WEBINAR: Knowledge sharing clinics and best practice catalogue








Nordic Sustainable Construction

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Nordic Sustainable Construction

Current work packages

WORK PACKAGE 1

Nordic Harmonisation of Life Cycle Assessment

WORK PACKAGE 2

Circular Business Models and Procurement

WORK PACKAGE 3

Sustainable Construction Materials and Architecture

WORK PACKAGE 4

Emission-free Construction Sites

WORK PACKAGE 5

Competences for Reuse in Construction & Programme Secretariat

This project

Task 5: New acceleration programme

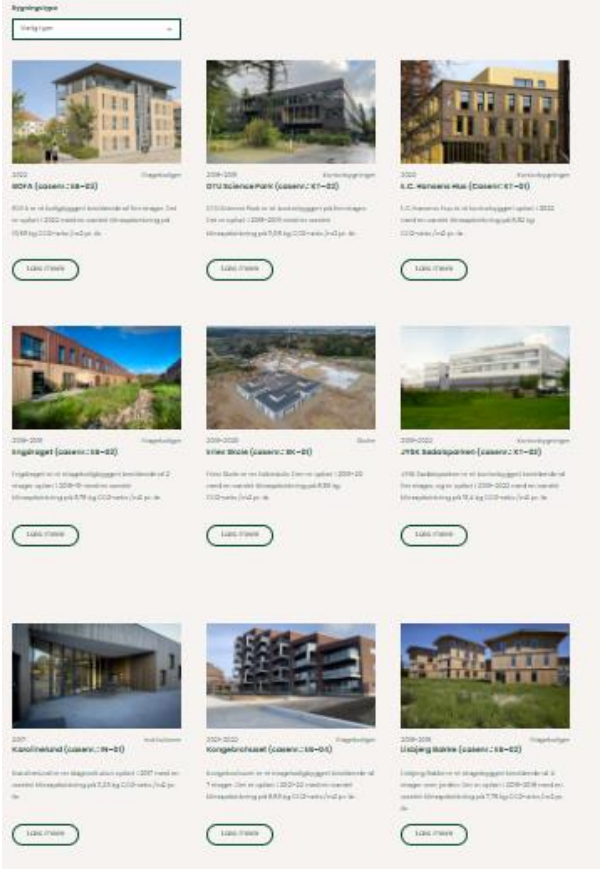
Low Carbon Clinics

Best Case Catalogue

Task 5: New Acceleration programme

Low Carbon Clinics

Best Case Catalogue



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Project outcomes

Low Carbon Clinics

10 local workshops with current building and design projects during August/September

2 online follow up sessions during September/October

1 report with key learnings and recommendations based on the workshops

Why sign up?

Possibility for free consultancy

Get new input, inspiration and knowledge

Help share your knowledge and project with the industry and accelerate the needed transformation

Project outcomes

Best Case Catalogue

1 Catalogue of best case examples across the Nordics and Estonia

1 online interactive case representation

1 webinar with the insights from the case catalogue

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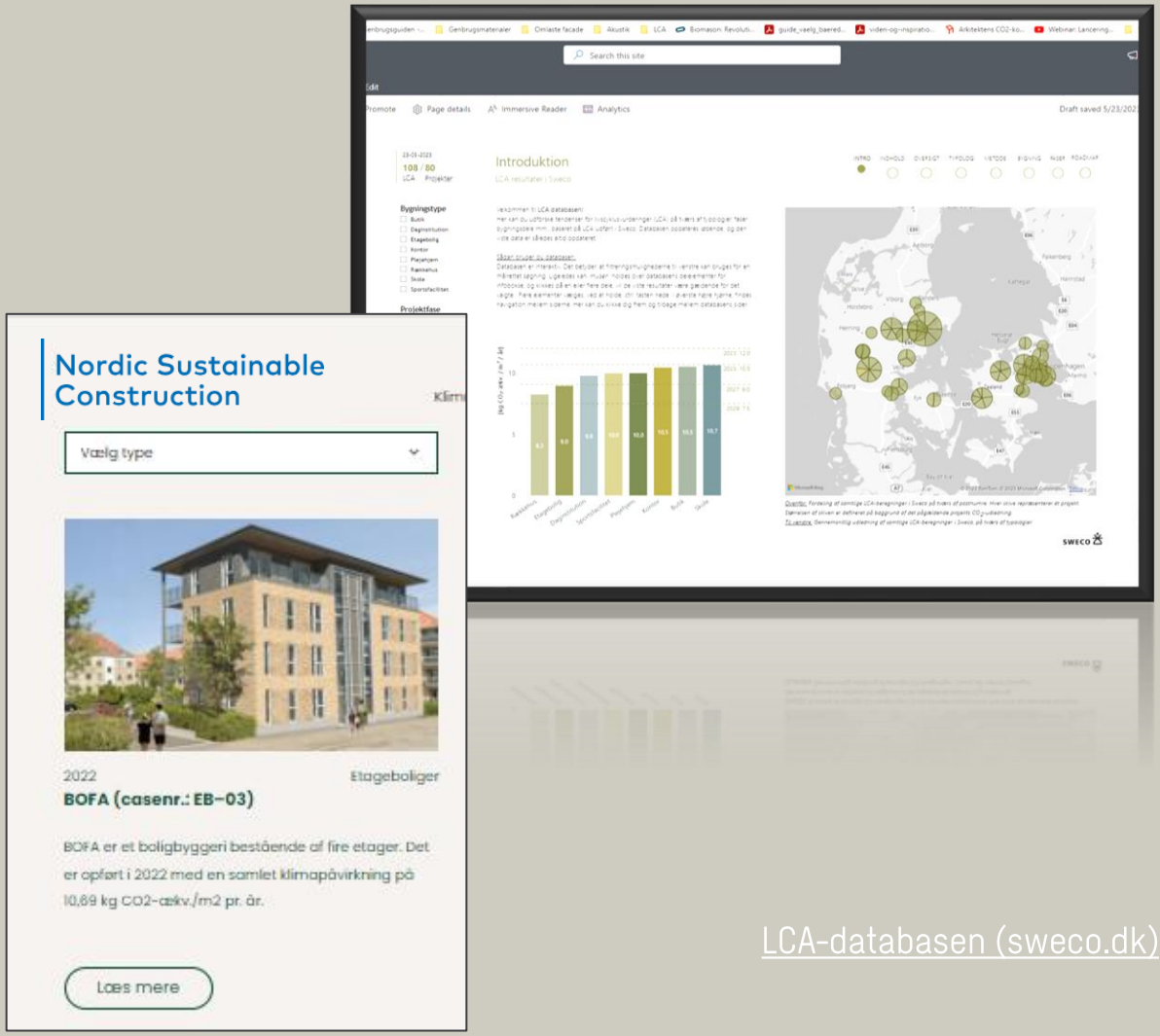
Why sign up?

