



Bucheon City Goes from a Car-Centric City to a People-Friendly Vision

By Beatrice Ch'ng,
Ecomobility Officer,
ICLEI – Local Governments
for Sustainability

ICLEI is the leading global network of 1,500+ cities, towns and regions committed to building a sustainable future. Through their collective efforts, ICLEI impacts more than 25 percent of the global urban population. Learn more at iclei.org.

Bucheon City, located between Seoul and Incheon in the western part of South Korea, is a charming and bustling city that prides itself as a cultural, information and industrial hub. Approximately 55 square km, Bucheon is home to almost 900,000 people, making it the second most densely populated satellite city after Metropolitan Seoul. Like its neighboring cities, Bucheon grew massively during Korea's rapid urbanization in the 1970s. New city areas and facilities were established in the 1990s and 2000s, such as the four major higher education institutions, a philharmonic orchestra and colorful parks that host annual festivals.

THE OPPORTUNITY

In the 1970s, Bucheon followed the car-centric trajectory of many of the world's cities, resulting in major traffic congestion. Existing roads were expanded and new arterial roads and overpasses were constructed. Even the Simgokcheon stream that meanders through the old town from the east to the west was covered with concrete to make space for cars. Narrow sidewalks made walking almost impossible, especially for the children, elderly and people with reduced mobility. As a result, the city faced massive traffic congestion, air pollution, and a lack of public spaces.

Photo: ICLEI



Bucheon's projects turned city space into urban green space, with the idea of improving people's commutes and daily interactions with the city. Aesthetics aside, green spaces lower cortisol levels, thereby reducing stress.

Photos: ICLEI

Fortunately, the past decade has seen a major rethinking of transport in Bucheon. In 2010, the city government implemented a groundbreaking “pedestrian-centric transportation policy,” with sustainable mobility as the pillar. The policy prioritizes pedestrians, cyclists, commuters with buses and trains. Bucheon developed four strategic pathways to meet this new vision: (1) improving walkability; (2) creating green networks and urban forest; (3) expanding cycling paths; and (4) increasing the use of public transportation.

MAKING THE CITY WALKABLE AGAIN

Making the city walkable is not only about expanding walking networks but providing attractive facilities and creative spaces that invite residents to walk. Bucheon designed walking trails connecting the city's 188 libraries. As libraries are culturally significant, the purpose of connecting libraries and the pedestrian pathway was to enable access to knowledge. The city also opened book cafes along streets, delivered books to the elderly and disabled, and set up small libraries in busy subway stations, which resulted in more people using libraries and public transportation. These efforts were successful as the number of pedestrians increased to 4 million with a total of 133,506 square meters of walking trails, and green space around the libraries increased by almost 40% to 1,115,000 square meters. Today, the city plans to increase the number of libraries within a 5-minute walk, and continue to expand the walking network.

GREEN SPACE FOR LIVEABLE CITIES

Turning some city space into an urban forest improves quality of life for residents. People are drawn to trees. Aesthetics aside, they lower cortisol levels in pedestrians, meaning less stress. Bucheon created an urban forest by building a network of trees and connecting waterways. The city adopted a participatory approach by inviting residents to give input on paving materials, maintenance systems, and other details. Local community gardens were also cultivated and nurtured through a series of donations and volunteer activities.

In 2017, Bucheon also began the restoration of Simgokcheon Stream which has been a highway cum sewage system since 1986. The revitalization involved the creation of 40 kilometers of waterways, organically connecting the main streams and rivers, and planting various plants to restore the ecosystem. The city government transformed the waterways into a cultural asset by inviting street performances and local festivals. As a result, the green area per capita increased from 4.48 square meters to 5.45 square meters, while reducing the urban heat island effect.

CATALYZING CYCLING

The city encouraged cycling by building 200 kilometers of cycling paths, and installing bike parking stations at every subway for seamless connectivity. The city also managed seven public bike sharing and repair services, that served 15,892 people in 2017. Unlike other cities that rely on technology to manage bike sharing systems, Bucheon staffs stations with people to promote social interaction.

The number of bicycle users increased by 11% from 2010 to 2017, and after a bicycle insurance policy was implemented in February 2018, cycling increased from 12.9% to 26%. All residents registered with the city are automatically insured.



Bucheon upgraded metro lines and stations to add more space for pedestrians, and make them more like "community squares."

