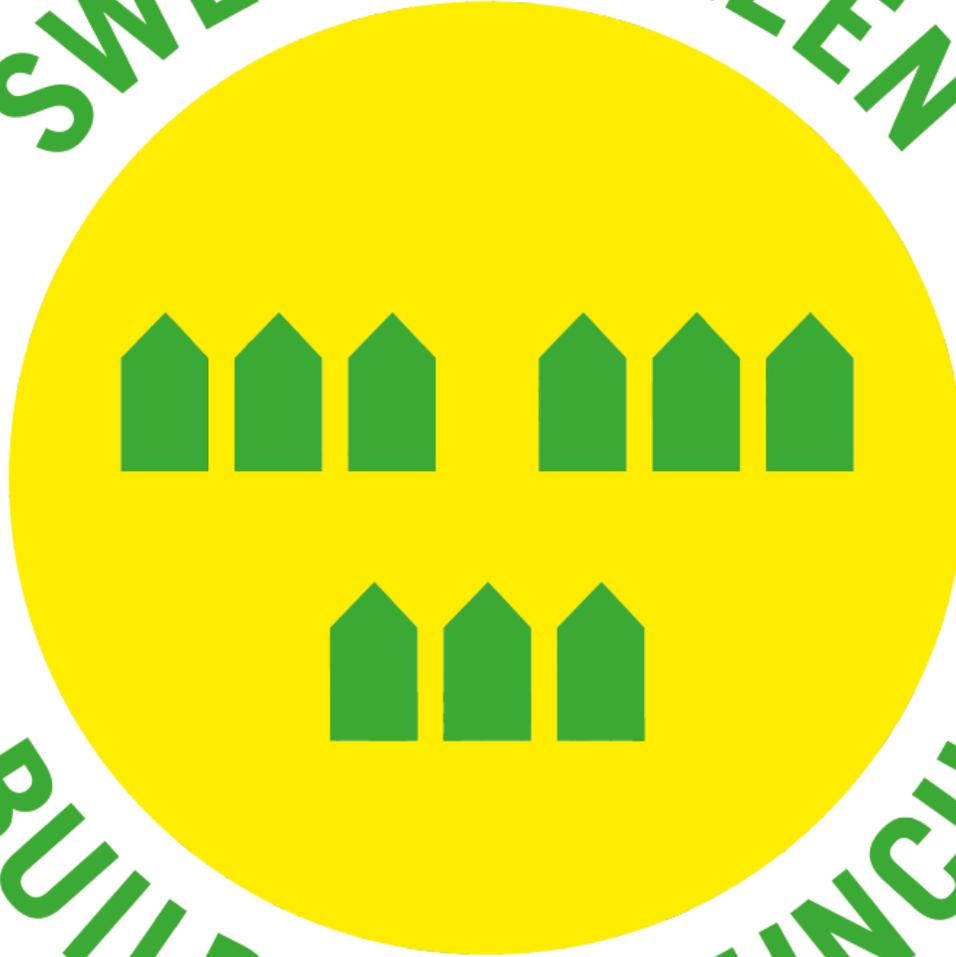
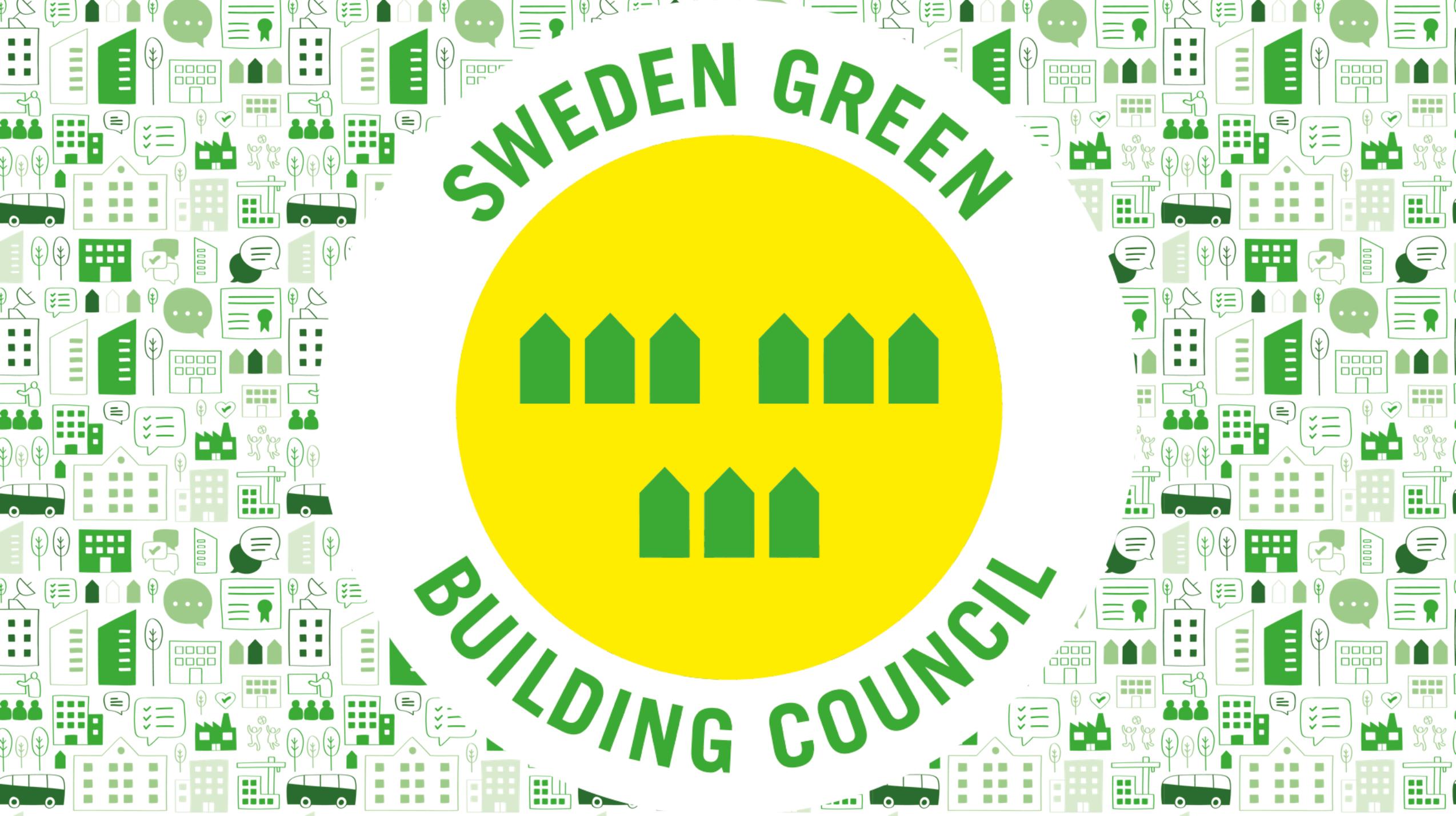


SWEDEN GREEN



BUILDING COUNCIL





**Johan Augustsson**  
Property Director  
Lidl Sweden

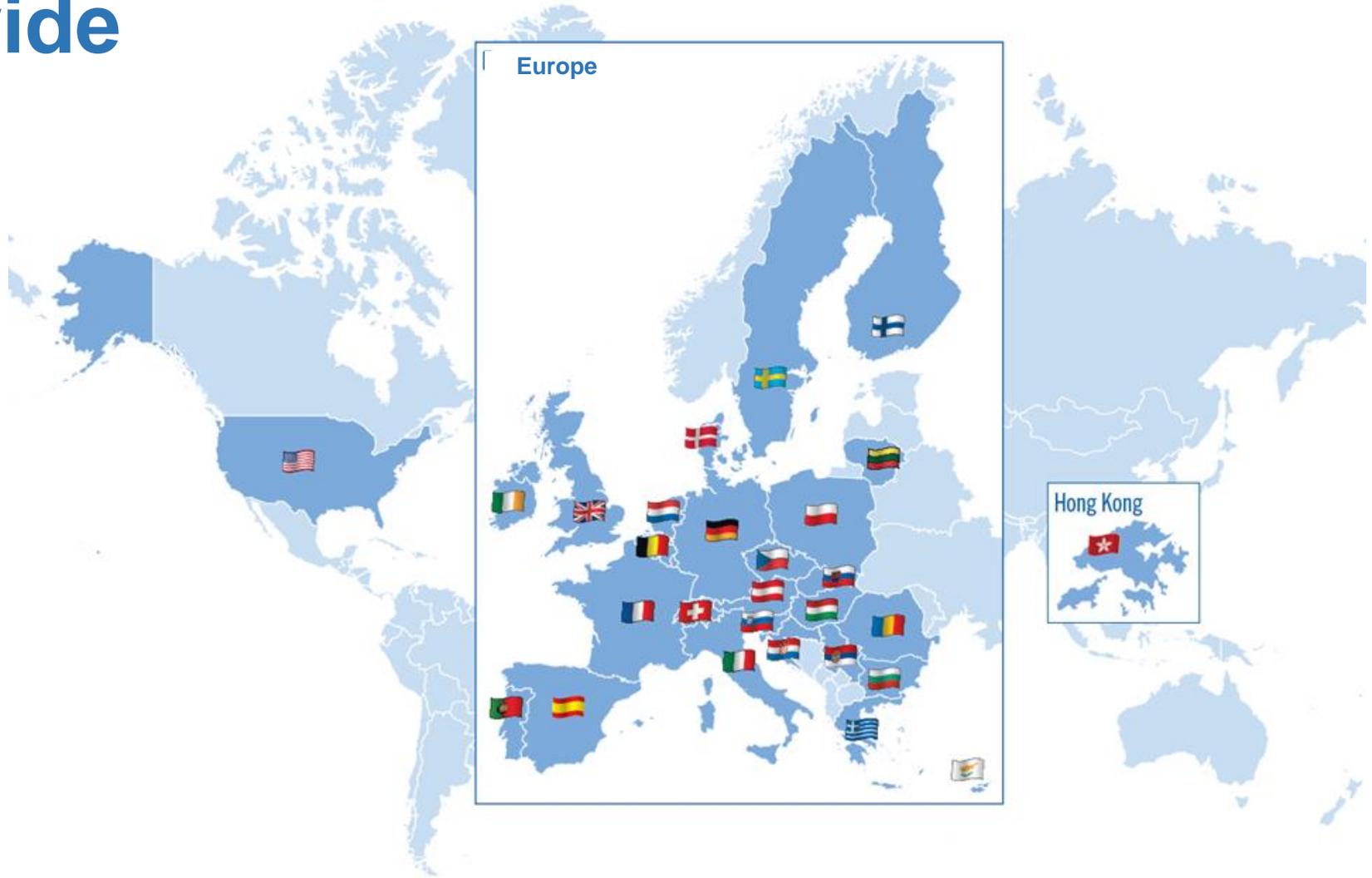


AWARDS 2017  
WINNER



# Lidl Worldwide

- No 5 worldwide
- No 1 in Europe
- 260 000 employees
- 29 countries
- 10 000 stores



AWARDS 2017  
WINNER



# Why ?



AWARDS 2017  
WINNER



# Sustainable solutions – Our concept



**LIDL**

ÖPPET: VARDAGAR 8-20  
LÖRDAGAR 8-19  
SÖNDAGAR 9-19

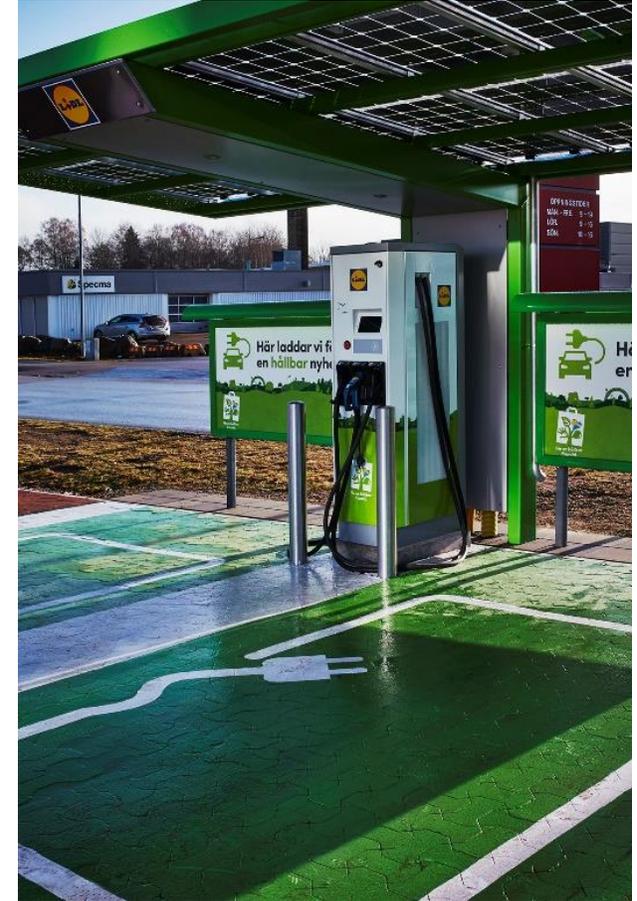
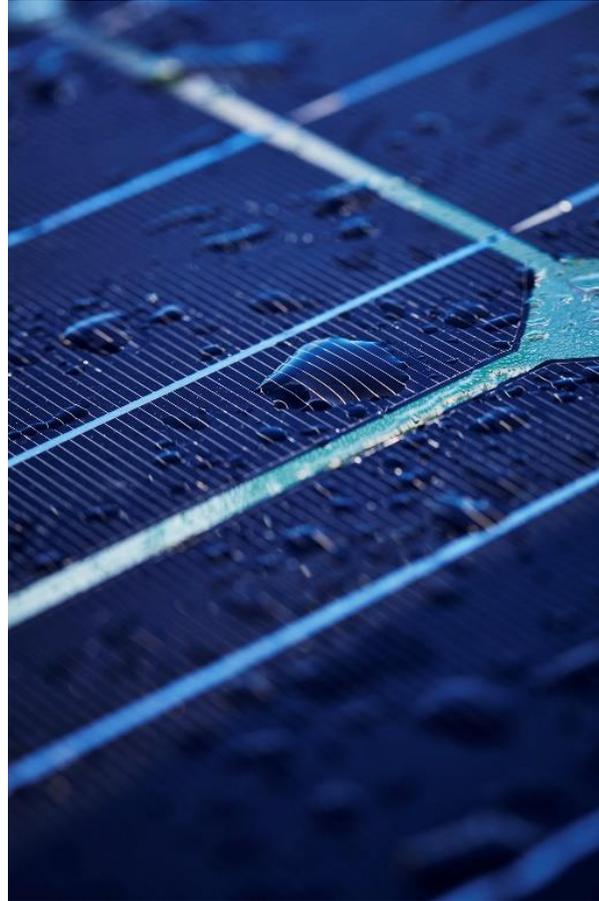
*Därför!*

Vi gör det bäst  
med 3 ggr så mycket  
i denna butik!

