

Social Proofing of Circular Solutions Workshop

Workshop overview

The third and last workshop of the Social Experiment on Circular Economy in Construction and Buildings, entitled *Social Proofing of Circular Solutions* was successfully hosted on the 1st of March 2024.

During the workshop our partners and stakeholders had the opportunity through an interactive process to discuss in detail, assess from many different angles and provide feedback for the 3 value propositions (Public digital registry for construction and demolition waste, Outsourced Market Surveillance and Compliance Assessment Process on Circular Projects, Digital Circular construction tool kit for the design of circular construction projects), drafted during the 2nd workshop.

The 3 suggested solutions were drafted to support overcoming constraints and barriers, as well as incentivizing or facilitating the aspects of collaboration, legislation/policy, and market.



Workshop elements and structure

The 3rd workshop began with an overview of the 1st and 2nd workshop, to align all participants, regardless if they took part or not in the previous sessions, and connect the outcomes of the previous workshops to the 3rd workshop.

The 3 value propositions were presented to a wide audience of Circular Economy and Sustainability experts as well as all stakeholders who took part in the drafting process during the previous workshops.

In particular, the 3 value propositions which have been proposed were:

- 1. Public digital registry for construction and demolition waste**
- 2. Outsourced Market Surveillance and Compliance Assessment Process on Circular Projects**
- 3. Digital Circular construction tool kit for the design of circular construction projects**

To extract feedback from different perspectives, Bono's hats method was used. Through open discussions and brainstorming both the positives as well as the negatives of each solution were addressed. Furthermore, the participants were asked to think beyond the proposed solutions and generate creative ideas, for possible alternatives and additions that could improve the solutions.

Following the Bono's hats process, a digital survey was conducted for each solution, whereas attendees were asked to assess the solutions against 5 criteria: Innovation, Circularity/ Sustainability, Feasibility, Inclusiveness and Collaboration.

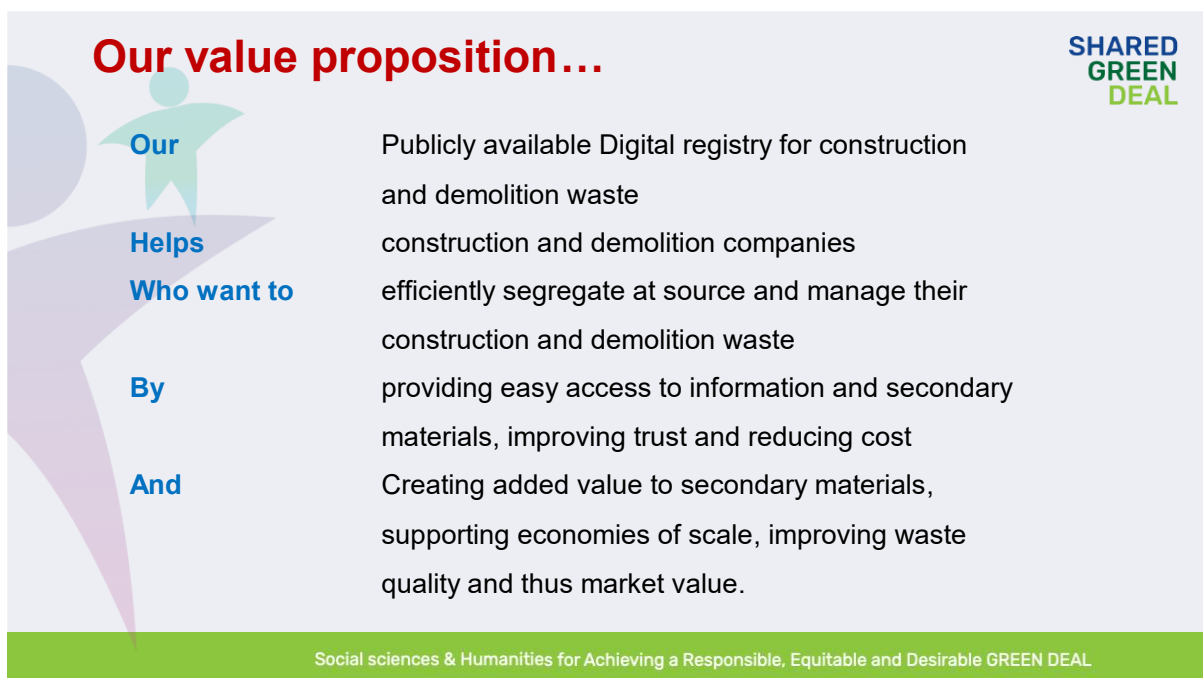


Workshop outputs

Value proposition 1:

Public digital registry for construction and demolition waste

Customer Profile: A construction company which needs to manage construction and demolition waste at source.



Black hat



Difficulties, weaknesses,
dangers; spotting the
risks.

High cost of maintenance for the online platform

Difficult to use by small scale contractors.

Risk of abandonment - One more unused online platform if it is not managed and promoted correctly.

Risk for unknown Quality of the secondary materials.

De-characterisation information is not available.

The registry does not adequately incentivise contractors' involvement.

Risk of stocking by delays in waste collection.

Possible high cost of the platform (operational and maintenance cost)

Risk of refusal to join the platform.

Difficulty in segregation of waste at the source.

The platform has very wide scope which can lead to management difficulties.


Imposes administration cost for contractors.

Uncertainty of downstream utilization

Lack of Quality Assurance processes (Quality of data, accuracy of data)

Risk of Contamination issues/hazardous materials

Lack of Framework to support the registry/responsibility/liability.

<p style="text-align: center;">Yellow hat</p>  <p>Positives, plus points; why an idea is useful.</p>	<p>Can create new revenue streams for contractors and waste management operators.</p> <p>Offers an opportunity to reduce landfilling.</p> <p>Can support structured inventorying of waste.</p> <p>A starting point for trust and leadership</p> <p>A starting point for culture change</p> <p>Promotes collaboration between stakeholders of the construction industry and also cross sector collaboration.</p> <p>Can reduce costs in waste management.</p> <p>Can save energy related to the transportation of waste at management facilities.</p> <p>Can support the reduction of use of virgin material.</p> <p>Can improve the environmental profile of construction industry, the country and support the transition to CE.</p> <p>Can create new business and job opportunities.</p> <p>Can create a new market of secondary material.</p> <p>Can create research and development opportunities for academia.</p> <p>Can contribute to the reduction of waste and GHGs.</p> <p>Can reduce costs by taking out mediators and by creating economies of scale.</p>
<p style="text-align: center;">Green hat</p>	<p>Include photos for materials.</p>



Ideas, alternative,
possibilities; solutions to
BH problems

Create a support call centre.

