



WALKABLE COMMUNITIES FOR A HEALTHIER PLANET: EXPLORING 15-MINUTE CITIES

Sabrina Alzahrani^{1,2}, Nisreen Abuwaer^{1,2} and Sami G. Al-Ghamdi^{1,2*}

¹Environmental Science and Engineering Program, Biological and Environmental Science and Engineering Division, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia

²KAUST Climate and Livability Initiative, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia

YOUNG REVIEWERS:



HARKIRAT

AGE: 10



TRILOK

AGE: 11

How long does it take you to walk to your supermarket? How about your school or your parent's work? Now imagine if you could visit most of those places in <15 min. Well, you actually can, and this concept is called a 15-minute city. The 15-minute city concept is a very simple method used by city planners and designers, in which neighborhoods are designed so that most services and other daily needs are located only 15 min away from your home. This includes work, school, or the supermarket. 15-minute cities are meant to discourage car use and encourage public transport, walking, and cycling. This allows us to shift into designing cities that emphasize a focus on human needs and demands over car-oriented ones—meaning people living there will not have to travel far for simple errands and can walk to most places.

AMENITIES

Useful features in a space such as parks, pools, and gyms, that make those spaces more enjoyable and comfortable.

MIXED-USE LAND

Areas with different types of spaces, like homes, shops, schools, and parks, all together in one area.

SINGLE-USE

Areas with only one type of space, like homes, shops, schools, or parks, in an area.

WHAT ARE OUR CURRENT CITIES LIKE?

In a normal city, most of the **amenities**, like shops, services, and entertainment, are placed in the center of the city. Around the city are the suburbs, where only houses are built and where most people live. It may sound like a good idea to separate land based on its uses, but because of this separation, residents of this type of city are very dependent on car ownership to get anywhere. For instance, if someone wants to have dinner at a restaurant, they need to have a car since there are no restaurants near their house. Although these types of cities might have proper sidewalks, they are rarely pedestrian-friendly, making walking difficult and causing people to rely on cars. Large amounts of land are also required within the city to build highways and car parking, which makes the city even less walkable.

HOW DID 15-MINUTE CITIES COME ABOUT?

The idea of 15-minute cities has existed for a long time, but the term was officially coined by Professor Carlos Moreno in 2016. 15-minute cities became popular during COVID-19 when many restrictions limited where people could go. Many people could not access the services they wanted, and the pandemic made it more difficult for people to move around. This caused lots of people to leave large cities and move to less crowded ones, where transportation is easier and faster. The pandemic led to an increase in the use of private cars, especially in the suburbs. But when the pandemic subsided, many people moved back into cities. This is because of the easily accessible and well-located amenities that were not present in the suburbs. Getting from one place to another was one of the obstacles that people encountered after moving back to cities, so they wanted more efficient transportation systems. 15-minute cities became a way to achieve the goal of having both good transportation and access to amenities.

There are some characteristics every 15-minute city should have. First is connectivity, which means connecting neighborhoods by public transportation, so they are not separated from each other. Second is proximity, which means that most services must be 15 min away, maximum. Third is diversity—the city should contain **mixed-use land** instead of **single-use land**, which means the land has shops and homes together instead of separated. Finally, these cities should have density, which means clustering people and places in a specific area [1].

IMPORTANCE OF WALKABILITY

15-minute cities aim to be walkable, so that people can walk or cycle to most places. These cities are designed for people rather than

CARBON EMISSIONS

Invisible gases, like carbon dioxide, that are released when things like coal and oil are burnt. These gases go into the air and harm the plant, impacting the weather.

Figure 1

(A) In a typical city, most people rely on cars to get around because places are far apart. (B) In 15-minute cities, most people cycle or walk because places are close together and the walking conditions are good. In a traditional city, Ali starts his day with a 15-minute drive to school. His parents go to work in the city, another 30-minute drive. They stop at the park on their drive home. In the 15-minute city, Sarah walks 5 min to school and her parents walk 15 min to work. After school, they all walk to the park and gym on their way home.

