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Urban Trail Systems

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Urban trail systems are connected open spaces located within an urban area and designed for the use of nonmotorized modes of transportation such as walking or cycling. The interest of urban planners in these systems has increased in the past few decades due to increased awareness of their benefits. The systems can enhance the livability of urban communities by improving accessibility to natural environments, promoting healthful exercise, and facilitating human interaction, leading to important benefits in terms of public health. They also fulfill an important role in the sustainability of the urban environment.

The definition of “open space” in urban trail parlance is broad and can encompass different types of land cover and use, depending on the geographic, environmental, and social context of each city. Most urban trail systems include parks, gardens, reserves, lakes or rivers, and other spaces where vegetation is a predominant element. Riversides or sea fronts, canal towpaths, corridors along disused railway lines, and regenerated industrial areas may also be included in the system.

The main characteristics of these systems are the large number of component spaces and their connectivity, allowing uninterrupted access by non-motorized modes, such as walking, cycling, or skating. Trail systems thus form a linear route linking different parts of a city or metropolitan area.

The concept is distinct from that of greenway because it presupposes access along the whole of the route, while greenways may include open space for the purpose of conservation and human access is partly restricted. Trail systems may also be connected with other car-free areas of the city, such as historical neighborhoods, shopping streets, shopping malls, or sport facilities. In some cases, public transit, such as electric buses or light railways, may also be allowed to use parts of the system.

Urban trail systems are a feature of many cities in developed countries. Cities in Europe have long developed trails along rivers and abandoned transportation infrastructure. In London towpaths along disused canals provide an extensive network used by walkers and cyclists. Trails may also be implemented in the space left by obsolete structures such as the Berlin Wall.

Many North American cities also have trail systems. For example, the system in Portland, Oregon, comprises a trail along the Willamette River and other streams and a network of parks and other open spaces, while in Toronto, Ontario (Canada), the lake waterfront is at the core of the project.

Most Japanese cities have also developed extensive trails along rivers. Throughout the world, urban trail systems are developing quickly following the popularity of programs promoting nonmotorized mobility, such as public rental bicycles.

One of the arguments for the implementation of this infrastructure is that it enhances urban livability. Trails can be used as corridors for walking and cycling as a means to access the workplace and urban facilities or to link nearby communities. The system can therefore facilitate human interaction and contribute to community cohesion.

People's sense of community may also increase because of the availability of places for social encounter and gathering, a role that local streets once filled but no longer fulfill effectively because of the noise, distraction, and dominance of motorized traffic.

Urban trails also increase accessibility to places with historical and cultural significance and provide spaces for recreation, cultural activities, and sport events, improving the experience of the city for both residents and visitors. The enjoyment of green and other natural areas also promotes environmental education and the feeling of closeness of humans and the natural world.

The benefits of trail systems in terms of public health are also important, because they provide opportunities for physical exercise. The benefits of walking, jogging, and cycling are widely recognized and include enhanced strength and flexibility and protection from cancer and heart diseases. These benefits are increasingly important given the current trends of aging populations and increasing obesity in most developed nations.

Living near and having the possibility of easily accessing open space and clean air also have benefits in terms of people's general physical health. Surveys indicate that outdoor recreation plays an important role in the mental health, well-being, and life satisfaction of urban citizens, allowing for relaxation and contemplation and thus providing relief from stress.

Urban trail systems offer important benefits as an alternative to daily commuting in cars, buses, and rail systems, which, research has found, is one of the most stressful activities in urban living. The trails may also provide an escape from the work environment during lunchtime breaks and from the home environment for residents in small and crowded apartments.

While urban trail systems are created for human activity, they also fulfill an important environmental and ecological role. The implementation of the systems is often done in conjunction with the revitalization of areas suffering from environmental degradation, such as rivers, lakes, and waterfronts, involving improvements in water quality, air quality, and a general clean up of natural areas. The inclusion of parks and natural reserves in the system, and the emphasis on their connectivity, also contributes to the conservation of wildlife and plants by helping preserve habitats and corridors for the natural movement of animals.

The Charles River Esplanade is a walking and biking path running alongside the Charles River in Boston, Massachusetts. Similar urban riverside trails can be found in London, England, and Portland, Oregon, among other cities.

In addition, the presence of open space within the urban environment reduces the risk of flooding, while urban forests and other green areas have positive effects in the regulation of urban climate and air quality. The creation of facilities for the use of nonmotorized modes also contributes to a transportation modal shift, reducing traffic levels and the associated local environmental impacts, such as air pollution and noise, and regional and global effects such as the excess release of carbon dioxide (CO_2).

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See Also:

- Bikeways/Bike Lanes, Road Design Issues of
- Complete Streets
- Greenways
- Health Issues

- Livable Streets
- Road Ecology
- Urban Walkways

Further Readings

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