



Mission
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Governance & vision

Visions of cities towards a low-energy future

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Report prepared par Energy Cities

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Overview: Report Description

OVERVIEW

TOPIC

Visions of Cities Towards a Low-Energy Future

PURPOSE

The overall aim of this report was to identify and review the process by which different cities have built visionary plans for the long-term sustainable development of their territory for a low-energy, climate-resilient future. We used a case studies approach to describe different methods used by cities to build their visionary plans and address present energy and climate change challenges. The purpose of this report is as well to contribute to the debate on the future of cities in the post-carbon society and to inspire further initiatives for a low-energy future.

METHODOLOGY

The first step towards understanding the visioning/planning process of cities for a low-energy future was to identify several initiatives where cities have developed a plan or statement to address energy and climate change issues in the next 20 to 50 years. These plans and documents were then reviewed in search of diverse and innovative *methods* and *process* for visioning, design and planning towards a low-carbon future. After these preliminary assessments and observations, we selected 4 cities based on the use of different methodologies for visioning, planning and development of the action plan and projects. Afterwards, we focused on the description of the visioning/planning process per city, based on information obtained from official plans and documents, and from interviews with local authorities and other personnel working for projects in each of the cities selected. The content of the interviews varied according to the local context of the initiative, but in general contained questions regarding methods and tools used to build their visions and action plans, as well as enquiries about the visioning steps and process, the role of stakeholders, and implementation strategies used to drive forward this initiatives.

What you will find in this report

Part I - presents an introduction to the challenges of energy production, consumption and climate change regarding the energy future of cities. It includes background information on how the use of visioning/planning methods can be useful to build alternatives sustainable development strategies to address these challenges and move towards a low-energy society.

Part II - presents four relevant case studies from cities and towns that have engaged in a sustainable planning initiative by envisioning and designing a pathway towards a low-energy future. In addition, fact sheets with basic information of six other European cities that have adopted initiatives to achieve sustainability and a low-energy development were included.

Part III – presents the conclusions of the report and provides further reflexions on the different methods and approaches used by cities to construct their vision-action plans. In addition, it includes a complementary list of similar initiatives worldwide, a glossary and an extended bibliography list with additional references and resources.

This report does not necessarily reflect the opinions of the MEEDDM or Energy-Cities.

Part I: Summary & Introduction



SUMMARY

The purpose of this report is to contribute to the debate on the future of cities in the post-carbon society. Most recently, several European cities have developed visionary action plans to address energy and climate challenges, in general sharing a common goal: to become less dependent on fossil fuels and achieve a sustainable development. These visionary plans include a wide range of strategies and objectives to enable a productive transition towards a carbon neutral, or a low-carbon, or even a zero-carbon city in the near future. Yet, an important aspect of this topic is to understand and explore the building process itself, of how each city developed its own vision and action plan. Therefore, the aim of this report is to study the process by which different cities have built visionary plans for the long-term sustainable development of their territory. Using a case studies approach, we intend to identify and explain different methods used by cities to build their visionary plans and address present energy and climate change challenges.





"When we project our dreams into a positive future, we see that we can have what we want. A positive image of the future not only shows us how to get there; it draws us to it, attracting us toward our dreams like a magnet."

- Jon-Roger and Peter McWilliams: Do it! -



INTRODUCTION

How does life occurs in a post-carbon future? Imagine. We face increasing scarcity of fossil fuel energy supplies that provoke changes in the structure of our economy, and in the nature of our lifestyle. The peak in global oil production inevitably transforms the functionality of cities as we know them, while our daily activities in industry and commerce change as well. We inevitably adopt new forms of energy and transportation, because we no longer have abundant low-cost fossil fuel energy to lead our lives as usual, nor to heat our homes, run our cars or import our favourite food from all over the world. We have no other choice than to transform our current social and economic dynamics to ensure our survival in this new post-carbon society.

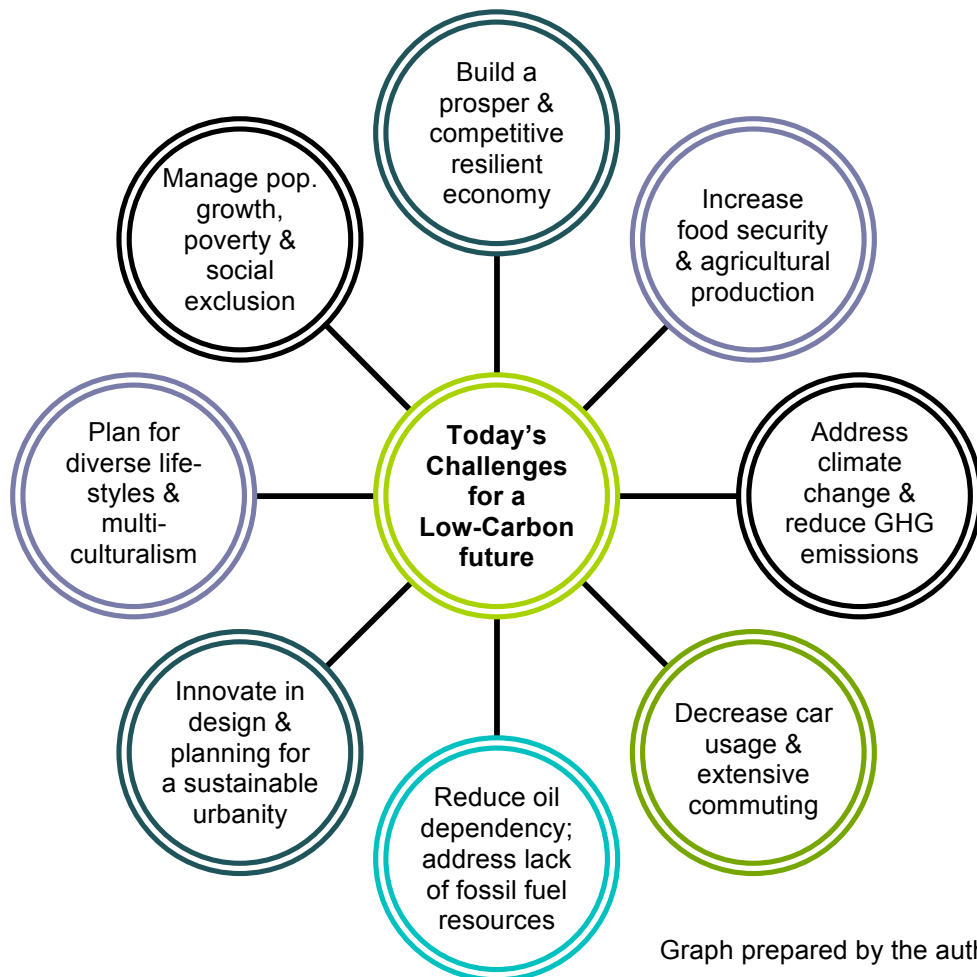
Imagine, life is great! We have created resilient cities independent of fossil fuels that are vibrant, prosperous places to live, work and grow. Everyday people walk or bike safely to their jobs and have access within walking distance to all their daily needs because we have built human-scale neighbourhoods. We have learned to use resources wisely and to act responsibly towards the environment by reducing our waste, water and energy usage and by recycling and reusing materials. We have learned as well to manage our energy consumption, and now our homes, public and commercial buildings are energy-efficient. We have improved our quality of life by developing a green, cleaner economy that provides jobs and enhances social justice and equity among all. We have invested in sustainable technologies and new business opportunities were created, making our cities more prosperous and productive than ever.

This positive attitude towards life in a post-carbon future is a distinct attribute of several visionary cities today. These visionary cities and its citizens have recognized the power of transforming the challenges and negative impacts of climate change and of the current economic and energy crisis into valuable opportunities. This report is then an inspiring review of various visionary plans that cities developed to guide their pathway towards a sustainable low-energy future.



BACKGROUND

This time of global challenges offers a major opportunity for rethinking the way we live, and to embark on the journey of planning and designing action plans to carry on to the post-carbon era. This challenge goes beyond an energy-carbon issue, since all the dimensions of our everyday life such as food, transport, jobs, manufacture and use of technology, health and leisure require energy inputs to go on. Therefore, a post-carbon living dynamic implies changes at the social, economic, political and cultural levels of our society. The general strategy that cities are using to make the transition towards a post-carbon living is based on envisioning and designing large-scale, long-range action plans, where they set targets and objectives to be progressively achieved in the near and further future. The year 2050 has become a milestone for cities all over the world, since this date marks the midpoint of the 21st century. This movement recognizes the need to reinvent our cities, along with the way we live, produce and develop today. Clearly, the message is that we can no longer sustain an oil-based development as we did during the last century, and that we need to formulate and experiment with new productive and sustainable alternatives to step forward into this era.



Graph prepared by the author.



"One of the wonderful aspects of the human imagination is its power to break through the barriers of time and space. It can see things not as they are but as they can be."

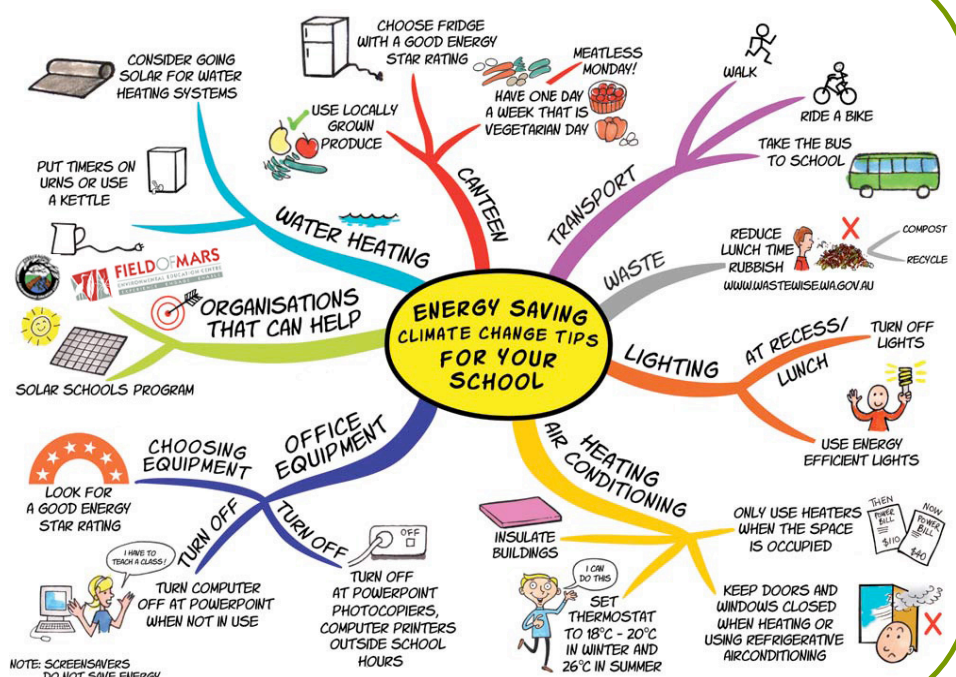
- Denis Waitley -

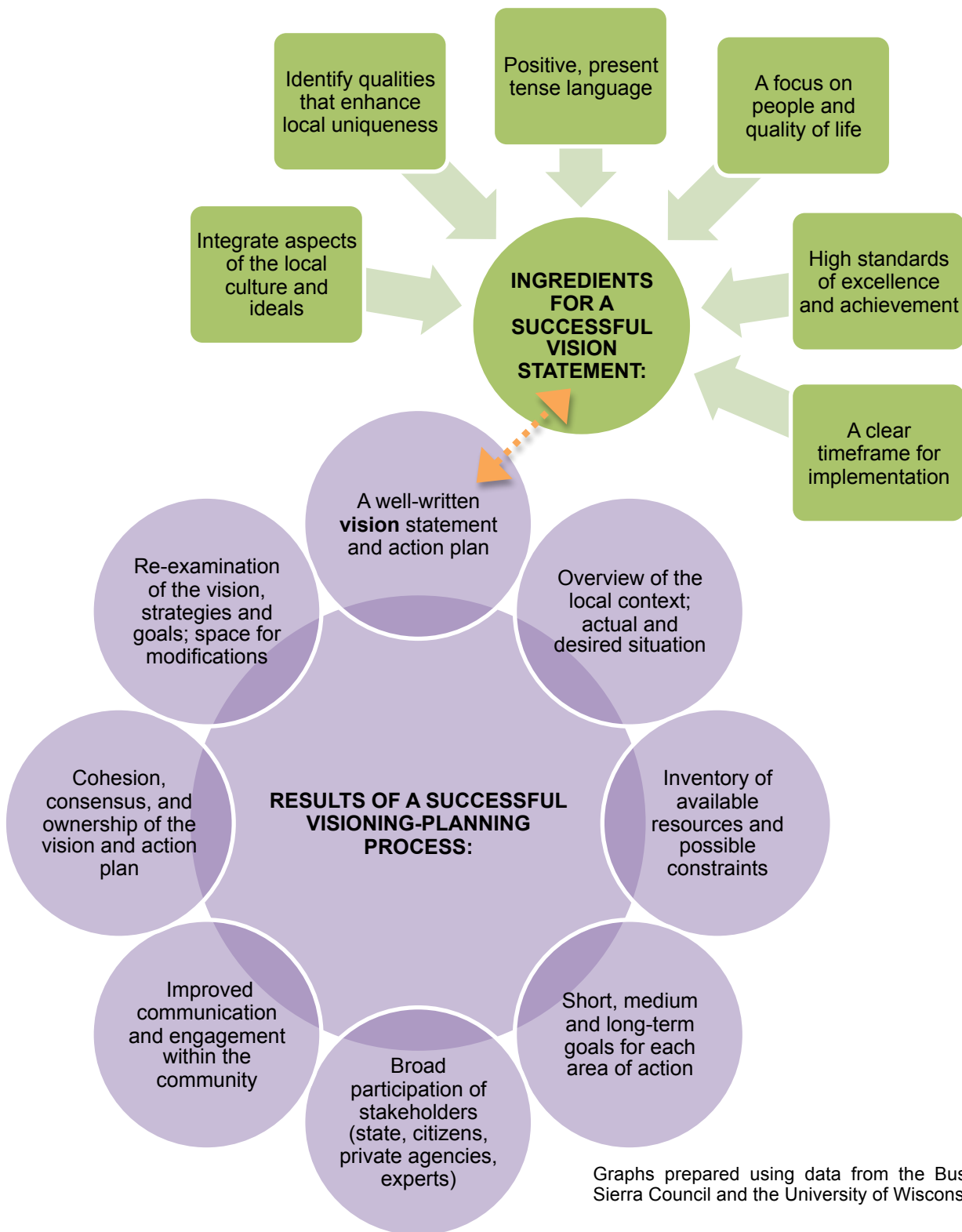
An innovative approach leading the transition to a low-carbon future occurs in the form of *visioning*, a process used by cities to build scenarios and action plans towards achieving a sustainable living. In general, **visioning** is a planning process used to develop specific goals and objectives for the future along with practical solutions, usually realized through consensus-based meetings open to all interested parties (McCann 2001). Visioning as a term is often associated with participatory, collaborative, or consensus-driven planning process (Woodmansee 1994). The process of visioning has been mainly used as a tool in community-based planning to create shared visions of the future, where a community collectively defines an issue, identifies assets, creates mind maps and then uses these resources to build a roadmap to achieve their vision. The use of visioning has proved to be an effective mean of identifying core values, of prioritizing goals and strategies, and of implementing plans and policies (Lachapelle, Austin & Clark 2010).

Visioning is a future-oriented thinking that requires the use of creativity and reflection for moving beyond present mind sets and paradigms towards a coordinated strategy made of short, medium, and long-term objectives. This exercise should embrace the collaboration of different stakeholders in order to identify issues of concern; it should motivate those involved to think about problems in new ways to stimulate collective action for generating solutions. This process is also a remarkable opportunity for citizens to determine and guide specific actions by outlining what could be or should be their future, by identifying options and focusing on opportunities for the future rather than on needs (McCann 2001).

Energy Audit Mind Map.

This is a mind map of all the things your school can do to decrease its emissions like South Fremantle Senior High School in Australia.
URL : <http://learningfundamentals.com.au/blog/what-schools-can-do-about-climate-change/>





Graphs prepared using data from the Business Sierra Council and the University of Wisconsin.

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- McCann, Eugene. 2001. "Collaborative Visioning or Urban Planning as Therapy? The Politics of Public-Private Policy Making". *The Professional Geographer*. 53: 2 pp. 207-218(12)
- Lachapelle, Paul; Austin, Eric; Clark, Daniel. 2010. "Community Strategic Visioning as a Method to Define and Address Poverty: An Analysis From Select Rural Montana Communities". *Journal of Extension*. 48:1.
- Woodmanse, Jason 1994. "Community visioning: Citizen participation in strategic planning". Washington, D.C.: International City/County Management Association.
- Business Sierra Council website - www.sbcouncil.org/Visioning/
- University of Wisconsin Cooperative Extension website - www.uwex.edu/ces/



So what is being done? – Case studies of visionary cities

There are no simple solutions, yet extremely inspiring alternatives. Every city and community has its own unique economic, social and political characteristics, so there is no single approach. To understand this post-carbon visioning and planning process, we identified several cities that have developed a plan or statement to address energy and climate issues in the next 20 to 50 years. Then we selected the following cities to use as case studies, based on the use of different approaches and innovative methods or tools for visioning and preparation of the action plans:

1. London Borough of Sutton, United Kingdom

One Planet Sutton

2. Helsinki, capital of Finland

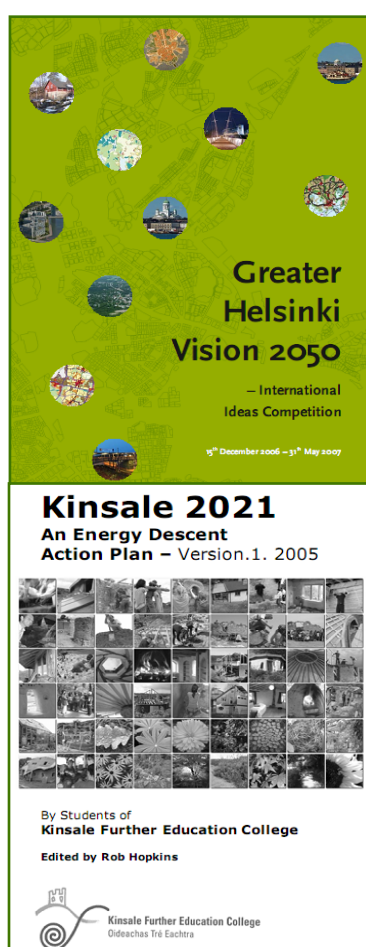
Greater Helsinki Vision 2050

3. Kinsale Transition Town, Ireland

Kinsale 2021: An Energy Descent Action Plan

4. Portland and Multnomah County, Oregon, U.S.A.

Portland 2009 Climate Action Plan



In addition to the four main case studies, we included six fact sheets with examples of other visionary European cities that have also developed initiatives for a low-carbon energy future:

5. Amsterdam: A Different Energy Strategy for 2040

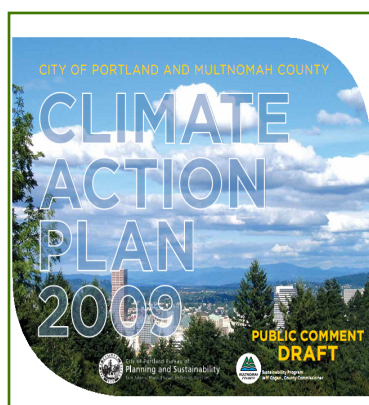
6. Glasgow's Sustainable Initiative

7. Göteborg 2050: Visions of a Sustainable Society

8. One Leicester: A 25 Years Journey

9. Munich Perspective: Shaping the Future

10. Vision Stockholm 2030: A World-Class City



Part II: Case Studies

Fact Sheets

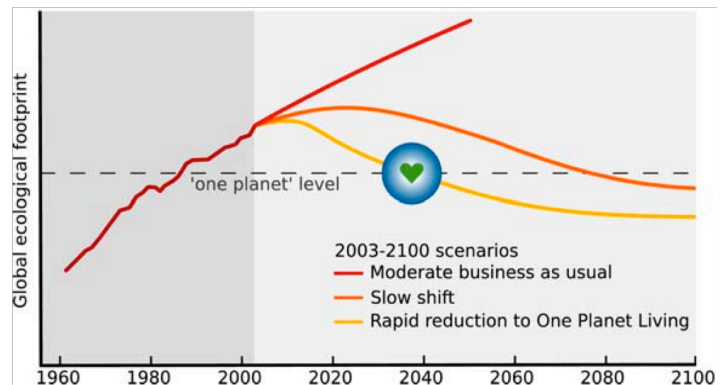
CASE STUDY #1 _SUTTON: Towards a One Planet Living

SUMMARY

The London Borough of Sutton is located in South London, England, and forms part of Outer London metropolitan area. In 2008, Sutton became the first UK council to formally adopt the One Planet Living framework, a global initiative to encourage people to use the earth's resources wisely. One Planet Living is an initiative of the environmental charity BioRegional and WWF, and is based on *10 principles of sustainability*, which cover social, economic and environmental aspects in an integral way. Specifically, One Planet Sutton promotes more sustainable council services, sustainable lifestyles and workplaces within the borough. Sutton's main goal is to achieve one planet living in 2025, by reducing their ecological footprint by 65%, while strengthening the community and improving quality of life.

VISION & PURPOSE

"Sutton in 2050 is a vibrant sustainable community where people want to live and work, and that protects the local environment and meets the needs of local residents both now and in the future." One Planet Sutton's vision aims to enable local people, business and council services in the borough to live and work with a low-carbon footprint. One Planet Living is BioRegional's vision is for a future in which people can enjoy a high quality of life, while living within their fair share of the Earth's resources and leaving space for wildlife and wilderness. One Planet



Source : BioRegional One Planet Action Plan

Living is a holistic and practical framework to address climate change by reducing carbon dioxide emissions, and includes targets like adapt all council buildings to be zero carbon by 2017 and achieve a sustainable transport by 2025. Activities within this initiative are focused on a 3,000 home pilot area, and involve reducing energy demand through a retrofit programme and supplying renewable energy to make the area zero carbon. The project tackles as well the key issue of behaviour change to demonstrate by 2012 how a whole neighbourhood can live and work sustainably.

METHODS & PROCESS

Working in partnership with the Sutton Council, BioRegional has developed a One Planet Action Plan that sets targets for council operations and a series of interventions that will enable Sutton residents and businesses to achieve one planet living by 2025. BioRegional worked in partnership with the Sutton Council to develop a Sustainability Action Plan for the borough, based on the 10 One Planet Living principles that cover environmental, economic and social sustainability. During this process, tools such as carbon and ecological footprinting, life cycle assessments and local economic multiplier analysis were used to set targets and assess strategies. An important aspect of this strategy is the establishment of partnerships between the council, the community, business, voluntary organisations and public agencies in the area. The role of *BioRegional* is to provide technical and strategic support to the Sutton council, help them guide the project and offer tools and inspiration during the implementation process. The technical team at *BioRegional* carry out a yearly review to check and analyse the ongoing state of the project; after this review the action plan can be modified because of changes in policies, technologies, agreements or in availability of funds.

10 principles of One Planet Living

1	Zero Carbon
2	Zero Waste
3	Sustainable Transport
4	Local and Sustainable Materials
5	Local and Sustainable Food
6	Sustainable Water
7	Natural Habitats and Wildlife
8	Culture and Heritage
9	Equity and Fairtrade
10	Health and Happiness

REFERENCES

One Planet Sutton webpage - www.oneplanetsutton.org
 London Borough of Sutton - www.sutton.gov.uk

CASE STUDY #2 _ Greater Helsinki Vision 2050**SUMMARY**

Greater Helsinki Vision 2050 was an open international design competition with the objective of creating a common regional vision for the future concerning land use, housing and traffic in the region. The aim of the competition was to develop strategies and solutions for strengthening the status and competitiveness of Greater Helsinki as an attractive region to live in and conduct business. The Greater Helsinki Vision 2050 project was funded and organized by the region's municipalities Helsinki, Espoo, Vantaa, Sipoo, Kirkkonummi, Kauniainen, Vihti, Nurmijärvi, Hyvinkää, Tuusula, Kerava, Järvenpää, Pornainen and Mäntsälä. In total, 500.000 Euros were given in prizes, and 9 entries were purchased. The prized entries gave innovative and objective solutions for the sustainable development of the region.

VISION & PURPOSE

The main objectives of this initiative were to address common challenges as population ageing, increased cultural diversity, mobility, location of services, the rise in energy prizes and climate change at the regional scale. Participants in the Open Ideas Competition were asked to visualize and design urban development solution to address the housing shortage in the region by providing housing in a sustainable ecological, social and cultural way, and to develop sustainable strategies to reinforce the status and competitiveness of the region. The final vision statement of the Greater Helsinki 2050 is then a compilation of ideas and solutions gathered from the awarded entries and comments from a wide range of stakeholders.

