Annex C

"Urban Ecological Corridors: Multifunctional Corridors for People and Ecology" Research Project

1. Under the Research, Innovation and Enterprise (RIE) 2025 Grant Call of the Cities of Tomorrow's Urban Environmental Analytics and Complexity Science research pillar, URA and NParks have awarded the "Urban Ecological Corridors: Multifunctional Corridors for People and Ecology" project to SUTD in December 2024.

2. To be led by researchers from SUTD over a three-year period, this $2.75 million project seeks to examine the different needs and preferences of both people and biodiversity across different corridor typologies to understand how the movement needs of both humans and biodiversity could be effectively integrated to optimise the use of the spaces for both groups.

3. To enhance connectivity for people, the research will look at several aspects of ecological corridors. For instance, it will evaluate how specific urban design features, such as corridor width, affect connectivity. The study will also assess environmental factors, including air quality, thermal comfort and wind conditions, to understand how they influence corridor usage. To assess social dynamics, researchers will study community interactions and how people engage with the natural environment. In addition, human behaviour will be studied through the tracking of mobility patterns and activities within and around urban ecological corridors.

4. The research will also assess biodiversity movement within and around these ecological corridors to determine the types of biodiversity present and activities that occur to identify the key factors influencing ecological connectivity. New technologies such as eDNA mapping at the tree canopy level will be trialled to provide better spatial and temporal resolution on biodiversity movement patterns.

5. Combining connectivity data for both people and biodiversity, the researchers seek to develop more effective planning and design for ecological corridors that better serve community and biodiversity needs.

About Cities of Tomorrow's Urban Environment Analytics and Complexity Science Research Pillar

The Cities of Tomorrow's Urban Environment Analytics and Complexity Science research pillar aims to support research projects that leverage advanced analytics and complexity science to address urban environmental challenges. By harnessing data-driven approaches and interdisciplinary methodologies, this research pillar seeks to enhance our understanding of complex urban systems, such as land use activity, mobility, impact of built environment on health and well-being, people and ecology connectivity and encourage the development of solutions that create more resilient, sustainable, and liveable cities for the future.