# A Collection of Shortlisted Initiatives of the 6ᵗʰ Guangzhou International Award for Urban Innovation

Foreign Affairs Office of the People's Government of Guangzhou Municipality
Guangzhou Institute for Urban Innovation

AWARD
*Guangzhou*

UCLG
United Cities
and Local Governments

metropolis

GUANGZHOU

城市创新
Guangzhou Institute for
Urban Innovation

Overlooking the Three Towers (West Tower, Canton Tower and East Tower, the three highest towers from left to right)

# AWARD Guangzhou

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# Eco-Friendly Farmer Card:
# Protect Your Environment,
# Collect Points, Win Prizes



📍 **Antalya, Türkiye**

## Basic City Data

- **Population size:** 2,735,791
- **Population Growth Rate(%):** 2.60
- **Surface Area (sq.km):** 20909
- **Population Density (people/sq.km):** 129
- **GDP Per Capita (U.S.$):** 10,665

- **GINI Index:** 0.4
- **Main Source of Prosperity:** Tourism, Agriculture and Livestock, Commerce, Mining, Health

## Abstract

Antalya's municipality has launched the innovative Eco-Friendly Farmer Card Project to address the pressing issue of hazardous agricultural packaging waste, a significant environmental and health concern in the city due to intensive farming activities. The project's objective is to mitigate plastic pollution from pesticide-laden packaging, which harms soil, causes pollution, and indirectly contaminates 98% of Antalya's drinking water.

This pioneering initiative introduces a sustainable system featuring sun-powered, fire-resistant smart containers, known as "Waste Vending Machines." These machines are monitored 24/7, utilizing magnetic key fobs distributed to farmers for access. When farmers deposit agricultural waste packaging, it's automatically weighed, and they receive reward points on their key fobs. An associated mobile app, "Çevre Dostu Çiftçi" allows farmers to track their points, rewards and vending machine locations.

## Background and Origins

Antalya, a vital agricultural center, intensively cultivates crops, particularly in greenhouse farming, to meet domestic and international demand for fruits and vegetables. However, this has led to a parallel increase in pesticide use, with Antalya consuming 10.1% of Turkey's annual 50,000-ton pesticide supply. Uncontrolled pesticide use has adverse environmental effects, including habitat degradation, soil and water pollution. The project's core objective is to devise innovative solutions, preserving fertile agricultural land and water resources for future generations by addressing these pressing issues.

## Key Innovative Aspects

Experts identified a growing waste problem in agriculturally intensive Finike and Kumluca districts, driven by excessive agricultural packaging waste. Departments of Environmental Protection, Zero Waste, and Agricultural Department worked together to conduct farmer interviews and to design the project. Private sector involvement provided innovative equipment, including user-friendly key-chain cards for farmers. Software accessible on phones and computers facilitate data monitoring and scoring based on the 1 gram = 1 point criterion. This comprehensive approach aims to address the toxic waste issue efficiently and effectively.

Participants receive incentives like air-heat-humidity sensors, greenhouse materials, and tools for farming. Additionally, farmers undergo training and receive guidance on identifying and properly disposing of hazardous

packaging waste in vending machines. This service is available to registered farmers, making a significant contribution to environmental sustainability, the circular economy, and reduced carbon emissions, marking a groundbreaking development in Turkey's environmental efforts.

## Desired Outcome and Measurement

### (1) Desired Outcome

The project aims to raise environmental awareness among farmers in Turkey by using the circular economy model, focusing on "The Protector Wins" instead of "The Polluter Pays". The strategy is to collect points, protect people's health, and win prizes to encourage sustainable practices. The business model is based on the take-make-dispose model, and the Zero Waste Branch Directorate was established to increase institutional capacity. The project began in 2016 and has been implemented in Antalya, Turkey, where the use of pesticide packaging waste ranks third worldwide. In 2022, the project was chosen as a pilot district and began using smart containers at six points where agricultural production is intense. The project continues to be implemented sustainably and expands its scale.

### (2) Measurement

The project collects various farmer information, including name, farmer number, field area, crop details, waste amounts, and irrigation status. Specifically, it focuses on the quantity of agricultural packaging waste deposited into vending machines using cards, automatically measured by software for the reward system. Personal data such as age, gender, income group, and disabilities are kept confidential in compliance with personal data protection regulations in the country, ensuring privacy and security.

## Implementation

### (1) Principal Parties and Partners

The waste management initiative involves public-public, public-citizen cooperation between metropolitan and district municipalities for waste collection and storage. Additionally, there's public-private collaboration with a local company that manufactures innovative waste vending machines. These machines, utilizing solar panels for energy, can operate for up to 60 days. They feature impact sensors, cameras, GPS tracking, and fire prevention mechanisms. This unique partnership, involving municipalities, citizens, private sectors, and academia, addresses agricultural packaging waste, preventing leachate through innovative coating techniques. This technology has the potential to benefit countries with similar agricultural patterns. Ongoing software improvements and capacity enhancements are part of future plans, promising economic development through increased suppliers, service providers, employment opportunities, and company capacity in various cities and municipalities.

### (2) Resources for Implementation

The project is funded using municipal resources and plays a vital role in contributing to the circular economy. Circular economy principles prioritize sustainable resource use and waste reduction. This initiative promotes material recycling, energy generation, reuse, alternative materials development, sustainable production, innovation, and employment opportunities. Operating on the take-make-dispose model, the circular economy system aims to eliminate waste and pollution by maximizing the utilization of products and materials. The financing model seeks to shift citizens' perception from the "Polluter Pays" concept to "Protector Wins" within the circular economy framework, challenging long-held misconceptions about waste and responsibility.

### (3) Tools and Methods Applied

Previously, farmers relied on environmentally harmful practices like incineration. The project promoted clean energy and innovation, contributing to economic and environmental sustainability. It raised public awareness and collaborated with stakeholders, creating lasting solutions through R&D in a multidisciplinary environment.

### (4) Obstacle and Solutions

Obstacles and challenges were encountered during the implementation of the Eco-Friendly Farmer Card Project, including:

● Awareness and Education: Farmers were not aware of the benefits of the program or the importance of proper waste disposal. Effective training and reward systems were introduced to engage farmers and encourage their participation.

● Security and Vandalism: Vending machines, digital systems can be vulnerable to vandalism or theft. Vending machines are equipped with alarm systems and cameras to ensure the security of the machines and data.

● Sustainability of the Reward System: Sustaining the reward system in the long term can be challenging.

Finding a reliable source of funding or incentives to engage farmers could be a barrier.

●Scale and Expansion: Scaling up the project may require significant logistical, financial and administrative efforts.

●Overcoming these barriers may require a combination of government support, community engagement, education and an ongoing commitment to sustainability and environmental protection.

### (5) Achieved Outcome

During the project, 13 waste vending machines were deployed, with 6 in Kumluca, and Finike districts, engaging 2,041 farmers. This effort collected 1,200 kg of waste, enabling 21 users to receive rewards. Seventeen farmers were rewarded in the first stage. The project raised environmental awareness among the 2,041 farmers, fostering sustainable practices. The collected waste packaging was recycled, re-entering the circular economy. Farmers gained rewards for agricultural tools, incentivizing behavior change. The municipality maintains transparency by sharing waste data through ceremonies, with agricultural chambers, annual reports, and inventory data. Currently in Antalya, plans are underway for nationwide expansion, promoting broader environmental sustainability.

