



# Collaboration for circularity in the Swedish construction sector

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*IVL Swedish Environmental Research Institute*

29 October 2023 REBUS Conference, OSLO

# IVL Swedish Environmental Research Institute – the independent research institute

## OUR VISION, A SUSTAINABLE SOCIETY:

- A sustainable society that drives the transition by :
- Taking science to society
  - Turning environmental problems into opportunities
  - Bending linear processes into a circular economy

All of our profits are invested in research for the future

## WE WORK WITHIN THREE THEMATIC AREAS:



Sustainable environment



Sustainable transition



Sustainable society

We conduct applied research and consulting projects in the environmental field

## WE OPERATE IN:



Sweden, India and China

+330 employees working with an interdisciplinary and holistic approach

Almost a third of employees have doctorates

# Together for sustainable construction



Market trends  
Reused building materials

# Circular construction and reuse in Sweden – Challenges (2020)

- **Immature market**

An increased range of both actors and circular products is needed

- **Knowledge and experience**

With collaboration and exchange of experience, we change faster together

# Status Sweden: 2023

- Circular construction is part of the solution to more climate-efficient and resource-saving construction
- The market is
  - still immature
  - ...but several players and groups of players are on the move - the industry is bubbling
  - ...and we need actors that both demand and offer circular services and products
- Knowledge is increasing, but is still low



# Trends – Reused building materials in Sweden

**Predominate trend: Reuse within the  
same project**

**Other:  
Reuse within own organization  
Buy and sell via local och national  
platforms**

# Market trends

## Reused building materials



Local reuse depots/  
reuse hubs



Pilot projects are ongoing within  
the construction goods trade

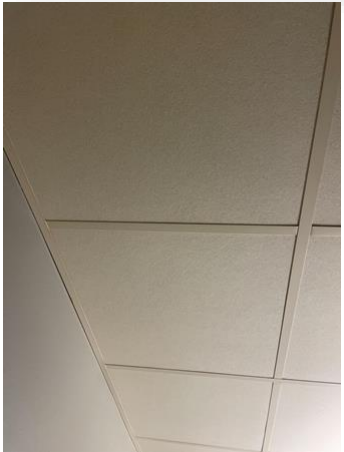


Circularity in public  
(and private) procurement



Circular product offers from  
material suppliers





# Example of reused products sold by material suppliers

Bricks

Light fittings

Ceilings

Ventilation ducts

Steel beams/columns

# Common flows in Sweden

## Återbruk sparar klimatet – även om träfönstret skickas ända till Kapstad



Återbruk av byggprodukter och möbler minskar de klimatpåverkande utsläppen generellt mer än klimatkostnaden för att göra dem klara för återbruk. Det visar en studie som gjorts av IVL Svenska Miljöinstitutet i Stockholms stad.

– Vi ser att exempelvis ett träfönster kan skickas för återbruk med lastbil längre än till Kapstad och ändå ha en mindre klimatpåverkan åter upp den besparing som görs, säger Johanna Andersson, IVL Svenska Miljöinstitutet i rapporten tillsammans med sina kolleger Sandra Moberg och Carina Loh Lindholm.

Resultatet i studien visar tydligt att klimatpåverkan från de processer som kan uppstå vid återbruk är betydligt lägre än den klimatbesparing man får av att undvika att köpa eller tillverka en ny produkt. Det gäller även klimatbesparing trots ökade transporter, lagerhållning och rekonditionering i samband med återbruk.

### Svårt att peka ut enskilda material

– Många vill ha en lista över vilka enskilda material eller produkter som ger störst climateffekt. Men en sådan bedömning är att det är olämpligt att peka ut några specifika. Det är viktigt att ta hänsyn till vilka material som är tillgängliga för återbruk, vilka mängder som omsätts och komplexiteten i återbruket. Även månader säger Johanna Andersson.

