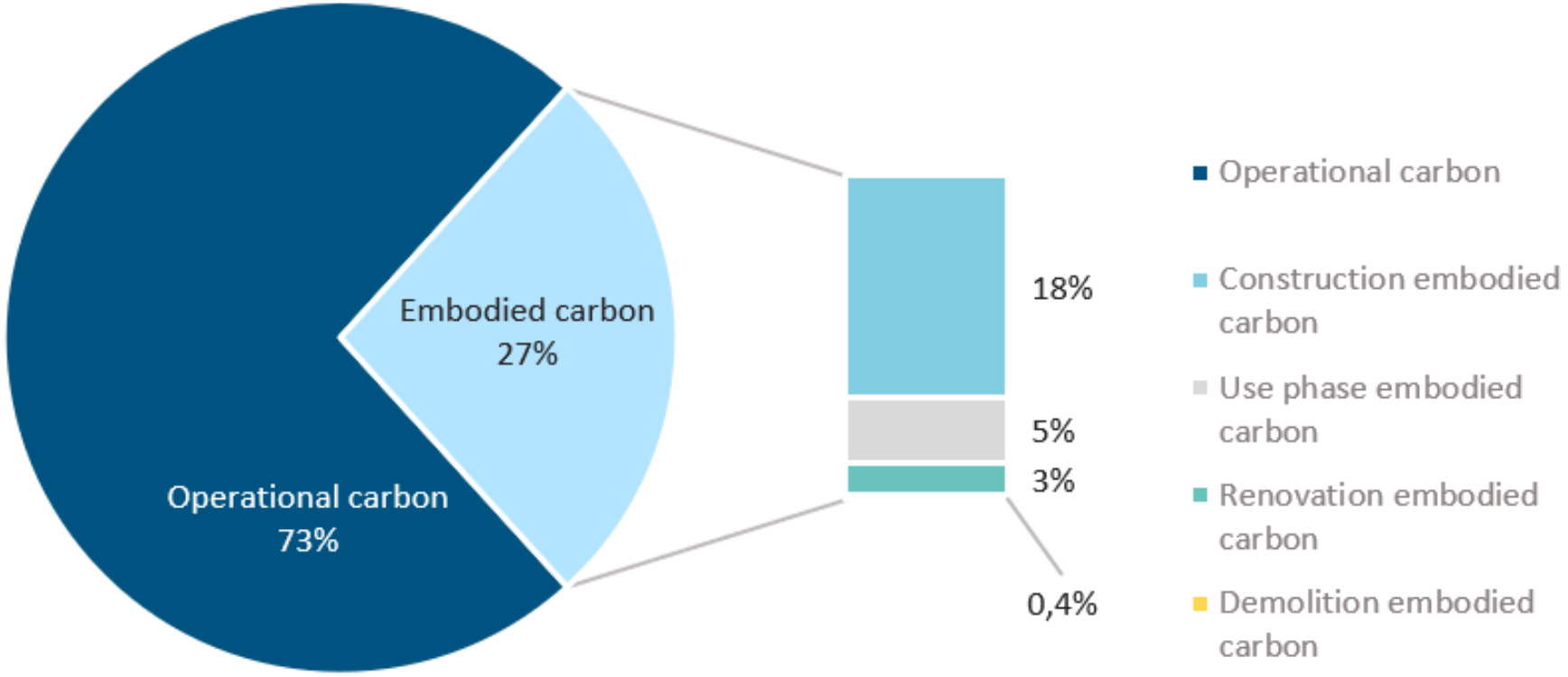
Keep buildings we have and use them better

Josefina LINDBLOM

DG Environment

GHG emissions - EU building stock

Figure·2.·Greenhouse·gas·emission·distribution·by·building·stock·activity,·baseline·year·2020



