Workshop Overview

The first Workshop of the Social Experiment on Circular Economy (CE) in Construction and Buildings successfully took place on 13 October 2023.

The workshop was attended by all relevant stakeholders involved throughout the entire construction industry supply chain, from design to waste management, including Government and academia. In total, 22 participants took part.

The workshop focused on analysing the context of Cyprus's construction industry today and identifying why a transition to a circular model would be necessary. Furthermore, through an interactive process, the stakeholders seek to identify the major constraints and barriers holding the industry from efficiently transforming and transitioning.

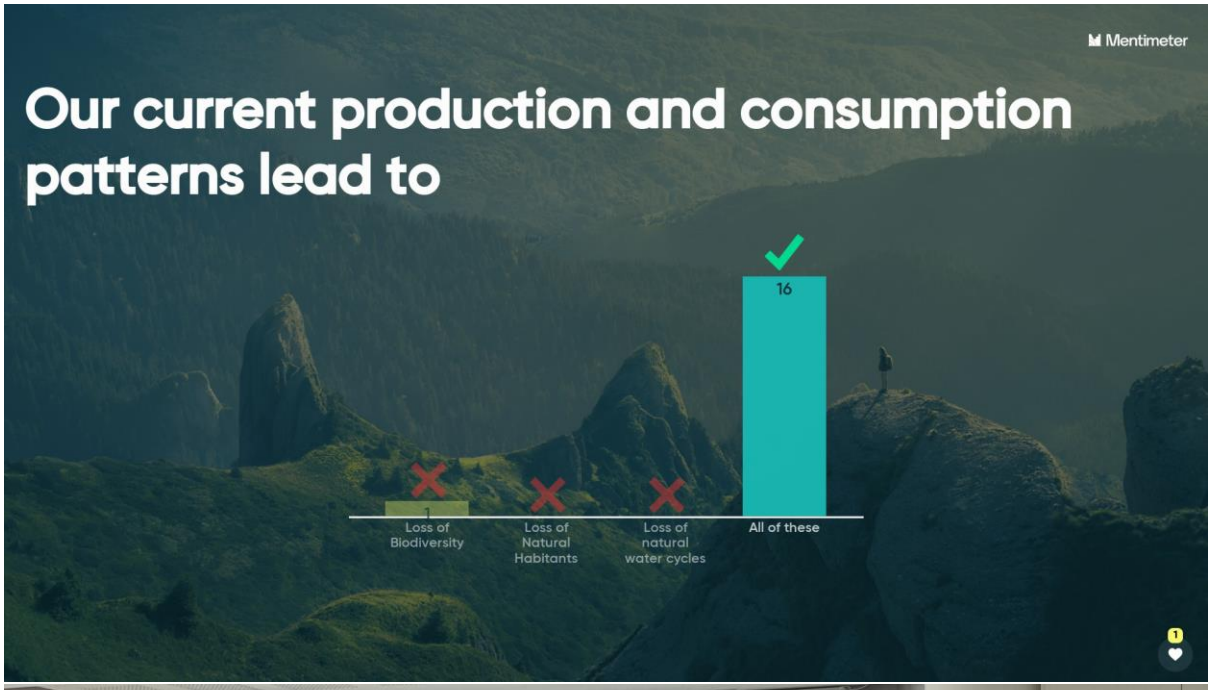
The outcomes of this first workshop will serve as input to the second workshop, focusing on developing practical solutions, including new business models to kick-start the industry's circular transition.

Workshop Elements

The 1st Workshop on mapping circular construction in Cyprus included the following elements:

- **Pre-workshop questionnaire assessing:**
  - the level of understanding for CE,
  - the necessity for CE,
  - willingness to adapt, implement, collaborate, and contribute to CE,
  - Constraints and barriers,
  - Vision and expectations.

- **Ice-breaking quiz to initiate the workshop using the mentimeter tool.**



- **Group sessions using design thinking methodology to define:**
  - The problem
  - The challenge
  - Constraints and barriers
  - Possible solutions

