here in America, the trend is towards obesity, as in America. Russia is just developing, but very quickly.
- Branding and marketing is a major trend and absolute requirement.
- The supermarket and convenience stores are the Finnish companies target consumer, not the end consumer. According to the reports, they dictate to the consumer through branding.
- Women are working more (in Finland they do also), thus men are / will be making meals. Individualism and convenience requires this also.
- Children actually do have buying power now, this has been influenced by electronic cash "technology trends" and because there are fewer caregivers at home and individualism is prevalent.
- Purchase of "luxury" food items of added value versus commodity items is key to $, this also relates to individualism.
- Environmentalism, growth of "biorefining" appears in Japan report and I know this from America also --- this leads to the development of crops for use for new types of energy, the crops likely will be 1. Corn; 2. ??? --- it is a new development in R&D stages. What does this mean? Land for other crops not as prevalent, food for animal feed may be at risk.

Here is what I think about analysis of demographics in year 2030 (which is our focus).

- Focus on the 5 year old to 50 year old person at this time. Analyze their current eating habits and future direction, "we have not done this in our reports" thus we are summarzing and not expected to do so, thus this can be a recommendation. I will make a table on that.

5 yr old in 2030 will be 28 years old
10 year old will be 33
15 will be 38
20 will be 43
25 will be 48
30 will be 53
35 will be 58
40 will be 63
42 will be 65 (current retirement age)

After the point of 65 years of age, the focus is on senior and a different type of food segment, i.e. in Japan softer food is labeled as such. Also, we are unsure of the wealth due to pension (in America), may not have due to baby boom generation taking all the $.

Perhaps we can suggest if we look now at the parents of 5 or 11 year olds, elementary school children; and 12 to 18 year olds, middle, high; 19 - 25 university; then the current working population of 26 to say 35- what are their habits for consumption? This will indicate the consumption patterns in 2030.

An individualized society is taking and will continue to take priority over a "family" style eating pattern = fast food, less ingredients, frozen, delivery.... etc.

Not only eating alone, but when eating together, having different menus -- an INDIVIDUALIZED food industry has emerged.

Food education is very important, the governments are taking a priority role. In Japan as America there are "food guides". In Japan it is taken much more seriously and implemented at the grade school level, in America it is DEFINITELY not.

How will we meet the food supply of 2030 when population moves from 6B to 9.5B? (a question for the focus groups, workshops)

There are 3-Ts when analyzing a consumer trend (Japan)

1. TIME - saving time and money
2. TASTE - Looking for new tastes all the time
3. TRUST - A "feel" of luxury - a brand - encourages consumption

- There is increased selectivity and polarization in consumption
- There is premium consumption
- There is the issue of food safety, however, a forecast indicates that the country of origin will not be a requirement to consumers in 2030.
- Sustainability is an issue. I.E. the consumer will look to the producer of the food in the future, and with more knowledge, will understand and trust the producer. The sustainability issue should be studied in the future. There are financial sustainability indexes that are very current now. They indicate growth in $ through ethical practices. Kesko is on an index.

Over a 20 year period, there has been a 50% increase in spending on "take out" foods.
A supertrend is energy problem which means a requirement to shorten production processes.

Food industry will need to work with other industries very closely, for example, packaging inside a lunch box can serve to protect the food from spoiling and convenience food will be paramount.

The terminology of "functional food" is not currently accepted in Russia, America, Japan. However, in America, the "experts" and good industry accept the term. It appears to have a greater impact when not branded as "functional" but good for you, heart healthy, and other such "descriptive" terminology. Perhaps the terminology can be changed to value-added or other marketing and advertising options. Advertisements do not stipulate functional, labeling is not allowed either, however, the RESULTS it can bring to the consumer are promoted. Again we are at Branding.

QUESTION TO FFRC: Are the Finnish consumers strongly influenced by advertisements, by brand? Japan mentions no, in America DEFINITELY YES. When I think about it, there is really not much advertising on the Finnish TV. If consumers are not influenced, then the industry, our target focus, would not be either as if they are local companies, they are also consumers. In the countries globally, brand is key, is it in Finland, if not, it must become so to succeed in foreign markets.

3.4 DRIVING FORCES AND TRENDS BY COUNTRY AND GLOBALLY

This chapter gives a description of trends and driving forces of each food culture and behavior by cluster of studied countries. In this section we ask the following questions:

- Are the trends shared globally or are the trends global with local impact/implementation?
- Trends within the food industry: e.g. flavor shifts
- A "global" trend(s)
- How a certain trend is implementing in studied countries e.g. environmental thinking, vital 60+ people, overweight, global vs. locally grown

The sections in this "visioning" chapter describe trends as we see them (Maarit and Sharon) from weak signals to trends to super trends. We are describing from weak to strong. Most all trends are global driving forces, particularly the super trends. There are a few cultural instances where similarities differ, particularly due to economics and cultural customs; however, generally we conclude that the driving forces are global at different time sequences.

