Recommendation to the European Commission and the Platform on Sustainable Finance

Market feedback from testing the proposed Circular Economy EU-Taxonomy Technical Screening Criteria for Buildings

Intermediate Project Report

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Publication Details

ABSTRACT
This intermediate project report is part of a study of the European study consortium, consisting of eight European Green Building Councils and the Climate Positive Europe Alliance (CPEA), providing market feedback to the Platform on Sustainable Finance and European Commission on testing the market readiness of the proposed Circular Economy EU-Taxonomy Technical Screening Criteria for Buildings. It aims to guide the transition of the criteria of the Taxonomy from a technical proposal into a functioning system at the very core of a future-proof, circular European economy. A final report will be available as of January 2023.

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In this study, a study consortium of nine organisations were joined by 31 market participants from Austria, Belgium, Denmark, France, Germany, Ireland, Spain, Switzerland The Netherlands and Türkiye. They provided relevant information on applying the proposed Taxonomy criteria to real case buildings and contributed with their expertise and market know-how. A final report will be available as of January 2023.

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Executive Summary

In June 2021, a study consortium of nine EU-based organisations (the Green Building Council España (GBCe), Green Building Council Croatia (CGBC) the German Sustainable Building Council (DGNB), the Danish Green Building Council (DK-GBC) and the Austrian Sustainable Building Council (ÖGNI) and Climate Positive Europe Alliance (CPEA), the Swiss Sustainable Building Council (SGNI), Croatian Green Building Council(GBC Croatia), the Bulgarian GBC and the Dutch Green Building Council (DGBC)) initiated a study on the "**Evaluation of the market-readiness of the proposed Circular Economy EU-Taxonomy Screening Criteria for construction and real estate activities**".

The consortium was joined by a group of 31 market participants from Austria, Belgium, Denmark, France, Germany, Ireland, Spain, Switzerland, The Netherlands and Türkiye, representing different stakeholder groups impacted by the EU-Taxonomy regulation: project developers, builders, asset managers, banks, sustainability consultancies and corporate real estate stakeholders. Among the organisations are: 011h, ABN Amro, Acciona, Arcelik, BASF Service Europe GmbH, Berlin Hyp AG, CBRE, Culmia, Die Bauingenieure Zertifizierung GmbH, ECE , EDGE, Hochtief, i3PT, List AG, Metrovacesa, OFB Projektentwicklung, Redevco, Sedlak, Soravia, Strabag, Turkeco, UBM Development, United Benefits Holding, VGP Industriebau GmbH, NPV, KIRKBI, Lærernes Pension, MT Højgaard, Danica Ejendomme and 1927 Estate.

The study tested **31 projects, 30 covering the "New Construction" activity and one project covering the "Renovation" activity** of the Taxonomy. Around 90% of the projects are (being) certified according to varying sustainable or green building standards, so a selection bias may accrue.

The diverse group of market participants were unanimous in their motivation to gain a deeper understanding of the Circular Economy Taxonomy, as the topic is perceived as challenging despite **the recognition that it is integral to sustainable sectoral economic activities**.

While the **study initiators welcome the high ambition** of the Circular Economy Taxonomy while simultaneously being concerned that in comparison to the existing Delegated Act and technical screening criteria for Climate Change Mitigation and Climate Change Adaptation, **the current ambition of the Circular Economy screening criteria would lead to cherry picking, as achieving alignment to the first two environmental objectives are perceived as less challenging**. To achieve wide application and realisation of the European circularity objectives, market participants claim the need for clearer description of scope and definitions.

Overarching recommendations:

1. **Align ambition in the taxonomies of the differing environmental objectives** to ensure equal uptake
2. **Incentivize and support renovation** over new construction economic activities and ensure level playing field within technical screening criteria.
3. **Develop and communicate clear and reliable roadmap** regarding higher ambitions to enable the market to start preparing for future requirements
4. **Recognize of existing standards, certifications, labels and related methods** to prevent challenges in data collection and hinder room for interpretation

Recommendation regarding New Construction and Renovation

1. **Clearly define methodologies and scope of application:** Especially when methodologies are referenced, key terms and scope must be defined, i.e. “reuse”, “recycling”, scope of LCA etc. Referring to different reference units (weight vs. surface) within requirements would lead to varying results.
2. **Refer to existing methodologies and introduce of quantitative benchmarks:** When it comes to Circular Economy relevant characteristics such as “adaptability”, “flexibility and dismantlability”, reference to existing methodologies and quantitative benchmarks reduce room for interpretation. For certain screening criteria the use of existing methodology could help in focussing on most relevant aspects.
3. **Allow country-specific documentation and consider national regulations**: Less-rigid documentation according to defined methodologies and country-specific methods should be allowed while considering national regulation, while simultaneously pursuing clear definitions on overall objective.