# Common flows of building materials in Sweden (2022)

## Common products for intermediate storage and sale

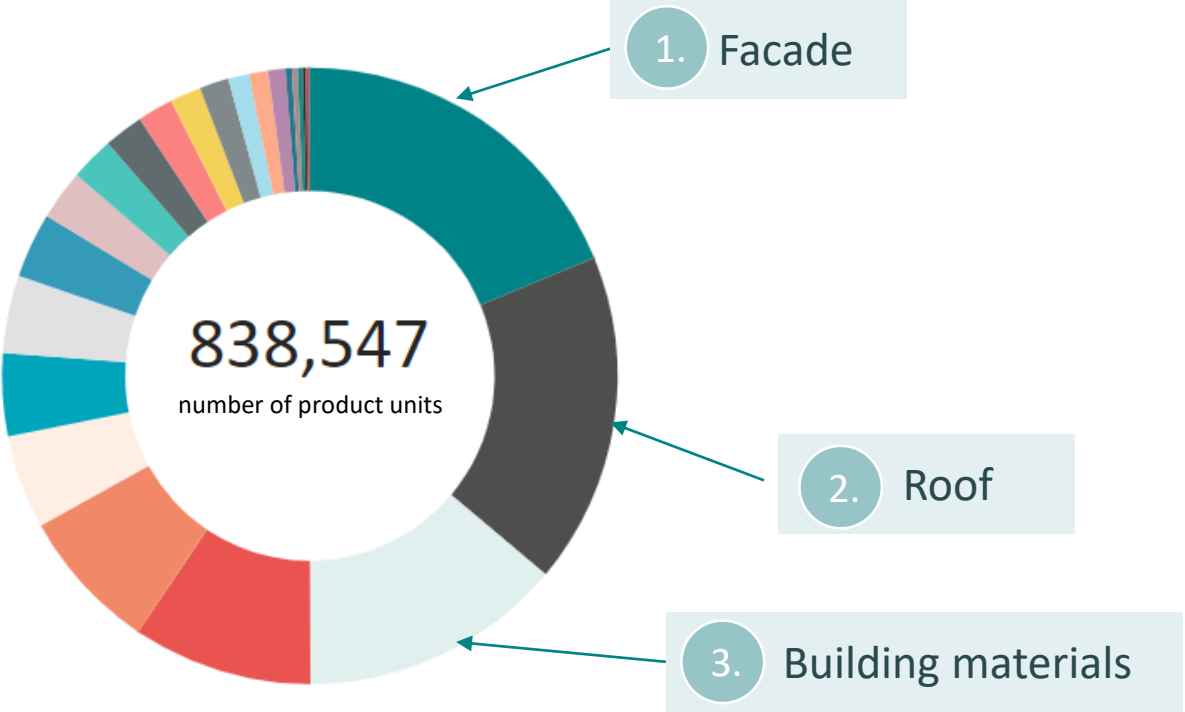
Celing	Wooden products	Other stone and concrete
Roof	Floor material	Building boards
Windows	Outdoor furniture	Insulation
Doors	Ground Material	Construction fitting etc
Bricks	Lightning	Interior & furniture
Other facade such as stone and sheet metal	Appliances (white goods)	

### Sources:

- Previous Swedish studies
- Real flows of building materials in local reuse depots
- Input from Stockholm's city – flows within own projects
- Products inventoried in CCBuild digital plattform

Read more (in swedish): [Klimat effekter av återbrukade byggprodukter och möbler: Metoder för värdering av climateffekter samt produkter vid mellanlagring och försäljning](#)

# Total amount of product units in CCBuild product bank (2019-01-14: 2023-11-20)



**78,773**  
ton  
( 728,468 produktenheter)

**19,507**  
ton CO2-ekv  
( 634,658 produktenheter)

**509**  
MSEK  
( 591,464 produktenheter)



Collaboration – a success factor for  
change in the Swedish construction  
sector?



# CCBuild - Centre for circular building

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

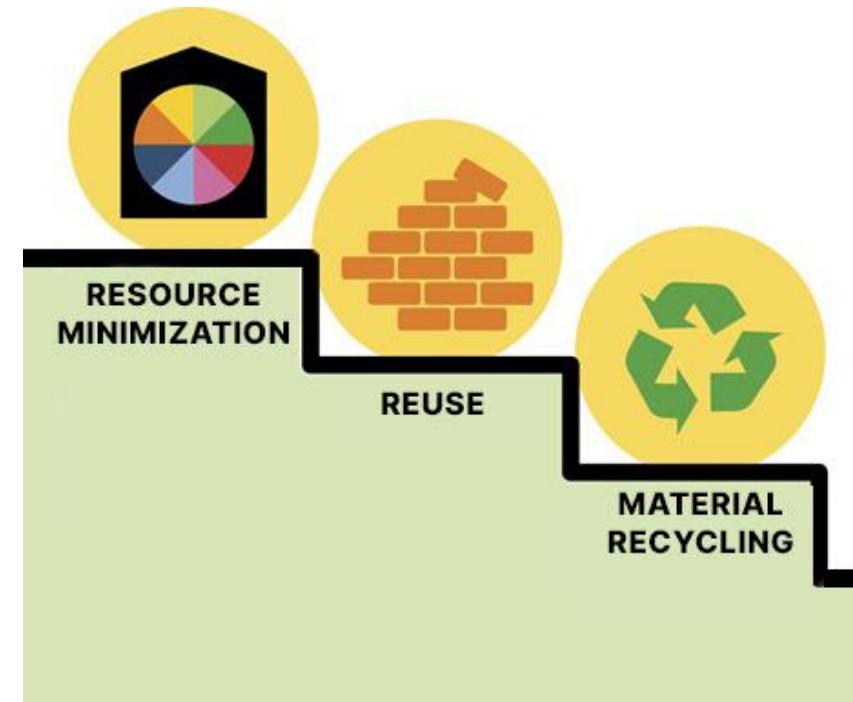
# CCBuild - Centre for circular building

