

## **Sustainable Innovation 2019**

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**University for the Creative Arts**

**Business School**

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### **New Micro Housing: An Approach to Enhancing Wellbeing and Sustainability.**

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By the year 2030 architects, designers and city planners will need to come up with a new housing strategy to deal with an urban migration of 1 billion people. This paper will demonstrate why the many of the most successful and liveable cities in the future will integrate new generations of reactive products that will blur the boundaries between product and architecture. Disseminating research from the UNEP Creative Economy Reports and through a variety of other consumption and economic-based statistics, a compelling argument will be made that it is peoples' living spaces that offers the easiest and most significant affordances for inducing positive changes to wellbeing and to a city's economic and environmental prosperity. This idea, that leveraging happiness, wellbeing and prosperity through creating new concepts and typologies of "home" and living spaces, puts peoples' needs, wants, aspirations and lifestyles at the beginning of the design process, not at the end, as so often occurs with current-day multi-unit housing development.

Focused on testing the functional and economic feasibility of activating small living spaces with different types of reactive and integrated architectural robotics, the Micro Habitation Lab (mHabLab) was created in 2016 by Professor Tim Antoniuk to explore solutions to this urban migration challenge. Committed to a program of continual R&D, the popularity of the ideas coming out of the Lab has moved this project from the conceptual design stages directly into the public realm and into a variety of new housing developments in Canada. This iterative approach of testing and engaging with the professional world has exposed three key findings: Firstly, that there is a clear opportunity to improve the macro and micro functionality of small living spaces; secondly, that allowing people to physically alter smaller elements of their living space lessens feelings of frustration and enhances feelings of pride and a deeper perception of "home"; and thirdly, that strong demand for these types of micro spaces is putting significantly less material and energy strain on a city because of the smaller footprint created by each resident.

This more equitably distribution of material, energy and emotional wealth is also exposing other groupings of new research ideas which relate to: The duality of space; how people can be in two living spaces at one time; and most significantly, how the creation of small living spaces is extending a person's home into the public realm and inducing increased human engagement and "overlapping homes". Of particular interest is the approach that is being taken in this project – That identifying new lifestyle patterns and codes can lead to more desirable spaces, places, and levels of sustainability.