Offer online booking of the materials.

Ensure Liability of the platform.

Required by regulations or Procurement processes.

Provide waste statistical data.

Capacity to serve small scale construction projects

Provide quality control results by laboratory testing.

Consider Tax incentives benefits.

Make segregation at the source mandatory to promote the use of the platform.

Connection of registry with existing regulatory framework related to the management of the construction waste.

Connection with the regulatory framework for urban planning permission.

Create a mobile application.

Set time limits on availability.

Option to get notifications matching requests.

Set minimum material entry requirements.

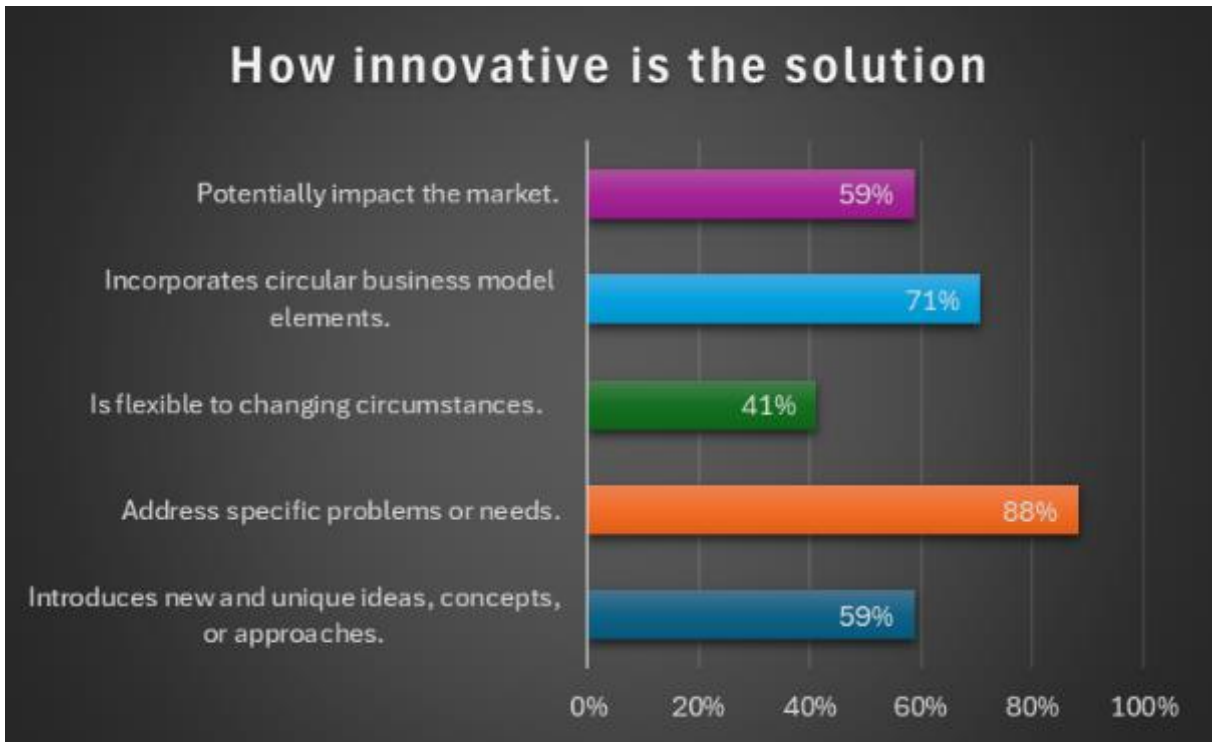
Sort input materials by category, classification & potential applications.

Create a modular tool with a narrow scope at the beginning and expand in the future.

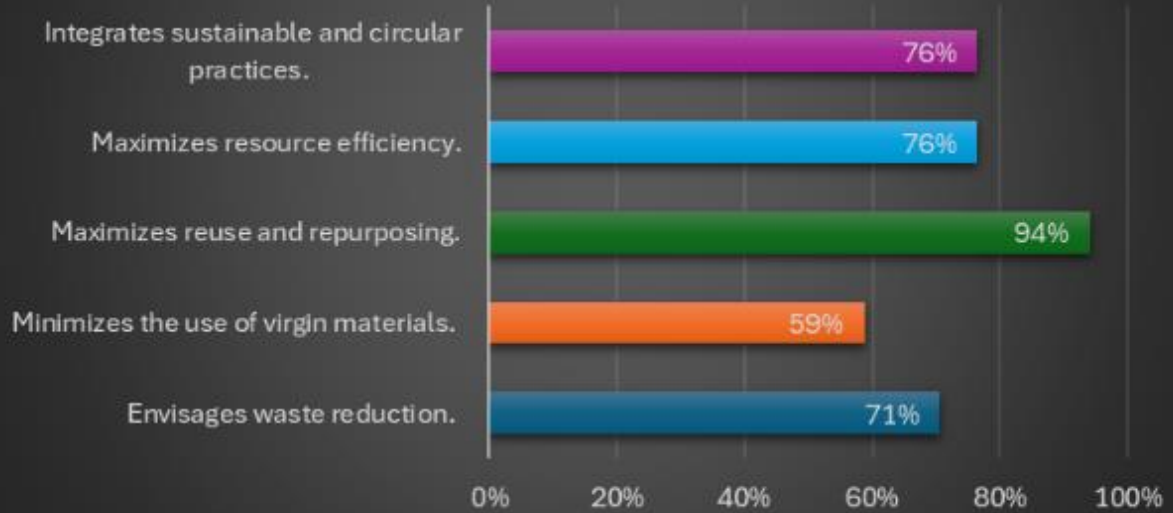
Possible connection with the electronic record of demolition quantities (required by law).

	Make use of the platform mandatory.
	Use AI tools for visual recognition and segregation.