DET BEHÖVER INTE KOSTA MER

# Sustainable features: Energy

- 67 % energy reduction
- 564 m<sup>2</sup> photovoltaic cells
- Car and bike charging stations



AWARDS 2017  
WINNER



# Sustainable features: Health & Wellbeing

- Thermal comfort and indoor air quality
- Acoustic performance
- We encourage bicycling through different features



AWARDS 2017  
WINNER



# Sustainable features: Land use & Ecology

- Enhance site ecology
- Protect existing ecological features
- Green roof, meadows and eco-zones

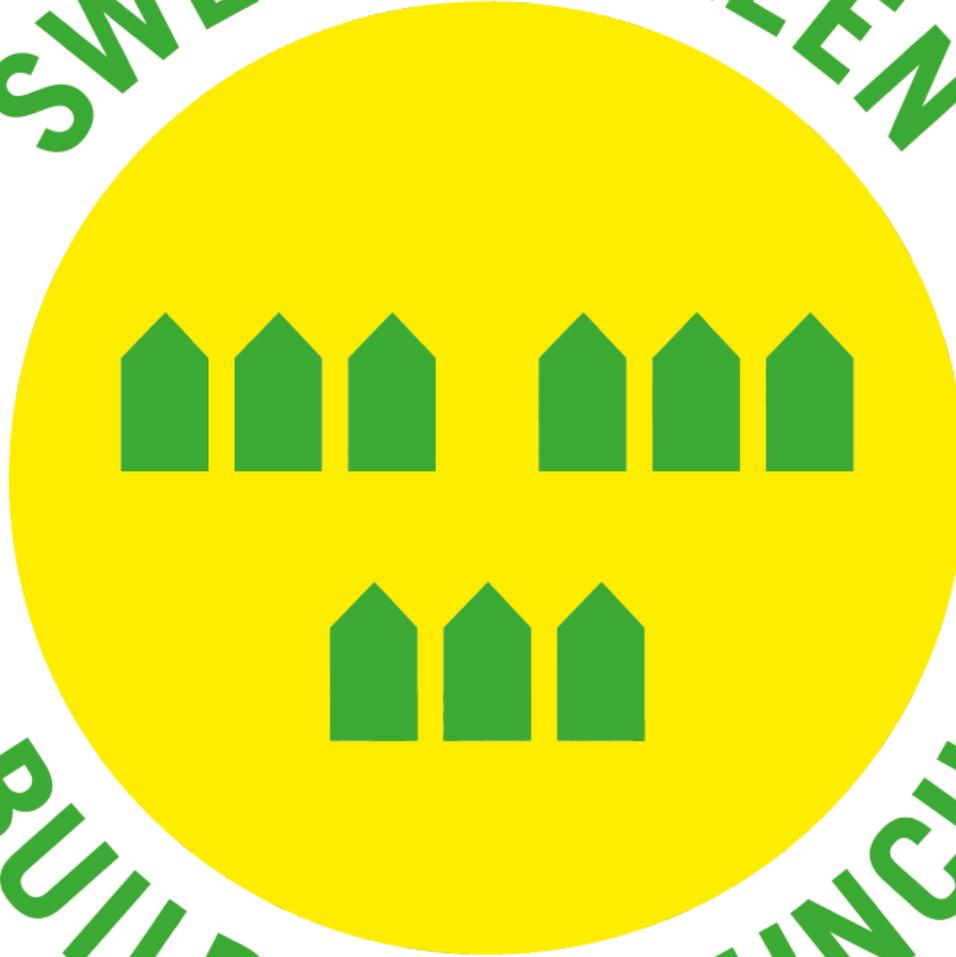




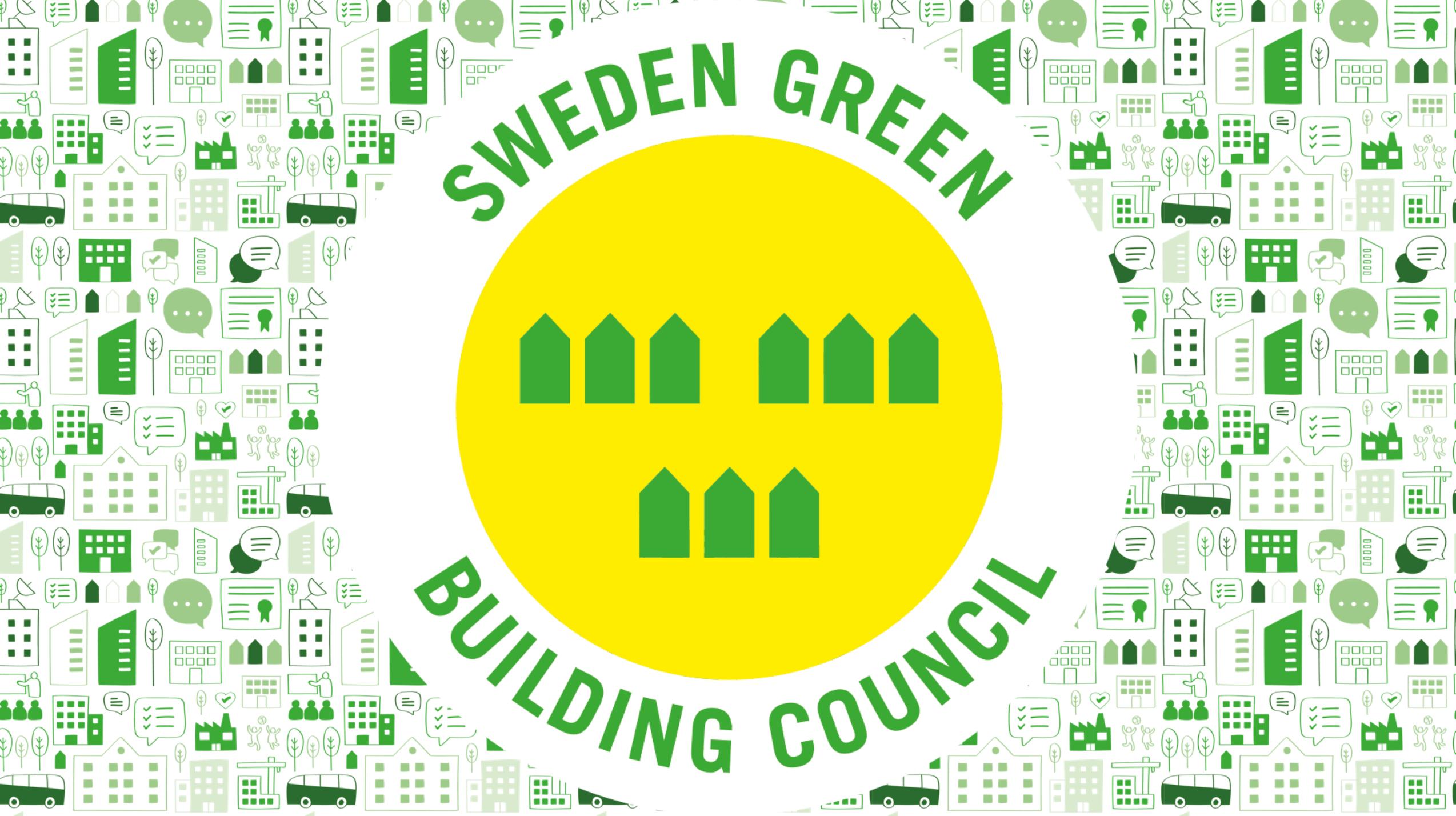
AWARDS 2017  
WINNER



SWEDEN GREEN



BUILDING COUNCIL



Jenny Holmquist, Environmental Strategist

# GREENHOUSE AUGUSTENBORG





# MKB Fastighets AB

*Home for each and everyone*

Founded 1946

Fully owned by the City of Malmö

22 500 rental apartments

750 new apartments 2017

Strong focus on affordable and sustainable housing





## Greenhouse Augustenborg

Innovative project on sustainable lifestyle in cities

Unique cultivation apartments in a sustainable building

Ecotown Augustenborg

Architect: Jaenecke

Built by NCC



Amazing opportunities for cultivation



Making sustainable life style easy and attractive



A sustainable climate smart building already creating new solutions for all 22 500 apartments



GULD 2016

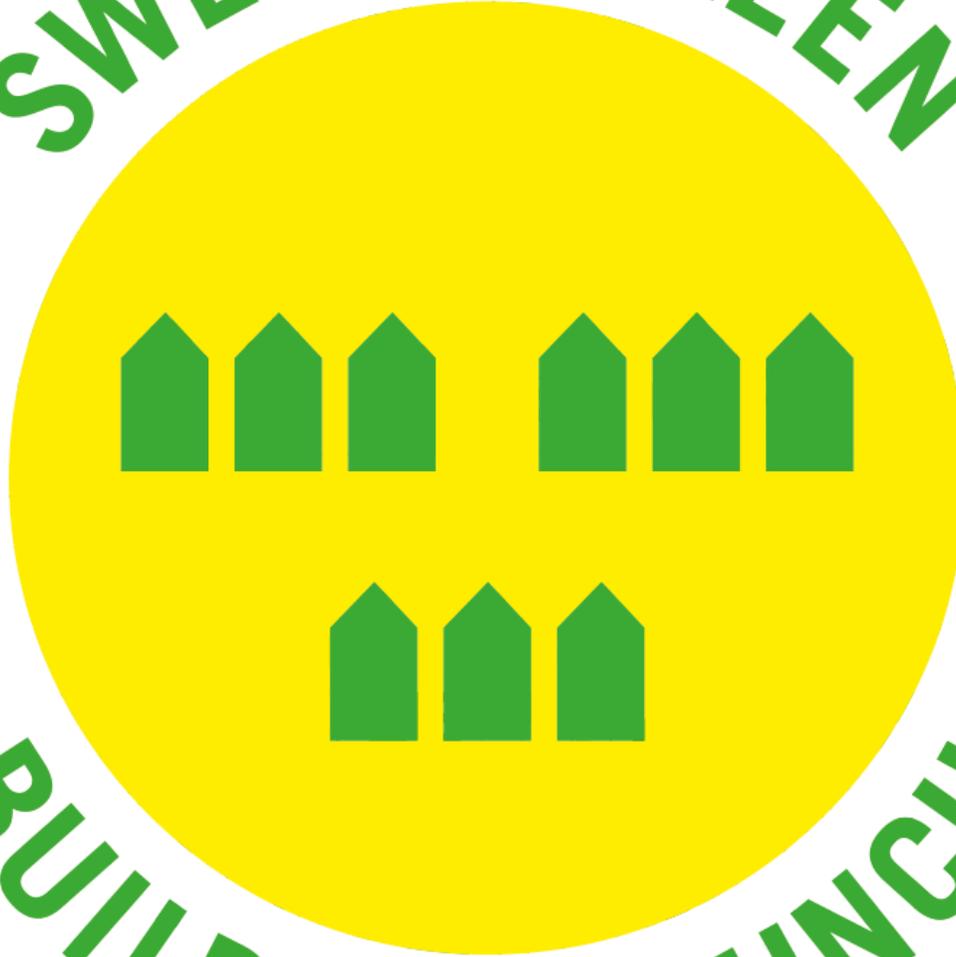




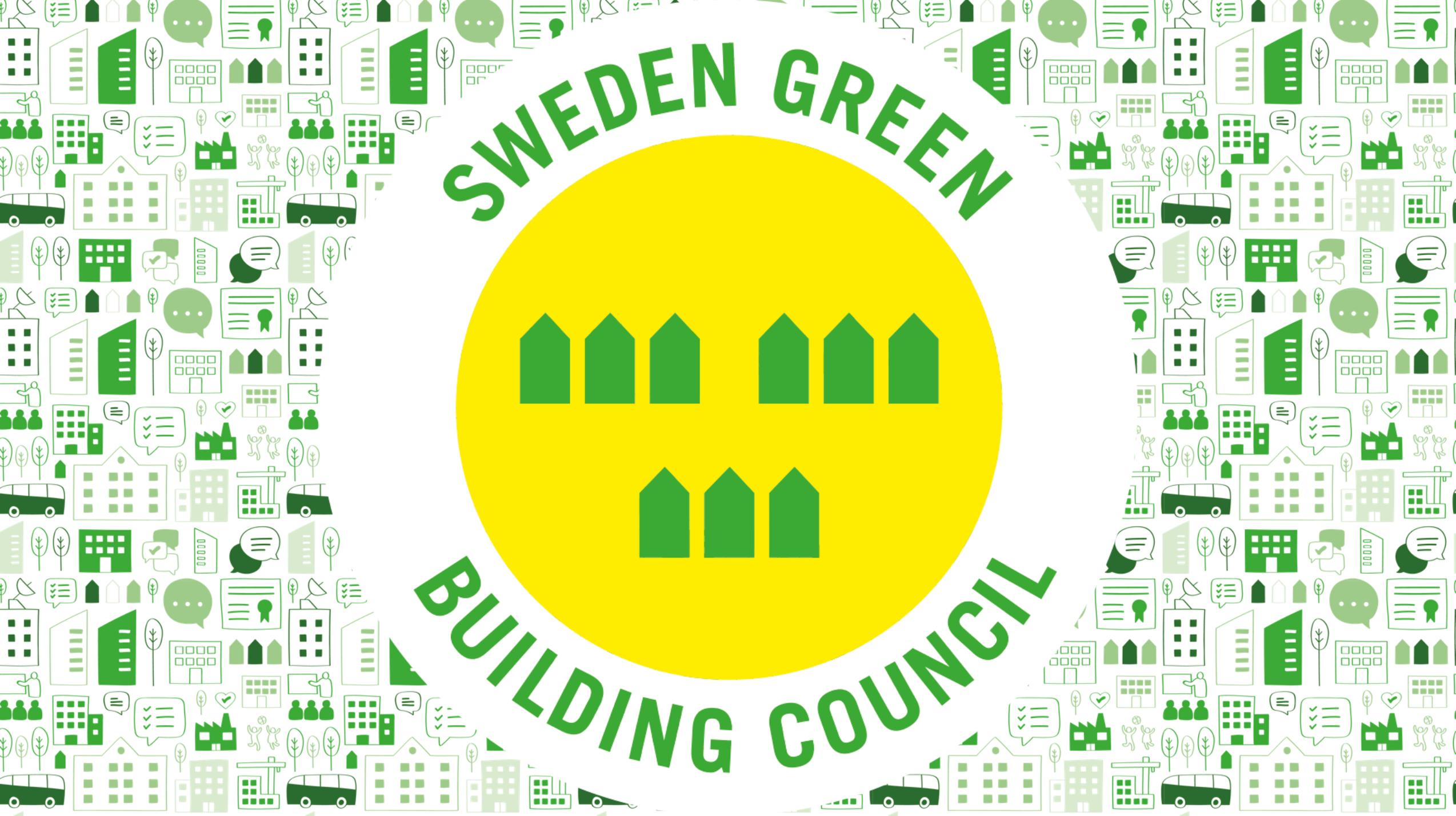
A project and process creating new ways to social sustainability



SWEDEN GREEN



BUILDING COUNCIL



## Sollén

– Sweden's first net zero energy neighborhood

Björn Berggren, Skanska Sweden, [bjorn.berggren@Skanska.se](mailto:bjorn.berggren@Skanska.se)



Green?

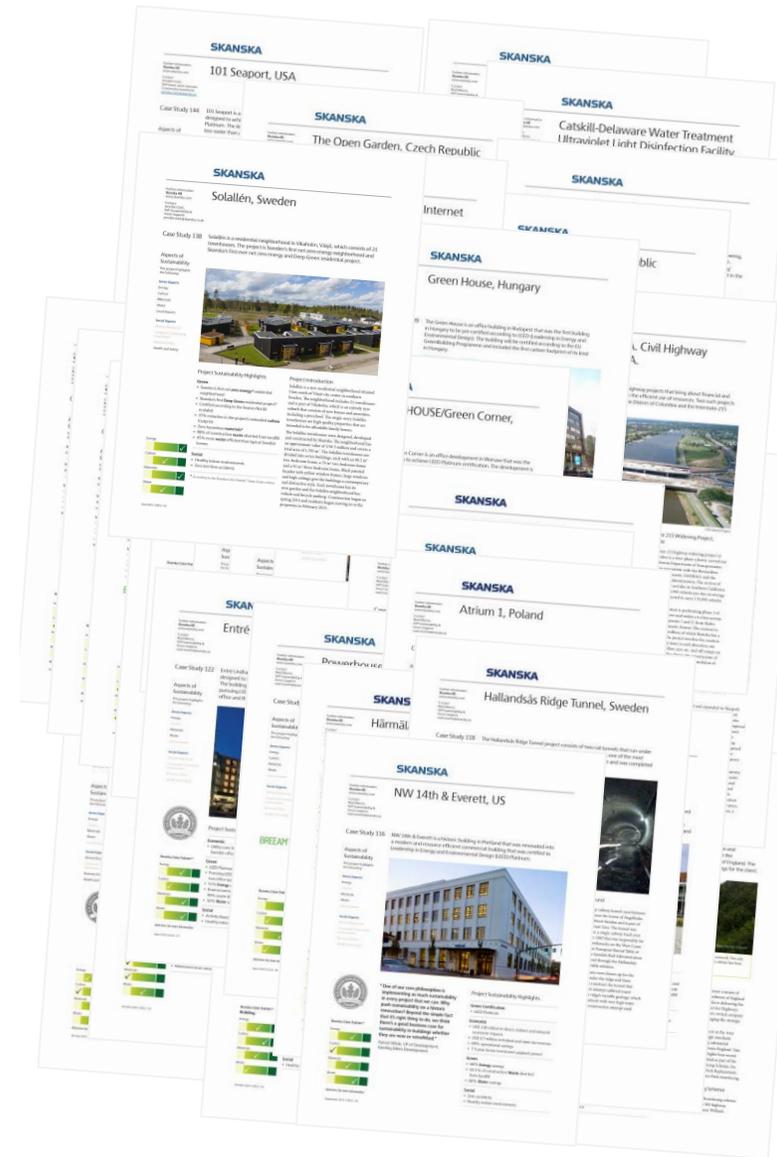
We want to be  
Deep Green

# What's Deep Green?

- Future proof
  - Net zero primary energy
  - Near zero carbon in construction
  - Zero unsustainable materials
  - Zero hazardous materials
  - Zero waste
  - Net zero water

# Skanska Color Palette™ helps us

## Skanska Color Palette™ Building



# Sollallén



## Sollallén, Sweden

Further information  
 Skanska AB  
 www.skanska.com  
 Contact  
 Jennifer Clark,  
 SVP Sustainability &  
 Green Support  
 jennifer.clark@skanska.co.uk

**Case Study 138** Sollallén is a residential neighborhood in Vikaholm, Växjö, which consists of 21 townhouses. The project is Sweden's first net zero energy neighborhood and Skanska's first ever net zero energy and Deep Green residential project.