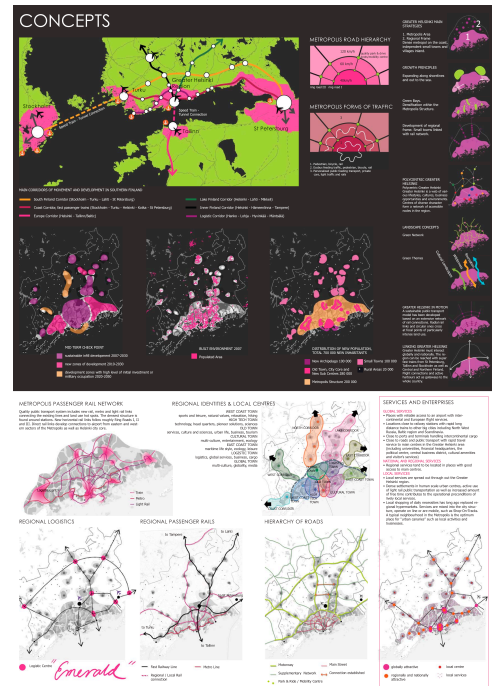
METHODS & PROCESS

In 2006, the City of Helsinki and 14 neighbour municipalities, in cooperation with the Ministry of the Environment and the Finnish Association of Architects, organized and launched an Open Ideas Competition, with sufficient prize amounts to allure international planning and architecture firms and teams to participate. Overall, the competition received more than 100 entries, whereas a total of 9 entries were awarded and purchased. Members of the competition Jury included assistant city manager Pekka Korpinen, Helka-Liisa Hentilä and Trevor Harris, two professional judges, and professor Peter Ache, from the Helsinki University of Technology. The proposal of the winning entry "Emerald", designed by the firm WSP Finland, is based on a variety of ecological choices for all dimension of everyday life, including transport, housing and lifestyles. To continue the visioning process, the city council launched in 2008 the "Follow-up Project of GHV-2050" to analyse the prize-winning ideas. During this process, more than 250 ideas were identified and examined by the Centre for Urban and Regional Studies of the Helsinki University of Technology.

REFERENCES

International Open Ideas Competition website:
www.greaterhelsinkivision.fi/

Greater Helsinki Vision 2050 website:
www.hel.fi/hel2/helsinginseutu/2050/



Emerald – winning entry GHV 2050

Process : "Follow-up GHV 2050 project"

Launched in 2008 to analyse the proposals, evaluate the prize-winning ideas, include the opinion of the public and to decide how to proceed with the vision process.

Stakeholders – city council (decision makers), town planning professionals and experts from the GHR, the prize-winning teams and citizens.

More than 250 ideas were identified from the winning entries, which offered material for workshops and Internet discussions, open for feedbacks and public participation.

The ideas and material recollected were compiled into a final report, which will act as a basis for the continuation of the vision process.

In November 2009, the local authorities and the AB approved the "Greater Helsinki Vision 2050".

CASE STUDY # 3 _ KINSALE Transition Town**SUMMARY**

The Kinsale community in Ireland is recognised as the first Transition Town, a voluntary community-led and designed initiative for local sustainability working to make the transition from a dependency on fossil fuel to a low-carbon future. This initiative started back in 2004 at the Kinsale Further Education College as a student project for a permaculture course directed by professor Rob Hopkins. The idea of the project was to envision life after oil and to design a community-scale sustainable solution to move from oil-dependency to local resilience. The result of this project was the elaboration of a step-by-step guide for community action entitled, the Kinsale Energy Descent Action Plan 2021. This initiative set the foundations of the Transition Model, a social and environmental movement that drives communities towards energy independence, based on local responses to the pressures of climate change, fossil fuel depletion and increasing economic uncertainty.

VISION & PURPOSE

In general, the vision of the Transition Towns initiative is that of “a resilient, self-reliant and sustainable town”. The vision of the Transition Towns model is based on the paradigms of relocation and resilience in response to peak-oil and climate change. It is built as a proactive and positive vision that integrates community awareness, action and preparedness. The statement guiding each Transition initiative, the Energy Descent Action Plan (EDAP), is a future vision of a localised community in a 20 years period that integrates ideas, strategies and methods to achieve a low-carbon living, encouraging collaboration and respect for the environment. The purpose of the Transition movement is to create resilient communities through an integrated, feasible, collective effort, and to inspire, inform and support other communities interested in adopting a similar initiative.

METHOD & PROCESS

As part of their final project for the permaculture course, the students of the Kinsale Further Education College constructed a plan for the community to use as a guide with ideas and alternatives of how to achieve a low-energy future, based on public participation and citizen action. The Kinsale Energy Descent Action Plan 2021 sets out clear, year-by-year actions and projects regarding food and energy production, livelihood, education, transport and waste management, to be implemented by the community. The Kinsale EDAP was structured in such a way to enable other communities and towns to adopt a similar process of transition towards a low-energy future. As a result of the Kinsale experience, a 12-steps transition plan was designed and established as a framework for communities to follow. Essential methods and process that ensure the success of the Transition Model include a strong networking organization that permits sharing of knowledge, information, expertise and experience among member communities. Knowledge production within the Transition movement consists of literature and audiovisual resources available through the Internet, which explains the model principles, and support structures while providing guidelines and timelines based on the existing transition initiatives. Today, there are more than 400 initiatives worldwide that have adopted the transition principles and that have embarked on the design of an Energy Descent Action Plan. Transition Town Totnes, the first initiative of this type in the UK, has become the focal point of the movement.

REFERENCES

Kinsale Transition Town - www.transitiontownkinsale.org/

Transition Network - www.transitionnetwork.org/

Transition Model process towards a low-carbon energy future:

CASE STUDY # 4 _ PORTLAND'S Climate Action Plan 2009**SUMMARY**

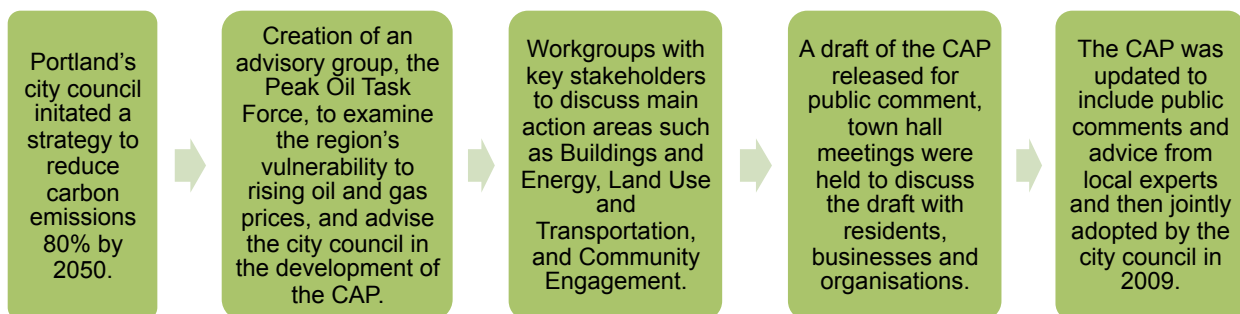
In 1993, Portland became the first city in the United States to adopt a carbon emissions reduction plan, and in 2001, along with Multnomah County, the city passed a Local Action Plan on Global Warming. These actions are the preface of the recently endorsed Climate Action Plan 2009 (CAP), a comprehensive plan to guide future sustainable growth and development in the city over the next 30 years. The plan provides an innovative framework for the region's transition to a prosperous climate-stable future by setting actions to reduce local greenhouse gas emissions in 80% by the year 2050. It covers key topics such as energy use in buildings, transportation, urban planning and food production. The overall strategy is based on citizen action, behavioural changes, new technology and the creation of a resilient green economy. The CAP was endorsed by the Portland City and Multnomah County in 2009.

VISION & PURPOSE

The vision of the CAP involves delivering more sustainable living opportunities to residents, business and organizations in the city. The purpose of Portland's CAP is to provide practical and sustainable responses to challenges such as climate change, social inequity, rising energy prices, and degraded natural systems. The plan also raises awareness and educates about sustainable practices regarding everyday choices such as food, heating, moving around the city, about buying and disposing materials, in order to reduce the carbon footprint of all its residents. The vision and targets of the CAP go beyond reducing carbon emissions, since it integrates climate protection, creation of green jobs, improving community livability and public health, addressing social equity and promoting resilient natural systems.

METHODS & PROCESS

In 2007, the Portland City Council adopted resolutions to strengthen cooperation between council agencies and directed a multidisciplinary staff the elaboration of an action plan to reduce local greenhouse gas emissions. This plan, the CAP, identifies and prioritizes strategies to reduce emissions and lists more than 90 actions to be achieved over the next three years, as well as benchmarks to meet by 2030. A very distinct step in the development of the CAP was the public participation approach utilized for the design and selection of strategies. More than 400 people, including residents, businesses and community organizations participated in the process and more than 2,600 comments and suggestions were received and examined by the city council. City bureaus are already implementing several climate-related initiatives, such as a business tax credit for installing solar panels and eco-roofs, and providing mass transit passes to high school students.

Targets of the Portland Climate Action Plan:

Development process of the Portland's Climate Action Plan 2009

REFERENCE

Portland's Climate Action Plan 2009 website - www.portlandonline.com/bps/climate

Part II: Case Studies

Case Study #1: Sutton, UK



Location of Sutton within Greater London



Sutton's Vision:

"Sutton in 2050 is a vibrant sustainable community where people want to live and work, and that protects the local environment and meets the needs of local residents both now and in the future."



Case Study # 1 One Planet SUTTON

Overview

The London Borough of Sutton is located in South London, England, and forms part of Outer London metropolitan area. Sutton has a population of over 180,000, and covers an area of 43 km². The One Planet Sutton initiative promotes more sustainable council services, sustainable lifestyles and workplaces within the borough. Sutton's main goal is to achieve one planet living in 2025, by reducing their ecological footprint by 65%, while strengthening the community and improving quality of life. The One Planet initiative is based on 10 guiding principles of sustainability, which cover social, economic and environmental aspects in an integral way.

"If everyone in the world lived like an average UK resident we would need 3 planets to sustain our global population."

-The Living Planet Report 2002-

1.1 Origin of Sutton's vision for a sustainable future

For the past 20 years, Sutton Council has led the way in promoting environmental awareness and sustainable living. Today, a key actor driving Sutton's pathway towards a low-energy future is the local organization *BioRegional Development Group*, a charity that started in 1994 in Sutton. *BioRegional* operates and coordinates programmes for practical sustainability solutions, as the **One Planet** programme and BedZed eco-village. Located in Hackbridge, southern Sutton, BedZed is UK's largest sustainable community, with a mix of average local people living and working there. This project was the inspiration and research base for the **One Planet Living** framework, considered now the basis and vision of Sutton's sustainable future.

1	Zero Carbon
2	Zero Waste
3	Sustainable Transport
4	Local and Sustainable Materials
5	Local and Sustainable Food
6	Sustainable Water
7	Natural Habitats and Wildlife
8	Culture and Heritage
9	Equity and Fairtrade
10	Health and Happiness

BioRegional

solutions for sustainability

BIOREGIONAL DEVELOPMENT GROUP

Bioregional is a local, entrepreneurial, independent environmental organisation based in Hackbridge, Sutton. They are sustainability specialists that develop “award winning, commercially viable products and services which meet our everyday needs”. They assist and encourage others to achieve sustainability through consultancy, education and informing policy, and as well are the main partner of the Sutton Council in the implementation of the One Planet initiative.

(www.bioregional.com)

“One Planet Living is our vision of a sustainable world, in which people everywhere can enjoy a high quality of life within the productive capacity of the planet.” - BioRegional -



BedZED (since 2002) – starting point of a sustainable living in Sutton

Outcomes:

- **Energy:** 81% reduction in energy use for heating, 45% reduction in electricity use
- **Transport:** 64% reduction in car mileage 2,318km/year
- **Water:** 58% reduction in water use 72 litres/person/day
- **Waste:** 60% waste recycled
- **Food:** 86% of residents buy organics
- **Community:** residents know 20 neighbours by name on average

Source: www.bioregional.com

In 2008, the Sutton Council became the first UK council to formally adopt the **One Planet Living** framework, a global initiative to encourage people to use the earth's resources wisely. **One Planet Living** is an initiative of *BioRegional* and *WWF*, and is based on 10 principles of sustainability aiming at having a high quality of life within a fair share of the earth's resources. By adopting this framework, Sutton aims at becoming a One Planet borough by 2025.

Ten principles for One Planet Living:

1. Zero carbon

Making buildings more energy efficient and delivering all energy with renewable technologies.

2. Zero waste

Reducing waste, reusing where possible, and ultimately sending zero waste to landfill.

3. Sustainable transport

Encouraging low carbon modes of transport to reduce emissions, reducing the need to travel.

4. Sustainable materials

Using sustainable products that have a low embodied energy.

5. Local and sustainable food

Choosing low impact, local, seasonal and organic diets and reducing food waste.

6. Sustainable water

Using water more efficiently in buildings and in the products we buy; tackling local flooding and water course pollution.

7. Natural habitats and wildlife

Protecting and expanding old habitats and creating new space for wildlife.

8. Culture and heritage

Reviving local identity and wisdom; support and participation in the arts.

9. Equity, fair trade and local economy

Inclusive, empowering workplaces with equitable pay; support for local communities and fair trade.

10. Health and happiness

Encouraging active, sociable, meaningful lives to promote health and well being.



One Planet Action Plan
London Borough of Sutton
December 2009



1.2 Planning for a sustainable future in Sutton

a. What is the strategy, or method, driving this low-carbon future initiative?

The strategy selected by the Sutton Council for making the transition towards a low-carbon living was to adopt the **One Planet Living** framework and promote the actions set out under each of the 10 guiding principles of sustainability that form this initiative. An important aspect of this strategy is the establishment of **partnerships** between the council, the community, business, voluntary organisations and public agencies in the area. In particular, the partnership between Sutton Council and the local environmental charity *BioRegional* is the base of the sustainability strategy of the borough.

The official plan that drives and steers actions to reach the vision of One Planet living is called a **Sustainability Action Plan**. In Sutton, this plan was jointly developed by *BioRegional*, the Council, and the community. *BioRegional* is the one who runs this plan, referred to as an “ever-evolving project, aiming at creating a “tipping point” by 2012”, where current unsustainable trends are supposed to be reversed. In 2009, the Sutton council launched the first **Sustainability Action Plan**, which sets targets for council operations and interventions that will enable Sutton residents and businesses to achieve one planet living by 2025. The job of *BioRegional* is to provide technical and strategic support to the Sutton council, help them guide the project and offer tools and inspiration during the implementation process. Afterwards, it is the main task of the Sutton council to deliver it. The technical team at *BioRegional* also supports the Sutton council by doing a review every year to check and analyse the ongoing state of the project; after this review the action plan can be modified because of changes in policies, technologies, agreements or in availability of funds. Another significant and positive aspect of the strategy in Sutton relies in the existence of a long-term common vision for the borough, and that is to “create a sustainable suburb in London”. The goal of a sustainable future is shared by many stakeholders, and is also the core strategy of the Local Development Framework, ensuring a strategic alignment of the development plans for the borough at all levels.





Sonoma, USA

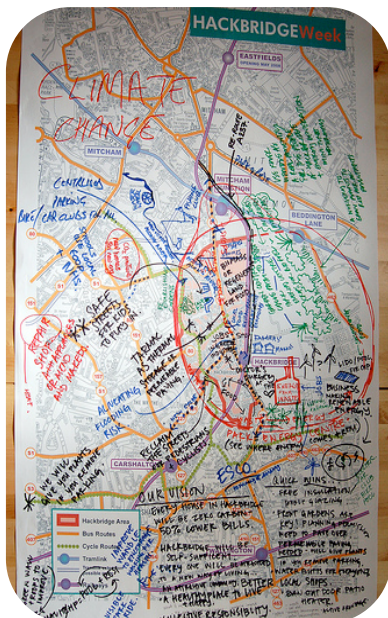


Brighton, UK



The strategy of adopting the **One Planet Living** framework can be, and has been, endorsed by various communities worldwide. BioRegional's One Planet Communities programme is a network of earth's greenest neighbourhoods, which works with developers around the world. The programme currently has projects in the USA, UK, and Portugal, with others planned in South Africa, China, Australia, and Canada. Officially-endorsed projects display the planet with a heart logo which means that the development has a Sustainability Action Plan approved by BioRegional, aiming to achieve the One Planet Community 2020 targets and will be independently monitored until 2020. However, the Council of Sutton is the only initiative that has completed its Sustainability Action Plan, while the other initiatives are taking their first steps. While every One Planet initiative is unique, the activities through the design and creation of a Sustainability Action Plan include:

- ◆ **Create Working PARTNERSHIPS** - A first step in the One Planet approach includes creating working alliances with relevant national, regional or local government, developers, businesses, community groups and non-governmental organisations to address properly each of the Ten Principles of sustainability. This method merges together the research, design and delivery expertise of various stakeholders within the framework of the Ten Principles to obtain a practical sustainability solution.
- ◆ **DESIGN of the Sustainability Action Plan** - During the design stage, each of the partners works with design team members to develop a comprehensive Sustainability Action Plan Module for each of the Ten Principles. This process requires that the partners work inclusively with consultants and community stakeholders to identify sustainability aspirations and plan how to accomplish them. Each Implementation Module identifies indicators and targets for success to achieve One Planet living, shaping the Master or Development Plan.
- ◆ **Establish One Planet LIFESTYLES programmes** - This programme aims to provide the stakeholders with information, inspiration, tools and products that will help them to achieve One Planet Living. The idea is to help residents change their lifestyle and reduce the negative impacts of their ecological footprint. The strategies within this programme include practical activities such as designing a sustainable built environment (i.e. recycling facilities), setting up support systems such as car clubs, organic food box deliveries and community shared agriculture projects, as well as running One Planet Lifestyles educational workshops.



Workshop 2008

Source: www.flickr.com/photos/oneplanetsutton



1.3 From VISION to ACTION in Sutton

One of the most important actions of this broad initiative is the **One Planet Hackbridge** Project, a pilot project aiming to transform this district into UK's first sustainable suburb, and thus become a model for holistic action towards sustainable urban regeneration and growth. This is a major cross-departmental initiative since it includes energy use and supply, waste and recycling, transport, food, water, habitats, green jobs and wellbeing. As well, it mixes behaviour change initiatives, retrofitting, decentralised energy and new build development on 19 hectares of land to meet its vision.

“By 2025 Hackbridge will be a sustainable suburb based on One Planet Living principles, a suburb where people living, working and visiting are fully aware of their ‘ecological footprint’ and understand what they can do to reduce it.”

- Hackbridge's Vision

One Planet Hackbridge Pilot Project

The activities for the transformation of Hackbridge into a sustainable suburb will be focused on a 3,000 home pilot area. **One Planet Hackbridge** combines community work with a large scale programme of environmental upgrades to existing homes, and the development of 1,100 new eco-friendly homes. The main goal is to make this a zero-carbon area, by reducing energy demand through a retrofit programme and by supplying renewable energy. A key element in this project is behaviour change, to demonstrate by 2012 how a whole neighbourhood can live and work sustainably. The Sutton Council has designed a master plan for Hackbridge that provides guidance on how the major sites and a district shopping centre could be developed, along with a strategy for open spaces and streets to improve connections for pedestrians and cyclists, all based on the sustainability paradigm.

WHY ONE PLANET LIVING:

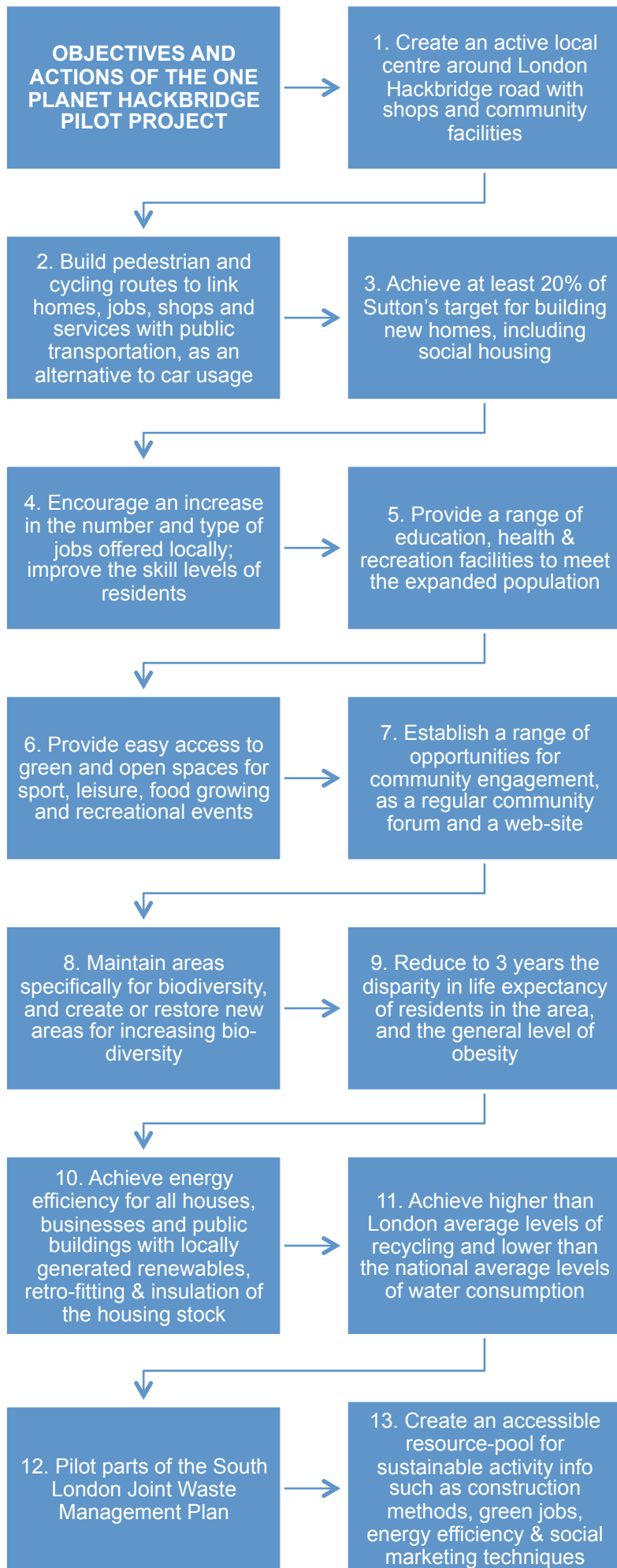
- Holistic approach – easy to engage, beyond LA 21
- Easily understood by stakeholders and flexible
- Visible connections between the 10 principles of sustainability
- Opportunity to share and learn from other One Planet communities in the world

OPPORTUNITIES AT HACKBRIDGE:

- Plans for the development of new 1,100 residences
- Excellent transport links and place of future Country Park
- Home of BedZed & BioRegional Group
- Strong political leadership, community engagement and stakeholder support

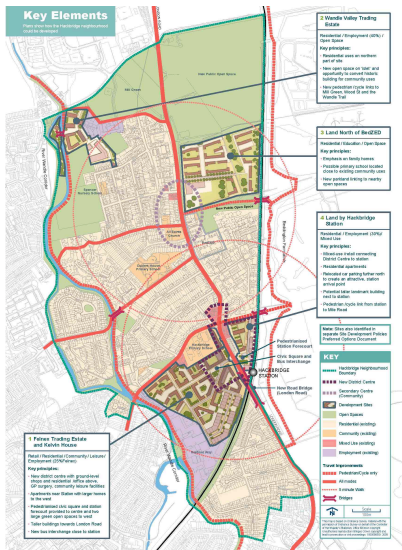
CHALLENGES AT HACKBRIDGE:

- 1930s suburb with poor energy efficiency
- Poor external physical environment
- Negative effects of heavy traffic, areas of deprivation
- Funding opportunities; to find the right balance between short and long term goals and targets



Sutton's City Council has approved a borough-wide Sustainability Action Plan for Hackbridge, based on the One Planet Living principles, including changes to the Council's own operations, direct activity and supply chain, together with regulatory and 'influencing' measures relating to the built environment, services, and behaviour change programmes.





The strategies designed by the Sutton council to meet the objectives of the Hackbridge project are based on the following strategies and processes (Hackbridge Project Charter 2009):

1. **Working with partners**, including developers, as Sutton and Merton PCT, Transport for London, the London Development Agency, Homes and Communities Agency, English Partnerships, The Environment Agency, and Natural England, to: Introduce joint activities in information provision, social marketing and social entrepreneurship, along with physical measures to improve sustainability in individual households, small business and at the public building/institution level regarding recycling, energy efficiency, transport and health.

2. **Establish a strong governance framework for community engagement and public consultation.**

3. **Adopt a Local Devolvement Framework in 2009 to provide:** Guidelines for development that meet the overall objectives, by using a master plan to promote a balance of mixed-uses and green spaces; to enhance cycling and walking by adopting and implementing a Smarter Travel Choices project; achieve energy efficiency measures for the new sites, using district energy production from renewable resources that also provides new options for existing demand; adoption of zero-carbon and other sustainable building techniques for all construction activities.

4. **Work with applicants** to push forward the objectives set out.

5. **Maintain open and honest communications** in describing and reporting the progress achieved in the area.

6. **Maintain an honest approach to finding out what works and what doesn't**, publicising the findings to inform about the implementation of the sustainability action plan.