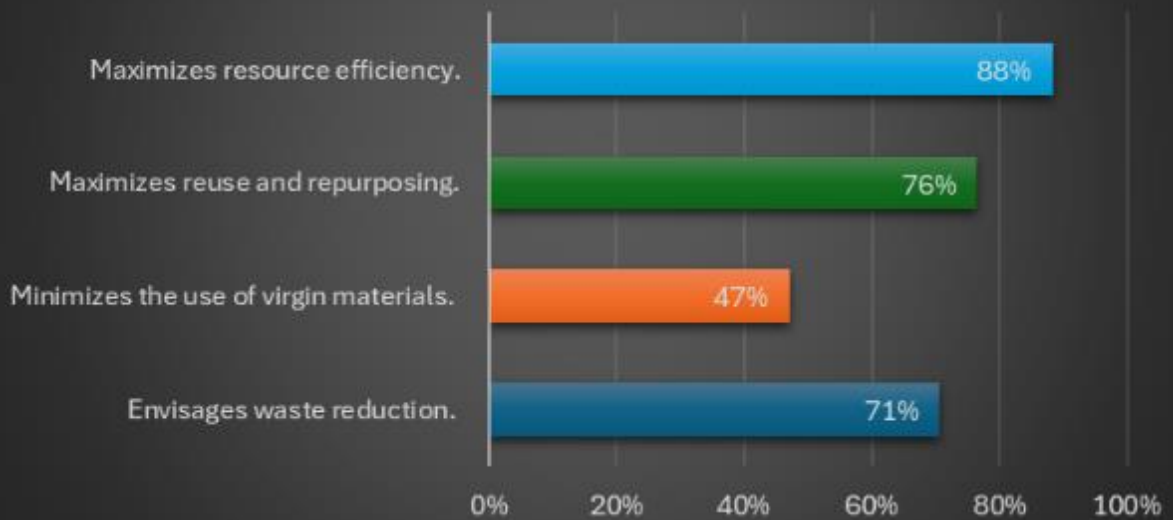
Assessment-Analysis for Value proposition 1



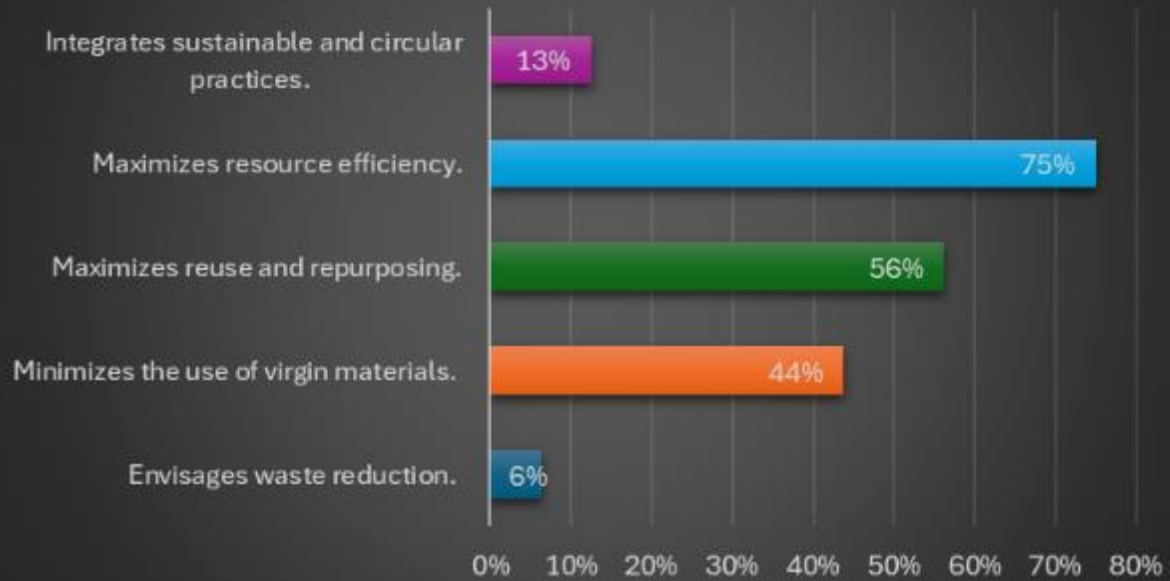
How circular and sustainable is the solution:



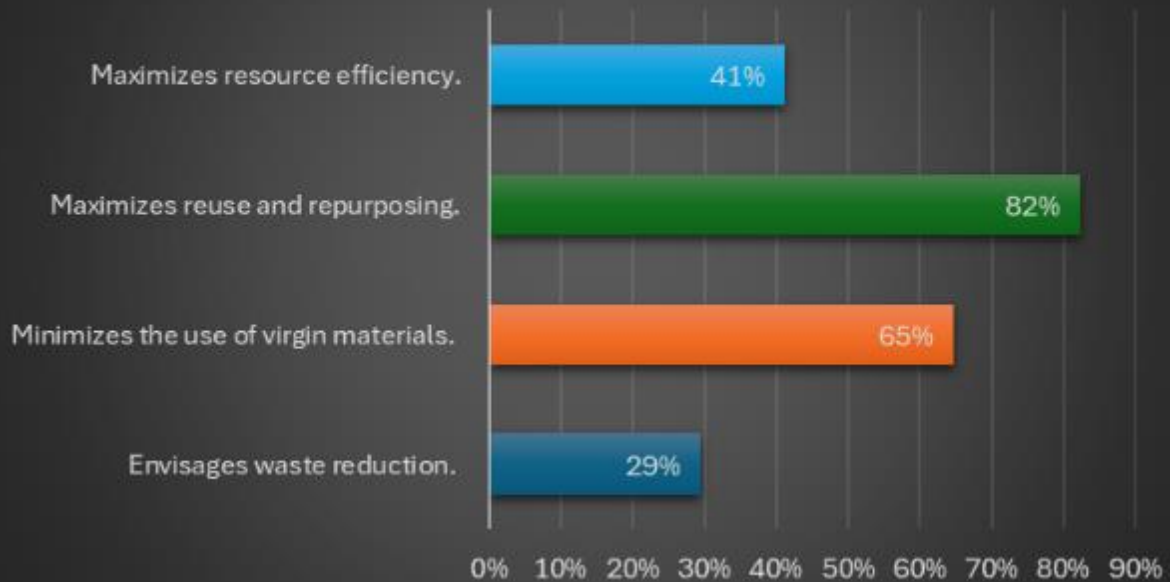
Collaboration aspects of the solution:



How Inclusive is the solution:



How Feasible is the solution



Value proposition 2:

Outsourced Market Surveillance and Compliance Assessment Process on Circular Projects

Customer Profile: An industry that wants to build/set up a circular asphalt factory in a community in Cyprus.