Introduction

The construction sector is crucial for a successful transition into a circular economy, as in Europe alone it is responsible for generating 35% of total waste and a third of the global resources are consumed by the built environment. Additionally, buildings generate around 40% of the annual carbon emissions globally, accruing from both the energy consumption and construction materials.

As part of the EU "Sustainable Finance Action Plan", the EU is aiming at mobilising finance for sustainable growth as finance is a critical enabler for transforming improvements in existing industries within Europe and globally. As part of the EU-Taxonomy, which aims at establishing a clear and detailed classification system for the EU's sustainable activities, the "transition to a circular economy" has been defined as one of the key environmental objectives. In March 2022 the Platform on Sustainable Finance proposed technical screening criteria for this objective.

The proposed technical screening criteria focus on recycling building components and structures, using best techniques that support circularity, restricting use of hazardous materials and considering the Global Warming Potential for new constructions and renovations. Depending on the final criteria that will be adopted by the European Commission in ultimo 2022 or primo 2023, the EU-Taxonomy could and should be an enabler for incentivising renovations and increasing the renovation rate in Europe, which is also vital to achieve the EU's other low-carbon economy objective.

About the study:
In April 2022 the study consortium consisting of Green Building Council España (GBCe), Green Building Council Croatia (CGBC) the German Sustainable Building Council (DGNB), the Danish Green Building Council (DK-GBC) and the Austrian Sustainable Building Council (ÖGNI) and Climate Positive Europe Alliance (CPEA), Swiss Sustainable Building Council (SGNI), Croatian Green Building Council (GBC Croatia), the Bulgarian GBC and the Dutch Green Building Council (DGBC) initiated the study for "Evaluation of the market readiness of the proposed Circular Economy Taxonomy Screening Criteria for construction and real estate activities".

The study's primary aim is to guide the transposition of the Taxonomy's technical screening criteria into market practices and processes that in turn will support firmly embedding Circular Economy principles in the construction and real estate sector in the EU. By applying the Taxonomy criteria on real projects, the study tests the strength of the proposed criteria in delivering the envisioned impact of the Taxonomy and identifies challenges, costs and benefits of implementing the related processes for market stakeholders.

The core study consortium was joined by 31 market participants who provided relevant information on applying the proposed criteria for significantly contributing to Circular Economy on real buildings and projects and contributed with their expertise and market know-how. Together with the market participants from Austria, Belgium, Denmark, France, Germany, Ireland, Spain, Switzerland, The Netherlands and Türkiye the criteria were thus applied to a total of 31 buildings. Basis of the market readiness study are the criteria as suggested by the Technical Working Group of the Platform on Sustainable Finance, as published in Part B - Annex: Technical Screening Criteria in March 2022[1].

The participating organisations represent different stakeholder groups that are directly impacted by the EU-Taxonomy regulation. They are project developers, builders, asset managers, banks, sustainability consultancies and corporate real estate stakeholders. Among the organisations are: 011h, ABN Amro, Acciona, Arcelik, BASF Service Europe GmbH, Berlin Hyp AG, CBRE, Culmia, Die Bauingenieure Zertifizierung GmbH, ECE Projektmanagement, EDGE, Hochtief, i3PT, List AG, Metrovacesa, OFB Projektentwicklung, Redevco, Sedlak, Soravia, Strabag, Turkeco, UBM Development, United Benefits Holding, VGP Industriebau GmbH, NPV, KIRKBI, Lærernes Pension, MT Højgaard and Danica Ejendomme and 1927 Estate.

Despite being a diverse group, market participants were unanimous as to their motivation to gain a deeper understanding on the Circular Economy Taxonomy requirements for future reporting obligations and to actively engage in developing feedback to both the Platform on Sustainable Finance and the European Commission.

Within the construction and real estate stakeholder community, the topic of circularity is still perceived as a challenging, vague and unclear subject despite the recognition that it is integral for sustainable sectoral economic activities. An additional driver for participation in the study was thus capacity building and awareness-raising. By affording participating organisations invaluable insights in relation to data requirements, data quality and verification with regards to increasing circularity in their respective projects and portfolios, the study was equally perceived as a means to foster the implementation of circularity and further sustainability criteria within organisational strategies and processes, assess their preparedness in accessing data for future evaluation, identify potential gaps within case study projects, enable peer comparison, and, ultimately, support becoming a front-runner in terms of implementation of and reporting against Circular Economy Taxonomy criteria.

