



Malmö

- the Green Digital City

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Background

Policy documents

- The City of Malmö is a member of **Eurocities**, an organisation that promotes networking and cooperation between major European cities
- Eurocities have launched ***the Green Digital Charter***, an initiative that the City of Malmö have signed
- **The City of Malmö's environmental program 2009-2020**
Overall environmental objectives for the City of Malmö:
 - Malmö is Sweden's most climate smart city
 - The urban environment of the future is in Malmö
 - Natural resources are managed sustainably in Malmö
 - In Malmö it is easy to do right

Green Digital Charter

By signing **the Green Digital Charter**, the City of Malmö agreed to:

- By the end of 2011, create an intercity partnership on Information and Communications Technologies (ICT) and energy efficiency
- Before 2015, deploy five large-scale ICT pilots that address ICT's environmental impact
- Decrease ICT's direct carbon footprint by 30 % by 2020

The City of Malmö's environmental program 2009-2020

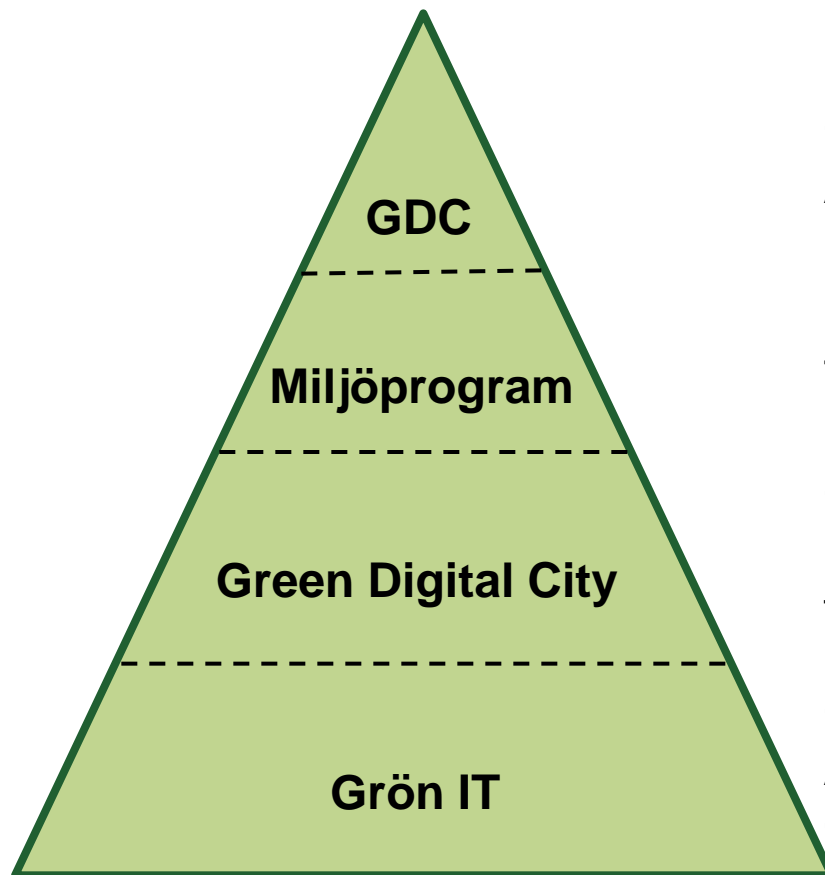
- areas addressing Green IT

- More efficient use of energy
- More renewable energy
- Reduced emissions
- Conversion of transport and travel habits
- Sustainable procurement
- Reduced use of hazardous substances
- Recycling
- Malmö – a city of knowledge and innovation
- Sustainable consumption and lifestyle
- Sustainable urban development

Malmö – the Green Digital City

- The City of Malmö's focus on Green IT is being embodied in a program called Malmö - the Green Digital City
- The overall aim with this program is to reduce the City of Malmö's IT attributable carbon dioxide emissions by 30% by 2020 and to live up to the city's commitments in The Green Digital Charter

Concepts and contexts



Green Digital Charter (GDC)

A commitment through Eurocities

Environmental program (2009-2020)

The City of Malmö's environmental goals

Green Digital City

Program embodying the City of Malmö's focus on Green IT

Green IT

Activity and operational concept in the City of Malmö

What is Green IT?

IT – a burden on the environment?

- IT has an environmental impact through manufacturing, electricity consumption and electronic waste
- Currently Information and Communications Technologies (ICT) account for about 3 % of global emissions
- This is the equivalent of the total emissions from global aviation
- The City of Malmö's goal is to reduce its IT attributable carbon dioxide emissions by 30% by 2020

Greener IT



- Focus on reduced consumption of energy, transports, material and waste
- Strengthening the municipality's environmental, climate and fair-trade initiatives through IT solutions
- The City of Malmö's internal IT support is managed with minimum environmental impact
- Increased environmental requirements in the purchasing process concerning ICT objects, more focus on social concerns (fair-trade) and eco-friendly recycling

IT used as an environmental technology



- Making ICT work for the environment by creating IT-solutions that will increase energy efficiency within areas such as property development and urban traffic systems as well as developing a more efficient distribution of electricity through IT-solutions.
- Actively using and developing IT as an environmental technology for sustainable development within the municipality's departments and within the Öresund region.

Green digital communication



- Using IT-solutions to visualize environmental impact, ratio and trends to encourage environmentally friendly behaviour in society.
- Communicating the City of Malmö's environmental commitment and its benefits for the environment through a multiplicity of innovative and creative IT solutions.