### Aspects of Sustainability

This project highlights the following:

#### Green Aspects

- Energy
- Carbon
- Materials
- Water
- Local Impacts

#### Social Aspects

- Human Resources
- Corporate Community Investment
- Business Ethics
- Health and Safety



### Project Sustainability Highlights

#### Green

- Sweden's first net zero energy\* residential neighborhood
- Skanska's first Deep Green residential project\*
- Certified according to the Swanen Nordic ecolabel
- 37% reduction in the project's embodied carbon footprint
- Zero hazardous materials\*
- 98% of construction waste diverted from landfill
- 45% more water efficient than typical Swedish homes

#### Social

- Healthy indoor environments
- Zero lost time accidents

\* According to the Skanska Color Palette\*\* Deep Green criteria



June 2015 | BRC5 - V1



orked to minimize environmental there were no Lost Time Accidents ng construction. Close project partner was promoted to identify the necessary meet the challenging project objectives, ect benefitted the local economy by workers and materials from the Växjö

### Aspects

#### Efficiency

townhouses are net zero primary ings that generate more energy se over the course of a year. Skanska d the townhouses to have minimal (rements, before incorporating onle energy generation into the design energy load of the properties. The nually use 30 kWh/m<sup>2</sup>, which is around ss than the Swedish energy code.

design phase, the team conducted lations to identify the most optimal r example for the insulation, and the nsions and positioning. This resulted ulated envelope with U-values of 0.09 7 W/m<sup>2</sup>·K, 0.9 W/m<sup>2</sup>·K and 0.11 W/ walls, roofs, windows and foundations The air tightness of the townhouses aured to be 0.14 l/s (mean average), th the already ambitious project 0.20 l/s.



he team reduced the project's total embodied rbon footprint by using foundation materials more ficiently and minimizing construction equipment me on site. Other carbon savings were realized by rcing local timber for the structural frames and adies.

### Materials

ero hazardous materials and unsustainable aterials he project met Skanska's Zero Hazardous aterials criteria, which involved not using abstances in Skanska's Restricted Substance List at are considered hazardous to humans or the nvironment. In addition, many of the materials sed were approved by the sometimes more rgingent Swanen Nordic ecolabel criteria, including il paint, wood flooring and windows, and all emicals fulfilled the Swedish BASTA criteria. he team worked closely with suppliers to assess ery material used on the project and alternative aterials were found when necessary. This resulted y only low-emitting products being used on the roject, and avoided the use of phase-out substances cording to Kemi - the Swedish Chemicals Agency. he approach also enabled the team to achieve skanska's zero unsustainable materials criteria.

Waste management during construction he team diverted 98 percent of construction waste om landfill. One significant waste management easure involved not using a commingled waste action, which meant that all waste was carefully orted on site into the correct fraction. The team so held training sessions with all project partners at covered the project's aspirations to send zero aste to landfill.

Waste management during operation ach townhouse is equipped with its own domestic aste sorting system under the kitchen sink with x fractions to encourage residents to sort their aste. The neighborhood also has a common ntral waste sorting building.



ocial cooperation with LÄGAN on the len project also involved testing three strict protocols, covering energy, moisture and air ness, which were used together for the first LÄGAN will use the results from the project aluate how this approach can be developed mproved in the future.

### Operational health and safety

ere no Lost Time Accidents on site during ruction. Skanska followed its standard safety ice, which constantly strives to improve safety edures and achieve zero accidents.

portable and healthy living environments ownhouses are supplied with fresh air lation and have 2.5 to 3.5 m high ceilings to re a good indoor air quality. No potentially r hazardous substances to human health een used on the project, which also promotes indoor air quality. Comfort is also enhanced e geothermal cooling system as cooling is mmon in homes in Sweden, but it can be ficial in well insulated homes that are prone to er summer temperatures.

e windows allow natural light to penetrate buildings and provide a close connection with rrounding outdoor environments. All the houses have pleasant gardens with secluded oor terraces to the rear of the properties. The undling area includes lakes, with beaches and mooring places, forests and attractive natural scapes.

### Affordable homes

Sollallén townhouses are designed to promote a useful lifespan by meeting the needs of current future residents. The open planned and well-gned homes allow various layouts according to ent requirements. The townhouses also have le storage in the hallways and bedrooms. Initial rs had the option of fitting out a closet as an tional bathroom.

### Contributing toward sustainable urban development

llén is situated in Vikaholm, which is a new rb planned by the municipality with its own hool and other amenities. Vikaholm is within le commuting distance to central Växjö. holm bus station is close to Sollallén and is sed by regular bus services to Växjö.

### Learning From Good Practice

is good for Växjö municipality, which self on its green profile, good for ners who make significant financial savings y healthy indoor environments, and good for Skanska, which is now well positioned on its experience at Sollallén and develop h quality zero energy homes in Sweden e.

# Sollallén

>100 % Solar energy – Net Zero primary energy

37 % Reduction of embodied carbon

2 % Construction waste

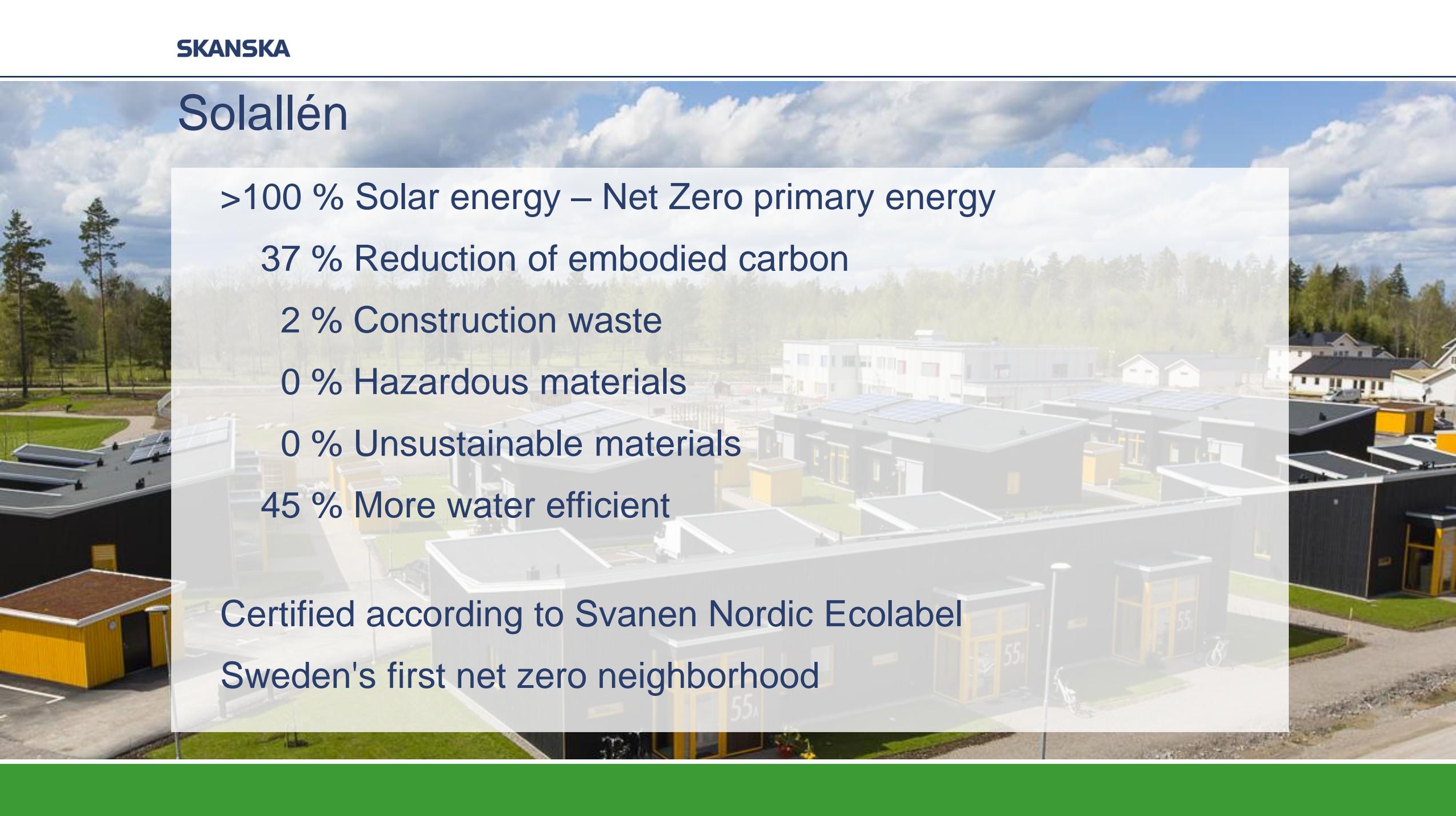
0 % Hazardous materials

0 % Unsustainable materials

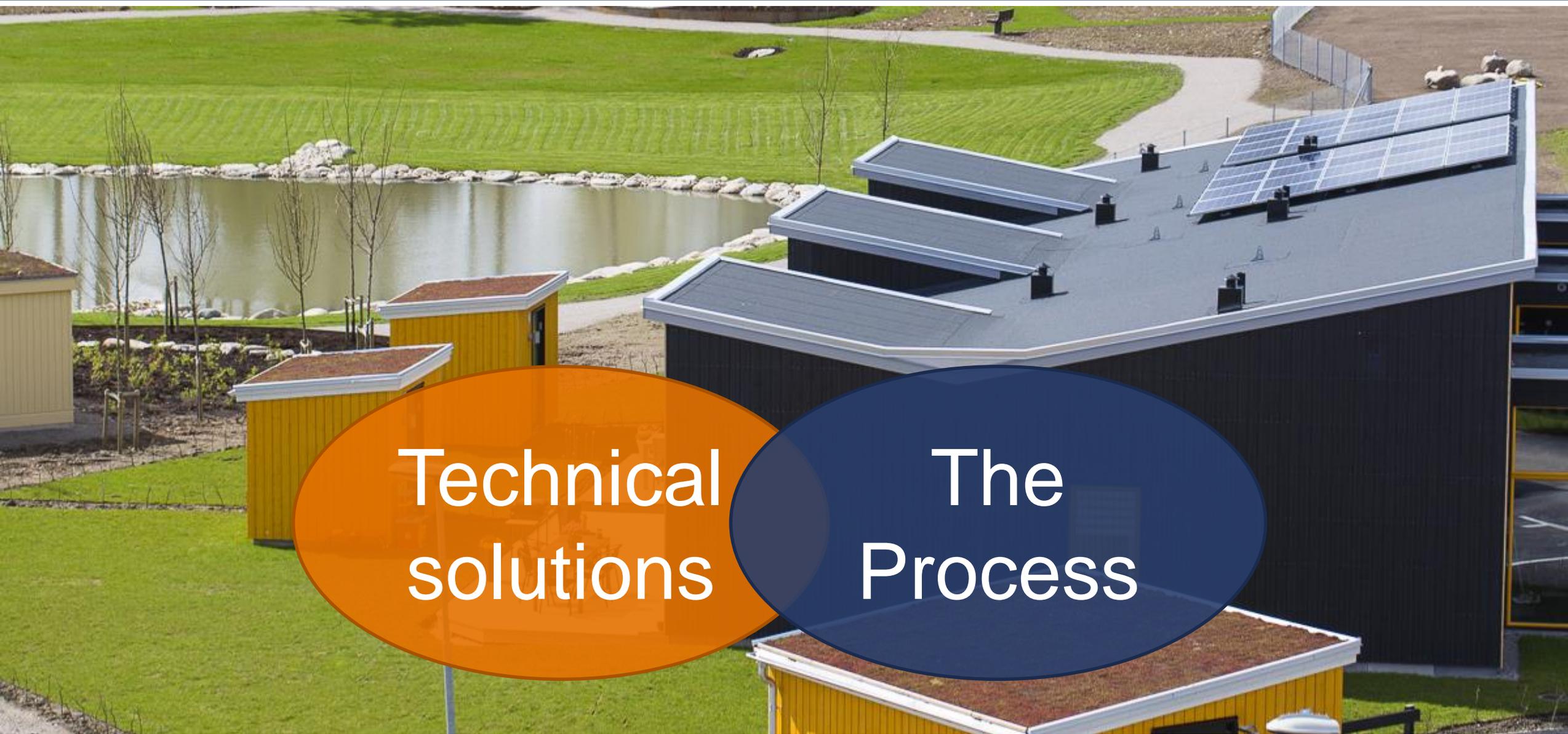
45 % More water efficient

Certified according to Svanen Nordic Ecolabel

Sweden's first net zero neighborhood



How do we do it?