FROM VISION TO ACTION IN HACKBRIDGE - ONGOING PROJECTS AND INITIATIVES

Hackbridge Community Farm - launched January 2010

Sutton Community Farm provides a shared growing space for the local community to grow fruit and vegetables on a large scale, with a range of other activities and events. It has monthly activity days on the last Saturday of every month as well as ongoing activities.

A low carbon retrofit for Sutton - December 2009

The Sutton Council, in partnership with a range of organisations as B&Q and BioRegional, has secured funding to test 2 different approaches to energy retrofit in Sutton. Since, Hackbridge has been declared one of 10 Low-Carbon Zones in London, residents will be offered free basic energy efficiency measures (such as loft insulation, and energy saving lightbulbs) and training in how to save energy in their homes. The other initiative, called *Pay As You Save* is borough-wide. Residents will be able to borrow £10,000 to spend on energy efficiency measures (like boiler upgrades and solid wall insulation) and renewable energy technologies (as solar panels to generate electricity or provide hot water). This will help reduce the cost of the house; the loan is then paid back over a 10-25 year period in-line with the savings made.

One Planet Food in Sutton - December 2009

The local environmental charities BioRegional and EcoLocal launched an exciting community project to enable Sutton residents to buy affordable, delicious and nutritious local food and get fit and healthy through growing their own. The project includes:

Food growing training for everyone from school children to families;

Increase awareness on healthy eating via cookery courses, healthy/local food events & workshops;

Setting up Sutton's first community farm near - allowing people to grow some food and learn new skills.
Local food markets providing fresh affordable locally produced in areas with limited access;

A local food network where local producers supply healthy local food to Sutton's schools and hospitals.

The project is funded by Big Lottery Local Food Fund, Esmée Fairbairn Foundation, NHS Sutton and Merton and Sutton Council and is part of One Planet Sutton initiative.

Hackbridge Community Forum - launched October 2009

Public meetings to hear updates on projects and developments, discussions about bio-diversity and flood risk, as well as news about further work planned in Hackbridge. Residents and businesses in Hackbridge are invited by Sutton Council to join a new group that will guide the transformation of the suburb into the UK's greenest place to live. It is the focal point for local people to have their say on and debate the various schemes and developments that make up the project, the pilot for One Planet Living in Sutton. There was also a presentation on the Low-Carbon Zone, by which Sutton received over £200,000 from the Mayor of London that will be used on a package of measures to help at least 700 homes in Hackbridge cut CO2 emissions by over 20% in the next three years.

Hackbridge Masterplan Consultation Event – March 2009

From 11 February to 25 March 2009, the council has unveiled a draft master plan for the area, seeking for people's views on the proposals for the future of Hackbridge. Copies of the document were accessible to the community through various public places.

Hackbridge Week- February 25, 2008 - March 1, 2008

This was an opportunity for local residents, businesses and other stakeholders to contribute ideas and give feedback on the plans. During this week, various stakeholders gathered and participated of workshops in the following topics: Planning and Design of New Build, Community Planning, Zero-Carbon, Zero-Waste, Sustainable Transport, Local and Sustainable Materials; Sustainable Water; Natural Habitats and Wildlife; Culture and Heritage s; Equity and Fair-trade; Health and Happiness.

Other One Planet Living Examples:

Mata de Sesimbra, Portugal



The first **One Planet Living Community**, Mata de Sesimbra, is currently in planning to be built outside of Lisbon on Portugal's Costa Azul. The project will integrate sustainable architecture, eco-tourism, a nature preserve and a reforestation project with cork forests, making it the first development to integrate land conservation with habitable development. The Mata de Sesimbra 5,300 hectares site will combine a 4,800ha nature reserve and Cork forest restoration project with a 500ha tourism development comprising 6,000 units. *Bioregional* and WWF will work with the Portuguese project team over a ten-year period as advisors.



Other methods used during the VISION-to-ACTION process in One Planet projects:

EVALUATION of Developments

In order to determine the success of the built environment and the **One Planet Lifestyles** programme, a process of Ecological Footprint Evaluations is implemented to compare net ecological footprints of residents to a baseline sample of the average ecological footprint of residents in nearby, equivalent non-sustainable developments. This evaluation process can become a feedback system to help residents monitor and improve their progress towards household sustainability targets.

COMMUNICATION of Successes

As **One Planet Living** initiatives progress and grow, lessons will be learned about the social, economic and environmental costs and benefits of this approach. **One Planet Living** projects use the WWF media network and common internet spaces to widely disseminate lessons learned to inform the decisions of governments, businesses, nongovernmental organisations and individuals.

SHARING of Best Practices

One Planet Living is building a networked knowledge-sharing program for sharing lessons learned and best practices across participating residential development projects under way in the UK, Portugal, China, South Africa, Australia, Canada, and the United States. Internet-based Communities of Practice (CoPs) are being established to improve the job performance of specialists by connecting them in a learning conversation (face-to-face, teleconference, online discussion forums) and an online knowledge-sharing environment (document store, search engine, knowledge taxonomy) with peers working on similar problems. These platforms will connect Architects, Landscape Architects, Engineers, Project Managers, Sustainability Coordinators, Community Engagement Specialists and other professionals within their disciplines. The idea is also to cut across job specializations and problem-solve around each of the Ten Principles of One Planet Living, with specialists from different disciplines discussing Lessons Learned, Best & Worst Practices, etc. around each principle.



Interested in this initiative? Contact:

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BioRegional Development Group - www.bioregional.com

Case Study #2: Helsinki, Finland



Helsinki location in Finland



Keilaniemi in Espoo



photographer: Paul Williams

Helsinki market square

Case Study # 2

Greater HELSINKI Vision 2050

Overview

Helsinki is the capital and Finland's administrative, cultural centre and economic powerhouse. Greater Helsinki has a land area of 3,751 km² and is integrated by 14 autonomous and heterogeneous municipalities, with a population of 1.3 million inhabitants. In 2006, these municipalities, in cooperation with the Ministry of the Environment and the Finnish Association of Architects, organized and launched an Open Ideas Competition with the objective of creating a joint, regional future vision concerning land use, housing and traffic in the region for the year 2050. The aim of this competition was to develop sustainable strategies and concrete solutions for strengthening the status and competitiveness of the Greater Helsinki as an attractive region to live in and conduct business, and to generate ideas on how to solve the existing housing problem.

“This competition, or should we say, visionary adventure, is a chance to dream afresh, to accept current realities, not as negative restraints but as spurs to the imagination.”

- Helsinki 2050 International Ideas Competition -

2.1 Origin of Helsinki's vision for a sustainable future

The history of visioning and planning using ideas competitions as a strategy has a long history in Finland. A hundred years ago, city and regional planning questions were actively debated in important competitions, such as that one where Finnish architect Eliel Saarinen made a plan for Greater Helsinki in 1918. At that moment, Eliel Saarinen, who was a forerunner of the City Beautiful Movement, created a new urban approach to the rapid metropolisation of the region. Almost a century later, the 14 municipalities of the Greater Helsinki region decided to organize an international ideas competition to envisage the metropolitan area's future up to the year 2050 and like this respond to the challenges of the 21st century.

HELSINKI'S VISION:

“Greater Helsinki in 2050 an internationally flourishing northern metropolis. Proximity to nature, coupled with a high-quality, safe and diverse urban environment form the basis of the region's attraction. National networks, international connections, living, working and service environments are all of the highest quality. The community structure is based on good public transport, and diverse, low-carbon and ecologically friendly services integrated with the living environment. The region offers a creative and supportive environment for new fields of business, and diverse possibilities for new lifestyles and cultures.”



Competition area: Helsinki, Espoo, Vantaa, Kauniainen, Järvenpää, Kerava, Mäntsälä, Nummijärvi, Pornainen, Tuusula, Hyvinkää, Kirkkonummi, Sipoo and Vihhti

One of the main planning challenges that Helsinki faces during the next 50 years is population growth and ageing, due to the increased proportion of senior citizens relative to the whole population. It has been estimated that due to the need for more space per capita and population growth, some 70 million square meters of new house construction are needed in the area. The challenge consists of how to provide housing and strengthen sustainable ecological, social and cultural developments in the area, while reinforcing the competitive advantages of Greater Helsinki. Moreover, the location and quality of these new developments, their public acceptability and their ability to attract qualified labour and foreign investments are key factors for the long term success of the region.

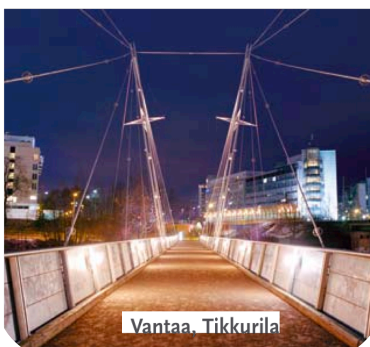
A key strategy recognized as a potential tool to address these challenges is the creation of a common future vision for the region, since there has been a long time discussion about the lack of cooperation between Greater Helsinki cities and municipalities. There was the shared opinion among high state officials, ministries and researchers (OECD Territorial Review 2002) that this lack of cooperation prevented the region to succeed in competition with other European metropolises, and that high prices of houses and apartments and lack of housing, including homelessness, and urban sprawl, are greatly due to that phenomenon. The solution envisage was the to tighten the cooperation between the group of 14 Greater Helsinki cities and municipalities which form a common labour and housing market area where daily commuting is remarkably high.



Kerava Railway station

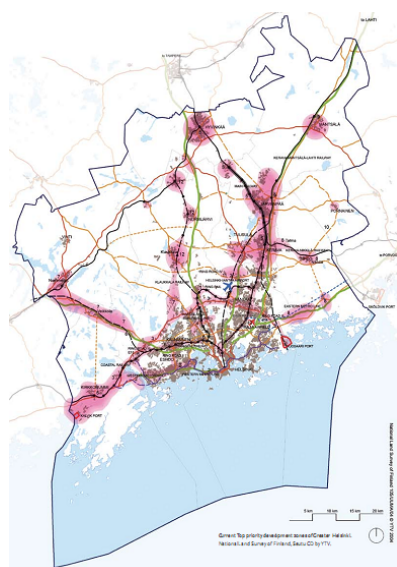
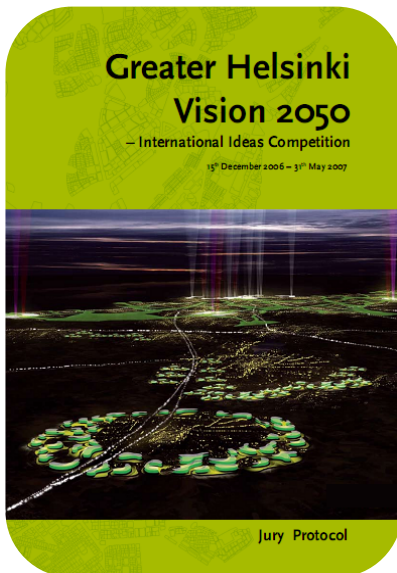


Mäntsälä station



Vantaa, Tikkurila

In 2003, the four “core cities” Helsinki, Espoo, Vantaa and Kauniainen, (around one million citizens), made an agreement on cooperation and formed working groups to address housing, land use and public traffic questions, to solve these common problems and enhance collaboration. Then in 2005, all of the 14 cities and municipalities of the Greater Helsinki region made an historical agreement to enhance regional cooperation and design sustainable solutions in terms of land use, housing and transport. This union was named the Advisory Board on Land Use, Housing and Transportation (MAL-neuvottelukunta in Finnish), formed by one member from each municipality, such as deputy mayors and planning directors, and of higher representatives, including Secretary Generals of the 3 ministries (Ministry of Finance, Ministry of the Environment, Ministry of Traffic and Communication, MAL-jaosto in Finnish). Now, together, they faced the greatest challenge of all: how to draft a common vision and a sustainable land use, traffic and housing strategy for the region’s future...



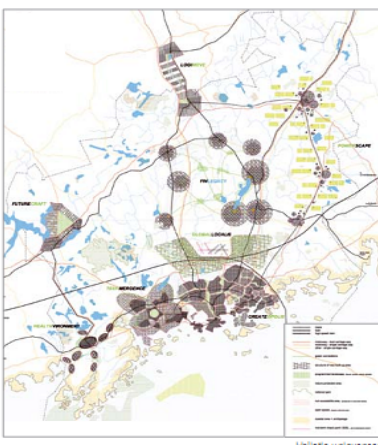
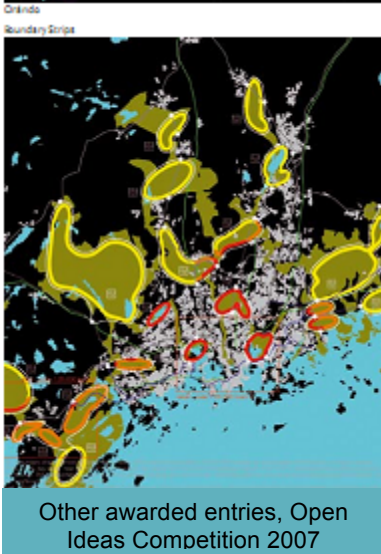
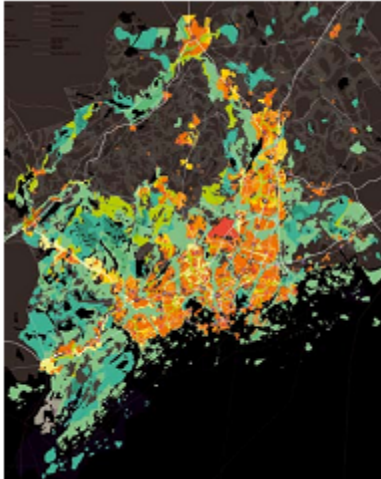
2.2 Planning for a sustainable future in Helsinki

a. What is the strategy, or method, driving this initiative?

The strategy selected in Helsinki by the members of MAL-jaosto was to open Greater Helsinki to the whole world by introducing an **International Ideas Competition**, with sufficient prize amounts to allure international planning and architecture firms and teams to take part in the competition. The general objective was to create a common vision for Helsinki Region for the year 2050. In particular, the aims of this competition were to develop sustainable strategies and concrete solutions for strengthening the status and competitiveness of Greater Helsinki as an attractive region to live in and conduct business, plus generate ideas on how to solve the exiting housing shortage problem.

Hence, the organization of the competition began, managed by MAL-jaosto, with help of Association of Finnish Architects SAFA and a group of permanent experts consisting of 5 chief planning officers from Greater Helsinki cities and municipalities, and one from Ministry of the Environment. In December 15TH 2006, the **International Ideas Competition** was launched. This initiative was certainly the biggest cooperation project ever in Helsinki, since it included several agreements between different parties, for financing, and for the design of a high-quality competition program according to EU-regulations. In order to achieve this ambitions plan, the organizers recommended the participation of visionary multidisciplinary teams in land use, transport, city and town planning, social engineering, urban economics and culture, as well as other relevant professions. According to the instructions for competitors explained in the call for proposals document, competitors were expected to create and present their own scenario and vision for the region in the year 2050. It was instructed that the solutions should address questions concerning the general urban development model of the Greater Helsinki region including spatial planning, building and developing the transportation systems and other networks, in terms of a future-oriented metropolitan structure. As well, competitors were expected to imagine, describe and visualize background assumptions for the vision concerning, for example, future climatic change, natural conditions and economic, social and cultural development in the region until 2050. The ideas should concentrate on finding and developing completely new potentials and opportunities at all scales rather than suggesting improvements to plans already on the way to realization. The competition organizers were looking forward to fresh new thinking concerning urban planning and design solutions at both regional and local levels (Ideas Competition, Jury Protocol 2007).

"We want you to show us the future Greater Helsinki you have in mind. We want you to build on the positive qualities of the existing landscapes that confront you, both the natural and the built. Unique, energising and memorable, this is your agenda for the Greater Helsinki Vision 2050, for the area to become an urban trail blazer, a centre of excellence and a symbol of hope and inspiration. We hope that this competition will become a landmark chapter in the history of the planning and development of the Greater Helsinki." (Ideas competition - Jury Protocol 2007)

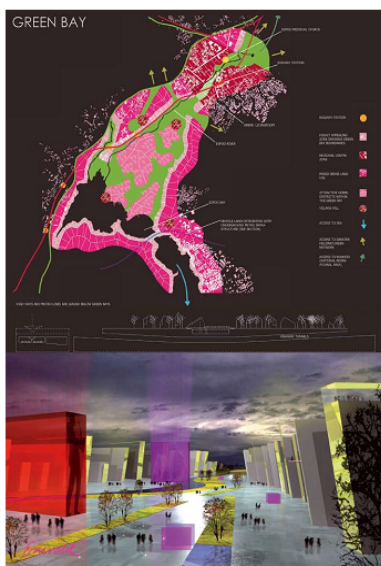
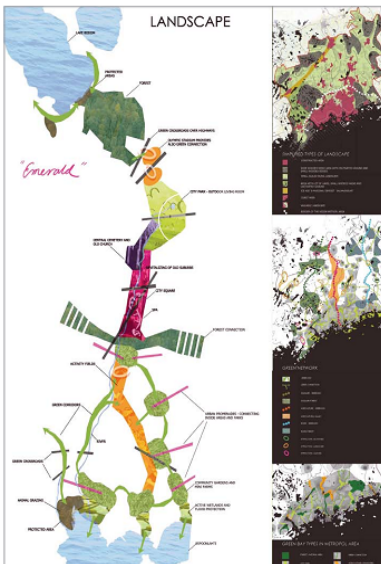
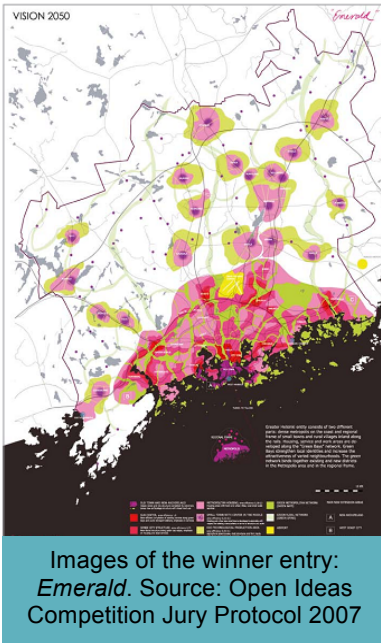


b. Results of the International Open Ideas Competition

Altogether, the Greater Helsinki Vision 2050 ideas competition received 109 entries from around the world, so it was not an easy task for the Jury to select the best ones. The jury's chair was Pekka Korpinen, Mayor for City Planning and Real Estate. The Finnish Association of Architects SAFA Professors named professors Helka-Liisa Hentilä and Trevor Harris professional judges, while professor Peter Ache functioned as the jury's foreign member. The Jury of the ideas contest felt that the competition assignment proved challenging for the participants, and that the best entries brought innovative and fresh ideas for developing the Helsinki region.

The main challenge for the competitors was to present visionary solutions which will allow approximately 70 million square meters of new housing stock needed in Greater Helsinki towards the year 2050 to be built in an ecologically, economically, culturally and socially sustainable way. Nevertheless, the competitors had a very good motivator for achieving this ambitious goal, a first prize of 160,000 Euros. In total, a sum of 500,000 Euros was awarded in prizes.

Some of the comments made by the Jury were that few entries imagined, described and visualized the very basic assumptions that the work was founded on, because no reference was made about the prospective future and developmental directions of the proposed plan (Ideas competition - Jury Protocol 2007). According to the jury, the best entries clearly depicted the assumptions concerning changes in future operating environments and lifestyles. In general, the entries identified megatrends to be prepared for in metropolitan planning, such as climate change, aging population, the rise of health and environmental awareness, ethical consumerism, diversification and individualization of lifestyles, change in the nature of paid employment, and an increase in work-based mobility, among others (Ideas competition - Jury Protocol 2007).



Winner of the 1st prize – “Emerald”

The winner of the international Greater Helsinki Vision 2050 (GHV-2050) ideas competition is an entry entitled **Emerald**, submitted by the planning agency WSP Finland, and whose competition team was led by architect Juha Eskolin. The jury characterized Emerald as a visionary, diverse, and innovative entry that genuinely reaches into the future. The major feature of the entry is the proposal of a multi-centered structure, with growth along the coast to benefit from the growth of the Stockholm-Turku-St. Petersburg connections, which supports the idea of a reduced need for transport and increased significance of local services, local work, and local food.

- ◆ The entry’s vision stirs the current climate change-advancing lifestyle, and offers environment-friendly practices;
- ◆ Residents are encouraged to choose more ecologically viable lifestyles through various active inducements. For example, clean water, business and research activities formed around this theme is proposed as the area’s new success factor and source of wealth;
- ◆ The service structure is considered from new, innovative, and ecological bases. The entry also features several social and service innovations, such as the idea of a mobile shop that comes to the client;
- ◆ A public transport plan will introduce a “climate bonus card” to benefit users through offering a certain amount of free fares in return for favoring public transport;
- ◆ Building is directed both to supplementing existing community structures and to create new areas in the urban cores and border municipalities of the metropolitan area. Housing, workplaces, and services are organized along “green bays” which form a unified urban tapestry;
- ◆ Residential areas are proposed to feature work oases and local logistics centres and rentable farming terraces, to grow fruit instead of importing them (“green pods”);
- ◆ The entry considers quality of life from the perspectives of residents of different kinds and ages. Several, varied ideas are proposed for living near water.

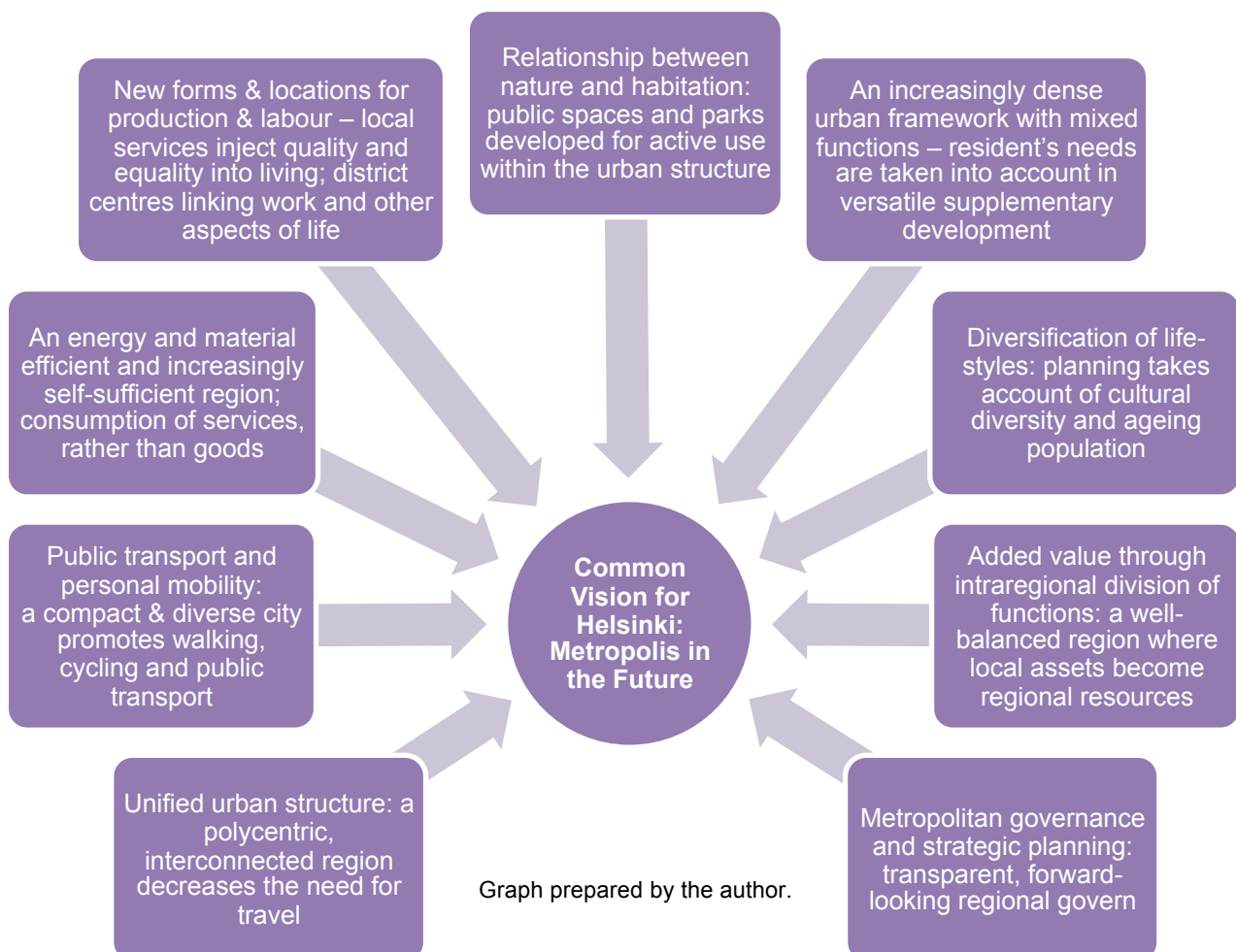
In total, there were 9 awarded entries:

- ✓ **1st:** Emerald (Finland);
- ✓ **Joint 2nd:** Boundary Strips (Germany), Towards City 2.0 (Finland) and Holistic Uniqueness (Germany);
- ✓ **Purchases:** Metroscape (Germany), Orlando (Italy), (R)evolver (Finland), Line TM (Switzerland) and Thirdlife (Netherlands).

c. Visioning as a tool for regional development in Helsinki



A regional common vision shared by the 14 municipalities of the Greater Helsinki Region was needed to face the ever-growing challenges of the 21st century. According to the report “Viewpoints on the Regional Vision 2009”, this regional vision is a “soft” tool or strategy because it has a common language and common goals that serve as clear guidelines for sustainable development. In addition, they argue that other advantages of building a common vision is that it considers opinions and standpoints from various stakeholders. Another important aspect of this vision is that it includes common spatial and land use planning strategies to guide the physical development of the region. The Helsinki experience demonstrates that above all, visions need commitments and understanding to be successful, so communication, consensus and interaction are needed constantly during the process. This vision is as well the background structure of the agreements between the region’s municipalities and the national government, with long-term objectives for housing, transport and investment in infrastructure.