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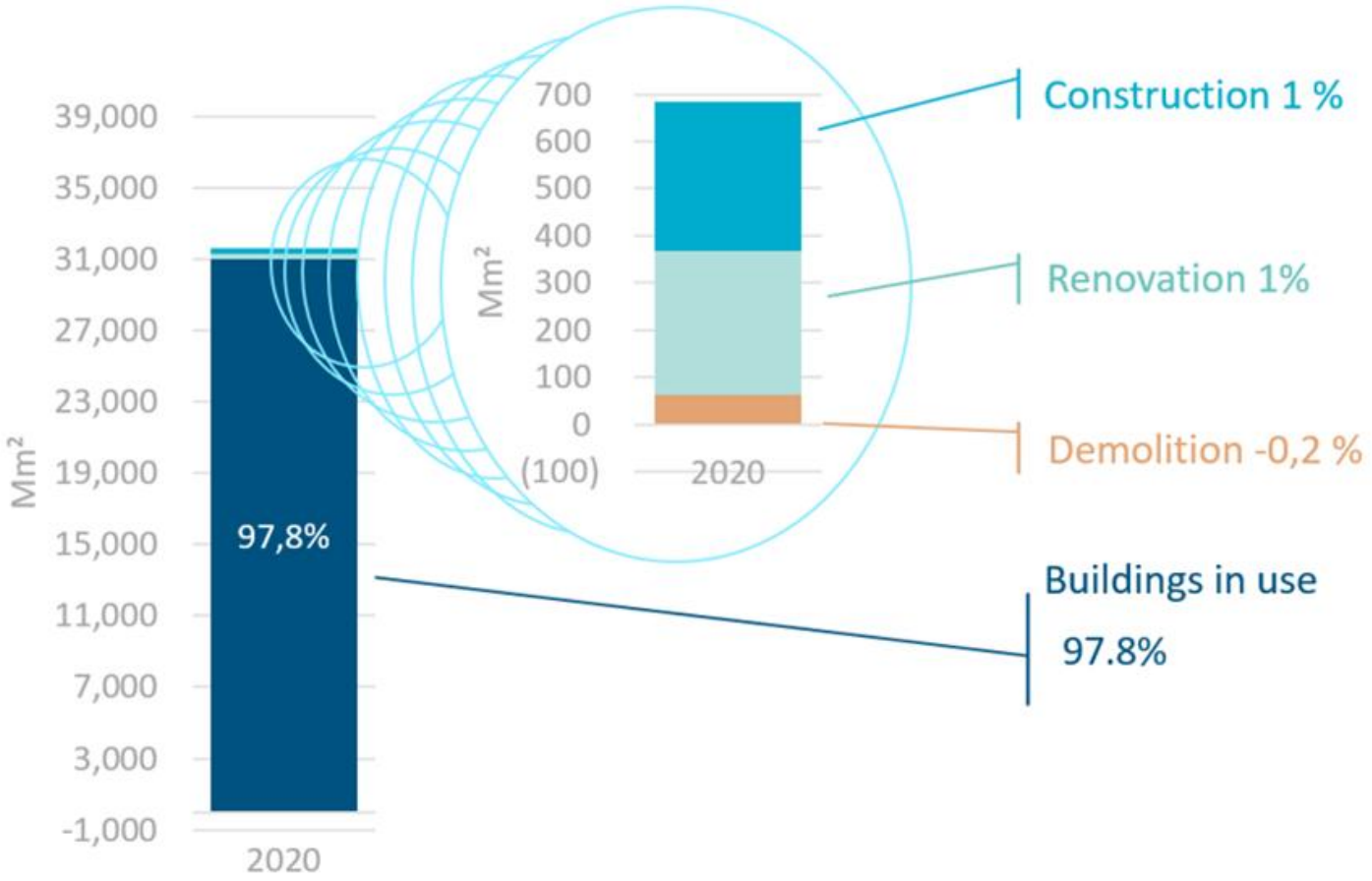
EU building stock activity

Figure·3.·Building·stock·floor·area·distribution·in·million·m2·in·the·baseline·year·2020·for·construction·of·new·buildings,·renovations·and·demolitions.¶