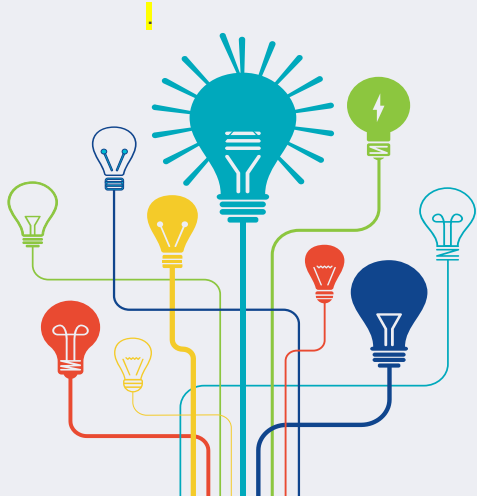


Outsourced Market Surveillance and Compliance Assessment Process on Circular Projects



Independent & Accredited companies & experts approved/licenced by a high-level committee

Compliance Assessment against all relevant specifications/standards and national and European regulations



Integrated Market Surveillance on all aspects irrespective of which public authority is responsible

Objective Impact Assessment on new & ongoing circular projects.

Data Collection as a comparison tool for long term impact projections

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Our value proposition...



Our

Helps

Who want to

By

And

Outsourced Market Surveillance and Compliance Assessment Process on Circular Projects

The Government & Competent Authorities ensure legal compliance & effective market surveillance on circular projects	Industry stakeholders promote circular practices and invest in improving their final products
enforcing a regular inspection/assessment program	increasing their trust and motivation
ensuring compliance with relevant legislation.	helping them gain a competitive advantage against non-complaint industry players.

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Black hat



Difficulties, weaknesses, dangers; spotting the risks.

Difficult and complex structure

Multiple competent authorities and governmental departments involvement

Lack of availability of standards for circular economy

Lack of Regulatory framework related to circular construction.

Lack of verification method/process

The term Circular product is too vague.

Difficulty specifying qualifications and competences of verifiers.

The scope is too open.

Lack of governance and leading authority

Noncompliance handling process is not defined.

No connection with Climate change

Difficulties regarding compliance /no availability of Circular Criteria

Lack of Terms of reference for the committee

Lack of a clear task and vision

Yellow hat



Positives, plus points; why an idea is useful.

Centralised Committee is a plus.

Qualified personnel involvement it is very positive.

Structure and standardised evaluation for circularity.

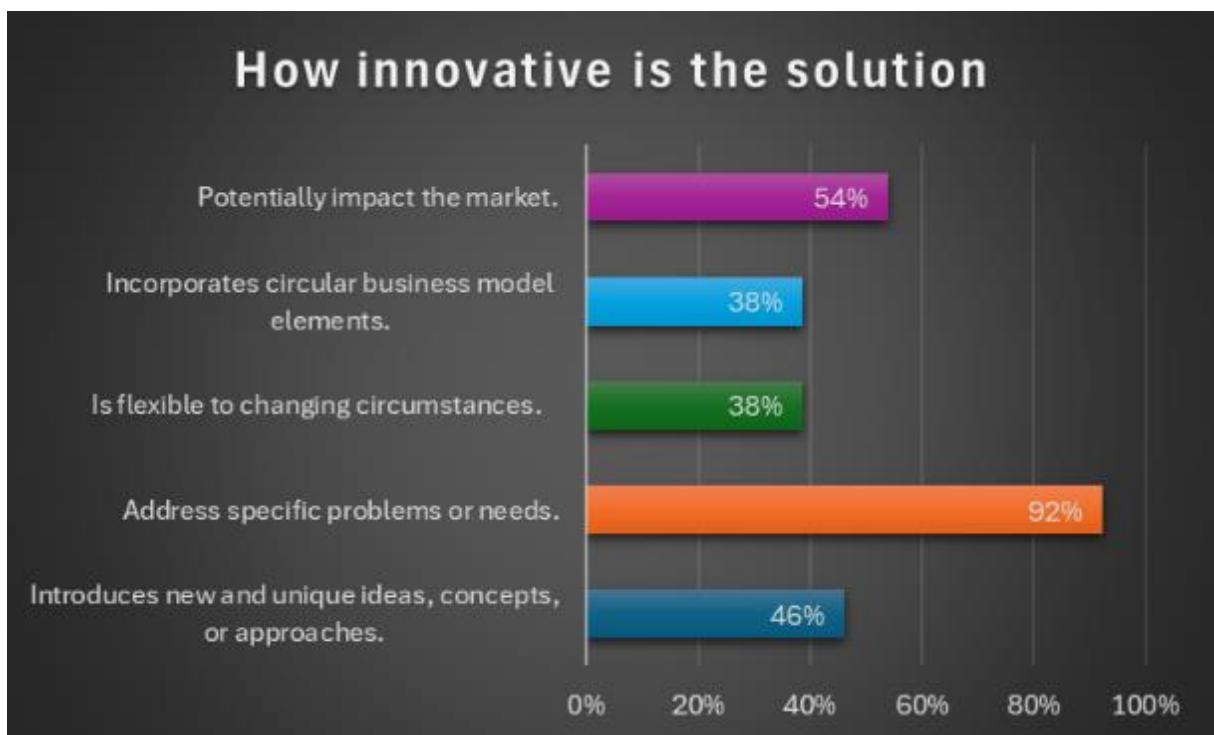
New Jobs opportunities

Improvement of assessment quality

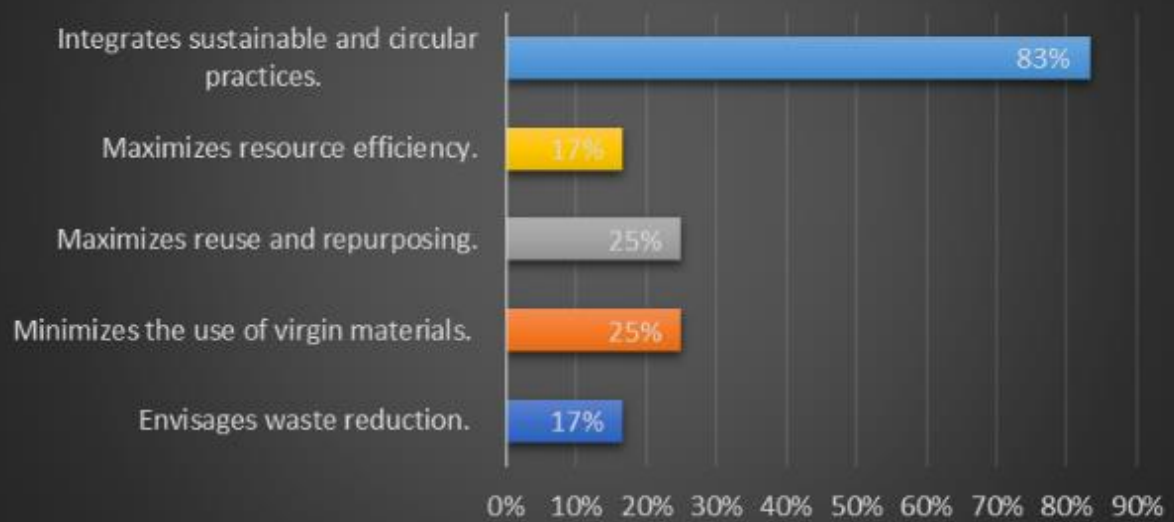
Supports transition to circularity.