There is some cross-over when combining driving forces and trends. We (Maarit and Sharon) see the main driving forces as:

- Power of organized retail trade
- Power of consumerism
- Fear of food safety
- Urbanization
- Willingness to modernize (e.g. food habits, lifestyle, factories, retail trade).
- Industrialization. However, this may not fully apply to China because food is produced in factories but at the same time the lower processing of food exists.
- Globalization

Other issues arise, for example:

- Organized retail trade (global)
- From fresh/wet markets to super and hypermarkets (global, but prevalent and moving reverse direction in America)
- Global supermarket chains like Wall-Mart, Carrefour
- Brands cross the borders (caviar in Delhi)
- Power of marketing will still increase (global)
- Branding food (global)
- Increase of rational advertising (Hong Kong government and Japan)
- Food safety issues: fresh is not necessarily pure or safe
- Food security (India)
- Ethics: Sustainability of the food chain
- Impacts of willing to enjoy of safe food
- Organic food (Canada, signs in HK)
- Natural food (Canada, Hong Kong)
- Local food (China, India)

FOOD SAFETY IS ONE OF DRIVERS IN GERMANY, CHINA AND INDIA

INDIA: (emerging people don t always know)

- Awareness about food safety is increasing, but still rather low. Products containing e.g. pesticides, chemicals, heavy-metals and food contaminations are rather common.
- Government has come up with new food safety-act and working towards increasing the quality standards. Food safety authority has recently been set up.
- Huge investments are being made into the development of the supply chain
- Advertising of safety processed food is seen: packaged milk and its safety are being advertised. People still need to be educated about the food safety and the benefits processes can bring about.
- People will increasingly look at symbols and standards telling about the quality and safety of the product.
- Indian consumers tend to buy fresh. Fresh food is considered to be safe.

Food safety (China) really an acute problem

- Food intoxications, food and animal related infections (Avian flu, SARS, Streptococcus suis in pigs), use of non approved chemicals or excessive additives (Malachite green in fresh fish, artificial juices) in food production, fake foods (baby milk powders with too low protein content or excessive iodine, fake branded products) have caused nationwide outbreaks, malnutrition and news.
- Meat, fish, and vegetables are the main food stuffs for Chinese people. The consecutive food safety problems occurred recently in China have had a great impact on the people s health, food supply and business of respective sectors as well as food control and regulations. The Avian flu outbreak in 2004 gave people a lesson about proper handling of poultry. New preventive measures and remedial actions have been taken by Chinese Government (Centralization of the slaughtering, separation of human and poultry, invention of quick test and vaccine for bird flu). The newest cases of Streptococcus suis in pigs and malachite green used in fish farming are turning food and health authorities to improve the control of the value chain and to create better standards for animal breeding or cultivation.

Germany – well established
- § Control systems available, more modern technology needed – traceability
- § In spite of that food scandals happen (imports, animal welfare)

America – very well established with strong traceability
Branding and marketing everywhere

New forms develop!!!
India and China emerging
Chinese extremely brand oriented
In America, brand and advertising is all that counts, brand advertising is a major business.

3.5 SUPERTRENDS

3.5.1 Supertrend 1: Technological Progress

Technological progress has been the supremely important trend in human evolution for millions of years. When it is weakened or reversed in one area, it flourishes elsewhere. The power, persistence, and acceleration of this trend suggest that it will continue through the 20th century and perhaps even longer. Scientific research continues to provide vast amounts of knowledge that technologists can exploit. Biotechnology promises a fourth revolution and there could be a fifth through nanotechnology. Here are some examples for thought.

Health Information Systems to 2015
New third generation cell phones that are currently being deployed in major cities will blur the line between cell phones and personal computers. Third generation cell phones are able to download information from the internet at speeds in between dial-up and broadband. Costs for third generation service will initially be high as the service is rolled out, but is likely to be lowered in price or included as part of a basic wireless package as the technology becomes widespread.

Wireless phone companies have already set standards for faster 3.5 generation cell phones and WiMax has been mentioned as a possible fourth generation cell phone technology, but no standards have been set yet.

The functionality of cell phones will grow and enable them to take on many of the functions currently offered by computers. It will be commonplace for the cell phones of 2015 to link to medical or personal biomonitoring devices and relay the information to the individual's personal health record or to their doctor's system.

It is likely that the cell phone and biomonitors will relay data over the network during low use periods to allow more cost effective applications. It is also possible that cell phones themselves will become a biomonitoring tool able to record and analyze heart rate, motion, and other data.

By 2015, all Community Health Centers will have Electronic Medical Records tied into advanced clinical management systems. Patients will have access to a personal health record that is linked to the electronic medical records of their healthcare providers and to biomonitoring devices. The personal health record is automatically updated with information from the electronic medical record and biomonitoring devices. Patients can adjust the security settings on their personal health record and control which providers have access to the health information in their personal health record. Both patients and providers have access to powerful knowledge management software to help turn this healthcare data into useful information to improve health outcomes. This software presents the biomonitoring data in easy to read format. This software reduces the disparities in health literacy among different patient groups by making it easier for them to access health information in their own language and in culturally appropriate ways.

India and China need modern technology in all sectors of the food chain.

The workshop scenarios may take some of the technological examples in Supertrend 1 as examples to think about how these technological changes will affect the companies. For example, consumers will become more aware of the nutritional values in food if biomonitoring devices are utilized, and depending upon the demographics, the nutrition content in the product, if changed, may be of greater value to the consumer.

Packaged and processed food industry grows in the future – demand for packaging materials and food processing technology solutions grows in India and China

- There are more packaged and processed foods in supermarkets of China now such as dairy products, ready meals, frozen and dried processed food.
- Besides these, innovations in food-biotechnology and agri-bio are required. (India).
- Logistic solutions (temperature controlled warehouses, warehouse management systems, refrigerated trucks.
- Production of a huge amount of foodstuffs at low cost (efficiency); high technology to produce functional foods.
- Indian retail and food processing industry has very low level of organized business
- India needs to develop its agriculture and new cultivation crop species (using biotechnology).
- China and Hong Kong and as far as I understand India, too, are not innovative in technology related to food and retail sector – they are followers of technological trends.
- ICT sector is growing in both countries. China provides consumer electronics solutions not b-to-b solutions. However, this might be a sector we are facing a surprise in the future.
- These countries are users of advanced technology. At least China is able to afford it and pay about it.
- Packaging solutions
- Technologies were mainly used to provide massa products at reasonable prices. Now we are looking for genetics and bio technology. Medical industry, ICT play important role e.g. in development of micro chips which could be used to observe the quality of food. The taste will not get lost in the future process. Consumers pay attention again to the original taste.

