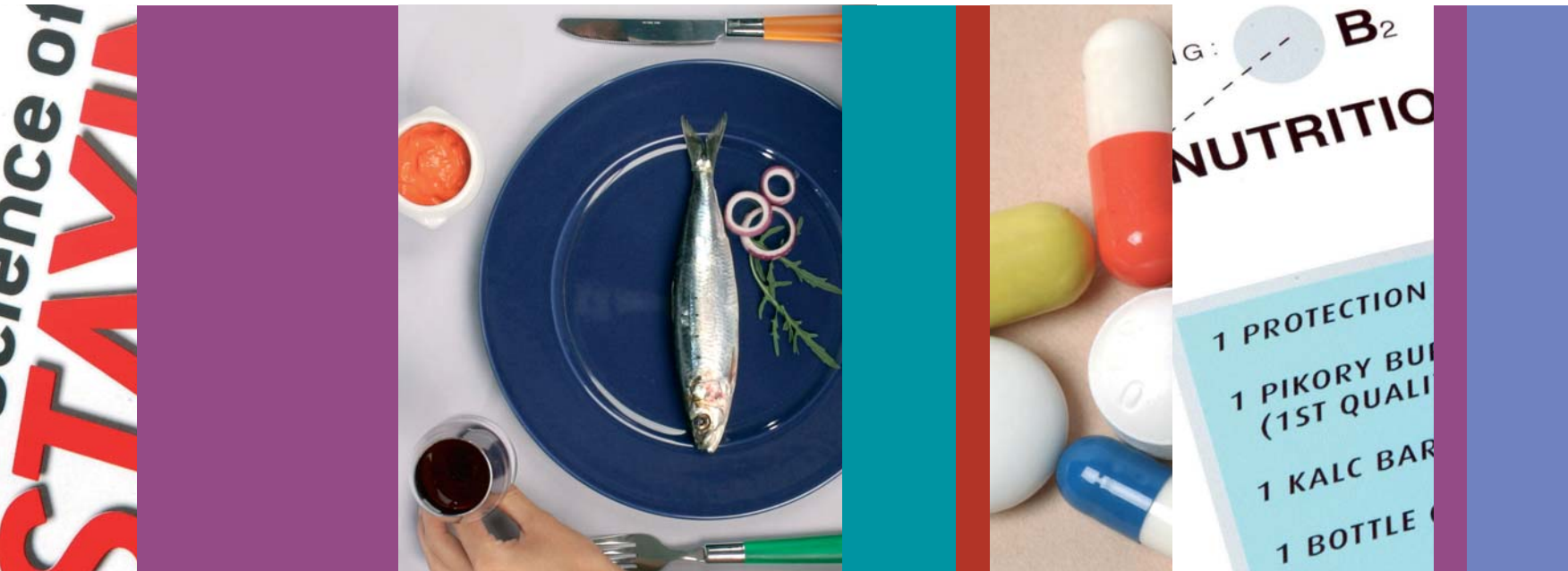


Nutrition & Health 2020



Scenarios for a health-conscious society

Summary Brochure

“The inexorably rising cost of European social security may have far-reaching implications.
The long-term viability of our societal model is at stake”

The Challenge

What we eat and how much we eat are important factors for the increase of health problems in industrialised societies. *An imbalance between food intake and energy expenditure is an important health determinant*, causally linked to the incidence of lifestyle diseases such as obesity, diabetes, cancer and cardiovascular diseases. On an individual level this leads to a deplorable loss in the quality of life of those affected by these illnesses.

On a societal level, this puts a heavy strain on national health care systems. Additionally, the European population is rapidly ageing because of low birth rates. Mushrooming pension budgets are an obvious implication of this 'agequake'.

The inexorably rising cost of European social security may have far-reaching implications. Progressive ageing and the rapid spread of chronic illnesses are key internal factors that contribute to the increasing gap between economic value creation and the associated cost structure of our national economies. The long-term viability of our societal model is at stake.

