

Survey on the European Commission Study on circular economy principles for building's design

Fields marked with * are mandatory.

Introduction

The European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) is undertaking a study on circular economy principles for buildings' design. Deloitte Conseil together with the Building Research Establishment (BRE) and In Extenso Innovation Croissance (IE IC) are supporting the Commission with this study.

The study was launched in April 2020 and will continue until January 2021. This study aims to **assist the European Commission to identify policy options to support the uptake of "Circular economy principles for buildings design"** in European, national and local policies, with the overall aim of increasing the service life of buildings, ease the use of secondary materials and improve resource efficiency throughout the building lifecycle. Key findings from the study will be used as an input to define the policies to be implemented in the context of the **Circular Economy Action Plan**.

The project team is currently conducting an online survey with relevant experts across the buildings value chain, namely building users, facility managers and owners; design teams (engineering & architecture); contractors and builders, including renovators; manufacturers (of construction products); deconstruction and demolition teams; investors, developers and insurance providers; and government/regulators (including national, regional and local (municipal) authorities responsible for land use/urban planning and building regulations/permits).

The aim of this survey is to collect further insights on how to enhance the circularity of buildings in the EU, particularly in relation to the following areas (independently and their interrelations):

1. Financing and fiscal instruments;
2. Urban design;
3. Building regulations;
4. Product information in relation to the circular economy

The deadline for the survey is 2 November 2020

[Data Protection Notice for the survey under the study on the on circular economy principles for buildings' design](#)

Before you start, we kindly ask you to **accept the data protection notice**.

This survey requires the provision of personal data. The computer ID will be also collected when filling in this survey. This information will be processed in accordance with Regulation (EU) No 2018/1725 on the protection of individuals with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data. For further information on data protection please see the privacy notice, which you can access at the end of the page.

Please, accept the privacy statement by answering the the question below.

I accept your Terms

Click on the following link to download the data protection notice

[Data Protection Notice Survey Circular buildings.pdf](#)

Personal information

* Last name, First name:

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Countries concerned by the answers (if different from country of location):

* Please indicate which of the following areas describe best your area of expertise:

between 1 and 7 choices







- Building users, facility managers and owners
- Design teams (engineering & architecture of buildings)
- Contractors and builders
- Manufacturers (of construction products)
- Deconstruction and demolition teams
- Investors, developers and insurance providers
- Government/regulators (including national, regional and local (municipal) authorities responsible for land use/urban planning and building regulations/permits)






Circular economy drivers

Which of the following are the most important drivers for the implementation of circularity across the life cycle of buildings?

(Note: In a broad context, circular economy principles include design and conception, construction, renovation and demolition activities that aim to reduce waste generation and pollution, ensuring products and materials remain in use as long as possible, use of secondary materials, regenerating natural systems, etc.).

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Commitment to reduce GHG emissions and/or other environmental impacts (e.g. end-of-life waste, energy efficiency)	
2) Savings on the whole life costs	
3) Access to available subsidies from national and/or EU programs for circular design in buildings	
4) Access to other types of available sustainable financing for circular design in buildings (e.g. loans, leasing models, etc.)	
5) Inclusion of circularity criteria in Green Public Procurement	
6) Increased interest/awareness from the end user on the benefits of sustainable design (across building life)	

7) Legislative requirements (i.e. compliance with regulations)	
8) Delivering a better quality product/ building for the end user	
9) Alignment with existing voluntary initiatives e.g. voluntary standards, certification schemes, etc	
10) Long-term sustainable business models that for example take into account factors such as resource scarcity, adapting to emerging trends, etc.	
11) Other (specify in the following question)	

Please specify if other drivers apply:

Resilience of the building sector (lesser material demand will allow for greater resilience of EU value chains)

Please include any other relevant information on drivers:



The setting of minimum performances requirements at building level targeting total carbon emissions including embodied emissions in materials in combination with minimum energy performance requirements, and even more mini performances requirements with regard all dimensions covered in LEVELs framework.











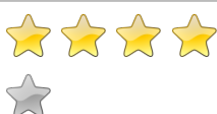
Circular economy barriers

Which of the following serve as barriers to the implementation of circularity across the life cycle of buildings?

(Note: In a broad context, circular economy principles include designing out waste and pollution, keeping products and materials in use as long as possible, regenerating natural systems).

