

Generic Scenarios

Wadden Sea Forum

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Version 2

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Scenario Summaries

Cautious world

NORTHWEST EUROPE IN 2020:

In 2020 Northwest Europe is a region within an enlarged and strong EU. The European Convention, passed in 2004, has been improved in 2012 to strengthen the EU bodies and to improve legislation and foreign affairs, also with regard to the accession of further states. The Union is a strong economic block in competition with the US and Southeast Asia. The costs of the integration of the new member states were enormously high and have used up money, which was originally planned for stimulating the weak economy. But nevertheless, the Union has made great success in social and health care, as well as in environmental protection policies.

Europe 2020 is a cautious world. The low economic growth, caused by weak global markets, in combination with failing common policies and innovations, have led to a high unemployment rate and a passive consumerism. An uncertain future with decreasing social protection has made the people save their money. This had also effects on the mobility of society. Private travelling is at a low level now, and car sharing and a reduction in commuting have also contributed to a low mobility. Freight transport has only moderately increased, mainly in the container sector.

Globalisation has increased continuously, and new countries play an important role on the international market, while the competition between the economic tigers has increased much. Regardless of low economic growth, the finance markets operate worldwide and the energy sector is still a classic example of a globalised economy. The global energy consumption has constantly increased and fossil fuels are still the most important sources. But also wind energy plays a substantial role. Also new trade opportunities have commenced: the trade with greenhouse emission quota has been introduced to the global market.

Hand in hand with low economic growth rates, technical innovation has been quite low in the past 15 years. Although many technical breakthroughs were made, particularly in the energy sector, lacking financial support, passive consumer behaviour and delays in implementation have prevented the development of an innovative economy.

Future unlimited

NORTH WEST EUROPE IN 2020

The world of future unlimited can be characterized as a prosperous global market. Production of standard consumer goods has been transferred to factories in developing countries like China, India and the Philippines. The united EU shares in this wealth. The EU-15 (The “old” EU member states) concentrates on fast growing, innovative, knowledge intense sectors. The new members (known as the new EU 10) successfully produce high quality food, consumer electronics and cars for the whole European market. They also deliver reliable and cheap labour for low wage jobs in personal service for the EU 15.

This new wealth has not come easily. The start of the new millennium was problematic for the EU. Institutional reform was needed but postponed because citizen did not accept changes in the social system. All political energy was spent on the EU enlargement process and internal discussions. The image and power of the EU institutions in internal and international arenas got worse. The absence of reforms and the strict budget policy (no deficits) led to a zero and in some EU countries even negative economic growth. Around 2005 things changed. Public debates in Germany and France made clear that big and painful changes were needed to improve the long-term perspectives. A new generation of politicians and managers realised that these changes should be initiated and managed on the EU level. Economic reform became the biggest issue in Brussels. A powerful unification and simplification of the EU and of national legislation were the starting points of the changes. This structural change got a big boost in 2008 when it became clear that the EU effort for a combined innovation strategy for DNA based medicines led to a strong competitive position of Europe in this sector. This resulted in more elaborated policies aiming at a better entrepreneurial climate and stronger innovative networks.

Business and active, as well as critical consumers are the main powers that drive successful institutional and technical innovations in this era. The pragmatic attitude of the new managers (in public and private sectors) has led to a smooth innovation process, ongoing privatisation and a corresponding growing effectiveness of EU innovation policy and institutions like the patent office and the cartel-authorities.

People are responsible for their own future. If you want improvements you have to invest money, time and/or attention for your neighbours, your neighbourhood, friends and colleagues. The sober social welfare system forces formerly unemployed, women and elderly to earn money for their living. In most EU countries we also see a relatively large group of poor working class people. The group with low education is over-represented in this group.

People also have to deal with big problems like a high internationally organised crime rate and illegal immigrants. The short-term economic orientation makes it furthermore very difficult to raise enough funds and long-term attention from people and (commercial) organizations to solve the problems.

Satisfied citizens

NORTHWEST EUROPE IN 2020:

The EU in 2020 is far from being a united political and economic block. Several bi- and multilateral cooperations exist and the only common element is a more or less free common market. The EU 2020 is characterized by large differences in welfare, with a very prosperous northwestern part and a relatively poor eastern part, with the Mediterranean states being in between.

In the northwestern EU countries average economic growth has been high for a long period, despite a rather passive behaviour of consumers. The main causes are the very high efficiency of production, and the high labour participation, also of women and elderly.

Labour has become a much more competitive factor (also compared to the new member states) due to the increased efficiency combined with a sharp reduction in the gross costs of labour (reduction of taxes).

Technological innovation is relatively low because of decreased consumer's interest in short-lived fancy products and the decreasing possibilities for investing in large-scale research and development. Another factor relevant for the relatively low investments in *technological* innovation is the fact that increasingly investments have been made in *structural* innovations.

Concomitant with the increasing nationalism in the EU in the period 2005 to 2020, the position of the Union as a political and economic global player has become weaker which, in turn, has caused increasing protectionism towards the other global blocks, i.e. the USA, Japan, the Asian tigers and China. As a result global trade decreased. This trend is still continuing due to the increasing ability of the EU itself to cover its basic needs, mainly in terms of energy and bulk products.

Mobility is relatively low, on the one hand due to the high energy prices, on the other hand as a result of a more passive attitude of satisfied citizens and the efficient public transport. The character of mobility has undergone dramatic changes compared to the beginning of the 2000s. Individual transport now has a lower share in mobility than collective transport. Car sharing is the dominant form of car transport. As a result of the increase of trade within the expanded EU market and the high economic growth, transport of goods is higher than in the first half of the 2000s. The increase has, however, not been as high as projected before the accession round of 2004, mainly because of a continuing decrease in global trade.

In Northwest Europe of 2020 a revival of nationalism and regionalism and aversion against internationalism can be felt. There is an attitude of no-nonsense and pragmatism, enabling a very well organized and efficient society in which there is no place for short-lived gadgets and frivolities. What is appreciated are robust products with a clearly defined purpose. The increased regional self-support and the desire for high living standards have been the basis for a strong revitalisation of the countryside.

Challenging world

NORTH WEST EUROPE IN 2020

In 2020 Europe is in the middle of a long period with zero economic growth. The average income of most families has not changed much since the beginning of the new millennium. Most people feel comfortable with the living standard (that is the same as around the millennium) and the orderly arranged local society.

Most people have a part-time job to earn what is needed for a decent living. For some families this means even moonlighting (2 jobs) or the exchange of goods and services on the grey market. Everybody who is capable of working has to earn money for his family, social services are only accessible to people with no possibilities to survive on their own. There are very big differences in income because capacities and needs of people differ a lot.

The political landscape has changed dramatically. Active people and organisations have taken responsibility. They have found practical and cost-effective local or regional solutions for their problems. EU or even global solutions are not needed any longer. The power of political institutions and international organisations like the IMF and the UN has diminished from year to year. Around 2015 some members of national parliaments started pleading for the cancellation of the European parliament. Until now (2020) most EU research institutes have been transformed into ad hoc think-tanks or commercial research institutes. The enlargement process stopped when most candidate countries saw that Turkey's strategy to make specific bilateral agreements with European and Asian countries was very successful. With the exception of Poland the economic situation in the whole Central and East European region is still bad.

The social and economical landscape in North West Europe has also changed. Consumers spend their leisure time on several issues, which are beneficial for the further (social and political) development of their local community. Trade within the EU is still relatively intensive. But trade between continents decreased because EU countries strived to be independent of non-EU countries.

The full Scenarios

CAUTIOUS WORLD

A UNITED EU

The adoption of the European Convention in 2004 and the subsequent ratification by the 25 member states, including the 10 new member states, which acceded the Union in the same year, opened a new era of the European Union. The Union was enlarged with Rumania and Bulgaria in 2007 and with Norway, Croatia and the Bosnia-Herzegovina in 2012. Now in 2020 the Union is made up of 30 member states.