3.5.2 Supertrend 2: Economic Growth

Increasing income and educational level in Russia, China and India change global balance and has impact on working force, raw material resources (food, packaging material), prices of materials, energy use, traveling as well as trends globally

- More eating out, foreign foods, processed food

- Brands becoming important
- Demand for services: cafes
- Traveling abroad
- Safety of food becomes important when the person is able to choose

This may have causes:

- Consumption of food raw materials and production tools increasing ≥ raising global prices (cereals, fuel, packaging materials, steel)
- Price of energy
- Rising prices of oil and gas creates a need for alternative heating materials –wheat (Global, Germany)
- In Germany middle-age people have (in 2020 49 % of Germans) high income. They are active and interested in innovations, health care and traveling (Germany, Japan, Hong Kong).
- When the society is well-developed and affluent like Hong Kong is, new kind of behavior phenomena captivate citizens 'minds: luxury is struggling with sustainability.
- People like to eat expensive ingredients. Bird nest, fine fin soup, abalone, Shanghai crab. Some fish species are even in danger to disappear because of their gourmet food popularity. Many are prepared to pay much more about dinner than what is typical in Finland. They also want to test different restaurants.

3.5.3 Supertrend 3: Improving Health

- Vitality
- Wanting to look younger, more vital, healthy and active (60+)
- Survive of work stress (China, Hong Kong)
- Weight control
- Male, female, especially children
- The number of signals and symbols of safe and healthy food is expected to increase.

Obesity

In India and China affluent middle-class, especially children are facing overweight, obesity and diabetes. In America all classes of people are facing obesity. In Japan there is great concern about children and young adults with obesity.

- The consumption of sugar and fat increasing alarmingly
- In India obesity rate is still 2%, but falling prices and increasing availability of high calorie foods may lead to the US-like situation where the poor eat the unhealthiest and fattiest food.
-
-

New lifestyle for eating and exercise (China)

- Since people have started paying more and more attention to their health, there has been a corresponding change in their eating lifestyle. More rich and well-educated people now prefer to eat more fresh fruit and vegetables, replacing meat and alcohol. Moreover, people's exercise habits are more established. As the government invested a lot on the infrastructure in communities for people to exercise after work, more and more people in the different age groups have increased the time they spend on exercise each day. Many pharmaceutical industries have also produced new medicines especially to treat obesity and its relative diseases, which could help people to improve their lifestyles. Nowadays, food products related to reducing tendency of contracting heart disease, cancers and etc. are becoming more popular. Lizhi (good source of antioxidant), concentrate of blue berries (good for eyesight), edible fiber (good for digestion) are added to food as functional ingredients (China, Hong Kong)

- Exercise begins to be a strong trend in Mainland China (private services)
- Low fat, no added sugar, and 100% natural food are consumed to maintain a healthy lifestyle.
- Holistic wellbeing services: Spas, beauty treatments, exercise + food, personal trainers (Hong Kong, large cities of China)

India:

- In India and China affluent middle-class, especially children are facing overweight, obesity and diabetes.
    - The consumption of sugar and fat increasing alarmingly
    - In India obesity rate is still 2%, but falling prices and increasing availability of high calorie foods may lead to the US-like situation where the poor eat the unhealthiest and fattiest food
- Consumption of health food like functional food; health-enhancing food (e.g. ayervedic products); tasty easy-to-cook/ready-to-eat food and "sports" food will still increase

Germany & Japan:

- Vitality
    - Wanting to look younger, more vital, healthy and active (60+)
    - Survive of work stress (China, Hong Kong)
- Weight control
    - Male, female, especially children
- The number of signals and symbols of safe and healthy food is expected to increase.
- Care for children's health (Japan)

America:

- Most all of the health issues identified in the other countries (with the exception of regulatory processes) are standard practice in America and taken for granted as part of the lifestyle. There is a multitude of obesity, diet clinics everywhere; beauty is the key as is weight. In fact, there is a problem with women trying to be too thin, trying to emulate models and actors. In addition, cosmetic surgery is standard practice, youth, vitality, beauty are prevalent.

3.5.4 Supertrend 4: Increasing Mobility

- Within regions, traveling, work traffic (women work), long distances
- The demand for convenience, easy-to-prepare and fast food for go and home and at work places
- In China: migration from the countryside and smaller cities to metropoles and their surroundings because work force is needed (urbanization of eating habits)
- Chinese have started to travel

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3.5.5 Supertrend 5: Environmental Decline

Environmental decline is continuing for the world as a whole because of continuing high population growth and economic development. Certain nations have made major efforts to reduce pollution and other environmental abuse, and these efforts have often been remarkably successful: Pittsburgh is no longer enveloped in factory smoke, and the fish have returned to the River Thames. Nevertheless, the earth remains sick and is still getting sicker. Among the trends making up this much-lamented supertrend are:

§ Petroleum, a nonrenewable natural resource, is being rapidly burned up. Just how long the supplies will last is much debated, but serious problems may arise a petroleum stocks dwindle.
§ Freshwater supplies are declining everywhere around the world, with lakes drying up and water tables falling, causing wells to run dry.
§ The supply of arable land available for farming is also dropping steadily even as population increases. Farmers desperate for land are laying waste to large swathes of the rain forests of Brazil and Africa. Overgrazed scrubland is turning into desert.
§ The oceans are already over fished. Fishing in many areas had to be outlawed to allow fisheries to recover.
§ Numerous species of animal and plants are becoming extinct even before they can be identified, studied, and evaluated for potential medical benefits.
§ Global warming is melting the polar ice caps, causing the oceans to rise and threatening costal areas around the world.