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Lack of regulatory drivers	
2) Unfavorable market conditions (e.g. higher costs compared to conventional buildings)	

3) Lack of financial incentives (e.g. taxes, subsidies)	
4) Unclear costs & benefits across the value chain	
5) Difficulty to develop standards (e.g. due to the diverse characteristics of buildings)	
6) Lack of awareness and skills across the value chain	
7) Lack of suitable secondary materials	
8) Lack of incentive to design with the aim to reduce impacts at the end of life	
9) Lack of alternative design options and technical solutions	
10) Lack of data and tools to effectively measure and monitor circularity performance	
11) Low (or uncertain) value of materials/products at end of life	
12) Uncertainty around building life span and future use requirements	
13) Other (specify in the following question)	









Please specify if other barriers apply:







Lack of real possibility to consider competitive offers for consumers/users when in search of a dwelling (to rent or buy) that would enable to really decide based on circular/sustainable criteria (not the same choice as when purchasing a car or a smartphone)

Please include any other relevant information on barriers:

Circular economy opportunities

To what extent should the following opportunities be the focus of future policy interventions to further promote circularity across the building life cycle?-[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Improvements in human health and productivity of building occupants	
2) Increase of access to sustainable financing	
3) Enhance market differentiation (e.g. activities to promote the benefits of sustainable materials and processes)	
4) Establishment of alternative & sustainable business models (e.g. “take-back” business models or “product as a service”)	
5) Anticipating changes in future use requirements e.g. during design & conception phase	
6) Use of construction techniques that facilitate easier maintenance, replacement and repairs i.e. renovation activities at product, system and building levels	
7) Optimizing the whole life cost and value of buildings (e.g. by making use of building passports, Building Information Modelling, etc.)	
8) Readily applicable measurement methodology/standard for circularity performance	

9) Promotion of performance and quality-based contracts	
10) Integration of health and environmental considerations in the end of life management of buildings	
11) Promote design for deconstruction and disassembly	
12) Develop standards on the reusability and recyclability of products and materials	
13) Improvements in collaboration of actors involved across the whole building value chain	
14) Other (specify in the question below)	

Please specify if other opportunities apply:

More systematic consultation and co-design of solutions with concerned publics at urban plans level (notably brownfield renovation) as well as at building level (notably public building).
Greater information sharing along the value chain

Please include any other relevant information on opportunities and future policy initiatives:

Make sure the EPBD is turn into a SPBD = sustainable performances of buildings to not limit the revision to mere energy use aspects.

* Broadly speaking, what types of policy measures would be the most appropriate to promote circular economy opportunities in building design?

[Multiple choices possible]

- 1) Mandatory requirements e.g. minimum standards, targets
- 2) Financing and related technical assistance (e.g. grants, loans)
- 3) Information campaigns, exchange of best practices
- 4) Capacity building in public authorities

- 5) Skills, qualifications, training and education initiatives
- 6) Research and innovation, new technology and techniques
- 7) Measures to improve availability and quality of data
- 8) Fiscal measures e.g. tax incentives
- 9) Other (Please specify in the question below)







Please specify if other types of policies apply:

building passport, Green public procurement, levels

Stakeholder involvement

How important are the following tools in improving the collaboration between building professionals in the value chain to further enhance circularity in buildings?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Promote common understanding and interpretation through the use of existing standards, development of or update of existing guidelines	
2) Development of dedicated communication platforms for knowledge exchange and collaboration	
3) Organization of thematic workshops and conferences	
4) Training of professionals across the entire value chain of buildings	
5) Wide implementation of Building Information Modelling (BIM)	
6) Other (specify in the question below)	

Please specify if other types stakeholder commitment methods apply

to develop more awareness and solutions on material exchange platforms (to enhance use of secondary materials)? + to develop specific promotion of re-fabricated materials and how they can be better used in construction sector by SMEs

Please further elaborate on any effective collaboration methods in your country / domain of expertise involving different target groups:

Policy landscape

* Are you aware of existing national or regional level policies and/or favorable market conditions that facilitate implementation of circular principles for buildings design in the areas of financing and fiscal instruments; urban design; building regulations; and product information to circular economy?

- Yes
 No
 Don't know

If answered yes to the above question, please describe further the policy initiatives and/or favorable market conditions:

We would like to mention here:

Finland is targeting total C emissions Finland also has an overall commitment to carbon negative buildings
France has a voluntary E+C scheme that can be taken as a best case.
Italy has mandatory use of core GPP criteria for public procurement, which is a key driver, especially for low carbon construction materials.

To what extent do these policy and/or market initiatives work together coherently?

A mix of mandatory minimum requirements, GPP increased ambition and voluntary schemes for frontrunners has proved to be working in other market areas.

Are there gaps in these policy and/or market initiatives?

- Yes
 No
 I don't know

If answered yes to the above question, please describe further the gaps or inconsistencies in these existing policy and/or market initiatives:

They are not developed in full consistency and not necessarily aligned, for example:

- no alignment between the approaches developed from EU to local level (the sustainable performances are not deployed from EU to local permitting)
- no alignment of subsidies or financial support with overall decarbonisation goals (many countries and local authorities still subsidize fossil fuel technologies)
- no alignment between our EU objectives and trade rules (we can import products and solutions which are not compatible with our decarbonization goals)

What are the principal expected or demonstrated benefits of these initiatives (e.g. environmental, social and economic)?

France voluntary measure: raise awareness of embedded emissions to the end consumer
Italian GPP: increase the use of low carbon materials in the market via public building as a driver

Has there been a focus on climate change, such as whole life carbon, health aspects/resilience to climate change, life cycle costing?