- **Open Discussion and presentation of pre-workshop questionnaire results**

Workshop Outputs

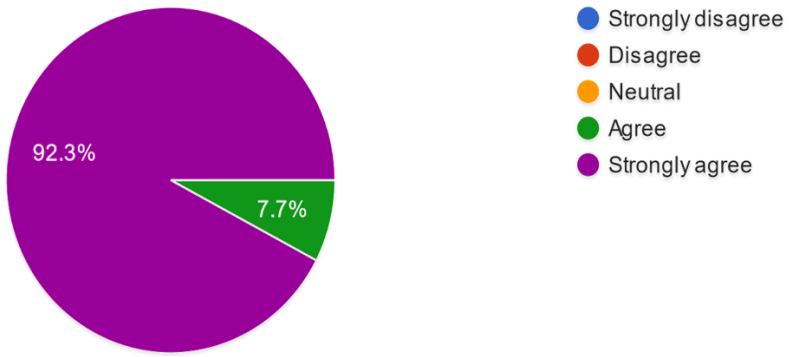
- **Pre-workshop Questionnaire**

The major outputs of the questionnaire were as follows:

- The majority of people who responded to the questionnaire assessed their level of understanding of CE as adequate and above. Also, they consider having a clear understanding of CE principles. Regenerate natural systems principles seem to be less clear than the other.
- Awareness is the most necessary level of training for the local construction and building industry to initiate its circular transition. Most responses indicate that Cyprus is not ready to proceed with the transition, although all are willing to implement circular practices.
- The reasons stakeholders consider most important for implementing CE include reducing environmental impact, expenses, and legal compliance.
- The majority of responses show that CE is not considered necessary by construction industry stakeholders, and it's difficult to envision a fast transition in the following years. Also, stakeholders do not foresee a successful transition in less than 5 years, with the majority not being able to anticipate the time or the time is more than 10 years.
- The survey shows that stakeholders perceive barriers and constraints blocking the implementation of circularity in construction but feel optimistic that the barriers can be overcome. The crucial factor in this is funding.
- Another important outcome of the survey is that a significant percentage considers collaboration among stakeholders not important, although the majority would be willing to collaborate.
- Finally, the major stakeholders considered to play an important role in the transition are the Government and the construction companies.

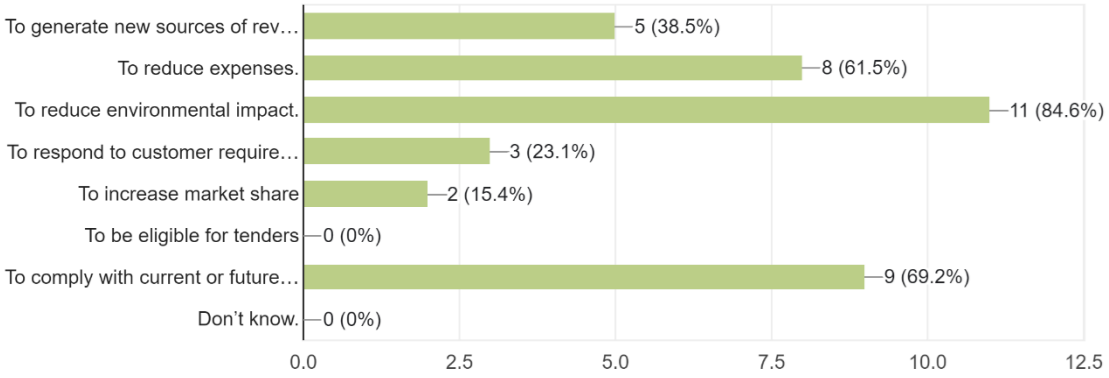
3.1 Do you agree that circular economy should be promoted in construction industry?

13 responses



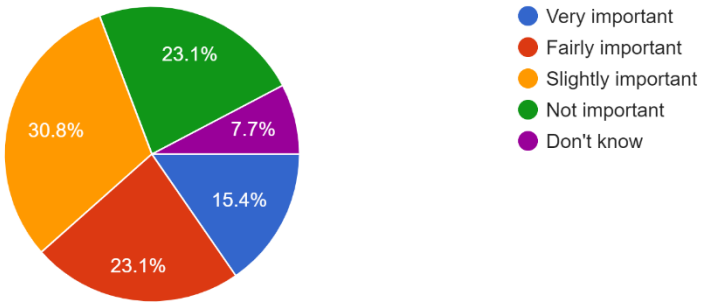
4.4 Which would be the most important reasons for implementing or promoting CE strategies? Select the three (3) most important reasons.