A sustainable shift in eating habits will not be easy to achieve. Ultimately, of course, it is the individual citizens/consumers who are responsible for the nutritional quality and quantity of their food intake. However, their decisions emerge from a dynamic and very complex forcefield, in which many different actors are implicated. Regulators, a particularly wide range of industrial sectors (food, pharmaceuticals, insurance, retail, medical appliances), the medical profession and media all have their part to play in how we will eat and what this will do to the health of our bodies and societies in the future.

The *Nutrition & Health 2020* project provided an opportunity for a mixed group of stakeholders to think through how this future might unfold and to share the resulting three future scenarios with a much wider group of people. *The purpose of this project is to alert citizens and decision-makers to a future that is unpredictable but which heralds important societal transformations.* One thing is certain: it will affect the fabric of our daily lives in a profound way.

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“The three future scenarios
visualise the uncertainty
pervading the nutrition & health
arena in a very pertinent way”

Why this project?

The *Nutrition & Health 2020* project was conceived to generate deep insight into future developments in the nutrition & health area. Based on the ideas and expertise of a wide range of stakeholders, it has resulted in a set of future scenarios that:

- describe different ways in which the *nutrition & health trend* may evolve and *impact* upon our society;
- provide new and deeper *insight in the interaction of driving forces*, arguments and values that will shape this future environment;
- *create a space to think about new economic and societal value creation opportunities.*

Each scenario is a provocative, yet plausible and coherent story about how European society adjusts its relationship to food in line with the demands of a healthier lifestyle. The three future scenarios visualise the uncertainty pervading the nutrition & health arena in a very pertinent way.

The purpose of these ‘images of the future’ is to stimulate debate and reflection in wider circles on how to best prepare for this uncertain future. There are no ‘good’ or ‘bad’ scenarios. How we prepare for them is what really counts.

How did we build these future scenarios?

The future scenarios resulted from a facilitated group process. Two interactive workshops brought together around *20 representatives from different stakeholder groups*: the food (ingredient), agricultural, pharmaceutical, insurance, retail, catering and electronics industries, consumer organisations, the medical profession, academic experts in food technology and consumer behaviour and a development NGO.