Among participants awareness of the EU-Taxonomy was high, especially among those preparing for future reporting requirements. Awareness focussed mainly on the existing Annexes of the Taxonomy Regulation through which an economic activity can significantly contribute to climate change mitigation and climate change adaptation. However, project developers stressed that awareness of Taxonomy requirements in detail and for implementation was still quite low among stakeholders, especially when Taxonomy compliance is specified within projects. Companies' internal processes are being adapted, be it in internal benchmarks being set, including taxonomy in strategic and investment decision-

[1] https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy-annex_en.pdf

making processes, deciding on a project site or building materials or within the due diligence processes related to acquisition and purchase procedures.

The study group also set out to increase knowledge on Circular Economy. As part of the study project, market participants were able to join two training sessions on implementing circularity in building projects. After study kick-off in June 2022, market participants were offered the opportunity to join an introductory training session, comprising circular economy strategies, circular economy instruments and business models in the built environment. The second session, which took place in July 2022, was focussed on the technical screening criteria for significant contribution to Circular Economy, proposed by the Platform on Sustainable Finance and published in March 2022[2]. The training also entailed relevant information on those elements from Level(s)[3] referenced within the proposed screening criteria.
Finally, market participants had the option to take part in multiple Q&A sessions to discuss questions and challenges in understanding the technical screening criteria, application to projects and collecting documentation with the core study group and their peers.

Between the 31 market participants the Circular Economy technical screening criteria were applied to 32 new construction and one renovation project.

Methodology

To assess the market readiness of the proposed technical screening criteria for a significant contribution to Circular Economy, market participants had a period of six weeks to complete data collection - though this was an extended period, it must be recognised that the phase of data collection was done from mid-July until beginning of September, in other words, data collection had to be undertaken during Europe's core summer vacation time.
While the scope and representativeness may be somewhat limited due to the number of projects evaluated, this study of the market-readiness of the proposed screening criteria does however provide valuable feedback from first-hand users of the criteria.

Focal point of the study was the proposed Significant Contributions to Circular Economy, while the Do Not Significant Harm criteria to the remaining environmental objectives were only being considered for company-specific feedback and therefore do not form part of the scope of the recommendation, given that these criteria were considered finalised due to their inclusivity in the already adopted Climate Change Mitigation and Climate Change Adaptation taxonomies respectively.

To facilitate data collection, participating organisations were given two questionnaires including the criteria for DNSH, one for new construction activities and one for renovation. The questionnaires included proposals for documentation, additional instructions on references to the Level(s) framework and an additional section on evaluating the reliability of the provided

[2] https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy-annex_en.pdf
[3] https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM1_Introduction_to_Level(s)_v1.1_27pp.pdf

answers. Participants were also interviewed regarding their motivation for participating in the study, their companies' targets and status quo related to both Circular Economy, the EU-Taxonomy and associated reporting obligations.
During the initial phase of the study, prior to data collection, as mentioned above, market participants could optionally participate in trainings on Circular Economy topics and the proposed screening criteria. Furthermore, the study consortium provided multiple Q&A sessions. Both trainings and Q&A sessions were well frequented, as they enabled insightful exchange between different market participants. Simultaneously, the frequency indicated the need and the willingness of participating organisations for exchange on the proposed screening criteria.

The results published here are an initial summary of the current market readiness.

As such, the findings presented are geared at helping the European Commission in defining the delegated acts that will extend the existing Taxonomy regulations. Both the study consortium members as well as market participants sincerely hope that the Platform on Sustainable Finance and the Commission take to heart the findings of the study.

The feedback document is structured as follows, summarising first the reflections of the market participants, the Advisory Board, and the study consortium of nine GBCs, followed by specific recommendations derived from reflections:

1. Summarised results of applying the proposed criteria
2. Overarching topics
3. Activity: New Construction
4. Activity: Renovation

We are happy to discuss the findings in person with representatives from the European Commission as well as the Platform on Sustainable Finance.

DISCLAIMER: The observations and recommendations presented here are the results of an intensive consultation and feedback process spanning several months across a large number of different organisations. Regular meetings have been conducted to consolidate the feedback and recommendations. The data basis for this report are the experiences with the application of the proposed Taxonomy criteria of the different participants. We therefore would like to point out that not all observations presented here are shared by all study participants. In similar fashion, not all recommendations are shared by all participants.