The enlargement with 10 new member states in 2004 and 5 others in the following years very much amplified the heterogeneity of the Union, both economically and socially. The large majority of the accession states were countries in transition with a significant lower economic and social standard than the EU 15. The member states genuinely acknowledged that in order to ensure economic and social cohesion, it was necessary to reinforce the institutions of the Union. The European Convention was revised accordingly in 2012 on the accession of further states. The president of the Council now serves for a period of 5 years and the European Commission constitutes the authoritative executive branch of the Union. The European Parliament is the legislative branch. A majority of the Parliament is in favour of a strong Union, which can address the economic, social and regional inequalities within the Union. European legislation has increased significantly in scope and now directly affects practically all aspects of the daily life of the citizens of the Union. Union rules, regulations and standardizations exist for all production and service activities and all policies of the Union, including environmental policies. In many ways this impedes entrepreneurship and technological innovation.

The Union distances itself from its neighbour countries. Turkey did not, in spite of earlier commitments, reach an accession agreement. The coherence of the Union was the predominating objective. This reinforces the Union's position in terms of foreign policy and defence and the influence of the President and the Commission in these policy fields. The "bloc" policy has, however, resulted in protection of markets and flaws world trade, which has significantly contributed to the low growth rate in the past decade.

The Commission and the European Central Bank (ECB) are the guardians of the strength of the EURO, which has now been introduced in the entire Union. The budget of the Union and the member states are subject to strict controls by the ECB and the Commission. Unified budget control and a strict framework for financial policy have limited public spending and worsened growth potentials

Since a generation the European Union has had sustainable development as a guiding principle, matching the economic and social development policies. In 2020 the Union ensures an, on average, moderate quality of life and environment and has dealt with much of the economic, social and regional inequalities that existed at the beginning of the century.

The Union is cohesive block, but this has been partly on the expense of economic growth and technological development. The European Union is lacking behind the Asian growth markets. The

deliberate policy of addressing the economic, social and regional inequalities has led to a massive transfer of community resources to specific projects and underdeveloped regions at the expense of technological innovation and developments in other parts of the Union. Because of the lack of technological innovation, an emphasis on regional development and the search for social and economic equality the Union has through a period of low growth of less than an average of 1.5%, which has now endured for more than a decade.

This development has been reinforced by increasing international tensions stemming from the regional conflicts in the Middle East and Africa and the competition with the emerging and still rapidly growing Asiatic economies. The Union deliberately pursues a policy of constituting a powerful economic and political block with the USA and Asia in order to maintain and enhance its influence in international affairs and ensure internal stability.

LOW ECONOMIC GROWTH

Economic growth has been a central feature in the development of Europe since industrialization has taken place. In the view of economists, economic growth is associated with a stable market, good living standards and a healthy society.

In this cautious world the average growth rates are below 1.5 % per year. Some branches have had enormous growth rates, such as the telecommunication and energy sectors, but others have broken totally down, e.g. shipyards and steel production.

The hope for new markets did not become reality. Economic crises in Russia and the whole South America, as well as political instability in Asia and Africa have obstructed the development of new markets. China and South East Asia provide themselves with the necessary products. In general, the global economy is suffering.

Not enough of that, the alienated global market, the misunderstood EU policies and restricted national budget policies drive people to persevere with a cautious consumerism. Social security and health benefits are decreasing, pensions seem to be uncertain, and jobs are not steady any more. These uncertainties have had the effect that people save their money, causing less tax revenues for the government, less productivity and less innovation. It will need extraordinary efforts to crack this spiral in order to reach higher growth rates.

The European and national economies have to deal with a relatively high number of unemployed persons – the rate varies between 8 and 30% among the European regions - but the economy is still strong enough to compensate for these negative factors by means of productivity and effectiveness. Important side effects are a decrease in social security, a falling influence of the trade unions and a shift from full time jobs to part time jobs.

People were used to the quite healthy economy in the 80ies and 90ies of the past century and are complaining about the worse situation today in 2020. A general accusation concerns the governments and the EU unification, the introduction of the Euro as the common currency and the revocation of subsidies. Although the EU has made great successes in many fields (see above), the European parliament has not been able to sufficiently explain its policies and has, to some extent, ignored the regional and social characteristics (see above), which finally led to a population frustrated with European legislation.

LOW TECHNOLOGICAL INNOVATION

The European Union has encouraged the member states, as well as the enterprises to achieve more innovation to survive within the global market. The bodies of the EU wanted to modernize the European economy to achieve more economic growth with technical innovation. The traditional trade markets have shifted to cheaper producing countries.

The European parliament defined several ambitious objectives in order to derive greater benefit from the efforts made at the EU level and to develop new impulses for innovation policies and the creation of innovative enterprises.

No doubt, there was a good and ambitious framework for innovation, but the policies did not succeed. Some causes were homemade by the EU itself. The stability regulations forced the member states to cost-cutting measures with negative effects on the economy. Furthermore, the change in consumerism of the population was a setback for the investing enterprises (see section economic growth) and some cost intensive investments at the beginning of the new millennium (e.g. UTMS licenses) blocked further investments.

Of course, there are exceptions: further development of IT technology is a daily business and the number of patents in biotechnology with regard to health care and food industry has increased between 2005 and 2020.

The most innovative economic sector in the last decade was the energy branch. The number of patents, as well the effectiveness of wind and wave power, solar energy, as well as fuel cells has increased enormously. New developments regarding the storage of energy with H₂ technology have been a success and recently the nuclear fusion technology has got wide attention.

But all these innovations, necessary for a specialized European market, could not contribute to a successful and innovative economy because the implementation has been delayed and the economic situation has not yet contributed to a better market situation.

The lack of technological innovation in economy and society, respectively the non-use of available new techniques, goes hand in hand with the weak economic situation, the relatively low mobility (no further development of public transport systems and traffic control systems) and the passive behaviour of consumers. It is a cautious world, but still strong enough to survive in a global market economy because of a strong European Union.

GLOBAL MARKETS

Global economy has made great progress since the 1950s and has influenced nearly all trade relations. Thanks to the expansion and unification of the EU, a strong economic block was built in the first two decades of the new millennium, competing with economic powers of China, Japan, the Asian Tigers and North America. Africa remained the poorhouse of the world and is still mainly a provider of raw materials. Also other Asian nations and South America are still of secondary importance in the global economy.

The economic globalisation progressed continuously in all trade branches. Transactions are carried out by computer networks and the job market has been internationalised. Omissions of education and

training policies in the western world have made it necessary to open the job market in order to get qualified experts. The first steps were made by limited green cards around 2002.

From 2005 on, the trade restrictions in the food market, as well as the high import duties on steel were removed step by step. As a counter move, the national subsidies (e.g. steel, agro-products, coal, etc.) were cut back. In all, a typical globalisation of the market.

But though the EU is a strong economic power within the global market, the trade markets have suffered a setback due to the huge national budget deficit of the US and the independent economic growth in China and South-East Asia. The export rate has decreased quite considerably while imports from the cheaper producing nations in Asia have increased. The result is the low economic growth and low technological innovation in Northwest Europe as described in the sections above.

The energy market fits perfectly into a globalised world. A continuing liberalization of the electricity and gas markets, as well as a further decrease in the number of energy companies as a result of mergers and takeovers were the drivers for globalisation. The energy consumption has increased by 50% from 2000 to 2020 due to the increase of the world's population and the growth of the markets in China and South-East Asia. The share of renewable energy in primary energy consumption increased only to a small extent and has reached a share of 6,2% in the EU30 of 2020.

The low economic growth and innovation have contributed to the fact that the implementation of new developments in the energy sector did not take place, particularly with regard to fuel cells, hydrogen and solar technology. Fossil energy, wind and water power still cover almost all primary energy consumption.

Also the finance market operates world wide, even though the economic engine is sputtering. The stock and bond market, as well as the foreign exchange market and government loans are a world wide business, and Europe has developed into an important centre of international finance.