Graph prepared by the author.

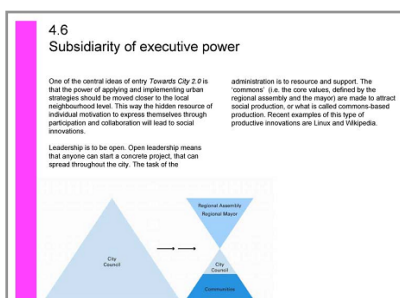
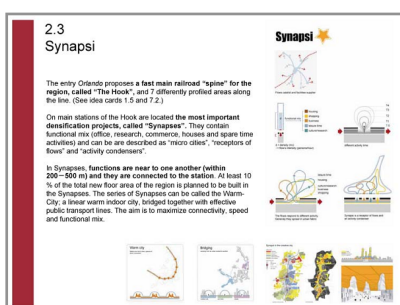
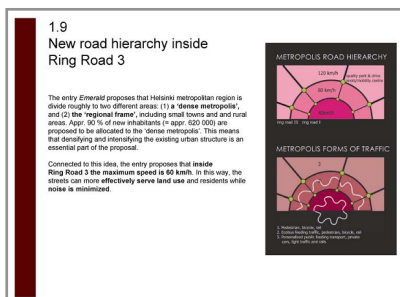
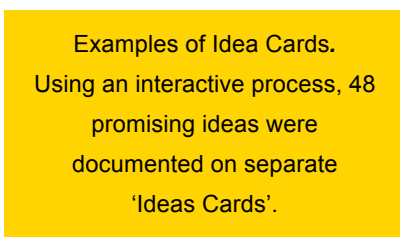
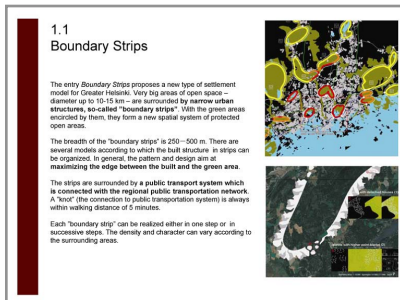


2.3 From VISION to ACTION in Helsinki

The **Open Ideas Competition** (GHV-2050) was a success in terms of achieving its main goal: generate a sea of innovative solutions and alternatives for the future development of the Greater Helsinki region. However, it is important to clarify that the winning entry of the Ideas Competition, *Emerald*, is not going to be realised as such. Instead, the Advisory Board on Land Use, Housing and Transportation (the MAL-neuvottelukunta) decided in 2008 to work with all the entries that were given a prize or purchase to find the very best ideas out of each entry and assemble them into a strategic guideline. It was recommended by the jury, as well, that all the municipalities involved in the competition initiate a common visionary and strategy process to identify and emphasize comprehensive land use plans within the joint metropolitan area, utilizing the awarded entries and calling for cooperation with their authors. Thus, the MAL-jaosto of Greater Helsinki municipalities decided to outline a written vision and strategic guideline concerning land use, housing and transportation in the region, instead of drafting an overall land use plan for the Greater Helsinki area. However, these guidelines would provide the strategic background for land use planning at a regional level and in cities and municipalities. To continue the visioning process, the MAL-neuvottelukunta ordered an analysis of the winning entries plus the creation of wide interactive hearing project open for public participation, named the "Follow-up Project of GHV-2050".

The "Follow-up Project"




The follow-up project was launched during 2008 to analyse the proposals, evaluate the prize-winning ideas, collect the opinion of the public and recommend how to proceed with the vision-implementation process. More than 250 ideas were identified from the winning entries. According to the Greater Helsinki Vision 2050: Viewpoints on the Regional Vision (2009), this is a unique project which combines the vision of town planning professionals and the general public for the future of the metropolitan area. The project consisted of several workshops for politicians and citizens, plus press interviews, articles, and public participation in the form of online discussion spaces. Consequently, all the prize winning teams were invited to take part a two-day workshop in Helsinki in August 2008, together with MAL-neuvottelukunta, experts from Greater Helsinki cities and municipalities, the Ministry of The Environment and the Regional Council. During this process, the ideas identified from the winning entries were used as material for the workshops and in open Internet discussions to gain feedbacks from diverse stakeholders.



During this process, a variety of viewpoints were collected using an interactive method and 48 promising ideas were documented on separate "Idea Cards". These cards were then organized into 9 thematic 'Ideas Flocks'. Then, city officials, the nine prize-winning teams, other planning experts and members of the public assessed the ideas in the light of pending environmental and social challenges. The vision material and the ideas with most potential were compiled into a final report, which will act as a basis for the continuation of the vision process (Greater Helsinki Vision 2050: Viewpoints on the Regional Vision 2009). One important aim of this project was to bring together viewpoints from decision makers, experts and citizens about the future of the region, and to enhance commitment and engagement towards the implementation of the vision. As part of the project, the Greater Helsinki Vision Ideas Competition's results were analysed and presented to the public and decision makers. Channels for feedback and participation were offered via web pages, public workshops and seminars for experts as regional and local decision makers. Then, regional and local decision makers refined the common vision for Greater Helsinki in 2050, as well as the necessary strategic guidelines based on the Ideas Competition and on the Follow-Up project. Finally, Presidents of the City Councils and City Boards of the 14 cities and municipalities of the Helsinki region approved the Greater Helsinki Vision in November 2009.

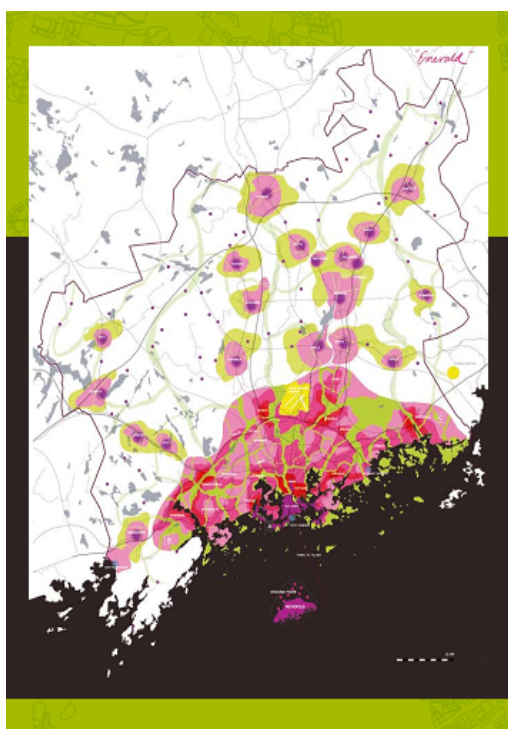


Source: Proposal drafted by Helsinki Region Advisory Board on Land Use, Housing and Transport

REALIZING THE VISION: The First Projects of the Greater Helsinki 2050			
	HELSINKI, Meri-Helsinki	ESPOO, T3 Area	VANTAA, Marja-Vantaa
Name and location	 3D Render Oy		 Harris-Kisk Architects
Project Description	The largest change in construction in Helsinki's history. When the three cargo ports were transferred in 2008 from the city centre to Vuosaari harbour in eastern Helsinki, some 250 hectares of waterfront areas and railway sites were vacated in Jätkäsaari, Kalasatama, Kruunuvuorenranta and Pasila. Helsinki plans to construct 4 million square meters on these areas, which will house tens of thousands of new residents and jobs. The construction work will take place in the second and third decades of the 21st century.	Tapiola is an esteemed residential area, a verdant Garden City and also the heart of Espoo's cultural services. Otaniemi has been recognised as one of the leading innovation environments in Europe. Attracted by the preceding, many significant corporations have moved into the vicinity, with Keilaniemi as the most prolific location. The development of this so-called T3 area promotes the international competitiveness of Espoo and the entire metropolitan area.	Marja-Vantaa is the most significant new urban residential and business area to emerge within the Helsinki Region, and will offer some 30.000 homes and 26.000 jobs in the future. Marja-Vantaa is being developed along the Ring rail track that connects the city centre to Helsinki Airport. Local assets include its proximity to the airport, excellent recreational facilities and good transport connections.
Website	www.hel.fi	www.espoo.fi	www.vantaa.fi
Adapted from Greater Helsinki Vision 2050: Viewpoints on the Regional Vision (2009)			

Other plans and projects in Helsinki's agenda:

- ◆ Uusimaa Regional Council is preparing a new regional plan, which consists of 24 cities and municipalities (in year 2011 the Itä-Uusimaa Regional Council ends as an independent actor and its 11 municipalities will join the Uusimaa Regional Council).
- ◆ Traffic System Plan for Greater Helsinki's 14 cities and municipalities is underway too, and this work is also done in the tight cooperation with MAL-neuvottelukunta and MAL-jaosto. During a meeting in April 2010, they approved the Strategic Guidelines for Land use, Housing and Traffic for the region including several points of action for each guideline.
- ◆ Greater Helsinki Vision 2050 debate for citizens at the Megapolis 2023 event. This workshop gives a chance for citizens to produce comments on the regional vision. The discussion is led by the assistant city manager Hannu Penttilä, industrial designer Mari Siikonen and architect Tuomas Toivonen.



Interested in this initiative? Contact:

TANJA SIPPOLA-ALHO

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Overall Coordinator of the GHV-2050 Ideas Competition
Secretary of MAL-jaosto
Email: tanja.sippola-alho@hel.fi

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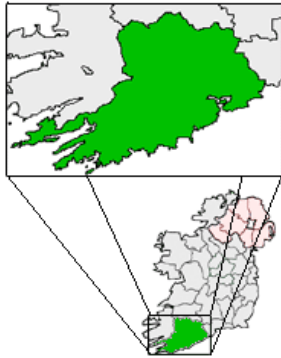
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Case Study #3: Kinsale, Ireland



Location of Kinsale in Ireland



Case Study #3

KINSALE Transition Town

Overview

Kinsale is a town located in County Cork, Ireland, with a population of more than 7,000 inhabitants. Kinsale is the first **Transition Town**, a community-based initiative working for sustainable solutions to the challenges of peak oil and climate change. As a response to these challenges, Transition Town communities are taking an integrated and inclusive approach to reduce their carbon footprint and increase their ability to withstand the fundamental shift that will accompany Peak-Oil.

"The term Peak-Oil refers to the maximum rate of the production of oil in any area under consideration, recognising that it is a finite natural resource, subject to depletion."

-Colin Campbell (ASOP)-

3.1 Origin of Kinsale's vision for a sustainable future

In September 2004, Rob Hopkins, a permaculture professor at the Kinsale Further Education College, and his students discovered *peak-oil* together. They soon started learning more about petroleum geology, of how and where oil forms, about alternative sources of energy, climate change and low-carbon living. They went on looking for examples of community responses to petroleum dependency and to the world's oil-depletion problem, but they found no practical example to follow. So they asked: *"Had anyone actually started to design an energy descent pathway to respond to peak oil anywhere in the world?"* And since at that moment the answer was NO, Hopkins asked his students to work on the design of a community-scale permaculture project for Kinsale, as part of their final project for the permaculture course. The task was then to envision life after oil in and propose alternatives of how the town could make the transition towards a low-carbon living. The main idea was to construct an *Action Plan* for the community to use as a guide towards a post-carbon future in Kinsale. And so they did...

Kinsale's Vision: A resilient, self-reliant and sustainable town.

Transition Town's Vision: "A transition to a low-energy future is possible through community engagement in a visioning and planning process lead by localised sustainable practices. This initiative encourages a go local, pro-active, community attitude as one of the best solutions for dealing with future challenges. Transition Towns consider the challenges of the future as opportunities to rethink the way we do everything, to reconnect with our planet and our community and to relocalise."



Images Kinsale Town
Source:
<http://www.terresceltes.net/>



For about 8 months, Rob Hopkins and his students went on study trips to visit a number of permaculture/organic projects in the West Cork area of Ireland. Here some communities had developed projects of local food and energy production, so the idea of the visits was to learn from their experiences and gain insights on practical responses to energy descent. During this time they also received visits from experienced speakers that lectured them on the topic of peak-oil, including Dr. Colin Campbell, the founder of the Association for the Study of Peak Oil (ASOP). About halfway through the process, they held a community **Open Space** day on the topic of peak oil to discuss what the community might do to prepare for a sustainable post-carbon future. After the students submitted their projects, Hopkins assembled the document into what was called the **Kinsale Energy Descent Action Plan**.

The term energy descent was instituted by the ecologist Howard T. Odum in his book '*A Prosperous Way Down*', and then used by David Holmgren in his book '*Permaculture, pathways and principles beyond sustainability*'. **Energy descent** refers to the time beyond the peak, the downward trend in energy availability. The Transition Movement defines energy descent as "the continual decline in net energy supporting humanity, a decline which mirrors the ascent in net energy that has taken place since the Industrial Revolution. It also refers to a future scenario in which humanity has successfully adapted to the declining net energy availability and has become more localised and self-reliant. It is a term favoured by people looking towards energy peak as an opportunity for positive change rather than an inevitable disaster" (transitionculture.org).

On February 2005, they held an event called "*Kinsale in 2021 - Towards a Prosperous, Sustainable Future Together*" that functioned as a 'community think-tank' that helped gather the community's ideas about how energy descent could be accomplished and to envisage solutions and alternatives for it. As well, the Mayor of Kinsale, Mr Charles Henderson, spoke of the importance of energy as a vital issue that affects all the dimensions of life.





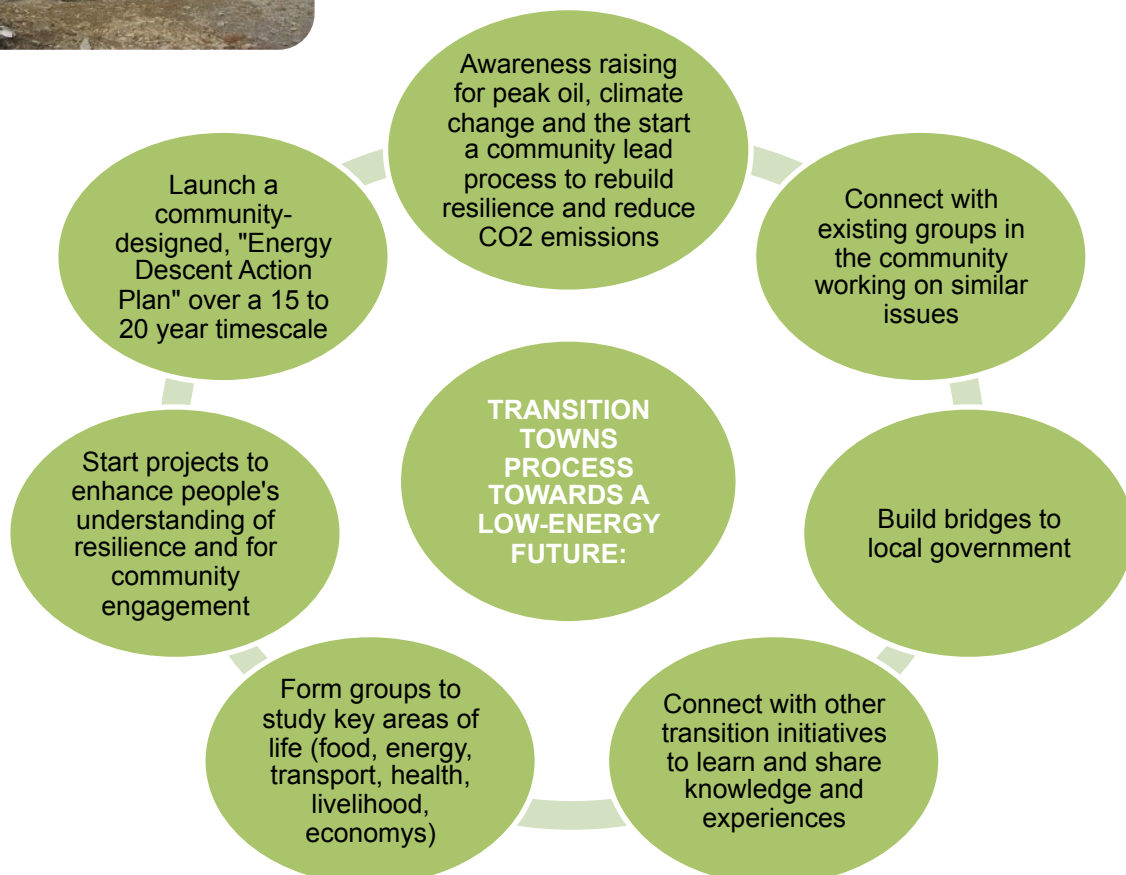
Kinsale community in action.
Meetings and house building.



2.2 Planning for a sustainable future in Kinsale

a. What is the strategy, or method, driving this low-carbon future initiative?

The strategy selected by Kinsale, and by the **Transition Towns** movement in general, is based on public participation and citizen action. The process of decision making and action planning within the Transition movement implies, like any other strategy, a series of steps to be followed. Overall, the process starts with a programme of awareness raising and meetings with small groups of interested people to articulate the rationale for adopting/adapting a Transition approach. As the group becomes larger, it sub-divides in smaller groups to cover all the key areas of interest, such as food, transport, energy, housing, education, economy and livelihood. Then, the task is to envision practical projects for the community to follow, such as community supported agriculture, car clubs, local currencies, neighbourhood carbon reduction clubs, and so on. Most Transition Initiatives are in this phase. Then, when the initiative is sufficiently thorough and complete as regards these concepts and practices, it embarks on an **EDAP (Energy Descent Action Plan)** process. An **EDAP** is a community-visioned and community-designed 15-20 year plan that creates a coordinated range of projects for all the key areas of interest, aiming at guiding the community to a sufficiently resilient and low CO₂-emitting state. Ultimately, the last and most challenging step is to embark on the implementation of the **EDAP**. As of March 2010, no initiative has embarked on this phase yet.





Kinsale Green Building – College of Permaculture Source; www.transitionnetwork.org



In Kinsale, the **Energy Descent Action Plan** was prepared by permaculture students from the Kinsale Further Education College under the guidance of Rob Hopkins. The plan sets out clear, year-by-year actions to achieve a low-energy future in key topics, such as food, youth and community, education, housing, economy and livelihood, health, tourism, transport, waste and energy. The plan is structured in the following way: first, there is an Introduction to the present state of the problem (in this case 2005), followed by the Vision, which gives an idea of how Kinsale could be if all the recommendations are to be implemented. Next, a list of ambitious but suggestions appears, along with a collection of resources and Internet links for reference and guidance. The last section of the **EDAP** is a proposal for a Kinsale Sustainability Centre, which provides services, courses and training to help the community achieve the steps of the action plan. Various public participation events were held to introduce and to engage the community in this Transition initiative, such as a series of Think-Tank events, like the Kinsale 2021 Day. During this event, people worked on specific topics related to the EDAP, for example, there was one on health, where they invite all the people in Kinsale working in the field, and another on education, inviting teachers, parents and other people with an involvement. These events served a dual purpose, first they acted as an essential community sounding board for the Plan's ideas, and secondly they open doors into the community for the project, since all kinds of new practical projects were proposed and contacts made. During this event, the concept of **Open Space** Technology was introduced to the community as a tool for facilitating dialogue and the productivity of such meetings. These efforts were one of the first attempts of this kind anywhere in the world (EDAP 2021). The **Kinsale EDAP** was structured in such a way to enable other communities and towns to adopt a similar process of Transition towards a lower energy future. The **Kinsale EDAP** was awarded the Cork Environmental Forum's prestigious 2005 Roll of Honour Award and, even more importantly, was formally adopted in a unanimous vote by Kinsale's town council at the end of 2005.

Open Space is based on the idea that "the most productive discussion and idea sharing at any event happens during the tea breaks". So it is literally a long tea break, where groups are formed to discuss specific issues including business & technology, food, youth, tourism and renewable energy, and where everyone is free to move between discussion groups. This strategy has proved to be very productive since it produces many ideas and possibilities that can be afterwards discuss with the rest of the community.



Kinsale EDAP 2021: vision per topic - a transition from dependency to self reliance:

1. FOOD - Food growing is an integral part of life in town. All landscaping comprises of edible plants, fruit trees line the streets, all parks and greens have become food forests and community gardens. The resurgence in food production had great benefits for the community, as people rediscovered old varieties, and began to save and exchange seeds. Peoples' diets improved with more fresh vegetables, health increased and illnesses decreased. There is a vibrant local economy around honey, vegetables, fish, poultry and fruit, which has replaced the monoculture of the supermarket.

2. YOUTH & COMMUNITY - By 2021 young people are the vibrant energy driving the cultural shift well underway in Kinsale. They are empowered, skilled and focused, and their ideas and opinions are reflected in the local political process. Their schooling has been re-oriented around core ecological values, their school environments having become as sustainable as possible. They represent the future, and they are supported by the wider community in their building of a more sustainable future.

3. EDUCATION - Education has been reorganised around key ecological principles. Schools are model sustainable systems, generating no waste and being very energy efficient. The daily school routine is a combination of academic and practical, to learn about basic skills of food production, shelter-making and self-reliance. Every school has a garden and produces much of the food it consumes. Students leave school equipped with the skills to withstand the new emerging post-carbon world.

4. HOUSING - Kinsale is a town where many people want to come and live. All new buildings include high level of energy efficiency together with a high portion of local sustainable materials used by local craftsmen/women. The existing housing stock has been retrofitted, and made efficient. Kinsale leads the way providing attractive, progressive and pioneering developments, inspiring communities worldwide.

5. ECONOMY & LIVELIHOODS - The definition of a 'healthy economy' is one where debt-stress is removed from lives and livelihoods, and where everybody finds a useful and fulfilling role in a clean, sustainable environment. By 2021 Kinsale could have a local currency, centred on community goals, and supporting a vibrant local economy of crafts and services. By simple means of currency fee and online transaction charges, Kinsale would have its own local revenue base, and be in a position to independently fund local community services and initiatives.

6. HEALTH - By 2021 a shift towards individuals understanding their own ailments and taking natural steps to heal themselves will be underway. Medicine will have fully recognised the principal that health is about much more than simply the absence of disease. The lack of oil-based pharmaceutical drugs is increasingly offset by a flourishing array of locally grown medicinal plants and herbs. Education about the benefits of healthy, locally grown foods and healthy lifestyle are of prime importance. Without the availability of cheap fossil fuels, health establishments have switched to green alternatives such as wind and solar, with bio-digesters turning green waste into compost for hospital gardens.

7. TOURISM - "Ecotourism"; Kinsale would become an Irish town at the forefront of active sustainable design; a unique and innovative leader setting the precedent for other towns and communities to follow, while at the same time using tourism as a vehicle for building the infrastructure and economy that will sustain it beyond tourism.

8. TRANSPORT - In 2021 there are fewer cars, and the need for private car ownership steadily reduced With the introduction of sustainable integrated transport design within the town, starting first with traffic calming and reduction and leading on to a healthier and more localised lifestyle for all within the area,. Transport in Kinsale now consists of easy safe ways to get around by bicycle, car sharing clubs and lift sharing bulletin boards, public transport and more efficient short distance vehicles. Plans for a light railway between Cork and Kinsale are well underway.

9. WASTE - Zero waste—reusing, recycling and recovery of all remaining waste. All waste generated would be either biodegradable or used in some other process. Most of the products which now carry lots of packaging would no longer have this type of packaging; any packaging used would have to be recyclable or reusable for some other process. As a result of oil becoming a scarce commodity a lot of waste which is now a consequence of the abundant oil era would naturally disappear and biodegradable waste could be used to generate energy or Kinsale could start to manufacture its own packaging locally.

10. ENERGY - Energy comes from sources within a ten-mile radius. Kinsale is part of a sustainable energy network, incorporating several renewable energy sources, wind being the main one. With wind speeds of 30 mph providing over 3 1/2 KW of power it will certainly meet Kinsale's energy requirement if combined with other sources such as solar, anaerobic digesters and Combined Heat and Power. An Energy Rating Scheme will survey buildings, to analyse energy efficiency, and to identify what changes need to be made and ensure that the buildings do not waste energy. Educational resources will be available for people to learn and follow clear, simple guidelines to help them reach a 5 star rating.