Possibility to showcase your best cases of low carbon building projects

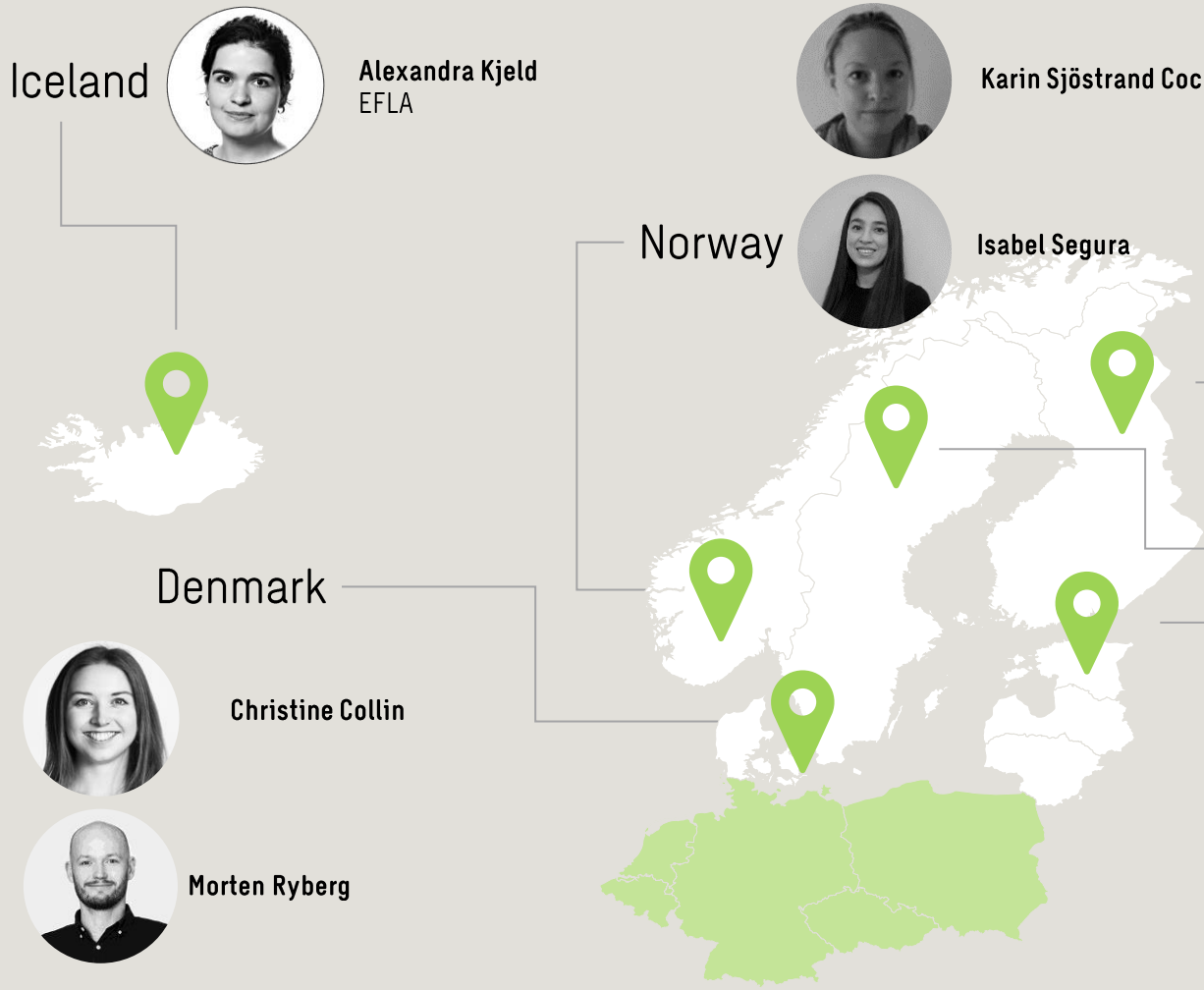
Help share your knowledge and projects with the industry and accelerate the needed transformation

Online interactive catalogue and database



LCA-databasen (sweco.dk)

An international team of local experts



Iceland

Alexandra Kjeld
EFLA

Karin Sjöstrand Cochard

Norway

Isabel Segura

Finland

Kari Nöjd

Elina Virolainen

Sweden

Anna Joelsson

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Denmark

Christine Collin

Morten Ryberg

Kai Kanafani
BUILD

Estonia

Anni Oviir
LCA Support

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Sign up here!

