

Garden City Mega City

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Urban planning in 20th century Singapore was strongly focused on land use zoning and largely dictated by industrialisation, population growth, vehicular traffic and roads. The framework of two-dimensional land use parcellation produced a largely segregated city comprised of siloed mono-use buildings and an inherent sense of social alienation. It also resulted in a planning vision encoded in regulations that limit evolving with the times.

The 21st century city needs to respond to pressing current issues – climate change, resource scarcity, rapid urbanisation and digital technology. This is particularly crucial for our land scarce island city-state with limited resources, where compactness—not urban sprawl—is the only option moving forward. The model of cities with hinter lands, as well as those in the temperate west cannot simply be imported into Singapore’s unique context. To ride the next wave of our nation’s future, Singapore has to innovate from within and pioneer its own solutions.

This calls for a strategic rethinking of urban planning as a 3D matrix rather than a 2D grid. By **Layering Cities**, architecture, infrastructure and urbanism can be integrated in radical ways to produce self-sufficient micro cities, while creating multiple new ground levels that increase urban liveability, foster community, and reinforce human scale. By **Planting Cities**, re-greening of the urban environment can be found in topographic architectural forms and building integrated green screens, sky gardens and sky parks. By designing for **Breathing Cities**, buildings can open up to the climate and nature by adopting sustainable and passive design strategies.

To achieve a 21st century Garden City Mega City, public and private sector mindsets and the methodology for **Rating Cities** must evolve. Buildings/towns should no longer be measured solely in terms of developers’ efficiencies, but according to more sustainable and humane yardsticks. ‘**Green Plot Ratio**’, for instance, measures the amount of landscaped surfaces within a building over its site area, with the aim of reintroducing biodiversity and green relief into the city. ‘**Community Plot Ratio**’, on the other hand, measures the total amount of community space within a building over its site area, with the aim of encouraging social gathering and human interaction at various scales. To measure the extent to which a building encourages

and facilitates the public life of a city, a '**Civic Generosity Index**' can be introduced. This rewards buildings that exhibit good neighbourliness in the way they gift the city visually or spatially. The adoption of "urban ecological" approaches to support wildlife within cities can also be assessed under an '**Ecosystem Contribution Index**', which measures the degree to which a building supplements a city's ecosystem. To drive sustainability further, a '**Self-Sufficiency Index**' that measures a building's capacity to provide its own energy, food and water can also be adopted.

This notion of a high-density, high-amenity 21st century Garden City Mega City is not a romantic ideal. It is a realistic vision for our urban future, holding the key to a highly liveable, three-dimensionally integrated Singapore that is progressive, sustainable and humane, serving as a model that is applicable even to other Asian Mega Cities.