13 responses

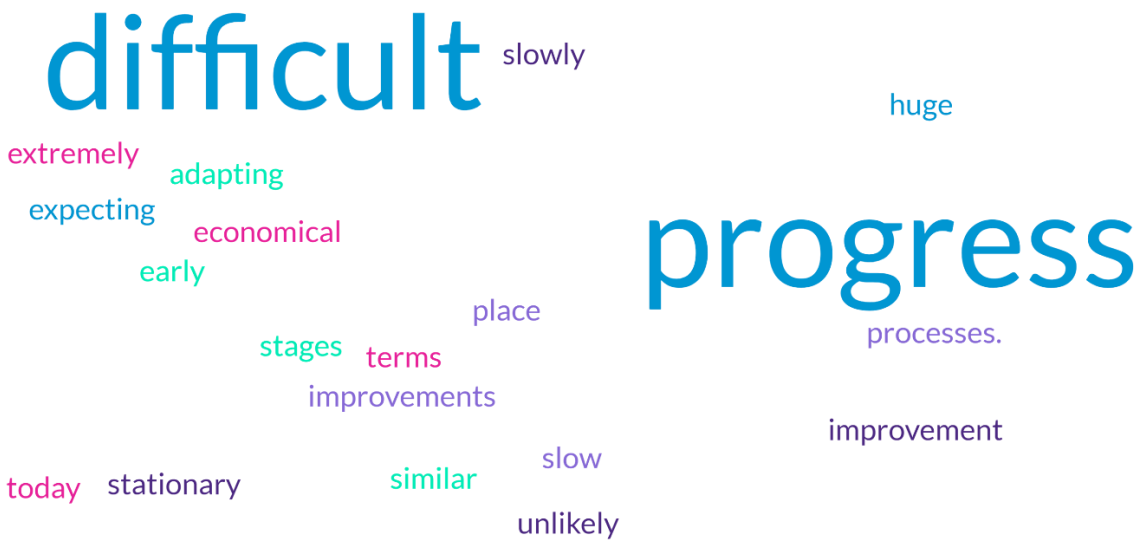


4.6 How important is circularity considered by stakeholders in construction and building industry supply chain?

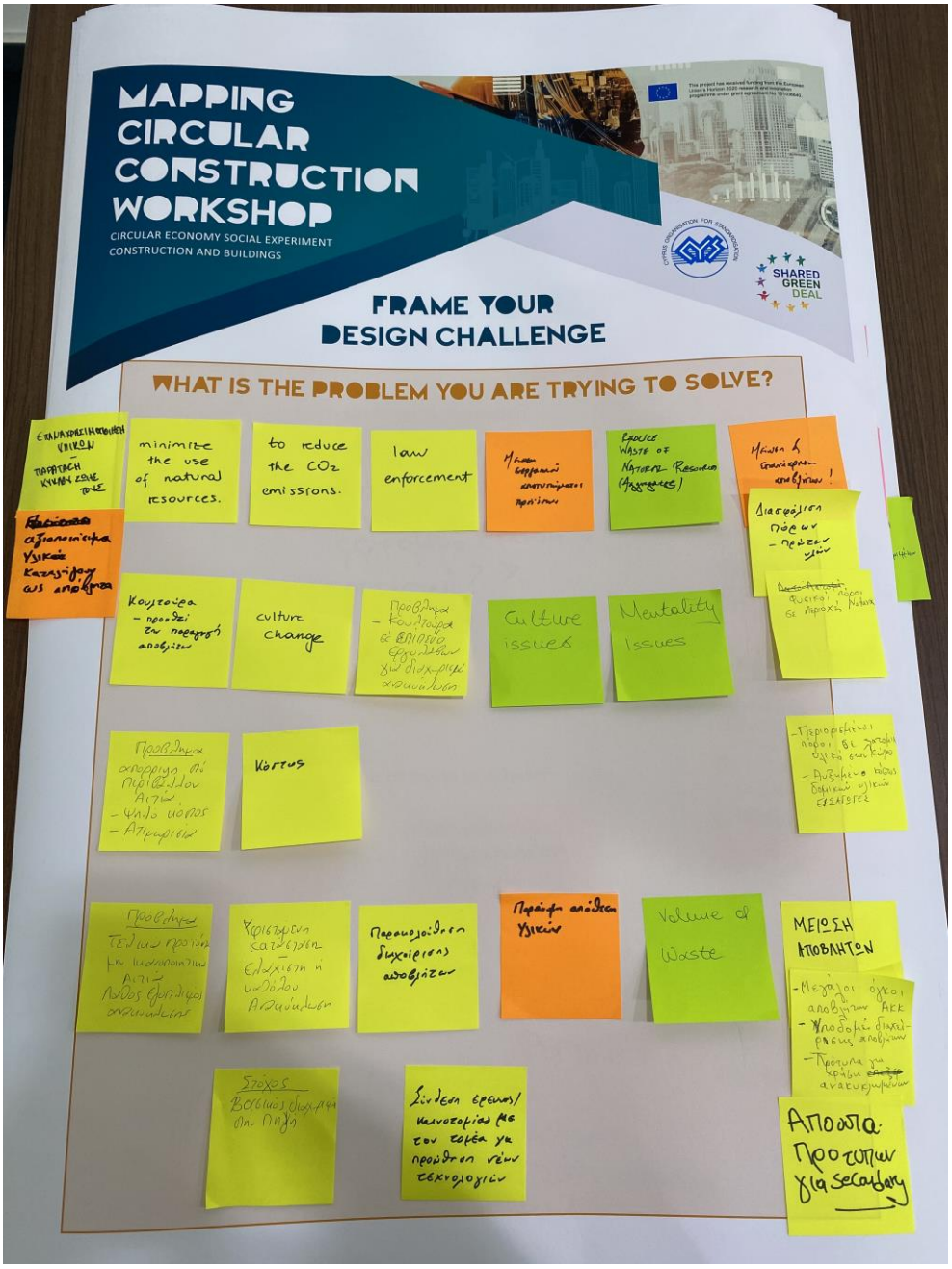
13 responses



4.7 Where do you see the construction industry in relation to the circular economy in the next 5 years?



- **Defining the challenge exercise – interactive session to define the following:**
  - **Defining the problem – Why do we need to transition to a circular model?**



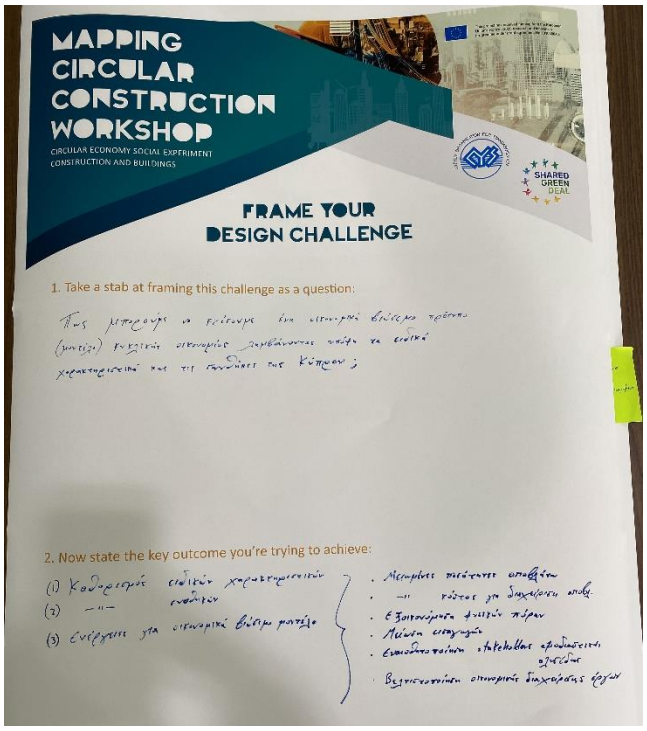
The construction industry significantly impacts the island's resources, generating large volumes of waste. Furthermore, there are limited available