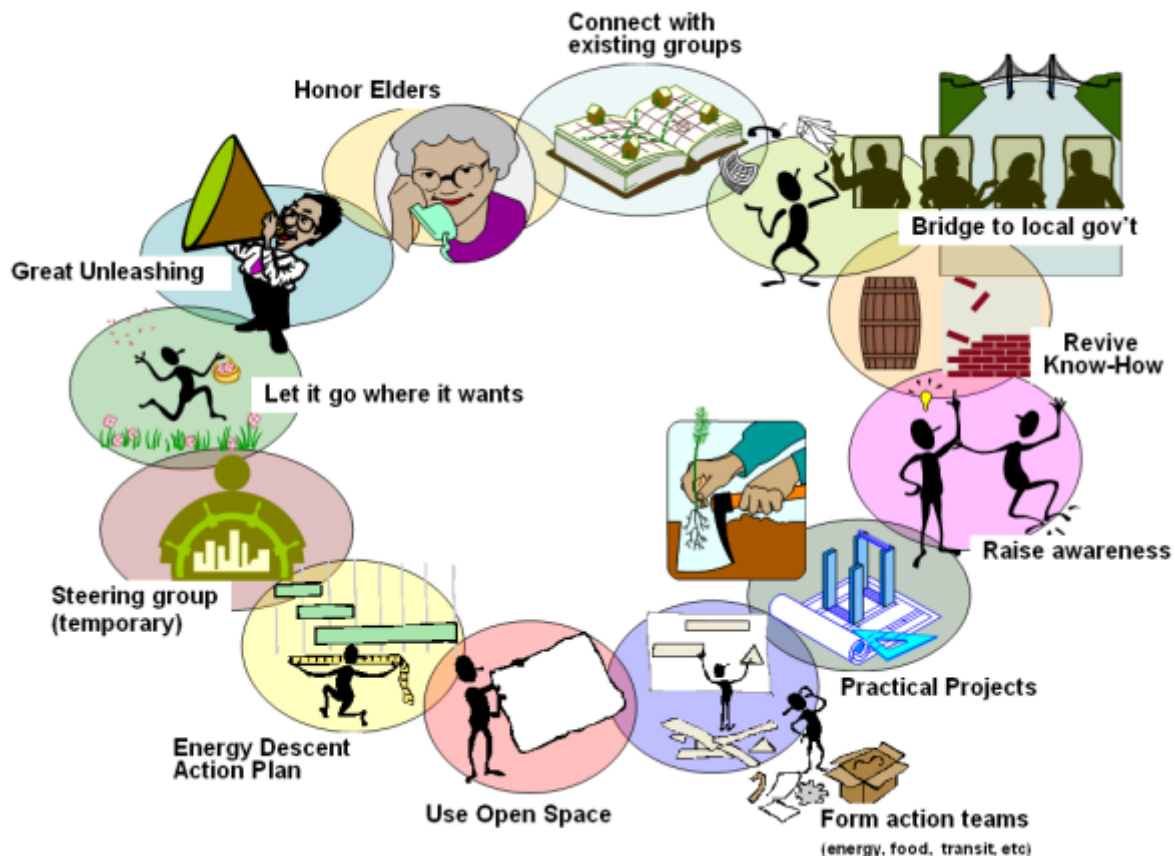


Kinsale's Transition Town community garden, managed by a rotating group of residents.



2.3 From VISION to ACTION in Kinsale

Transition Town Kinsale is most notable for having the support of the Kinsale Town Council. In 2005, a motion to support the implementation of the Kinsale Energy Descent Action Plan was unanimously supported at the Town Council meeting, who also granted €5,000 for community garden projects, schools projects and information leaflets. In 2008, the Kinsale Community Power Down was launched at the Tidy Towns Spring Fair by Trevor Sargent, Minister for State at the Department of Agriculture, Food and Rural Development. This initiative is about engaging the community in energy reduction in households and in businesses alike. Nearly 100 individuals are involved in this project, promoting changes in the use of energy, as well as measuring carbon footprints in the town. An example of this effort, is the local restaurant “Jola”, the first business to reduce their energy bill by 60%, for which they received the ‘Smiley’ Energy Award in 2008. In addition, as a result of an open space event, a new initiative was created to bring the community together to share their food growing experiences. The idea is that through The Edible Garden Network local vegetable growers of all levels of experience will be able to share their skills, resources and workload. However, we could argue that the most important contribution of the Kinsale Transition initiative is that the lessons learned at Kinsale resulted in the design of the “12 Steps” model that structures and guides the transition process within the Transition Towns movement today.



12 STEPS OF THE TRANSITION MODEL PROCESS.

1. Set up a steering group & design its demise from the outset

- A core team sets in to drive the project forward during the initial phases.

2. Start raising awareness

- Identify allies, build crucial networks and prepare the community for the launch of the Transition initiative. Participants have to understand Peak Oil and Climate Change, to promote community resilience and a reduction in carbon footprint. Screenings of key movies, talks by experts, articles in local papers, interviews on local radio & presentations are also part of the strategy.

3. Lay the foundations

- Networking with existing groups and activists, making clear that the Transition Initiative is designed to incorporate their previous efforts and potential inputs by looking at the future in a new way. Get the community to explore solutions and to begin thinking about grassroots mitigation strategies.

4. Organise a Great Unleashing

- Create a memorable milestone to mark the project's opening to the community as it celebrates the community's desire to take action. Estimate 6 months to a year after the first began the "awareness raising". It needn't be just talks, it could include music, food, opera, break dancing, whatever you feel best reflects your community's intention to embark on this collective adventure.

5. Form theme (or special interest) groups

- Smaller groups will focus on specific issues required by the community to sustain itself and thrive, such as food, waste, energy, education, youth, economics, transport, water, local government. Each of these sub groups will look at the best ways of building community resilience and reducing the carbon footprint. These solutions will form the backbone of the EDAP.

6. Use Open Space

- Open Space Technology is a highly effective approach to running meetings for Transition Initiatives, where a large group of people meet to explore a particular topic (food, energy, etc), with no agenda, no timetable, no obvious coordinator and no designated minute takers. By the end of each meeting, extensive notes had been taken, lots of networking has had taken place, and a huge number of ideas had been identified and visions set out.

7. Develop visible practical manifestations of the project

- The project needs, from an early stage, to create practical manifestations in the community. These will significantly enhance people's perceptions of the project and also their willingness to participate.

8. Facilitate the Great Reskilling

- Research among the older members of the communities how to live in a lower energy society and learn repairing, cycle maintenance, natural building, loft insulation, dyeing, herbal walks, gardening, basic home energy efficiency, practical food growing. This will give people a realisation of their ability to solve problems, to achieve practical results and to work cooperatively alongside other people.

9. Build a bridge to Local Government

- The local authority's role will be to support, not drive, the Transition Initiative. Projects and the EDAP will not progress unless there is a positive and productive relationship with local authorities. Whether it is planning issues, funding issues or providing connections, they are necessary.

10. Honour the elders

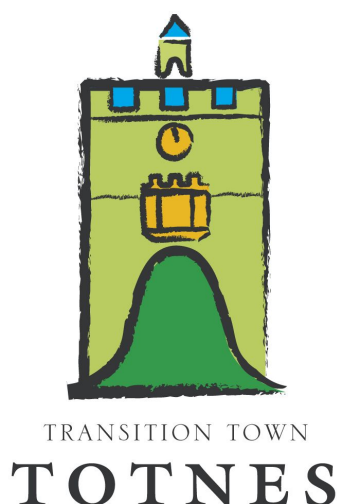
- In order to rebuild the picture of a lower energy society, we have to engage with those who directly remember the transition to the age of Cheap Oil, especially the period between 1930 and 1960. While this is not advocating for 'going back' or 'returning' to some dim distant past, there is much to be learnt from how things were done, what the invisible connections between the different elements of society were and how daily life was supported.

11. Let it go where it wants to go...

- Although you may start out developing your Transition Town process with a clear idea of where it will go, it will inevitably go elsewhere. A key issue is not to come up with all the answers, but to act as a catalyst for the community to design their own transition.

12. Create an Energy Descent Action Plan

- During the first years of the transition process, the theme groups will have been focusing on projects that increase community resilience and reduce CO2 emissions. Over time they'll get adept at running projects, measuring outcomes, linking with the key groups in their area and becoming literate around resilience. When all the key theme groups have built up that expertise, they come back together to help engage the wider community in creating the vision for how that community might look in 15 or 20 years, to create what is known as an EDAP.



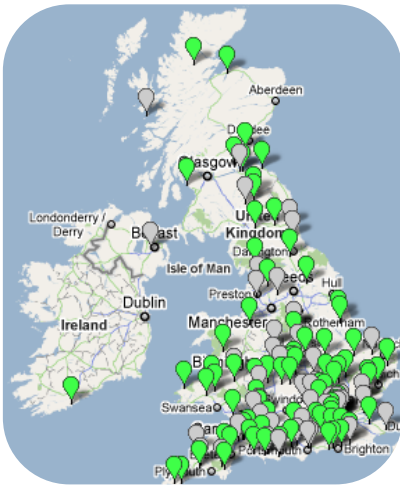
Other Transition Town Examples:

TRANSITION TOWN TOTNES

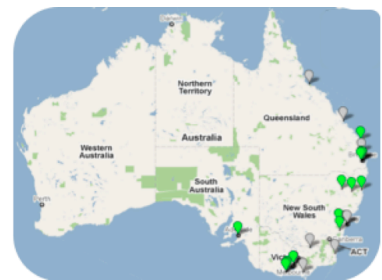
Totnes is United Kingdom's first Transition Initiative. In May 7th 2010, it launched its Energy Descent Action Plan and Vision for Totnes in 2030. This action plan is the most comprehensive one prepared so far by a Transition initiative, and includes visions and local solutions that create a tangible and attractive road map to a lower energy living. On December 19th 2009, Transition Town Totnes (TTT) was announced as one of 10 communities across England and Wales to be chosen as a '**Low Carbon Community**', and awarded £625,000, specifically for a project called '**Transition Streets**'. The project has 4 main stages, explained by TTT as:

1. **Behaviour Change:** TTT will initially select 15 streets, involving a minimum of eight households from a wide cross section, to participate in a programme called *Transition Together*. This programme, designed to inspire practical change at the community level, offers quantifiable reductions in energy consumption, food, transportation, water and waste. This ensures households have achieved all affordable reduction measures and have the intrinsic motivation and social support to take them to the next stage.
2. **Energy Efficiency:** on commencing Transition Together, householders will fill in the Home Energy Check form provided by the Energy Savings Trust (EST) and receive a bespoke home energy audit. They will apply for highly subsidised energy efficiency measures through the partnership with South Hams District Council's (SHDC) 'Cosy Devon' scheme, overseen by Energy Action Devon (EAD), including loft and cavity wall insulation, and in some cases, secondary glazing and external wall cladding. EST will provide with baseline and completion data for the research element of this part of the project.
3. **Renewable Energy:** one participant from each Transition Street will complete training in assessing suitability for household microgeneration, offered by Devon Association for Renewable Energy (DARE), and participants' houses will be assessed. If houses are suitable for solar PV, they will offer £3000 towards solar PV installations along with significant savings on the unit cost of systems due to bulk purchase and upfront payment to a solar PV installer. For low income households SHDC will offer further grant aid and low interest loans through their partnership with Wessex Reinvestment Trust. Houses not suitable for PV will be encouraged to consider alternative forms of microgeneration.
4. **Community Awareness:** Totnes Civic Hall is central to life in the town. In partnership with Totnes Town Council (TTC), SHDC and Devon County Council (DCC) they propose an energy retrofit of this building with a match funding of £50,000 to provide solar PV. The savings thus generated will be used to support further projects, with a public digital display showing the significant energy savings being made. In addition, 'Open Streets' event will showcase some of the upgraded houses so that the public can see what the project has achieved.

According to the experience in Transition Town Totnes, this model of educating and empowering people to decide for themselves how best to decarbonise their lives has positive implications for local authorities because it offers a genuine bottom-up engagement that easily enables behaviour change.



The contributions of this visionary and experimental process in Kinsale, are the base of the worldwide used Transition Model. Its strengths lie on the basic idea that a community could design a safe and intentional path away from oil dependency, seeing that as an opportunity rather than a disaster, which has gone on to inform and inspire the Transition movement (Transition Initiatives Primer). Kinsale was the first attempt at that kind of visioning and backcasting approach, with no previous examples. A Transition Initiative (a town, village, university, etc) is defined as a community-led response to the pressures of climate change, fossil fuel depletion and economic contraction (Transition Network). It all begins with the intention of engaging citizens into a Transition Initiative and is asking this BIG question: *"for all those aspects of life that a community needs in order to sustain itself and thrive, how do we significantly increase resilience (to mitigate the effects of Peak Oil) and drastically reduce carbon emissions (to mitigate the effects of Climate Change)?"* Today, they are more than 400 transition initiatives worldwide.



Interested in this initiative? Contact:

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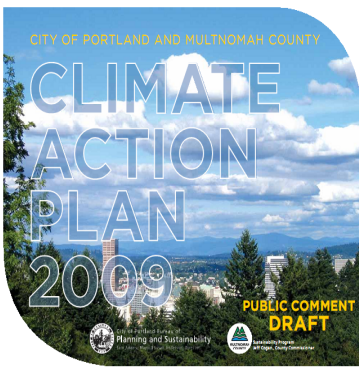
Transition Network - www.transitionnetwork.org

Transition Culture - www.transitionculture.org

Totnes Transition Town - <http://totnes.transitionnetwork.org>

ASPO - The Association for the Study of Peak Oil and Gas - www.peakoil.net

Case Study #4: Portland, USA



Case Study # 4

PORTLAND's Climate Action Plan

Overview

Portland is the biggest city in the state of Oregon, located on the northwest of United States, and it has been recognized as the most environmentally friendly or "green" city of the U.S. The city has a population of over 580,000 inhabitants, whereas about two million people live in Portland's metropolitan area. In 2007 the Portland City Council adopted resolutions directing staff to design a strategy to reduce local carbon emissions 80% by 2050. The vision and strategy guiding this initiative is the **Portland's 2009 Climate Action Plan**, a comprehensive action plan at the city level which provides an innovative framework for the region's transition to a more prosperous, sustainable and climate-stable future.

"The most important innovation in our planning now should be to anticipate an increased capacity for planning itself, for flexibility, for allowing -even enabling- rapid, adaptive and widespread change, social as well as material, in the light of changing circumstances."

-Transition PDX-

4.1 Origin of Portland's vision for a sustainable future

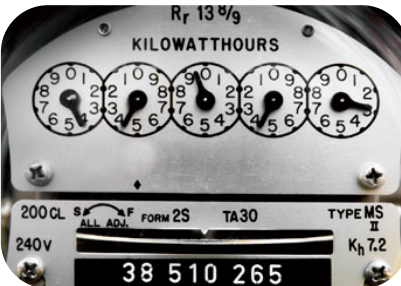
Portland's efforts to reduce carbon emissions started about two decades ago when the city adopted the first climate strategy in the U.S. (1993 Carbon Dioxide Reduction Strategy) and followed with the "2001 Local Action Plan on Global Warming." These plans supported ambitious carbon-reduction efforts, like public transit expansions and new green building policies that promise to benefit the region's long-term economic, social and environmental prosperity. The **Portland 2009 Climate Action Plan (CAP)** was then a natural evolution and extension of these previous efforts. Portland's CAP is based on a long history of linking environmental protection with a high quality of life.

PORTLAND'S VISION 2050:

"Each resident lives in a walkable and bikeable neighbourhood with retail businesses, schools, parks and jobs. Green-collar jobs are a key component of the thriving regional economy, with products and services related to clean energy, green building, sustainable food and waste reuse and recovery. Homes and offices are durable and highly efficient, healthy, comfortable and powered primarily by solar, wind and other renewable resources. Urban forest, green roofs and swales help cover the community, reducing the urban heat island effect, sequestering carbon, providing wildlife habitat and cleaning the air and water. Food and agriculture are central to the economic and cultural vitality of the community, with productive backyard and community gardens and thriving farmers markets. A large share of food comes from farms in the region, and residents eat healthily, consuming more locally grown grains, vegetables and fruits."



Photos: City of Portland,
Bureau of Planning and
Sustainability



Since the 1970s, the State of Oregon has required every town to establish an “urban growth boundary” that guides where growth occurs. Portland’s work on energy has its roots in the late 1970s, when its first energy policy prioritised energy efficiency, renewable energy, and public transportation, partly in response to the sharp rise in energy prices during the 1970s. During the last decades, the city of Portland has implemented a number of innovative policies and programs that have reduced greenhouse gas emissions while providing other economic and community benefits, including (CAP 2009):

- ◆ Land use policies supporting efficient transportation systems, mixed-use development, and a vibrant community;
- ◆ A green building policy covering City facilities and buildings receiving public funding;
- ◆ Transportation infrastructure improvements, including the Portland Streetcar and significant expansion of bicycling and pedestrian infrastructure, coupled with innovative education and outreach programs like SmartTrips;
- ◆ A renewable fuel standard requiring that all gasoline sold in Portland include 10% ethanol and all diesel include five percent biodiesel;
- ◆ A recycling rate of 63%, among the highest in the U.S.;
- ◆ The Urban Forest Management Plan and watershed health programs, which sequester carbon, among other benefits;
- ◆ A Sustainable City Government Partnership to improve efficiency in City operations and serve City energy needs from renewable resources like wind and solar.

In this way, the City of Portland, working together with Multnomah County and many private and public-sector partners, achieved a significant accomplishment in reducing greenhouse gas emissions to 1990 levels in 2006. Despite these accomplishments, the city and its partners face many challenges in continuing to reduce emissions and achieve the 80% reduction in emissions that they aim for. Recently, the State of Oregon has set a goal to arrest increases on greenhouse gas emissions by 2010; achieve 10% emission reductions below 1990 levels by 2020; and achieve 75% emission reductions below 1990 levels by 2050. Consequently, in 2007 the city of Portland committed to the development of a comprehensive vision and action plan for the growth and development of the city over the next 30 years.

CLIMATE ACTION PLAN 2009



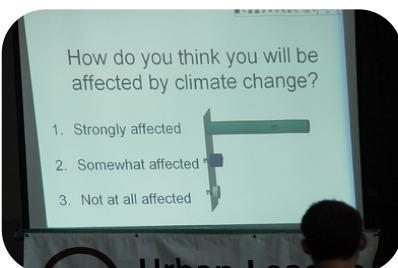
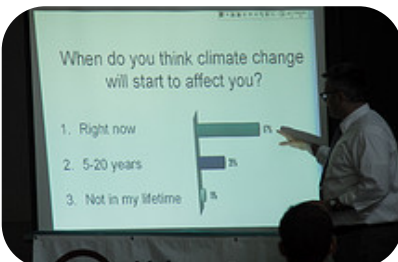
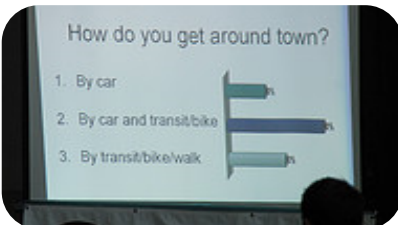
4.2 Planning for a sustainable future in Portland

a. What is the strategy, or method, driving this low-carbon future initiative?

The strategy selected by the city of Portland was to adopt council resolutions to direct a multidisciplinary staff from different bureaus to design a strategy and elaborate a comprehensive action plan to reduce local greenhouse gas emissions. Specifically, the Portland City Council appointed the Office of Sustainable Development to direct this task, in coordination with the Bureaus of Planning, Development Services, Environmental Services, Water, Housing and Community Development, Parks and Recreation, Office of Transportation, Portland Development Commission and Multnomah County. The purpose of the **Portland 2009 Climate Action Plan (CAP)** was to identify and prioritize strategies to reduce local greenhouse gas emissions by 80% by 2050, while supporting local businesses, improving livability, and maximizing other community benefits like clean air, clean water, and human and environmental health. The CAP identifies objectives and actions in the following 8 categories to put Portland and Multnomah County on the right path to reduce carbon emissions:

1. **Buildings and Energy**
2. **Urban Form and Mobility**
3. **Consumption and Solid Waste**
4. **Urban Forestry and Natural Systems**
5. **Food and Agriculture**
6. **Community Engagement**
7. **Climate Change Preparation**
8. **Local Government Operations**

Within these categories, the CAP details 18 specific objectives and more than 90 actions intended to achieve the interim goal of a 40% reduction in emissions by 2030. The actions identified are of the highest priority, and must be pursued by the end of 2012. Key criteria in prioritizing actions were the magnitude of emissions reductions, the scale of economic and community benefits, and the ability of local authorities to facilitate their implementation. The City and County committed to report community carbon emissions annually, to evaluate progress and identify new actions every three years, and to re-examine the objectives every ten years. Moreover, while the city council will have a major, direct role in carrying out many of the articulated objectives and actions, the successful implementation of the CAP will require the collaboration of many diverse partners, from non-profit organizations to business leaders, neighbourhood associations and residents.



b. Development of Portland's Climate Action Plan (CAP)

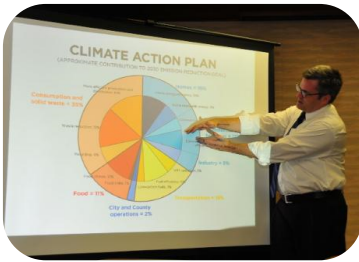
The creation of the CAP 2009 occurred in 4 main phases:

1. Portland's city council gave the overall direction (create a strategy to reduce local carbon emissions by 80% by 2050), based primarily on the Intergovernmental Panel on Climate Change (IPCC) findings that carbon emissions must decline by 50% to 85 % below 2000 levels by 2050.
2. A Steering Committee of local experts was established to advise and guide the City in the development of the CAP. Workgroups with the participation of key stakeholders like regional and state governments, non-profits, businesses as well as community members were established for main action areas such as Buildings and Energy, Land Use and Transportation, and Community Engagement. These groups reviewed potential goals and actions, set priorities and commented on the structure and early drafts of the CAP.
3. A draft version of the CAP was released for public comment in April 2009, and 8 town hall meetings were held to discuss the draft plan with residents, businesses and community organizations. More than 400 people participated in the public meetings, and an additional 175 sets of comments were received through an online comment form, by email or in letters, totalling more than 2,600 comments and suggestions.
4. The CAP was modified and updated to reflect the public comment and advice from local experts. The updated document was then jointly adopted by the City of Portland City Council and the Multnomah County Board of Commissioners.

An additional important resolutions made by the council was that the revised plan shall incorporate recommendations from the Peak Oil Task Force. In 2006 the Portland City Council established a citizen advisory group, the **Peak Oil Task Force**, to examine the region's vulnerability to rising oil and natural gas prices.

Portland's Peak Oil Task Force:

On May 2006, Portland's city council adopted a resolution establishing the **Peak Oil Task Force**, a citizen advisory group, formed by 12 citizens from a wide variety of backgrounds, to provide recommendations on appropriate responses to uncertainties in the supply and affordability of oil. Collectively, the members of the Task Force brought expertise in transportation, land use, business, the food system, building energy use, sociology, and economically disadvantaged populations. Candidates were selected for their ability to bring a multi-disciplinary, systems approach to the issues and for their commitment to seeking solutions that benefit the community as a whole. The resolution charged the Task Force with examining the potential economic and social consequences of peak oil in Portland and developing recommendations to mitigate the impacts of rising energy costs and declining supplies. Overall, the Task Force held more than 40 meetings and involved more than 80 stakeholders and interested citizens in gathering information, and produced a final report in March 2007. URL: www.portlandonline.com/bps/



In March 2007, the city's Peak Oil task Force presented their final report entitled *Descending the Oil Peak: Navigating the Transition from Oil and Natural Gas*. This document assesses Portland's vulnerabilities in the face of wide-ranging changes in global energy markets and provides a set of recommendations for addressing that challenge wisely. The Task Force findings illustrate the central role that oil and natural gas play in people's daily lives. To address oil dependency and make the transition towards a low-carbon energy future, the Peak Oil Task Force outlined a comprehensive package of recommendations, proposing strategies to initiate institutional change and to motivate action in households and businesses. Collectively, the recommendations address the need to reduce oil and natural gas use by 50% over the next 25 years, and they declare the following (Final Report: Peak Oil Task Force 2007):





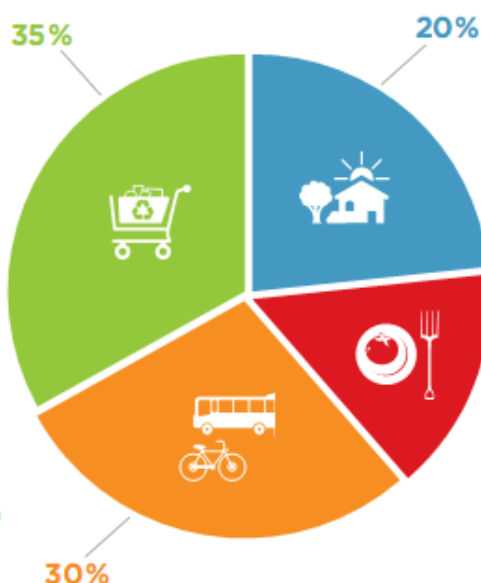
In addition to the joint efforts by the Peak-Oil task force, some other **partnerships** were cultivated during the development of the CAP, particularly among city bureaus (e.g. more explicit partnerships between City of Portland agencies like Planning & Sustainability, Environmental Services and Transportation). This shared ownership for the CAP inside the city has been a key element for success since many of the actions in the CAP require the involvement of other specialized bureaus to be implemented. However, a new and probably the most significant and challenging area of partnership for the city of Portland, has been the issue of engaging the public into the CAP venture. Today, the city council is in the process of developing a public engagement and education campaign to begin talking more explicitly with the public about climate change and how their behaviours and daily decisions are essential to help achieve the CAP goals. Furthermore, an important aspect of this initiative is that the city council recognizes that the residents and businesses are an essential part of the solution to the energy and climate crisis. This is a key strategy overall since over one-third of all carbon emissions result directly from household energy use and personal vehicles, while non-industrial businesses account for another third (CAP 2009). To foster community engagement and commitment towards the CAP initiative, the city council is supporting wide public engagement campaigns to educate, inspire and offer cost-effective, healthy and easy solutions to the energy and climate challenges. The campaign seeks to engage diverse stakeholders; create a shared community vision, goals and progress indicators of a low-carbon future; connect individuals and organizations with education, tools and resources; and celebrate positive changes and successes.