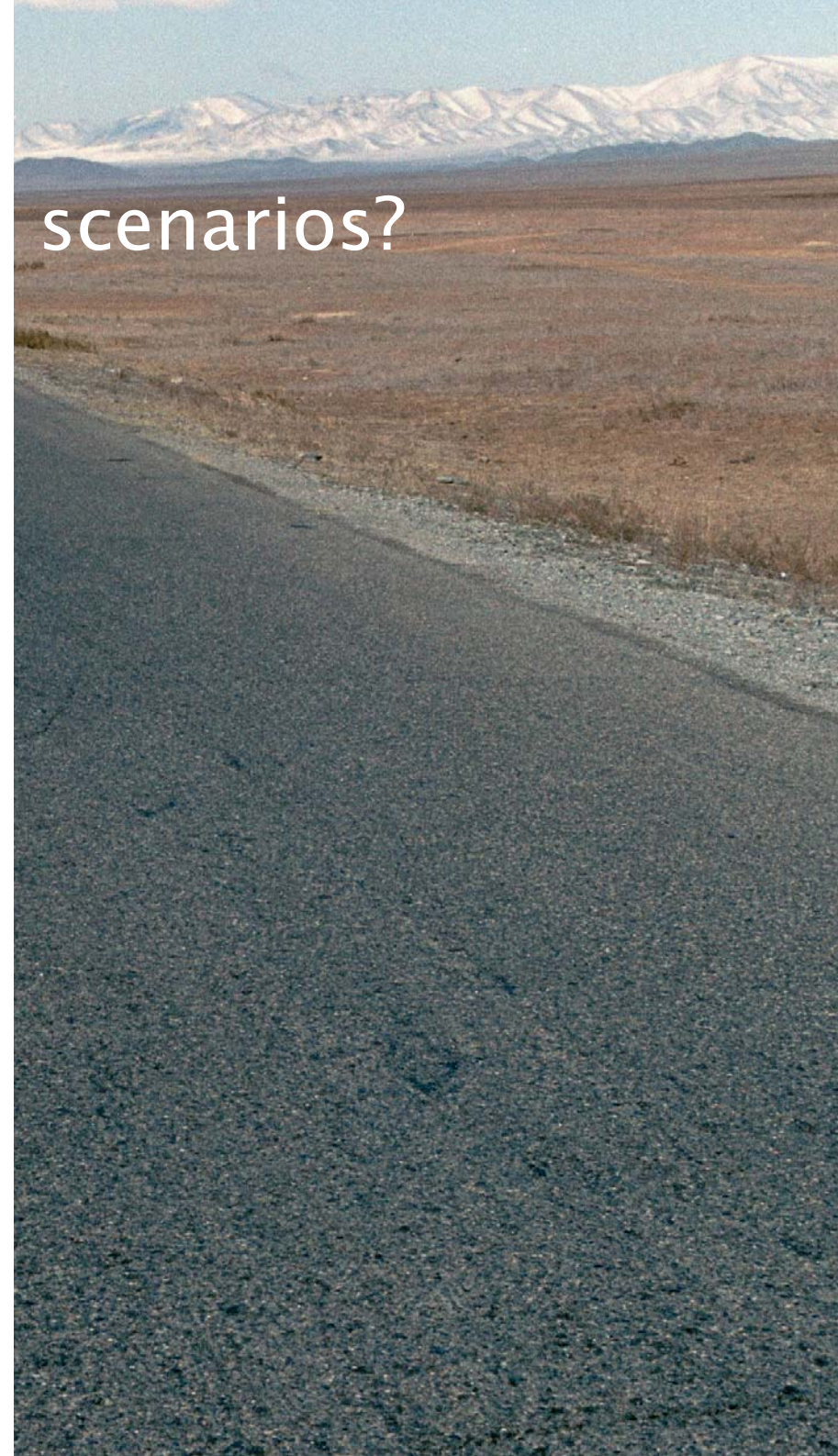
At first, the various stakeholders were interviewed to map the perspectives on the complex situation surrounding nutrition & health. More than *20 interviews* were transcribed and analysed in detail. A synthesis of this rich database of perceptions on the nutrition & health trend was fed back to the participants at the beginning of the *first scenario development workshop*.

The scenario development process started with a brainstormed inventory of external *driving forces*. A number of these were identified as possibly having a very large impact on the future dynamics of nutrition & health in Europe, whilst their outcome was seen to be highly uncertain. These were the *critical uncertainties*. They expressed what participants believed would really make a difference in the next 15 years. Amongst the uncertainties identified in this process were:

- the level of economic surplus in European societies;
- the economic value of the nutrition & health trend;
- the quality of nutrition & health-related information;
- the future logic of health care systems;
- the impact of non-food health determinants; and
- responsiveness of citizens/consumers to the requirements of a healthy lifestyle.

The critical uncertainties formed the basis for a number of *skeleton scenarios*. These were embryonic stories in which the key uncertainties interacted in various ways.

In a *second scenario development workshop*, three of these basic stories were selected for *further development*. In a series of assignments, the participants were invited to visualise and describe these future worlds from a number of different angles (industry structure, norms and values, eating habits, information provision, etc.). The resulting three scenarios are summarised on the following pages. The whole process took place from September 2003 to March 2004.





Scenario 1



“A societal consensus emerges that nothing less than a fundamental ‘whole systems change’ is necessary”

Marshealth Plan

It is starting to dawn on opinion leaders and decision-makers that the rise of lifestyle-related, chronic diseases represents a major political, economic and societal hazard. Declining productivity, absenteeism and increasing social security costs weigh heavily on European economies. By 2007 the effects are extremely visible. After this point, the real challenge of retaining the status quo becomes clear and the fate of the ‘European model’ starts to dominate the political debate. After several government shake-ups, political leaders understand the disruptive character of this societal problem and start seeking for genuine long-term solutions.