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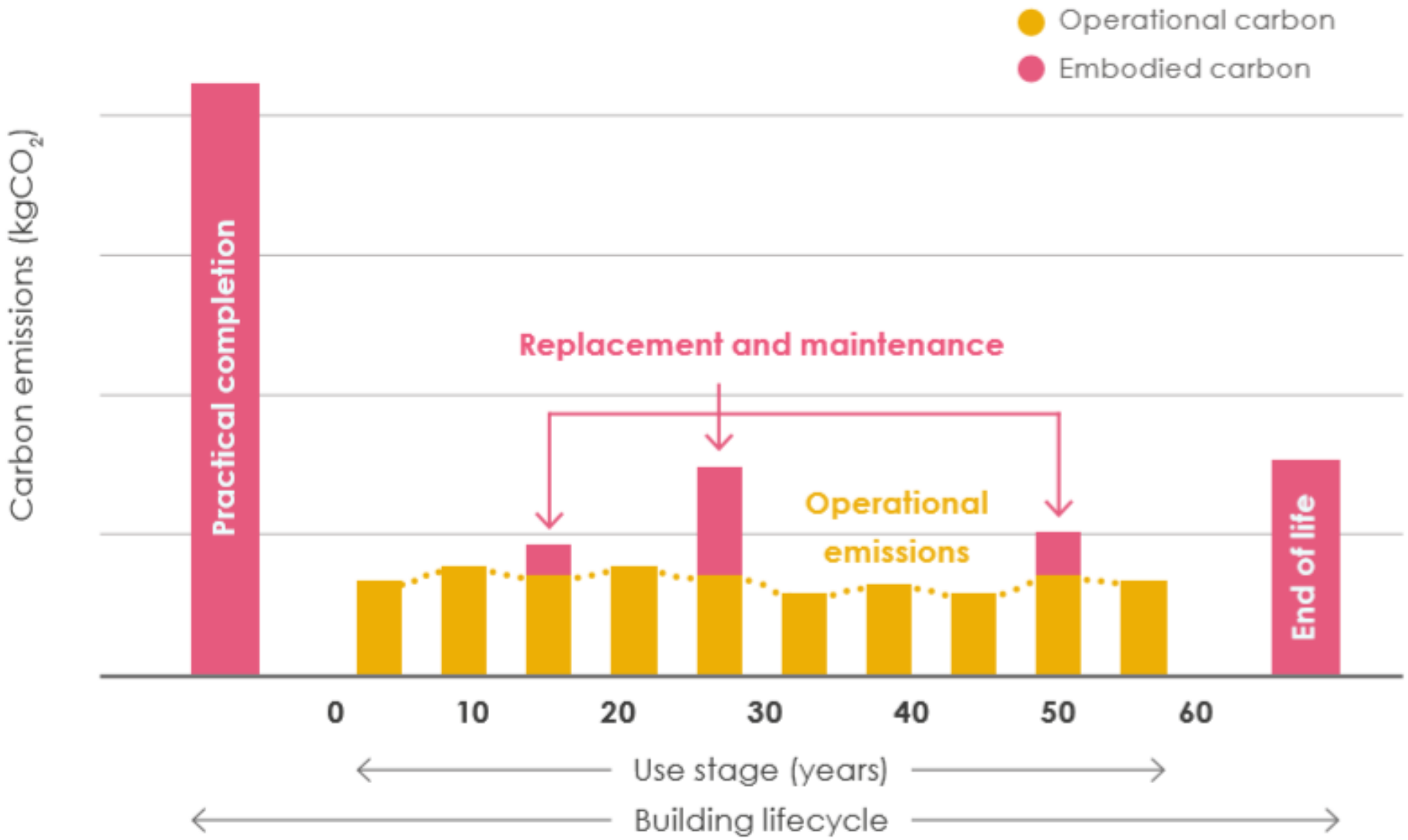
Whole life carbon at building level