Participate in the Nordic Low Carbon Clinic – Task 5.1 (sweco.dk)

Sign your project up for Nordic Low Carbon Building Catalogue – Task 5.2 (sweco.dk)

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Low carbon clinics

Karin Sjöstrand Cochard, Sweco Norway
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5.1 Low carbon clinic for new construction projects in the Nordic countries and Estonia

The low carbon clinics to support and facilitate decarbonization of projects

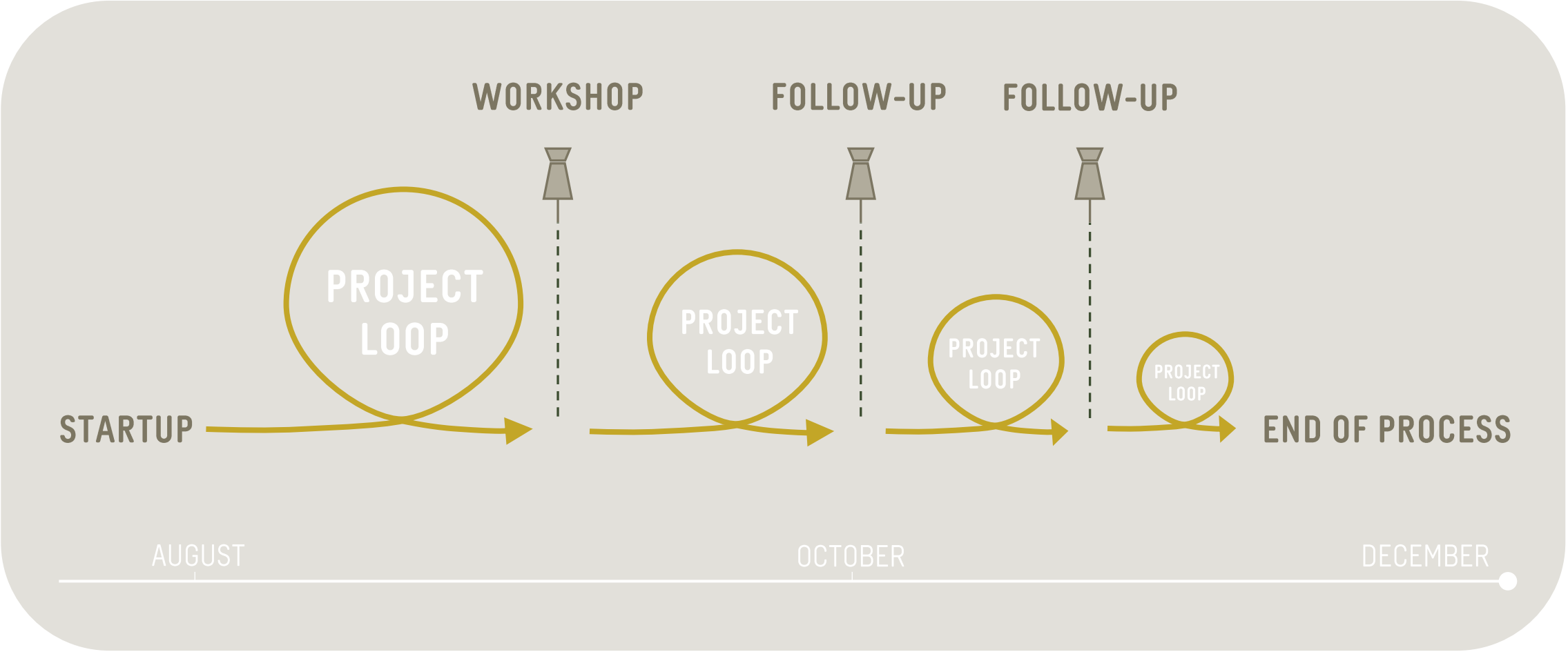
1. Introduction to Sustainability Concepts:
We provide a foundational understanding of key sustainability principles to prepare participants for more advanced discussions on decarbonization.
This include how to measure climate performance of the project and overall advice for reducing impacts

2. In-Person consultations
On-site meetings with the client about the specific project
Discuss the specific project and provide tailored advice and feedback
We take a deep dive into the project to identify where the largest potentials for decarbonizing are.
Both where the largest reductions can be found, but also where the low hanging fruits are
Develop plans and actions for reducing CO2-emissions

3. Follow up consultations
We provide continued support through 2-3 online meetings,
Here we assist in evaluating and refining the low carbon strategies

The clinics are free and conducted by local experts from your country
Because these experts will be aware of local or national specificities that can affect your project.
We know these topics are complex, and it is easier to have open and free discussions in your own language