### Lessons Learned

Antalya builds a localized recycling and disposal network through the eco-friendly farmer card. This would ensure efficient waste management even during external challenges. The card incentivizes farmers to use recyclable and eco-friendly packaging, promoting a circular approach that reduces waste. By incorporating data collection and analysis, Antalya can monitor waste generation, recycling efficiency, and farmer engagement, enabling evidence-based improvements.

The eco-friendly farmer card program offers valuable lessons in localized waste management, integrating health measures, community engagement, adopting technology, adhering to circular economy principles, fostering collaboration, practicing adaptive planning, and demonstrating long-term commitment.

This proactive approach aligns with global efforts to build more sustainable and environmentally responsible communities while addressing critical challenges like waste management and supply chain resilience.

# Bogotá Care Blocks: How a City is Reorganizing Itself for Women and Achieving the SDGs



**Bogotá, Colombia**

ALCALDÍA MAYOR DE BOGOTÁ D.C.

CARE BLOCKS
Time and Services for Women

BOGOTÁ

3 GOOD HEALTH AND WELL-BEING

5 GENDER EQUALITY

11 SUSTAINABLE CITIES AND COMMUNITIES

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

## Basic City Data

- **Population size:** 7,834,167
- **Population Growth Rate(%):** 1.24
- **Surface Area (sq.km):** 1,776
- **Population Density (people/sq.km):** 21,276
- **GDP Per Capita (U.S.$):** 12,117 (2022)
- **GINI Index:** 0.53
- **Main Source of Prosperity:** services

## Abstract

The unpaid care burden falls disproportionately on women, which translates into lack of economic autonomy, abandoning education, chronic mental and physical illnesses and higher chances of gender-based violence. Bogotá designed and implemented the first ever city-level Care System in Latin America, to recognize, reduce and redistribute care. It operates mainly through Care Blocks. With a radical "ease-of-access" modality that had never been tested, Care Blocks provide educational, leisure and income generation services for caregivers, while simultaneously offering professional care for those they care for: children, people with disabilities and the elderly. They also comprise a cultural change strategy, that includes a "Care School for Men", so men learn to recognize care, and distribute care more equitably within the household. Care Blocks are a social innovation to address economic and time poverty, enhance gender equality, and promote environmental sustainability in a city, and an already proven easily replicable model.

## Background and Origins

### (1) Background

Designing and implementing Care Blocks is an objective of the 4-year government plan of the first female elected mayor of Bogotá, Claudia López-Hernández. Furthermore, care was included as an organizing principle of the Master Urban Plan, which guides city planning until 2035. The plan foresees 45 Care Blocks. Lastly, Care Blocks were adopted as a by-law by the City Council, making them a city policy, beyond the current administration.

### (2) Origins

Women's "time poverty" is a structural cause of gender inequality. In Bogotá, the unpaid care burden falls disproportionately on women, reaching alarming proportions: 30% of Bogotá's female population are providing unpaid care-giving full-time; 91% of them are low-income; and 33% are deprived of free time for self-care.

To address these challenges, women's organizations in Bogotá have historically demanded a care system that reduces, redistributes and recognizes care work. In 2019, when running for Mayor of Bogotá, Claudia López-Hernández signed a pact with the Women's Movement to create a care system should she be elected. After her election, she launched in 2020 "Care Blocks" and its mobile version - Care Buses. Civil society participation has been key in the design and implementation of Care Blocks.

## Key Innovative Aspects

● Care Blocks are innovative because they: 1) put caregivers at the center; 2) organize the city to meet people's needs, not the other way around; 3) address the care inequalities from a cultural perspective that ensures long-term, sustainable change; 4) offer a social solution to the environmental crisis; 5) comprise comprehensive public management as opposed to management in silos. Its modus operandi is the main innovation: providing simultaneous services for caregivers and those who require care.

● The main institutional challenges to make Care Blocks work efficiently are: 1) interdepartmental cooperation to align the 13 public entities that are providing services in a Care Block; 2) new procedures and rules to enable all the service-providing entities to coexist in one space; 3) shared budgets, ensuring budget efficiency and cost-effectiveness; 4) a data collection and sharing system to help measure the impact of Care Blocks as a system.



## Desired Outcome and Measurement

### (1) Desired Outcome

The objectives are threefold: (i) to recognize the role of care and the contribution of caregivers to society; (ii) to redistribute the unevenly shared responsibility of care more equitably between members of society; and (iii) to reduce women's unpaid care work to give women time to engage in education, formal jobs, well-being, and social and political activities.

## (2) Measurement

An impact assessment of Care Blocks and Care Buses with quantitative and qualitative methodologies, is currently taking place. Instruments such as surveys and in-depth interviews with focus groups, (disaggregating by age, location, type of care, gender, etc.) are being used.

## Implementation

### (1) Principal Parties and Partners

Shared responsibility is one of the Care Blocks principles since it is based on public-public and public-private partnerships. For example, the private sector has been progressively involved by providing care services or resources such as free public laundry facilities in each Care Block which reduces the time previously devoted to hand-washing. Finally, partners in academia and donors have carried out studies, evaluations, and donations that have enhanced and the technical and technological aspects of running and managing the Care Blocks.

### (2) Resources for Implementation

Public resources were allocated from the beginning through the City Development Plan 2020-2024, covering 98% of the total cost. Care Blocks have received technical and financial support from international cooperation agencies and academia, such as the 2021 Bloomberg Mayors Challenge Award; the Carter Center Transforming Lives Campaign; the Open Society Foundation, UN Women, ECLAC, UNDP, UNHCR, IDB, World Bank, among others. Also, the private sector has contributed with in-kind donations.

### (3) Tools and Methods Applied

● Two key services have been offered: i) public laundry service, which has liberated 4,394 hours, equivalent to 183 days, for caregivers; and ii) "childcare service", which has liberated 7,976 hours of childcare for caregivers, equivalent to 332 days. Adding the hours of the laundry and "childcare service", caregivers have a total of 4 daily hours to study, generate income, or to rest and recreate.

● Bogotá Care Blocks contributes mainly to SDG#5 (gender equality) and its target 5.4., but also to SDG#3 (well-being), SDG#11 (sustainable cities), SDG#16 (strong institutions), and SDG#17 (partnerships). For Bogota the target is: 20 Care Blocks in operation by 2023 and 45 by 2035.

● To meet these targets in the long term, Bogotá Urban Master Plan oversees 45 Care Blocks by 2035. Also, in March 2023 a Care System City Law was approved by the City Council to guarantee the continuity of the program.

### (4) Obstacle and Solutions

"Care Blocks" is an initiative never tested before at a city-level and faced multiple challenges including: 1) the COVID-19 pandemic which aggravated the caregivers' situation by increasing their unpaid care work burden; 2) securing budget approval in the legislative body; 3) working with 13 city government entities that showed resistance on leaving the traditional manner of operation by silos, and to start operating in an articulated and coordinated manner; and 4), data collection system among all entities to measure the impact of the Care Blocks.

**(5) Achieved Outcome**

Since October 2020, more than 1,900,000 services have been provided that have changed the lives of more than 297,000 caregivers and their families. As a result, 849 women have been able to finish high school; more than 12,000 achieved technical level of education; over 28,000 had access to business and entrepreneurship education.