A further contribution to globalisation started around 2005. CO₂ emissions trading allows companies emitting below their legal allowance to sell their remaining allocation to a company exceeding its permitted level. After the Kyoto protocol, the European Commission has worked out a directive for an emission trading scheme that has harmonised cross-border trading of greenhouse gases. In 2005, the price for one ton CO₂ equivalent was at 10 € and increased since to 30 – 40 € per ton. The trade with greenhouse emissions has become an important element of the global market.

LOW MOBILITY

The growth of the travelled kilometres for private persons in the period 2000-2020 has been 20%. The relatively low growth is caused mainly by the economic situation and the modified views of mobility in the society.

The commuting pattern has not changed much since 2000. The average distance of the daily trips decreased a bit because people live closer to their work. The number of business trips on EU level has grown moderately because of the increasing common market. Due to the cuts in tax subsidies, more people share a car or use public transport systems. The public transport facilities have not improved since 2000 because of the weak economy and lacking investments in new technologies.

The holiday patterns are the same as in 2000 although the number of intercontinental trips decreased slowly. Travelling for fun and visiting cultural attractions has been reduced. Social and cultural activities are more family (and friends) orientated. This resulted in smaller trips, but the number of trips slightly increased.

Public transport has been extended with regard to international traffic. This has mostly happened in the new member states of the EU (2004 and later). The absence of extra state funding and an innovation blockade have hampered the development of public transport systems. The quality of the public transport improved slightly.

The private travelling sector has undergone a moderate decrease over the last 15 years. The increasing fuel prices, caused by taxes, as well as the installation of road fees forced the people to share cars and to reduce the number of long distance journeys by car.

Migration patterns have not changed much. The rural areas and small towns near big cities are still vivid living places although they have an increasing number of smaller households. Small villages further away from the cities have to cope with a further decrease of the population.

LOW FREIGHT TRAFFIC GROWTH

The world wide annual international trade growth is 4.5 %. The trade size for the EU 15 is around \$8000 billion. Only 47% of the trade is between EU countries. Due to lower growth rates, the increase of freight transport has been moderate. Transport by vessels (global market) plays an important role. Additional investments have been made, particularly in container transport and connecting facilities. The implemented ruling of motorway toll for trucks in the EU has led to a decrease of road transport while container freights by ships and trains have increased from 2005 on. Many goods are transported by containers now, which makes the distribution more efficient on a lower cost level.

PASSIVE, COMMUNITY ORIENTED PEOPLE

Life style and consumption of people have changed during the past 15 years. Due to a cautious economy with low technological innovation but a strong European bureaucracy, people increasingly appreciate their traditional values of family and friends. They try to find a counterpart for a globalised world and an alienated EU policy. The different nations share a common vision, however, the lack of communication and region specific implementation has led to a withdrawal of people from responsibilities and active involvement' in national and EU policies. Also a change in consumerism has taken place. People do without luxury products and smart articles, they stick to basic products and save their money. Furthermore, Europe is ageing like all industrial countries and has approached a situation with a reversal of the proportion between the young and the old, and the elderly have not as much money at their disposal as what they had at the beginning of the millennium, which also leads to a passive consumerism.

The passive orientated people behave cautiously and are not taking any risky initiative.

The EU enlargement and unification, as well as trends in the socio-economic field have led to improved living conditions. Even under trends of low economic growth and low innovation, better housing conditions and household equipment have been achieved in the enlarged EU. With a tremendous financial support, the most dramatic changes happened in the new member states,

motivated by the wish for a fast adaptation in order to avoid a long lasting two-class society within the European Union. But the conformity of social standards has also had negative side effects. For many people in the new member states the changes have happened too fast. They have lost their traditional bindings and are not able to integrate into the new system, which has led to many social conflicts with which the Union has to deal with today.

ENERGY MARKET

The world energy demand has steadily increased from 2000 to 2020 by an average rate of 1.7 %. In total, the energy consumption is about 45% higher than 20 years ago, of which the developing countries have a share of 60% of the growth rates.

Fossil resources still play the most important role in energy supply and natural gas is the world's second-largest energy source (after oil).

The increase of the energy demand in Europe has been 0,7% per year and was quite moderate. The economic growth rates have led to a cautious consumption and if the supply of fossil resources on the global market would have been not that big and easy, the consumption would be even lower due to higher prices and resource constraints.

The government of the enlarged EU passed several policies for sustainable energy use (insulation standards, emission limits for heating systems, taxes on consumption, etc.). There was no sound regulation or financial support for the structural development of new clean techniques so the market maturity has not been reached.

Only a substantial growth of wind energy by using the existing technology has taken place. The wind energy share of generation has grown from below 1% in 2000 to almost 5% in 2020.

Many off-shore wind parks were constructed between 2005 and 2015.

The price development of fossil energy was very moderate (the price for a barrel crude oil on the world market is about \$ 20, slight increase of natural gas price) and has had no negative effects on the economy. Just the electricity price increased slightly in which the costs for companies and household could be compensated by energy savings.

PERCEPTION OF NATURE

There is a growing gap between the ecological consciousness of the average citizen and the goals of EU legislation. Local and regional authorities have problems implementing the strict rules and regulations from Brussels, on the one hand because these are not fitting to regional characteristics, on the other because of the poor financial situation of most communities. Consequently the support for nature and environmental protection policies has become less. There is increasing trespassing of environmental standards and building in officially protected areas is no exception.

There are some nature protection organisations fighting illegal practices, but it is a long way to Brussels and they receive little support at the local level.

Environmental quality is still good, but there is a serious threat of decline, also because existing purification installations become older and little money is available for new investments. Nature quality

is relatively high. The Natura 2000 area is larger than today, but the quality threatened by illegal practices and insufficient local support.

THE WADDEN SEA REGION

Generally, there has been a further increase in differences between structurally weak and structurally strong parts of the region. The relative importance of the service sector (mainly in cities, on islands tourism) has further increased. The declining secondary sector is struggling with global competition and the poor economic situation. In the primary sector we see an increasing scale of high efficiency farms. In order to compete on the global market increasing use is made of the European Nature Park label.

The unemployment rate is high with an average of 10% in the rural areas. The population is greying because young people move out of the region into metropolis or abroad.

There is hardly money from Brussels for improvement of social situation in the country side (services etc.).

The Wadden Sea has a high ecological quality and has been designated as European Nature Park. There are large Natura 2000 areas on abandoned low quality soils and areas set aside for water storage. The level of enforcement is, however, rather low. Biodiversity is high in nature areas only. Water and air quality are good, but water quality is under threat of becoming poorer, due to the lack of enforcement.

FUTURE UNLIMITED

THE EUROPEAN UNION: LIBERAL FEDERAL CONSTITUTION

The adoption of the European Convention in 2004 and subsequent ratification by the 25 member states marked the beginning of a new and prosperous era of the Union and the neighbouring states and an unprecedented prolonged period of stability and progress. The Union was extended with the Balkan states, Turkey, Norway and Iceland in a series of enlargements in 2007, 2010 and 2012 and now encompasses 34 states. Comprehensive association agreements exist Ukraine, Russia, and a number of Mediterranean countries. Discussions have started on whether accession negotiations should commence with Algeria, Morocco and Tunis. The Union guarantees political stability in Europe and around the Mediterranean and contributes to security and progress world wide. The Union is hence one of the superpowers on the same level as the USA . The international stability contributes to the enduring high economic growth in the Union and world wide.

The development since the ratification of the Convention in 2005 has contributed to making the Union an effective federal collaboration. There is a clear division between the tasks of the Union and the member states as defined by the Convention. Foreign and security policy is a task of the Union. International economic cooperation is also an EU task. Tasks related to social and regional development, education, tax policy and other areas, remain the sole competence of the member states. The Common Agricultural Policy and the Cohesion Policy have become less sectoral policies and more policies for regional development of peripheral and rural areas.

The European Court strictly guards the task division between the Union institutions and the member states. The European Parliament executes its legislative power with the president of the council in the confined areas for which the Union is responsible. Finally the democratic decision-making is guaranteed in the Union as discussed many years. The clear task division has resulted in a reduction in the number of EU rules and regulations, less bureaucracy and transparent decision making. The Union is a smoothly operation entity for the benefit of its citizens.