An iterative process



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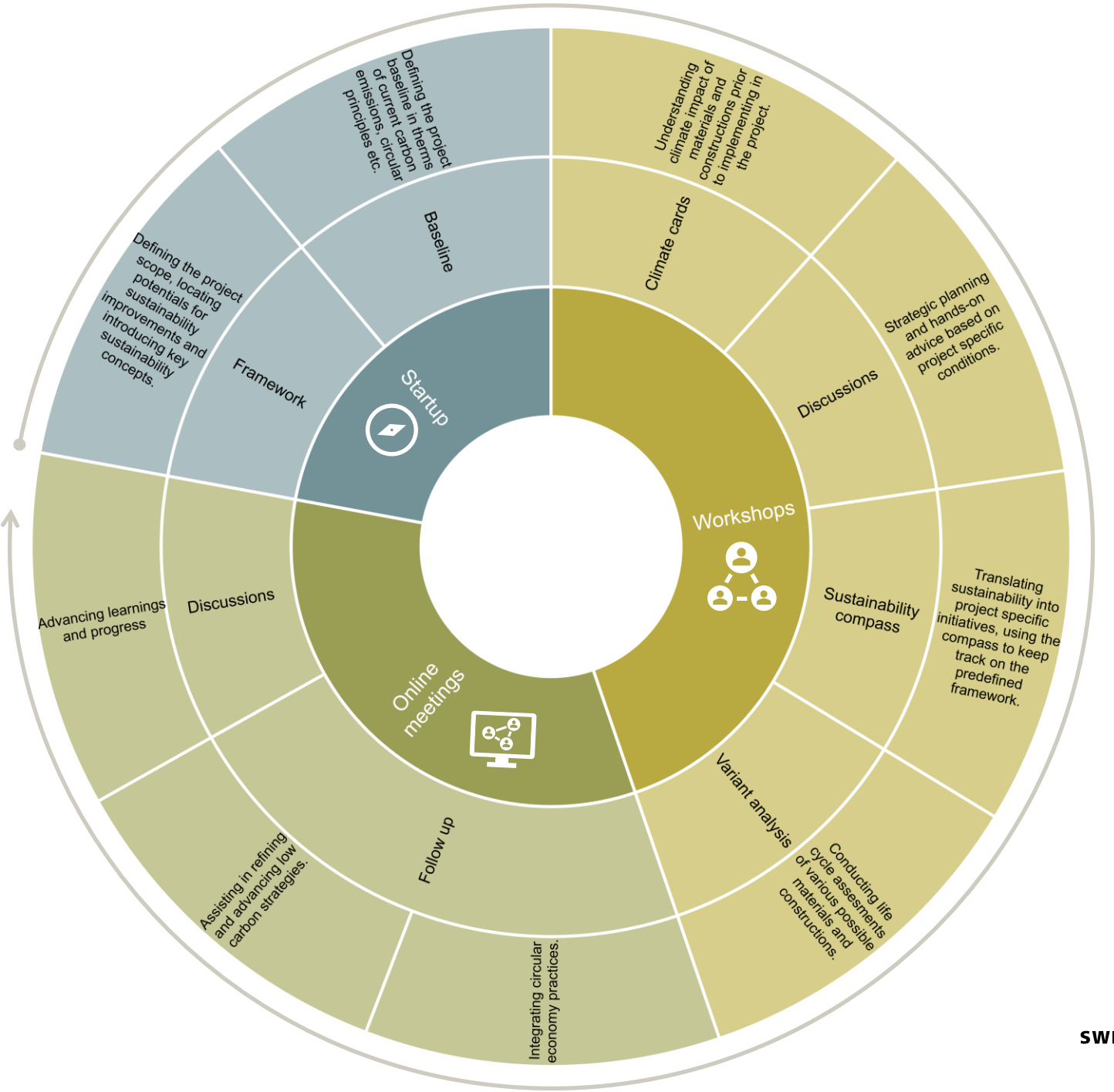
Low carbon clinics

Process

- The low carbon clinic will span across three phases, focusing on sustainability improvements throughout.
- Each phase will advance the projects overall circularity and refine low carbon strategies



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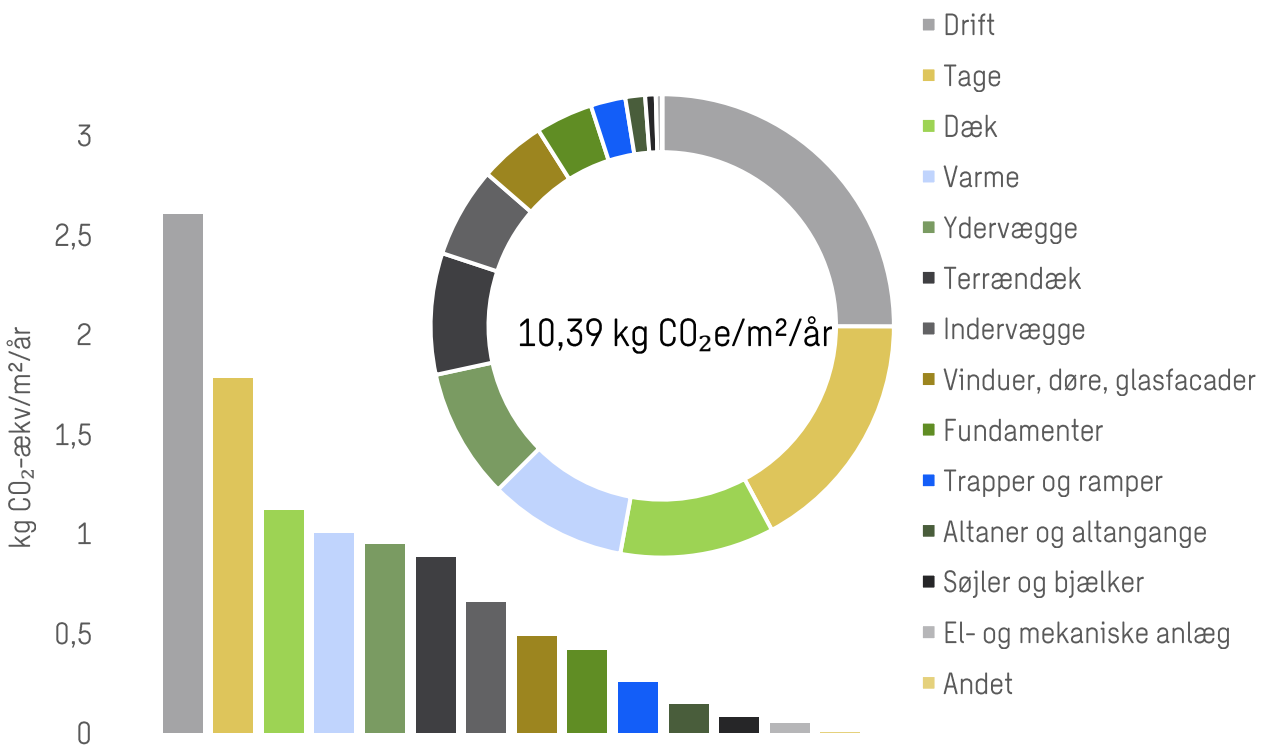
Scoping of the project and setting the baseline

- First, scope and framework of each project is defined, using various tools to map and prioritize initiatives.
- We discuss the ambitions of the project and existing plans for considering decarbonization
- We introduce key sustainability concepts and show how they can be linked and applied to your project in practice
- A carbon impact baseline is assessed and this is the starting point for further actions to decarbonize.