<div align="center">

**Lessons Learned**

</div>

● Before Care Blocks were introduced, the various departments of the Bogota City Government operated in silos. Each one provided services independently, without coordination. Similarly, data was compartmentalized; every department gathered information differently, making the data non-interoperable. This lack of integration made it challenging to determine how many individuals had been served by Care Blocks, which consequently hindered our ability to better tailor our service offerings. To address this, Bogota developed an interoperable data system, allowing for data from different formats and locations to be integrated. Establishing this unified data system subsequently led us to adopt a more systemic approach to governance.

● The COVID pandemic increased the number of women devoted to unpaid care work from 800,000 to 1.2 million. Therefore, the implementation of the Care Blocks became an urgency for women and an imperative measure to promote gender equality and economic recovery. Bogotá is still learning how to work towards that.

● Care Blocks are easily replicable, and a practical solution that can be adapted to urban and rural contexts. They use existing public infrastructure and facilities and arrange existing and new services around an "anchor building", bringing together caregivers and care-receivers. For people who live in rural and peripheral areas, far from Care Blocks, the Care Buses were designed. They go to rural community centers and guarantee that rural caregivers have access to care services. This is especially important because caregivers in rural areas devote more time to care work and often lack basic utilities like running water or electricity.

# Building Resilient Food Systems in Cape Town
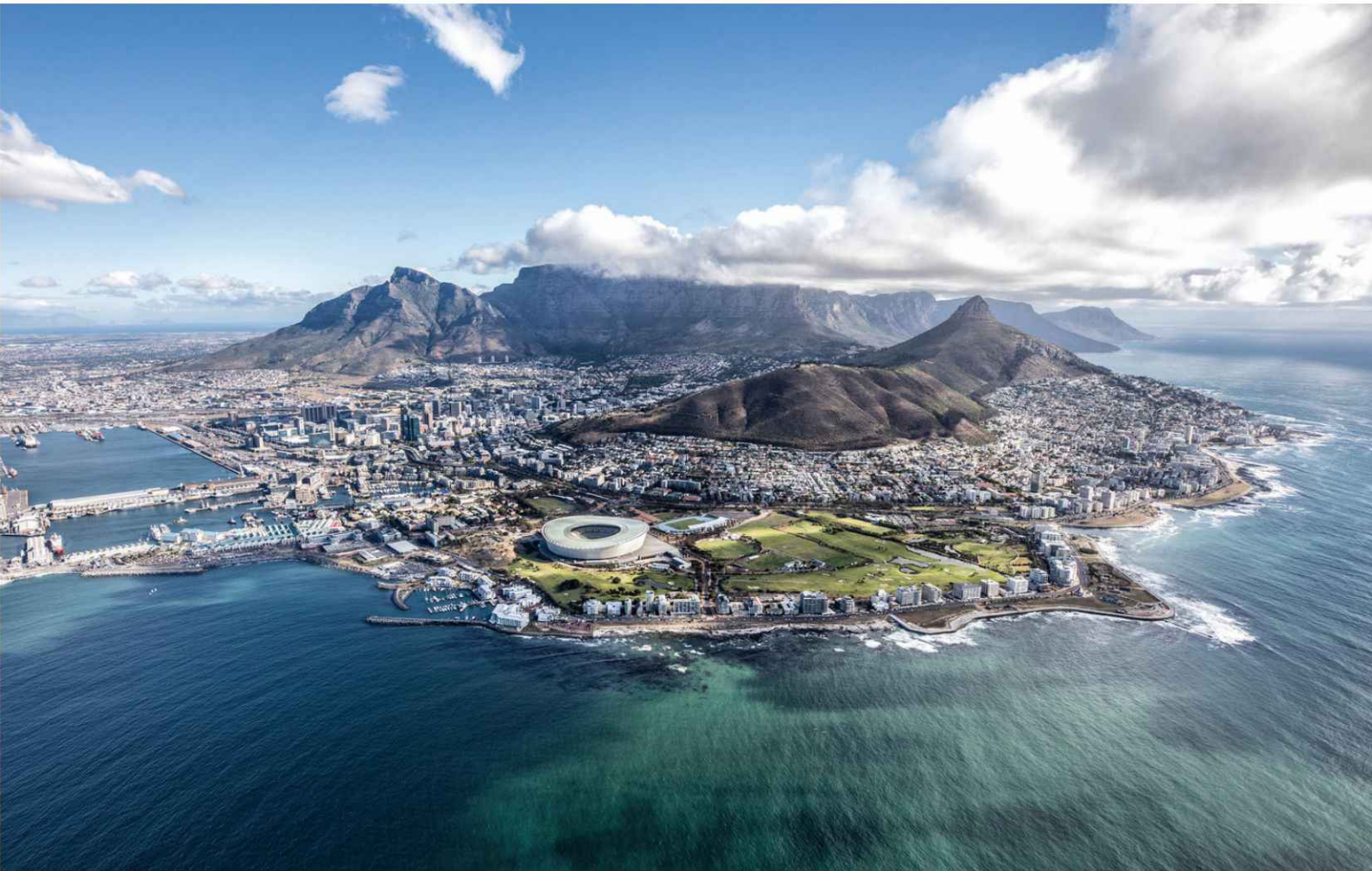


**Cape Town, South Africa**

## Basic City Data

- **Population size:** 4,800,000
- **Population Growth Rate(%):** 1.85
- **Surface Area (sq.km):** 2,446
- **Population Density (people/sq.km):** 1,638

- **GDP Per Capita (U.S.$):** 137,234
- **GINI Index:** 0.62
- **Main Source of Prosperity:** tourism, finance, business services

## Abstract

Food systems in Cape Town are complex and loosely governed. Food is also not a formalized government mandate, even though it is a constitutional right. The City has identified over 40 actions that intersect with food systems ranging from informal trade and markets to environmental health, spatial planning, urban health - and importantly - resilience. Recent shocks and stresses (drought, COVID-19, load shedding and minibus taxi strike) emphasize the need for a food systems approach that recognizes the increasing occurrence of shocks that typically impact food access of vulnerable communities. Their work uses a holistic approach that seeks to leverage existing mandates that are managed through partnerships, both within and external to the city.

## Background and Origins

### (1) Background

The Food Systems work stems from the Cape Town Resilience Strategy (2019). Upon its adoption, work commenced to develop a Food Systems Programme, one of the Resilience Strategy flagship actions. It aligns with the Milan Urban Food and Policy Pact that the City is a signatory to – and to the SDGs. Programme maturity is evident from its inclusion in the City's five-year plan.

### (2) Origins

The city joined the Rockefeller 100 Resilient Cities Programme at a time when the city was experiencing its worst ever drought. Part of the resilient cities' work included the completion of a City Resilience Index benchmarking process. Food insecurity emerged as a key vulnerability and a food systems programme was proposed as a measure to address this vulnerability.

It seeks to address the double burden of disease caused by food insecurity that results in child wasting and stunting, overweight and obesity that drive the high incidence of non-communicable diseases (NCDs). Local government does not have a clear food mandate, but it is nevertheless often engaged in humanitarian relief (food parcels etc.) or food gardens. Cape Town has adopted a more systemic approach that seeks to improve access through other city mandates including, but not limited to markets and trading and spatial planning. Themes that drive its actions include: resilience, governance, food environments, health and economy. Primarily (and where it has had the most success) is governance and building knowledge within the organization around the connection between its work, food systems activities and outcomes.