This was also a result of a significant reduction of the involvement of the Union in all areas of economic life. Through a deliberate liberalization of the market and the successful privatisation of the energy market, part of public transport and social services a truly competitive market has emerged. Less state involvement has also further decreased the necessity for regulations and rules. The European Central Bank (ECB) guards the common currency but has long ago left the original objective, which was to guarantee a stable currency through curtailing inflation. The ECB has adopted a flexible approach of monetary policy, which supports economic growth and international financial stability. The Union also deliberately financially supports technological development and innovation. Surprisingly, the heterogeneity between the pre 2004 EU members and the new accession members has been overcome with great success. There are still significant disparities economically and socially between the "old" and the "new" countries. Successful economic and political reform led to high economic growth in the 'new countries'. Focussed EU investments in growth sectors and infrastructure and disparities in taxation in the new member states facilitated this process. Labour mobility is

encouraged because the healthy economic growth led also to a big demand for cheap labor in the old countries.

The Union is committed to sustainability. The wealthy citizens demand a healthy living environment. The strict implementation of the Kyoto plans also showed that focussed investments in clean technologies is wise from an economic point of view because of lower energy costs, bigger flexibility and better image of the company and company products.

The citizens of the Union are content with the Union. The Union and its institutions are seen as legitimate carriers of authority. People engage in the international and national political process.

HIGH ECONOMIC GROWTH

Labour productivity has grown considerably in the second decade of the new millennium, caused by longer working hours, fewer holidays and higher labour participation. A relatively sober social welfare system forces formerly unemployed, women and elderly, to earn money for their living. High tech, knowledge-intense sectors and personal services absorb the new possibilities in North West Europe, so unemployment is low. Because it is relatively easy to fire people and to start new businesses we see a lot of very small, very specialised start-ups in the high tech sectors. In the personal service sector we see a lot of one-person companies. The IT sector (high speed, high touch, high capacity communication and information networks), pharmaceuticals and health, transport and energy are the driving sectors. Besides that, we see a considerable growth in all kinds of locally organised services for the wealthy elderly and the families with double incomes (this group has grown considerably in the last decades). The production of standard consumer goods has been transferred to factories in developing countries like China, India and the 'new' EU member states. Three big national players with a 70% market share dominate most sectors. Some of these companies dominate the whole value chain. In most growth sectors we see a European representative. Of course there are exceptions, for example air transport and computer hardware (both dominated by two American and one Asian company).

HIGH TECHNOLOGICAL INNOVATION

Consumers have high confidence in the problem solving possibilities of new technologies. A relatively big group earns enough to buy expensive products that improve the quality of life: 'we work hard so we deserve the best'. High tech products and fancy functionalities and gadgets are accepted easily.

Consumers are looking for comfort, new experiences and the possibility to distinguish themselves with the things they buy (of that can be used to show off). Because of the heavy competition almost all sectors have their own strong quality control systems. Consumer organisations still exist.

The most important sectors are energy (because of the growth in energy use), agriculture and food. Most politician and researchers speak with great enthusiasm and respect of the ambitious innovation program and market implementation that followed after the successful introduction of the first generation fashionable electronic cars (the SMART 2 to 5) in 2005 and the successful tests of omnibuses with hydrogen fuel cells in four big cities. Of course, the 5% market share of electric cars and hydrogen busses is not much if we look at the total energy required in the coming decades, but it really shows that technological developments sometimes even surprise the most optimistic views.

Most people have the opinion that the quality of their life has improved substantially by supports like biosensors in shirts, monitoring vital signs (heart rate, body temperature) or all-weather suits that change their characteristics when the weather changes. Old military innovations like fabric that changes colour depending on the weather are also quite popular .

The biggest progress in bio-technological developments was made after 2010 when two major events happened: First, EU legislation on the use DNA manipulation of crops for better resistance against climate extremes was accepted world-wide in a trade round and, second, a breakthrough was achieved in the treatment of some of the most frequent cancers, based on DNA analyses and 'repair'.

The EU innovation process is based upon big multi-disciplinary research projects, coordinated by the EU commission for innovation. Research institutes, universities, multi-nationals and small, specialised business, work closely together in ongoing innovation processes. The primary role of the EU is to speed up the innovation process.

TRULY GLOBAL MARKETS

On the international market we see fierce competition, comparable with the competition in consumers electronics and in the super-market sector at the end of the last millennium. Cooperation in networks with commercial and non-commercial organisations (universities, public institutions) is the only way to develop, produce and deliver high quality products, demanded by wealthy and critical consumers. Temporary cooperation with competitors is needed to share the costs of very expensive technological development and to shorten the time and the effort that is needed to set market standards. Cooperation in value chains like food and consumer electronics is organised very well. A few big international players dominate these chains. Developing countries that succeeded in transforming their economic and political systems, were also successful. The increased demand for energy and food in these countries led to an enormous growth in energy and food production. The energy demand of the developing world now is 50% of the total global demand. Despite growing energy efficiency researchers expect that the world will run out of fossil reserves within 20 years. They plead for intensified energy innovation programs.

HIGH MOBILITY

The growth of the travelled kilometres for private persons in the period 2000-2020 is almost 100%. The relatively high mobility is caused mainly by the good economic situation and commuting of people who live far outside city areas.

The commuting pattern changed enormous. A lot of white collar knowledge workers work from home and travel 2 or 3 times a week to their customers or the headquarters of their companies in the big cities. The amount and distance of the international trips has also grown because of the international orientation of most big and medium sized companies.

Personal mobility also has grown considerable, as expected around the start of the new millennium. Higher education became a real international market. A lot of Chinese students follow management or agriculture (and food) studies at European universities. The international oriented people travel a lot. A shopping weekend in Paris or Rome is not exceptional. Going abroad at least two times a year for a holiday of more than 5 days is a rule. We also see that people travel more for the social events.

National and international public transport systems improved considerably. New investments in fast connections and the improved services (working cabins for business men, gaming networks for children) attracted new passengers. The share of regional public transport outside the cities declined further. People prefer the flexibility of their own car. People don't mind to travel many kilometres. The car industry showed a substantial growth.

In this world we see a high migration rate. People change jobs every 5 to 10 years and don't mind to move for a better job to another region or even country. A relative big part of the workforce and elderly live (far) outside the cities in an attractive and healthy environment.

HIGH FREIGHT TRAFFIC GROWTH

The world wide annual international trade growth is 7 %. The trade size for the EU 15 is around \$11.000 billion. Only 39% of the trade is between EU countries. Globalisation and the higher wealth of individualistic consumers have led to a boost in international freight transport. International specialization of organizations, the growing diversification of (tailor made) goods and the available IT technology to order on the world market, led to smaller but more frequent long distance (intercontinental) shipments of goods. With regard to the speed of delivery individual consumers have a lot of choices, all transport companies have a "follow your order" service, based on elaborate GPS and traffic guidance systems.

Big investments in all transport sectors have been made to meet the needs of economic activities.

ACTIVE, INDIVIDUALISED PEOPLE

Income/money, personal freedom, new experiences and social status (gained with a good job and respectable income) are the most important ambitions of a majority of people. Impulsive consumerism, exiting experiences and the status of the exclusive brands characterize the dominant life style. People like to show off. Churches are emptier than ever, the role of the family is still diminishing, taking care of your own grandparents or neighbours is not being considered. Marriages last as long as partners feel comfortable. The number of one-person households has grown tremendously, a substantial amount of old and young people live (temporarily) in modern communities (shared service flats and quarters), only a minority lives in a traditional family group. Social and ecological awareness has changed slightly since the end of the last millennium. People really react mature on local (regional) issues. But a lot of people feel not more than a bit uneasy when they read newspaper headlines about the poor unemployed, burn outs, or accidents in other regions.