waste management areas, and wastes are often disposed in non-regulated locations. Cyprus is an island system with a high cost of shipping wastes abroad. There is also low availability of local resources that need to be secured, and a significant amount of raw material is imported. The construction industry has an important impact on climate goals due to its multiplier effect on energy consumption.

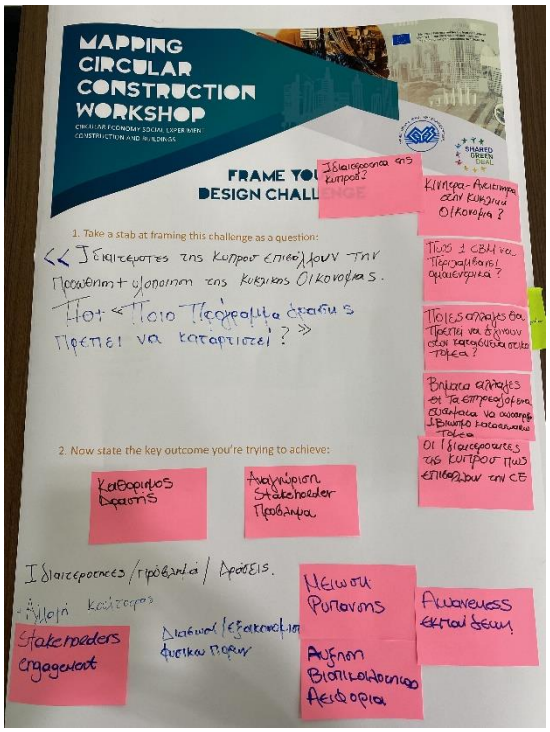
○ Defining constraints and barriers

Construction industry stakeholders' culture is traditionally linearly oriented, and there is significant resistance to change. There is a lack of knowledge of the impacts of the industry by the stakeholders.