## Key Innovative Aspects

The programme started as a pilot where it was able to test the appetite within the organization and since its adoption in 2020, it has been successfully embedded into the City's 5 year plan - the Integrated Development Plan and the Metropolitan Spatial Development Framework. Food is transversal across the administration and for this reason, much of the food systems work is advocacy and building knowledge. The city does this through a Food Systems Working Group that has been adopted widely as best practice. It includes internal and external role players where it builds knowledge, network and leverage city work towards food outcomes. It also convenes a Food Indaba (meeting) internal to the City and Food Systems Research Community of Practice to co-ordinate and promote research. The city further co-ordinates food systems events across the city to ensure co-ordination and leveraging resources for best possible outcomes.

Innovations are embedded in the resilience and systems approach that it uses to test scenarios. The approach has tested a variety of scenarios such as unrest, heatwave, load shedding (energy) and global conflict (Russia/Ukraine crisis). Through this work it has built knowledge of the food system and determined vulnerability and from there, worked with key players to highlight the risk to enable appropriate action. The Food Systems Working group is an extensive network of external expertise that is drawn on to inform its work and help to drive change within the organization using best practice. In this way, it is possible to activate a wide range of stakeholders c for change through information and demonstration, rather than a defined policy pathway.

## Desired Outcome and Measurement

### (1) Desired Outcome

The city's goal is to mainstream 'food' into urban policy and strategy, improve governance and implementation. The work is ongoing and is driven by an Implementation Programme that will run for another 12 months. The broader programme is however linked to the City's 5-year plan which runs until 2027. It envisages systems change with a longer time horizons.

### (2) Measurement

A Food Report is prepared annually that tracks activities in the Food System. Because the approach is food system based and collates activities across multiple departments, reporting is high level. It does however include health data as available and food trade, also as available.

## Implementation

### (1) Principal Parties and Partners

The initiative partners provincial levels of government, universities, NGOs and researchers. All partners fulfill their own roles within the broader network that is co-ordinated and driven by the city. It's success lies with networking within the city, and between the city and external partners to improve food outcomes. These are sometimes project based, or research support based. The innovation for government has been the ability to hold partnerships and processes loosely in a non-hierarchical way that nurtures positive outcomes. Its close

relationships with researchers and other organisations have also allowed it to connect with relevant data in times of crisis so as to inform responses.

### (2) Resources for Implementation

This initiative is funded directly by the city via salaries. An EU Horizon grant via ICLEI for AfriFOODLinks, a programme the city is a partner to, is allowing it to pursue markets-focused work that will conclude in 2025. It also believes in building knowledge and for this reason, on occasion, hosts interns.

### (3) Tools and Methods Applied

The city uses many different methods including convening role-players, building networks and partnerships, in addition to informing policy and influencing and partnering around projects.

Food Systems Programme has been developed into an Implementation Programme. Integration into the Integrated Development Plan (5-year). AfriFOODLinks is a significant achievement that will provide resources to better develop informal food access through markets and trade, which is how 60-70% of Capetonians access their food.

Food waste is another significant issue that has made progress and work is underway to determine the potential for solar cold storage that will improve the quality of fresh produce and reduce food waste. Exploratory work has also commenced to develop nutrition hubs including early childhood development centers, community kitchens and food gardens. This work is nascent, but is growing in momentum.

Ongoing participation in the Food Dialogues as partners has provided opportunities to build networks, knowledge and influence thinking around food with multiple partners including children and youth.

### (4) Obstacle and Solutions

Difficulties lie predominantly in the perception of food systems as being limited to food gardens. It is believed that food gardens are one limited part of the food system and that local government responsibilities lie much more broadly and systemically. Shifting this perception has been difficult because it is held at a high political level. Limited Food Systems team resources also affects productivity.

### (5) Achieved Outcome

Change has been within the city's policy and strategy and is illustrated in a growing recognition of the inter-connectedness of food and city work. An example of this is illustrated by the recent food systems breakaway at this year's Informal Trade Summit which was organized at the invitation of economic development colleagues, inclusion in the City's Integrated Development Plan and the Metropolitan Spatial Development Plan and an upcoming Water and Food event planned for November this year.

## Lessons Learned

COVID-19: challenges reaching families with humanitarian relief and knowing who to assist on the ground. Key experiences include:

- Local partners are critical and keeping databases of these partners is a key tool for action during a crisis.

The partners  often come from affected communities and know who needs help and can navigate complex urban and societal systems on the ground in a way that a large organization is unable to.

- Food parcels are less desirable than vouchers due to ease of use and lack of logistics needed to distribute relief. Vouchers can be spent within neighborhood stores supporting the ongoing economic activity within communities, rather than further de-stabilizing these systems by introducing external inputs.

Partners with intimate, detailed knowledge of food systems at localized level are critical for informing appropriate interventions. Partnerships with a group of research advisors supported decision-making that enabled sensitive and informed interventions that would not damage sensitive local dynamics.

This initiative is actively working to systematize social infrastructure into the city structure to improve its responsiveness to future shocks. Lessons to other cities is the importance of specialist advisors, data and tools for communicating and co-ordinating data for planning and response; and the potential for non-traditional policy approaches.

# Ancient Engineering (of Sustainable Water Management) Meets Urban Innovation through Citizens' Participation



Chalandri, Greece

## Basic City Data

- **Population size:** 77,108
- **Population Growth Rate(%):**3.80
- **Surface Area (sq.km):**10,805

- **Population Density (people/sq.km):** 7,140
- **Main Source of Prosperity:** Service and leisure industries

## Abstract

The Cultural H.ID.RA.N.T. project (Cultural Hidden IDentities ReAppear through Networks of Water, henceforth CH) aims to activate local Hidden Heritage Potential and resources (tangible and intangible, cultural and natural) in order to enhance local wellbeing. CH has local and inter-local outreach and uses water as a medium of cultural heritage, while cultural heritage leads to the re-vitalization of idle urban water resources.

CH re-introduces the Hadrian Aqueduct, a subterranean Roman infrastructure, into city life beyond the usual "sightseeing" approach to cultural heritage. It highlights this ancient public work in harmony with nature as a historic monument, a contemporary landmark, a local memory and an unexploited water resource and urban infrastructure. CH creates a paradigm shift by enhancing the cultural branding of Chalandri, vis-à-vis the central-Athens' concentrated heritage map.

CH promotes green urban policies and sustainable water management. It creates new quality green public spaces by regenerating four Chalandri neighborhoods, while the Hadrian aqueduct is re-utilized for irrigation, replacing expensive and energy-consuming potable water.

Through participatory processes Chalandri's communities are revitalized by becoming active around heritage and water commons, and the local economy is strengthened via endogenous and resilient development.

## Background and Origins

In the last few decades, Chalandri's development was based on services and leisure industries, causing increased strains on the City's urban, cultural and natural resources. At weekends about 7,000 people (~10% of Chalandri's population) come into town. This has jeopardized the sense of community, belonging and the City's identity. It caused traffic issues, weak access and low walkability in green public spaces.

CH takes place within the European Regional Development Fund's - Urban Innovative Actions (U.I.A.), which is an Initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. U.I.A. is based on the article 8 of the ERDF.

## Key Innovative Aspects

(1) Cross-sectoral approach: integrates cultural, social, environmental, economic sectors.

(2) Participatory planning & governance: communities take ownership of public assets.

(3) Creative heritage re-generation: Breaking with sight-seeing conservationist approach.

(4) Sustainable and circular economies: re-utilizes idle resources as common assets, enhancing endogenous resilient development.

(5) Steering committee: important decisions - monitoring (every 3 months).

(6) Weekly operational meetings.

(7) Working meetings and workshops for consultation and activities' co-organising.