ENERGY MARKET

Due to a healthy economy and quite an increase of technological innovation (new products), the energy consumption has grown substantially also in Europe. The energy has had a significant influence on the economic development in the European regions. The easy supply on the global markets of primary energy sources and the provision of electricity created a comfortable situation for a reliable basis for the economic development.

The trend of decoupling of economic growth and energy consumption has continued. Therefore, the consumption was very moderate in the last 15 years in comparison to the economic growth rates and mobility increase.

The demand for natural gas has grown faster than for any other primary fuel. Gas consumption has doubled from 2000 to 2020 in the world, which is similar in Europe. New sources or rather new techniques fulfilled the natural gas demands. Liquefied natural gas (LNG) from oil exploitation, particularly in OPEC countries, contributed to the supply. New LNG terminal in the Wadden Sea distributed the gas by pipelines to the users.

Also the renewable energy market contributed to sufficient energy supply in the Wadden Sea region. Besides wind energy, solar energy and biomass techniques are sound newcomers. Furthermore, hydrogen fuel cells were introduced to the market in 2015 and deliver now 2% of the total electricity in North West Europe. The outlook for this source is very optimistic.

Due to the higher energy demand, the price increased for both, primary energy (\$ 30-40 per barrel) as well as for electricity. This moderate price increase is related to a more efficient generation and use as well as to the fact that the healthy economy is not strongly depended on the energy prices.

PERCEPTION OF NATURE

The ecological consciousness is high in a relatively small group of intellectuals and a relatively large group of well-to-do elderly. Promotion of nature is done through professional organisations with much influence.

There is a strong believe in new technologies being able to solve ecological problems.

The high economic growth puts a burden on the use of space and energy, but there is money available for technical innovation and buying land for nature conservation purposes, at least in our part of the world.

There is a strong tendency to use nature for living and recreation. Generally new nature is created. There are protected ecosystems, mainly in the framework of the Habitat Directive. Also several traditional landscape areas have been conserved. These have the character of outdoor museums. Biodiversity has decreased, mainly because intensification of activities outside the nature areas and the further decrease of natural habitats.

The quality of air, water and soil has further improved, mainly as a result of the introduction of new technologies and more efficient use of energy and materials.

THE WADDEN SEA REGION

Strong economic impulses for the region come from the big cities and Hamburg. The differences between city and countryside are decreasing.

There has been an (absolute) increase in employment and added value in the service sector: higher education, high tech, tourism and state services.

A highly specialized secondary sector is developing: wind energy, offshore and harbour activities, food and health, car.

The primary sector concentrates on traditionally strong products (milk, seed potatoes) and niche products for health and construction. Both are large scale businesses.

Unemployment is low with an average of 6% and with hardly differences between the countryside and cities. Living in the countryside (mainly the rich) has increased strongly. Service facilities in countryside are mainly based upon private initiative: everything costs money.

Social problems of unemployment (social security is low) are concentrated in the metropolis of Hamburg.

In countryside identity problems increase through a growing difference between allochthonous and autochthonous parts of the population.

The quality of the Wadden Sea is high, but the level of disturbance has increased: more activities (gas extraction, tourism, fisheries). The World Heritage Status attracts more visitors from abroad.

On the mainland undisturbed nature exists only in Natura 2000 areas of minimum size. Outside these areas there is a loss of biodiversity and natural habitats, however with large differences between the Wadden Sea countries. Water and air quality are good.

SATISFIED CITIZENS

A DIVERSIFIED EU

The accession of 10 new member states and the adoption of the European Convention did not inaugurate a new period in European collaboration as many had hoped for. The "old" Member states, prompted by the fear of their citizens that an enlarged EU would result in wage dumping from the new member states and that they would have less increase in prosperity, were reluctant to delegate more competencies to the Union's institutions. Though formally the Commission and the President and the European Parliament were given more executive and legislative power, as laid down in the draft Convention, also in the 2020s influence and decision making in the Union was and continues to be dominated by the France-German axis in terms of the economic, monetary and social collaboration. On other issues, such as foreign policy and defence, other blocks continue to be formed between member's states, determined by the specific issues at stake. A further enlargement of the Union failed, except for the accession in 2008 of Rumania and Bulgaria, since these had been promised accession already earlier.

The "old" EU members that had not joined the common monetary system have even less arguments to do so now. The rich Euro states joined forces through bi- and multilateral agreements aiming at protecting their internal labour markets and social systems. This was the beginning of a divided EU with several internal blocks.

Sound government finances in the "old" member states in combination with low wages in the "new" member states have guaranteed high economic growth the last decade. In that sense also the new member states have become their share of the economic progress but the economic and social disparities remain. The Union is not engaged in social progress. The "old" members states have not had a genuine interest in structural reforms of the Common Agricultural Policy, the cohesions policy and the regional programs. They still become a significant share of the regional and the cohesion fond.

The collaboration with the neighbouring countries of east is undergoing a period of tensions. In order to maintain the internal market the Union has been forced to impose trade tariffs on imported goods from Russia, Ukraine Turkey. The Union does only to a limited extent act as a dominant international player. The larger EU member states pursue their own foreign policies as they find fit in their national interests.

The European Union is accepted among its citizens as the less bad collaboration. They accept that it is necessary to cooperate in economic affairs for this is mutually beneficial. Most of the citizens are very sceptical towards further political integration because it is a prevailing perception that Union is dominated by a few powerful countries and the Brussels bureaucracy. It is will be impossible to change the balance of power within the Union and create truly democratic institutions.

Sustainability and the protection of the natural environment continue to be based on the directives issued in the 1990s but since then no significant new initiatives have been taken. Member states feel that environmental protection is their competency and can best be regulated nationally. The new member states were directly opposed to new initiatives in this field because it was the opinion that this would curtail economic and social progress.

HIGH ECONOMIC GROWTH

In the north-western EU countries average economic growth has been high for a long period, despite a rather passive behaviour of consumers. The main causes are the very high efficiency of production, and the high labour participation, also of women and elderly. The average working week is now 44 hours, while between the age of 60 and 70 this gradually declines to 20 hours a week. There is, however, a very high degree of flexibility in the actual hours worked per week. Labour has become a much more competitive factor (also compared to the new member states) due to the increased efficiency combined with a sharp reduction in the gross costs of labour (reduction of taxes). Money is spent easily, although not on electronics or cars, but on long-life quality products, high quality homes, public transport, health care and high quality food. The open European market provides good export chances for products from high efficiency agriculture, which are processed in the region and subject to high standard quality controls. The service sector is the most important economic driver, most notably higher education, attracting many foreign students from within the EU, health care and tourism and recreation being the most important in terms of added value. Also the health care sector is an important pillar of the economy. The still increasing percentage of elderly citizens (some 20% of the people in the old EU states are older than 65) spends much money on illness prevention (healthy food, health farms, sports and leisure activities). The centres providing these services employ relatively cheap, but well trained personnel from the new EU states. Some of the classical industrial sectors, most notably the German car industry, are doing well, although exports to non-EU countries have dropped seriously after the revival of global protectionism. The reduced imports from Japan and the USA, combined with strong restructuring programmes, reducing the number of models and investments in research and development and scaling down large plants into small efficient and flexible units, have made survival possible.

LOW TECHNOLOGICAL INNOVATION

The speed of technological innovation has gradually decreased in the period 2010-2020. The two major causes were the decreased consumer's interest in short-lived fancy products and the decreasing possibilities for investing in large scale research and development. The first is definitively related to the complete saturation of the "new" generation, born around the turn of the millennium, with new electronic gadgets and other fashion products. The latter was the result of the new protectionism and the scaling down of companies into smaller, largely independent units. This does not mean that there is no more innovation. There certainly is, but it is on a small-scale and much less capital intensive than it used to be. Moreover, innovation is very practice and market

oriented, taking due account of the real needs of consumers. It is concentrated on, amongst others, improvements in energy use (efficiency, renewables), comfort, health service and public transport. Low technological innovation must therefore be seen from the perspective of the percentage of the national budget spent on it, which is nowadays some 1% of GDP, whereas it used to be some 2.5% in the 1990s.