- Lack of market surveillance and effective implementation of legislation.

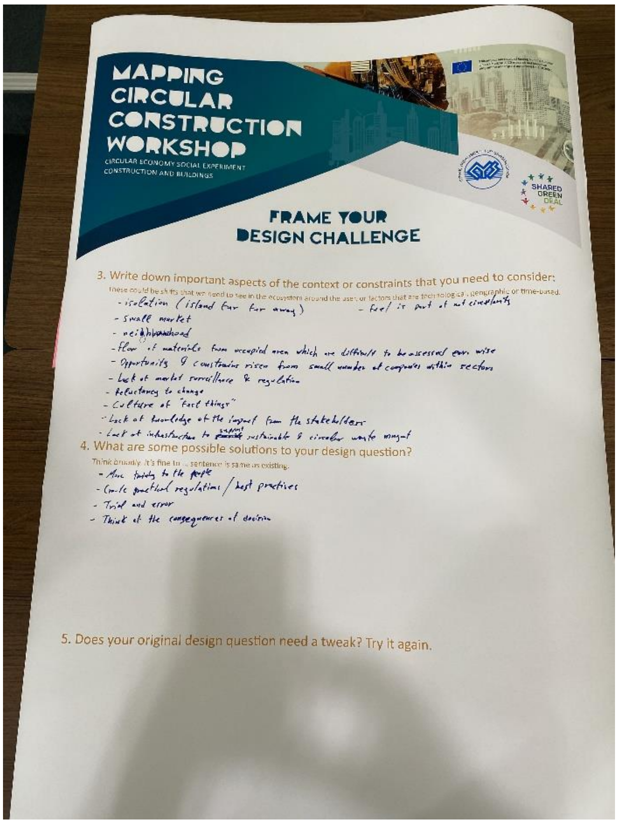
- Small market, in a constrained island system, which does not allow the buildup of economies of scale.
- Lack of availability and high cost of circular products and technologies.
- Lack of trust by the construction industry stakeholders towards circular products due to lack of long-term experience, knowledge, standards, and certifications.
- Lack of standards and specifications of secondary raw material.
- Lack of linkage of research results and the market on innovative solutions and products.
- Lack of stakeholder's coordination and leading authority.
- Lack of incentives to implement circular practices in construction projects.

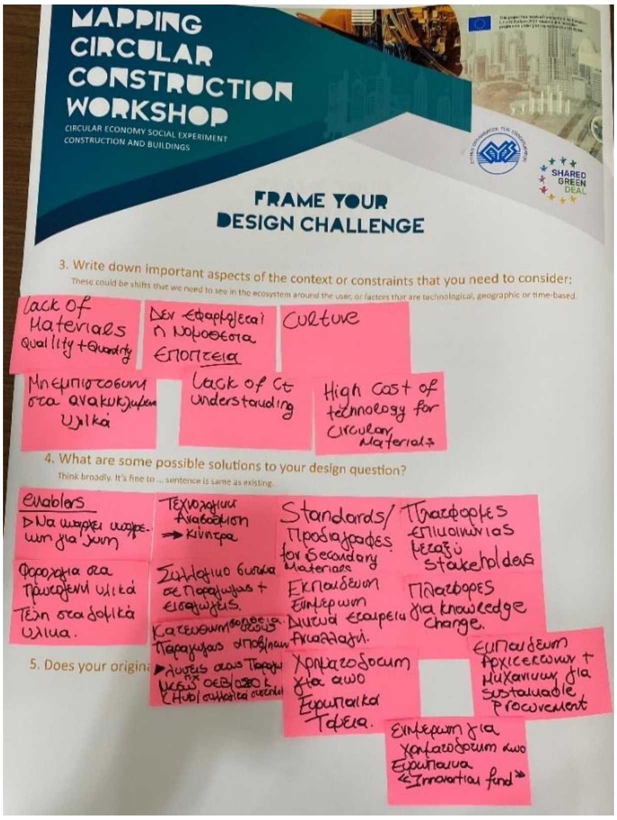




Defining solutions

- Create collaboration and knowledge exchange platforms.
- Training and education of the entire construction industry supply chain about sustainable and circular concepts.
- Provide incentives and subsidies by the Government to support the use and promotion of circular practices and material.
- Develop standards or other specifications for secondary material.
- Create a national waste/material repository to support industrial symbiosis.
- Promote the involvement of industry in funded research projects, national and European.