What is the baseline? And where are the hotspots?



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The sustainability compass

- The compass is used as a tool to translate sustainability into specific strategies and initiatives, allocated into four categories: *The place, the frame, the space and the people*.

  The Place because a project will always have to relate to its surrounding nature, community, etc.
  The Frame because a project will always have a frame, with the potential to use low carbon materials and resources.
  The space because a project will always define a space, that should enhance well-being.
  The people because a project will always have an impact on society.

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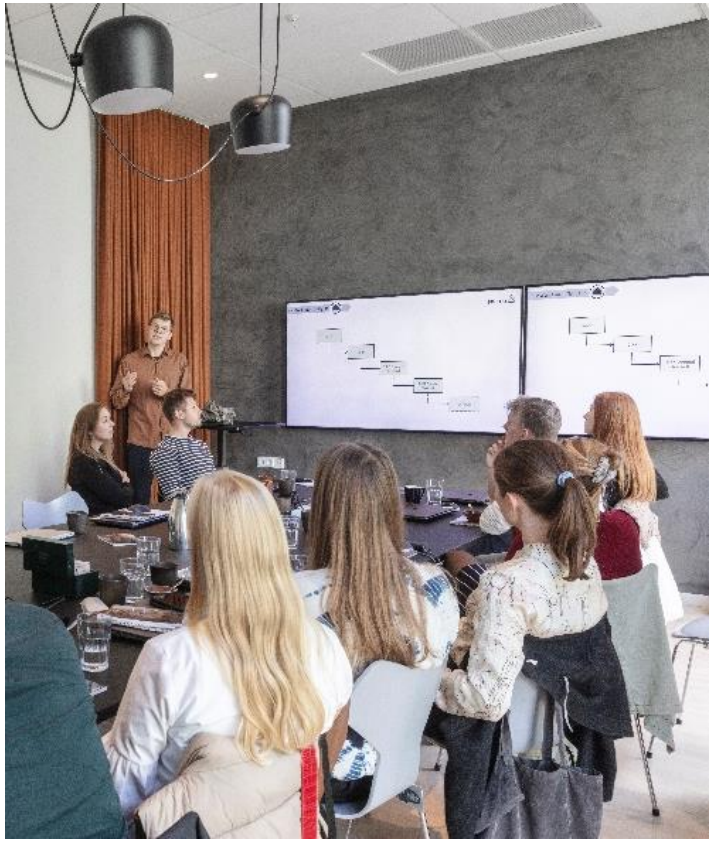
On-site workshops

- Based on the startup and the defined scope, potentials, strategies etc., on-site meetings are facilitated.
- The meetings will provide hands-on advice, tailored feedback, and strategic planning focused on achieving low carbon goals.
- We will look into the big potentials and low hanging fruits for decarbonization.
- We will discuss how to achieve this in the project and any potentials and barriers.



Measures library used as input at the workshops

Measures library sorted by discipline and project phase

Project phases/TIME

Disciplines/ Categories	Strategic definition	Preparation and Brief	Concept Design	Technical Design	Construction
Circularity	• Circularity • xx • xx	• Circularity • xx • xx	• Circularity • xx • xx	• Circularity • xx • xx	• Circularity • xx • xx
Architecture	• xx • xx	• xx • xx	• xx • xx	• xx • xx	• xx • xx
Construction	• xx • xx	• xx • xx	• xx • xx	• xx • xx	• xx • xx
HVAC	• xx • xx	• xx • xx	• xx • xx	• xx • xx	• xx • xx
GEOTECH	• xx • xx	• xx • xx	• xx • xx	• xx • xx	• xx • xx
XXX	• xx • xx	• xx • xx	• xx • xx	• xx • xx	• xx • xx

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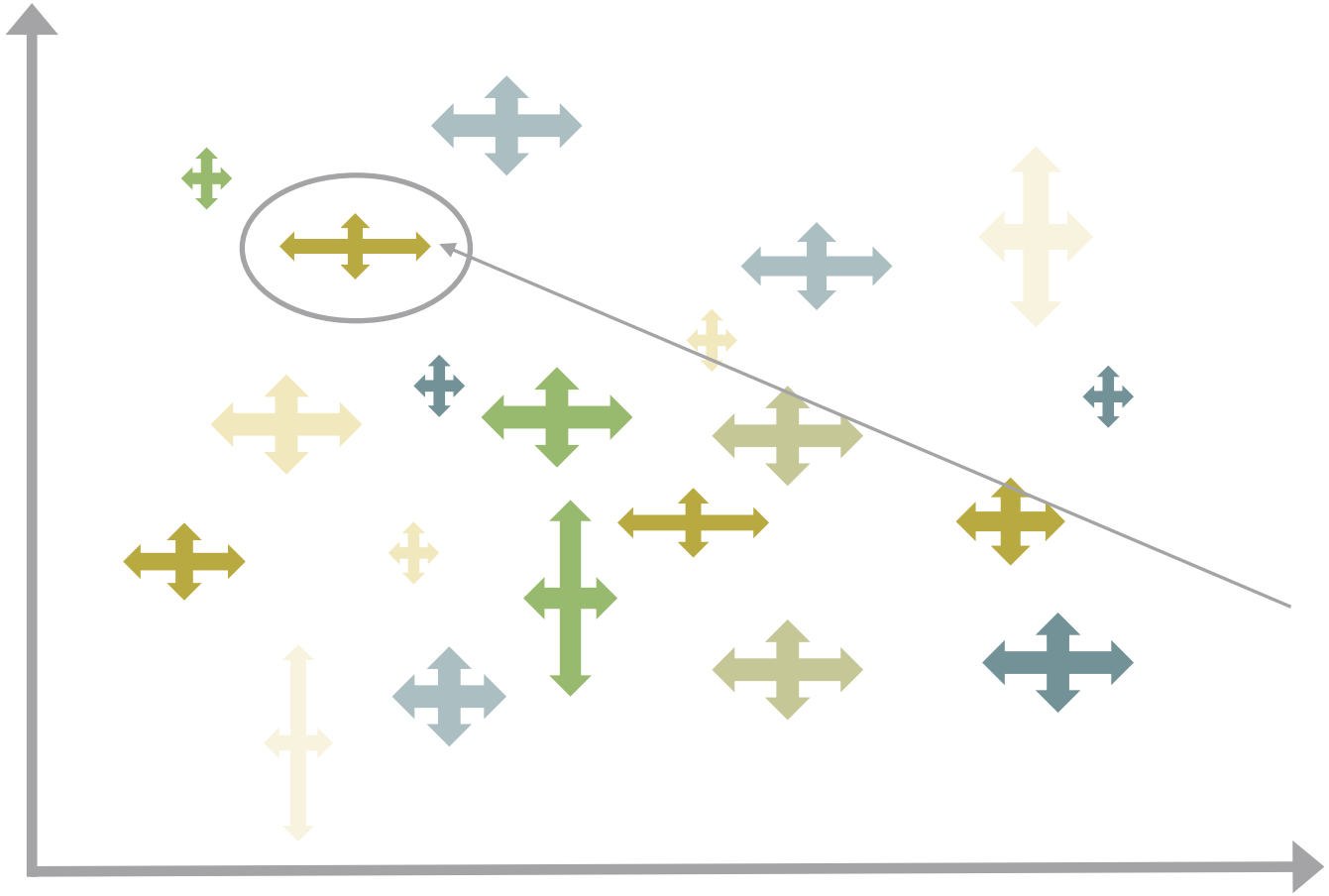
Workshop - process of sorting measures by discipline, potenial for carbon reduction and price/constraints