Another factor relevant for the relatively low investments in *technological* innovation is the fact that increasingly investments have been made in *structural* innovations. This is, for example, visible in agriculture where substantial land re-allocation schemes have been implemented, making production more efficient. Also in transport structural measures have greatly improved efficiency.

REGIONAL MARKETS

In the expanded EU the north-western member states now have the best of both worlds: a large internal EU market and protected national social and economic systems.

Concomitant with the increasing nationalism in the EU in the period 2005 to 2020, the position of the Union as a political and economic global player has become weaker which, in turn, has caused increasing protectionism towards the other global blocks, i.e. the USA, Japan, the Asian tigers and China. As a result global trade has decreased. This trend is still continuing due to the increasing ability of the EU itself to cover its basic needs, mainly in terms of energy and bulk products. With regard to the latter also the increasing recycling of waste material must be mentioned, one of the few issues where cooperation within the EU is functioning well.

It must be noted that the decreasing global trade has not only been the result of internal political problems. Another major factor was the economic growth of China causing an enormous increase in the prices of oil, which has prompted the EU to take care of its energy needs. The relatively high level of expertise and experience with solar and wind energy systems, which already existed at the beginning of the 2000s, certainly was an important advantage.

EU trade is now mainly an internal matter, with only exotic food products (coffee, tea, spices) and some non-ferrous metals being bought at the global market.

The trade flows within the EU internal market have changed as a result of the decreasing global trade and the increasing regional self-support within the EU. Multinational companies have switched their production sites in Asia, supplying the European market, back to Europe, mainly into the new EU member states. There is an increasing flow of high quality end products, such as cars, from the eastern to the western part of the EU27.

There is, furthermore, an important flow of relatively cheap labour forces from the eastern states into a western direction.

Food production, on the other hand, has undergone a process of decentralisation, with each region having its own production and processing of most basic needs.

The service sector is the strongest export product of the north-western EU states. Services are provided to most of the EU, including university and high school education and specific expertise in various fields.

LOW MOBILITY

In 2020 the amount of travelled kilometres for private persons is the same as in 2000 (no growth). But the character of mobility has undergone dramatic changes compared to the beginning of the 2000s. Collective transport has grown tremendously and is now responsible for 40% of the total number of persons transported. Car sharing is the dominant form of car transport. The cars used in car sharing are, however, much more comfortable than 15 years ago and are also used as a work station.

Because the people work in the region they live, commuting distances have become smaller. Also leisure travelling is very well considered as quite expensive, even though the energy prices are still quite moderate. Small distances are managed by bike or foot. International travelling for holidays has decreased while national and regional destinations have become more popular.

The share of public transport has reached almost 40%. The big ongoing investments in fast train connections and better integration of the regional and national connections has led to a steady growth in public transport from 2005 until now. This fact, together with the evolution of traffic guided systems has caused a strong reduction in traffic "pressure" and has made traffic jams a phenomenon of the past. It is certainly true that people travel less than two decades ago, but the major factors causing low mobility pressure are the increase in car sharing and public transport.

Migration is visible just on a really low level. People stay in the region and are satisfied with their living and commuting conditions. The community-orientated population contributes to a vivid region. Migration on international level almost does not take place (strong nations, regional markets).

MEDIUM FREIGHT TRANSPORT

The world wide annual international trade growth is 2.4 %. The trade size for the EU 15 is around \$3500 billion. 60 % of the trade is between EU countries. As a result of the increase of trade within the expanded EU market and the high economic growth, the number of transported goods is higher than in the first half of the 2000s. The increase has, however, not been as high as projected before the accession round of 2004, mainly because of a continuing decrease in global trade.

There have been important changes in the nature of the trade flows (see above) and thus also in the nature of transport. Within the EU both sea and inland ship traffic have increased considerably. The size of container and bulk ships has however not increased because of the strongly reduced global ship traffic. Generally, the number of traffic movements has increased more than the total number of goods.

Another important change in the nature of transport is the strong reduction in long distance land transport. This is caused by the increased local and regional self support of various products and the increased inland ship transport.

PASSIVE, COMMUNITY ORIENTED PEOPLE

Northwest EU citizens in 2020 are proud of their country and region, they work hard, are in good health, have comfortable homes, are member of golf clubs or walking unions, and visit the wellness centres around the corner at least once a week where they get a massage from a guest worker from Hungary or Slovakia.

They have good reasons to be satisfied nowadays. It have been hard times at the end of the 2000s and the beginning of the 2010s. They were confronted with increasing social uncertainty and bad economic forecasts, shortly after the 2004 accession. Criminality increased, as well as unemployment, due to immigration of cheap labour forces from the new eastern members.

It took some years before the national intellectual elites started to become active, but, then, increasing political pressure was exerted. First success was achieved in Brussels with the stopping of new regulations for uniform EU social standards. The newly gained self-esteem of national political parties and the academic elite was the basis for new nationalism and regionalism, and aversion against internationalisation. The EU is tolerated now because, at the political level, it is paralysed, whereas from an economic perspective the advantages of the internal market are well recognized.

An attitude of no-nonsense and pragmatism has developed, enabling a very well organized and efficient society in which there is no place for short-lived gadgets and frivolities.

What is appreciated are robust products with a clearly defined purpose. There is a preference for locally grown and processed food products, the quality of which can be easily checked.

The increased regional self-support and the desire for high living standards have been the basis for a strong revitalisation of the country-side. Agricultural production is concentrated in large areas with high quality soils. Areas with sub-optimal soils have been set aside for nature and living.

ENERGY MARKET

Until 2020 the primary energy demand in the European Union has risen by an annual average of 1%, which means a total increase of more than 25% from 2000 on. Economic growth rates have been even higher which underlines the trend of decoupling economic growth and energy consumption.

Most of the demand is still covered by fossil fuels though the price for oil from the OPEC countries as well as for Russian gas increased substantially. The imports from outside the EU (the EU countries exploit just 20% of their oil demand and 40% of their gas consumption) are to great extend covered by Norway, but the supplies become meagre.

There are enough sources of fossil fuels on the world market, but the EU countries are refraining from the global energy market and OPEC policies. With a view to heavy political tension in the world, the EU is going to become more and more independent regarding energy consumption.

The installation of new renewable sources (wind energy is already heavily used and has a share of 10% of electricity generation in Northwest Europe) has not made the progress as intended but will quickly grow in the near future, particularly the non-hydro renewables.

Some efforts were made to increase the efficiency of energy generation, which is the most effective way to reduce the consumption, together with energy savings in all sectors.

Private households do practice the savings quite well to save costs of the relative high electricity price. Also private initiatives installing solar collectors for warm water systems have been very successful during the past 10 years.

The prices for oil and natural gas have increased from \$ 20 per barrel in 2000 to \$ 30-35 in 2020. North Sea oil is even a bit more expensive.

PERCEPTION OF NATURE

There is a high ecological consciousness and the willingness to invest in nature and environmental protection. These investments are mainly based upon the wise application of existing practices and a very high efficiency of using energy and materials, including a high degree of recycling.

The conservation of traditional landscapes and nature areas is higher on the agendas than today.

There has been a strong increase in living with nature.

As a result the area covered by natural habitats and, consequently, biodiversity has increased.

Also the quality of water, soil and air has generally increased, mainly as a result of recycling, the use of degradable materials, and the reduced use of energy.

THE WADDEN SEA REGION CHARACTERISTICS

There is a strong conservation tendency, i.e. of culture, landscape, traditions and way of working. This has increased the typical features of the cities and the rural area.

The economic situation is dominated by the service sector. Central governments have stimulated government institutes and education in cities. An increase in tourism and recreation (high quality) has occurred, also on mainland. Industry is strong in high (energy) efficiency products. Also the car industry and the food and health sectors are doing well. The primary sector is characterized by efficient agriculture with traditional features, i.e. no use of GMOs and with cows in the meadows.

There is a low unemployment (average 4%) and a high labour participation. The social security system has small meshes but moderate facilities. The social cohesion is strong and there are good communal facilities in the rural areas.