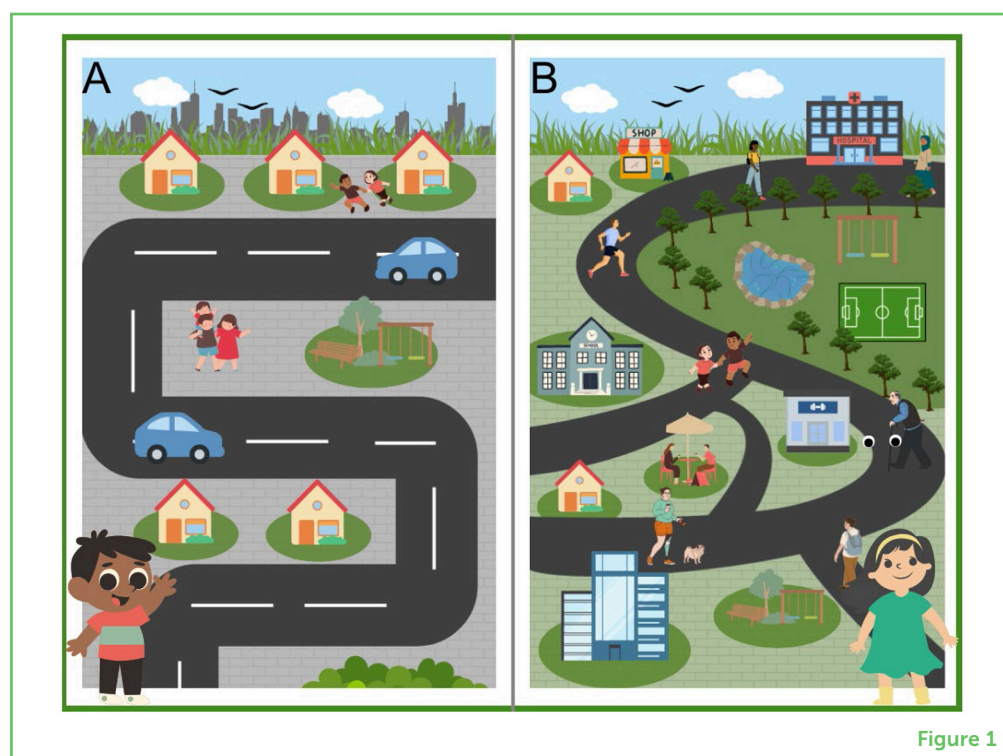


Figure 1

Walking is free, so people who walk save money. Spending on car ownership, repairs, parking fees, and fuel are all reduced or eliminated. Governments also save large sums of money because they do not need to build and repair highways and roads. Governments can also earn money as more people opt to pay for public transportation. This money can be reinvested back into the 15-minute city.

Walkability paves the way for more social interactions between people, helping a community to form—whether that involves friends walking to a coffee shop together or saying “hi” to another person walking their dog. Walking is a physical activity associated with healthier populations because it decreases heart disease and obesity, and even improves mental health [2].

EXAMPLES OF 15-MINUTE CITIES

Paris, a crowded and polluted city, is implementing the 15-minute concept, which will allow the city to reduce pollution caused by cars.

Many people in Paris travel across the city to get to work, which causes traffic jams and excess emissions. The “La Ville du quart d’heure” project (meaning “the 15-minute city”) is now being used to reduce the distance between offices, restaurants, schools, supermarkets, stores, and other amenities—making each Paris district self-sufficient. There will also be a less need to travel outside a personal district for those services. To achieve this goal, Paris plans to construct a cycle path on every single street, to encourage bicycle use. Paris will also use nature-based solutions, including green roofs, parks, and permeable pavement (read more [here](#)), to reduce the risk of extreme weather events like excessive heat and flooding [3].

The Line is an upcoming 170 km (105 mile)-long vertical city built, as the name suggests, in a line from the sea to the inland mountains in Saudi Arabia. The city will have no cars or roads and will use 100% renewable energy. Green spaces like parks will be only 2 min away from anyone living in The Line. All the services people need will be accessible within 5 min of their homes. The Line has a high-speed rail connecting all the communities, and it takes only 20 min to travel from beginning to end. The Line project aims to be the epitome of **sustainable** city development and act as a model for the world.

SUSTAINABILITY

Meeting our needs without using up all the earth’s resources, such as water and trees, so that future generations can also use them.

HOW ARE 15-MINUTE CITIES HEALTHIER FOR THE PLANET?

15-minute cities, unlike many cities, are designed with mixed-use land. This means that in one plot of land, houses, supermarkets, sports facilities, offices, and other shops will all be present next to each other. This is the opposite of single-use land, in which land is only used for one type of purpose. Mixed-use land can make the journey between two locations much shorter. However, many places are too cold or too warm to walk or cycle all year round. Additionally, because of climate change, more extreme weather events are occurring, including hurricanes, droughts, and floods. These extremes make walking and cycling impossible. This is why it is important to have strong, efficient public transportation networks in 15-minute cities. When the weather is bad, or if someone does not want to (or cannot) walk to their errands, they can use public transportation instead of buying a car.