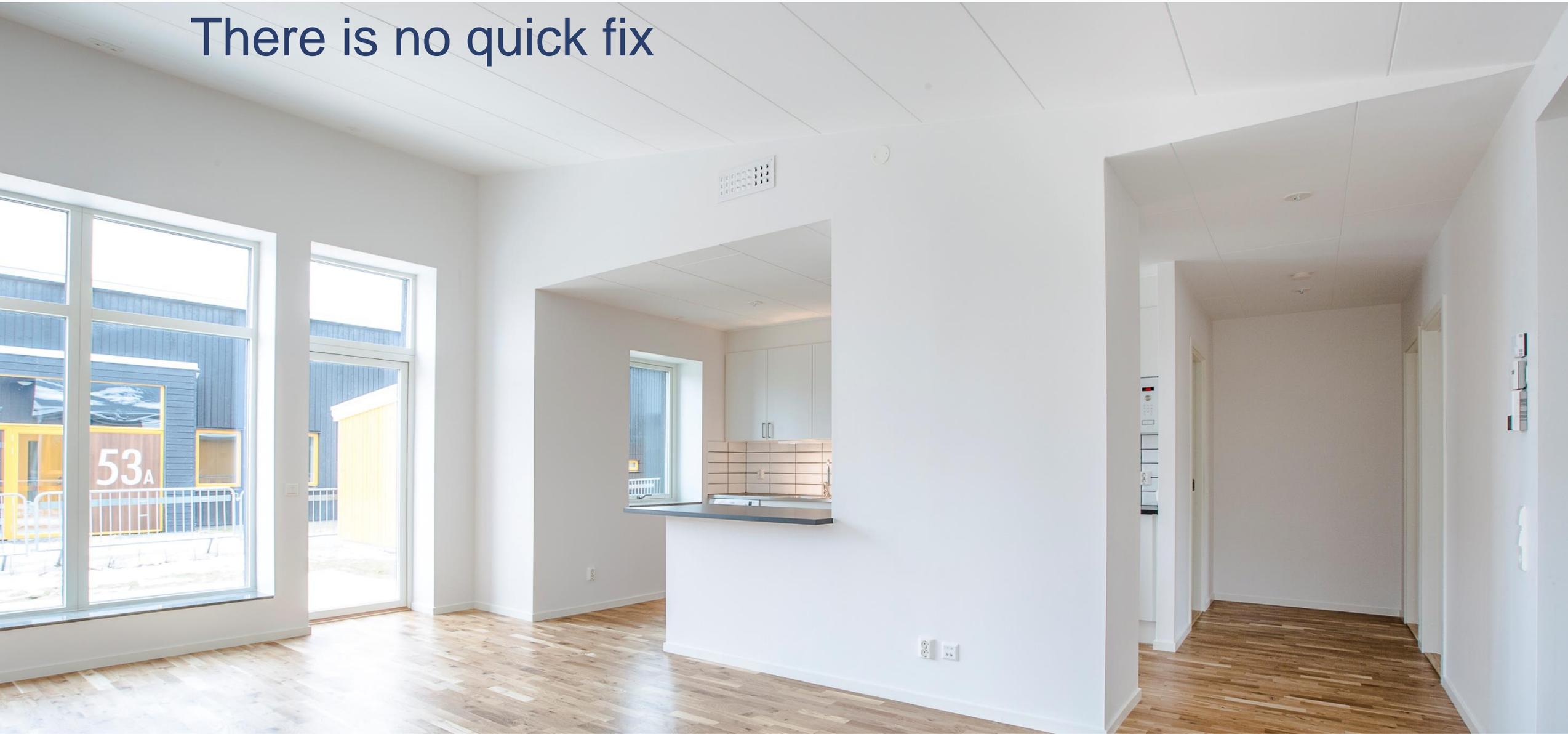


Technical solutions

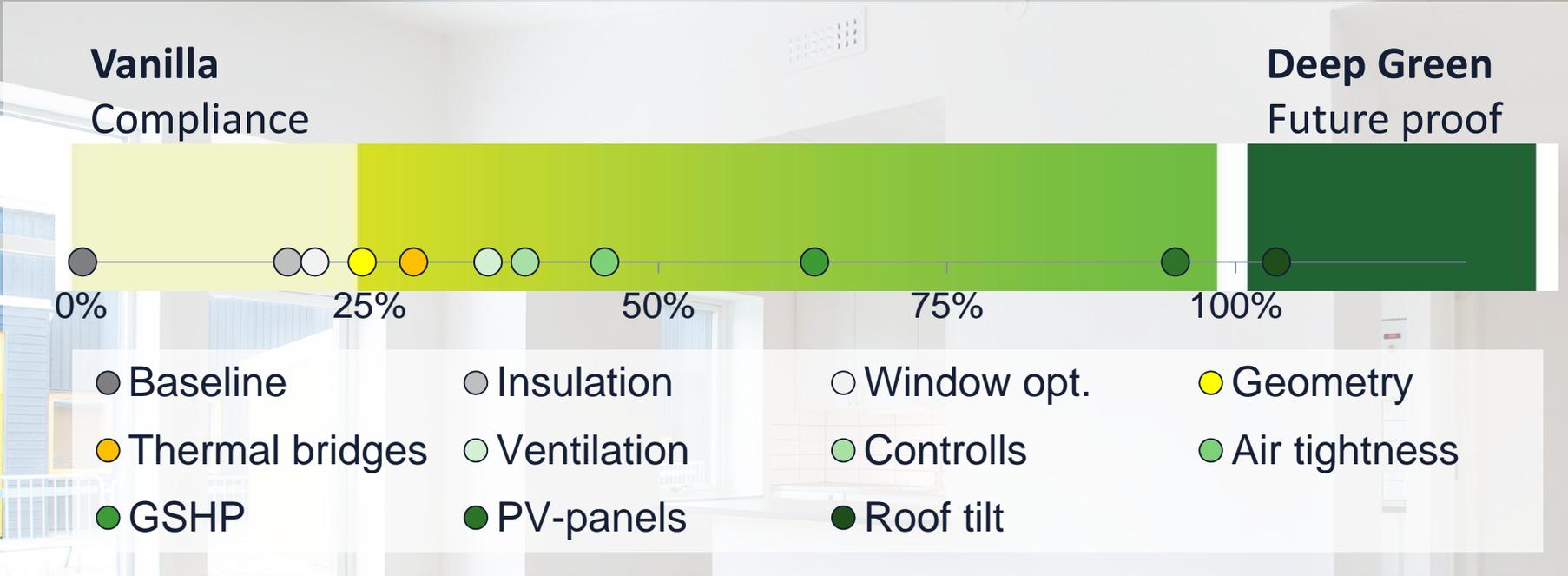
The Process



There is no quick fix



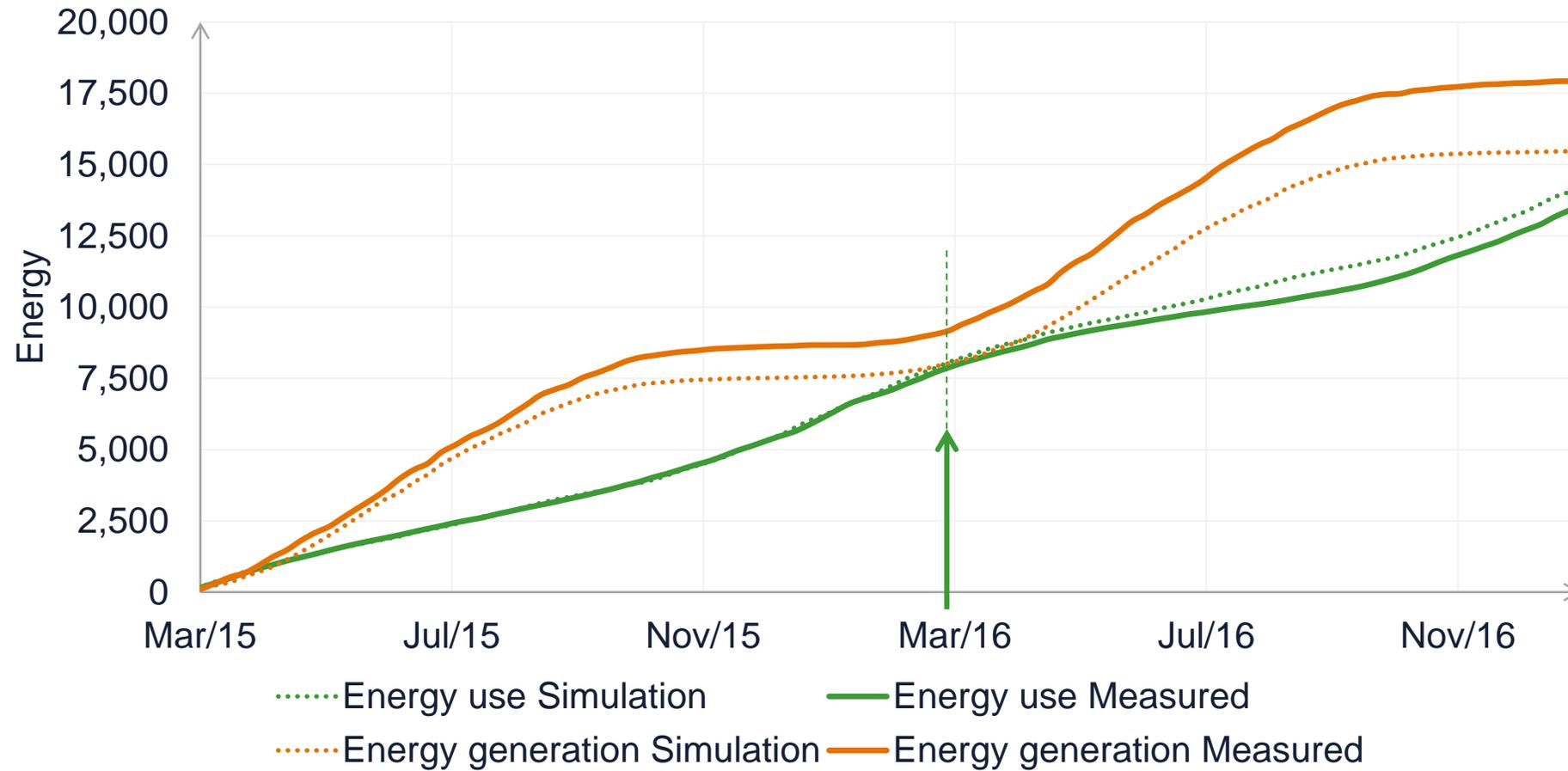
# There is no quick fix



What's in it for us?



# Energy results



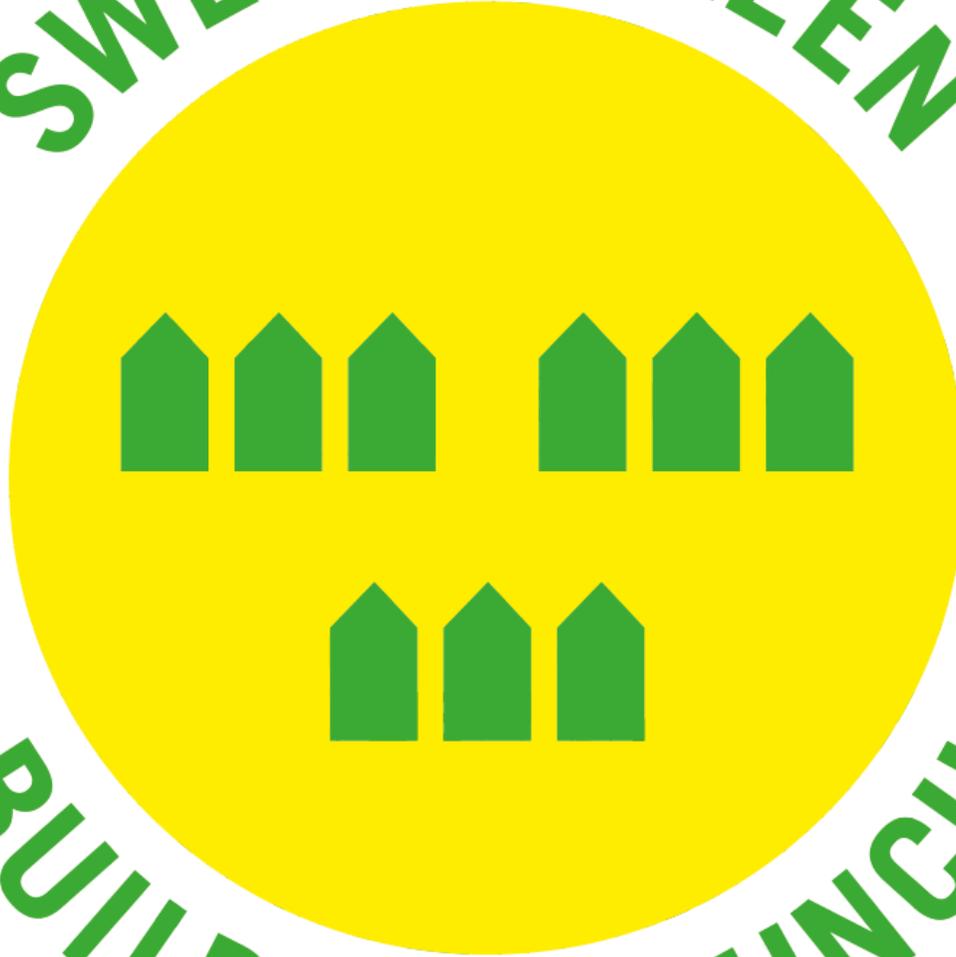
# Lessons learned?

# Lessons learned

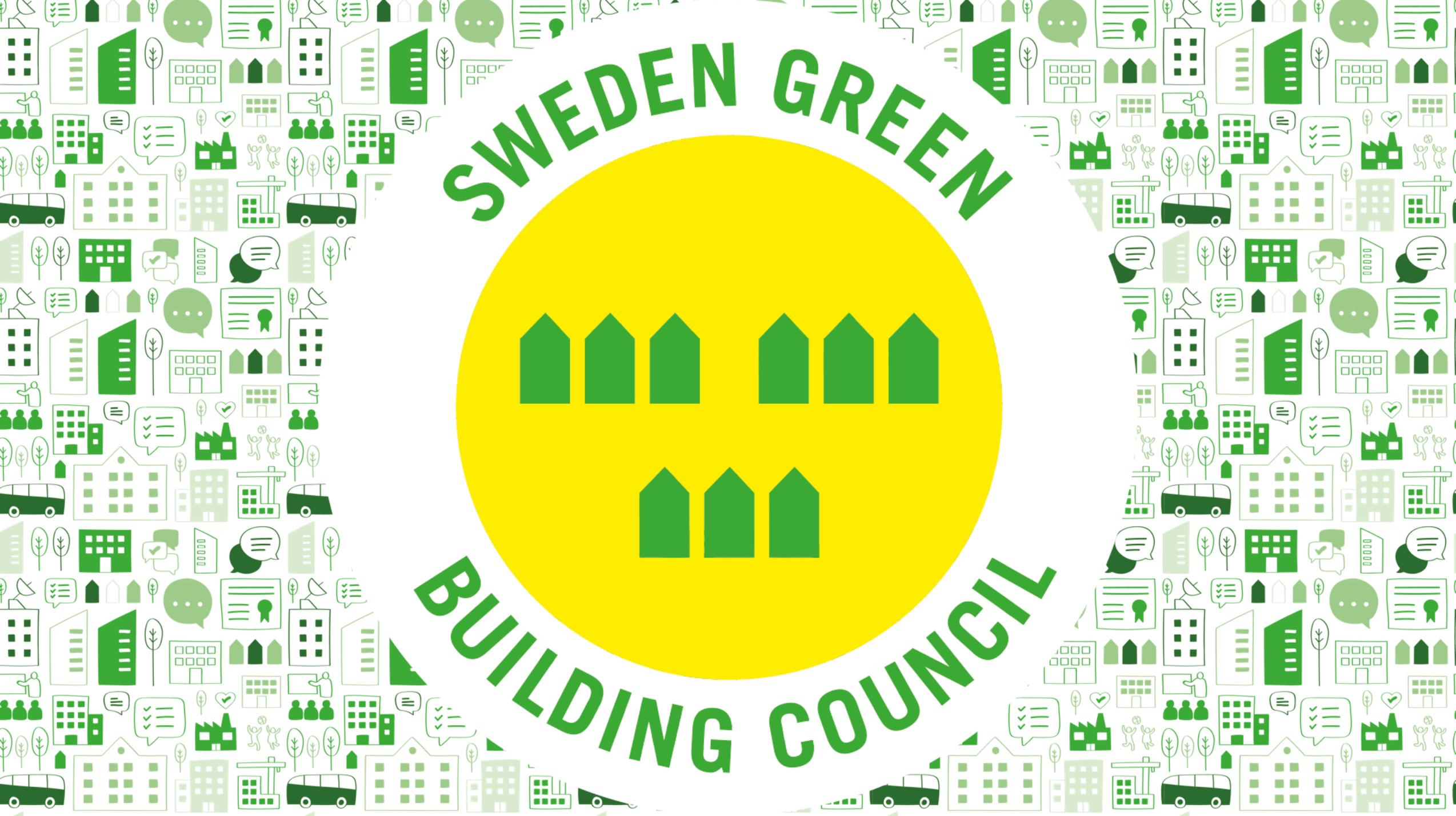
- Everyone is crucial in our work
- Clearly define your goal – and don't let go
- Make sure that everybody is involved
- Try to outperform your goal
- Plan for verification
- Follow your plan

Thank you!

SWEDEN GREEN



BUILDING COUNCIL



# Brf Viva – Sustainability within a residential project

Anders  
Johansson,  
Charlotta  
Szczepanowski



---

# Riksbyggen

---

- We build properties, create housing associations, maintain buildings and offer residential services.
- Responsible for approximately a tenth of the housing built in Sweden.
- Over 500,000 people live in dwellings managed by Riksbyggen
- 2500 employees