The ecological quality of the Wadden Sea is high. The trilateral cooperation is strong and based upon a common strategy and harmonized aims. The Wadden Sea and parts of the adjacent mainland have the status of World Heritage Site for natural and cultural heritage.

The traditional cultural landscapes are protected. In these areas there is a higher biodiversity. There is less support for Natura 2000, i.e. on the mainland there are less natural habitats.

CHALLENGING WORLD

STATES BEFORE UNION

The enlargement with 10 predominantly and the adoption of the new constitution in 2004 started with great expectations. The new constitution, which was finally ratified by the last member states in 2005, was however weakened in comparison with the draft Convention. The institutions were not strengthened to the extent formerly aimed for. The European Union foreign minister was vested e.g. with less authority than foreseen in the draft treaty. The further reform of the Common Agricultural Policy went slowly ahead. The prime problem however was that the problems ensuing from the enlargement and the social and economic problems in the new accession states had been gravely underestimated. The financial support of the new countries were much larger than foreseen and drained the financial potential of the Union which had been also weakened by the decline of the reform of the CAP and the Cohesion Fond. The structural funds investments failed to create real growth in the "new" member states. High unemployment and migration to the "old" member states enforces the structural underdevelopment in most of the regions of the eastern part of the Union. The western part of the Union is flooded by cheap labour form the east. Crime and corruption in the east thrives. Crime increases in the western part of the Union because of the loss of boundary controls, which is reinforced by the inability to create a European police force.

The support for the enlarged Union is slowly eroding among the citizens of Europe. In stead of an anticipated high economic growth, the enlargement has resulted in low economic growth, which is partly seen as a result of failing policies. Further enlargement of the Union is not pursued and tensions with the Balkan countries and Turkey, which were promised accession, is increasing. The European market is also strictly closed for goods from the former Soviet republics of Ukraine and Byelorussia. The EURO is confined to the member states, which had adopted the currency in 2004. The Scandinavian countries refrain from adopting the currency because they are against loosing their formal monetary authority and other member states are not allowed by the existing ones to adopt the currency because of the fear that they will undermine the value of the EURO. The European Central Bank attempts to conduct a strict monetary policy as foreseen in the Stability and Growth Pact but largely fails because of the opposition of Germany and France. Other member states accept the state of the cooperation because they are in their turn unwilling in the current circumstance to delegate power and authority to the Union's institutions.

The European Union in 2020 is a Union, which is based on practical considerations. Much of the cooperation is on an ad-hoc based issues approach as is much cooperation between member states and states outside the Union. The Union's institutions primarily the Commission has basically lost its possibilities to influence the development though they have kept their formal positions. They are

basically bureaucratic institutions which attempt to make their influence valid through former adopted rules and regulations. The "old" member states are very much in the position to conduct regional development and ensure that in spite of low economic growth, the national development is satisfactory and appropriate to the local and regional circumstances. Relatively also the "new" member states have undergone a significant development in a positive sense socially and economically though the large difference between the member states continue to exist.

On the national level we see big differences in politic systems (as we saw in 2000). In the major economies we see all kind of agreements between big players (so called "open sky agreements"). Small countries try to survive (economically and politically) by regional cooperation and bilateral agreements with their most important partners. Cooperation on industry level is common practice in Scandinavia and the Benelux still exists as a vivid economic and politic entity. Poland and Germany work closely together on several issues. Some of the first hour EMU countries still have a very strict monetary policy

The European citizens experience that they have a significant influence on their direct environment. This reinforces their involvement in local politics and activities. It also reinforces the opinion of the majority that "Brussels" is far away. And though the participation in elections to the European Parliament is low the majority in the Parliament is for less involvement of Brussels and against strengthening the Union's institutions.

LOW ECONOMIC GROWTH

The last two decades have shown an almost zero growth in most countries in Europe. The only exceptions are Norway, Finland and Poland. Poland had a big internal market and a lot 'easy wins' in labour productivity and product quality, which has made it relatively easy to produce food and consumer goods on informal markets of several old EU-members. Norway exports a lot of oil and 'water power' to the rest of Europe. Germany has gained a lot from its technological breakthrough on solar energy and hydrogen fuel cells, although this was barely enough to solve the severest economic problems.

The sober social systems forced people to work. The labour participation of married women is high (they want to be independent). Both parents have a part-time job of 24 tot 32 hours a week. A lot of families with only low education have problems to get enough money to maintain the living standard they used to have. Moonlighting is common practice for people who can not find other jobs, trade by barter is the way to get the things you can't buy them (if you repair our heating system, we will give you some vegetables out of our garden). The consequence is a vivid 'informal (black) market' (up to 30% of the GDP) although it is becoming more and more difficult to see the differences between formal and informal markets. These informal (black) markets are more or less accepted by the political and social system. The acceptation process started in the old EU when in several countries parliaments concluded that unemployed were allowed to earn annually a certain (substantial) amount of money without losing the payments from the social services .

Competition in the market is fierce. Cost cutting and the simplification of processes and products are the main goals of the average company. Consumers get the desired quality for a reasonable price from the local companies. If the quality of local products is too low, local traders on the informal market will import them from other continents.

Skills exchanges, neighbourhood networks and leisure activities with a productive aim, such as growing vegetables and do-it-yourself, are professionally organized at local markets with their own administrative system and sometimes even with their own (virtual) currency ('nixes'). At these markets people exchange or buy hand-made products, second-hand trade, cultural activities and all kinds of personal services (e.g. remedial schooling, child-care, home help, care for the elderly). The biggest informal market is of course the refurbishment of houses by professional carpenters, plumbers and brick builders. Local associations, run by families, or small groups of unemployed, have turned into de facto small businesses. Most of these operate on an unofficial basis, not bothering to register with the relevant authorities or to pay taxes. In other places, new-style local trade unions have been formed to defend the rights of inhabitants in general, as well as those of workers. A large majority of these local community structures has remained open to the outside world to get the information, skills and goods that are not locally available. They have developed international communication, partnerships and exchanges of experiences, not only between EU countries but also with partners in Eastern Europe, the Mediterranean and Africa .

HIGH TECHNOLOGICAL INNOVATION

The creative power of the well-educated EU population is big. We see a lot of creative ideas emphasising the perfecting of existing technologies and the creative re-use of known concepts and technologies (we are big in energy efficiency gains using existing technologies). But because of a lack of funds and the absence of a good working coordination mechanism we hardly see any fundamental European breakthroughs in the rapidly growing technology sectors. The strength of the EU companies and consumers is to select and adapt new technologies that really solve big problems, like personal health and the quality of the everyday surroundings in a sustainable way. Most European organisations don't have enough funds and knowledge for fundamental research in Genomics (isolate genes that play a role in determining physical disorders, longevity, and susceptibility to disease) and smart materials for medical purposes. They concentrate on importing the research results from outside and using them to translate them into essential products for the European market (high-tech copying). Of course, this is not as profitable as the strategy of the US companies (it is more difficult than becoming a billionaire) but there are also less risks and less needs for very risky investments). The same trick is used with regard to technologies of which it is unclear what the new standard will be. The European industry learned a lot from the expensive battles on standards (video recorders, software, mobile phone systems, games computer). Of course here are also some exceptions. Most countries continue to build with reasonable success on the strong innovation power in certain sectors. Finland is still considered an innovative player in the world market for mobile devices, Germany is doing well in solar energy and the Dutch are still famous for their innovative power in the flower business.

Consumers have a sceptical attitude towards new technologies like the so-called new improved washing powder, the breezer you need in order to enjoy life or new technologies like ISDN, (outdated before implemented on a broad scale). The market for new mobile communication devices (phones, SMS, PDAs) totally collapsed. New energy and transport systems are accepted widely. The implementation of these innovations is often difficult because of (national) protectionism and differences in legislation for new products.