Summarised results of applying the proposed criteria

Table 1: Overview of buildings

Economic Activity	Building Type	Number of Projects (number of certified/ to be certified projects)
New Construction	Residential; Office; Logistic; Mixed Use; Retail; Hotel; Other	30 (27)
Renovation	Mixed Use	1 (1)

Evaluation of meeting requirements

- requirements **met** by > 70% of the projects
- requirements met by <70% of the projects
- requirements **not met** by around 50% of the projects

Evaluation of evidence according to data collection

- evidence not available (>85%)
- simple assessment
- verifiable documentation available (as part of certification)

Table 2: Assessment Results Significant Contribution Circular Economy

Circular Economy Technical Screening Criteria		**Meeting requirements by projects**	**Evaluation of evidence**
1.	Waste generation according to EU Demolition and Construction Protocol		
	Recycling 90% of non-hazardous construction and demolition waste		
2.	Calculation of Life Cycle Analysis (LCA)		
	Publication of LCA results		

3.	Construction designs and techniques supporting circularity		
	• resource efficiency		
	• adaptability and flexibility		
	• ease of dismantling		
4.[4]	Retaining 50% of the original building		
4.	Asset comprising of 50% re-used, recycled or responsibly-sourced renewable materials		
	15% reused		
	15% recycled content		
	20% reused/ recycled/ responsibly sourced renewed materials		
5.	Omission of asbestos or substances of very high concern according to REACH		
6.	Use electronic tools		
	• information on Materials and components used		
	• information on future maintenance		
	• guidance on recovery of materials and components at end of lifecycle		
	• information on potential reuse pathways		
	• digital storage and given to client		

[4] only applicable for renovation projects

Overarching Topics

The objective of the study is to increase the usability and application of the Circular Economy screening criteria, in order to ensure broad application. Considering the set timeline of compulsory application of the criteria from January 2023 onwards, the study consortium sees the risk of intransparency, if no further clarity and methods are given, as the market will be forced to interpret proposed technical screening criteria. Additionally, the study consortium emphasises that both the European Commission's and the Sustainable Finance Platform's overall objective should be to ensure that the final technical screening criteria are usable, setting an ambition, but not being too ambitious that effort and resources are allocated in tasks, which do not contribute to the circular and green transition. Furthermore, the criteria should be aimed at involving and motivating market players to incorporate circularity, increasing discussions around sufficiency and bringing together circularity on product as well as building design level and emphasising the economic aspects of circularity.

Overarching Topic: Ambition of the Circular Economy Taxonomy

The application of the proposed technical screening criteria to projects has shown that the ambition of the Circular Economy criteria is far beyond that of criteria finalised for the other two environmental objectives. The study consortium therefore sees the extreme threat of cherry picking in preference of the environmental objectives of Climate Change Mitigation and Climate Change Adaptation. The ambitions set out in the screening criteria specifying the use of 15% reused components and materials are seen as key challenge in implementing the Circular Economy taxonomy and therefore endangers the broad implementation. A further challenge is seen in the screening criteria specifying the SVHCs usage, which is not implementable, due to enormous effort in documentation.

RECOMMENDATION ON AMBITION OF THE CIRCULAR ECONOMY TAXONOMY

1. Revisit and tighten ambition set in Climate Change Mitigation Taxonomy during mandated revision through Taxonomy regulation and aim for alignment of ambition in different environmental objectives in near future.
2. Align Taxonomy screening criteria with already well functioning recognized public funding schemes that go even further to increase usability.

Overarching Topic: Rollout of the Circular Economy Taxonomy

With drafts and different screening criteria for the environmental objectives covered by the EU Taxonomy, implementation of new regulations at national and European level, market participants strongly stressed the need for gaining a clearer and more reliable overview on future changes and publication of new requirements. New releases or unclarity in regulations lead to great uncertainty in implementation.

RECOMMENDATION ON ROLLOUT OF THE CIRCULAR ECONOMY TAXONOMY

1. Actively steer Taxonomy development, expansion and adjustment processes with real case studies accompanying considered changes upfront.
2. Actively communicate planned development and changes early and set up a roadmap. Define a fixed calendar defining planned development according to the planned regulation (and provide an outlook for benchmarks development or a midterm target).

Overarching topic: Renovation and New Construction

The Taxonomy criteria are currently set as to prefer new construction activities rather than renovations. Renovations are commonly more complex and multifaceted in comparison to dismantling and new construction – therefore having the same ambitious technical screening criteria for renovations and new constructions favours new construction activities, as implementation there is more straightforward. Additionally, renovations currently are categorized as enabling activity, which reduces the volume of monies which can be associated as Taxonomy compliant, further incentivizing new construction activities. The economic activity of renovation must at minimum be put on a level playing field with new construction activities, in order to realize climate change mitigation and circularity objectives on a larger scale.

