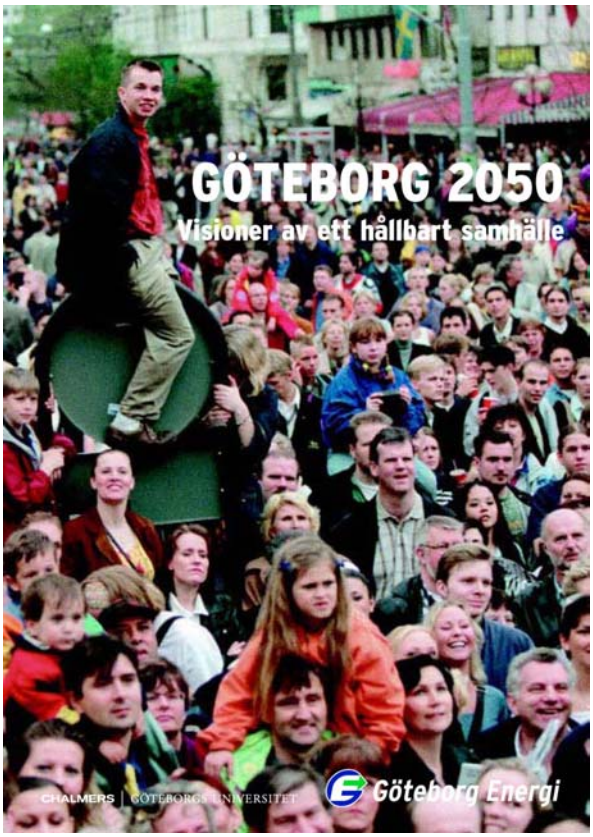
GÖTEBORG 2050

- visions of a sustainable society



This is a translation into English
of the GÖTEBORG 2050 folder

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GÖTEBORG 2050
www.goteborg2050.nu

The project

GÖTEBORG 2050 is a project spanning a number of years. Our aim is to draw up and develop visions of the future for Göteborg as a sustainable city and part of a sustainable society. Our ambition is to achieve a deeper understanding of how the sustainable world of the future might take shape, and thus to stimulate accelerated movement towards sustainability.

This folder describes the project GÖTEBORG 2050, giving ideas about what various aspects of life might be like half a century from now. We hope it will also serve as a source of inspiration so we can begin to envision Göteborg as a sustainable city. We offer the reader our own ideas as scenarios for conceivable, desirable futures. As the project progresses, we hope as many people as possible will become involved in developing them.

Hans Eek, and Johan Swahn are the coordinators of the project GÖTEBORG 2050. The main financiers of the project include the Swedish National Energy Administration (STEM), the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS), the city of Göteborg, Göteborg Energi AB, Chalmers University of Technology and Göteborg University, Västra Götalandsregionen, Renova

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Photo: Hans Eek and Johan Swahn

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The good life

When developing a sustainable society, we choose to use the best of what is new, while retaining the best of what we already have, making use of the things that really were “better in the past”. We aim at maintaining an ongoing dialogue throughout the project about what “the good life” means. The results of another visionary project — the county of Halland’s Environmental Forum — and the work of that project on drafting an environmental strategy have also been an inspiration to us in our work.

A more humane society – Quality of life – Good health

The focus is on the individual, and on individual visibility. Every individual will be able to develop to the full, and there will be time to discover the potential of every person and his or her qualifications. Our increasing number of elderly people will be able to live good lives, thanks to the fact that each new generation will have good support while growing up, and we will all be able to develop into secure, responsible individuals. Young people will participate in establishing the new society, will be invited to be active and to bring an influence to bear. Every effort will be made to allow individuals to have an impact and to take part. Opportunities to serve as representatives in decision-making bodies and on steering committees will be fairly divided among the different groups in society. The powers that be will be receptive to comments and open to dialogue from all strata of society.