CLIMATE AND YOUR STUFF

FACT: About 35 percent of household carbon emissions can be attributed to the lifecycle of the stuff that we buy; food adds another 16 percent. This includes the resources and energy to manufacture and ship all of the goods we consume.

CLIMATE AND GETTING AROUND

FACT: The transportation of people accounts for almost 30 percent of local carbon emissions in Multnomah County.



CLIMATE AND A HEALTHY HOME

FACT: The heating, cooling and powering of buildings is the single largest contributor to human-caused global warming, accounting for about a third of total carbon emissions. About 20 percent of all emissions comes from our homes.

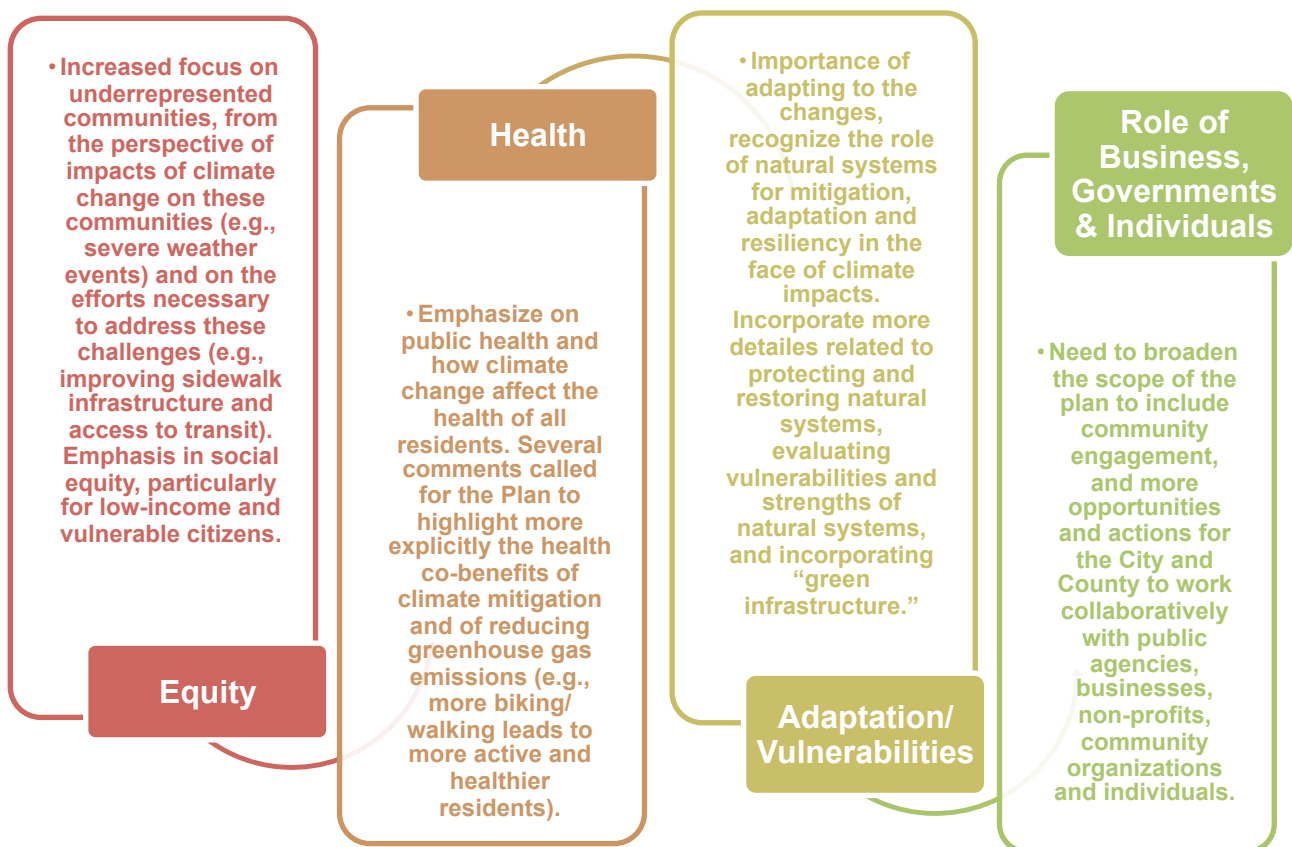
CLIMATE AND FOOD CHOICES

FACT: The global system for producing, distributing and landfilling of food accounts for at least 16 percent of household carbon emissions that cause global warming.

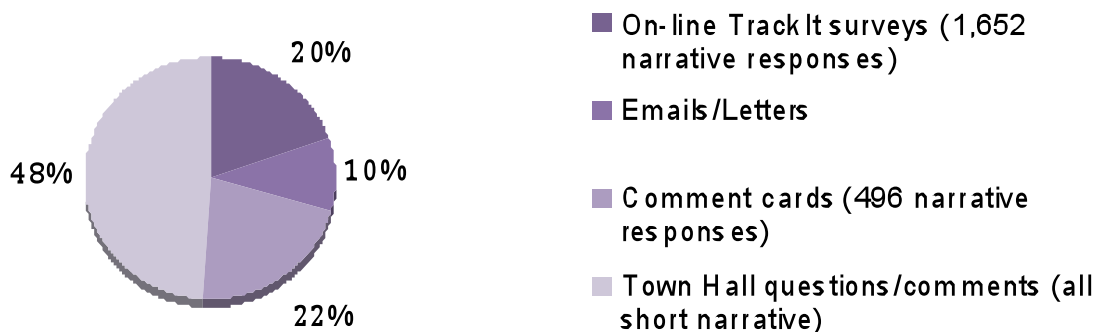


c. Public participation process in Portland

A draft Climate Action Plan was released for public comment in April 2009. Eight town hall meetings were held to discuss the draft plan with residents, businesses and community organizations. More than 400 people participated in the public meetings, and an additional 175 sets of comments were received through an on-line comment form, by email, or in letters, totalling more than 2,600 comments and suggestions (CAP 2009). Specifically, 604 respondents provided comments to both quantitative and qualitative questions. Overall, comments tended to express broad support for the direction of the Climate Action Plan. A summary of the primary themes of the comments follows, along with a brief description of the response in terms of edits to the document (CAP 2009):



Public participation methods used by respondents - CAP 2009



Graph adapted by the author from Portland's Climate Action Plan (CAP) 2009.

Portland's CAP: Objective #16

Create partnerships with businesses, universities, schools, non-profit and community groups & public agencies to develop a wide engagement campaign to promote carbon emission reductions.

Establish a business leadership council to catalyze the business community to create a prosperous low-carbon economy.

Establish and publicize climate action metrics by neighbourhood, including measures such as household energy use, vehicle miles travelled, walkability and bicycle commute rates.

Seek funding to support neighbourhood and community groups in the implementation of carbon-reduction projects and programs.

In addition to public consultation, and considering the importance of participation and engagement to achieve a low-energy future, the city council designed a series of strategies to motivate residents and businesses to change their behaviour in ways that reduce carbon emissions. The CAP clearly establishes actions and calls for cooperation among governments, neighbourhoods, schools, NGOs, faith communities, businesses, civic organizations and individual community members. Specifically, objective #16 of the CAP articulates that "a successful community engagement campaign must tie together existing efforts, develops new initiatives and forges a partnership between government and the community", as it concludes that the following actions and process that need to be completed before 2012 (CAP 2009):

Partner with the Portland Sustainability Institute to bring together academia, businesses and government to foster policy development, best practices and collaboration to address climate change.

Expand opportunities for residents and business, especially in historically underserved areas, to learn how to track and manage energy use, improve efficiency and adapt to a changing climate.

HERE ARE SOME ACTIONS INDIVIDUALS CAN TAKE RIGHT NOW

Between heating, cooling and powering our homes, and driving, Portland residents are responsible for about 50 percent of all local carbon emissions — and that's without counting the contribution of all the things we buy. At a national level, the production and distribution of goods amounts to another 38 percent of carbon emissions.

TAKE ACTION TODAY!

Most of these actions can be done in less than 20 minutes, for less than \$20. Why wait?

NEXT STEPS...

With just a little set up time, you can get your household on the right track.

START PLANNING FOR CHANGE.

Some changes take time and planning. Start thinking about these goals now.

GETTING STARTED

Calculate your carbon footprint.

Quick: www.footprintnetwork.org
Thorough: www.epa.gov/climatechange/emissions/ind_calculator.html

BUILDINGS & ENERGY

Save energy and costs:
Replace incandescent light bulbs with efficient compact fluorescent light bulbs (CFL).
www.18seconds.org

Plug your microwave, stereo, chargers, television and computer equipment into power strips that can be shut off when not in use.

Turn down your thermostat three degrees (or 66°F daytime and 55°F night time). If you have air conditioning, turn up your air conditioner three degrees.

Set up a free home energy review with Energy Trust of Oregon:
866-968-7878
www.energytrust.org

Get a free water conservation kit from the Portland Water Bureau: 503-823-7439
www.portlandonline.com/water/conservationkits

Buy clean energy from your utilities:
PGE: 503-226-6322
www.portlandgeneral.com
Pacific Power: 1-800-869-3717
www.pacificpower.net
NW Natural: 1-800-422-4012
www.nwnatural.com

Fully insulate your home and seal ducts.

Replace your furnace and home appliances with ENERGY STAR models that qualify for Oregon tax credits: www.oregon.gov/ENERGY

When planning a home renovation project, call the Green Building Hotline for expert advice.
503-823-5431
www.buildgreen411.com

Install solar water heating or a solar electric system on your home: 1-877-546-8769
www.solarnoworegon.org

MOBILITY

Maintain your car: properly inflate tires and keep it tuned up for efficient driving.

Shift daily trips to walking, bicycling, transit and carpooling to reduce driving.
www.portlandonline.com/transportation

Buy the most fuel-efficient vehicle that meets your needs. If your household has more than one car, try to eliminate a car and borrow or share a second vehicle when you need one.

CONSUMPTION & SOLID WASTE

Recycle right: recycle all paper, metal and glass, as well as yogurt tubs and other plastics accepted at curbside: 503-823-7202
www.portlandonline.com/bps/carts

Paper or plastic? No thanks!
Take reusable bags with you every time you go shopping.

Compost food scraps in your backyard:
www.oregonmetro.gov

Shop Local: visit neighborhood shops and keep your dollars in Portland:
www.portlandisbettertogether.com

Be a smart consumer:

- Make a list.
- Cross off any items that can be rented, purchased used or borrowed instead.
- Buy long-lasting, durable goods.

FOOD, AGRICULTURE & URBAN FORESTRY

Visit a local farmers market to purchase fresh, local produce:
www.portlandfarmersmarket.org

Reduce the number of times you eat beef and pork each week.

Use native species and wildlife attracting plants in landscaping your yard.

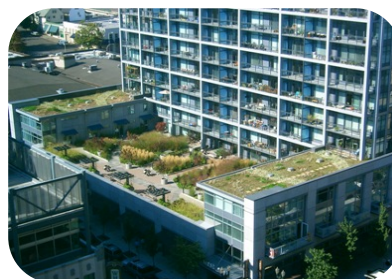
Plant a vegetable garden or more trees:

Portland Parks and Recreation, Community Gardens:
503-823-1612
www.portlandonline.com/parks

Friends of Trees: 503-282-8846
www.friendsofrees.org



Images of Portland's ECOROOOF Programme



d. From VISION to ACTION in Portland

The implementation of the CAP began recently, so many of the actions are being developed currently and simultaneously (i.e. Ecoroof's program) since there are over 90 actions that must be completed or significantly underway by 2012. This major task demands as well as the creation of several working partnerships to achieve them. Among the early actions is the establishment of a \$20 million fund to retrofit existing buildings, which is expected to leverage an additional \$100 million investment, and significantly expanding the bicycle and streetcar networks (CAP 2009). The CAP is leading change through a combination of educational programs, public consultations, economic development planning and the coordination of financial incentives. The Portland's city council has recognized that their ability to set policies and to invest in infrastructure is a powerful lever in influencing local energy management and carbon emissions. The city has an important role in shaping the overall form of the community, which is perhaps the most significant factor in reducing emissions, as well as in integrating transportation systems, enforcing the building code, and regulating garbage and recycling collection. At present, the city is actively developing tools and resources for Portlanders, such as a comprehensive website focused on helping residents understand climate change and encourage actions they can help reduce emissions. This website, helps connect residents to organizations, events and information – including other programs offered by the City (i.e. home energy efficiency upgrades, biking/walking resources). More details on the implementation of the will be available at the end of 2010, in a progress report on the actions, with an update of the local greenhouse gas emissions. A strong attribute of the CAP is that it prioritizes actions the City of Portland or Multnomah County could either take themselves or strongly influence, while at the same time tries to identify the full range of potential options for reducing emissions, such as food choices or personal consumption. As an example, the Portland city council provided gardening and food-related classes to more than 700 local residents, and they are actively reviewing their code to address ways in which it makes it more difficult to grow, sell, or distribute locally produced foods. The council is also looking at options for expanding the number of community garden plots and is identifying parcels of land owned by the city that may be suited to urban gardening to enable a more active urban agriculture.

Portland ECOROOOF's - An ecoroof consists of a layer of vegetation over a growing medium on top of a synthetic, waterproof membrane; they replace conventional roofing with a living, breathing vegetated roof system. An ecoroof significantly decreases storm water runoff, saves energy, reduces pollution and erosion, absorbs carbon dioxide, cool urban heat islands, filter air pollutants, increase habitat for birds and insects and provide much needed green space for urban dwellers. Source: Portland Bureau of Environmental Services.

**CLIMATE
ACTION
PLAN
2009**


Actions to reduce CO₂ emissions in Portland require improving energy efficiency and reducing the carbon intensity of energy supplies, primarily by increasing renewables sources of energy. According to the CAP, buildings are the main contributor to carbon emissions in Portland, accounting for more than 40% of total emissions, so key actions need to be focused on managing energy efficiency in the urban fabric. In the northwest of the U.S., despite relatively abundant hydropower, nearly half of all electricity is from coal, natural gas and nuclear power plants. Wind power has increase lately, but in 2007 wind still provided less than 3% of all electricity, and solar-generated electricity represented well less than 1%. The following table provides an example of how the CAP addresses the energy issue by relating objectives and actions to be completed progressively to achieve a low-carbon future:

#1: Buildings and Energy objectives	Actions to be completed before 2012:
<p>2030 OBJECTIVE #1: Reduce the total energy use of all buildings built before 2010 by 25%.</p> <p>To reach the 2050 emissions reduction target, all buildings must consume 25% less energy than today. By 2030, many new and highly efficient buildings will have been built that will consume less than half the energy of today's buildings. However, because more than 65% of the buildings that will exist in 2030 exist today, these buildings must be retrofitted with energy-saving measures.</p>	<ol style="list-style-type: none"> 1. Establish an investment fund with public and private capital to provide easy access to \$10 million annually in low-cost financing to residents and businesses for energy performance improvements. 2. Require energy performance ratings and consumption disclosure for all homes so that owners, tenants and prospective buyers can make informed decisions. 3. Require energy performance benchmarking for all commercial and multi-family buildings. 4. Provide resources & incentives to residents & businesses on energy-reduction actions on existing buildings. 5. Work with partner org. to promote improved operation and maintenance practices in all commercial buildings.
<p>2030 OBJECTIVE # 2: Achieve zero net carbon emissions in all new buildings and homes.</p> <p>Addressing building efficiency will start during the building design stage. It is critical that buildings built after 2030 generate more energy from clean sources than they consume, resulting in a net emissions reduction.</p>	<ol style="list-style-type: none"> 6. Adopt green building incentives for high performance new construction. 7. Participate actively in the process to revise the Oregon building code to codify the performance targets of Architecture 2030. 8. Accelerate existing efforts to provide green building design assistance, education and technical resources to residents, developers, designers and builders.
<p>2030 OBJECTIVE # 3 Produce 10% of the total energy used within Multnomah County from on-site renewable sources and clean district energy systems.</p> <p>State law requires that by 2025, 25% of all electricity sold in Oregon be from renewable sources, as utility-scale wind farms or solar.</p>	<ol style="list-style-type: none"> 9. Make the investment fund referenced in Objective #1, available to finance distributed generation and district energy systems. 10. Establish at least one district heating and cooling system. 11. Facilitate the installation of at least 5 megawatts of on-site renewable energy, such as solar energy.
Adapted by the author from Portland's Climate Action Plan 2009.	



A strategy used by the Portland City Council to achieve these objectives and actions, was to establish working **partnerships** with various governmental agencies and business, such as the program Clean Energy Works Portland. In addition, in march 2007, alongside with the resolution that adopted the Peak Oil Task Force goal of reducing fossil fuel use 50% by the year 2030, the Portland city council aligned itself with the goals of Architecture 2030, an initiative adopted by the American Institute of Architects, the U.S. Conference of Mayors, and hundreds of governments and businesses to dramatically improve building performance. The idea behind Architecture 2030 is that the buildings sector transforms itself from a major contributor of carbon emissions to a central part of the solution to climate change. Its performance targets specify that new buildings built after 2010 use no more than 50% of the fossil fuel used, on average, by similar types of buildings. This target decreases by 10% every 5 years, such that buildings built after 2030 will consume no fossil fuels to operate.

CLEAN ENERGY WORKS: PORTLAND

This program builds strong linkages between saving energy, creating jobs and improving social equity. It was launched in 2009 as a **partnership** between the City of Portland, Multnomah County, the Energy Trust of Oregon, NW Natural, Portland General Electric and Pacific Power. The program provides low-interest financing to homeowners who improve the energy efficiency of their homes. The loan is then repaid on the homeowner's utility bill over 15 to 20 years. Low-income households pay the lowest interest rate, with higher-income households able to lower their interest rate by electing more comprehensive energy retrofits. A core component of the program is its commitment to creating quality jobs and advancing social equity. Their green jobs goals include:

- ◆ 80% of employees are hired from local work force;
- ◆ 30% of total project hours are performed by disadvantaged people;
- ◆ 20% of all contractors and subs are businesses owned by disadvantaged people;
- ◆ 180% of minimum wage or better paid to all contractors and subs;
- ◆ 100% of new hires come from qualified training programs;
- ◆ 20% of the pilot project works to contractors who demonstrate particular focus on creating pathways out of poverty and into green jobs for local residents, including through employing social enterprise models and/or partnering with nonprofits community-based organizations.

Source: www.cleanenergyworksportland.org

— clean energy works —
PORTLAND





Interested in this initiative? Contact:

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URL: <http://www.portlandonline.com/shared/cfm/image.cfm?id=145732>

Portland's Climate Action Plan. October 2009. City of Portland and Multnomah County. Bureau of Planning and Sustainability. URL: <http://www.portlandonline.com/bps/index.cfm?a=268612&c=49989>

WEBOGRAPHY

Portland's Climate Action Plan 2009 - www.portlandonline.com/bps/climate

Clean Energy Works Portland - www.cleanenergyworksportland.org

Global Footprint Network - www.footprintnetwork.org

Fact Sheets of Other Low-Energy Initiatives in Europe

CASE STUDY #5 _AMSTERDAM: A Different Energy Strategy for 2040**SUMMARY**

The city of Amsterdam plans to become the beating heart of a sustainable metropolis by 2040. The 'Vision 2040' is an innovative approach to regional governance and scenario development. The 2040 vision focuses on several aspects of urban redevelopment to increase Amsterdam's sustainability and focuses on the aspects of adaptation to climate change, creating a compact city strategy, improving public transport network and on the development of a metropolitan landscape. In terms of energy management, the city opts for energy efficiency and renewable energy to achieve a livable and economically vital city. This initiative is part of the Urban Matrix project, funded by the European Union Sixth Framework Programme for Research and Technological Development.

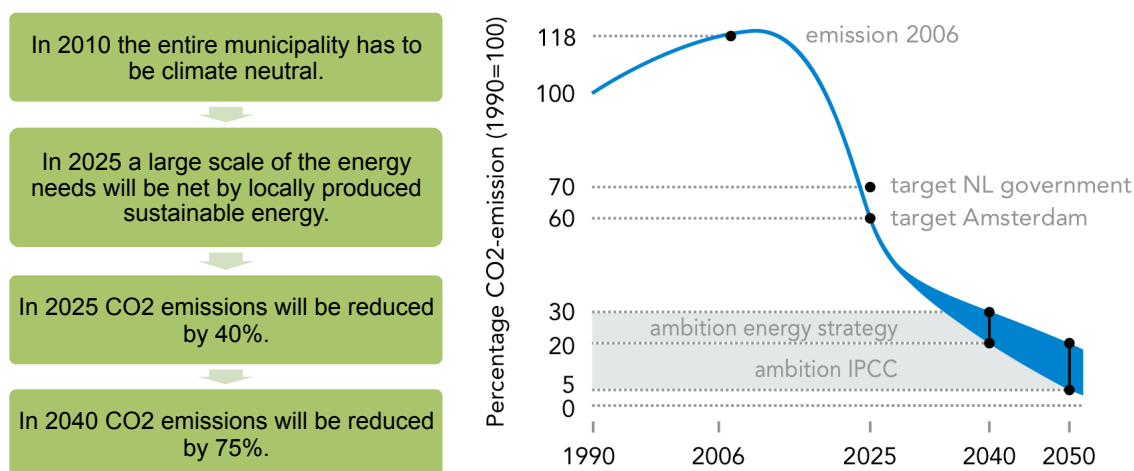
VISION & PURPOSE

The overall vision for Amsterdam in 2040 is that of a creative and varied city, economically and socially strong, with a healthy living environment that manages space, energy and power sources with care and efficiency, and that is prepared to tackle the effects of climate change. Specifically, goals envisioned for the year 2040 include a 75% reduction in CO₂ emissions, compared to 1990 levels and an expansion of the city's heating network to supply with heat more than 200,000 new households. In addition, the vision aims to have around 200,000 electric cars and scooters in the city before 2040. As well, the vision states that only electric boats will be allowed to travel along the canals and that innovative concepts will be introduced for the distribution of goods into the city from the outskirts of Amsterdam.

METHODS & PROCESS

Through the Amsterdam Climate Programme, the city has established strategies and activities to transform Amsterdam in a clean and habitable city. This large-scale strategy was designed to reach the transition to a sustainable energy supply and actions were set to make energy savings, and for the efficient use of fossil energy. Amsterdam addresses its future agenda by producing a regional plan every 5 to 7 years, for a period of 10 to 20 years, whereas the "Vision 2040" is the latest regional plan for the area. The "Vision 2040" is an official planning instrument composed by a spatial strategy, an implementation plan and an environmental impact report to strengthen the decision-making process. A draft Vision was prepared by the Physical Planning Department of Amsterdam and was subject to extensive stakeholder consultation, including public and private sector partners and the general public. In 2007, the city council began to approach a large number of companies, the community and organisations to enhance cooperation and to joint efforts towards a sustainable future in the region. The results of the "Vision 2040" project were summarised in a series of key maps and reports, supplemented by images that clearly show the proposed areas of intervention and that illustrate the imagined future in Amsterdam.

Amsterdam's vision energy and climate targets:



Source: Amsterdam: A Different Energy Strategy for 2040 Report

REFERENCE

City of Amsterdam, Klimaatbureau Amsterdam website: www.nieuwamsterdamsklimaat.nl/

CASE STUDY #6 _ SUSTAINABLE GLASGOW**SUMMARY**

The Sustainable Glasgow Initiative aims to make Glasgow one of Europe's most sustainable cities within 10 years. It proposes a framework for the long-term development of the energy infrastructure in Glasgow, so as to achieve 80% carbon emission reductions by 2050. The overall objectives are to create jobs, help tackle fuel poverty, support the development of a new clean energy sector, create new revenue streams for the Council, improve air quality, and help regenerate communities to make Glasgow a better place to live, work and invest. Sustainable Glasgow functions as a partnership between the University of Strathclyde, Glasgow City Council, Scottish Power, Scottish and Southern Energy, Scottish Enterprise, plus many other stakeholders needed to implement this initiative.