RECOMMENDATION ON ROLLOUT OF THE CIRCULAR ECONOMY TAXONOMY

1. Incentivize and support renovation activities over new construction, by setting a higher overall ambition on new construction in comparison to the renovation activity. Reconsider renovation and existing building activities with the Taxonomy classification of enabling and transitional activities.
2. Support the concept of “no-regrets” whereby renovation measures are considered according to sequence, i.e. through renovation passports, whereby focussing on hierarchy of renovation steps. Instead of conducting partial renovations, which potentially hinder subsequent renovation measures, an overall renovation concept must be defined and implemented.

Overarching topic: Alignment with existing regulations and initiatives

The study group welcomes the reference of available, European-wide methodologies, i.e. the Level(s) Framework to further specify the technical screening criteria. However, within the projects of the market participants, the Level(s) framework is not widely being used and applied. Market participants mentioned a bill of quantities according to the Level(s) framework could be obtained only with higher cost and effort.

RECOMMENDATION ON ALIGNMENT WITH EXISTING REGULATIONS AND INITIATIVES

1. Support initiatives standardising building documentations and ensure implementation of information relevant to Taxonomy screening in such documentation, e.g. material building passports. Thereby ensuring that information is standardised in precision and presentation of results, e.g. requiring digitised available information.

2. Recognize existing standards, certification and labels, which can substantially reduce effort and difficulties in data collection.
3. Support further know-how transfer on existing frameworks, especially Level(s) calculation methods and tools.

Overarching Topic: Documentation and project stage

Especially with new construction and renovation projects, data availability is largely dependent on the project stage. Market participants noted that at the beginning of the project stage, when financing is applied for, information on requirement fulfilment is limited or only available with low data reliability, i.e. as a declaration of intent. This means that a review on project completion is required to ensure full alignment to the screening criteria in order to achieve a higher reliability.

RECOMMENDATION ON USE OF BUILDING AND PROJECT STAGE

1. Call for the depiction of data reliability and data quality for Taxonomy aligned projects.

Activity: New Construction

1. Topic: Treating waste according to EU Demolition and Construction Waste Protocol and preparing 90% of generated construction and demolition waste for reuse or recycling

In treating waste according to the EU Demolition and Construction Waste Protocol it is unclear whether the full checklist must be fulfilled or whether the simple application of the checklist is sufficient for Taxonomy alignment.
Furthermore, the definition of "recycling" requires further specification: according to the Taxonomy, waste must be "prepared for recycling", whereas the Level(s) indicator referenced only considers preparation for reuse or off-site recycling and Directive 2008/98/EC, which was amended by Directive 2018/851 specifying the definitions of preparing for re-use and recycling (article 3, definitions 16 and 17). The study group positively notes that according to definitions in the reference documents on recycling and material recovery, incineration does not count in material recovery.
In applying the Level(s) indicator 2.1 in the context of the EU-Taxonomy to compile a Bill of Materials and Bill of Quantities, the scope of elements to be considered must further be specified. The Level(s) framework allows both a minimum scope of considering only "shell" elements or considering all materials.[5]
As stated within the overall comments on data availability at different project stages, the evaluation of aligning to this requirement is only possible at project completion. Some market participants noted that the Level 3 reporting format implies responsibilities on which the developer cannot intervene, as the percentage of effectively recycled waste depends largely on the waste manager, and not on the design or construction works. Considering the interdependencies gaining information on the percentage of recycled waste poses a huge challenge in some countries. Information which is accessible is mostly on recycled waste on a yearly basis.
It is very complex to establish limit values if appropriate data is not available to know the market with respect to the different fractions of waste. Current databases only collect data in aggregate form and for "Mineral waste from construction and demolition".

OUR RECOMMENDATION ON CONSTRUCTION & DEMOLITION WASTE REUSE AND RECYCLING

1. Allow for country-specific documentation according to existing national regulation (e.g. in Germany according to GewAbfV – the German waste regulation), i.e. potentially deviant from the Level(s) framework, keeping in mind the overall objective.
2. Provide clear definitions on scope of application of EU Demolition and Construction Waste Protocol, scope of bill of quantities, the terms "recycling" and "reuse", i.e. specifying handling of backfilling; methodologies to quantify reuse and recycled waste
3. Revisit ambition in future and consider tightening 90% benchmark for future developments according to implementation of the market and consider separate quota values for reusing and recycling.