3.5.6 Supertrend 6: Increasing Deculturalization (Loss of Traditional Culture)

Urbanization is one of the many factors contributing to deculturation. It is happening on a massive scale in the developing nations, largely because people in rural areas cannot make a living. By moving to cities, people leave behind the social and cultural support systems of their native communities, and they must function in an alien environment where people do not speak or act as they did back home.

Below is INFORMATION FROM A NISTEP REPORT (RESULTS OF A DELPHI STUDY)

The social infrastructure field combines the "cities, construction, and civil engineering" and "transportation" fields of the previous analysis, surveying 97 topics in 14 areas. Of the 155 respondents, about 56 percent envision society 30 years from now as "a society driven by environmental technology." This is a slightly idealistic environmentally-orientated society in which "compact cities will be distributed around the country based on environmental policy... urban transportation will be handled by public transportation and dissemination of fuel-cell automobiles will progress," but one that is not that far from realization.

On the other hand, 38% envision a "world market" society, in other words, a realistic society that confirms the status quo with "concentrations of people and capital in a few major urban areas as economic competition and population decline advance... railways and automobiles forming the core type of transportation around major cities... automobiles as the main form in suburbs."

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In addition, 90 percent of respondents envision private-sector corporations playing an expanded role in the social infrastructure field. These are all matters that are often spoken of in recent years.

The strong realist tendencies and, in a sense, strong conservative tendencies of the respondents are reflected in these survey results. In fact, topics with high scores on the degree of importance index are concentrated in the areas "disaster prevention technology" and "revitalization, maintenance, and management of social infrastructure," perhaps reflecting the frequent occurrence of natural disasters in recent years.

In addition, predicted times of both technological realization and social application for field topics tend to be markedly on the early side relative to all topics. The results for the fields with which the social infrastructure field should integrate and collaborate, the environment, social technology, and information and communications fields, were also very much in line with common sense. The field of social infrastructure technology is an extremely long-lasting one that has existed since the dawn of human history. In fact, in a sense human history is a history of "disaster prevention." Certainly social infrastructure is much less colorful than leading-edge technology sectors, but just as we are supported by the development efforts of the previous generation; the mission of human beings is to pass on the maximum fruits of technical development to the next generation. In a sense, the above survey results can therefore be seen as appropriate and steady results.

On the other hand, the tendency of the respondents is towards disaster prevention and maintenance management rather than towards problem-solving topics. This may be a rather harsh assessment of the kind of technological topic that creates new services.

This phenomenon is taking places in China and India, but still in early phase. "Bad" impacts of the phenomenon are seen related to health issues. Obesity, diabetes are soon national diseases at least in urban cities of China. The trend is obvious in India as well. In China private sector is expected to solve the problem (Private hospitals, health care centers, fitness centers, food companies, retail outlets.

The sufferers are wealthy middle-class, well-doing citizens not poor. The poor people tend to follow rich people's habits, this is seen in India. Germans have observed that low income people tend to eat cheaply in fast food outlets.

3.6 THE WORLD IN 2030, WHAT MIGHT IT BE?

One means to look ahead to the future is to think back to the past. Taking today's timeline of 2007, what changes have occurred in the past 23 years, back to the year 1984?

Then we can look to the future, evaluating the depth and impact of the changes experiences from the period 1984 to 2007.

In 1984, as example of the literature (Cambridge History of World Food) indicates the following:
"Household food security has been defined as the access of all people at all times to sufficient food for an active and health life (World Bank 1986). Two of the biggest determinants of household food consumption are income and prices. Rising income and falling food prices

increase a household's ability to obtain an adequate diet. However, an accumulating body of evidence shows that it is not simply the level of household income but who earns that income that is important in improving a household's food intake.

Income controlled by women is more likely to be spent on food than is male-controlled income (Braun and Kennedy 1994). At similar levels of income, households with more women controlled income are more likely to be food secure. Evidence for the positive influence of female control of income on household food expenditure (Haddad and Hoddinott 1991), caloric intake (Garcia 1991), and anthropometric indicators (Thomas 1990) is increasing in both Africa and Asia. This influence may be explained by a number of factors: (1) societal gender roles that cast women in the role of gatekeepers; (2) different preferences – women may prefer to spend more on children's food because they spend more time with them. (3) different constraints. Whatever the reason, getting income into the hands of women seems to be one way of enhancing the household's food security."

A number of different food trends have been playing themselves out over the past twenty years some of which are scientifically correlated and others coincidental. An interesting inverse relationship exists between the decrease in home food production over the past few decades and the astronomical rise in obesity. The exact nature of the relationship is more for scientists to ponder and unravel than kitchen gardeners, but it seems logical that the easier and cheaper food becomes, the more of it we tend to eat (Kitchen Gardeners International).

In 1985 more people were concerned about salt than fat; and now that has flipped. To Bauer that's not the most significant conclusion. If you look at 1985 versus 2005 it indicates we're less concerned about everything: salt, additives, fat, cholesterol and sugar. Is that possible, considering how much more we know about them these days? The NPD Group Health Track did a questionnaire fielded each year to its National Eating Trends panel, which includes about 2000 respondents. The panel is balanced to the U.S. Census on key demographic variables (including household income, household size, age, education, employment). The chart really reflects is the huge increase in information that has been published in the last 20 years. In many cases, Americans have become saturated with too much conflicting information and people don't have a clear picture of what to avoid (Michael Bauer).