	<p>Investments Opportunities for verifiers</p> <p>Supports optimisation of legal framework</p> <p>Promotion of circular national products</p> <p>Circular development to be part of regulatory framework for urban planning permission.</p> <p>Compliance through a standardised procedure</p>
<p>Green hat</p>  <p>Ideas, alternative, possibilities; solutions to BH problems</p>	<p>Create Experts Registry</p> <p>Steering Committee Audit for transparency and integrity</p> <p>Creation of relevant supporting/establishing Regulatory framework</p> <p>Accreditation of professional qualifications of verifiers</p> <p>Governance committee members profiles through Stakeholder engagement/open public consultation</p>

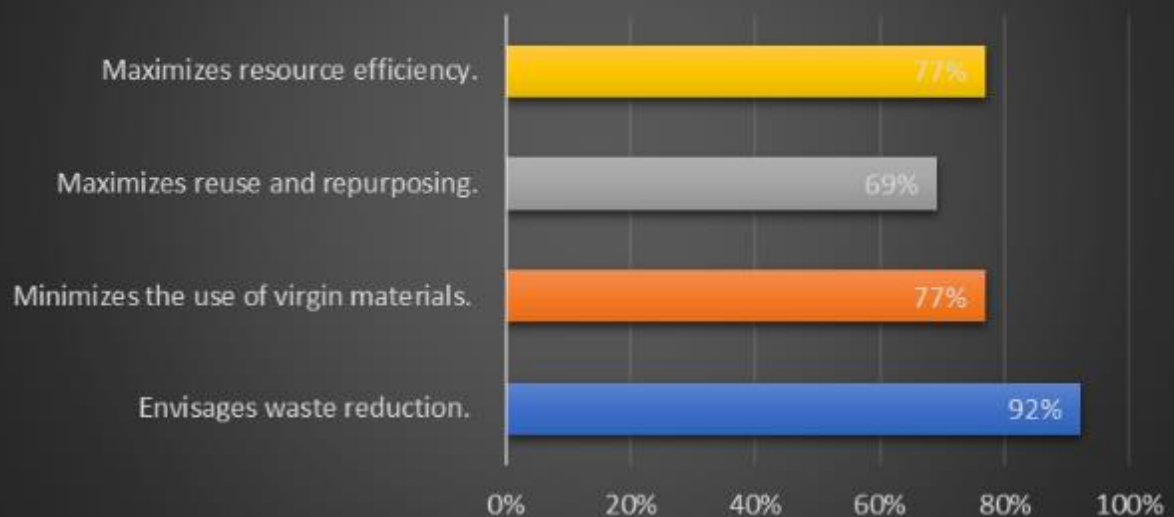
Assessment-Analysis for Value proposition 2



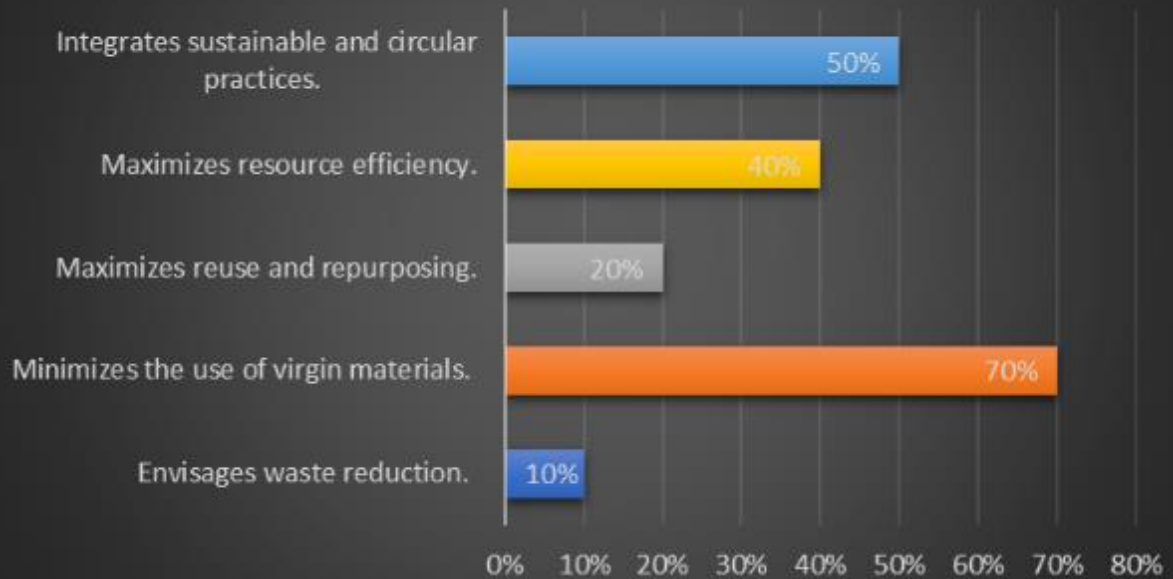
How circular and sustainable is the solution:



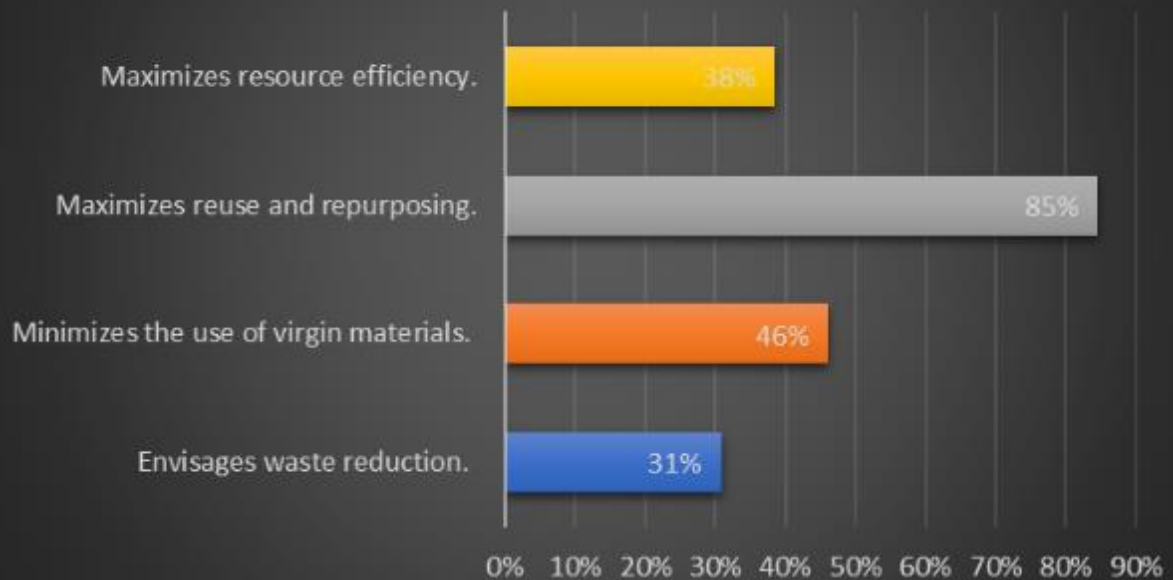
Collaboration aspects of the solution:



How Inclusive is the solution:



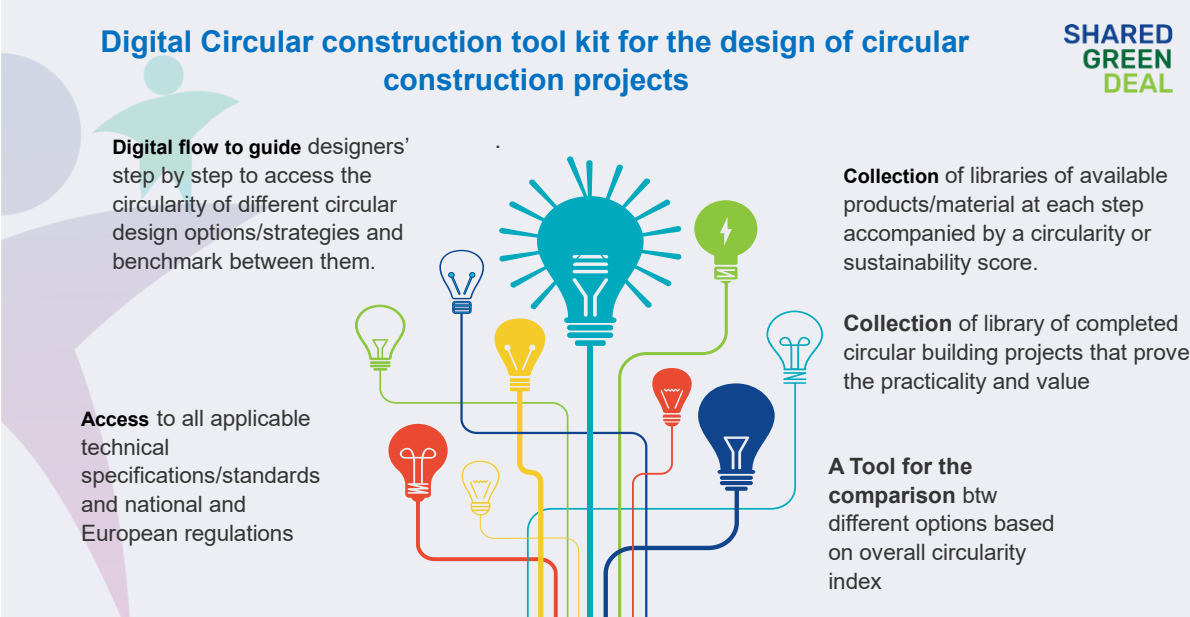
How Feasible is the solution



Value proposition 3:

Digital Circular construction tool kit for the design of circular construction projects

Customer Profile: A Business (Designers of construction projects/products) that wants to design a competitive construction circular product/circular building or infrastructure project.



Digital Circular construction tool kit for the design of circular construction projects

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Digital flow to guide designers' step by step to access the circularity of different circular design options/strategies and benchmark between them.


Access to all applicable technical specifications/standards and national and European regulations

Collection of libraries of available products/material at each step accompanied by a circularity or sustainability score.

Collection of library of completed circular building projects that prove the practicality and value

A Tool for the comparison btw different options based on overall circularity index

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Our value proposition...

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Our Digital Circular construction toolkit

Helps Businesses during the design phase

Who want to design a competitive circular construction product/project.

By Supporting structured circular design process

And Thus, facilitating the development of circular construction projects

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Black hat



Difficulties, weaknesses, dangers; spotting the risks.

Difficult to access the level of circularity and have comparable results between projects.

The scope of the toolkit is too wide.

Risk of Misconception and Greenwashing

Risk of increasing project embedded costs (e.g. design for durability)



High cost of investment for the development and maintenance of the toolkit

Lack of material availability data, circularity data and benchmark

Lack of knowhow regarding circular design by majority of designers/ engineers

Requires significant training for toolkit users.