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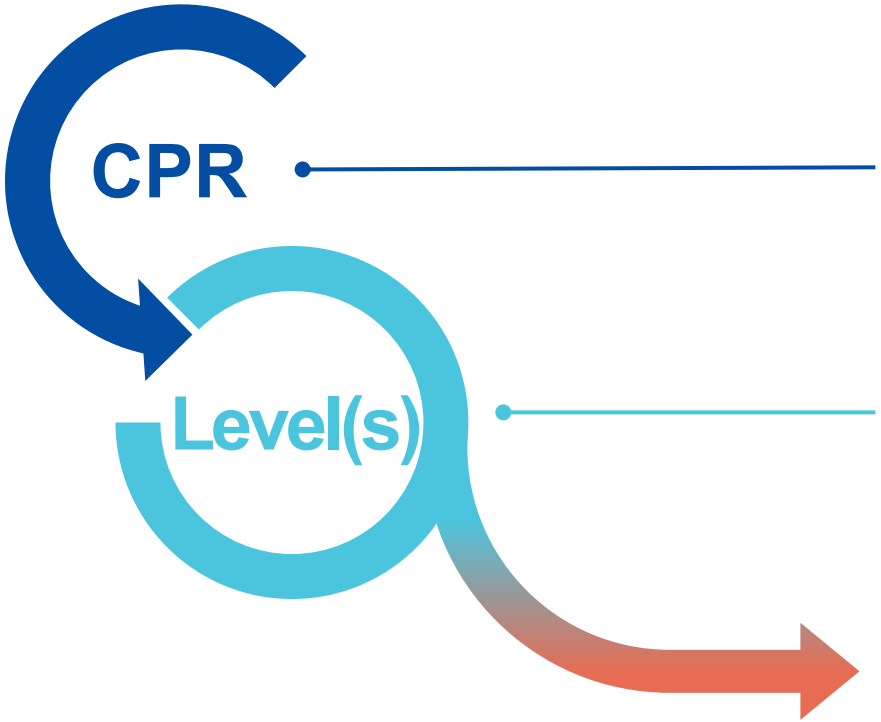
EU Regulatory framework



Construction Products Regulation
Delivery of environmental information from construction products and implementation of requirements

Level(s) methodology
Sustainability assessment of buildings

Taxonomy
Sustainable activities

EPBD
Sustainable buildings

EED
Public procurement of buildings

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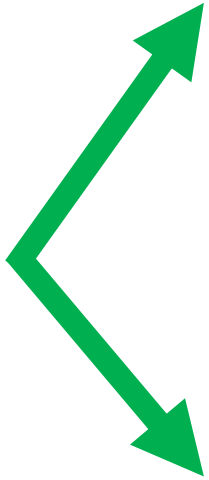
EPBD on whole life carbon



- Article 7(2) : Calculation of LC Global Warming Potential (GWP)
- From 1-01-2028 for large new buildings, 01-01-2030 for all new buildings
  - Article 7(3) Calculation in accordance with the main principles of Annex III, pending the adoption of a DA to set out a Union framework for the national calculation of GWP by 31 December 2025
- Article 7(5) : By 01-01-2027, publication & notification of national roadmaps detailing introduction of limit values and targets

Timeline of the EPBD provisions for whole life carbon

May 2024

Publication of the EPBD in the OJ & entry into force
Directive - EU - 2024/1275 - EN - EUR-Lex (europa.eu)

31 December 2025

Delegated act setting out a Union framework for the national calculation of life-cycle GWP (Article 7(3))

(Under the scrutiny period until 16 April)

January 2027

Member States shall publish and notify to the Commission a roadmap on the introduction of limit values & targets

Article 7(5)

January 2028

> New buildings over 1000m2 useful floor area

Member States shall ensure that life-cycle GWP is calculated in accordance with Annex III and disclosed in the energy performance certificate.

Article 7(2)

January 2030

> All new buildings

Member States shall ensure that life-cycle GWP is calculated in accordance with Annex III (and DA) and disclosed in the energy performance certificate

+ **limit values** for all new buildings from national roadmaps

Article 7(2) + Article 7(5)

New buildings – or existing ones?

Göteborg -90% GHG by 2030

- Göteborg, second biggest city in Sweden.
- Public owner provides 25% of inhabitants with housing. In charge of 60% of all new built.
- 2020-2025 target: each building project halving its climate impact.
- To reach -90% by 2030 for entire stock, actions on each project is not enough. Fewer new projects are needed, instead new ways of thinking are required.