In another example, there is currently great concern over fat intake, however, a study conducted from 1920 to 1984 indicates that: "Coronary heart disease mortality has declined in the United States since 1968. Because diet has been implicated, a search was conducted of published individual assessments of food intake since 1920. One hundred seventy-one studies, ranging from 8 to 20,000 subjects and covering all ages, all ethnic groups, and both sexes, were analyzed by regression, with values weighted by number of subjects in each study. Results show fat intakes rising from approximately 34% energy in the 1930s to 40-42% in the late 1950s to mid 1960s then falling steadily to approximately 36% energy in 1984. This trend was seen for all age and sex groups. Saturated and monounsaturated fatty acid intakes fell from 18-20% energy in the early 1950s to 12-13% energy in 1984 whereas polyunsaturated fatty acid intakes rose from 2-4% energy to 7.5%. These results differ markedly from food supply trends and indicate a fall in US fat intake, which preceded the decline in heart disease mortality". (Trends in individual consumption of dietary fat in the United States, 1920-1984. Stephen and Wald. Division of Nutrition and Dietetics, College of Pharmacy, University of Saskatchewan Saskatoon, Canada.)

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What do these "looks at the past" signify for the future?

- Is it possible that history repeats itself? Fashion trends are continually looking to history for opportunities for the past.
- Is it possible that (with the exception of PEST) key indicators may remain constant for the future?

Comparatively, the following section indicates some forecasts for the future from the experts.

3.7 EXPERTS VIEWS OF TECHNOLOGY REALIZATIONS AND SOCIAL IMPLICATIONS

Below is a timeline of topics for technological realization and their social implications.

TECHNOLOGICAL REALIZATION:

2025
- Prevention of diseases, recovery of homeostastis, improvement of feeding and milk production control based on elucidation of immune system and endocrine mechanisms of adenohypophysis.
- Genetically engineered plants in which artificially introduced genes do not spread over the environment because of the special timing/site expression of genes.

2026
- Creation of biomass production crops of greater than tp tons/hectare/year (dry).
- Technology to restore coastal environments such as marine forests and tidal flats based on elucidation of material cycling systems that connect land, river, and costal areas.

2027
- Crop production and greening in the strict environment, such as deserts, by using new plants enhanced/added salt, drought or cold tolerance.
- Prevention of infection disease based on the knowledge of the immune system and its regulatory factors of fish.

2028
- Modeling of all process about the rice plant growth based on the complete elucidation of gene functions and interaction of transcripts.

2029
- Systems that use global sensor networks to monitor major elements and material cycles in agriculture, forestry, and fisheries ecosystems.

2031
- Growth regulation of crop/tree based on the knowledge of the mechanism about biosynthesis, transport, and receptor-mediated signaling by regulators in plants.

2036
- Communication technology between human and livestock utilized sensing of the neuro-transmission in the brain.

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SOCIAL APPLICATIONS:

2025
- Prevention of diseases, recovery of homeostasis, improvement of feeding and milk production control based on elucidation of immune system and endocrine mechanisms of adenohypophysis.
- Genetically engineered plants in which artificially introduced genes do not spread over the environment because of the special timing/site expression of genes.

2026
- Creation of biomass production crops of greater than 50 tons/hectare/year (dry).
- Technology to restore coastal environments such as marine forests and tidal flats based on elucidation of material cycling systems that connect land, river, and coastal areas.

2027
- Crop production and greening in the strict environment, such as deserts, by using new plants enhanced/added salt, drought or cold tolerance.
- Prevention of infection disease based on the knowledge of the immune system and its regulatory factors of fish.

2028
- Modeling of all process about the rice plant growth based on the complete elucidation of gene functions and interaction of transcripts.

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- Systems that use global sensor networks to monitor major element and material cycles in agriculture, forestry, and fisheries ecosystems.

2031
- Growth regulation of crop/tree based on the knowledge of the mechanism about biosynthesis, transport, and receptor-mediated signaling by regulators in plants.
- Communication technology between human and livestock utilized sensing of the neuro-transmission in the brain.

3.8 FUTURE CHALLENGES TO FOOD INDUSTRY BASED ON TRENDS IN LIFE SCIENCE

Some prospective challenges to the future for the food industry are:

- Advancing our understanding of challenges related to the aging population, including chronic diseases, Alzheimer's, cancer, heart disease and diabetes;
- Innovations in early diagnosis (including imaging and non-imaging diagnostic equipment); predictive tests, maintaining wellness, and health-care delivery;
- Genomics, proteomics, metabolomics, and other "omics" that have the potential to advance our ability to treat many medical challenges;
- In the area of pharmaceuticals and biopharmaceuticals we can expect the development of more targeted drugs with higher efficacy, new drugs and vaccines (including technologies to expedite their development) to address infectious diseases, nano or molecular drug delivery structures, etc.;
- To reduce costs of drug development, we will see "in silico" drug development (systems biology) as the basis for a new paradigm for drug discovery and development, new bioprocesses for the production and purification of biopharmaceuticals, and advances in novel drug production technologies using transgenic animals and plants;

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- In the area of health services, we can expect advances in telehealth, remote surgery, devices and infrastructure that support the development of care services (e.g. home care);
- We can expect greater use of ICT in terms of electronic health records, registries and databases, communications infrastructure, bioinformatics and high-performance computing, decision support software and interoperable measurement systems.

Some characteristics that will begin to define the world in 2030 include:

- Set in a social context: developed within the context of an understanding of the evolution of science and its interplay with society and humanity.
- Reflexive: disciplined, open, tested by others and critically self-aware.
- Varied in size and scope: includes many different scales, scopes, intentions, tools, techniques and locations from curiosity-driven to project-based science; from "big science" to smaller projects.
- Focused on human development: focus on the potential to contribute to ongoing human development.
- Integrated around big issues: cross-disciplinary approach to strategic issues.
- Global: work with the best in the world and to serve the wider world.
- Transparent: meeting demands for greater transparency and accountability.
- Committed to knowledge-in-use: commitment to get information into routine use within our society and economy, and to do so as quickly as possible.
- Foresighted: practice of strategic foresight is inherent.
- Selectively focused: co-operate, learn from and build on the work of others, focused on what is of importance to Canadians.