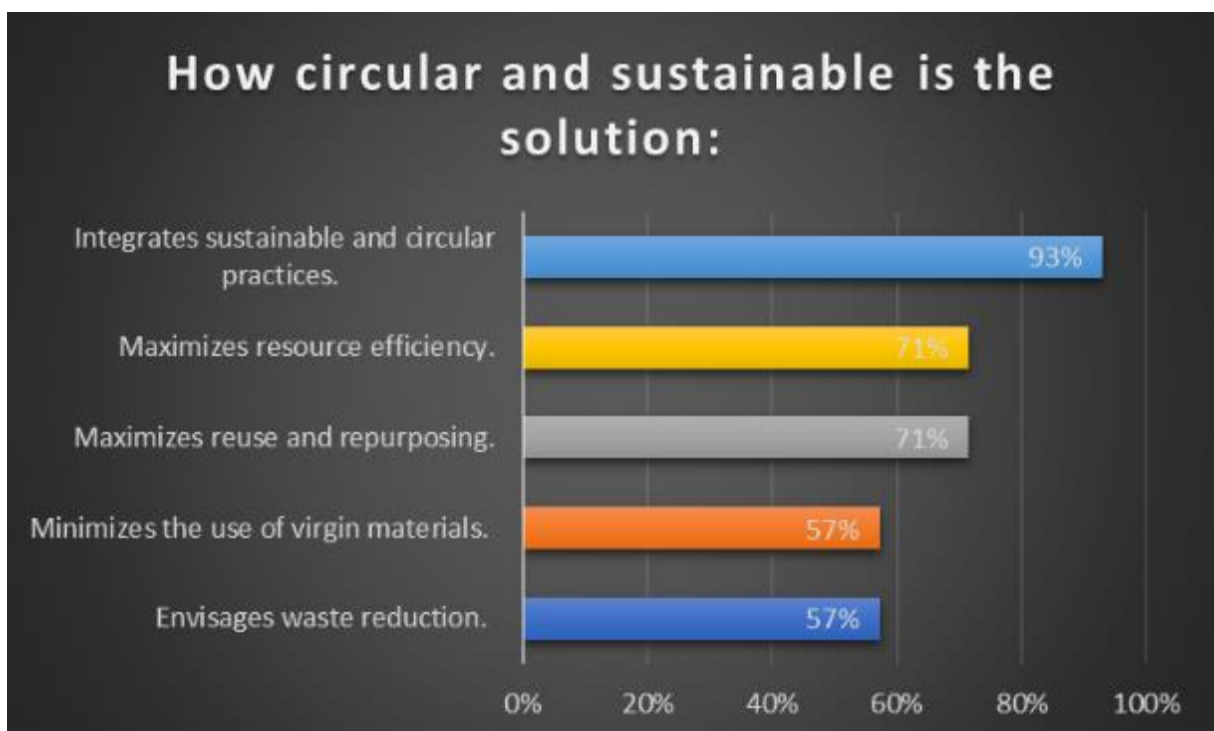
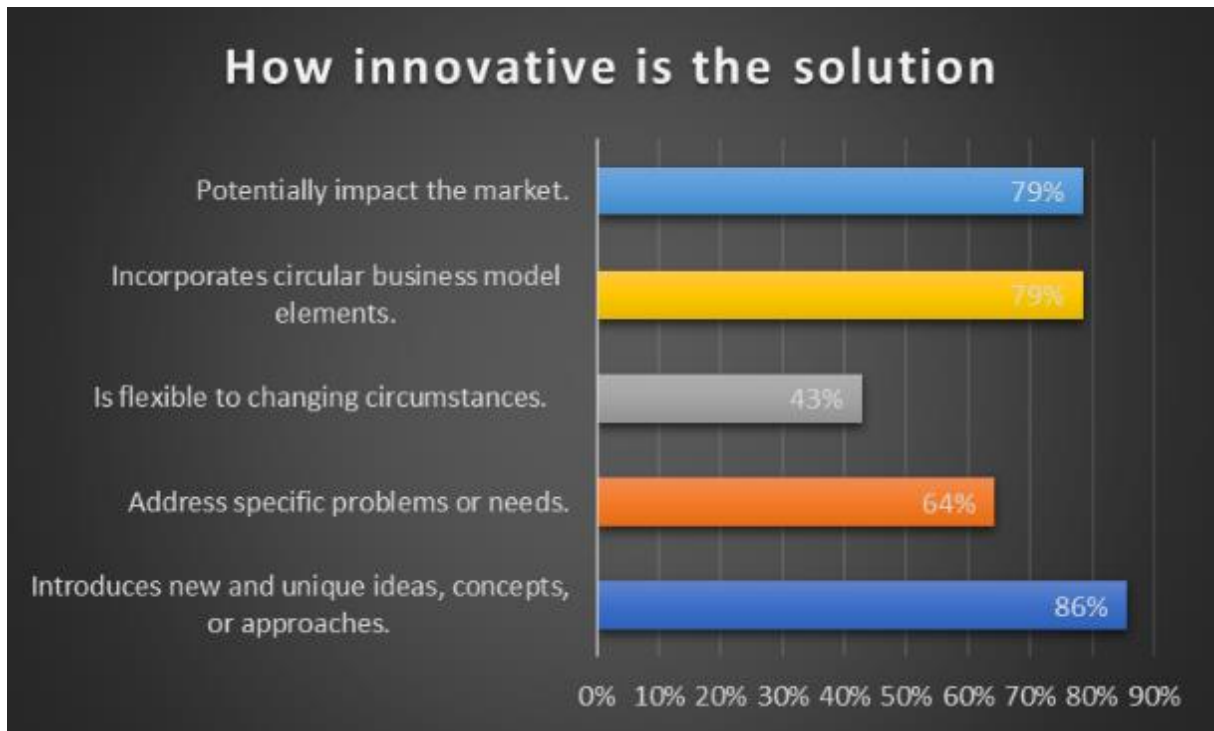
Unspecified how to compare new products/ Lots of assumptions

<p>Yellow hat</p>  <p>Positives, plus points; why an idea is useful.</p>	<p>Minimises the use of virgin material.</p> <p>Promotes Circular practices/strategies.</p> <p>Value adding for secondary materials.</p> <p>Supports access to financing.</p> <p>Supports Net-Zero buildings.</p> <p>Helps minimise carbon taxes.</p> <p>Supports the Market for circular products/projects.</p> <p>Help achieve national targets regarding CE</p>
<p>Green hat</p>  <p>Ideas, alternative, possibilities; solutions to BH problems</p>	<p>Define a specific scope of the toolkit.</p> <p>Enable feedback collection from users.</p> <p>Include financial data for project budgeting.</p> <p>Provide levels of circularity for suggested materials/products</p> <p>Include more design aspects for e.g. modularity/disassembly/ decommissioning.</p> <p>Connect toolkit with government subsidy schemes and incentives e.g. lower VAT or interest rates.</p> <p>Make the tool applicable for renovation and refurbishment of buildings.</p> <p>Include criteria for Certification for circular projects/products.</p> <p>Connection with the digital registry for construction and demolition waste (group collaboration value proposition)</p>

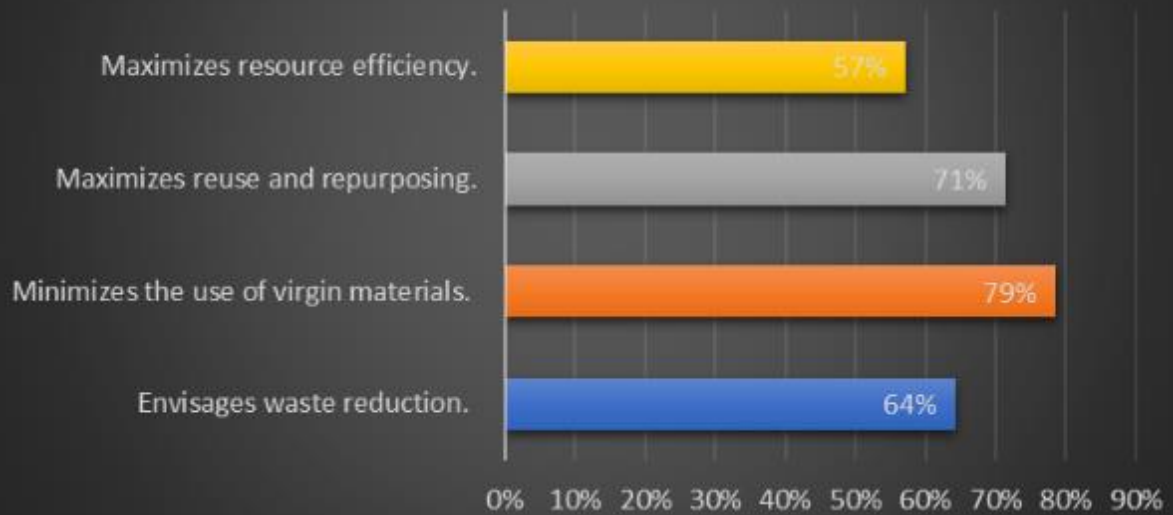
Design Requirements to be clearly defined (standards or code) to quantified parameters.