(8) Partners produced a declaration of intent of commitment to the project.

(9) Co-operation memorandums and charters between citizens' groups, CH and Chalandri Municipality for co-managing the project's outcomes.



## Desired Outcome and Measurement

### (1) Desired Outcome

CH aims to: increase public quality green spaces, highlight the city's cultural heritage and sense of belonging, develop a citizen-cared sustainable water infrastructure based on circular and solidarity economies, establish participative processes and institutions of managing urban resources.

CH's time-span is 4 years, until 30/6/2024. However, the participative urban planning, HIDRANT festival and digital local history platform are already complete and running. The Chalandri Adrian Community Network will be

established by 12/2023, while the regeneration works and the non-potable water network will be ready by 04/2024, when water delivery will commence.

### (2) Measurement

Panteion University leads M&E processes, applying mixed methods to measure "change". Enhanced local wellbeing is being measured through a two-stage life satisfaction survey (~100 respondents – indicator: 50% report high levels of life satisfaction associated with the project). Other indicators include:

- Connection to heritage
- Sense of ownership & belonging
- Skills-development in heritage co-governance & organizing public events
- Regenerated public space
- Participation in public space co-design
- Potable water saving
- Water pumping savings

## Implementation

### (1) Principal Parties and Partners

The partnership assimilates to Public–Private–Community model. Municipality of Chalandri leads as project-manager, while each partner leads Working Packages and deliverables according to expertise. Stakeholders participate in co-designing and implementation and will take ownership of certain outcomes.

### (2) Resources for Implementation

CH is co-funded by: the European Regional Development Fund, in the UIA frame, the Municipality of Chalandri and the Greek Green Fund. However, most valuable resource has been the engagement of local communities and stakeholders (e.g. the Oral History Group and the Rematia stream SOS Association) in co-designing, implementing and care-taking the multiple outcomes of the project. Using participatory modes to detect actual needs and aspirations -from urban space to local heritage and water management- has been key to access and utilize in situ human and cultural resources and potential.

### (3) Tools and Methods Applied

The project meets key regional and RIS3 priorities on Creative Blue and Sustainable economy.

Cultural Heritage Awareness: Citizen-led Digital Local Archive (350 items), HIDRANT Festivals (3), Drop-A-Message digital game-app.

Natural Heritage and Sustainable Water Use: CH has more than doubled the targeted number of water users (180 instead of 70) and increased Chalandri's green spaces by 300%.

Participatory planning: 1,500sq.m. (7%) of green spaces regenerated, 13 school-communities engaged with

over 700 participants.

Community Building: Hadrian Community of Chalandri (association of persons), Hadrian Network digital platform.

### (4) Obstacles and Solutions

The main obstacles have been bureaucratic and regarded the necessary approvals for the technical design studies and the public procurement procedure. These obstacles caused delays for which CH's leading partner requested to UIA, and was granted, a year extension.

Other contested issues have been the need to establish a tariff for non-potable water as a distinct water service. Through a process of discussions with EYDAP (water operator and project's partner), consultation with specialists and representatives of urban authorities that run water co-management schemes and participatory workshops the City drafted a two-level operational map for citizens involvement in both local and trans-local levels of water resource stewardship.

### (5) Achieved Outcome

CH aims to improve Chalandri residents' wellbeing, cultural heritage and sustainable resource management. So far it has managed to:

- Re-introduce the Hadrian Aqueduct as both a heritage site and a functioning water resource (4,000m pipe-network, 100 smart-meters, 2 municipal water tracks, ~170 beneficiaries)

- Revitalize communities through participatory action plan (~1000 people engaged in CH's activities)

- Create the first local history archive and digital platform (350 original items)

- Promote green urban policies on sustainable water use and quality green spaces (25,000 c.m. water annual-savings -out of which 15,000c.m. drinkable water- 21,400 sq.m. green regeneration in 4 neighborhoods)

## Lessons Learned

Countering climate crisis and ensuring quality public spaces have been main concerns for the CH project. Hence, re-generation of the water infrastructure and the greening of everyday urban spaces are used as means to create micro-climate effect outbalancing locally the consequences of climate crisis and promoting residents' wellbeing.

By nurturing both resilient urban infrastructure and citizens' resource-caring and awareness, CH cultivates new everyday habits and water-use culture by connecting communities to their technical, urban and natural environs and heritage.

As the City has reached out to other examples of participatory water (or public assets) management, (Torino, Paris, Terasa -Catalunya). At the same time, the Municipality of Chalandri participates in the inter-municipal consortium for implementing such extension. CH has been invited in water/culture policy making processes in EU level (Creative FLIP), in 6 conferences (among which one with GWOPA of UN-Habitat) and in urban-networks (HUB-IN Alliance, Cities FORUM). Additionally, CH prepares end-of-project conferences, inter-local meetings with municipal authorities and interested parties and publication of a promotional handbook with the project's good practices, lessons learnt, challenges addressed, innovations and solutions adopted.

# The Last Bastion for Protecting Human Dignity 'Gwangjuness Community Care'



📍 **Gwangju, Republic of Korea**

## Basic City Data

- **Population size:** 1,425,739
- **Population Growth Rate(%):** -0.57
- **Surface Area (sq.km):** 501.1
- **Population Density (people/sq.km):** 2,944
- **GDP Per Capita (U.S.$):** 82,408

- **GINI Index:** 0.33
- **Main Source of Prosperity:** The stronghold of the May 18 Gwangju Democratization Movement in 1980 (listed on UNESCO's Memory of the World)

## Abstract

If one's health condition does not allow performing daily tasks, others' help can be the last bastion for protecting their dignity. However, the current care-giving system selects beneficiaries based on age, income, etc., and supports only those eligible persons who make an application.

To address this problem, an innovative care model "Gwangjuness Community Care" has been created. It is for anyone who needs care. Dong-office (neighborhood level) care managers visit individuals at their homes, check their situations, and apply for needed services.

It has launched 16 new care services and plans to inject 7.74 million dollars annually to encourage citizens with economic difficulty to take advantage of these care services. "Care Call," a single application channel has been launched to increase convenience.

## Background and Origins

Diverse care-giving policies have been introduced by the central government. However, the policies provide a limited range of services to limited categories of people, mainly focusing on the elderly, people with disabilities, and children. Many residents have no access to these services, thus creating in-built inequality in the provision of critical public services. For example, "Long-Term Care Insurance for the Elderly," a representative care policy for older people, is extremely selective, requiring 6 or more months of medical treatment history. Thus, approximately 22.1% of senior citizens are excluded from this policy despite their need for care. Besides, gaps in the care service delivery system cause citizens many inconveniences to identify needed services.

## Key Innovative Aspects

### (1) Innovative elements of this project

a. Any citizen is able to use care services whenever needed;

b. Apply one-time through Care Call

c. Application optional for those in a vulnerable condition (They receive mandatory visits.)

d. 1:1 citizen-care manager matching

e. 16 new services, large-scale budget

f. Launched a dedicated division and allocated dedicated people

### (2) Public-private-political-academic sector cooperation in the process of planning

- 17 task force members had 10-hour marathon meetings 26 times.

- Discussions were attended by scholars, civil servants, caregivers, welfare groups, and civil groups.

- Signed business agreements with 13 institutions including a social welfare association, a medical association, and a health insurance provider to discover service users and cooperate in providing services.