A societal consensus emerges that nothing less than a fundamental ‘whole systems change’ – dubbed the Marshealth Plan in reference to Europe’s miraculous post-WW2 reconstruction – is necessary. Health considerations are woven into key policy areas, particularly industrial, research and fiscal policy. The former two are geared towards supporting innovation and entrepreneurship in food, life sciences, ICT industries and new hybrid businesses emerging from all of these sectors. Fiscal incentives are designed to stimulate citizens/consumers to adopt a healthier lifestyle and to monitor their personal health on a regular basis. This creates the basis for a move towards a much more ‘preventive’ healthcare system, which gradually takes shape by 2010.

Economic actors are keen to capitalise on this new market opportunity. A relatively stable investment horizon allows substantial capital to be funnelled in 'healthy lifestyle' related businesses: not only food and pharmaceuticals, but also technology for personal care, diagnostics, medical appliances, housing and information provision. Innovative approaches are explored to bring together the essential elements of health – nutrition, physical exercise, a positive image and pleasure – into highly customised products and services.

Although society definitely shows the will to fight the scourge of chronic lifestyle diseases, there are also dissident citizens who want to hang on to their hamburgers, soft drinks and cigarettes. Powerful socialisation processes steadily erode this minority. Peer pressure, positive role models, advertising, and nutrition campaigns are convincing people to abandon this 'self-destructive' and 'antisocial' behaviour.

The key to this socialisation process lies in the quality of nutrition & health related information. Due to the fact that the various stakeholders communicate more transparently and unambiguously, people feel empowered to adjust their individual behaviour. The blossoming of nutrigenomics – the unravelling of the connection between diet and genotype at an individual level – plays a key role in providing the basis for clear and personalised dietary advice to citizens/consumers. Technology is also becoming more pervasive and embedded in the human body: the personal lab-on-a-chip keeps tabs on an individual's nutritional behaviour and environmental conditions and how these factors interact with the body's physiology.

By 2015, a healthy lifestyle has become the social norm. Living and eating healthily has become 'transparent' and effortless for most citizens: it just happens. Taking responsibility for their own health has become an integral part of their identity. A minority persevering in their 'old ways' are socially discriminated and financially punished. Later in the decade, the positive economic implications of this societal transformation start to become apparent. Health care costs are stable by 2015–2017. Health related economic activities are paying 'healthy' dividends too.





Scenario 2



“Governments force the food industry to adhere to elaborate and strictly controlled fortification schemes to ensure that food helps to quell the increased disease risks in the population”

MiniPoly

The first decade of the 21st century in Europe is troubled by grave political and economic problems. The accession of low GDP Eastern European countries, the war against radical Islamic terrorism and fierce competition from India and China continue to drain vital resources from state budgets. Political gridlock amongst the 25 (and later 27) EU member states keeps Europe in the throes of a stifling immobilism.

Below the surface, another crisis has been brewing for a long time. Chronic lifestyle diseases as a result of inappropriate diets and a sedentary way of living have been constantly increasing. This puts a heavy strain on healthcare systems. Additionally, the European population is rapidly ageing and declining due to very low birth rates. This ‘agequake’ is being felt through skyrocketing pension budgets.

Governments of EU member states remain largely passive to the threat, at least throughout the first decade of the century. With so many other problems to attend to, this one is barely noticed. Apart from implementing more and more draconic austerity policies, which rapidly hollow out the social security systems, nobody seems to have a solution.

By 2010 the crisis moves into a higher gear. The standard of living, and the average level of health and life expectancy are all in decline for the majority of the

population. Widespread discontent emerges in the lower layers of society causing violent social conflicts to erupt. The EU becomes subject to very strong centrifugal forces with (sometimes unlikely) clusters of member states facing off against each other.