Good health will be a matter of increasing focus, and preventive activities will inspire people to show more interest in what they eat, how food is produced, and in getting exercise

There will be more places for people to meet and more fora for discussion. New technology will be used to facilitate daily living and make time for people to spend together, with culture and sports, for instance, being cohesive elements in society. People will spend more of their leisure time experiencing things and socializing with friends -- as well as in contemplation and reflection.

(Source: Halland County on the Offensive in Environmental Efforts ["För ett offensivt miljöarbete i Halland"], Lisbeth Schulze)

Working with the GÖTEBORG 2050 project

Our intention is to involve as many people as possible in the process of working with the scenarios for the future developed in the GÖTEBORG 2050 project.

We hope to:

• Create meeting places where anyone who is interested can discuss various aspects of the concept of a sustainable future, and participate in developing positive future scenarios.

• Draw up and then continue to build on facts and figures on which to base our scenarios for the future, a sort of "knowledge base" to give the project a sense of coherence.

• Initiate and fund research for continued work on the future scenarios.

• Develop visual images of the future scenarios.

• Contribute to planning and developing strategies that will enable us to move towards sustainability.

• Provide an impetus for pilot projects that demonstrate how to take the first steps.

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What is a sustainable society?

Perhaps the most significant aspect of sustainability is that it is about long-term thinking. In the GÖTEBORG 2050 project we have taken the following point of departure for the development of a sustainable society

• An ecocyclic society. In an ecocyclic society, the material loops are closed, no toxic substances are emitted or discharged, and biodiversity is safeguarded. The use of finite resources is minimized, and as little waste as possible is landfilled.

• Emissions of greenhouse gases are kept low, with a view to achieving zero emission levels. Thus there is a sustainable energy system based solely on supply from renewable sources

• The world's resources are utilized in a way that is fair to all. Within fifty to one hundred years, prosperity will therefore be evenly distributed, and the entire earth will be sustainable and sound.

These points of departure are in line with the tradition that sees sustainability as leading to an ecologically sustainable society.

The GÖTEBORG project 2050 also includes aspects beyond ecology The project is meant to encourage active discussion of what constitutes the good life and what basic issues we need to grapple with.

Open questions:

What do we think about the way time is used?

How can we make our community more people-oriented?

What gives people satisfaction?

What is our view on consumption of goods and services?

What can we say about the future?

When we speak of GÖTEBORG 2050 we are envisioning a society characterized by long-term sustainability in a sustainable world.

GÖTEBORG is the name of our city but it is also a term term with many different implications. Sometimes it refers to the block we live in, sometimes the city center, sometimes the greater Göteborg region, and sometimes the county of Västra Götaland. We must always bear in mind that Göteborg is part of Sweden and part of Europe, and that the place for which the word GÖTEBORG stands, only exists in interaction with its surrounding context.

When we put the year 2050 in the name of our project, we were not setting out a fixed time frame, but rather the time needed to develop a desirable and possible future. Some sustainable systems were already in place at the dawn of the 21st century, and as we move towards 2050, many steps will probably be taken along the way to sustainability. Still, it make take as long as to 2100 for the whole world to become sound and sustainable.

In 1950, it was impossible to predict exactly what society would look like in the year 2000, and it is equally impossible today to say precisely what society is going to look like in another fifty years. The GÖTEBORG 2050 project is not an attempt to predict the future. On the contrary, the method we use is known as "backcasting", and implies setting up goals for how we would like things to be in the future, and then exploring ways of achieving those goals with the knowledge we have today about how the future could be. It is our conviction that it is possible to say quite a bit already about how a society characterized by long-term sustainability might be.

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What could Göteborg be like in fifty years?

In 2050 the people of Göteborg will live in residential areas much like those we have today, spanning the spectrum from our very urban unique wood-and-stone “landshövdingehus”, Torslanda, Angered and Bergsjön. Almost all housing will have been renovated and adapted for greater energy efficiency and resource economization. Areas with single-family dwellings will be more compactly built-up, with a view to better utilization of the urban infrastructure, private and public transport, and district heating, water supply and waste water management services, Every neighborhood will have its local shopping square with lively commerce, as well as places for people to meet, since we will have plenty of time for leisure activities.