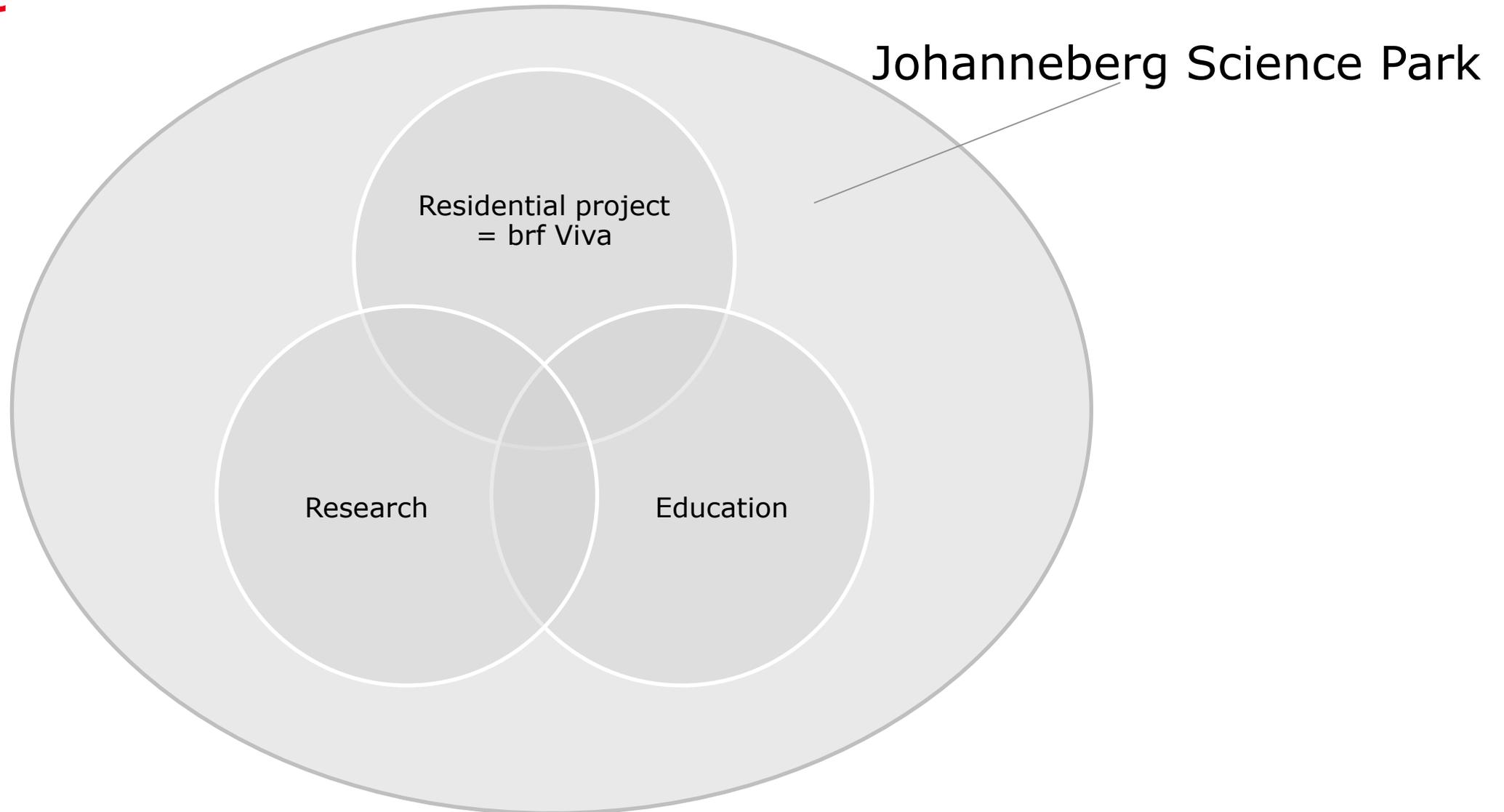


# Brf Viva

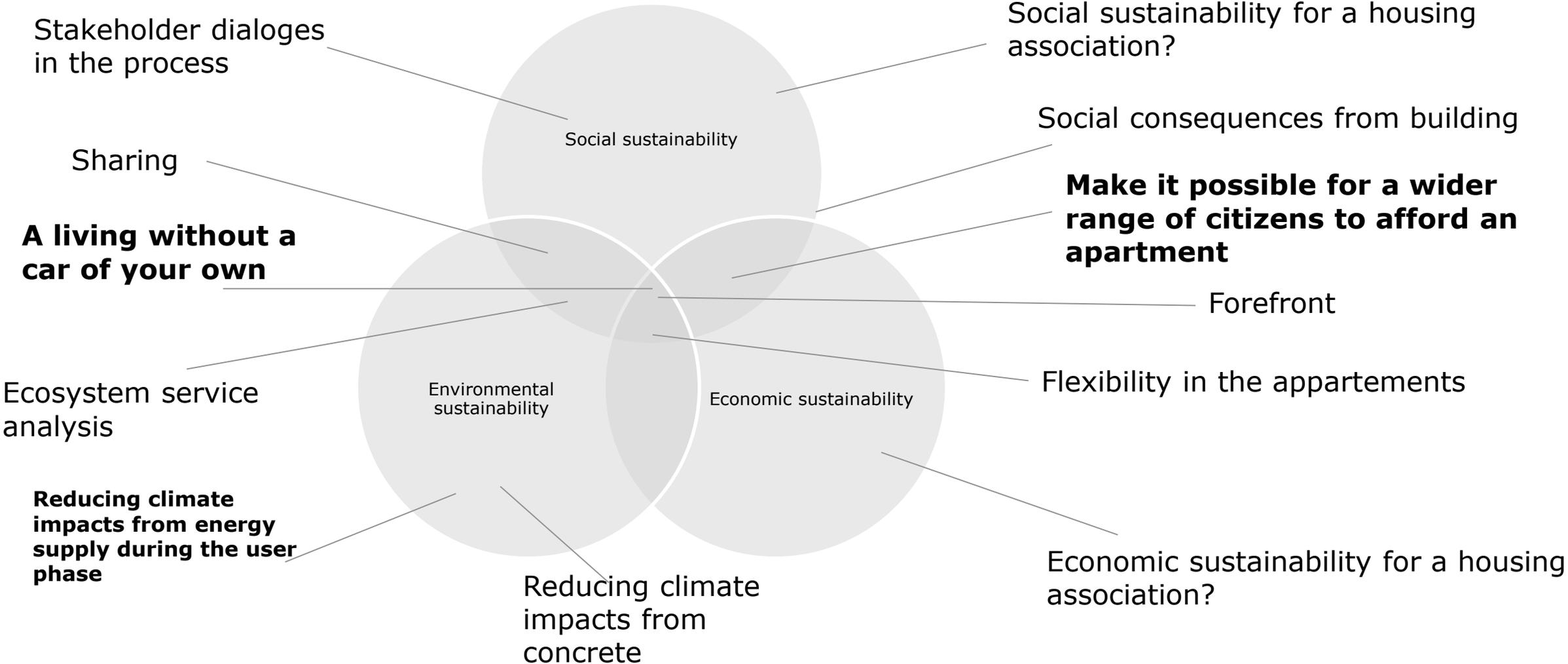


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# We work with research, education and a residential project



# Research projects as a base for the residential projects



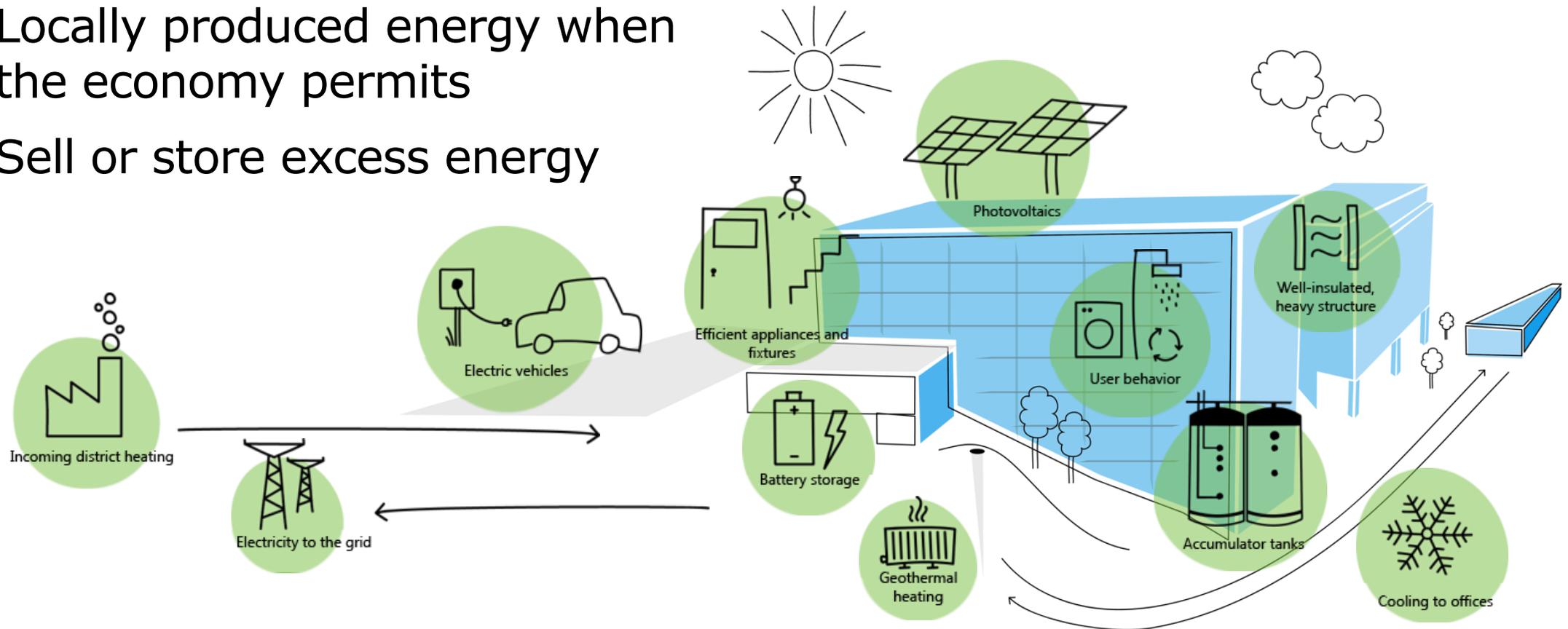
# A living without a car of your own

- Introduction when moving in
- Vehicle pool with electric:
  - Cars
  - Small vehicles
  - Bikes
  - Cargo bikes
- Intelligent delivery boxes



# A house that generates more energy than it uses

- Use as little energy as possible
- Locally produced energy when the economy permits
- Sell or store excess energy



---

# Try to find new solutions to reduce segregation – experiment with 6 apartments

---

- Make it possible for young people (18-30) to afford an apartment
  - Minimize the cost of the apartments by increasing the monthly charge
  - Small apartments with a lot of extra shared spaces
  - No need for a car of your own since a car pool included in the apartment
- The owner of the apartments are members of the housing association



---

Riksbyggen develops,  
maintains and  
improves the spaces  
that you live and work  
in.

---

**Contacts**

Charlotta Szczepanowski

Chef enheten för hållbar utveckling

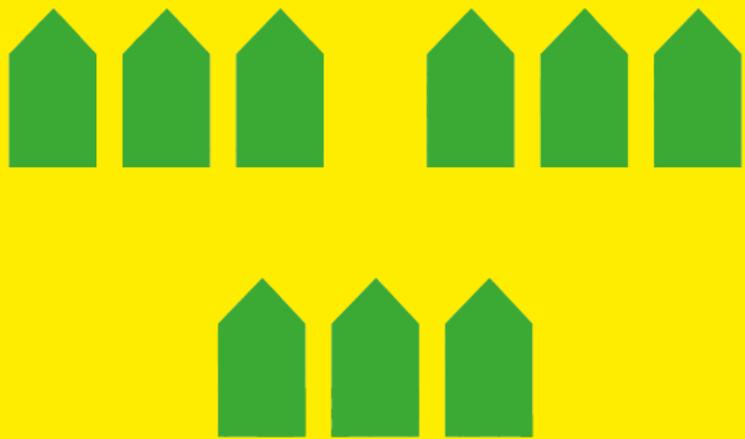
106 18 Stockholm

+4686984142

[charlotta.szczepanowski@riksbyggen.se](mailto:charlotta.szczepanowski@riksbyggen.se)



SWEDEN GREEN



BUILDING COUNCIL



# IKEA Hubhult

A place to work, meet, act, grow and create - together!

An aerial view of a large, modern atrium in an Ikea store. A large group of people is sitting on the floor in a circle, facing each other. The space is bright and open, with multiple levels and large white spherical pendant lights hanging from the ceiling. The text "To create a better everyday life for the many people" is overlaid in the center, with "better", "everyday life", and "many people" underlined.

**“To create a better  
everyday life for the  
many people”**

*The Ikea Vision*



Measuring sustainability

# **BREEAM OUTSTANDING**

HUBHULT is the most sustainable building in the IKEA Universe  
Swedens first outstanding certified building

In the top 1% of certified buildings in the world





# HUBHULT is selfsufficient

100% Renewable energy

*Geoenery - solarpanels - IKEA windmill parks*

Energy sufficient design

72% better energy use



# Responsible choice of materials

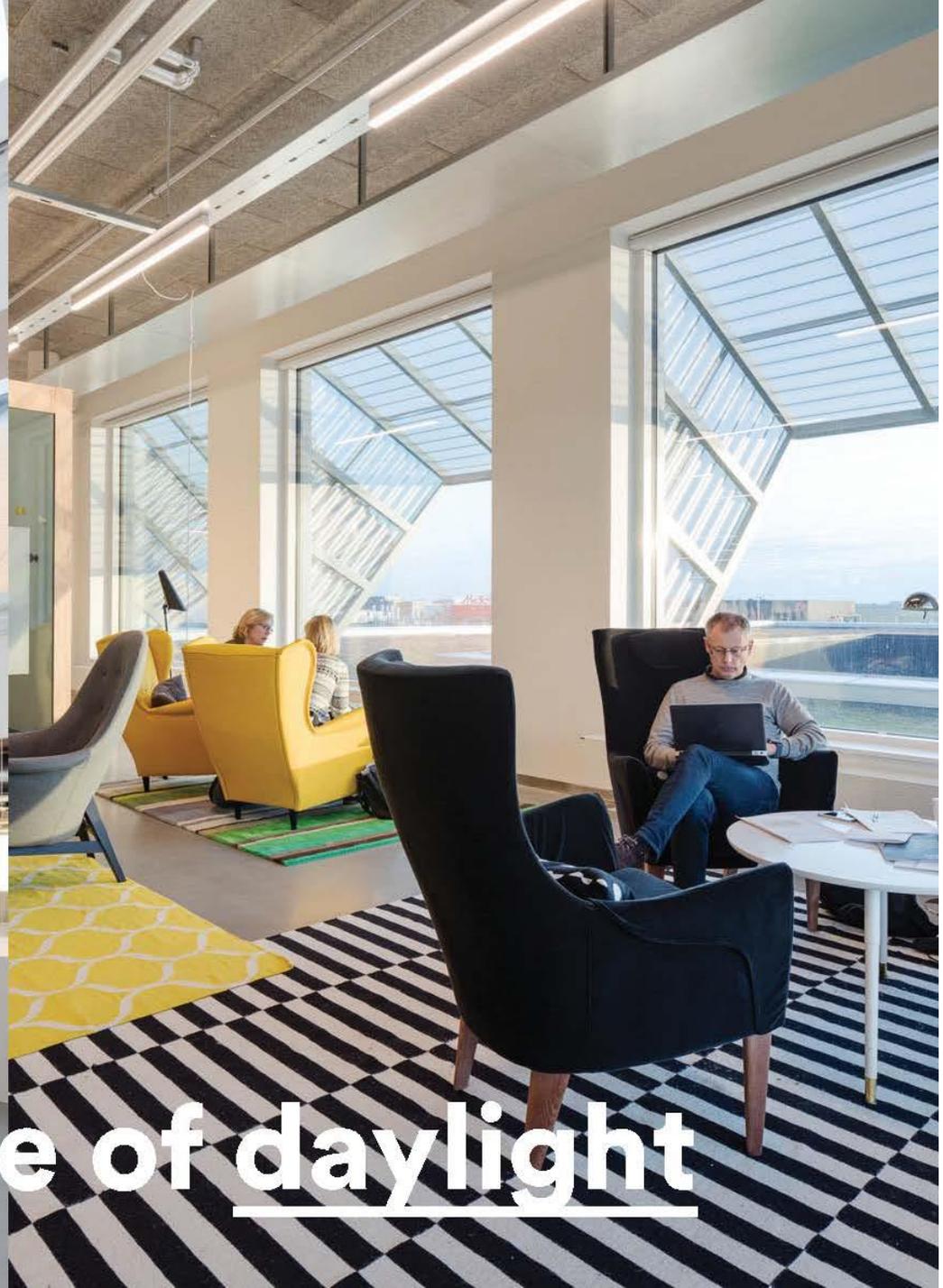
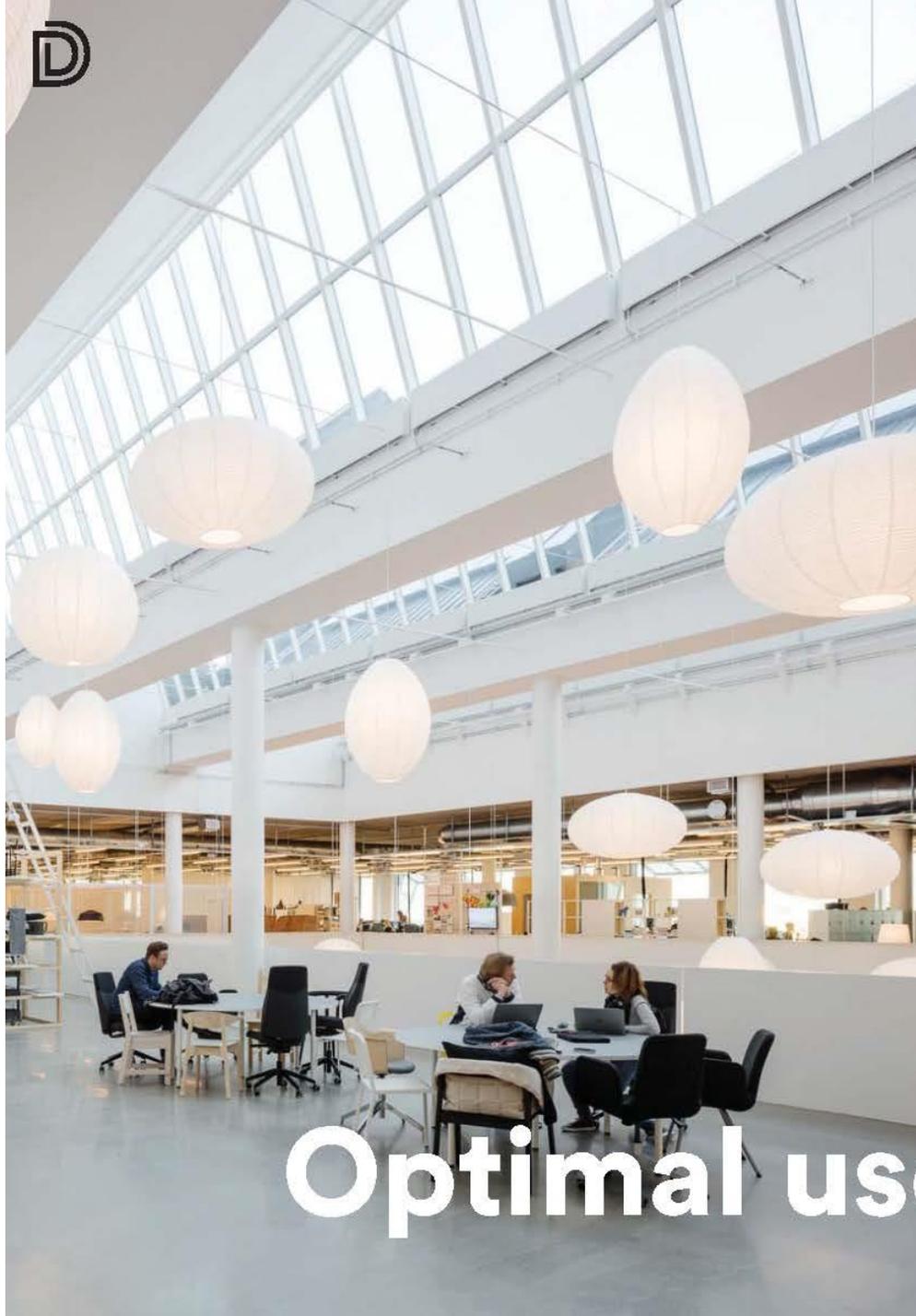
100 % responsibly sourced structural building materials