### (3) Reshuffled organizations to ensure innovation in the course of executing the project.

## Desired Outcome and Measurement

### (1) Desired Outcome

● Goals

a. Ensure that all people in all age groups enjoy healthy and clean lives, resulting in an improved quality of life.

b. Take care of meals and health, and prevent depression, suicide, and lonely death through effective social networks.

c. Dong-office care managers check if someone needs help even when they did not apply. When people make an application, they only need to do it one time (fast, convenient, user-oriented service).

d. Lift care poverty by funding care services for low-income people to receive sufficient care.

e. Mitigate economic inequality by providing different levels of support according to the severity of people's needs, not their economic status.

f. Inject funds from local governmental budgets to launch new care services, activate the care service market, and create related jobs.

g. Prompt cooperation between related circles.

### (2) Measurement

It has developed and is using its own "computer system" for this project.

This represents a completely innovative computer system capable of managing all the data (which citizens have what needs and use which services) in every process of the "GwangJuness Community Care."

## Implementation

### (1) Principal Parties and Partners

a. City: Operates collaborative governance, draws operational guidelines, establishes Care Call (one-call application channel) lines, develops a dedicated computing system, promotes the care services to citizens, trains

care managers, and discovers and spreads best practices.

b. Gu-office: Operates 16 newly established services (selects service providers, controls quality, pays costs, etc.), supports Dong-office care managers' activities.

c. Dong-office: Home visits (application visits, compulsory visits) → Care-level assessment → Care plan establishment → Service linkage/referral → Evaluation/follow-up management

d. Public Institution (Gwangju Metropolitan Social Service Institute): Dedicated to emergency care and caregiver training.

e. Private organizations: Private organizations from diverse areas—welfare, medicine, architecture, etc.—participate in providing 15 types of care services.

f. Assembly: Enacts ordinances (legal grounds) and takes votes to confirm budgets.

g. Partner organizations (social welfare associations, medical societies, health insurance corporations, etc.): Identify citizens in need of care and provide additional resources to institutions.

### (2) Resources for Implementation

City and Gu-office have funded 7.74 million dollars in 2023 alone. They are mobilizing resources of hospitals, police agencies, the National Health Insurance Service, regional social security councils, social welfare facilities, etc.

Hospitals: cooperatively take care of discharged patients

Police agencies: cooperatively take care of crime victims

Health insurance management services: cooperatively take care of people who are qualified for senior long-term nursing services

Regional social security councils, social welfare facilities: uncover care blind spots, link volunteers.

### (3) Tools and Methods Applied

1) First, Care Call is entered into the computer system as soon as it is reported to the Gu-office, and is then sent as a notification message to the Dong-office Care Managers. It is faster and more accurate than conveying by email or phone.

2) The notified Dong-office Care Managers visit homes to check on situations that require their care, and they input consultation details directly on the spot through mobile devices (tablets) and the app. The entered data is sent to the PC's web.

3) Afterward, which service to support is entered into the computer system (Web).

4) This is sent to supporting private institutions, and a notification message pops up in private institutions.

5) Private institutions assign who will directly provide the service to their affiliated personnel.

6) This is sent to the service personnel's smartphone app.

7) Service personnel input the service details and results on the spot through the smartphone app. The

inputted content can be checked in real-time by Dong-office Care Managers. This allows for monitoring and, in case of emergencies, both administrative and private sectors can quickly respond.

8) Once the provision is completed, private institutions claim costs through the computer system.

9) Gu-office verifies and pays the costs.

10) Dong-office Care Managers evaluate the service either by revisiting the user or by phone, and record this in the computer system.

Through the computer system, it can promptly establish service plans and monitor the service results in real-time, enhancing the quality-of-care services and evaluating changes.

### (4) Obstacles and Solutions

● Gu-office's request for reorganization. Although Gu-office is under the City, it has no obligation to follow City's orders as it holds authority over its own human resources. - City relentlessly discussed with Gu-office to secure human resources, an essential element in executing the project. All Gu-office's have newly established the Integrated Care division and allocated 368 employees.

● Budget sharing, developed a City-Gu office mutually beneficial model that has defused all conflicts. In the process of negotiating a City-Gu office budget ratio, it hit a stalemate and the press published negative outlooks. However, it tenaciously continued the negotiations and reached the conclusion of the 75 (City):25 (Gu-office) ratio for securing 7.74 million dollars for 2023.

● Front-line managers' abilities are the most significant. As the abilities of 1,000 managers (administration: 368, private: 700) who meet citizens in person decide this project's fate, it has prepared 78 training sessions for them to understand their tasks and its visions in depth.

● Lack of medical service providers. Private institutions actively applied for the newly launched 16 services. (The new services create new jobs.) It has selected excellent institutions through screening. A limitation is that doctors do not prefer visiting homes (They want patients to come to their office). As many citizens trust oriental medicine (acupuncture, moxibustion, etc.), it has included oriental doctors specializing in chronic disease and pain management; 74 oriental doctors are participating in its project.

### (5) Achieved Outcome

From January to July in 2023, in 7 months, 5,188 citizens have benefitted from 11,983 services.

All age groups from children to the elderly were able to receive appropriate help when needed, and have enjoyed improved quality of life with better health and cleaner environments. 3,067 citizens who weren't able to prepare meals for themselves due to poverty or diseases (disability) are now having nutritious meals delivered to their homes; 1,108 citizens who had difficulties with housekeeping now have their house chores done; 917 citizens with intractable diseases can now have doctors' or physical therapists' visits to their homes for diagnosis or rehabilitative exercise guidance; 2,022 citizens have received cleaning, insect-proofing, epidemic prevention, or house repair services to make their homes safe and clean.

Low-income service users, 97.8% of all, were funded, meaning that this program has contributed to covering

care blind spots and easing economic inequality. Suicide attempters, the elderly living alone, and youth/middle-aged single-person households with diseases are eligible to receive care services, which help prevent suicides and lonely deaths. With a one-time application, one person can conveniently sign up for a maximum of 5 care services. This project has created jobs for 700 caregivers.

The care project has raised national public awareness that caring is not a responsibility individuals must face alone, but is a shared obligation within its society.

## Lessons Learned

COVID-19 and climate change have uncovered how vulnerable people in need of care are to such crises. Many low-income households, older people, and people with disabilities cannot afford care services in the market and have little access to information. These people will inevitably face a more severe crisis.

Therefore, it has brought care services into the public area to give everyone equal access according to the New Urban Agenda. To this end, the administration takes the lead in organizing and managing care services and injects more budget than any other local government-level policy for citizens to use care services without financial pressure.