MAPPING CIRCULAR CONSTRUCTION WORKSHOP
CIRCULAR ECONOMY SOCIAL EXPERIMENT CONSTRUCTION AND BUILDINGS
SHARED GREEN DEAL
FRAME YOUR DESIGN CHALLENGE
3. Write down important aspects of the context or constraints that you need to consider:
- isolation (island far far away)
- small market
- neighbourhood
- Resistance to change
- Culture of "fast things"
4. What are some possible solutions to your design question?
- Trial and error
- Think of the consequences of decision
5. Does your original design question need a tweak? Try it again.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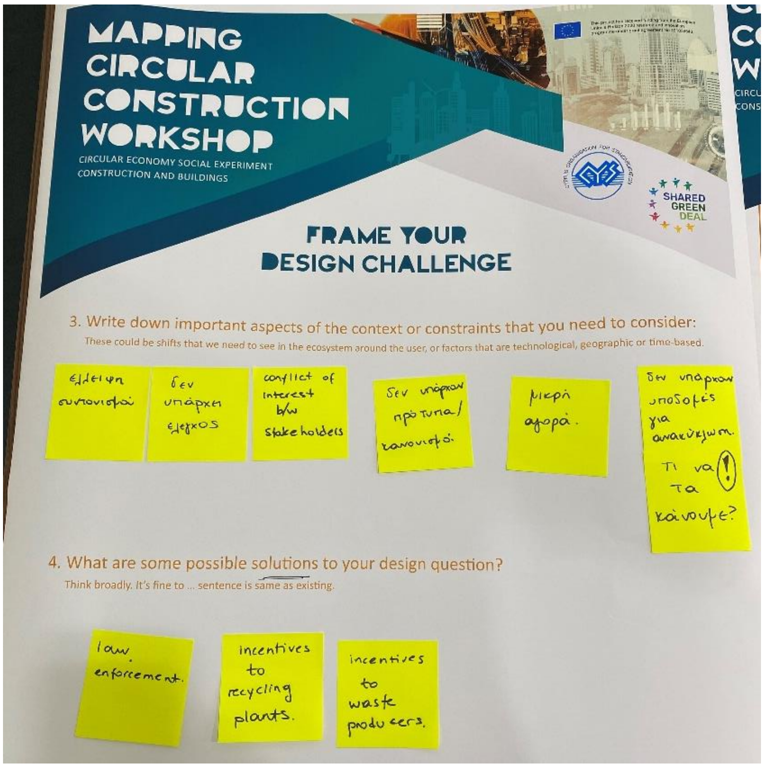
CIRCULAR ECONOMY SOCIAL EXPERIMENT CONSTRUCTION AND BUILDINGS
SHARED GREEN DEAL
FRAME YOUR DESIGN CHALLENGE
3. Write down important aspects of the context or constraints that you need to consider:
Lack of Materials Quality + Quantity
Culture
Lack of CE understanding
High cost of technology for circular materials
4. What are some possible solutions to your design question?
Enablers
Standards/ Προδιαγραφές for Secondary Materials
Πλατφόρμες για knowledge change
Εκπαίδευση
5. Does your origin


MAPPING CIRCULAR CONSTRUCTION WORKSHOP
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FRAME YOUR DESIGN CHALLENGE
3. Write down important aspects of the context or constraints that you need to consider:
These could be shifts that we need to see in the ecosystem around the user, or factors that are technological, geographic or time-based.
Έλλειψη συντονισμού
δεν υπάρχει έλεγχος
conflict of interest b/w stakeholders
δεν υπάρχουν πρότυπα/ κανονισμοί
μικρή αγορά
δεν υπάρχουν υποδομές για ανακύκλωση. Τι να τα κάνουμε?
4. What are some possible solutions to your design question?
Think broadly. It's fine to ... sentence is same as existing.
law enforcement.
incentives to recycling plants.
incentives to waste producers.

Defining the overall challenge

- “Create a financially sustainable circular model for the operation of the entire construction industry supply chain. The model should be tailored for the specific conditions of the construction industry, considering the Cypriot market's constraints, being an isolated island system with cultural rigidities.”