[5] *See User manual: introductory briefing, instructions and guidance (Publication version 1.1) pg 24 https://susproc.jrc.ec.europa.eu/product-bureau//sites/default/files/2021-01/UM3_Indicator_2.1_v1.1_34pp.pdf*

2.Topic: Calculation of life cycle analysis and publication of results

In requiring a life cycle assessment (LCA) of the entire building to be calculated, there was unclarity as to which impact indicators are to be evaluated, e.g., for substantially contributing to the Climate Change Mitigation Taxonomy (Annex I of the Taxonomy Regulation), it is specified that only the life-cycle Global Warming Potential (GWP) is to be calculated. The scope of elements to be considered in the LCA is unclear, and whether simplified reporting options 1 or 2 are compliant and which level of Level(s) must be achieved: Level(s) indicator 1.2, according to the “introductory information”, requires the evaluation of each element of the building (including facilities), as defined by the minimum scope of elements, components, products and materials in the Manual user 2 “Complete the description of the building”, while for indicator 2.1 (Bill of Materials), a common minimum scope is allowed at level 2 only including the elements of the "exterior enclosure".

When defining scope of the LCA differing national regulations should be considered: in Denmark LCAs calculations currently are optional and will be required from 2023 onwards and benchmarks will be set for the impact indicator Global Warming Potential, very similar to regulation in the Netherlands, whereas in Germany and Spain there is no such requirement. Given the differing national regulations, the decision on scope of the elements should be aligned and must be considered carefully to avoid further complexities in implementation.

In requiring the publication of the LCA results, the method of publication should be more clearly defined.

OUR RECOMMENDATION ON LIFE-CYCLE ANALYSIS REQUIREMENTS

1. Clarify the scope of the life-cycle analysis and determine the impact indicators to be considered, eliminating room for interpretation. Preferably all indicators should be considered in the long-term, however to increase usability of the EU-Taxonomy, temporarily simplified reporting and the limited scope according to Level(s) indicator 2.1 should be allowed in countries, where LCAs are not yet part of mandatory regulation.
2. Obligate publication of LCA results: by publishing LCA results, data will be available over time to enable an improved foundation for policy making and future target-setting benchmarks in future Taxonomy developments.
3. Set up benchmarks for the specified impact indicators, while defining clear methodologies, to enable comparability. Benchmarks should use a clearly defined methodology and transparent rules and are best to be aligned with standards and laws. The (country-specific) benchmarks should be validated by official or by competent bodies and updated regularly.
4. Set up and communicate a timeline (e.g. conforming to national regulation), depicting when and how the requirements, i.e. the benchmarks/ expanded scope/ depth of detail, will be adapted in future.

3.Topic: Circular construction designs and techniques enabling reuse and recycling through resource efficiency; adaptability and flexibility and dismantlability

In application of the construction design and techniques to support circularity, even though standards and Level(s) indicators are referenced, the technical screening criteria leave a lot of scope for interpretation: in using the available tools for circularity the question arises whether the use of named methods is sufficient for alignment or whether certain quantitative requirements are to be fulfilled. The measurement or method of documentation for "resource-efficiency" was unclear for many market participants.

OUR RECOMMENDATION ON CIRCULAR CONSTRUCTION DESIGN AND TECHNIQUE

1. Clearly define methodology and documentation for evaluating "resource-efficiency". A potential pathway would be to demand the integration of life cycle assessments during planning processes and demand illustration of LCA optimisations.
2. Introduce quantitative for the circular design techniques such as disassembly potential, which aligns to the circular economy vision that designs out waste. For the dismantlability a minimum "Overall Circularity Score" methods developed by the Sustainable/ Green Building Councils and according to Level(s) indicator 2.4[6] could be used (among others, the VERDE certificate in Spain defines 40% as a minimum score or using the methodology in the DGNB System criteria TEC1.6). For adaptability and flexibility, a minimum score could be set according to Level(s) Indicator 2.3[7] or according to methodologies developed by GBCs (e.g. DGNB System ECO2.1).
3. Set an objective to increase transparency on building components used.
4. Connect resource efficiency requirements with requirements to conducting an LCA: demand documentation on optimising the conducted LCA during different planning phases in order to depict resource-efficiency.

4.Topic: Minimum 50% of asset constitution from a combination of re-used, recycled content, or responsibly sourced renewable materials

We welcome the ambitious inclusion of separate quantitative requirements for reused and recycled materials, which will further promote the reuse of materials over recycling. Market participants strongly doubted that sufficient materials are available in the market to enable achieving the reuse material quotas and stressed that reuse quantities are not included in product documentation or monitored within material documentation. When reusing materials, market participants face multiple uncertainties e.g. for static reused elements in safeguarding and in general for lifetime, durability and quality.