The next decade will see dramatic advances in biomonitoring, including early indicators for cancer, diabetes and other chronic diseases. In addition to advanced biomarkers, there will be new and simpler ways of testing (e.g. a "breathalyzer for cancer", wrist watch monitors, saliva tests, and "smart toilets"). The results from these will be integrated into the electronic health record accessible by individuals and their health care providers[1].

[1] The Biomonitoring Futures Project.

SECTION IV: ASSUMPTIONS AND CONCLUSIONS

New measures of foresight need to be applied and analyzed. So much untapped technology potential exists, we need be consistent in applying it. These are all areas where Finnish technology and expertise exceeds. Coordinate efforts more prominently internationally. The international perspective is important for Research & Industry. This report covered many prospective applications for future technology and business development, and specifically of prominence is the "convergence" of global supertrends in the food industry.

4.1 ASSUMPTIONS: AMERICA (CANADA & USA)

Assumption 1: Branding is all and everything in the American food value chain. From ingredients to packaging to targeted advertising. This is a critical component for success. This is commonplace rather than a trend and will not subside but well develop and even strengthen with continued globalization.

Assumption 1.2: (As this is related to branding) The terminology of "functional food" is not fully accepted *by consumers* (Sharon) in Russia, America, Japan. However, in America, the "experts" and industry accept the term. In America it appears to have a greater impact when not branded as "functional" but good for you, heart healthy, and other such "descriptive" terminology. Perhaps the terminology can be changed to value-added or other marketing and advertising options. Advertisements do not stipulate functional, labeling is not allowed either, however, the RESULTS it can bring to the consumer are promoted. Again we are at Branding.

Assumption 2: Consider the various age demographics matrixed together with country demographics, economics, and growth patterns. Consider determining targeted marketing to specific segments in a near-term, mid-term, and long-term perspective (Sharon).

- For example, if we consider females of the 15-20 age group now, they will be 38 to 43 years of age in 2030. Monitoring the trends of this age group now will target them for their prime earning and spending years. The trend for women is towards prime purchasing decisions and power. This is just one example, many can be formulated for various countries as well as men.
-

Assumption 3: Natural Health and beauty are prevalent. Natural health supplement, holistic-type medicine, and the way back to tradition is emerging. All production focused on supplementing beauty effects is of value added. This includes diet programs and fast-weight-loss type products.

Assumption 4: Americans are very willing to pay for prestige products, and in many cases they demand them and want no less than the best.

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4.2 ASSUMPTIONS: RUSSIA

The following changes can give Finnish companies a good opportunity on the Russian market:

- General reconstruction of the food facilities both with technologies and equipment, especially in the regions, as long as economic development will involve the less developed areas.
- New food technologies for better food quality – deeper processing for longer shelf life, better package.
- Healthy food – the tendency will start in Moscow and St.-Petersburg as the cities with higher levels of life.
- Growth of offering of delicious food for those people who use the level of food products as a prestige tool.
- Public catering will develop in the aspect of lunches for working people.
- Functional food will be definitely a theme for further discussions, if the period of stable growth will continue and people will solve more important tasks in the general life conditions improvements.

4.3 ASSUMPTIONS: GERMANY

Assumption 1: Demographic facts indicate signs of strong change, which influence also on eating habits and consumer behavior.

- Age: The median age of the German population is set to rise, from 37.6 years in 1990 to 44.3 years in 2015, because of the decline in the birth rate. The lowest birth rate in Germany is that of university-educated women, of whom 41% have remained childless up to the age of 39. The rate of childlessness among the elite was the highest among Western countries. The ageing population is illustrated by figures showing that the age group with the largest share of the German population was 25-29 in 1990 (with 8.7% of the total) and 35-39 in 2000 (again 8.7%), whereas the largest group is expected to be 50-54 in 2015 (8.5%).
- Non-original Germans: In 2005, 75.4 million of Germany's total population of 82.7 million, or 91.2%, was German by birth. Of the remaining 7.3 million non-Germans, 1.4 million were born in Germany but retain foreign nationality. Germany is the European country with the highest share of foreign citizens (8.9%) after Luxembourg and Austria. The largest immigrant group is the Turks.
- Personal income in Germany is expected to rise especially in older age cohorts.

Assumption 2: Demand is rising in Germany for higher-quality goods and better service, but at the same time the gap between higher earners and the poor is also widening. Generally speaking, wealthier Germans buy branded goods while those on lower incomes buy private labels, although some "smart shoppers" cross these borders.

Assumption 3. German consumers are extremely interested in health topics and new lifestyles. Despite the increasing demand for healthcare products, consumers remain price conscious. They combine trends like health, convenience, organic into the Ecogastronomie trend. People want to be close to the production and partners for food producers.

Assumption 4. German are price conscious, therefore there will polarization in eating habits as mentioned assumption 2.

Assumption 5. Energy and raw materials issues become very important to the food industry.

4.4 ASSUMPTIONS: CHINA

Assumption 1: With the growth of China’s economy and improvement of the people’s life is expected to radically change within the next decade. These changes have huge impact on China’s infrastructure, food industry, domestic and international trade, health care and retailing system, people’s health and nutrition, education, income, housing, demand for services.

China is a service oriented culture. Complete lifestyle, healthcare, fitness and other concepts will sell very well in China. People are willing to purchase services in all above mentioned sectors that they didn’t even believe to exist before.

Assumption 2: Due to the sales of processed and packaged food (dairy and bakery products, meat and seafood, beverages) demand for higher-value packaging materials and processing technology has gone up. Popularity of convenience, demand for packaged food has made niche for the packaging industry in China. China is lacking paper.

Assumption 3: Consumers in urban centers become more concerned and demanding about hygiene standards, shifting their consumption habits from traditional to modern.