Despite these difficulties, all countries continue to face the same challenges and the options to react to them are limited. It is too late now to move the dilapidated healthcare systems from a curative to a preventive approach. The curative paradigm has to receive maximum leverage. Science and technology are mobilised to define minimum standards in nutritional value and health benefits for all food products. Governments force the food industry to adhere to elaborate and strictly controlled fortification schemes to ensure that food helps to quell the increased disease risks in the population. Food is seen primarily as fuel and lawmakers make sure that it is 'healthy' as well. Massive quantities of the new 'health-improved foods' (HIFs) are distributed to the most needy through relief centres, social kitchens, etc. The choice of food products shrinks rapidly as most of it becomes commoditised 'stuff'. From a scientific and technical point of view, some of these are quite groundbreaking products (artificial meat!) combining very low cost, reasonable taste and adequate nutritional value in a very convenient package. Marketing wise, they are distributed in the blandest way conceivable.

The majority of the population tries to cope as well as it can and thankfully relies on their government sponsored 'happy meals'. As a result, societal health indicators stabilise by 2015. An affluent minority continues to be able to afford everything. They indulge in 'fun food' as in the old days, and lavish personal health care programs cater for whatever health problems come with these indulgencies. By the end of the next decade, a new social movement starts to gain momentum. These are people who simply opt out and want to explore new ways of making a living. They leave the crumbling urban ghettos and move to rural areas where they establish self-supporting communities, partly based on horticulture and livestock management, partly on modest revenues from all kinds of (very often sophisticated) services to sometimes far flung economies. By 2020 roughly 15% of the population in the former EU has settled in one of these communes. Although difficult to assess what their real impact would be, many believe these communities will form a fruitful basis for the rejuvenation of our societies.





Scenario 3



“There seems to be every reason to believe that a series of technological breakthroughs help us win battles against old enemies as heart diseases, diabetes, and Alzheimer”

Magic Pill

'Magic Pill' is a never-ending race to keep on top of the health challenge. Europe is not in bad shape in this scenario. The expansion pays off: after a turbulent transition period, the new entrants provide a dynamic internal market and a rich supply of high quality human resources. Institutionally, the Union finds a new equilibrium as well, with decision protocols overhauled in time to make this multi-level governance structure sufficiently agile to deal successfully with its main threats. A clever industrial policy, hard work and continued investments in education and research allow Europe to compete successfully with its American and Asian counterparts in a number of technology areas (mobile communications, renewable energy technologies, nutraceuticals). The prevailing mood is one of cautious optimism.

Of course, Europe has its fair share of challenges. For one, the ageing of its population and the rise of chronic lifestyle diseases put a heavy burden on social security systems. But there is a general expectation that science will solve that problem: one day, a magic pill will be developed that will cure us of all our ailments and help us to live healthily and productively until the very end of our long life. There seems to be every reason to believe that a series of technological breakthroughs help us win battles against old enemies

as heart diseases, diabetes, and Alzheimer. Strict monitoring of the food production chain and developments in wearable health coaching devices also contribute to keeping the rise of chronic and age-related diseases at bay.

But these are not decisive victories. Many pieces of the puzzle are still missing. Some breakthroughs seem spectacular, but they are isolated. A structural solution for our health problems is not being developed. There are at least two fundamental elements missing: first, despite (or rather because of) all the technological ingenuity that is mobilised, the citizen refuses to take up responsibility for his own personal health. Junk food is as popular as ever. Convenience rules. This is a society on the go. Nobody spends time on carefully preparing a meal in a society that needs to stretch in order to compete with the Chinese and the Americans. So, despite the lacklustre efforts of governments to persuade citizens to change eating and physical exercise habits, couch potatoes happily continue to indulge.

Furthermore, the deplorable quality of nutrition & health related information continues to block fundamental advances. Very different diets continue to compete for people's favour and opposing scientific claims confuse the citizen/consumer as much as ever. Food and pharmaceutical giants are invading each others territory backed up by massive promotion campaigns. Inevitably, quackery flourishes and makes good money out of people's confusion. Regulators try to impose order on this pandemonium of competing claims and misinformation but with on average 20.000 new food products coming on European markets each year, they have to resign themselves to the futility of their interventions.

The net result of this is that the social security system never quite gets in balance. Technological improvements are neutralised by social factors such as people's carelessness, migration of lowly skilled workers to affluent areas, environmental pollution, and the effects of global warming.