The population of the Göteborg region will have expanded, and the city alone will have over half a million inhabitants. Infrastructure improvements and new connections will have made the region more dynamic, with a total population of nearly two million. The population of the world will be almost ten billion, and population growth will have begun to stagnate. Because fertility is generally low, there are predictions that the global population will soon begin to decrease.

The Göteborg region will still have overall negative population growth, but we will live in a society that encourages childbearing and is child-friendly, so people will be having more and more children. Since the turn of the century, Swedish population growth has been mainly attributable to immigration from developing countries. People from other countries are welcome in Sweden and, like the rest of the world, Sweden will continue to become increasingly multicultural.

Open questions:

Will our docklands have developed into a cohesive, new, dynamic area?

Will Gothenburg City Airport be closed down and the area converted for terraced and single-family housing?

How many people will live on earth?

What kind of interplay is there between local and global culture?

Pages 8 and 9

Energy

In 2050, the most environmentally sound energy will be the energy we can save. Efficient economization with energy resources will be one of the keys to a sustainable society. Minimizing the consumption of energy and the use of materials, and only using the energy services one really wants and needs will be natural elements of sustainability. By 2050 we will have made dramatic improvements in energy efficiency in the housing and transport sectors as well as in industry and commerce.

By 2050 the total energy consumption in the world will have doubled in relation to 2000, and will continue to increase. Solar cells, solar heat, biomass, wind power turbines and hydropower plants will be used to a large extent instead of fossil fuels and nuclear power. Wind power will have taken such a large market share, alongside large-scale solar cell facilities that it will be possible to envisage a future where the use of fuels and nuclear power will be a thing of the past.

The systems for utilization of wind power and solar cells will include new storage systems, using chemicals and other means, such as hydrogen storage where electricity and heat are generated from fuel cells. The new electricity transfer system that will be under development will also reduce our need for energy storage.

In 2050, Göteborg will be a city with old and new architecture, all served by district heating systems for both heat and hot water, as well as for cooling. All the buildings constructed since the year 2000 have been built with a view to energy efficiency, and the older buildings have been renovated, and made more economical in terms of energy consumption.

Göteborg will be one of the cities to have contributed most to global development of renewable energy technology, and energy economization in 2050. Because we were early to invest in large-scale development of an offshore wind power park on the Fladen rock area, and because we set up a large CHP plant with gasification of waste and biomass, and invested in conversion of our oil refineries to DME facilities, we became a cutting edge city in terms of renewable energy. Another element of this process was our decision to use renewable fuels in our public transport system. We were also early to expand our use of biogas/natural gas digestion of sewage sludge and composting of household waste.

Continuation from pages 8 and 9 Energy

Open questions:

Will we even be able to manage without hydropower, and therefore be able to restore our diverted watercourses to their states of original beauty?*

When my fuel cell vehicle is parked, will I charge it up from the grid?

Will wood chip biomass from the forestry industries in central Sweden be transported to Göteborg by barge via Lake Vänern and the Göta Älv River?

Can cars be run on only one-fifth the fuel?

Will the new buildings have radiators?

Will biogas, DME or hydrogen be the fuel for our city busses?

Home – work – leisure

Do we live to work or work to live? In the vision for 2050, people work both to have an income and because they feel positive about doing something they really believe in.

In 2050, more people will be self-sufficient than today. We will be more attentive to one another and to our environment than in the past. More of our food will be locally produced, and our everyday lives will be more locally-oriented. We will devote more time at home to everyday functions such as vegetable gardening, composting, doing repair and maintenance, and looking after one another.