REGIONAL MARKETS

Political tension between The US and the EU, the second confiscation of SHELL investments in Russia in 2010 by the Russian government, and the problems of EU companies with doing business in China have led to a strong development of regional markets. EU countries strive to be independent from non-EU countries. This has led to (relatively) high EU investments in energy (new sources), and lasting investments in health and food developments (research and production). Within the EU we also see quarrels like the one between Spain, France and Poland about agriculture (issues are unfair competition, lack of quality and the sources and treatment of diseases) and between Germany and Slovakia about the misuse of German patents and price dumping of Volkswagens produced in Slovakia. More in general we see that the rich countries try to close their countries for imports of goods and cheap labour. These initiatives seldom succeed: consumers want cheap products and companies want cheap labour. Because of the strong demands and the absence of an independent (powerful) regulating institute (government) goods and labour are traded on a vivid, local informal (black) market. The choice of consumers (citizens) for regional markets and the local community has been a positive one: people value their cultural roots, the stronger bindings with the local community and the gain in flexibility and problem solving power. The local orientation gives them possibilities to build a future local world without needless loss of local identity. Their society has become less complex (less regulation, less suppliers, less influences from exotic cultures) and the disadvantages, such as less economic growth and purchasing power, are taken for granted.

MEDIUM MOBILITY

The growth of the travelled kilometres for private persons in the period 2000-2020 is almost 40%. The relatively high mobility is caused mainly by active and adventurous social activities and by the frequent migration.

The average commuting pattern of an average employee is more or less the same as in 2000. But people move easily to other communities, regions and European countries to find a job that suits them. Because finding a new dwelling is not easy people travel a lot in period around a job shift. This leads to short periods (3 to 6 month) of intensive travel. The result is a modest growth in the commuting kilometres. The patterns for international business trips are the same as in 2000. The daily short distance rides are smoothly spread over the 24 hours of the day, leading to a diminishing pressure on roads and public transport systems. This spreading was possible because people have to take every opportunity, to find jobs or to establish new enterprises in niche markets.

A relative big group of people seeks for an active way to spend their leisure time. Passive consumption of television programs is replaced by all kind of activities like organized bike and walking trips (day, weekend and even holiday trips of one or two weeks). International holidays are under pressure. People use special offers for going abroad. Most people spent their holidays in the home country or neighbouring countries.

Public transport has improved. The growing demand for regional public transport seduced regional players to improve their services. We see amongst others 'bus on demand', perfect integrated planning between public transport nodes and between regions. Big investments to create better high tech infrastructures are considered but not granted yet because of the weak economic situation.

Car ownership has remained at the level of the year 2000, because of the lower status of car ownership, the lack of money and the available transport alternatives for the very short trips. Where possible, people use bicycles, scooters or small electro-cars (a new generation SMART cars).

Migration within the regions and countries is quite high. People meet the challenge to find work everywhere in and outside the region. The situation in the rural area and the small villages near big cities is the same as in 2000. Further away from cities the communities have big troubles to survive.

MEDIUM GROWTH IN FREIGHT TRANSPORT

The world wide annual international trade growth is 3.7 %. The trade size for the EU 15 is around \$6000 billion. 60 % of the trade is between EU countries. The biggest growers are the transport raw materials, the transport of mass products from Eastern to Western Europe and the import of very specialized high-tech goods like hospital equipments and parts for nuclear power plants. The amount and the average distance of intra-Europe transport are growing. Imports of IT equipment, cars and consumer electronics from the US and Asia have decreased.

No big investments were made in infrastructure over the last 10 years. All available facilities are used for freight traffic. Small harbours have been reactivated for cargo handling.

Due to the political tension, harbours got also important for transshipment of military goods.

ACTIVE, COMMUNITY ORIENTED PEOPLE

The people living in North West Europe believe that all human beings have the right and capabilities to make their own choices. Individual freedom and responsibility will lead to a healthy society. A vast majority of people uses a definition of growth emphasising social and spiritual maturity. A good balance between economic health on the one hand and physical and emotional health on the other hand is important. Differences in culture and lifestyle are seen as a source of inspiration. People are strongly focussed on their local community. Local social and political issues are analysed and solved in an intense and informal process, a lot of people participate actively in formal and informal discussions (or better dialogues).

Traditional values are clearly visible but are implemented in a way that stimulates individual freedom. This freedom has caused big differences in attitude towards labour, leisure time and family

composition. These differences can also be seen in the attitude towards education and culture. Some people only want the best education, no matter what it cost, others scramble (grab) as much bits and pieces as they can get from their small budget. Some people focus on culture with a capital C (Art), others on small culture (television soaps, the revival of the rap and reggae scene).

Some people have chosen for a sober pattern of consumption of physical goods. Good is good enough, a second house or car is an ecological, social and economic burden. A good balance between work and private life and between short and long-term goals is their central ambition. They work to create a great future for themselves or their children without forgetting their current needs. Simple contributions to improve the local social and ecological health are made easily. Other people (from upper, middle and working class) are still very ambitious and driven by the wish to secure their individual future as quickly as possible. These people choose a job in the energy, food or recycling industry or they start their own business as craftsmen (plumbers etc). All people are active on the informal market (as entrepreneur or buyer) and have a high cost consciousness.

ENERGY MARKET

As energy is the basis for any social and economic activities and development, the demand of primary energy as well as for electricity has increased in the past and is much higher than in 2000. The growing technological innovation and the establishment of new small enterprises require all kinds of energy supply.

The transport sector remained the fastest growing sector in final energy demand. The total energy consumption in the EU has grown by 30% from 2000 to 2020 and the share of the transport sector increased by about 5 % in Northwest Europe and has a total share of more than one third of the consumption.

Natural gas resources still play the most important role on the energy market, but the lowest costs options, piped gas from Algeria and Russia (Nadym-Pur-Taz region) were not sufficient after 2010 and the long term option of the Barents Sea are quite expensive.

Therefore, Norway is still the leading external supplier of energy to the EU. Both, natural gas as well as electricity, generated by water power, are exported to the EU, in which the limited resources of Norwegian fossils will lead to settling other options.

Besides a substantial use of LNG (imports from Africa and the Middle East), which will play a much more important role in supplying the European gas market in the next years, some renewables have been further developed.

For the decentralized energy generation market, hydrogen technology together with fuel cells have found application over the past five years but do not contribute to the energy consumption substantially (< 1%). All in all, energy savings, more efficiency and the use of low cost resources kept the electricity prices very moderate – a positive effect for economy and society. The fossil fuel prices are in the range of \$ 30-35 per barrel but an increase is expected in the near future (2030) due to shortage of the supplier countries.

PERCEPTION OF NATURE

There are strong national and regional differences in environmental and nature protection. The harmonizing force of the EU has almost disappeared. Due to the bad economic situation, national governments have watered down their nature and environmental rules and regulations.

The differences in perception of nature between the average citizens are high as well. In some communities nature areas or cultural landscapes are highly valued and protected. At the same time large former nature protected areas have become the playground of new enterprises or have become part of large farms.

Both water quality and biodiversity have decreased, mainly as a result of illegal practices (because of insufficient enforcement) and the average decrease of the size of natural habitats.

THE WADDEN SEA REGION CHARACTERISTICS

Generally, there is a high level of entrepreneurship, both in cities and countryside.

The administration-related employment has decreased and there is less bureaucracy.

The number of private consultancies has increased. Several small sized firms produce many new patents in the food and health sector and in the energy saving sector. There is a high differentiation in agriculture and there are substantial differences in national support.

Unemployment is moderate to high (8%), but there is a high dark figure. Generally unemployment is higher in countryside than in the cities. Incomes are lower than today. The social system is moderate but there is much private, community-oriented, support of the socially weak. Facilities in countryside are mainly community organized and ad-hoc. Birth rate are increasing again.

With regard to nature protection of the Wadden Sea there are big differences between the Wadden Sea countries: In Germany is still strong but in Denmark and The Netherlands DK and NL protection is slowly degrading and more activities are allowed.

Also on the mainland there are substantial differences, but, generally, there is less protection than today and a decreasing biodiversity. Also the Quality of water and air are decreasing.