Assumption 4: The one-child-policy and aging population have impact in the future. Children and elderly care provide business opportunities in the form of products and services but also cause problems e.g. how to finance pensions and health care.

Assumption 5: Chinese people want to educate themselves and their children. People are also increasingly aware of importance of education and new learning models are searched for.

Assumption 6: In many food industry sectors China is one of world’s largest manufacturer and consumer (pork, beef, poultry, beer), this is because of the large 1,3 billion consumer base. Analysts still see growth potential on many sectors like baking, beverages and processed food. Manufacturing and retailing is getting more and more sophisticated features. Chinese are quick learners and willing to absorb the newest ideas (food processing and packaging technology).

Assumption 7: Healthy food means to a Chinese person a harmonious combination of food stuffs and traditional Chinese herb medicaments and treatment. Western health food concept is little by little coming to China. Finnish type functional foods and low fat foods are missing. Finnish companies could utilize Chinese knowledge as well.

4.5 ASSUMPTIONS: INDIA

Assumption 1: Emerging national trends and changes in peoples lifestyles
Changes in lifestyles have mostly taken place in urban India. In many areas, especially in drought prone areas, food availability itself is an issue, let alone nutrition. What people eat now

and what they will eat in future is entirely dependent on their purchasing power. Population living in urban and semi-urban areas which has the purchasing power already today is the one whose lifestyles have been changing. The change in lifestyles is about to happen in rural areas as well; it's only question of time. The time depends mostly on connectedness: if roads, railways, transportation, mobile network etc. is available, lifestyles change faster. In urban setup the lifestyle is nowadays very fast, and it has become faster in rural areas as well. 25 years ago rural people walked everywhere. Now most of them have cycles or even bikes. There is thus a change, but it is slower than in urban areas. Finally, areas located close to urban areas change faster.

Assumption 2: Food Security
Lot of discussion has been going on about the declining area used for cultivation. Cultivation has become more efficient, since the production as such has increased only exception being pulses. There is enough food, but the major problem is distribution.

Assumption 3: Future of Processed Food
At the moment there are not that many shops in the countryside, let alone processed food items. Processed food is coming to the rural market as well. With good distribution networks their availability can get wider. When processed food is there, and when people have the purchasing power, it will be eaten – or there is at least the opportunity for people to make choices.

Assumption 4: Future of Fast Food
Migration from rural to urban areas is taking place constantly. Often migrated labor, having little extra money, starts eating local fast food instead of cooking the dishes. This trend is likely to continue. Regarding Western eating habits and Western food chains, there is peer pressure: people don't want to be left out. When rural population gets enough purchasing power and possibilities, it'll start living like the urban people.

Assumption 5: Future of Health Food
More than 50% of India's population is underweight, but on the other hand 10–15% suffers from obesity. For example in Delhi's private school kids are alarmingly obese. You have to tell people how to healthy food in their new lifestyles. It is impossible to change the lifestyle, but traditional, healthy, food habits – modified, though – can be built into modern lifestyles.

Assumption 6: Future of Organic Food
Concept of organic food will still be unfamiliar to most Indians also in the future.

4.6 ASSUMPTIONS: JAPAN

Assumption 1: In Japan the government is focusing on children and their health. There is current concern about obesity in all the population as "fast food" or "take out" grows. There is also concern regarding the sustainability of crop production as Japan is a strong importer of foodstuffs.

Assumption 2: The growth in "prestige", boxed-foods, and convenience foods as well as inability for full sustainability all mean opportunities for the Finnish food industry.

4.7 R&D AND MARKETING IDEAS FOR FINNISH FOOD INDUSTRY

Reports give ideas and insight for new R&D for Finnish companies for domestic or international market. What are trendy foods and behavior is different countries?

- E.g influence of chefs de cuisine, flavor shifts/new flavors.
- Baby and children´s food (China: food safety, wealthiness): Dairy products, milk powders, cereal foods
- 50+ generation (39 %=32 million of Germans) has relatively high and possess considerable assets. They are critical but ready to spend and are interest in innovations; they demand high standards of service, advice and quality (health care market, food: brands, organic and functional food, cosmetics, traveling)
- Product design: transgenerational design (large displays and buttons, light and easily opened packages
- Allergy free sausages (no lactose, glutamate and phosphate)
- Growing market for consumer goods
- Imports of consumer goods incl. packaged foods is increasing
- Nicely packed gift foods
- China offers excellent growth opportunities for the dairy industry. Demand of raw materials and ready made products. Dairy foods regarded healthy
- Bakery sector growing
- Demand of ingredients
- A variety of ingredients in the diet is growing everywhere in China. Certain ingredients from Finland would be interesting like oats and berries. New foods and ingredients can access the market but market entry demands much work from exporters like everywhere in the world.
-

4.8 REQUIREMENT FOR RECOGNITION OF FINNISH FOOD: BRANDING

- Nobody could recognize any Finnish foodstuffs or tell about Finnish Food Culture. Some could mention F.I.N.D.S which a top-class Nordic restaurant at Lang Kwai Fong and known for its cuisine. Finnish food was not recognized at all in America, Russia, or Japan.
- Finland is known about Joulupukki/Santa Claus and winter sports. Anyway a general assumption/impression is that Finland is a country of pure nature.
- Because of the increase in income, living standards, one-child policy etc.
- Branded foodstuffs. E.g. chocolate, some drinks
- Foreign well and beautifully packed foods
- Healthy foods and drinks
- Pure food, organic food
- Nutrition supplements
- Oat products
- Bread products
- Dairy products: light cheese types
- Slimming products and services
- Leisure time products
- Children´s food
- Increasing demand for restaurants to offer more healthy food