- Yes
 No
 I don't know

If answered yes to the above question, please describe further the focus on climate change aspects in existing initiatives:

we would like to draw attention to the #BuildingLife campaign and to the BAMB project

In your view, could these initiatives be applied in other EU Member States, or across the EU as a whole?

- Yes
 No
 I don't know

Please elaborate further on the applicability / scalability of existing initiatives:

GPP and Minimum Performance Requirement can be standardised at EU level.

* Are you aware of existing policies that actively hinder or contradict circular economy uptake within buildings' design?









- Yes
 No
 I don't know

If answered yes to the above question, please describe further the existing policies:

The actual framework for construction building products does allow for hazardous substances to end up contaminating the products thus hampering the possible reuse/recycle phase.
Several local and regional building codes prevent the use of secondary raw materials in roads and other public procured constructions. There should be a centralised update on the technical capacities achieved by circular and low-carbon products such as steel from scrap

How important are the following policy areas in regard to supporting the decision-making process of building owners and increasing / improving the potential service life of buildings?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Costs of ownership, maintenance and operating costs during the use phase	
2) Durability in relation to materials and products, the supporting infrastructure and the building as a whole)	
3) Ease of maintenance and repairs of buildings and buildings components	
4) Financial incentives to invest on the flexibility and adaptability of buildings	
5) Provision of technical guidance on the choice of materials and design approaches	
6) Robust data and monitoring / measuring tools on building service life performance	
7) Planning zone incentives (i.e. planning tools used to entice developers to provide a public good (e.g. affordable housing, community amenities) by offering incentives (e.g. increased density).	
8) Other (please describe in the question below)	




Please specify if other policy areas apply

Facilitation of group purchasing of sustainable solutions by local authorities to create economy of scales and affordability opportunities + Specific support for most vulnerable populations with regard investment capacity + area renovation approach when refurbishing public equipments

Financial aspects of circular economy in buildings

Which of the following approaches are most effective in promoting a circular economy from a financial perspective?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Capitalization of future costs related to the deconstruction of buildings and other potential end-of life costs	
2) Integration of the durability of buildings and materials in financing building projects	
3) Integration of the adaptability of buildings and materials in financing building projects	
4) Integration of Life Cycle Costing when preparing investment decisions	
5) Consideration of the residual value of buildings to improve end-of life management	
6) Other (specify in the question below)	

Please specify if other approaches apply:

Creating differentiated loans and reimbursement schemes related to circularity of buildings + reduced VAT rate or tax credits on circular materials and or circular services (deconstruction versus demolition for example)

Please provide any relevant examples or best practices on financial approaches that promote the circularity of buildings:






as stated above reduced VAT or tax credits on circular buildings work

Criteria for increasing service life of buildings

How important are the following elements in increasing the service life of buildings during the design stage?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Climate change adaptation	
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2) Functional adaptability of the building as a whole	
3) Adaptability and life span of materials, products and systems/infrastructure	
4) Ease of maintenance, repair and renovation of materials, products and systems /infrastructure	
5) Reusability and/or recyclability of materials, products and systems	
6) Other (please specify in the question below)	




Please specify if other criteria apply:







Please provide any relevant examples of existing policies where the above criteria are applied:

Design aspects of buildings and circularity

How important are the following elements in promoting circularity in building design?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Service life and durability	
2) Flexibility and adaptability (i.e with respect to structural and functional design and potential for reuse or conversion, including public buildings and cases of flexible or multiple functionality for different users)	
3) Choice of materials and systems and life-cycle of materials	



4) Information on life-cycle environmental impacts (ex. embodied carbon) of construction products and at building level and the use of this information in building regulation and permits (e.g. in terms of thresholds)	
5) Information on health-related impacts linked to the use of certain materials	
6) Assembly techniques	
7) Design for deconstruction	
8) Maintenance related matters	
9) Others (please specify below)	








Please provide examples of existing policies where such criteria are applied, if you are aware of any.

Transparency of construction product information

How important are the following areas in increasing the transparency of construction product information to further promote circularity across the building life cycle?

[Please score: 1: Unimportant; 2: Slightly important; 3: Moderately important; 4: Important; 5: Very important]

1) Origin of products and constituent materials	
2) Information on potential for reuse and re-manufacturing	

3) Information on reparability	
4) Ability to deconstruct	
5) Information on reused materials and/or recycled content	
6) Information on recyclability	
7) Information on other sustainability-related aspects (e.g. environmental performance of materials, ethical aspects)	
8) Information on expected residual value e.g. take back value	
9) Other (specify in the question below)	

Please specify if other activities to increase of transparency apply

if not well covered by info on constituents: info on hazardous and substances of concern contents. We would like to remark that it is not only the type of information but also their comparability amongst products and materials delivering the same functionality that is crucial, so as to help best decision

Contact

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