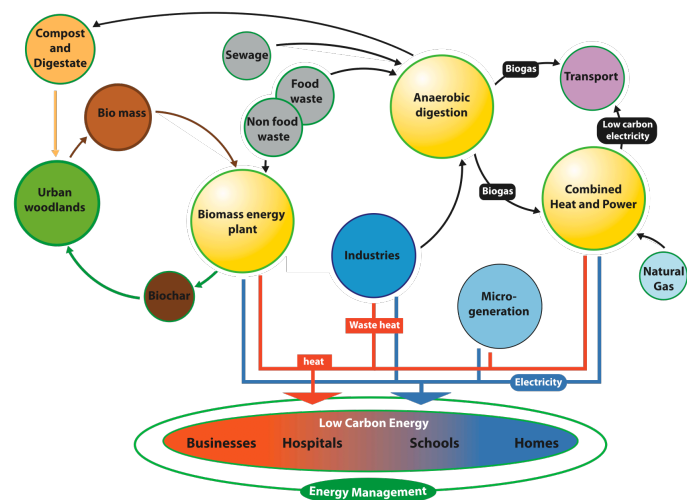
VISION & PURPOSE

"Our aim is to improve the lifestyles and opportunities for Glasgow's people and businesses, enhance Glasgow's image as a leader in sustainable urban living, and to deliver this in a way that is compatible with the development of a vibrant and growing city." The purposes of this initiative are to reduce Glasgow's carbon emissions by 30% within 10 years, maximize the use of sustainable energy resources, and minimize Glasgow's adverse impacts on the environment. The vision covers key factors such as energy systems, energy management, waste, transport, and behavioural change. The vision statement was designed to ensure a common understanding of the Sustainable Glasgow's objectives and to motivate and gain the support of all the stakeholders involved in this initiative.

METHODS & PROCESS

A city-wide strategic analysis of Glasgow's current carbon emissions, of the city's renewable energy resources, its infrastructure and of proposed new developments helped identify technically and commercially feasible opportunities to reduce carbon emission in the city. These opportunities involve combined heat and power/district heating, waste to energy systems, renewable energy, sustainable transport, smart energy networks, and energy management. The role of the Glasgow City Council is to provide leadership and to implement supportive public policy measures. This initiative recognizes the importance of engaging a range of stakeholders into this initiative to achieve the success, including businesses, universities, housing providers, developers, utility companies and the wider public sector.

Proposed integrated low carbon energy systems for Glasgow



Source: Sustainable Glasgow Report 2010

Sustainable Glasgow Initiative Development Process:**STRATEGY DEVELOPMENT:**

- Map energy demand and carbon emissions;
- Understand city's resources and infrastructure;
- Identify key stakeholders;
- Identify major carbon reduction opportunities;
- Identify technically and financially viable opportunities;

INTEGRATE, PLAN AND DEVELOP RELATIONSHIPS:

- Create a high level coordinating entity;
- Consult, raise awareness and develop support;
- Ensure projects and initiatives support wider policy objectives;
- Integrate strategy into public planning, policy and investments.

IMPLEMENT PROJECTS AND INITIATIVES:

- Analyze individual projects;
- Raise investment funding;
- Adopt supportive public policy measures;
- Implement projects;
- Develop indicators to monitor progress;
- Disseminate this approach.

REFERENCES

Sustainable Glasgow Initiative website - www.sustainableglasgow.org.uk

CASE STUDY #7 _GÖTEBORG 2050: Visions of a Sustainable Society**SUMMARY**

The city of Göteborg in Sweden has a long history of commitment to sustainable energy, including energy-efficient buildings, renewable energy and energy-efficient urban planning. The Göteborg 2050 Project was an initiative where long-term visions and images of the future were created for the sustainable development of the city and the surrounding region. The project used a **backcasting** methodology to build alternative long-term scenarios to planning processes in the city and the region. The project was initiated by Hans Eek, architect and passive house promoter, and by Johan Swahn, researcher in sustainable environment and energy systems at the Chalmers University of Technology. It was supported as well by the City of Göteborg, Göteborg Energi AB, Chalmers University of Technology, Göteborg University, Renova and the Region Västra Götaland. The City of Göteborg considered this project a useful tool for the ongoing energy planning process in the city. The project included components of research, scenario development, support for strategic planning, and dialogue with the public, visualisations, and support for demonstration projects. The Göteborg 2050 project was carried out between 2000-2004.

VISION & PURPOSE

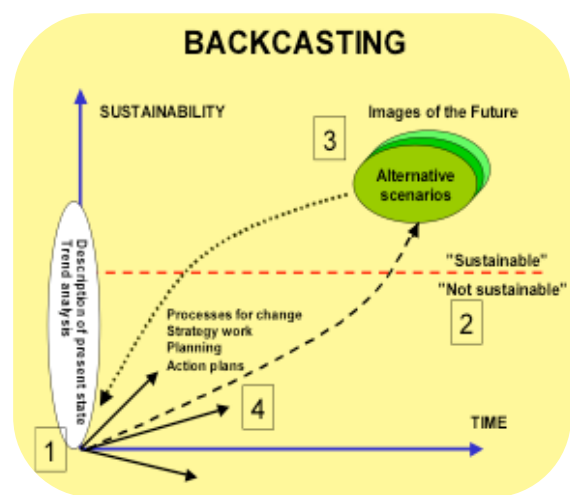
The purpose of the project was to supply visionary and sustainable inputs to the development of a new energy plan for the city (Solar City Göteborg 2050), assist in the planning process of the city's urban plan, waste management, transportation alternatives, industrial development, food, and consumption of goods and services. The vision Göteborg 2050 sets out goals for each of these topics that the city must reach by 2050 for a sustainable development. The year 2050 symbolized a sustainable society and no targets were involved for other specific years. The Göteborg 2050 project integrated aspects of social sustainability, were a high quality of life was seen as important as reaching environmental sustainability. Another important goal for the project was to have an outreach to the general public and citizens of Göteborg.

METHODS & PROCESS

To develop long-term and diverse future scenarios, the project used a **backcasting** approach. Backcasting is a methodology that uses scenario work in order to form images of the future that can be used as guiding images in planning processes. During a workshop, a variety of stakeholders and researchers are asked for inputs, on what they see as a sustainable future. Often it involves scenarios of what would happen if the best available technologies are broadly used in a future society. This brainstorming work is then used to produce a visionary document that can be used for inspiration in planning processes. Backcasting involves 4 steps:

1. *Analyse the present situation and trends*
2. *Examine and decide upon criteria for sustainability*
3. *Create alternative scenarios*
4. *Use the scenarios to promote change*

The project was also proactive in initiating demonstration projects to show practical examples of a sustainable world, including the design and construction of demonstration homes that use only solar energy for heating and hot water, even in the winter. As well, the project involved the engagement of the public through exhibitions, meetings and the media, used to illustrate citizens about positive visions of a sustainable future in Göteborg related to energy, transportation, urban structure and food among others. According to the experience of Göteborg 2050 project, the use of a backcasting methodology and the creation of visions and images of the future helped accelerate the rate towards a sustainable development.



Source: Solar City Göteborg 2050

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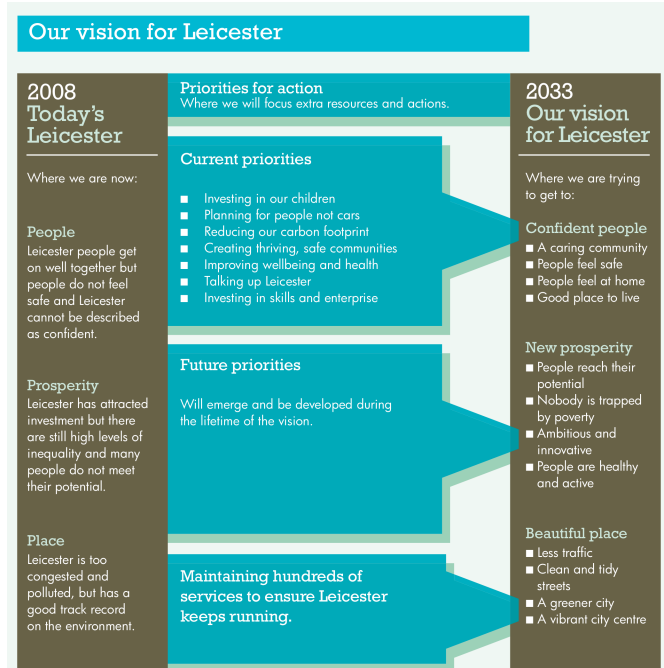
Göteborg 2050 Project website: www.goteborg2050.nu

CASE STUDY #8 _ONE LEICESTER: A 25 Years Journey**SUMMARY**

"One Leicester" is an ambitious sustainable community strategy in the UK that set priorities to guide the work of the city council and its partners over the next 25 years. These priorities include reducing the city's carbon footprint and aiming to have the lowest carbon footprint of any major city in Britain, improving wellbeing and health and investing in skills and enterprise. This strategy was developed by the Leicester Partnership (the local strategic partnership), in consultation with a wide range of stakeholders and organizations across the city. The One Leicester plan considers actions that are needed to make Leicester a sustainable city, by meeting their present needs without compromising the ability of future generations to meet their own. The focus of the strategy and vision are the people of Leicester; the plan intends to make residents feel confident about themselves, about their neighbourhoods, their city and their future.

VISION & PURPOSE

"Our vision is of a beautiful, vibrant, clean and green city that is a great place for people to live, but that does not create an unacceptable burden on the planet." One Leicester is a vision that forms the foundation for the changes Leicester City Council and its partners want to see in Leicester over the next 25 years. The purpose of this strategy is to set out a pathway to transform Leicester into Britain's sustainable city over the next quarter century, while improving economic, social and environmental wellbeing and to contribute to the sustainable development of the UK. The main objectives of this strategy is to help coordinate the actions of the council and other public, private, voluntary and community organisations across the city, to assist these organisations shape their activities to enable them to meet the needs and aspirations of the people of Leicester; and to contribute to a sustainable development locally, regionally, nationally and globally. The strategy describes an ambitious, progressive and prosperous city, where everyone has the opportunity to meet their potential, regardless of their age, disability, gender, race, religion or sexual orientation.



Source: One Leicester strategy – a 25 years journey

METHODS & PROCESS

This strategy was developed by the Leicester Partnership (the local strategic partnership), in consultation with a wide range of stakeholders and organizations across the city. The role of the Leicester Partnership is to bring together the public and private sector, business, community and voluntary organizations to establish a local coordination framework that can drive forward the One Leicester strategy. The process to make reality the One Leicester Vision requires a wide support, participation and involvement from all major public, private and voluntary sector organisations of the city. Thus, some of the methods used to drive this initiative include the identification of key local community bodies that can help promote best practice, plus the establishment of a broad network of relevant organisations that align their key strategies, activities and services with the One Leicester Vision. As well, the initiative focused on engaging citizens to increase their knowledge and understanding of how to make the city more sustainable while improving their quality of life.

REFERENCES

One Leicester Initiative website: www.oneleicester.com
 Leicester City Council website: www.leicester.gov.uk/oneleicestervision/

CASE STUDY #9 _ PERSPECTIVE MUNICH: Shaping the Future

SUMMARY

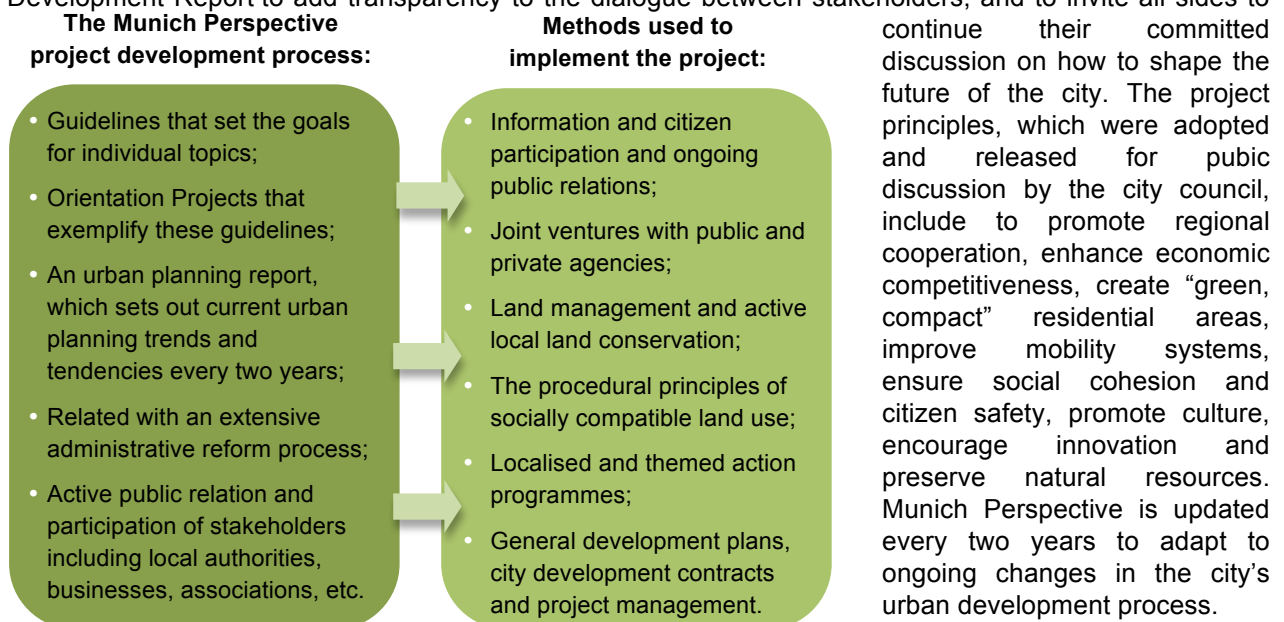
In 1998, the Munich City Council adopted a concept of urban development entitled Munich Perspective, a project designed for communal action regarding urban economic, social, spatial and regional development. Munich Perspective is a flexible and proactive guide that provides specific tools and a "laboratory" for research into new pathways in urban planning and communal urban living. Its guiding principles and projects serve as an action framework for the orientation and development of the city, which includes systematic dialogue between citizens, business and local authorities. Many of the projects designed in 1998 have been implemented, and new principles and projects were added during the two updates made to the initiative in 2001 and 2005. This development concept has proven itself in practice as a successful long-term framework for action at the city-scale.

VISION & PURPOSE

Munich Perspective is "urban development as a process", an initiative acting with foresight. The aim of is to find the right strategy for positive urban development to prepare for future challenges. The initiative is based on two main principles, Sustainability and Urbanism, plus embodies fundamental values such as openness, social and cultural diversity, tolerance, economic opportunities, creativity, and responsible use of natural resources. The Munich Perspective plan was designed to be a continuous process of urban development planning aiming to tackle the increasing pace of socioeconomic and demographic change in the city, through flexible actions fitted to the needs of citizens and the business community.

METHODS & PROCESS

In addition to the adoption of council resolutions, one of the essential features of the Munich Perspective project is the inclusion of citizen participation strategies, like public debates about objectives and methods to be used during the implementation phase. The project combines workgroups with youth and senior citizens and cooperation with district committees, chambers of commerce and other associations, scientific, trade union and churches, clubs, non-profit organisations, local Agenda 21 activists and representatives of the Munich region. The city council also regularly publish the Munich Perspective City Development Report to add transparency to the dialogue between stakeholders, and to invite all sides to



Source: Shaping the future of Munich Development Report 2005

REFERENCE

City of Munich Department of Urban Planning and Building Regulation - www.muenchen.de/plan

CASE STUDY #10 _ VISION STOCKHOLM 2030: A World-Class City**SUMMARY**

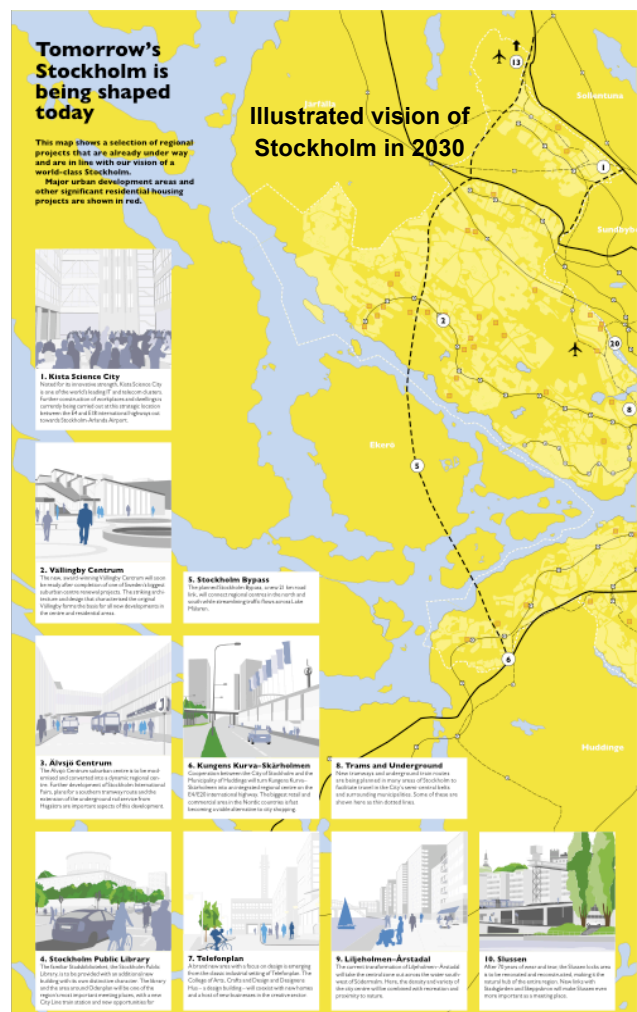
The project entitled "Vision Stockholm 2030" was developed by the city council to outline an overall, long-term vision for the sustainable growth and development of Stockholm. This project was formally adopted by the city council in June 2007 and forms part of a strategic plan to guide priorities and characterise development work within the city. The creation of a common vision for 2030 was a collective effort from various city's departments, administrations and companies. The final vision statement, named "A World-Class Stockholm", focus on how to make Stockholm a city in which to live, work or visit in 2030. To transform this vision into concrete projects, the city council enhanced regional cooperation with neighbour municipalities and established working partnership with citizens, the private sector, with national authorities, universities, special-interest clubs and associations all over the city.

VISION & PURPOSE

By the year 2030, "Stockholm will be a world class metropolis and the hub of the growing Stockholm-Mälars region. The city will be internationally competitive, with an economy characterized by knowledge-based businesses that compete with goods and services in the global marketplace". The vision aims to create a region that provides a wide range of work, education, service, culture and entertainment to give citizens "the opportunity to fulfil their life dreams, and that will make use of every single person's potential". The vision includes the goal of becoming entirely independent of fossil fuels by 2050, through actions that can led to substantial reductions in energy consumption among industrial and domestic users alike. The purpose of the initiative is also to attract visitors from all over the world.

METHODS & PROCESS

The development process of the vision started in 2006, with dialogue with many stakeholders, including local authorities, representatives of trade and industry, educational institutions and research facilities. The task was to formulate a long-term vision for Stockholm's development and sustainable growth, and to identify important tasks for the achievement of the planned goals. In addition, between 2008 and 2009, the city council produced a series of seminars and debates with politicians, experts and the community to discuss Stockholm's future and key urban development initiatives. As part of this initiative, a new city plan for Stockholm was developed, to function as a stool to show how the city will achieve the vision 2030 goals. The plan also serves as policy guidance for the entire city's areas and functional responsibilities and to provide clear guidance as regards the city's intentions and objectives.



Source: A World-Class Stockholm: Vision 2030

REFERENCES

City of Stockholm website - <http://international.stockholm.se/Future-Stockholm/Vision-2030>

Part III:

Conclusions

Comparative matrix of the methods used for the visioning-planning process in the four case studies reviewed:

CITY	HELSINKI	PORTLAND	SUTTON	KINSALE
COUNTRY	Finland	State of Oregon, USA	London, UK	Ireland
PROJECT	Greater Helsinki 2050	Portland's Climate Action Plan	One Planet Sutton	Transition Town Kinsale
PROJECT SCALE	Regional-level (1.3 million inhabitants)	City-level (580,000 inhabitants)	Borough-level (180,000 inhabitants)	Community-level (7,000 inhabitants)
VISION/GOALS	Year 2050	Year 2050	Year 2025	Year 2021
MAIN STRATEGY	Open Ideas Competition, city-to-city cooperation & community participation	New council resolutions and public policies, use of external advisory groups & community participation	Adoption of a global programme, forming partnerships, new public policies & community participation	Community-based vision, design and implementation; networking movement and grassroots model
METHODS & PROCESS	<ul style="list-style-type: none"> Proposal of a common sustainable long-term urban development vision at the regional-scale. Intercity agreements on cooperation to solve common problems and enhance collaboration. Create an Advisory Board formed by local authorities and planning experts to drive forward the initiative and coordinate efforts. Create an International Ideas Competition, with attractive awards to appeal international planning and architecture 	<ul style="list-style-type: none"> Introduce council resolutions to design a strategic plan to reduce carbon emissions at the city-scale. Appoint a multidisciplinary staff to elaborate a comprehensive action plan to reduce emissions and to guide the sustainable future development of the city. Establish a steering committee of local experts to advise local authorities in the development of the action plan. Establish a citizen advisory group to examine the region's vulnerability to rising oil and natural gas prices and include the recommendations into the final action plan. 	<ul style="list-style-type: none"> Adopt a programme or global initiative to build a common vision to reduce local carbon emissions at the borough-scale. Use the programme to provide stakeholders with information, inspiration, tools and products to achieve the vision. Build an action plan with specific targets to guide the vision. Combine research, design and expertise of stakeholders to attain practical solutions. Establish working partnerships between local authorities, the community, business, NGOs, public and private agencies to introduce joint activities to help 	<ul style="list-style-type: none"> Acknowledge the importance of creating a vision and action plan to address energy and climate change challenges at the community-scale. Set out an initiative to create a vision and action plan to address these challenges based on public participation and citizen action. Start a learning process about key topics and alternatives of how to proceed, search for examples and previous initiatives for inspiration and consult with experts. Set awareness raising campaigns and form working



PROJECT STATUS

firms and teams to participate.

- Use the competition platform to debate questions regarding city and regional planning and to create a new urban development approach for the region.
- Launch a follow-up project to analyse ideas received during the competition.
- Create workshops for politicians and citizens to discuss and select best ideas and practices.
- Create Internet spaces to facilitate open discussions with the general public and to obtain citizen feedback.
- Give press interviews and produce articles and update reports about the status of the project.
- Compile ideas into a final report that will act as a basis for the continuation of the vision process and for the strategic planning at the regional scale.

Implementation Phase

- Set short-term actions, medium-term objectives & long-term goals.
- Create workgroups with key stakeholders to review potential goals and actions, set priorities and comment on the structure and early drafts of the action plan.
- Foster community participation and commitment through public education campaigns and raise awareness about how individual behaviors and daily decisions are essential to achieve the vision and action plan.
- Release a draft version of the action plan for public comment and discuss the draft with key stakeholders.
- Update the action plan to reflect public comments and the advice from the advisory groups.
- Endorsement of the action plan by local authorities.
- Build working partnerships and cooperation among stakeholders.
- Celebrate positive changes and successes.
- Report carbon emissions annually, evaluate progress, identify new actions every 3 years, and re-examine the objectives of the action plan every 10 years.

Implementation Phase

- achieve objectives and goals.
- Establish a sound governance framework for community engagement and consultation.
- Receive technical and strategic support from an external team of experts to help local authorities guide the project.
- Use of indicators and evaluation programmes, such as Ecological Footprint, to monitor progress and provide regular feedbacks to all stakeholders.
- Review the state of the project to make necessary modifications according to changes in policies, technologies, agreements or in availability of funds.
- Use the Internet to create a network and a knowledge-exchange platform to keep stakeholders connected to improve job performance, support learning, encourage discussions among participants and to connect peers working on similar strategies to solve problems and share best and worst practices.
- Communicate successes and inform about decisions taken; report the progress achieved.

Implementation Phase

- groups of interested people to articulate the rationale and approach of the initiative.
- Connect with existing groups in the community working in the same issues.
- Develop visible and practical manifestations of the project to enhance community engagement; do open events to discuss the aims of the initiative and encourage participation and commitment to the project.
- Design of a long-term vision and action plan at the community-scale, based on voluntary work, to guide the project forward, by envisioning solutions and proposing alternatives for action.
- Create an event to launch the plan, share its vision and targets with all stakeholders, and build bridges with the government to gain support from the local authorities.
- Set an Internet-based network to share experiences, knowledge and enable other communities to adopt a similar process.

Implementation Phase

ENERGY AND CLIMATE CHANGE CHALLENGES: PROMOTING INNOVATIVE FORMS OF URBAN AND LOCAL GOVERNANCE

Cities are, and will always be, dynamic places and spaces of change, innovation and solutions. Cities are drivers of development processes, constantly creating new ways of dealing with changing circumstances to overcome challenges. Today, energy and climate change challenges are the main issues driving cities and citizens through innovative pathways and levels of development and governance. The process of visioning, planning and design of long-term visions and action plans to reduce dependence on fossil fuels and carbon emissions at the city-scale is definitely an ideal example of this dynamic. Moving towards a low-carbon energy future requires cooperation at the global scale, but most important, it requires a continuous coordination of efforts and actions at the local level. Often, successful initiatives aiming at achieving a sustainable low-carbon energy development involve elements of citizen participation and urban governance. These two elements are crucial since the transition to a low-energy society entails collective efforts from its members, who need to actively contribute with individual actions, based on common goals and visions for the future. A broad participation of stakeholders promotes as well the valorisation of knowledge, enhances transparency and accountability, and can serve to balance power relations.

