Sustainable community bio-innovation centres for Sydney Harbour

Colin Finn & Regen Sydney

BlueGreen

OVERVIEW

Community innovation centres, such as Makerspaces, hackerspaces and fab labs, are an important type of third space in communities. They provide opportunity for people to connect through workshops, DIY-culture and collaboration around shared interests. This project requires design-led research to activate a space at Neutral Bay, Sydney, which will include resources for community projects to grow mycelium-based objects that can utilise waste (sawdust, cardboard, coffee grounds etc) for a circular economy. The space is also open to the public and creates an exciting opportunity to engage with circular economy around Sydney Harbour.

AIMS

The aim of this project is to understand the values of the community, and opportunities that could be leveraged at the site through a community innovation centre. Objectives may include:

- Undertake high-quality design-led engagement with community to understand their values and perspectives.
- Ideate and iterate creative ways to provide opportunities at the physical location, which could be translated to a range of sites.
- Develop prototypes, activities, workshops and/or community engagement strategies that support meaningful contribution to the health of Sydney Harbour and the surrounding communities.

SCOPE

The scope is open to interpretation but must tell a compelling story of how the values of the community can be supported through a sustainable community bio-innovation centre. The focus can be on the sustainability of the system, or the activities that can be supported in the community innovation centre. It could be the creation of a new social enterprise, or collaboration with existing social enterprises in the sustainability sector.

RESOURCES

Sub Base Platypus, located in Neutral Bay. Retort house, the intended site for the community workshop is open to the public and can be visited in person: https://www.harbourtrust.gov.au/our-places/sub-base-platypus/

Circular economy introduction: https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

Relevant academic papers:

Gough, P., Perera, P. B., Kertesz, M. A., & Withana, A. (2023). Design, mould, grow!: A fabrication pipeline for growing 3D designs using myco-materials. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, 1–15. https://doi.org/10.1145/3544548.3580958

Jørgensen, S., & Pedersen, L. J. T. (2018). The Circular Rather than the Linear Economy (pp. 103–120). https://doi.org/10.1007/978-3-319-91971-3_8

DELIVERABLES

Deliverables may include:

- Speculative, physical prototypes of sustainable designs that can be made in a community bio-innovation centre to provide benefit to local communities.
- System designs for the innovation centre. This could cover educational workshops, collection of waste materials (for mycelium growth), processing, and deployment to provide benefit in the community, based on primary research into community needs and values.
- Digital tools to support citizen science initiatives.
- High quality renderings, videos, or campaign materials to raise awareness about localised circular economy initiatives to be undertaken at Sub Base Platypus.
- Designs of products or systems that are circular, able to take waste and give it new meaning and value but also can be created by volunteer/community participation.

The project is not required to utilise mycelium-based materials, but they presented as a novel and unique opportunity.