

3 Ways in Which Singapore Succeeds in Green Urban Development

One that tops most indexes ranking the world's most sustainable cities is, unsurprisingly, Singapore. With just over 5.6 million inhabitants, the Asian city-state has the second greatest population density in the world.

1. Public Transports and Traffic Regulations

When talking about the sustainability of urban areas, an efficient, affordable, and modern public transport system is of the utmost importance. Singapore has been praised for its efforts to push for electric vehicles and the use of data in transportation planning, all strategies that have contributed to an overall very sustainable urban transportation system. Despite its high population density and the significant land constraints, in the last few years the government has focused on implementing policies that were successful in reducing private vehicles' dependency, ensuring a smooth traffic flow, and maintaining an overall affordable transport network.

2. Green Areas

In early 2021, the Government of Singapore announced the audacious plan of building the avant-garde eco-smart city of Tengah, the western region of the island. The city will have several sustainable features such as an automated trash collection system ensuring a cleaner environment as well as pedestrian-friendly zones and underground roads. This ambitious project will resemble a proper 'forest town' characterised by huge green areas such as public gardens and a nature reserve.

Despite the relatively small population, per-capita emissions in Singapore are relatively high, with greenhouse gases coming mainly from the elevated use of air conditioning. To tackle this issue, urban planners are implementing a centralised cooling system to regulate the temperature in households, which they see as a more energy-efficient alternative to individual air-conditioning units. This 'forest town' plans to add nature to an urban area that already features several parks, vegetation, vertical gardens, and green spaces in both indoor and outdoor spaces. Indeed, according to the Centre for Liveable Cities (CLC), in 2020 nearly 47% of Singapore's land was covered in green space, making it a true 'garden city'.

3. Technology and Digitalisation

With the introduction of the Smart Nation program in late 2014, Singapore started a nationwide digital revolution. The programme introduced a series of innovations across different sectors such as Strategic National Projects, Urban Living, Transport, Health, Government Services, and Businesses. Some concrete examples of how the program was implemented are the introduction of a National Digital Identity and of services to facilitate contactless and e-payments, the completion of smart homes relying on environmental-friendly energy sources, as well as green interventions in urban mobility, such as the launch of trials of autonomous buses and shuttles.

Another sector that has seen a surge in digital services is the healthcare industry. Digitising healthcare has several benefits, such as improving the operational efficiency of healthcare providers, reducing administrative costs and waiting times, and, as more and more studies are finding, even allowing better and ongoing monitoring of patients.

Decreasing the circulation of physical money through cashless payment systems, or of people through digital healthcare, can have a significant impact on CO2 emissions and waste production. According to data by US healthcare provider Kaiser Permanente, replacing the average outpatient paper-based record with a digital version or physical visits by video consultations would drastically reduce the generation of greenhouse gases, saving approximately 1.7 million tons of carbon emissions.

Final Thoughts

In the last decade, Singapore has proven to have the potential to be a worldwide leader in sustainability. With technological advancements, green interventions, and smart strategies applied across all main sectors, it has repeatedly earned its reputation as one of the world's greenest, smartest and most sustainable cities. The stability of Singapore's economy allows it to divert attention to pressing environmental issues and increase investments and deployment of resources to tackle them. Even though much more can be done, Singapore's story is a successful one and other big cities can only learn from it.

Especially in densely populated urban areas, having green spaces and an efficient and cleaner public transport network, a solid waste management system, and a smart deployment of the resources available can have a massively beneficial impact on the environment. And despite there not being a universal solution because of the uniqueness of every city on earth, Singapore's interventions and its approach to a more sustainable future can certainly serve as an example and paves the way for more sustainable cities across the rest of the world.