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- All sort of service concepts: health, beauty, leisure
- Traditional Chinese Medicine:
- Ingredients for food, functional food and pharmaceutical companies
- Raw materials, herbs
- Processed TCM ingredients for food industry, cosmetics
- TCM products, brand for consumer markets
- Learning, know-how, research
- Cooperation projects with universities
- Food Industry
- New ingredients and additives
- Berries esp. blueberries (dried, frozen)
- Finnish dairy and meat processing technology incl. cold and packaging technology + materials and R&D know-how
- Food Safety
- Solutions and consulting, materials, technology to improve food safety of the value chain
- Animal healthcare, feedstuffs
- Safety of drinking water
- Environmental solutions
- Finnish models
- School meals
- Santa Claus / Joulupukki concept
- Hong Kong people love Santa Claus/Joulupukki and are able to tell that it comes from Finland. They organize e.g. Christmas food fair where Finland and Finnish companies are invited
- Good opportunity for MEK/Finnish Tourism Board, food companies, Finnair
-

4.9 MARKET POTENTIAL FOR FINNISH FOOD INDUSTRIES

- What kind of connotations interviewed people had about Finnish food and food cultures?
- Do Finproners see market potential for Finnish food companies in their countries? For what kind of products or concepts?

Finnish food companies and products were not known in the most of the countries. Some connotations experts had: Nature was one of them.

- Finnish food, food habits are practically unknown in most of the countries
- Benecol mentioned in Canada, showed interest in India and hoped to enter quickly the India market
- In Germany Finnish food is known for its pureness and nature (Lebensmittel Zeitung 2006):
- Fazer: rye bread follows convenience and functional food trend
- Complexity of German market (Valio, Moilas, Raisio)
- Finlandia vodka
- Research cooperation between Raisio and Valio (ZPM nachrichten 2007)

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- Healthy food – the tendency will start in Moscow and St.-Petersburg as the cities with higher levels of life
- Functional food will be definitely a theme for further discussions, if the period of stable growth will continue
- Growth of offering of delicious food for those people who use the level of food products as a prestige tool
- Public catering will develop in the aspect of lunches for working people

Organic, health, functional foods are the trend in many of these countries. Successful branding is a key determinant in the market entry

4.10 PROSPECTIVE STRUCTURED IDEAS FOR THE FOCUS GROUPS AND WORKSHOPS TO BE USED IN THE SCENARIOS

These ideas provide insight to the importance of marketing in America, and globally.

§ India Rising - By about 2015, India's economy is projected to be larger than Italy's; by about 2020, it is projected to be larger than the U.K.'s; and by about 2035, it is projected to become the world's third-largest economy. What do the ramifications of this global economy transformation mean for the Finnish Food Industry? (America).

§ Everything Old Is New Again: The Resurgence of Nostalgia - From entertainment to pop culture to consumer products, retro styles are in again. How are companies that have historic brand equity are in a great position to leverage nostalgic feelings and create cross-generational appeal for their products? (America)

§ The Rise of China and the 21st Century Marketplace - By mid-century, China's huge population, expanding marketplace and explosive growth are projected to lead it to overtake the U.S. as the world's largest economy. What does this mean for marketing and communications for the Finnish Food Industry as the balance of economic power shifts to the East? (America)

§ Obesity, Inactivity and Rising Healthcare Costs - Obesity has become a worldwide problem, and its implications for healthcare costs and business productivity are staggering. What role does food manufacturing and the resulting product play towards (1) health (2) beauty (3) fitness to turn the tide of this growing world problem? (America)

§ The Changing Roles of Men and Women - The traditional roles of men and women are being completely redefined. How shall the Finnish food industry think ahead when: (1) women are holding more consumer purchasing power, and (2) men are changing their spending habits.

§ The workshop scenarios may take some of the technological examples in Supertrend 1 as examples to think about how these technological changes will affect the companies. For example, consumers will become more aware of the nutritional values in food if biomonitoring devices are utilized, and depending upon the demographics, the nutrition content in the product, if changed, may be of greater value to the consumer.

- Children actually do have buying power now, this has been influenced by electronic cash "technology trends" and because there are fewer caregivers at home and individualism is prevalent.
- Purchase of "luxury" food items of added value versus commodity items is key to $, this also relates to individualism.
- Environmentalism, growth of "biorefining" appears in Japan report and I know this from America also --- this leads to the development of crops for use for new types of energy, the crops likely will be 1. Corn; 2. ??? --- it is a new development in R&D stages. What does this mean? Land for other crops not as prevalent, food for animal
- Feed may be at risk not only in developing but also in developed countries.

Consumption of health food like functional food; health-enhancing food (e.g. ayervedic products); tasty easy-to-cook/ready-to-eat food and "sports" food will increase globally.

Consider the following prospective health issues projected to 2015, how will the affect the participants in the FFRC workshops?

By 2015 people with risk factors for diabetes are screened routinely.
Aggressive primary prevention is undertaken when they are found to have prediabetes.
Health care payers routinely pay for effective health/behavior intervention from a range of health care providers.
By 2015 effective measures are available to change behavior
and randomized, controlled trials demonstrate efficacy.
Efforts by health plans, community health centers, and provincial and federal agencies
are beginning to reduce the incidence of diabetes and obesity.
It is a work in progress that will take many years for a significant reduction in societal disease burden.

By 2015, unless current trends change, the twin epidemics of obesity and diabetes will be the biggest challenge in public health and for the healthcare system.
Minorities and the underserved will be impacted the most.
Community health centers will devote a major portion of their resources and efforts in addressing the multiple comorbidities of these twin problems.

By 2015 inexpensive noninvasive screening tests for glucose and lipids are available.
Electronic health records make it easy to identify those at risk who have not been tested so "opportunistic screening" tests are given when a person checks into the clinic or ER for another problem.
High risk patients who do not seek care are located through screening at church, work, soup kitchens, homeless shelters, and health fairs at malls and sporting events.

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