**Mission Statement – GeoData Dynamos**

In 2021, the Government of Nova Scotia announced its plan to double the province’s population by 2060 (Thomas, 2022), half of which reside in the Halifax Regional Municipality (HRM). This goal is in line with current trends in the HRM, with the municipality’s population on track to double in the next 25-30 years (Halifax Regional Municipality [HRM], 2023). Given this growth and the municipality’s ongoing affordable housing crisis (HRM, 2023), Halifax will need to significantly invest in its infrastructure (esp. housing) to ensure the safety, health, and prosperity of its current and future citizens. Additionally, it is imperative that Halifax ensures these investments align with the United Nations’ 17 sustainable development goals (United Nations, n.d.) in an urban context.

Nearly three quarters of Canadians live in large urban centers (Statistics Canada, 2022), and with this number expected to increase, cities have been and will be subject to urban sprawl, which is known to impede arable cropland and increase impervious surfaces, resulting in reduced food security, biodiversity loss, hydrological changes, and heat island effects (Kuang et al., 2021). Developing vertically as opposed to horizontally minimizes the impact of urban centers on surrounding ecosystems and increases access to vital infrastructure like grocery stores and public transit. Thus, understanding the spatial distribution of current amenities and characteristics of cities helps to identify suitable areas for different kinds of sustainable development.

Our app, *Urban Densifier Pro*, aims to inform and assist decision-makers, developers, and planners in targeting areas suitable for densification and areas needing better infrastructure in the core of the HRM. Using various data from different governmental organizations, we’ve created two suitability maps: one that identifies areas suitable for densification (DUPI), and another identifying areas lacking in sustainable urban infrastructure (SUII). The app also allows users to visualize and describe relevant amenities and characteristics in the core of the HRM that contributed to the overall suitability maps. Examples of these include characteristics like the median height of buildings in a dissemination area (DA), where developers can determine suitable locations for vertical expansion, as well as accessibility to services like bus stops, helping planners to increase equitable access to public transport. Though our app is specific to the HRM, the process can be applied to any municipality, assuming the relevant data is available.

**References**

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