This is a world in which our technological ingenuity and our willingness to put in long hours allows us to keep the crisis at bay, but only just. And for how long?

	Marshealth Plan	MiniPoly	Magic Pill
<i>General storyline</i>	A societal consensus fuels a whole systems change	Ineffective response to key challenges leads to a world of reduced affluence and limited choice	A world of quick fixes and systemic crises
<i>Dynamic archetype</i>	Virtuous circle	Vicious circle	Precarious equilibrium
<i>Level of economic surplus</i>	High, as a result of imaginative industrial policy and shared societal goals	Low, as a result of ineffective response to external and internal challenges	Relatively high, as a result of very hard work and intense competition
<i>Economic value of the N&H trend</i>	Potentially high, for imaginative and risk-taking players	Potentially high, for companies with a strong technology base and lean logistics	Relatively low
<i>Food choice</i>	Unhealthy products become rare, expensive and socially unacceptable	Limited, trend towards mass-produced health products. Still plenty of choice for the affluent.	Large, a wide range of 'fun foods' and healthy products are available
<i>Role of government</i>	Facilitating, enabling, persuading	Initially passive, then very active relying on draconian measures	Generally short-term, but within that paradigm often inventive
<i>Social coherence</i>	High (but perhaps artificially so); social consensus as a result of strong coercion; stigmatisation of dissidents	Weak, society is split in haves and have-nots	Weak, atomised in individual 'utility maximisers'
<i>Quality of N&H related information</i>	High; much clearer link between food intake and health creates more focused information	Initially low; slightly higher towards the end of the scenario with standardised (but anecdotal) messages accompanying mass-produced food stuff	Low; conflicting messages, a lot of 'noise'
<i>General health of population</i>	Improving	On average deteriorating, then stabilising towards end of the scenario	On average stable; but large differences between social classes
<i>Logic of health-care systems</i>	Evolves from curative to preventive	Preventive for poor/ Curative for rich	Curative

Overview of the scenarios

The table on the left shows how these three scenarios differ from each other in a number of key dimensions, grouped in four categories: general narrative logic, economy, governance and health. The table shows the general thrust of the scenarios. Many of these variables will differ between societal groups and/or geographical regions in a given scenario.

And now...

The *Nutrition & Health 2020* scenarios provide very different perspectives on the question of to what extent we will adjust our behaviour to deal with the challenge of lifestyle diseases and ageing in our European societies. They confirm the central importance of leadership, of the willingness to take responsibility and to invest in social and technological innovation at all levels of society.

At the same time, many more questions emerge from these glimpses in the future. On a fundamental level, the question that underlies all these scenarios is: how will we balance the requirements of a healthy body with those of a resilient economy and a living democracy? On a more practical level we can ask ourselves what specific policies, governance institutions, business models, technologies, drugs and food products will populate these future worlds.

None of these scenarios are intended to be read as 'good' or 'bad'. Threats and opportunities for various stakeholder groups are distributed unevenly in each of these future worlds. *Marshealth Plan* requires huge commitment and creativity from all actors in society. *MiniPoly* seems a bleak world, but still offers an improvement in material living condition for a large part of European society. *Magic Pill* is a never-ending, Darwinian race to stay on top of the health challenge.

No citizen and no decision-maker can be indifferent to the type of future that emerges from our current predicament. The *Nutrition & Health* scenarios are an invitation to continue a strategic conversation within and across the borders of our national assemblies, corporate boardrooms, local communities and homes on the importance of our relationship to food in securing a viable future for our European societies.



“On a fundamental level, the question that underlies all these scenarios is: how will we balance the requirements of a healthy body with those of a resilient economy and a living democracy”



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Organisers and Sponsors

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Organisers

Bio-Sense



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Nutrition & Health 2020: Scenarios for a health-conscious society describes three different ways in which Europe reacts to the challenge of bringing nutritional habits in line with the requirements of a healthy lifestyle. These scenarios are not predictions. They are intended to stimulate debate and reflection and to help citizens and decision-makers navigate a future that is unpredictable but sure to affect the fabric of our daily lives in a profound way.

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