100 % FCS-certified wood products

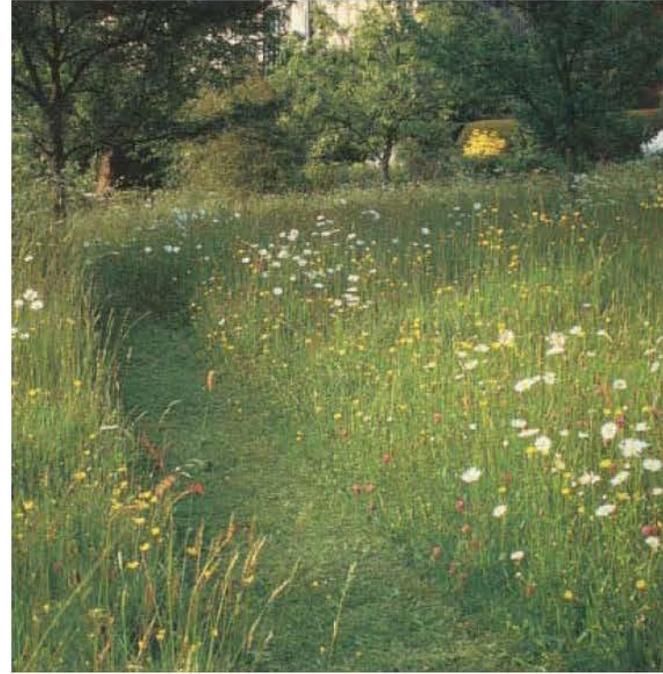
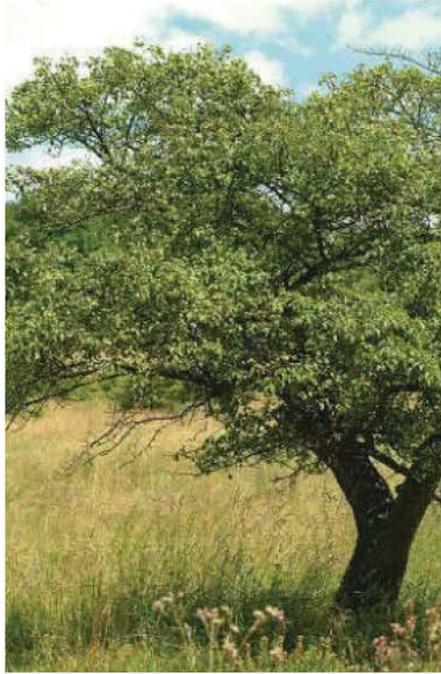
99,9 % of insulation + 50 % of walls, windows & ceilings  
attains the highest green guide rating

100 % of indoor finishing materials  
give very low or no volatile chemical emission

D



**Optimal use of daylight**



# You need air & light to grow

2880 m<sup>2</sup> of green roofing  
200 trees & 30 million seeds  
Ecological value and protection of habitat  
Long term impact on bioversity



**A huge variety of places to  
meet, act, grow and create  
together**



# IKEA Hubhult

A place to work, meet, act, grow and create - together!

# Thank you

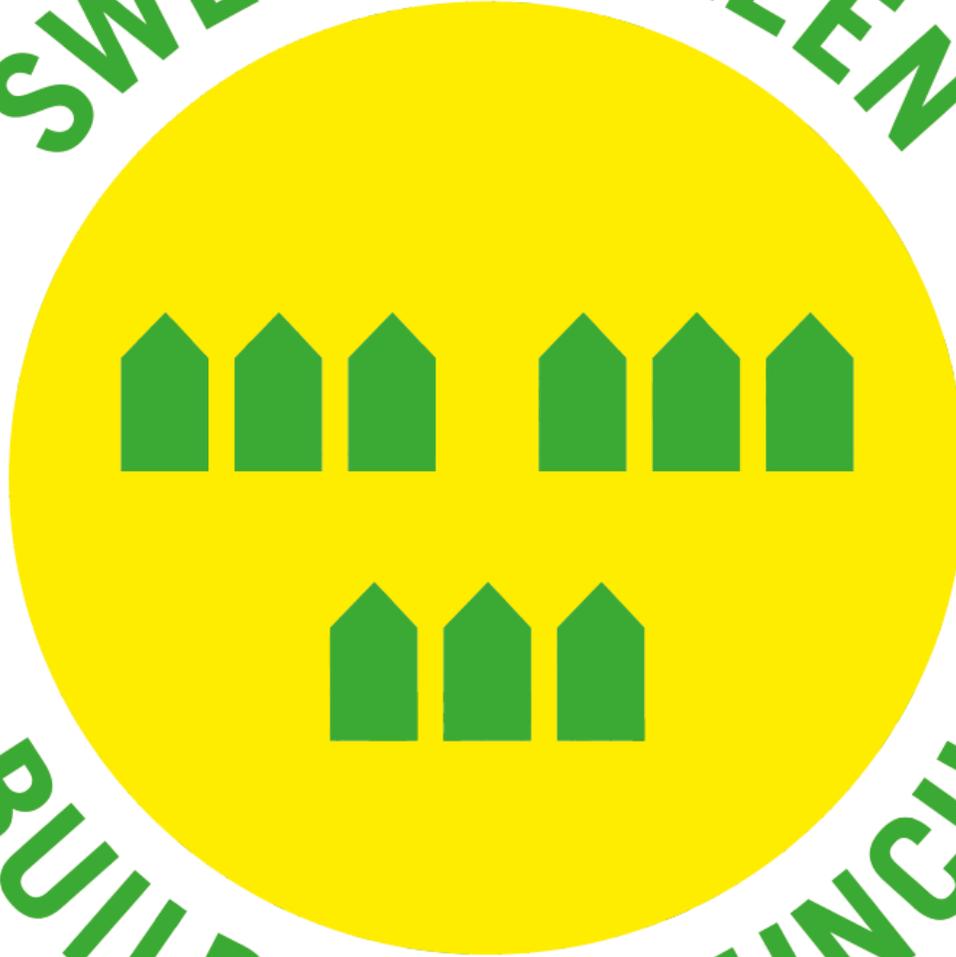
Architects

Dorte Mandrup A/S

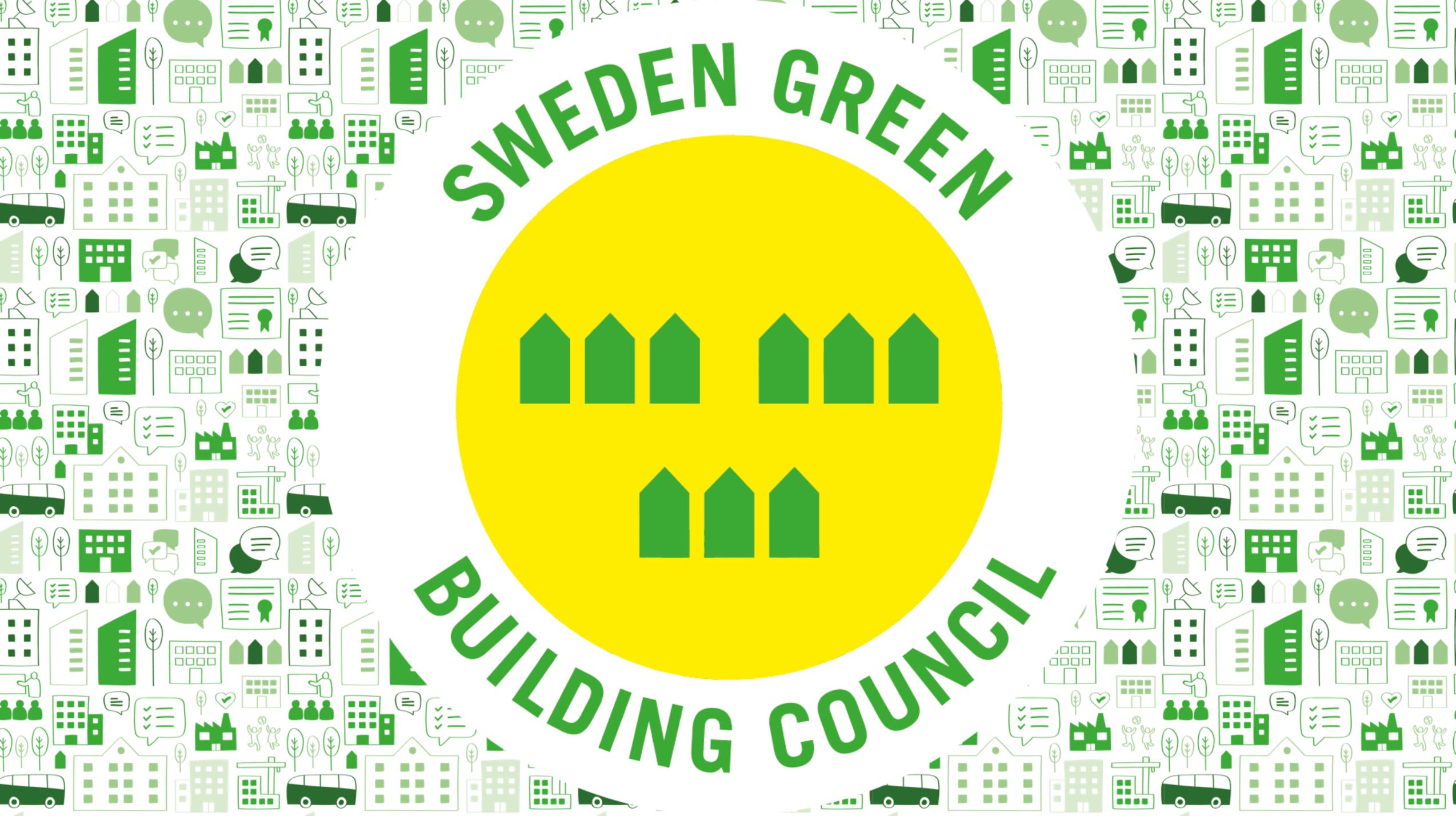
Sustainability & Breeam

Bengt Dahlgren AB

SWEDEN GREEN



BUILDING COUNCIL





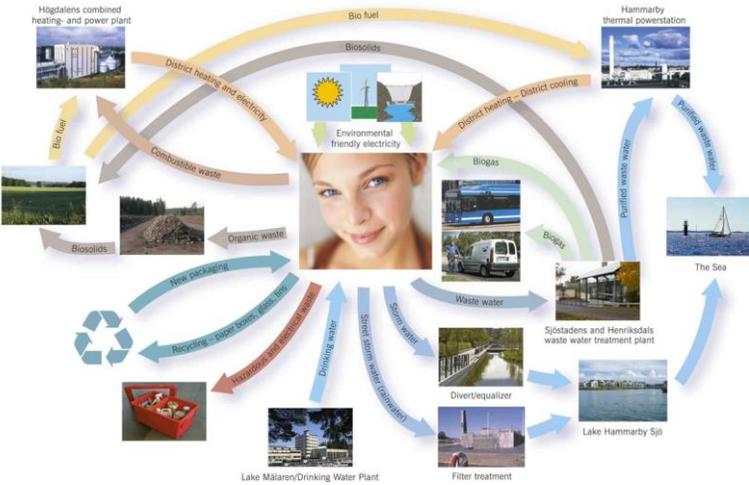
**CITYLAB**

Tomas Gustafsson

Program Director of Citylab Action

Sweden Green Building Council

# SUSTAINABLE CITY DISTRICTS IN SWEDEN - ROLE MODELS



Hammarby Waterfront, Stockholm



Western Harbour, Malmö



Stockholm Royal Seaport, Stockholm



# VISION CITYLAB

*"We have a common work process that engages and leads to sustainable urban development"*



**CITYLAB**

# CITYLAB ACTION

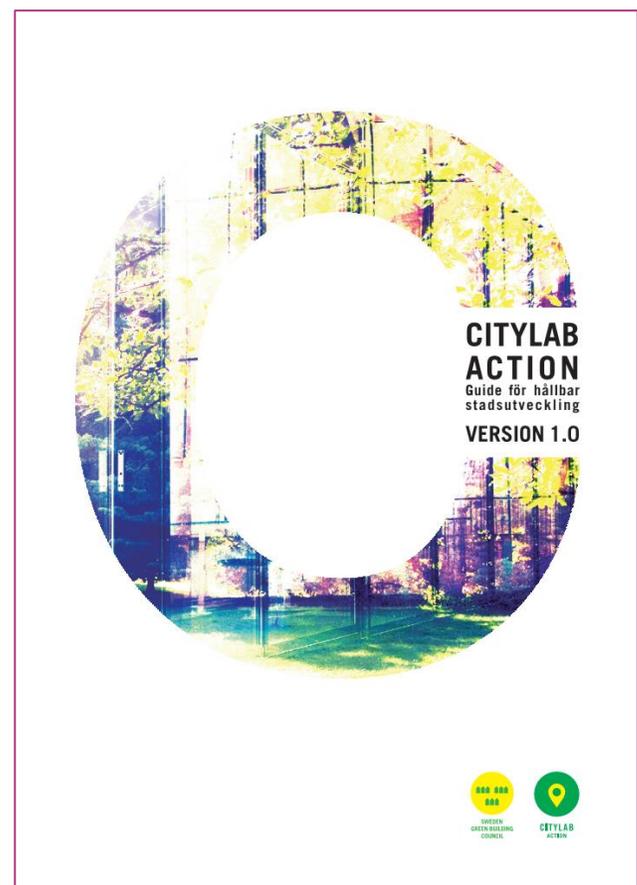
- GUIDE FOR SUSTAINABLE URBAN DEVELOPMENT
- PROGRAM for urban development projects
- CERTIFICATION SYSTEM





# CITYLAB ACTION

Guide for sustainable urban development







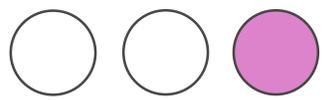
*c/o City*





# PROCESS MANAGEMENT

- Organisation
- Cooperation
- Participation
- Innovation





# PROCESS MANAGEMENT

- Organisation
- Cooperation
- Participation
- Innovation

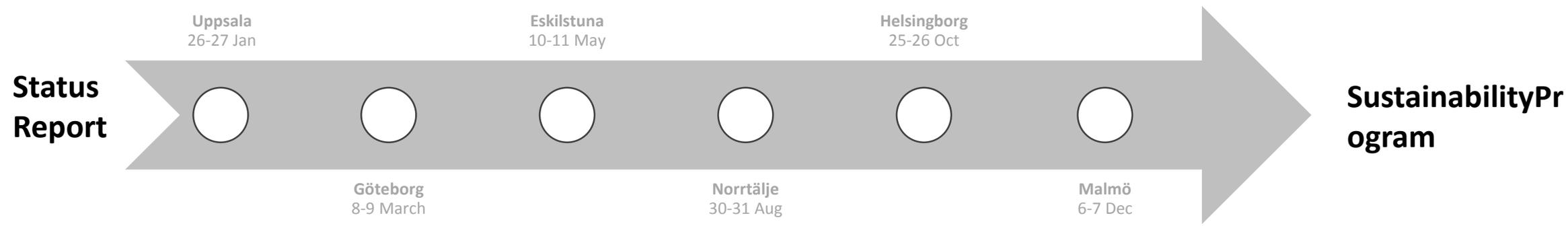
*The DECODE project*





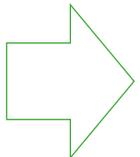
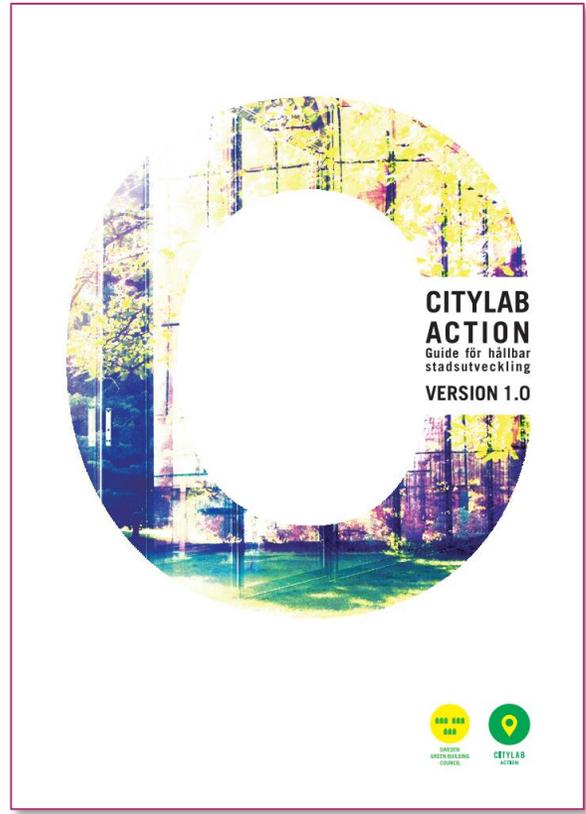
# CITYLAB ACTION Program