# UTOPIAS—Units of Transformation and Organization for Social Inclusion and Harmony



📍 **Iztapalapa, Mexico**



2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS
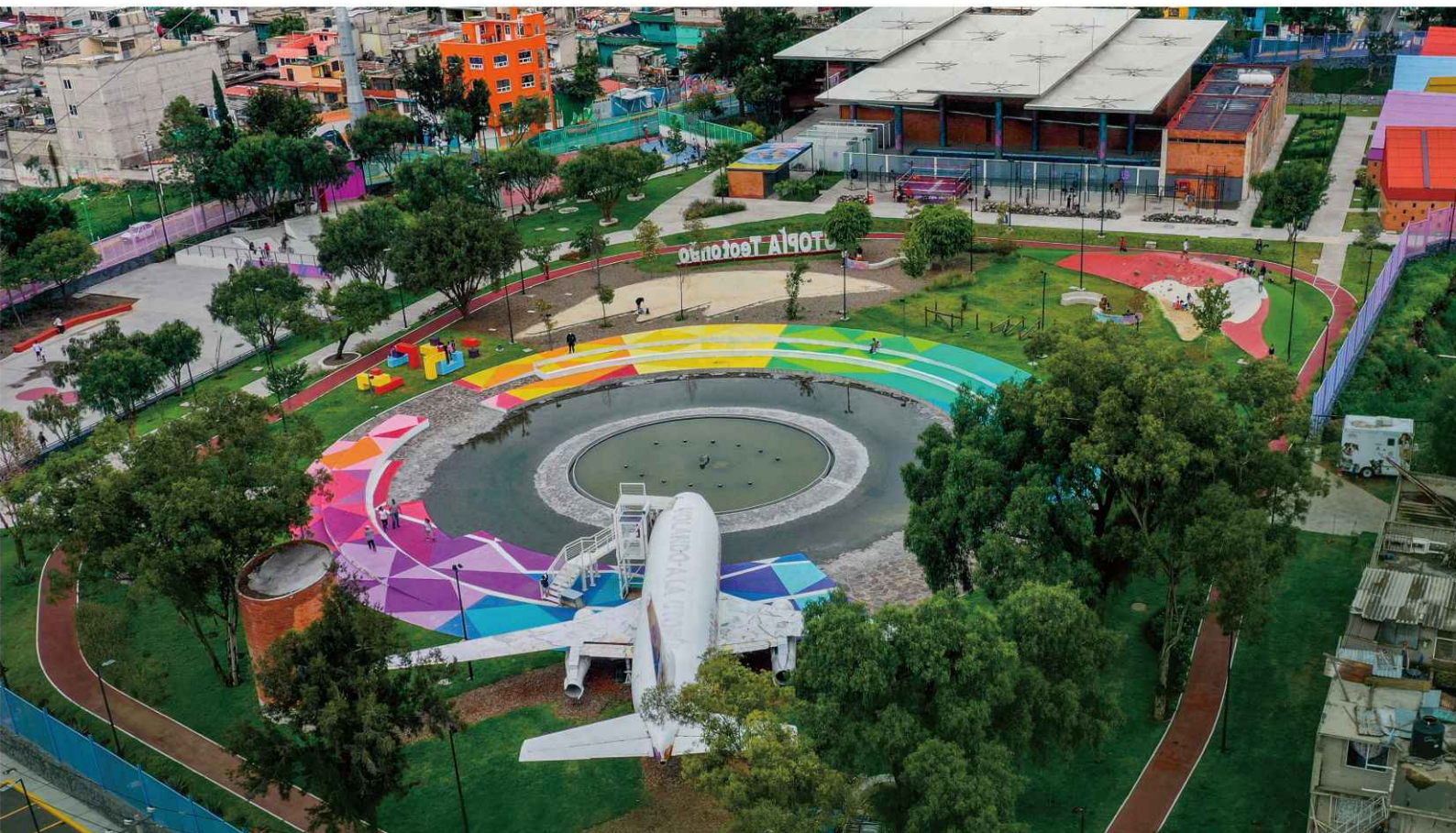
## Basic City Data

- **Population size:** 1,835,486
- **Population Growth Rate(%):** 1.08
- **Surface Area (sq.km):** 116.67
- **Population Density (people/sq.km):** 16,219.6
- **GDP Per Capita (U.S.$):** 5,467
- **GINI Index:** 0.39
- **Main Source of Prosperity:** trade, services and manufacturing industry

## Abstract

The "UTOPIAS" is a strategy for deep social and urban transformation to transcend the structural socio-territorial inequality of the urban peripheries. It does so via the regeneration of deteriorated public spaces and the construction of a system of large, comprehensive, high-impact public facilities. These help promote human rights and well-being of the communities, revalue public space as a treasure and community good, with a focus on the equitable distribution of public goods and a 15-minute city. 12 UTOPÍAS, built in 4 years, have recovered more than 540,000 m2 of degraded public space, and serve more than 100,000 people a week, transforming their lives.

## Background and Origins

Iztapalapa has 1,835,486 inhabitants, 22% of total population of Mexico City. It is the second most populated city in the country, with what it implies in terms of demand for services, consumer goods and economic benefits. 43% of its population (800,000) live in poverty, 33% between 15-34 years old and 23% in the informal economy. Historically has been city's backyard, with a very strong lag in necessary physical and social infrastructure. Socioeconomic and territorial inequality is the main challenge to face to guarantee to local population their rights and sustainable development.

The "UTOPIAS" is a municipal decision to retake historic social struggle for right to city, quality public spaces and in defense of green areas that were integrated into the Government Program. It is an emblematic project of this administration that seeks to reduce socio-urban inequalities with rights perspectives and child, youth and gender focus within the framework of the New Urban Agenda and the Sustainable Development Goals of 2030 Agenda.

## Key Innovative Aspects

The UTOPIAS are an innovative model of participatory-integrated-transdisciplinary and trans-sectoral public management. A shared-responsibility management model from the design and planning of the project to its execution, operation and sustainability, which implies a qualitative transformation of the governance exercise.

The initiative can be considered revolutionary for various reasons:

1) It is the first time that an action of this magnitude has been implemented in the history of the city, under the principles of "first the poor" and "for the poor, the best"

2) Innovative approaches have been taken to carry out public policies in many ways, that implied fundamental changes in the inertia and current model of public management

3) More than 540,000 m2 of public space have been recovered and transformed in record time (4 years) with only local resources.

4) It involves a series of principles and approaches that are current trends in global agendas resulting from historical social struggles.

5) It retakes the city of 15 minutes approach, under the precept that "for the poor what is far away does not exist"

## Desired Outcome and Measurement

### (1) Desired Outcome

The main objective is to reduce social and territorial inequalities and transform Iztapalapa into a place where all the rights of all people are respected and guaranteed, focusing on guaranteeing the Right to City. The transformation is taking place progressively during the government administration that culminates in 2024.

### (2) Measurement

Users are registered daily, disaggregated by sex and age, by space and activity, by people who provide the various services or activities, which allows having basic quantitative and qualitative data. This data is systematized in a general way, so it is necessary to generate a system and a platform that allows a totally reliable database to evaluate the changes. In addition, opinion polls and interviews with users and visitors have been carried out, giving it a pulse on the successes and needs for improvement, but without a systematicity that allows analyzing impacts more consistently.

## Implementation

### (1) Principal Parties and Partners

There are public-public-partnerships with universities and international-agencies in educational spaces of UTOPIAS, public-community in the co-management of various activities, and public-private with NGOs and enterprises who donated equipment, furniture and supplies, all under the leadership of the mayor's office. Innovations have occurred in relation to science and technology, such as the Geological Observatory, as well as the incorporation of eco-technologies in the construction and management of spaces, where all the partners have benefited in terms of learning and of possibility and capacity of concrete implementation of innovative actions.

### (2) Resources for Implementation

The resources used for the implementation of UTOPIAS come totally from budget allocations granted by the City Congress.

The city has established a strategy to strengthen own resources to resume basic works and services through self-administration as a key mechanism to finance development projects. In addition, it has managed strategic

alliances with the academic, public and private sector that contribute with human, technical, material and economic resources to develop some specific activities.

### (3) Tools and Methods Applied

An innovative model of participatory-integrated-transdisciplinary and trans-sectoral public management was developed inside the public administration as a new working method.

The involvement and active participation of citizens through participatory-community-planning and participatory design processes was strategic, also incorporating children, to respond to the territory needs, dreams and imaginaries, and also to allow subsequent execution and operation of projects.