Reading example:
Construction measure (color coded)

- High carbon reduction potential
- Low/medium proce/other constraints
- Higher unceratinty in terms of price than carbon reduction potenial

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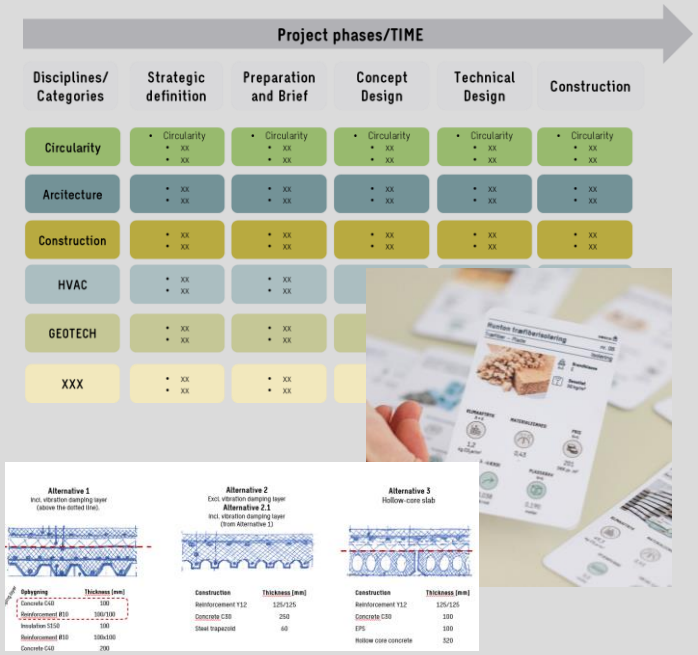
Workshop process

Measures Library + other tools from Sweco

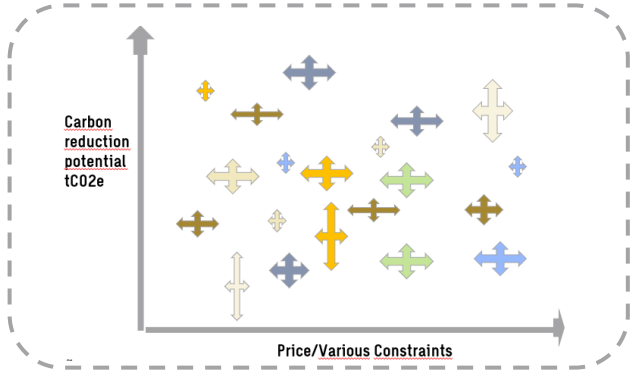


Input from Client

Building Function/ Need

Project specific info + constraints

Carbon measures categorisation



Input from Relevant Disciplines

Architecture | Construction | HVAC | GEOTECH | XXX

- Potential measures
- Alternatives
- Constraints

Output

- Selection of measures for further development
- To be followed up in later sessions

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Tools and activities to foster low carbon considerations

- As a part of the clinics, a wide range of tools will be presented and used.
  - Low carbon measures library
  - Assessment of scope of action/degrees of freedom
  - Selecting measures for further assessment and follow up
- Facilitate discussions and create a better understanding and knowledge of how to improve the projects climate performance