For recycled components market participants noted, that when considering different scenarios for logistical buildings and with including backfilling, concrete with recycled share and recycled reinforcing steel or further building components the 15% quota would be achievable.

For new constructions being erected on a brownfield site with either the existing buildings or building materials still in situ, materials from the demolished building should be reused for the new building where feasible, unless they contain substances of high concern.

[6] https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-11/UM3_Indicator_2.4_v.2.0_clean_20.07.2021.pdf

[7] https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf

Market participants mentioned the challenges in calculation of surface areas and pointed out that especially considering weight quite differing results would be achieved (e.g. in considering wood as a component), thus when calculating the quota by weight and buildings mainly being built with concrete and steel, the quota is hardly achievable. For components being reused, especially in static components, which have the highest implication when calculating the quota according to weight, market participants must deal with safeguarding challenges, whereas the reuse of sanitary facilities in weight would only account for minimal percentages. Alternatively, market participants noted that they would see the need in building in unnecessary materials to achieve the quotas.
In general, the calculation of quotas without digital building models or BIM are very time consuming. The bill of quantities according to Level(s) are a help, however the real cost and time-consuming task is in identifying the quantities, to then fill in the Level(s) excel tool. The second difficulty is gaining standardized and reliable data on recycling quotas, which must be based on reliable database.

OUR RECOMMENDATION ON RE-USED, RECYCLED AND RESPONSIBLY SOURCED RENEWABLE MATERIALS

1. Reconsider methodology for calculating reused, recycled and renewable material components. When using weight or even volume for the calculation of quota, heavy or bulky materials are prioritized, whereas for surface areas the calculation method is not defined. Methodologies could be considered where both mass, weight and surface areas are regarded and an average is computed, or preferably a list of reusable and recyclable components is made and quotas or units are defined per component group. Further specification on quotas would enable easier application and implementation.
2. Support expansion of local markets and infrastructure to enable reuse, fostering circularity of products and materials.
3. Incentivise or demand clear and apparent declaration of all products used in buildings, readable and manageable by planners, architects and constructors. Support initiatives aiming for product circularity data sheets. Information provided could then be linked to a building materials passport.
4. Clarify terminology of “reuse”, “recycle” and “renewable” materials, i.e. by referring to existent definitions. Define whether computation of quotas according to methodologies can be varied within one project (e.g. concrete is regarded by weight, wood is regarded by surface while reused components such as sanitary appliances/ steel staircases are regarded by weight again). Define scope of components being taken into consideration, i.e. by counting in backfilling the recycling quota could be significantly be increased.
5. Slacken the 15% benchmark for reused materials or allow for varying combinations of reuse/ recycle and determine forecasts for gradually increasing the benchmark, hindering the usage of reused components with long transport routes.
6. Reward the documented avoidance of building components - instead of only focussing on the use of reused, recycled or responsibly sourced renewable materials.
7. Promote dimensional standardisation in order to facilitate components re-use and define clear methodology for calculating 15% or 20% benchmarks in surface areas.

5.Topic: Construction not containing asbestos or substances of very high concern

Market participants struggled majorly in applying this criterion on their projects, as checking all building products and materials for substances on the SVHC Authorisation list and implementing adequate quality assurance processes on construction sites to prevent any misuse is considered very time and cost intensive. The study group sees this requirement as a clear risk in uptake of the EU-taxonomy.

While documentation of omitting asbestos is no challenge, the complete omission of SVHCs within the construction poses a major challenge - as the method of determining and controlling materials, which do not contain SVHCs in unclear and there is no clear definition how materials are to be dealt with, where the use of SVHCs is authorised.

OUR RECOMMENDATION ON OMISSION OF ASBESTOS AND SVHCs

1. Support and incentivise providing clear and apparent declaration of all products in buildings, readable and manageable by planners, architects and constructors.
2. Focus on relevant building elements with known issues, for which a qualified hazardous and risk related substance management has to take place.
3. Refer to methodologies developed and used in green building certifications, such as the DGNB ENV1.2 matrix, which is based on empirical evidence of combining the potential extent of damage and risk.
4. Clearly define scope of applying the criteria: determine which components and materials are to be checked. Depending on the definition of the scope of “components and materials” SVHCs are either subject to declaration or not. This makes it very vague and arbitrary, if SVHCs are declared or not, thus detected or not. A limit value with clear references is needed to make this criterion applicable.
5. Include hazardous materials and harmful substances, which are incorporated in (smart) technical building equipment.