- for urban development projects





# CITYLAB ACTION



**Sustainability  
program**  
Project X  
2017-12-15

**Action- and  
follow-up plan**  
Project X  
2017-12-15

Citylab Action – Guide for Sustainable Urban Development



**Rosedal**  
Uppsala



**Masthuggskajen**  
Göteborg



**Stadsläkning Lagersdal,**  
Eskilstuna



**Norrtälje Hamn**  
Norrtälje



**DrottningH**  
Helsingborg



**Täby Park**  
Täby



**Barkarbystaden TRE**  
Järfälla



**Solna Business Park**  
Solna



**Campus Albano,**  
Stockholm



**Skeppsbron,**  
Jönköping



**Falsterbokanalen**  
Vellinge



**Lommarstranden**  
Norrtälje



*12 Urban  
development  
projects in  
Citylab Action 2016*

*10 Urban  
development  
projects in  
Citylab Action 2017*



# PEERGROUPWORK



# SPEAKERS



## LIVSKVALITET

- Helsingborgs väg mot hållbar utveckling



SWEDEN  
GREEN BUILDING  
COUNCIL

sgbc.se



CITYLAB  
ACTION

ACTION

STADSUTVECKLING BLIR  
VERKLIGHET



# PROJECTWORK



# Hållbarhetsprogram för Täby park

Sustainability program for Täby park



I GOTT SAMARBETE



SKANSKA



TÄBY 

# OUTCOME OF CITYLAB ACTION



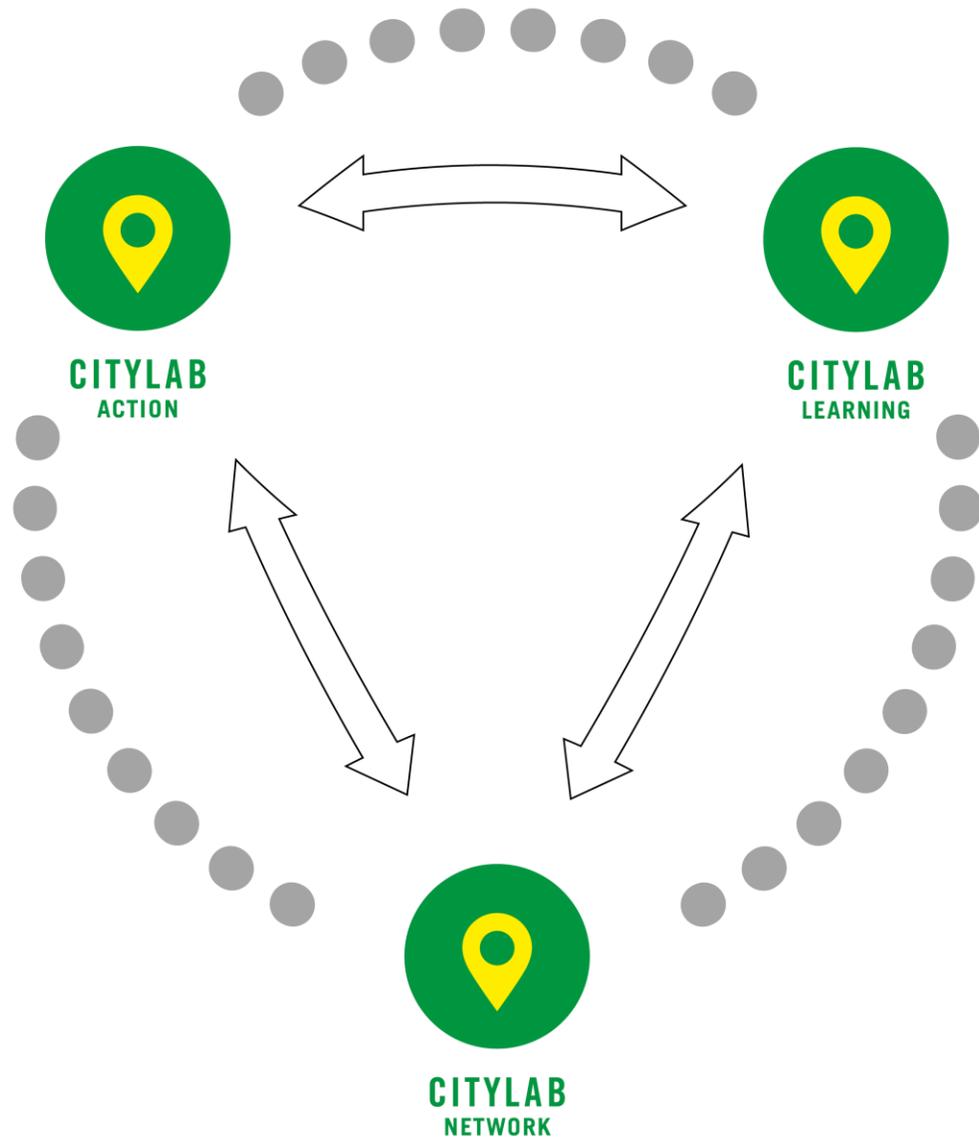
- A sustainability program for the project, including action- and follow-up plan
- Increased knowledge of sustainable urban development
- Improved competence in planning for sustainability
- More effective management and cooperation within the project
- Wide involvement of inhabitants and local actors
- A local and attractive demo-project on sustainable urban development
- A long term sustainable urban area for inhabitants och local actors!
- A network of projects and colleagues with a sharing culture
- The first step towards certification of the project



**CITYLAB**

**CERTIFICATION SYSTEM**

for sustainable urban development



**CITYLAB**  
ACTION



**CITYLAB**  
LEARNING

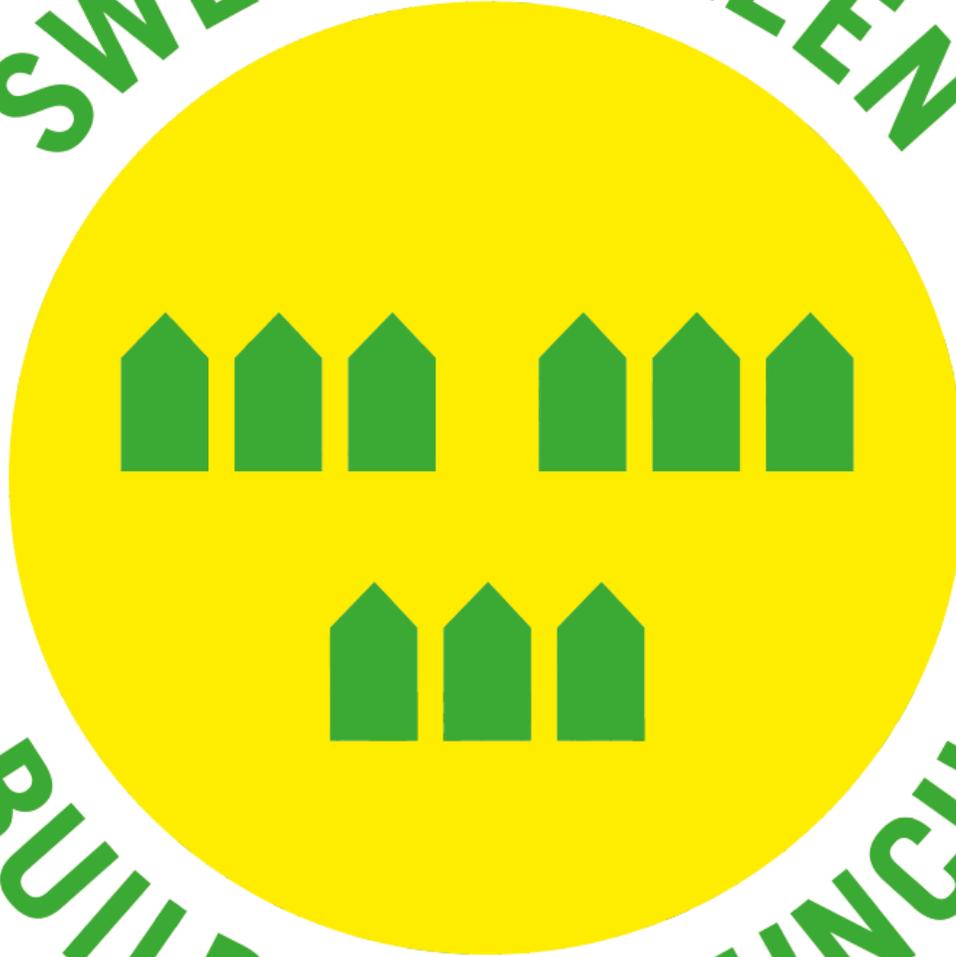


**CITYLAB**  
NETWORK

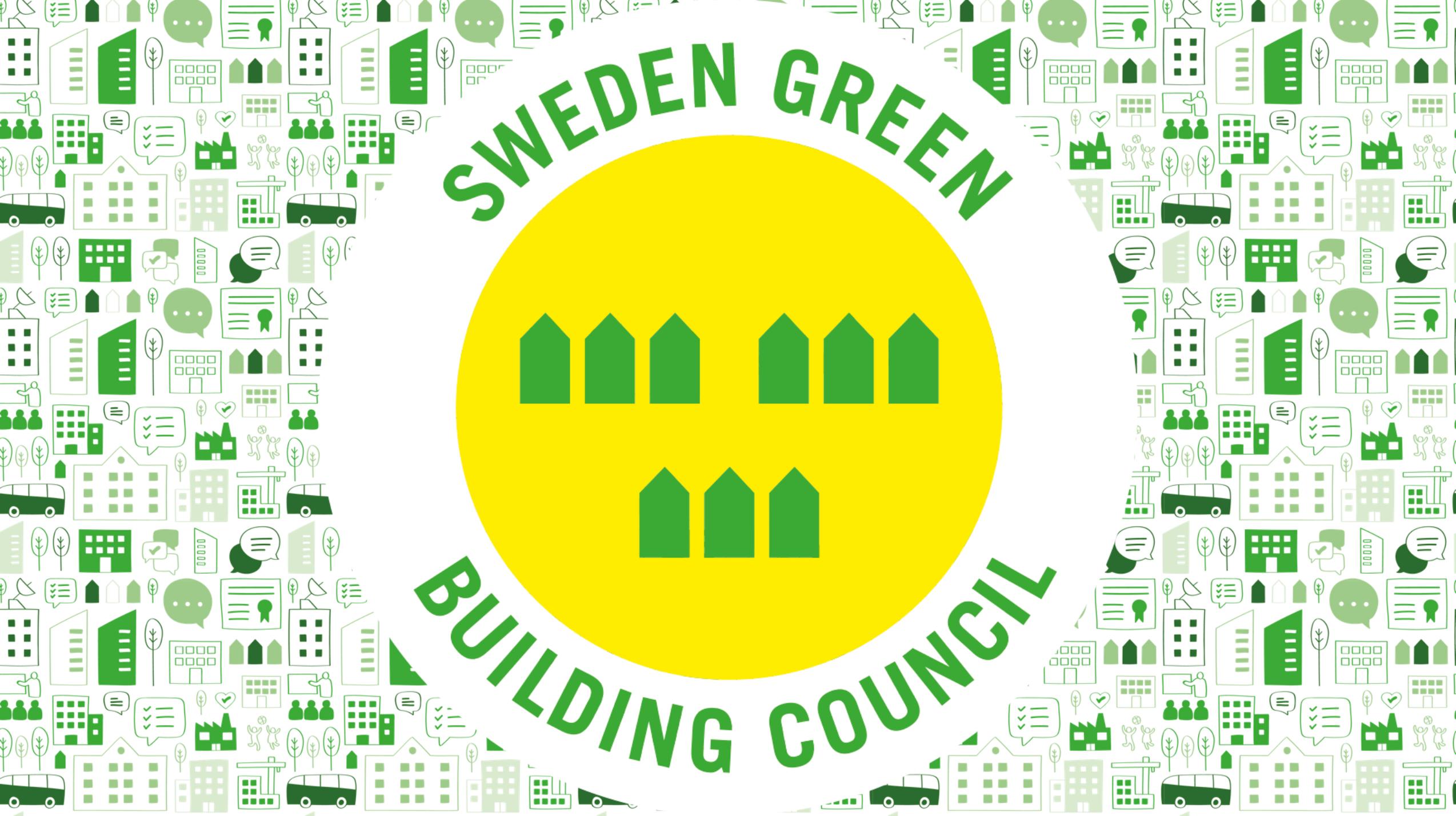


THE END

SWEDEN GREEN



BUILDING COUNCIL

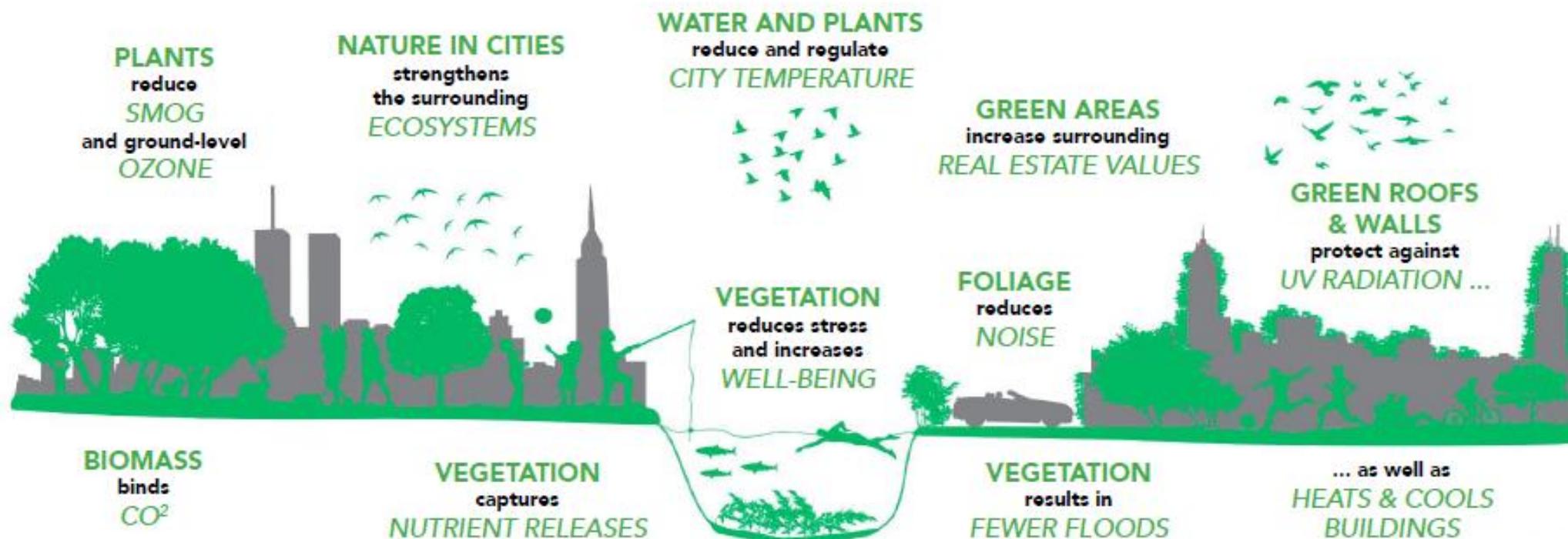




# CREATING LIVING CITIES

Emilie Zetterström  
City of Stockholm

# Urban Ecosystem Services



# Stockholm Royal Seaport

- Climate adapted and green outdoor environment
- Let the nature do the job
- Green solutions



Stockholms  
stad

# Green Area Factor



# Stormwater - a resource



# New pathways



# Ecological pathways



# Ecological



# Social



# Climate





city

Partners

[www.cocity.se](http://www.cocity.se)