To help you design multi-functional spaces.

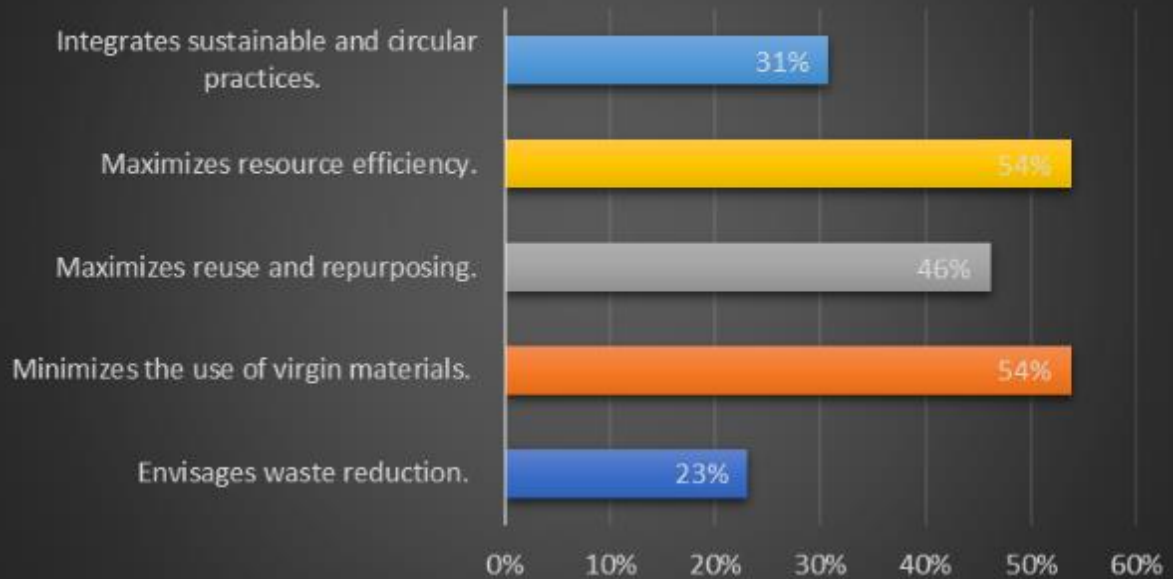
Assessment-Analysis for Value proposition 3

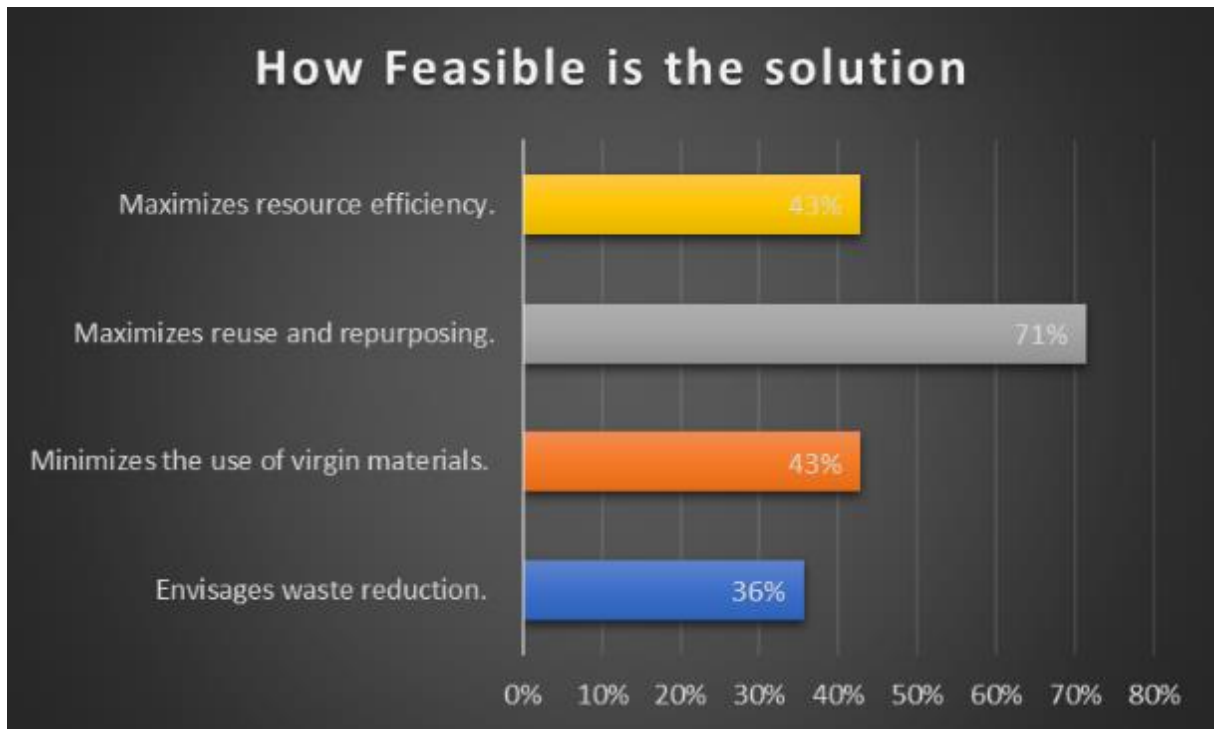


Collaboration aspects of the solution:



How Inclusive is the solution:





Overall Assessment of Value Propositions

	Innovative	Circular & sustainable	Collaboration	Inclusive	Feasible
VP 1	63.53%	75.29%	70.59%	38.75%	54.41%
VP 2	53.85%	33.33%	78.85%	38.00%	50.00%
VP 3	70.00%	70.00%	67.86%	41.54%	48.21%

A report will be drafted for each value proposition elaborating on the key aspects of each one. Based on the results of workshop 3 the three value propositions will be awarded according to their most high scoring attitudes