Malmö –the Green Digital City

Vision and goals

Vision – Green Digital City

By 2020, the City of Malmö will be a global role model in using IT as a communicative, sustainable and innovative means for climate-smart urban development in accordance to the City of Malmö's environmental program 2009-2020.



Goal – Green Digital City

Minimized environmental and climate impact of IT, while IT will maximize the creation of digital innovation for sustainable urban development in Malmö.



Malmö –the Green Digital City

Focus areas

1. Green IT collaboration in the City of Malmö

- **Focus:** Management, governance, reporting and communication concerning Green IT
- **Goal:** Decrease the City of Malmö's consumption of energy, material, fossil transports and electronic waste
- **Activity:** Introduce a model for collaboration concerning Green IT within the municipality departments in the City of Malmö



2. Urban development using Green IT in the borough of Hyllie

- **Focus:** Urban development using smart IT-solutions within areas such as property, transport and energy systems
- **Goal:** Influence and encourage eco-friendly behaviour as well as developing solutions that will decrease the need for and use of energy and transports in the borough
- **Activity:** The first step is to start a feasibility study to explore how IT can be used as an environmental technology in the urban development in the borough of Hyllie



IT as an environmental technology

- Information about your energy consumption or closest route via public transport through an app in your cell phone.
- Via an IT-system connected to the solar panels on your roof you can sell excess energy to your neighbour.
- IT-based energy-solutions that gives advise and controls your heating system, lights, electrical devices etc.



3. e-documents & print-outs

- **Focus:** A more efficient document management system through increased digitalisation (e-documents) and fewer print-outs
- **Goal:** Reduced electricity consumption, reduction in material and waste
- **Activity:** Pilot projects in the boroughs of Hyllie and Fosie as well as City hall. Focus on behaviour, communal printing service and eco-friendly document storage in IT-systems



Eco-friendly printing service

By using energy efficient printers and a communal office printing environment a potential saving of 100 000 KWh per year can be reached in the City of Malmö. That would mean reduced carbon dioxide emissions by 10 tons per year, the equivalent of almost two laps around the world by car.



Additional environmental benefits:

- Reduced paper and toner consumption
- Reduced amount of transports for service, maintenance, stockpile management and disposal
- Reduced consumption of machines and electronic waste

Energy efficiency

An energy saving of 100 000 KWh equals reduced carbon dioxide emissions by 10 tons per year

This is equivalent to the emissions of:

- 10 households electricity consumption for a year (10 000 kWh)
- 270 laptops that are switched-on all day, all year around (40W)
- 15 coffee machines switched-on all day, all year around (900W)
- 65 Xbox used all day, all year around (180W)
- 1 electric sauna heater used 40 hours p/w for a year (5000 W)

(källa: www.vattenfall.se)

4. Climate neutral data centre

- **Focus:** Energy efficiency in data centres and IT-systems
- **Goal:** Zero vision regarding emissions, reduced electricity consumption, reduction of material and electronic waste
- **Activity:** The first step is to start a feasibility study that conducts an energy and climate analysis regarding the data centres and its IT-systems as well as produces a plan of action based on the analysis



Example – Telia’s green data centre

- 4 500 square metres big data centre, filled with data servers and other networking equipment
- After two years hard work with an eco-friendly focus the energy consumption in the data centre had reduced by 20 – 30 % and the electricity costs had reduced by 25 million SEK per year



5. Green properties with green IT

- **Focus:** Develop green properties with smart IT-solutions in collaboration with MKB and the Department of Service
- **Goal:** Use IT as an environmental technology in properties thus reducing the energy consumption as well as the consumption of material
- **Activity:** The first step is to start a feasibility study that explores how IT as an environmental technology can be used in property developments such as Greenhouse Augustenborg



Example – Adobe uses environmental technology

Through a combination of environmental technology and IT-solutions, Adobe's head-office in the USA has reduced its consumption:

- Water in-doors 38 %
- Water out-doors 76 %
- Electricity 39 %
- Natural gas 37 %
- Waste 63 %

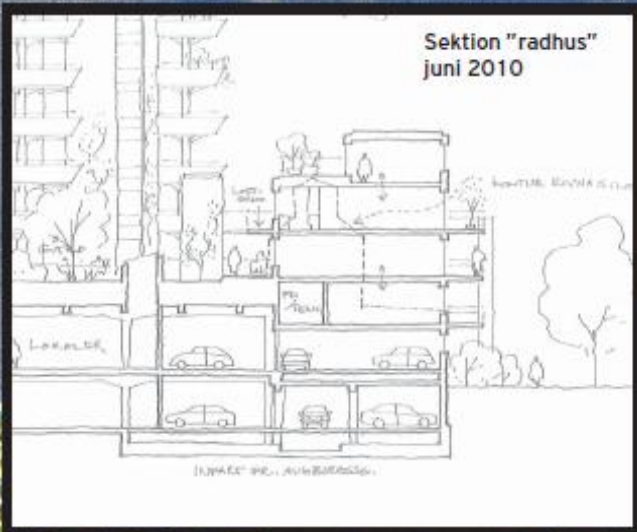




Balkongstudie mars 2010



GREENHOUSE AUGUSTENBORG



More information

Leaflet on Green Digital City

- Summary of the City of Malmö's focus on Green IT
- Published on malmo.se



Would you like to find out more?

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