6.Topic: Use of electronic tools for information on materials and components, future maintenance, recovery and reuse

Having access to information at different stages of the project is key to enhancing circularity, therefore the study group welcomes the inclusion of electronic tools for enabling the transfer of information. Considering the current lack of standardised formats, the definition of “electronic” was widely discussed among market participants – e.g. discussing whether if information is available in PDF or Excel format is considered as “electronic”. While digital twins will help significantly in tackling circularity and deliver information when it is required, market participants stressed that due to lack of capacity, the practicability is not given to use digital twins in every project, making information available in document files or excel sheets.

OUR RECOMMENDATION ON USE OF ELECTRONIC TOOLS

1. Further define the term electronic or digital tools.
2. Determine minimum requirements for components included within electronic tool, i.e. building shell elements considered in the Level(s) Bill of Materials.
3. Set out a timeline for future tightening of requirements, i.e. when digital twins are the only valid option for taxonomy compliance.

Activity: Renovation

1.Topic: Treating waste according to EU Demolition and Construction Waste Protocol and preparing 90% of generated construction and demolition waste for reuse or recycling

Same feedback as for activity “New Construction” topic 1

2.Topic: Calculation of life cycle analysis and publication of results

Same feedback as for activity “New Construction” topic 2

3.Topic: Circular construction designs and techniques enabling reuse and recycling through resource efficiency; adaptability and flexibility and dismantlability

For the economic activity “Renovation”, the requirement for circular design is applicable to the entire building. Market participants stressed that in application of the screening criteria the scope should be specified to the renovation works conducted, as with the building being retained the scope for enhancing circularity, i.e. resource efficiency, adaptability and flexibility and dismantlability is limited.

4.Topic: Retention of at least 50% of the original building

Market participants stressed that when the use of the building is changed during renovation measures, a retention of at least 50% could pose a challenge. Especially in combination with the subsequent requirement, where minimum 50% of the asset is to be composed of reused, recycled and responsibly sourced renewable materials, the criteria must be reconsidered. Both criteria in combination sets preferable conditions for the implementation of Taxonomy requirements in new construction over renovation, as specifications are set for a higher percentage of building components.

Additionally, market participants stated that the methodology for calculating quotas must be revisited.

5.Topic: Minimum 50% of asset constitution from a combination of re-used, recycled content, or responsibly sourced renewable materials

Additionally, to the comments made for the economic activity “New Construction”, for the economic activity “Renovation” this requirement in combination with the requirement of 50% of the original building being retained, calculated based on total surface area, it is unclear, whether the minimum 50% of asset constitution can be calculated from the 50% asset, which is being retained, or whether it is focussed on the new materials being brought in during renovation works.

OUR RECOMMENDATION ON RE-USED, RECYCLED AND RESPONSIBLY SOURCED RENEWABLE MATERIALS

1. See recommendations in “New Construction”
2. Redefine that minimum 50% of the materials used in renovations underlie the requirements using a combination of reused, recycled or responsibly sourced renewable materials, or allow 50% of retained asset to be calculated as 15% reused material.

6.Topic: Construction not containing asbestos or substances of very high concern
Additionally, to the feedback mentioned for the activity “New Construction”, market participants mentioned that existing buildings might contain asbestos and other substances of very high concern. Therefore, the technical screening criteria must specify materials brought in during renovation should not contain asbestos or substances of very high concern. The criteria are unclear on handling of existing harmful materials/components within the building, which are not part of the renovation measures, i.e. must a screening of the existing building be conducted on existing harmful materials, is a safe removal mandatory, even if particular component is not part of the renovation or is the enabling of future safe removal sufficient.

OUR RECOMMENDATION ON OMISSION OF ASBESTOS AND SVHCs

1. Additionally, to the recommendations mentioned for the activity “New Construction”, the scope of consideration for renovations must be defined.

7.Topic: Fulfilment of requirements for major renovations or reduction of primary energy demand of at least 30%
Considering that this requirement is the same as the requirement for significantly contributing to the Climate Change Mitigation Taxonomy (Annex I), the study group stressed that the ambition for the Annex I was unfortunately set too low. The inclusion of the Climate Change Mitigation criteria within the Significant Contribution to Circular Economy technical screening set enables cherry-picking, as in result the fulfilment of a significant contribution to Climate Change Mitigation would be much easier and more economical to achieve.

OUR RECOMMENDATION ON ENERGY DEMAND REQUIREMENTS

1. Tighten and set a higher ambition when reconsidering the further development of the technical screening criteria for the activity “renovation” in Annex 1 of the Taxonomy Regulation.

8.Topic: Use of electronic tools for information on materials and components, future maintenance, recovery and reuse
Same feedback as for activity “New Construction”