



Compact development

Key points

- *The increasing density of urban area allows for more efficient use of resources, including land and energy.*
- *It is important to develop adequate infrastructure within dense areas and supplement them with other development concepts in order to not hamper the liveability of people.*

Compact development explained

Compact development aims for a more efficient use of land through higher-density planning. In light of rapid urbanization, many emerging cities are turning to compact development as a means to more efficiently use scarce resources required for economic and social activities. Compact development is often supplemented with mixed-use development to incorporate a variety of functions (housing, offices, retail, etc.). Densely located, a good combination of built infrastructure can reduce the need for driving and promote walkability. Without strategic planning and coordination, the increased density of single-use development might cause problems and unpleasantness due to the lack of utility services.

How it works

The concept can be applied in new urban development as well as for retrofitting projects, such as:

- **Infill or brownfield development:** Dense, infill developments make use of vacant and underused properties in already developed areas. Redeveloping brownfield sites provides opportunities to reuse both the land and the existing infrastructure, including roads, underground utilities and street lighting.
- **Cluster development:** Setting standards for a minimum number of housing units per land parcel can limit the sprawl of smaller towns and villages. In neighbourhoods that are not densely developed, policies that promote accessory housing units will reduce the need for urban expansion.
- **Compact development along with mass transit:** Density growth can be promoted along mass transit corridors.

Strengths of compact development

- **Reduces sprawl:** By maximizing the land use in cities, for instance, via redevelopment of abandoned and vacant properties, green development on the urban periphery can be avoided.
- **Reduces dependency on private car use:** Compact development, along with public transit integration, will encourage people to be less reliant upon vehicles, thus reducing greenhouse gases, traffic congestion and dependence upon fossil fuels.
- **Creates walkable environments:** Brownfield sites, vacant lots and abandoned properties often create barriers between existing districts and neighbourhoods. This often inhibits walking, cycling and other more sustainable forms of transportation and promotes the use of the automobile. With careful compact development design, pedestrian-friendly districts can connect with each other.
- **Increases economic efficiency in delivering basic urban services:** Utilities service can be delivered cost-efficiently in more densely populated areas. Due to the economies of scale in supplying energy, water and treating waste, it is less costly to deliver urban utilities service in compact cities than in suburban areas.

Challenges to compact development

- Local codes and regulations can often make it difficult, particularly for higher-density infill.
- Existing comprehensive plans may promote competing priorities and codify single-use development.

Weaknesses

- Without a proper planning process and coordination, compactness can result in overdevelopment, air quality problems, noise pollution or unused and unprofitable developments.
- The increased cost of living in dense urban cores may contribute to gentrification, dispersion of low-income residents and the creation of impoverished areas with insufficient resources and infrastructure.

Implementing strategies

Develop master planning: Other development concepts, such as mixed use and transit-oriented development and the inclusion of affordable housing as well as parks and recreation areas, should be supplemented to serve various functions required for economic and social activities in cities.

Adopt and enforce ordinances that encourage cluster development, high-density population and mixed-use zoning: For instance, setting a maximum limit for the size of a building's footprint and decreasing lot sizes in single-unit housing districts will promote compact neighbourhood and vertical growth while preventing oversized tower block development.

Build adequate infrastructure to complement density policies: The necessary infrastructure needs to be available to support compact development. This includes street and highway design, water and wastewater systems and altered utility installations.

Set urban growth boundaries as supplementary measures: Creating an urban-growth boundary that requires new development to be maintained within a specified municipal area will encourage the density within the designated areas.

Examples

Delhi, India: The city government set an urban-growth boundary along the Ridge, a dense forest near the capital, to prevent urban sprawl and promote compact development within the city.¹

Bangkok, Thailand: In 2010, the deputy governor announced plans to redevelop a 740 square kilometre informal settlement within the city, including residential compact development incorporated with green space.²

Further reading

Compact Development: Changing the Rules to Make It Happen, ULI Community Catalyst Report Number 6 (Washington, D.C., ULI Urban Land Institute and National Multi Housing Council, 2006). Available from www.uli.org/~media/Documents/ResearchAndPublications/Reports/Community%20Catalyst/Report%206%20Compact%20Development.ashx.

Compact Development for More Livable Communities (Sacramento, CA, Local Government Commission Center for Livable Communities, 2005). Available from www.lgc.org/freepub/docs/community_design/focus/compact_development.pdf

¹ Economist Intelligence Unit and Siemens AG, *Asian Green City Index: Assessing the Environmental Performance of Asia's Major Cities* (Munich, 2011).

² *ibid.*