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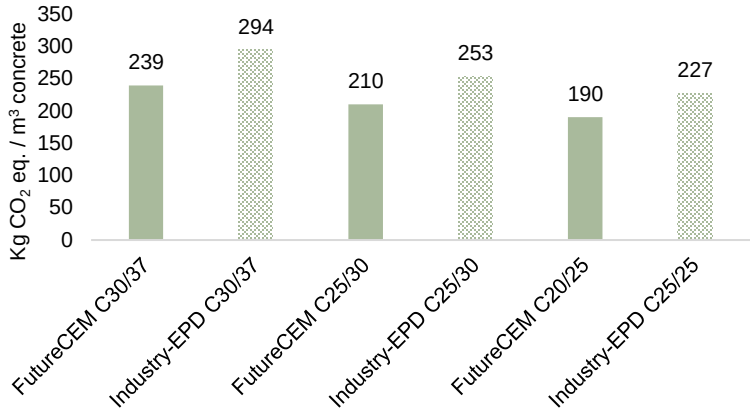
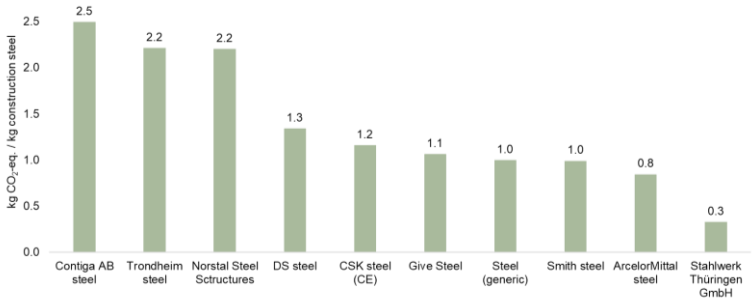
Low carbon materials and constructions

As an example, Sweco has developed a set of ‘Climate Cards’ of both materials and constructions.

These can be used to get an idea about different materials and constructions and the CO2 emissions related to these



Difference in CO2 emissions from concrete



Study on the difference in steel climate impact

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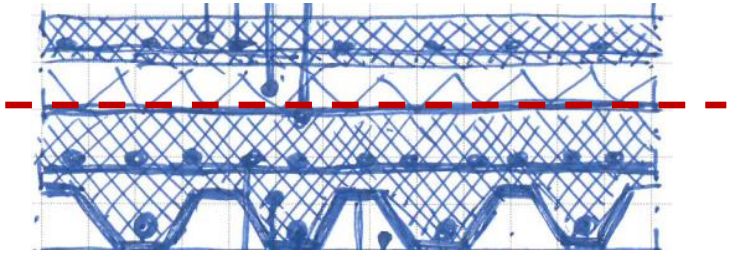
Example of different slab constructions

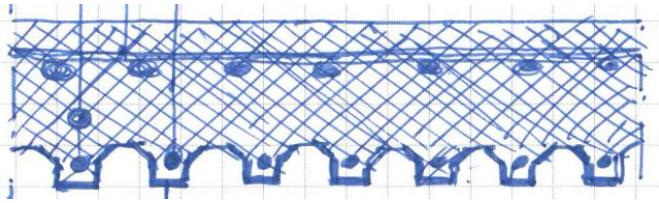
Alternative 1
Incl. vibration damping layer
(above the dotted line).



vibration damping layer

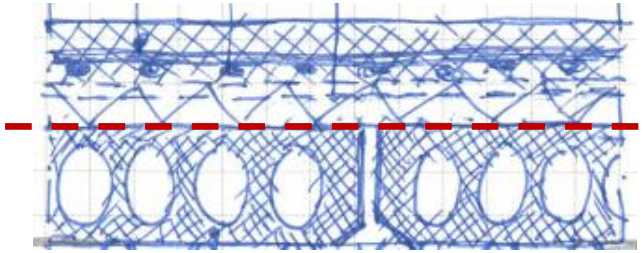
Construction	Thickness [mm]
Concrete C40	100
Reinforcement Ø10	100/100
Insulation S150	100
Reinforcement Ø10	100x100
Concrete C40	200
Reinforcement Ø16	-
Steel trapezoid	-

Alternative 2
Excl. vibration damping layer
Alternative 2.1
Incl. vibration damping layer
(from Alternative 1)



Construction	Thickness [mm]
Reinforcement Y12	125/125
Concrete C30	250
Steel trapezoid	60

Alternative 3
Hollow-core slab



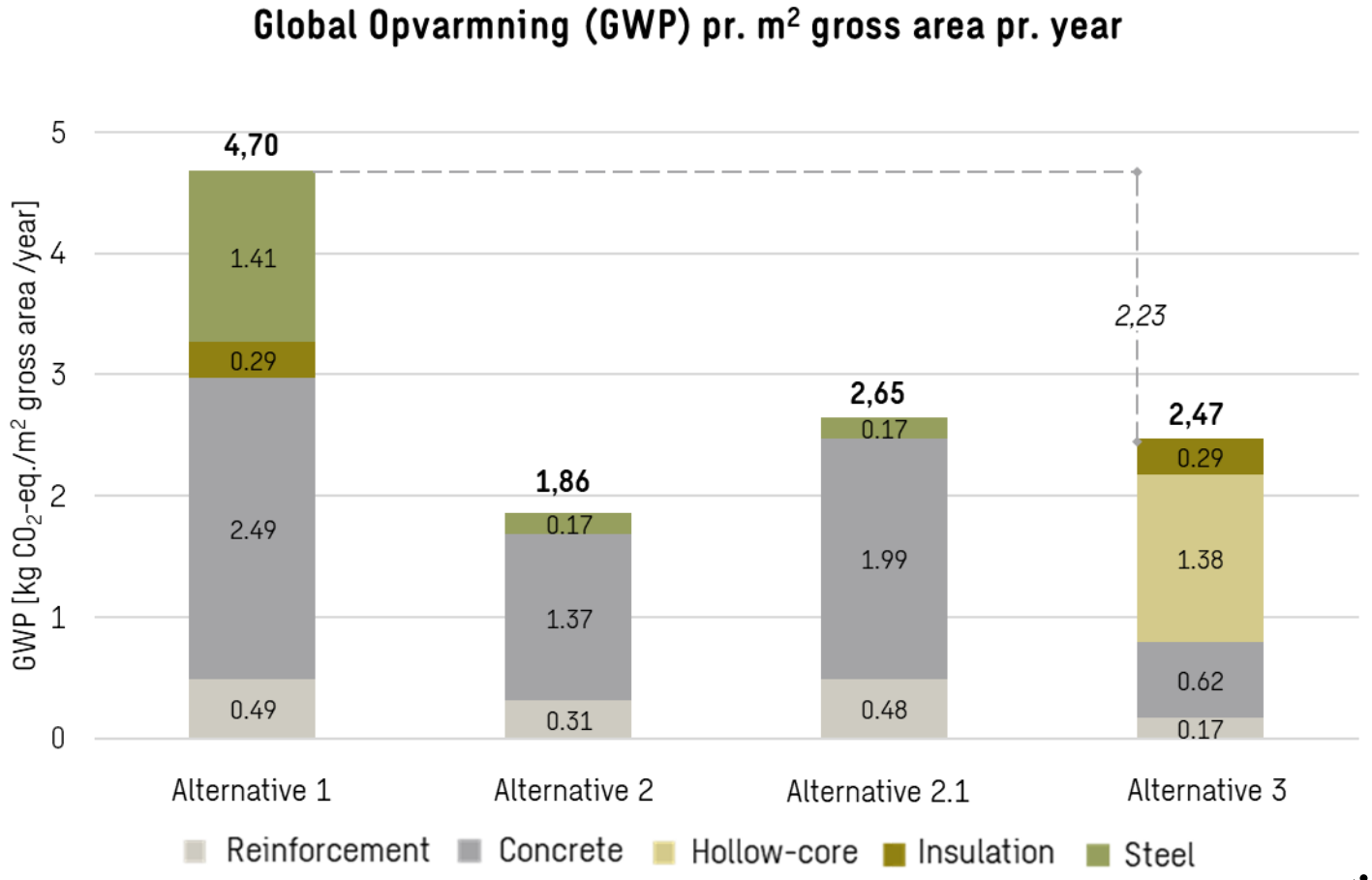
Construction	Thickness [mm]
Reinforcement Y12	125/125
Concrete C30	100
EPS	100
Hollow core concrete	320

