

Empathy and Innovation: Leveraging Design thinking alongside system thinking approaches in the circular economy - A personal, student experience

by *Cintia Molnar* | *The University of Edinburgh*

Background and purpose

In the face of climate change, it is critical to rethink our approaches to resource efficiency and security. Traditional methods often fall short in addressing the complex and interconnected nature of these issues. This presentation explores how two complementary approaches, design thinking (DT) and systems thinking (ST), can be applied to improve resource efficiency and security at the intersection of academic education, entrepreneurship, and sustainability.

Approach

The approach involves leveraging design thinking and system thinking methodologies. Design thinking focuses on empathizing with stakeholders, defining problems clearly, ideating solutions when the challenge arise, prototyping, and testing while system thinking, focuses on understanding the entire system and its interrelated parts. Using these approaches, multiple courses, workshops and networking events were used to instil these approaches in students and first time aspiring entrepreneurs. Personal experiences are shared to illustrate the practical application of these concepts, from rebuilding an entrepreneurship-focused student society that aimed at finding innovative solutions to social issues, participating in design thinking framework-based programme, and attending various entrepreneurial events/courses/workshops including CloudEARTH*i*.

Results

The application of DT and ST led to the successful development of innovative **idea into an opportunity**, resulting in joining a start-up that developed a multi-functional, collapsible, reusable silicone cup aimed at reducing resource single-use plastic cup in festival environments. The journey fostered a culture of empathy and creative problem-solving among participants, helping them to overcome **cognitive fixedness** and generate new, innovative ideas that solved our problems. During the process, the importance of avoiding

assumptions and keeping the beneficiary at the forefront was emphasized. Additionally, a collaborative hub of similar products or services , where startups and businesses may work with and brainstorm development opportunities, was found to be essential for future progress.

Conclusion:

The integration of design thinking and system thinking has the potential to enhance resource efficiency and security by fostering innovative and empathetic approaches to problem-solving.

These approaches could address immediate challenges and may equip individuals with the mindset and tools needed for long-term sustainability and entrepreneurship.

By focusing on the entire system and its relationships, system thinking complement design thinking`s user centric approach, leading to comprehensive and effective solutions. Establishing collaborative hubs further supports ongoing innovation and collaboration, essential for advancing the circular economy.