Collaboration arena for reuse and circular material flows in the building and real estate sector in Sweden.

Growing network, over 150 partners

Developed in an innovation project (2015-2022) with support from Vinnova – the Swedish innovation agency

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

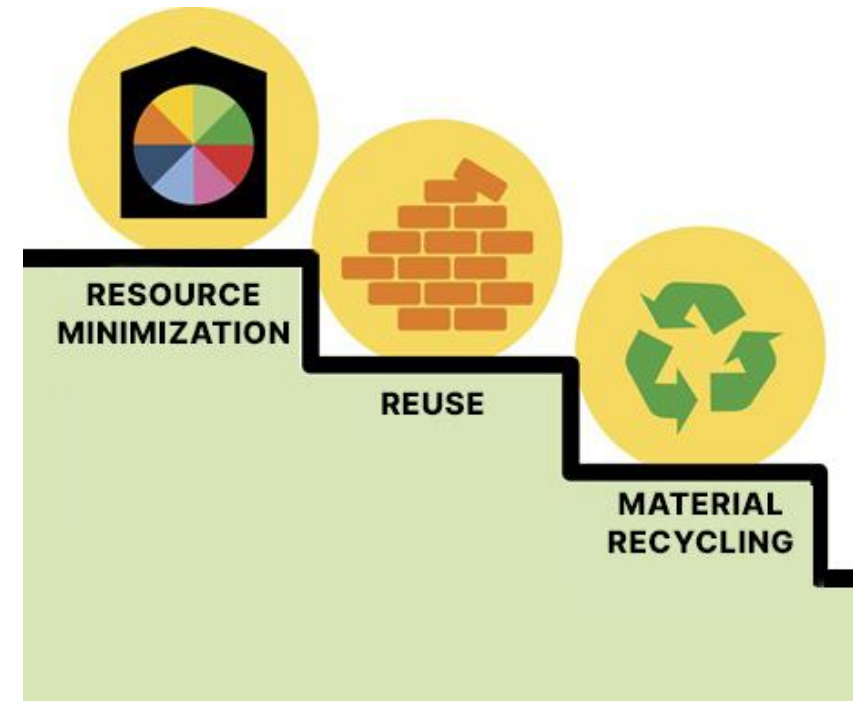


# Vision

A resource-efficient, circular and scientifically anchored civil engineering industry that develops and manages sustainable living environments for people in today's society and for future generations.

# Mission

Through digital tools, knowledge dissemination and collaboration, CCBuild supports the circular change in the civil engineering industry.





# [www.ccbuild.se](http://www.ccbuild.se)



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## Center for Circular Building

The building and real estate sector's common arena for circular building



### Marketplace

Visit the marketplace if you are looking for re-useable building materials, interiors, furniture or circular services. The marketplace is synchronized with CCBuilds product bank and inventory app.

Marketplace



### Reference projects

The parties involved in the Center for Circular Building have conducted many projects with focus on re-use and circularity. Here you can see many good examples. Learn from them and be inspired!

Reference projects



### Digital services

Use our digital services to digitalize your building materials, interior and furniture to make them easily accessible for use and reuse. CCBuild's digital platform provides support both for internal reuse - within projects or organizations - and for external reuse through publication on our marketplace.

Digital services

## Training and network forum

- National arena
- Local forums
- Education

## Knowledge bank

- Reference projects
- Guides
- Reports

## Digital tools

- Inventory
- Product bank
- Marketplace

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Tack!

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