We will attach great importance to having meaningful, environmentally and ergonomically sound jobs, and to individual well-being. It will be possible to walk or cycle to a facility for teleworking. Our city squares, the public meeting places of our city, will be really that — places where people can get together and where they can also do many of their regular errands.

Leisure time will be time to converse and to meet. Vacation time will be seen as a chance to relax, to settle into oneself, and to experience things that will enrich our everyday lives.

Open questions:

Will the idea of "gainful employment" have taken on a different meaning?

Will the people of Göteborg spend more time out of doors?

Will more men than women be working in the caring professions?

Will fewer people be living in involuntary isolation?

How will people see the relationship between the private sphere and the public space?

Industry and commerce

Industry and commerce in the Göteborg business region will be better adapted to globalization by 2050, and at the same time will retain a local focus. Many of Sweden's raw materials are natural to the ecocycle. These include paper, wood products and food products, all of which will be in demand on the global market.

Sweden has a high-tech mechanical engineering industry. As early as the beginning of the 21st century, this industry had begun to specialize in development of sustainable technologies. The business life of the Göteborg region will have changed by 2050. What was once the oil refinery industry was early converted to the use of biomass rather than petroleum as its raw material, and to the production of primarily renewable fuels. Göteborg will be at the cutting edge of research and development in the new field of biomass chemistry.

Recycling, water and waste water management, district heat, and wind and solar energy are all areas where the region has long traditions. By 2050 the industries in this sector in Göteborg will have become world leaders. Chalmers University of Technology will also have maintained its spearhead position in research in these disciplines.

Göteborg will have developed into a transport center, as well as a hub of research and development. It will also be the midpoint of the entire Scandinavian goods and freight business. From all over Scandinavia, goods will arrive by rail and be forwarded on by sea, on combined sail and motor vessels. Landvetter will be both an airport and an airship port.

Instead of manufacturing products, local companies will hire out functions, taking major responsibility for life cycles and for operations. Maintenance will have become an integrated part of every product.

Open questions:

Will the Götaverken heating plant have come back into use as a full-service provider for the production and leasing of wind power facilities?

From what companies will it be possible to rent port cranes or airships?

Where can new parents lease a baby pram?

Will Sweden serve as a key biomass resource base in the global market?

Communications: Transport and information technology

Transportation, for people and for freight, has been a pillar of societal development since the stone age. As the developing countries have followed in the footsteps of the industrialized nations, transports have experienced a major growth spurt at the global level.

In 2050, travel in and around Göteborg will take place using the greatly improved public transport network, or by bicycle, electrically-driven cycle, hybrid electric motorbike, or microcars. Short distance travel will have decreased in volume, because people will tend to live closer to their workplaces, and because people will have more goods delivered via the distribution network, and will spend less time shopping.
Everyone will have access to cars in 2050, which they will be able to borrow from a local car-pool. For moving house, there will be transport vans to borrow, and seven seater-vehicles for large groups.

The tram and commuter train systems will be highly developed. Smart cards make it quick to get on and off the busses, and can also be used to pay for a taxi or to rent a cycle. The new train line will stop at Landvetter Airport.

When we are going farther, we will travel mainly by train. High speed trains will transport us on package holidays to southern Europe. As we come to have more and more free time, we will find ourselves enjoying long boat cruises again.

As more and more goods are produced locally, long-haul road transports will decrease. Long distance transports will mainly take place by rail and sea. Short-haul freight transports will take place by truck, using sophisticated logistics and coordination.

Developments in the spheres of information technology for communication will be ongoing. We will need to travel less, as we can teleconference on the web. Some real world travel will be replaced by a sense of experience from virtual reality.

Continuation page 12

Open questions:

Will our vehicle fuels be hydrogen and DME? Will our ”motors” be fuel cells?
Is it possible that the feelings from car and flight simulators will do away with some of our desire to drive fast and fly?
Will we feel we can just as well experience the Taj Mahal or the mating dance of the cranes at a Swedish lakeside at dawn as armchair travelers?
Will we be able to check the quickest way of getting somewhere on our mobile phones?
Will there be open-topped sports cars to borrow if you want to feel the wind in your hair?
Will we pick up our purchases at the neighborhood square, or even closer to home?