Participation, and shifting to more democratic and decentralised decision making-processes are also attributes of good governance in cities, which allows the articulation of productive and diverse visions and ideas for a sustainable future development. Governance refers to the process by which elements in a society exercise power and authority to influence and enact policies and decisions concerning public life, and economic and social development (Novartis Foundation for Sustainable Development). Governance involves interaction between formal institutions and the civil society and can be understood as “an art of public leadership”, and a challenging precondition to achieve sustainability in all its dimensions. Practices of good governance in cities include equitable participation of stakeholders such as local authorities, policy makers, professionals, the private sector, civil society organizations and citizens in important decision-making processes. Encouraging effective participation of these urban stakeholders is essential to achieve a sustainable development, to enhance social and economic opportunities and to improve quality of life in cities.

The four case studies presented in this report embrace different types innovative urban and local governance structure to address energy and climate change challenges and achieve sustainability. They clearly illustrate how locally-led (bottom-up) initiatives can influence national action, and as well, how nationally-led (top-down) initiatives can enable structures to empower local players. In a very diverse way, the cases of Sutton, Helsinki, Kinsale and Portland involve and support experimentation with innovative practices of urban and local governance towards a low-carbon, climate-resilient future. These experimental pathways and practices include articulation of ambitious long-term visions and actions plans, the design of local solutions to overcome obstacles, capacity building and knowledge construction, productive technological and financial partnerships, easy methods for feedback and evaluation, information sharing and cross-scale learning, dissemination and networking. In particular, this four cities present diverse frameworks and examples of multilevel governance, showing the advancement of governance and development through innovative methods and processes centred on the concepts of participation and sustainability. We could argue as well that the case studies presented in this report illustrate diverse forms of ‘horizontal governance’, which refers to any initiative that takes place across various levels of government, between units of a single department or among multiple departments or agencies, and even across public, private and voluntary sectors (Ferguson 2009). This type of governance

replaces hierarchical leadership with collaboration, willingness to work in consensus and through sharing responsibilities about decisions and results achieved. The term 'horizontal governance' covers a range of approaches to policy development, service delivery issues, and management practices (Ferguson 2009). Most recently, horizontal governance has appeared and grown in the form of city networking, which focus on best-practice transfer, learning among their members and the representation of their members' interests at national and international level (Kern 2010). This type of governance has also emerged under different names including "interdepartmental actions, alliances, joint ventures, co-actions [and] partnerships" (Bourgault & Lapierre 2000).

The cases of Sutton and Portland are examples of the 'urbanization effect' of energy and climate change governance in cities. These initiatives illustrate the importance and significance of a historic consensus between local authorities, the civil society, public and private agencies, and citizens in making the transition to a low-carbon energy society. Sutton and Portland can be regarded as pioneers in the formation of urban responses to energy and climate change challenges in the form of 'governance experiments', that involve broad participation of stakeholders, the reconfiguration of energy infrastructures, and the design of socio-technical innovations to address the carbon intensity of energy systems. Both cities are example of 'governing through enabling'; where to the role of the local government in coordinating and facilitating partnerships with private actors and encouraging community engagement is the core of the overall initiative (Kern 2010).

In the case of Kinsale and the Transition Towns movement, local communities are encouraged to participate in the formulation of actions and projects to reduce energy usage and build resilience against future energy and climate change challenges. This Transition initiative concept is yet another novel and creative type of governance, based on community empowerment and participation towards self-reliance and sustainability. A crucial principle that differentiates Transition Towns from other community-focused sustainability initiatives, such as Local Agenda 21 strategies, is that the Transition model is initiated and driven by the community itself, rather than by central or local government agencies. We could argue that this type of experimental and decentralised local governance structure is the most distinctive characteristic of the Transition Model, underlying the possibility of adapting the model to a wide variety of environments. In addition, another type of governance co-exists within the Transition Towns movement, present in the structure of the process established by the movement to endorse an initiative as a Transition initiative. The Transition movement is, in one way or another, "governed" by the Transition Network, whose structure supports and enhances the feasibility, productivity and continuity of the Transition process.

The case of Helsinki exemplifies a form of 'regional governance', where various municipalities and city councils of the Greater Helsinki Region joint together and established cooperation arrangements to solve common problems in a collaborative manner. This exercise of regional governance insures an efficient coordination of efforts in the planning and provision of public policies for a wide range of policy areas such as, land use, energy, transportation, housing, economic and social development, public safety, and so on. In the case of Helsinki, this regional governance arrangement was organized to attain a larger technical and financial capacity to manage and develop practical solutions for the long-term sustainable development of the region. This collective effort was crucial to organize, launch and finance the Greater Helsinki Vision 2050 project and the Open Ideas Competition, which was the strategy adopted for building a common vision to serve as a framework for the future development of the region. But mostly, regional cooperation and management is critical to successfully implement and accomplish the vision by 2050.

Even if some of the cities reviewed for this report recently began to implement action plans developed, a

variety of implementation obstacles have appeared during the process. In general, common obstacles confronted by cities and citizens during the implementation phase of visions and action plans to address energy and climate change issues involve:

- ◆ **Lack of appropriate funding.** Since the majority of the visions and action plans involve interventions in major and complex sectors, such as housing, transport, waste management, urban structure and social development, the implementation costs can be very high. Often local government and communities do not have the capacity to provide funding for the projects and actions envisioned.
- ◆ **Lack of support from central governments.** The response and attitude of local governments varies according to the country's national legislation, and to the regulatory and policy frameworks that support local initiatives. The absence of appropriate regulations and policies in key areas, such as energy and planning, are sometimes a barrier that impede the initiatives from developing forward.
- ◆ **Lack of a governing authority or responsible structure.** The absence of a governing structure that coordinates, monitors, and directs the interdisciplinary actions at many different scales is a main constraint for success. While decentralisation is often advocated as the solution to reinforce implementation capacity, local authorities and communities often lack technical resources and the decision-making power needed to undertake proposed action and projects.
- ◆ **Insufficient capacity and expertise.** The lack of technical knowledge, particularly that related to energy and climate change-related issues, plus insufficient expertise concerning planning, management and delivery of projects.

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Novartis Foundation for Sustainable Development website: www.novartisfoundation.org

TOWARDS A LOW-ENERGY WORLD

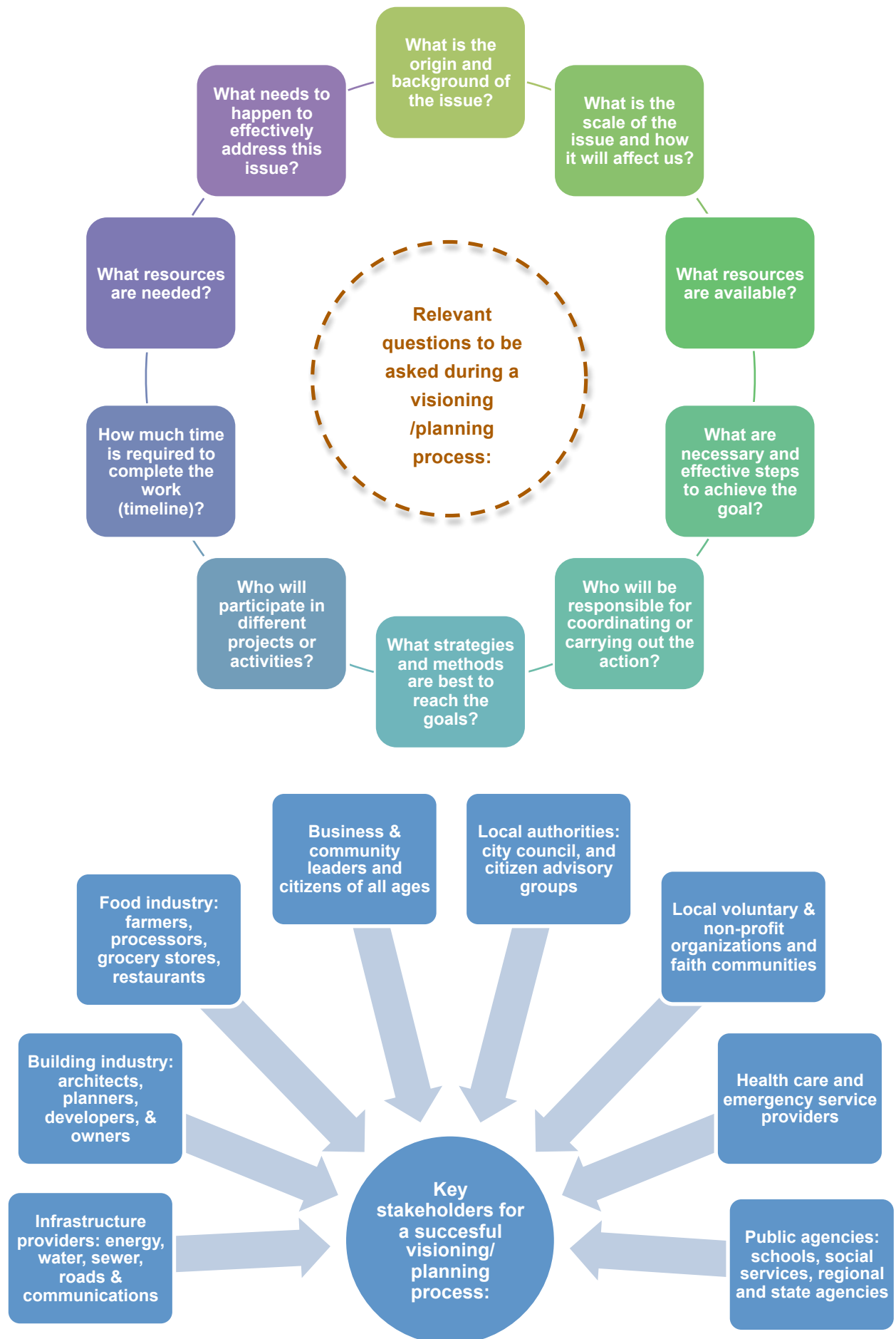
"What is now proved was once only imagined."

-William Blake-

A first step towards a sustainable low-carbon future is simply imagining it. For cities, articulating a long-term vision and an action plan can be a powerful tool and roadmap to guide their transition into a low-carbon energy world. The case studies presented in this report provide examples of methods, processes and practices developed by cities and citizens to drive forward a low-carbon initiative, particularly by using a visioning approach to action planning. They are an example of the potential and value inherent in the act of designing while imagining a positive, productive pathway to a secure low-carbon future whilst addressing energy and climate challenges. The use of energy has brought huge benefits to human populations across the world, but it has also come with significant environmental and socioeconomic impacts. Cities are responsible for around 80% of the world's greenhouse gas emissions – and as such have a major role to play in tackling climate change.

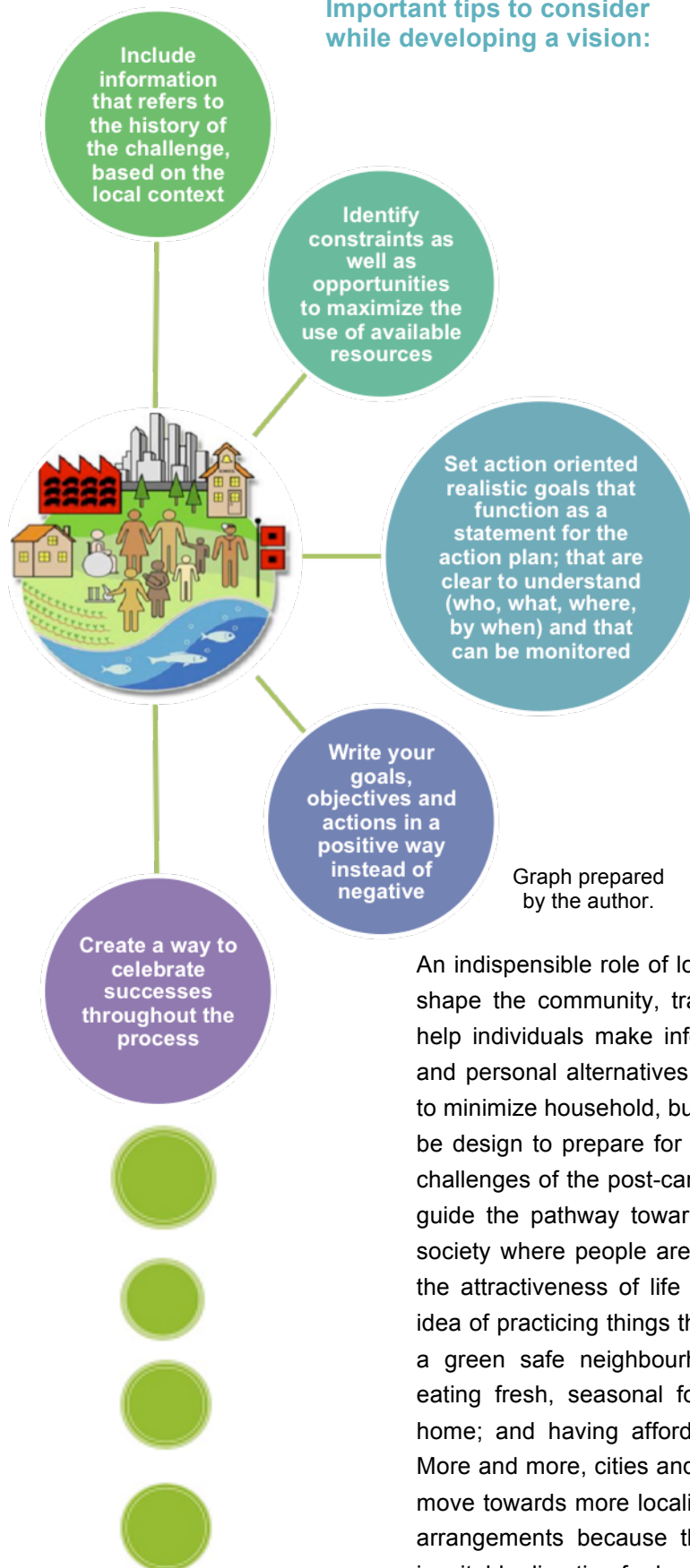
During the 20th century, and still nowadays, the design and construction of cities worldwide has been based on fossil fuel energy. Urban growth and expansion has occurred vastly in the form of car-oriented sparse developments, therefore heavily dependant on fossil fuel. However, this urban development approach was possible only because fossil fuels became cheaper and cheaper over the last 150 years. But today, at the doors of the 21st century, fossil fuel energy is getting more and more expensive as we approach peak oil production. The effects of this type of sprawl development pattern, plus vast CO₂ gas emissions product of the exploitation of fossil fuel resources, have caused severe environmental damages that are as well the cause of global warming and climate change. This emerging energy and climate crisis represents a major challenge for the future of cities and its citizens. Cities, without accessible fossil fuels and facing climate change, will have to follow a different model of development in order to adapt and prepare for the post-carbon era. A key feature of these visionary action plans is that they align sustainable development and climate protection actions to reduce the energy burden and facilitate the transition. In general, the initiatives envisioned by cities and presented in this report involve feasible urban and socio-economic development projects related with energy security; climate change mitigation and adaptation; transport, water, and waste management, food supply and community engagement. Visions statements in Helsinki, Kinsale, Portland and Sutton highlight the importance of promoting actions that ensure a good quality of life for all, and that create pleasant urban and rural environments which enhance health, social equity and economic growth, indispensable attributes to create a sustainable a low-energy society. Creativity and big picture thinking was a common and effective tool used in these cities to find solutions that combine sustainability with prosperity. They have also demonstrated that having a clear, common vision is indispensable because building a low-carbon future requires society-wide cooperation and a continuous coordination of efforts. A vision becomes then a tool or strategy to build in a common language, common objectives and goals, to direct the development of new institutions, new regulations and new habits. There are still many more aspects to discover about the utilization of the relatively new action of visioning in city planning and development, but is evident that it has become a popular and practical method for future planning. As a summary, a city's vision and action plan are road maps for creating community change by specifying what will be done, who will do it and how it will be done. A vision plan describes what a group wants to accomplish, what activities are needed during a specified timeline, what resources (money, people and materials) are needed to be successful and should be constructed using to following elements:

Key questions and stakeholders for a successful visioning/planning process:



Graphs prepared by the author.

Important tips to consider while developing a vision:



Graph prepared by the author.

Having a vision, plus an action plan that supports it, is a key mechanism, particularly for local authorities, that serves as a framework to guide and help generate the political will and public support needed to commence a transition towards a low-carbon future. Certainly, it is not enough to pass energy or climate legislation and to sign long-term international commitments nor to establish domestic targets and timetables. To reduce carbon emissions and address climate change, local governments must strength cooperation, build partnerships and share responsibilities with many stakeholders, whereas citizens are the key piece of the equation. As well, it is necessary that local governments make fundamental shifts in its energy policy and align its research and development resources with climate protection.

An indispensable role of local authorities is as well to influence and shape the community, transportation systems and buildings, and help individuals make informed choices about everyday business and personal alternatives. Essential energy policies and programs to minimize household, business and government emissions should be design to prepare for the coming environmental and economic challenges of the post-carbon era. These collective efforts will help guide the pathway towards a prosperous and secure low-carbon society where people are willing to live, work and grow. Likewise, the attractiveness of life in a low-carbon society comes from the idea of practicing things that most people enjoy, such as walking in a green safe neighbourhood with easy access to all services; eating fresh, seasonal food; enjoying a pleasant, well insulated home; and having affordable, convenient transportation choices. More and more, cities and citizens worldwide are using visioning to move towards more localised energy-efficient and productive living arrangements because they consider it is not a choice, but an inevitable direction for humanity.

OTHER VISIONARY CITIES OF THE WORLD



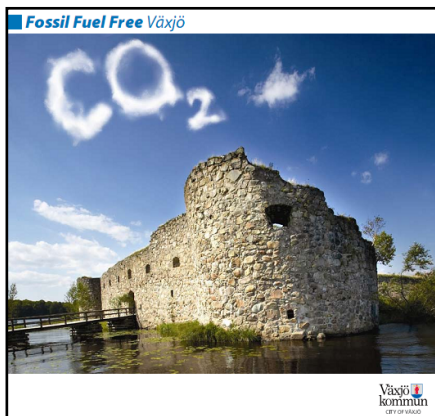
Vancouver's 100 Year Sustainability Vision - This project is a multiphase, stakeholder-driven, design-based initiative aimed at developing a long-term vision in the form of a citywide concept plan. The vision for Vancouver is to be a vibrant, diverse, and highly livable community that provides for the social and economic needs of the community within a carbon neutral environment by the City's 200th Birthday in 2107. The project mega-targets are to achieve zero net greenhouse gas emissions by 2107 and to reduce GHG by 80% below 2007 levels by 2050.

URL: www.cnv.org/server.aspx?c=3&i=541



Barcelona 2159 - To celebrate urban planner Ildefons Cerda's vision of this city 150 years ago, a multidisciplinary team of scientists, anthropologists and designers are collecting messages from individuals that envision what Barcelona will look like in another 150 years. The idea is to gather thousands of messages on the Barcelona2159 website, which will be stored inside a huge mechanical Time Capsule designed to preserve the digital data, and that will be opened up in Barcelona in the year 2159.

URL: www.barcelona2159.org/



Fossil Fuel Free Växjö - In the City of Växjö, Sweden, the emissions of fossil carbon dioxide (CO₂) shall decrease by 70 percent per capita until 2025, compared to 1993, and the long-term vision is a totally fossil fuel free Växjö. The city strives to use energy efficiently from renewable sources and to go over to a fossil fuel free transport system.

URL: www.vaxjo.se/upload/3880/CO2%20engelska%202007.pdf



Sustainable Sydney 2030 Vision - Sydney is in a Green, Global, and Connected City. The vision recognises Sydney's Indigenous heritage and contemporary culture, is leader in new 'green' industries driving economic growth; is reducing its greenhouse gas emissions, with a network of green infrastructure to reduce energy, water and waste demands, led by major renewal sites integrated with vital transport, facilities, infrastructure and open space. Sydney will be Australia's most significant Global City and international gateway of world-class tourism, sustained investment in cultural infrastructure, icons and amenities. The City will commit to partnerships and cooperation between governments, the private sector and the community to lead change and to be diverse and inclusive. URL: www.cityofsydney.nsw.gov.au/2030/

ANNEXES: Glossary & Extended Bibliography

GLOSSARY

ACTION PLAN - Proposals for action. Usually in the form of a list of steps required, who should take them and when

COMMUNITY PLAN - Plan for the future of a community devised by the local community. Sets out proposals for the way in which a community wants to develop and respond to changes in the future. No set format. Will usually contain statements of principle, physical design proposals and targets

COMMUNITY VISIONING - Term used to describe group working processes which help a community to develop imaginative shared visions for the future of a site, area or organisation. Approach often adopted by local authorities at an early stage in the plan-making process. This is a useful process for engaging large numbers of citizens in thinking about and planning their community's future, since it helps create consensus, opens the door to new ideas and strengthens citizen support for action.

CONSENSUS BUILDING - Procedure for helping people with different views to come together interactively on a dispute, project, plan or issue, to work towards agreeing a sensible solution or way forward which is mutually satisfactory.

DISCUSSION GROUPS - Method of social research involving a group of people who are brought together to discuss their views or experiences surrounding a particular topic.

ECOLOGICAL FOOTPRINT - Ecological footprint measures the amount of productive land and water, such as forests, farmland and fishing areas that a person, project or product needs to produce all the resources that they/it consumes and to absorb the waste they/it generates. The biggest element of our footprint comes from food, followed by energy use.

ECO-TOWN - Exemplar *green development* which meets the highest standards of sustainability, including low and zero carbon technologies and quality public transport systems. It will make use of brownfield land and surplus public sector land where practical and lead the way in design, facilities, services and community involvement.

GREEN INFRASTRUCTURE - Uses natural processes, systems or features to provide traditional infrastructure services. There are two primary types of green infrastructure: (i.) natural networks of streams, rivers, and open spaces that naturally manage storm water, provide habitat, improve air and water quality, reduce flooding risk, and provide areas for human recreation and respite; and (ii.) engineered facilities, such as green street treatments or eco-roofs, which use natural processes in an infrastructure setting.

GOVERNANCE - Ways in which political, economic, social and cultural life is co-ordinated at global, national, regional and local levels

LOCAL AUTHORITY - Organisation governing local area. For instance; borough council, county council, town council, village council

LOCAL DEVELOPMENT FRAMEWORK (LDF) - A suite of documents that outlines how planning will be managed in an area. Includes core strategy, supplementary planning documents and a Statement of Community Involvement

MASTERPLAN - Overall planning framework for the future of a settlement. May be highly detailed or schematic. Used to provide a vision and structure to guide development.

MIND MAP - Diagram showing people's perceptions of trends and linkages. Not a geographical map. Used in future search conferences

NON GOVERNMENTAL ORGANISATION (NGO) - Voluntary and non-profit-distributing organisation. The difference between an NGO and a CBO (*community-based organisation*) is that an NGO is normally organised and funded from outside the local community in which it operates

OPEN SPACE WORKSHOP - Workshop process for generating commitment to action in communities or organisations. Features include starting without an agenda

PARTICIPATORY APPROACH – a method utilize to gain an understanding of a community, or certain aspects of a community, based on the participation of that community and a range of visual techniques. Allows people to share and record aspects of their own situation, conditions of life, knowledge, perceptions, aspirations, preferences and develop plans for action. Not restricted to planning issues. Many terms used to imply similar concept including participatory learning and action.

PARTNERSHIP - Agreement between two or more individuals or organisations to work together to achieve common aims.

PEAK OIL - term that refers to the maximum rate of the production of oil in any area under consideration, recognising that it is a finite natural resource, subject to depletion

PERMACULTURE - Approach to designing sustainable environments based on ecological principles of co-operation with nature

PUBLIC MEETING - Advertised, open access event at which issues are presented and commented on and at which decisions may be made. Term normally used to refer to fairly formal events with the audience sitting in rows

facing a speaker or panel of speakers with a chairperson who controls the proceedings

SOCIAL ENTERPRISE - Initiative that uses a commercial approach to fund social or community-based activities

STAKEHOLDER - Person or organisation with an interest because they will be affected or may have some influence.

STEERING GROUP - Informal group set up to pursue a project or goal

SUSTAINABLE DEVELOPMENT - Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Report definition).

THINK TANK - Brainstorming group. Increasingly used by governments and city authorities. Often for *experts* only. May use a *community planning event* format. Sometimes called an *expert panel* or *symposium*.

TRANSITION TOWNS INITIATIVE - Project or initiative aimed at making the transition necessary for communities to be able to reduce climate change by reducing carbon emissions and counter the effects of the end of cheap oil.

ZERO-CARBON HOME - Energy-efficient dwelling where the net carbon emissions from all energy uses over a year are zero. This includes energy use from cooking, washing and electronic entertainment appliances as well as space heating, cooling, ventilation, lighting and hot water.

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