15-minute cities have fewer roads and car parking lots. This results in free spaces that can be used to build green spaces like parks. Green spaces are beneficial because they help to remove carbon dioxide from the atmosphere and cool the air. Trees also act as air filters, cleaning pollutants from the air and improving air quality [4].

ZONING LAWS

Laws that regulate how certain areas of land can be used, for example where houses, factories, or offices are allowed to be built.

INFRASTRUCTURE

The backbone of a city, which includes roads, buildings, sidewalks, streetlights, phone lines, cables, and pipes—things that allow a city to run smoothly.

WHAT ARE THE LIMITATIONS OF 15-MINUTE CITIES?

It is difficult for governments to change how a city is designed because there are laws regulating how land is used and how a city is meant to be organized. For example, some areas have **zoning laws** that make a plot of land single-use, such as only for houses. If someone wants to build a supermarket on this single-use land, it is very difficult and may take years for the government to allow it—if at all. So, imagine if people want to transform a large area of single-use land into mixed-use land for a 15-minute city. To do so, the zoning laws need to be modified, which is difficult and time-consuming. It is also a lot of work and very expensive to transform a traditional city into a walkable city because a lot of the city's **infrastructure** needs to be changed.

Agriculture and industries will be located far away from 15-minute cities. This means that many resources people need every day will need to be transported into 15-minute cities from other cities or even other countries. Long-distance transport produces a lot of carbon emissions, illustrating that it is very difficult for a city to be a true 15-minute city. These limitations are just a few of the difficulties 15-minute cities face. Further research must be conducted to overcome these limitations and make the 15-minute city a more realistic idea that can be applied around the world.

FINAL TAKEAWAYS

15-minute cities are a method of planning cities in which most of a person's daily necessities are located nearby. 15-minute cities stress the importance of walking and cycling and discourage private car use. Many cities around the world, such as Paris, are implementing 15-minute cities to reduce the pollution and traffic jams caused by cars, and to shorten the journey between a person's home and the services they need. Multiple cities are being encouraged to take on the 15-minute city concept, to make city life more liveable. What ideas do you have to make your city more like a 15-minute city?

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YOUNG REVIEWERS

HARKIRAT, AGE: 10

Hi, I am a 5th grader who loves to dream, doodle, and solve puzzles! I like unicorns, I am super good at hopscotch, and I can solve Rubik's cubes super-fast! One day, I want to try all the cookies and find the yummiest one. When I am not in school, I am either reading cool books, building awesome stuff with my Legos, or challenging myself with tricky puzzles.

TRILOK, AGE: 11

Trilok is an 11-year-old with a keen interest in automobiles and mathematics. He is an enthusiastic learner and reader with a curious mind, always eager to build or create something new. His passion for reading extends to books, articles, and magazines, and he enjoys listening to music. One of his favorite activities is crafting impressive LEGO cars, showcasing his creativity and engineering skills.

AUTHORS

SABRINA ALZHRANI

Sabrina is an environmental high school researcher at KAUST Urban Lab who has been interested in protecting the environment from a very young age. She has



various interests in the environment, such as measuring and reducing the carbon footprint of products and processes, as well as sustainable urban planning.



NISREEN ABUWAER

Nisreen Abuwer a doctoral researcher at KAUST Urban Lab in Saudi Arabia, specializing in environmental science and engineering. She researches the workings of cities, diving into how they function and the effects they have on the environment. She uncovers the relationship between cities and their surroundings—understanding not only how cities impact the environment but also how the environment shapes urban life. Fuelled by her dedication to sustainability, she seeks ways to incorporate environmentally conscious practices into urban landscapes, to help pave the way for sustainable development.



SAMI G. AL-GHAMDI

Prof. Sami G. Al-Ghamdi, Principal Investigator of KAUST Urban Lab, conducts research on the complexities of the built environment to fight climate change and optimize energy, water, and material consumption. He works on transportation, water, energy, materials, and indoor environment, to assess the impact of urban systems on the environment with aim of sustainability, resilience, and decarbonization. He is developing computer models to understand the potential contribution to climate change, and other environmental effects. Lastly, he works to help communities withstand, survive, thrive in, and adapt to natural and climate change stresses and shocks. *sami.alghamdi@kaust.edu.sa