Food

Water and sustenance are basic human needs. The right of all people on earth to have their nutritional needs fairly met without draining the natural resources of our world is one of the key points for the sustainable society. The ability of the earth to produce what we need to consume must be maintained. All agriculture, forestry and fishing in the Göteborg region will be done in a sustainable way by 2050.

In 2050, the food we eat will be of even higher quality than it is today. We will eat somewhat less meat, but more beans, pulses and vegetables. Above all we will consume far less fat than we did in 2000. The things we eat in Göteborg will be produced in the region of Western Sweden, within a 100 km radius of the city. The whole province of Västra Götaland, with a population of 2 million, will be provided with food from the local area.

As around the year 2000, fruit and spices will still be imported – and of course, coffee!

The fifty years between 2000 and 2050 will have seen radical changes in food handling. There will be much more local shopping, with stalls on the neighborhood square, and we will order many of our staples by computer from home.
Energy consumption for food handling will have fallen by half since the turn of the century.

Open questions:

Will Sweden have been one of the places that provides food for most of the world? Will we be exporting grain, meat and fish, and will we have special systems to return nutrients to our soil and watercourses?

Will the people of Japan eat as much fish as the people of Göteborg?

Will it not cost much more to eat out than to eat at home?

Will there be plenty of restaurants?

Will cooking at home have become a hobby?

Will there be a particular way of labeling foodstuffs that are not produced in sustainable ways?

Ecocycles

The shift toward recycling and source separation that began early in the 21st century will have progressed, and by 2050 a large proportion of materials will be recycled. Packages and packaging materials for consumer goods will also be standardized, to facilitate source separation and purity of the individual waste fractions. Returns systems will be important.

By 2050, there will be no more flows of hazardous materials in society. Thus there will no longer be pesticide residues in our compost, or heavy metals in the residual waste products that are incinerated.

The quantities of waste for incineration will have declined, and because the big CHP facility with gasification technology that was built in Göteborg is fuelled by both household waste and biofuels, this is not a problem. The waste used for fuel is so clean that there is no need to deposit the ash, it can be used as fertilizer.

After digestion for production of biogas, all sewage sludge will also be used as fertilizer. The same holds true for the soil produced through large-scale composting of the compostable fraction of household waste.

Open questions:

Will all plastic materials be made from biomass?

Will there be a global system of returns for wine bottles?

Will there be special collection systems for "old objects" that may contain hazardous waste?

Will there be deep drill holes for final deposition of lead, mercury and cadmium, as for nuclear waste?

Will we still have large-scale wastewater and sewage management systems, or will we have introduced new, smaller-scale solutions?

Consumption of goods and services

By 2050, the term ”consumer society” will have lost the negative connotations it had in 2000. Consumerism will no longer be a lifestyle, and the word consumption will be associated mainly with fulfilling our goals and doing things. Thus consumer goods will no longer be ”disposables”. Instead, they will have a long life span, be easy to repair, and made to be upgraded.

It will be much more common not to own all the things we use. Instead, we will rent things like our bicycles and our refrigerators. The company that owns them will also service and repair them. And hardly anyone will have lots of possessions they hardly ever use.

By 2050, our society will be a service society. We will have accepted the idea that services, rather than consumer goods, are the expensive part of our cost of living. Now that the production of consumer goods has been made more efficient, a larger proportion of our incomes goes to purchasing services, which cannot be streamlined in the same way.

We will also have more time to do things ourselves for which, fifty years earlier, we ”just didn’t have time”.

Open questions:

Will every homeowner have to have a compost mill? Will every apartment owner have to own a hammer drill?

Finally, I’ll have a chance to organize my bookshelves and repaint my kitchen chairs!

Get in touch with

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