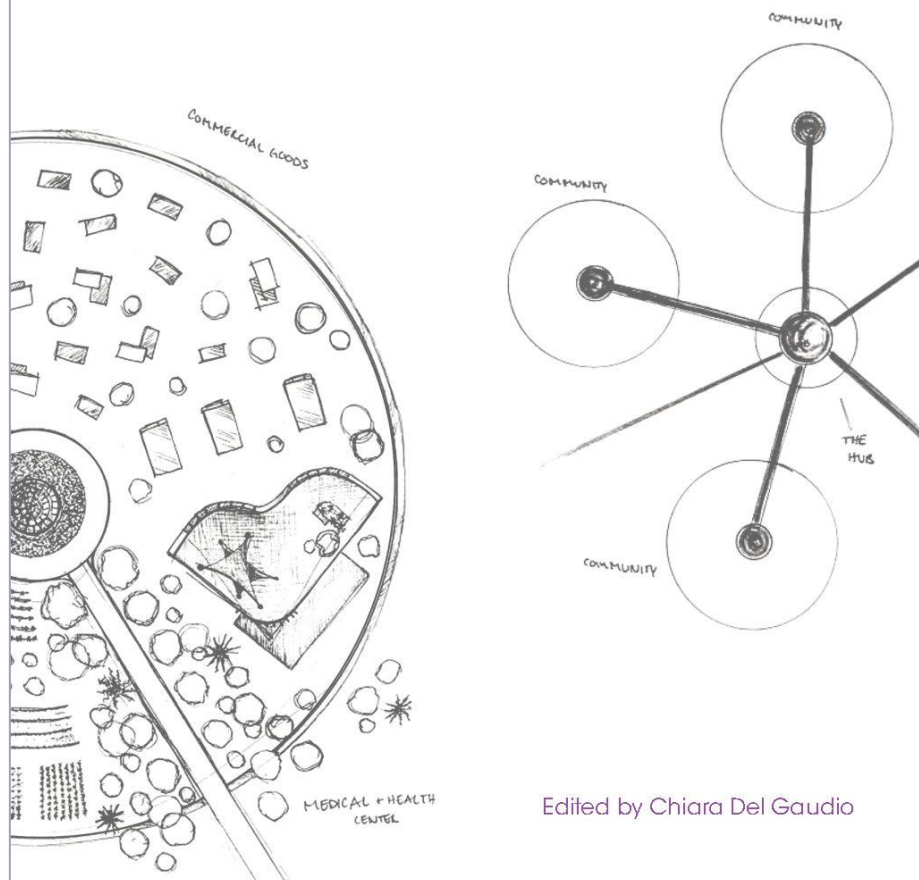Section excerpted from:

INSIGHTS

4th-Year Students' Reflections on
Design for Social Innovation

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Social Innovation and Urban Adaptation

CLIMATE CHANGE - URBAN - SOCIAL INNOVATION

Design for social innovation is the concept of developing real and practical solutions to social and environmental challenges that drive or help drive social change (Sherwin, 2012). A looming environmental challenge that humanity faces is climate change, which poses an existential threat on our species. How can design for social innovation and sharing help those living in urban environments adapt to climate change? The aim of this paper is to reflect on the different design solutions for social innovation that can be implemented to help those living in urban environments adjust.

As more people move into cities, preparations and adaptations will have to be undergone if quality of life is to be maintained. Design for social innovation plays a crucial role as systems and products will have to be rethought to deal with a vastly different set of parameters. Since social innovation centres around the public good, and climate change will provoke change and challenges in food, transport, and housing, there are many designs for social innovation that should be implemented for those living in urban environments -many of which revolve around the concept of sharing. To deal with food shortages, urban areas should set aside space for communal gardens, use roof space for farming, and convert old buildings into indoor farms. To deal with transport emissions and damaged infrastructure, more public transit should be utilized in addition to implementation and planning for backup routes when others are flooded. To deal with housing shortages and lack of space, urban areas should offer more customizable, small spaces alongside apt greenspace. Radical changes will have to be implemented to stymy the worst of this impending crisis. The UN Department of Economic and Social Affairs estimates that two-thirds of all humans on

Earth will be living in cities by 2050 (United Nations, 2019). What sorts of difficulties will the majority of all humans face?

Food security is considered a matter of national security. Extreme weather events pose a major obstacle to current systems of agriculture. In the coming decades, crop yields are projected to decrease due to atmospheric carbon (Tubiello et al., 2007). Climate change poses the potential for widespread food shortages, particularly to those living in urban environments.

Another relevant challenge will be related to transportation since many cities were built and planned around automobile transit, which has resulted in urban sprawl (Melosi, 2010). As a result, an increasing amount of people rely on automobiles for transport (Turcotte, 2008). With consequences of climate change such as flooding, roads at risk of flooding will not be able to be used during certain times of the year, impacting travel (Suarez et al., 2005). Climate change poses the potential for widespread loss and damage in transportation infrastructure, which greatly affects those living in urban environments.

Housing in urban areas will also pose a challenge as more people move into cities. As the world population increases, less space will be available to individuals (Nuwer, 2015). A study conducted in 2012 found that raising children in crowded spaces can have several negative impacts which can persist throughout life (Solari & Mare, 2012). Extreme weather events have the potential to damage and destroy houses and dwellings, which will affect more people living in urban environments.

Design for social innovation will be necessary to usher in and implement wide-scale societal changes.

Urban farming is the concept of growing crops in public

and shared spaces in urban environments. To address the distance between urban environments and rural farms where food is grown, social innovations geared around sharing (such as urban farming) can be implemented through municipal policy. This would negate the need to transport crops over long distances. It can also be done indoors and vertically using far fewer resources than traditional agricultural practices (Despommier, 2013). This would allow residents to lower the net emissions of their food, while allowing them to proactively fight climate change (Cleveland et al., 2014), allowing for a greater sense of purpose.

Shared transit (such as public transit or autonomous taxis) can be used and more widely adopted to address carbon emissions from transportation. Shared transit paired with electric autonomous vehicles will have a further reactive effect on urban adaptation for climate change (Greenblatt & Saxena, 2015). To address flooding and unusable roads for portions of the year, the social innovation of the acceptance and accommodation of natural cycles will be implemented, which will serve as a proactive adaptation to climate change for those in urban settings. City and public transit planners will have to account for this phenomenon, allowing for effective detours to be implemented quickly to avoid delays and damage to infrastructure.

Crowded communities must incorporate many accessible and shared greenspaces so that all inhabitants can have access to nature, which has been found to increase wellbeing in a multitude of factors (White et al, 2019). Along these lines, people in smaller spaces will grow accustomed to less space and closer proximity to their neighbours, mitigated by shared greenspace. In this way, housing issues in urban areas revolving around smaller living spaces can be solved with an increase in shared community greenspace.

In conclusion, new design innovations focused around sharing in food production, housing, and transportation will all allow for proactive and reactive social innovation. Vertical farming, communal gardening, public transit, and greenspaces are just some of the many possible innovations that can mitigate the issues in urban areas posed by climate change. Every environment will command unique solutions and will require the shared efforts of all.

"How can design for social innovation and sharing help those living in urban environments adapt to climate change?"

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