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Circularity lowering whole life carbon

Göteborg

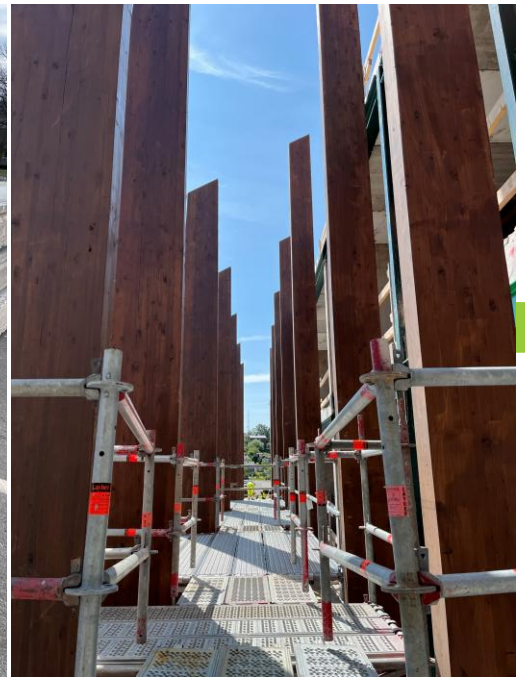

Photo credit: Framtiden Byggutveckling

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School transformation in Halland county (Sweden)

- County on west coast of Sweden.
- Case study assessments of different transformation scenarios.
- Calculated reduction of GHG and waste generation.
- Scaled up case study results to schools in whole county → representing yearly reduction of 7% of GHG from all building activities.

GHG and waste savings – vs new built

Scenario 1

Bevarande vid en enklare renovering innebär i medel 91% lägre klimatpåverkan än nybyggnation av motsvarande byggnad

Klimatbesparing
330 kg CO2e/m2 BTA

Minskad avfallsmängd
1380 kg/m2 BTA

Scenario 2

En ombyggnation där man behåller stommen kan ge 60% lägre klimatpåverkan än nybyggnation av motsvarande byggnad.

Klimatbesparing
218 kg CO2e/m2 BTA

Minskad avfallsmängd
1105 kg/m2 BTA

Scenario 3

Endast bottenplattan/ källarplanet behålls innebär i medel 30% lägre klimatpåverkan.

Klimatbesparing
110 kg CO2e/m2 BTA

Minskad avfallsmängd
618 kg/m2 BTA

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Showcasing Sufficiency - completed study

- Gaining a better understanding of vacancies is possible with little extra investment
- Measures are context dependent and need tailored approaches to be effective
- Requires capacity within public administrations
- In policy objectives driven by climate, social, economic, and aesthetic objectives

Office conversion to housing – completed study

- Create affordable, decent, high-quality housing in the centres of EU cities
- Often less costly than new construction, but bigger uncertainties
- Decarbonisation and urban regeneration
- Permitting process is key

Springville House before the office-to-residential conversion

Springville House after the office-to-residential conversion

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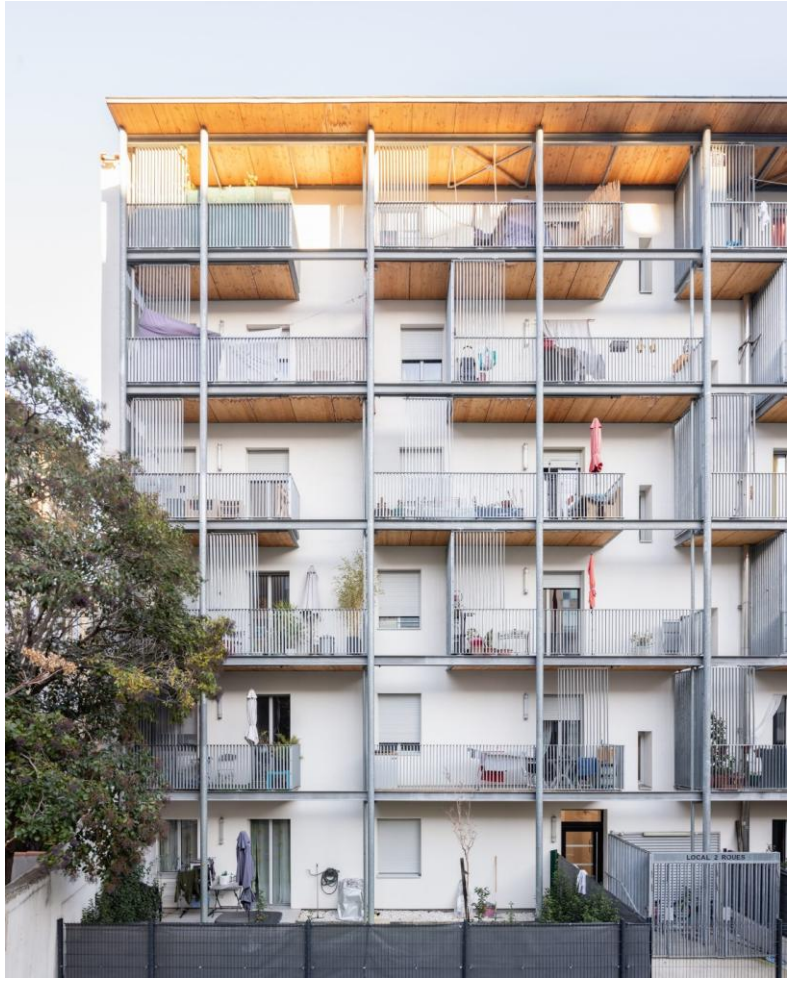
Coming study