CHALMERS

Stockholm Resilience Centre  
Sustainability Science for Biosphere Stewardship



Stockholm  
University



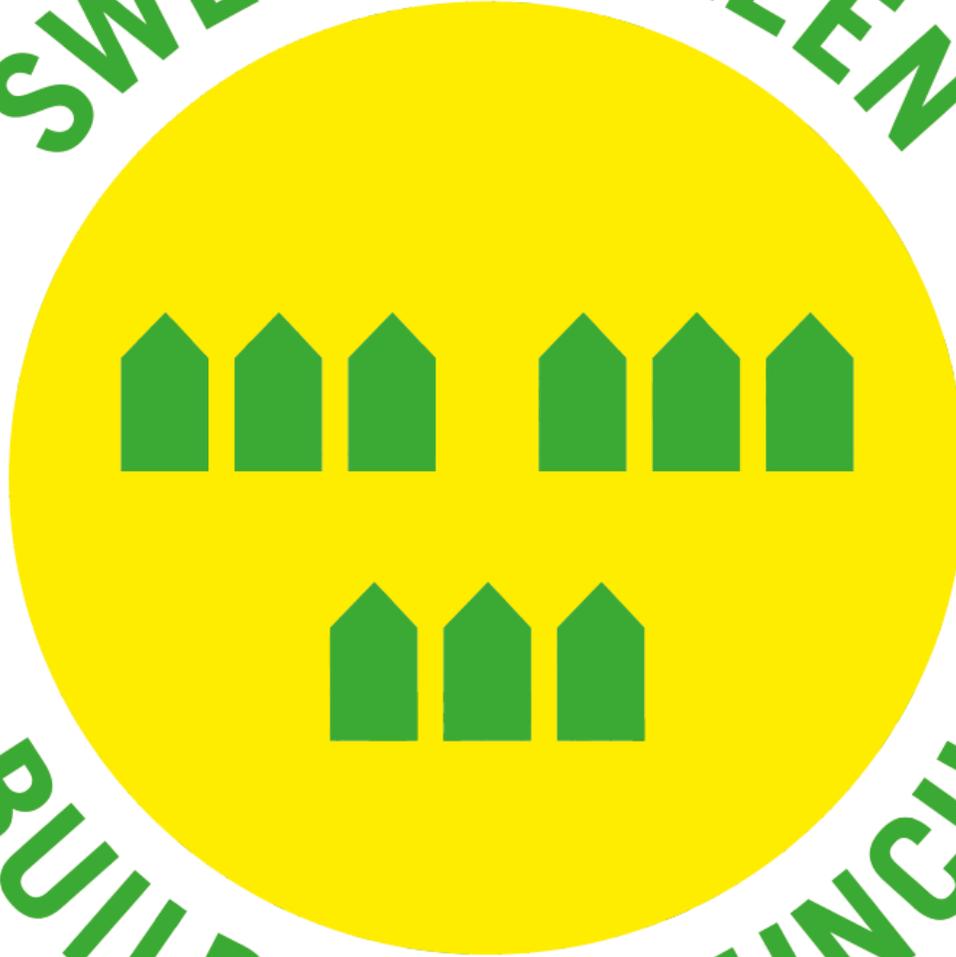


Stockholms  
stad

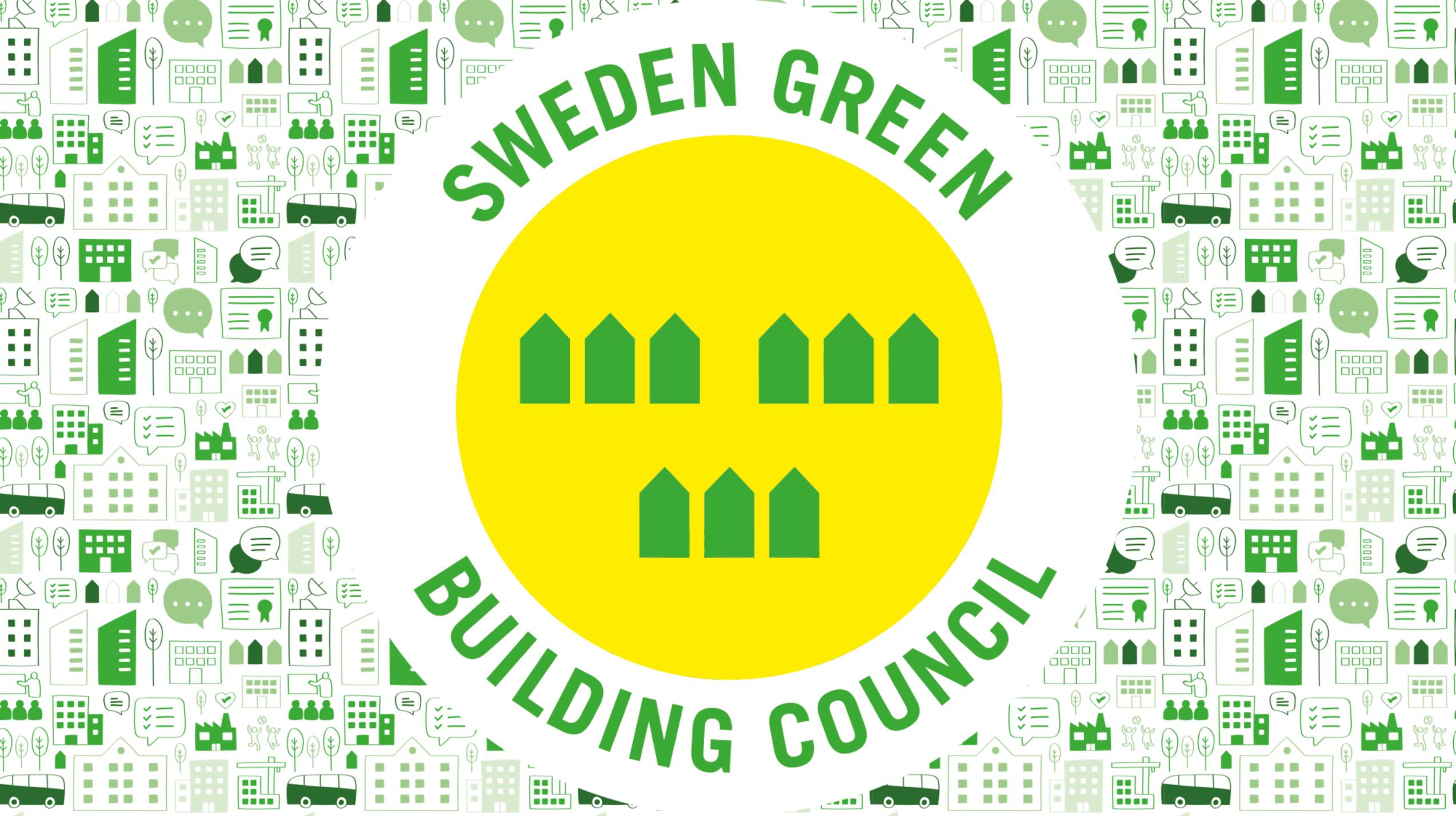
# Welcome to Stockholm!

Emilie.zetterstrom@stockholm.se  
[www.stockholm.se](http://www.stockholm.se)

SWEDEN GREEN

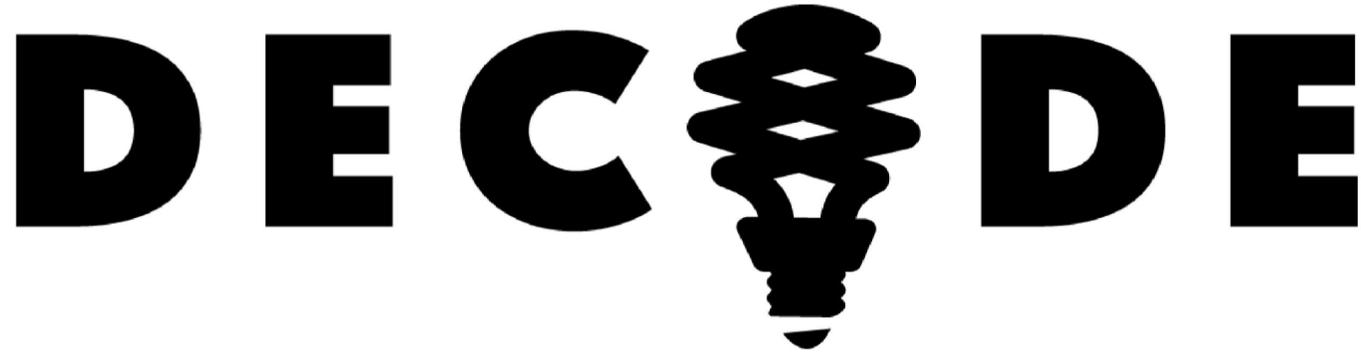


BUILDING COUNCIL



DECODE





**community design for conflicting desires**

[www.decodeprojektet.se](http://www.decodeprojektet.se)

**Sarah Bragée**  
**Tyréns, strategic analysis**

**Åsa Norman**  
**Tyréns, environment**

# Vinnova Innovation – Sustainable Cities

**Time frame**      **Jan. 2017 – Dec. 2018**

**Budget**            **44 MSEK**

- **17,5 MSEK VINNOVA (Swedens' innovation agency)**
- **Tyréns consultant company**
- **Sweden Green Building Council**
- **8 municipalities, (Göteborg, Järfälla, Norrtälje, Sorsele, Stockholm, Täby, Upplands Väsby, Uppsala,**
- **National Board of Housing, Building and Planning**
- **Public Art Agency Sweden**



# Case 1: Analysis of Power – Upplands Väsby

Power resource	Description
Formal power	Money and/or hierarchy
Symbolic	Legitimacy as expert, defender of environment or justice,
Cognitive	Linguistic, rhetorical
Social	Ability to build alliances and networks, fame

## FINDINGS:

- Money of minor importance
- The environment is important, great symbolic power
- Credibility is important for commitment. Communicate the extent in which dialogue can alter the Planning – no false hope.
- Social alliances had great impact



# Case 2: Sustainable goals, all the way – Täby

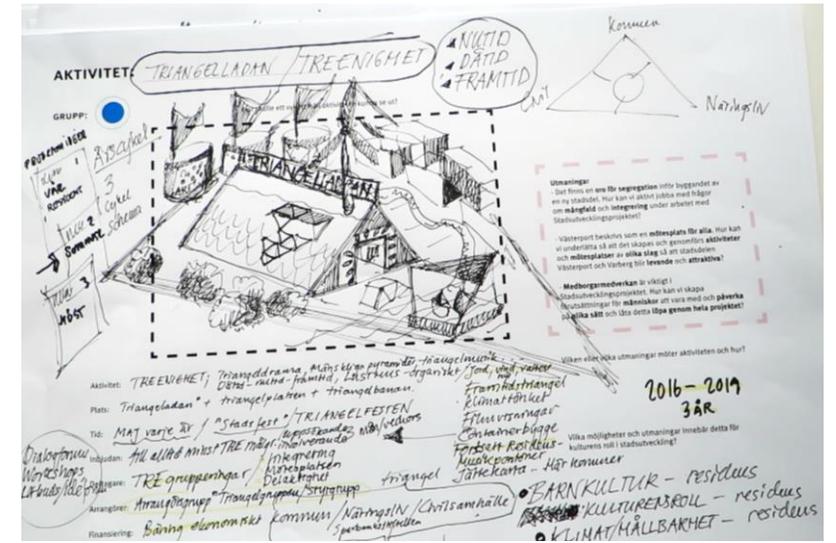
Goal	Guideline/Activity	Need	delivery	Gap improvement proposal
<b>Sustainable travels are both easy and attractive</b>	Existing strategy för mobility management.  Traffic signs for pedestrians and cyklists exists from the beginning.	 <p>Responsibility Need</p>	 <p>Delivery reciever</p>	



# Case 3: Creating values during regeneration - Varberg

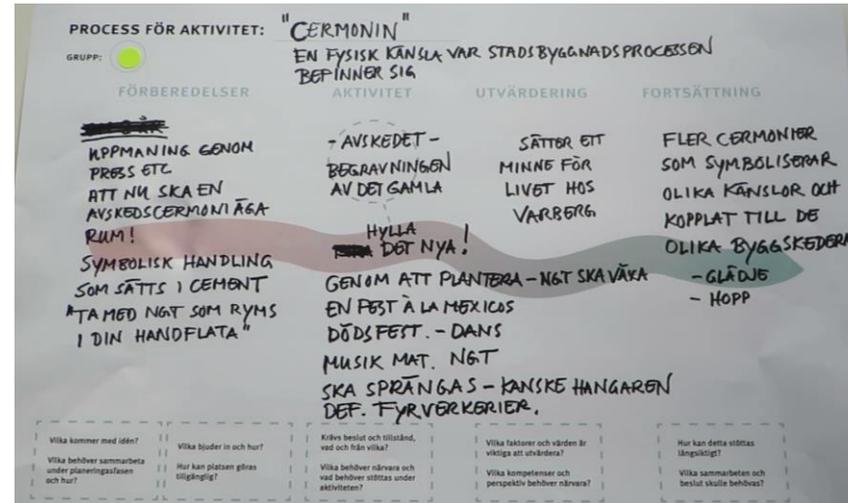


## Develop ideas

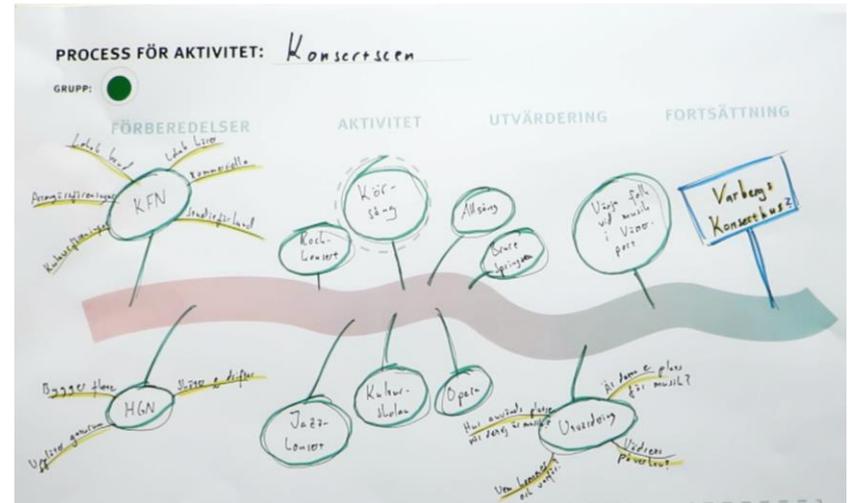


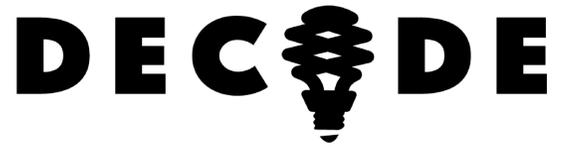
## Defining the process

- Financer
- Permissions
- commitment



## Video presentation

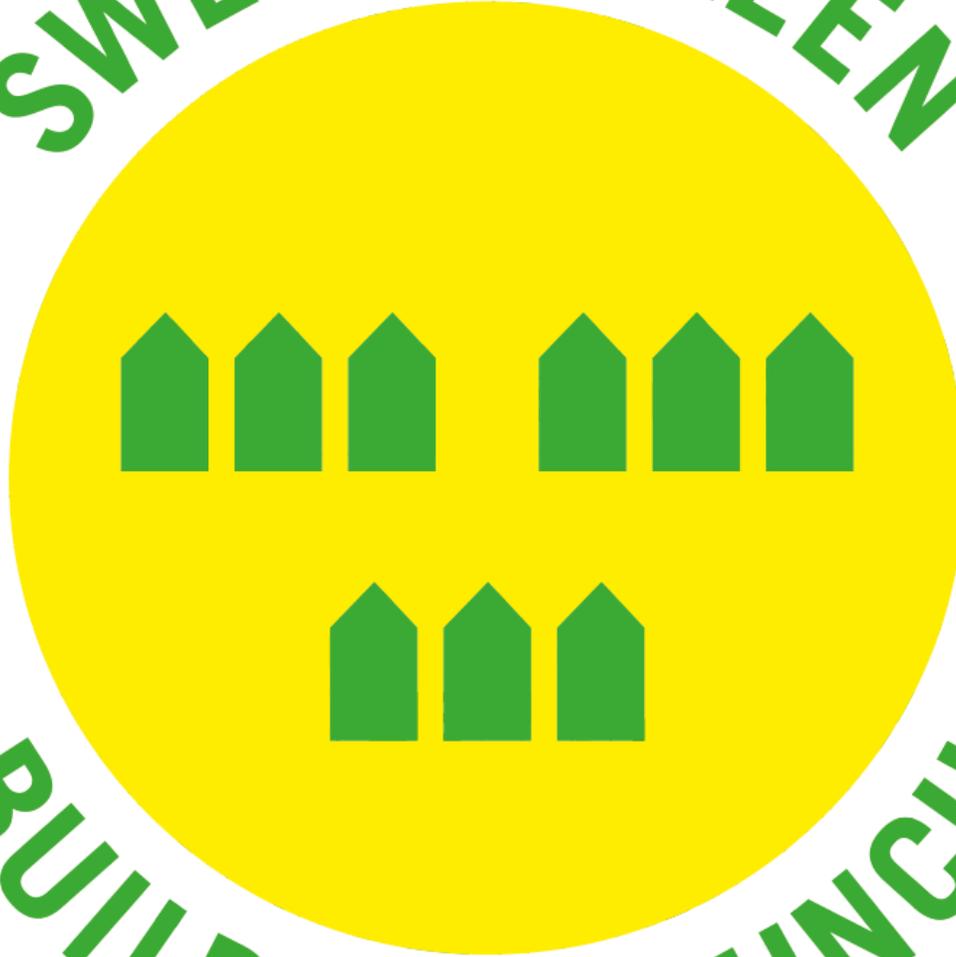




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**Thank you!**

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