Photo: ICLEI

The insurance is renewed annually and covers injuries, hospitalization, permanent disability, and fatalities.

To promote biking, the city plans to extend the cycling network to 250 kilometers and offer bicycle training to 30,000 residents. An annual Grand Bike Festival is also hosted by the city every autumn with 5,000 participants.

IMPROVING CONNECTIVITY AND INTEGRATION OF PUBLIC TRANSPORT

To increase public transport ridership and reduce traffic congestion, metro lines and stations are being upgraded with new stations and trains. One of the metro lines that opened in

continued on p. 38

Early Childhood

continued from p. 7

sidewalk in a city. Boa Vista, Brazil is working to identify the routes taken by families to early childhood services to make them safer. The city is also working with older children to use GPS to define the routes they take from home to school and other destinations. Andres Sevtsuk at the Harvard Graduate School of Design uses probability analysis to prioritize the routes most likely to be taken by people trying to reach a given set of destinations and has applied this technique to the routes that small children take to reach playgrounds in Cambridge, Massachusetts.

4. Design child-friendly streets. For babies and toddlers, safer roads mean both traffic safety and reducing air pollution. The Global Designing Cities Initiative is working on a Streets for Kids supplement to its Global Street Design Guide that provides technical guidance on designing streets that serve both as safer transport corridors and spaces for vibrant public life. Bogotá, Colombia is piloting some of these techniques for colorful pedestrian routes and traffic calming paint jobs in its Children's Priority Zone. In Barranquilla, Colombia, two grownups for every two dozen children lead "walking buses" along pre-established routes to keep preschoolers and older children safe on their journeys to school.
5. Create walkable cities. There are dozens of reasons to make a city more walkable. For babies, toddlers, and their caregivers, not only is walking good exercise and free—it is predictable, reducing stress on already stressed caregivers. And at its best, walking through city streets creates a stream of interesting sights, sounds, and people for small children to experience.
6. Make travel fun. City dwellers can spend hours a day in transit. Some recent projects to turn travel into moments for learning and love include Urban Thinkscape's work to convert a Philadelphia bus stop and the vacant lot next to it into science-based early learning spaces; ImagiNation Afrika's work in Dakar, Senegal, to promote play between parents and children on buses; and the Boston Basics-inspired project in São Paulo, Brazil, to post billboard messages to encourage caregivers to talk, sing, and play with small children.
7. Finally, regulate cars in places where small children spend the most time. Cities around the world from Paris to Jakarta have established or are considering partial or even permanent bans on cars in the city center, to reduce congestion, improve air quality, and make room for a growing population. We'd like to see this near places where babies and toddlers spend the most time, like the play streets near schools and in neighborhoods filled with families in Los Angeles, Bogotá, London, and Libreville (to name just a few).

Bucheon

continued from p. 13

2013 had a slow ridership due to a flawed consultation on service intervals. After a review, the city made service adjustments and purchased two new electric trains in 201. In less than a year, the average ridership significantly increased by 67.27%. A new Sosa-Wonsi metro line opened this year will serve more residents.

Three of the metro stations were redeveloped to release the traffic congested space to community squares: the Maru Square, Rainbow Square, and Dohaeng Square. The connecting metro stations were redesigned with integrated platforms for safe and convenient one-stop connections with buses and taxis. Exciting cultural performances take place at these squares daily, for Bucheon as the city of culture. Overall, this project generated an economic benefit of over 500 million dollars.

MORE THAN JUST MOBILITY

As a result of Bucheon's progressive people-oriented and ecomobile transport policy, passenger cars decreased by 3.2%, while the number of pedestrians and cyclists increased by 5% and 15%, respectively. As the traffic volume decreased by about 90%, safety improved with the traffic accident risk index reduced from 4.4 to 4.3, and the number of traffic accidents reduced from 3,682 to 3,080 in 2017. Most of all, the average air quality improved by 13%. This illustrates how improving the transportation system is not only about mobility, but creating an accessible, people-friendly, safe, fun and livable city with positive economic benefits.

Bucheon's policies have won 135 awards since 2017, including winning the Honourable Mention for the 2019 Sustainable Transport Award. Visitors now come from around the world to study Bucheon's model for sustainable and equitable urban development.

Bucheon is an inspiration for active and integrated mobility that can truly improve the quality of life for local residents.