Example of different slab constructions

CO_2-emissions for the constructions

The figure shows the total CO2 emissions for floor slabs indicated per m2 gross area per year.

Floor slab 2.1 is identical to Floor slab 2, but includes a vibration damping layer.



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Sign your project up for the low carbon clinics

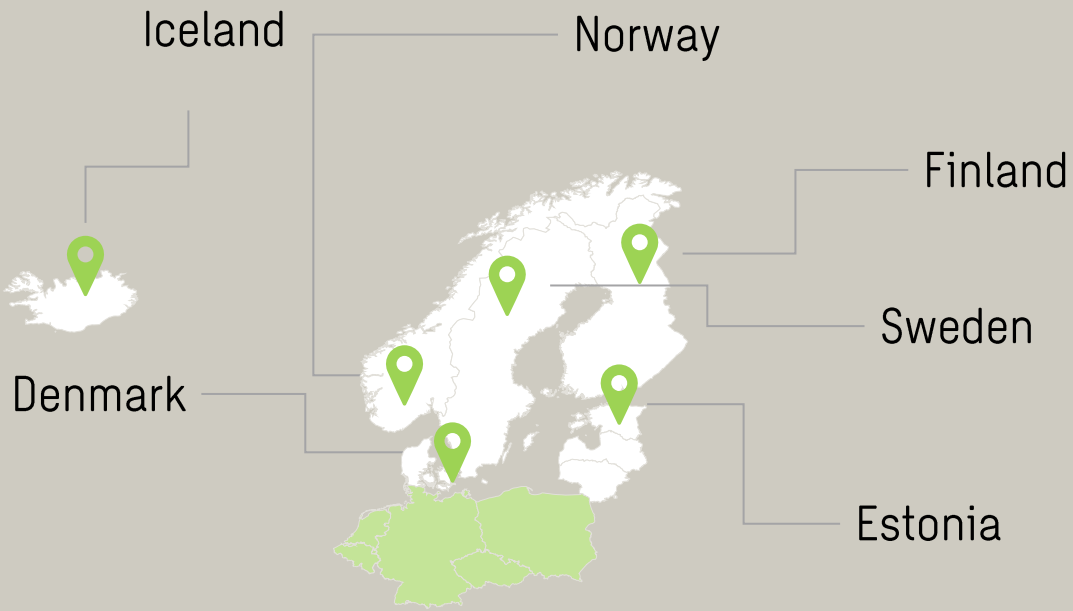
Aim to have projects from all countries

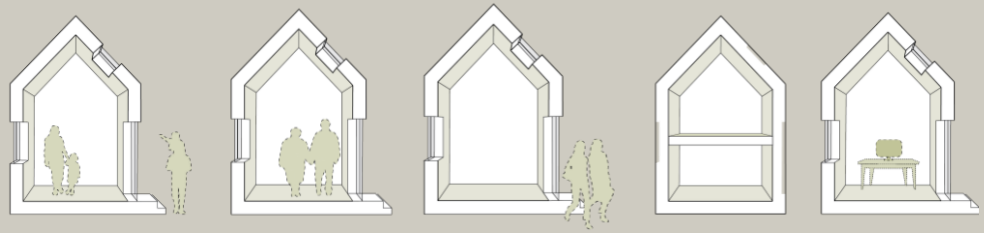
We encourage you to sign you project up to participate in the free low carbon clinics. The deadline for signing up is July 15.

Afterwards, we will select project to be included. We strive towards having projects from all countries

We would like to have different projects, such as different typologies or use of different construction materials

[Participate in the Nordic Low Carbon Clinic – Task 5.1 (sweco.dk)]





Questions?

Participate in the Nordic Low Carbon Clinic – Task 5.1 (sweco.dk)

Sign your project up for Nordic Low Carbon Building Catalogue – Task 5.2 (sweco.dk)

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Sign your project up to the low clinics

Participate in the Nordic Low Carbon Clinic – Task 5.1