Investigating

- how building policies as well as other conditions can impact the potential for sufficiency
- how data can be generated and shared, to allow for useful monitoring of e.g. vacant or underused building as well as conversion and infill potentials



Rue Acquaviva, Marseille

Housing Package - 2025

- Affordable Housing Plan
- Construction Housing Strategy
- New European Bauhaus Communication

Notuddsparken in Västerås, Sweden © New European Bauhaus

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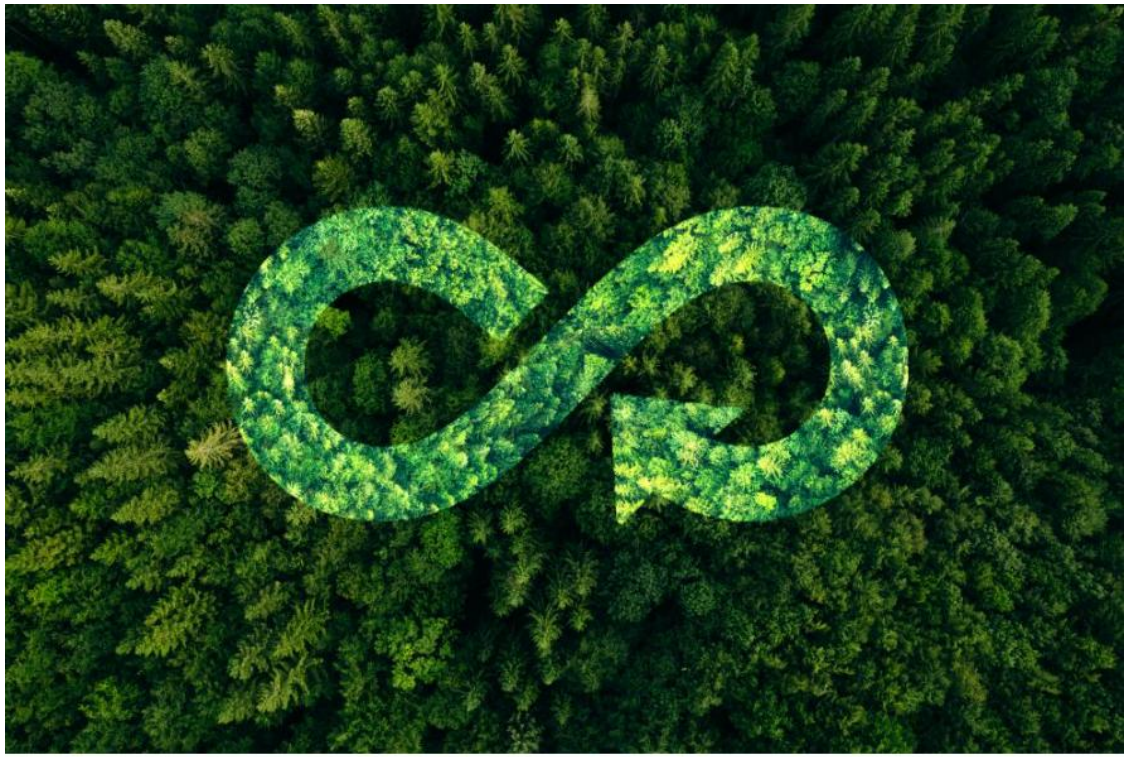
Circular Economy Act



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- Establishing a single market for secondary raw materials
- Boosting supply of and demand for secondary raw materials

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