Popular consultations were held to guarantee the exercise of the rights of native-neighborhoods established in our Constitution.

Recruitment campaigns were carried out for hired local construction-workers, training-personnel such as workshop-leaders and instructors to provide some activity or service.

### (4) Obstacles and Solutions

During the planning and development stages of the UTOPIAS, there was some initial resistance participatory planning processes on behalf of some local actors due to the entrenched hab iots and customs. There was also some resistance to the re-allocation of public space owing to some private interests. Faced with this situation, mediation processes were implemented through dialogue and citizen participation, assemblies and work groups, which led to agreements in favor of the use of public space for collective needs and the diversification of activities and services.

### (5) Achieved Outcome

- Transformation of more than 540,000m2 of degraded local-public-space

- Construction and operation of 12 large-comprehensive-complexes for well-being, care, culture, sports, recreation and coexistence, distributed under the approach of proximity and the city of 15 minutes

- About 100 thousand people a week served, in two years more than 8 million people have used and visited UTOPIAS

- From one to 12 swimming-pools; from 3 to 7 auditoriums and 8 open-forums

- Around 27,000 people from all ages registered to take swimming lessons

- 148 community-orchestras formed that today have a certified Music-School.

- From sixth to third place in the city medal table

- Nearly 2,000 students enroll every four months in the Film &Photography School

- 57% reduction in crime-incidence

## Lessons Learned

The initiative highlights six lessons learned to advance in the main objective of fostering social inclusion, dignity and happiness and to share with other cities with same perspective.

1) Governments have a lot to learn from community voices and experiences to solve social needs more accurately, timely and effectively.

2) Creating comprehensive infrastructure with human rights, social and spatial justice and equity in mind can help achieve the Right to City for excluded populations of urban peripheries and help "leave no one behind".

3) Beautiful architecture with functional and quality-equipped spaces combined with comprehensive, dignified and humanistic care models transform people's lives and coexistence, and build peaceful and solidary communities.

4) A more comprehensive vision and more integrated action in the formulation and implementation of public policies, projects and management allow for greater effectiveness, economy, and better results in less time.

5) Recover the main function of local government of providing public services directly to the people instead of sub-contracting to third parties. Direct delivery of services obliges local government to become more transparent and accountable.

6) The adequate resolution of long-standing social problems generates trust, closeness and recognition of the population.

The UTOPIAS have received national and international recognition from the central government or other government entities, which has led to their implementation in different cities in the country and region. At regional global level, the city has participated in international conferences, forums, sharing its experience. Many international organizations or networks of cities may have recognized the innovation of the city and have highlighted it. Several social and civil groups, companies, educational, academic, research and cultural institutions have joined to carry out activities in the UTOPIAS.

# Reclaiming Spaces for Children in Public Transportation Through Navi_Station Initiatives



📍 **Jakarta, Indonesia**

## Basic City Data

- **Population size:** 10,680,000
- **Population Growth Rate(%):** 1.47
- **Surface Area (sq.km):** 661.23
- **Population Density (people/sq.km):** 15,973
- **GDP Per Capita (U.S.$):** 137,234

## Abstract

The Navi_Station initiative is dedicated to reclaiming children's space in public transportation by using an eduplay teaching toolkit on station literacy, navigation, public transport ethics, and safety messages. The project team focuses on preschool children and children with special needs.

The initiative was developed in 2022 by Dr. Eng Widyarini in a Short Course Public Transport in Metropolitan Areas. A mockup teaching toolkit was successfully created during the course. The vision of this project is to raise awarenmess of station literacy, navigation, and safety to all school in Indonesia. Current development being undertaken is the development of disability toolkit through a multisensory book.

## Background and Origins

In Indonesia, rapid development of new public transport systems, including PT Kereta Api Indonesia (KAI), PT. MRT Jakarta, PT. LRT Jakarta, PT. LRT Jabodebek, and PT. KCIC, which serves millions daily. Preparing the next generation for safe and ethical train use is crucial as the network expands. Early education on navigating stations is essential, requiring a tool for clearer explanations. This tool aims to promote children's readiness and awareness for train station literacy, navigation, and safety as a prospective user of public transportation.

## Key Innovative Aspects

### (1) Innovations in Navi_Station's:

- Progressive content from early station literacy to navigation and safety awareness.

- Engaging media like wipe and clean activity books, play-mats and paper-crafts, rail transport logos and mascots for brand recognition.

- Involving pre-school teachers to validate content and approach

- Comprehensive evaluation through pre-tests, post-tests, and edu-visits (observation evaluation).

**(2) Collaborating with Jakarta Transportation Agency and rail operators for integrated wayfinding and signage systems at stations. Seeking Ministry of Education for support for curriculum inclusion. Crucial role of involving schools in Navi_Station implementation for children.**

## Desired Outcome and Measurement

### (1) Desired Outcome

● The readiness of children as the future generation to be able to ride trains operating in Indonesia especially in DKI Jakarta; The creation of ethical behavior that is polite and follows the rules applied on trains and stations; The establishment of safety behavior among children and also teachers on trains, stations, and level crossings.

● Time Frame: 2023-2027

Create a playing toolkit focusing on station literacy, navigation, and safety for children aged 5-7 years in rail transportation and bus system for children and children with needs (multi-sensory book)

### (2) Measurement

The data used for analyzing and assessing changes that occur after the implementation of education is collected through an evaluation process, divided into several stages: pre-test and post-test related to three main subjects. Additionally, assessment is conducted through direct observations during visits to existing rail transport modes to apply the knowledge acquired. These questionnaires (designed by Navi Team) will be distributed to each schoolteacher who received the toolkit to conduct the evaluation process. Finally, the test results will be returned to the Navi_Station team for monitoring and development considerations.

## Implementation

### (1) Principal Parties and Partners

**Public-Private Partnership:**

The Bandung Institute of Technology, collaborates with Jakarta Transportation Agency and several national-scale rail operators including PT Kereta Api Indonesia [KAI], and other large transport operators (PT. MRT Jakarta, PT. LRT Jakarta, PT. LRT Jabodebek, PT. KCIC).

**Public-Community:**

The Bandung Institute of Technology partners with Sekolah Alam Bogor and 10 schools in DKI Jakarta to implement rail-based transportation education for children aged 5-7 years.

### (2) Resources for Implementation

Navi_Station received funding assistance through the ITB Research Program (P2MI) sponsored by Institut Teknologi Bandung and also obtained funding through the Community Service Program organized by the Directorate General of Research and Development Strengthening (DRPTM) from the Ministry of Education, Culture, Research and Technology. Besides financial support, Navi_Station also received in-kind assistance from rail transport and bus operators in the form of logos and mascots. Jakarta Transportation Agency also provided technical inputs throughout the development of the teaching media.

### (3) Tools and Methods Applied

● In March 2023, P2MI ITB funded the implementation of the project in one preschool in Bogor, Sekolah Alam Bogor. In July 2023, the project received funding from the Ministry of Education, Culture, Research, and Technology to expand to 10 schools across Jakarta, collaborating with Jakarta Transportation Agency.

● Navi_Station Toolkit will be distributed in November 2023.

● Evaluation involves 300 children in the first batch using the toolkit.

● Navi_Station's program will be escalated to other cities by the initiator (Dr. Widyarini), but adjustments will be made to suit the specific conditions and transportation facilities of each city. The advanced stages involve replicating and implementing the teaching materials, followed by evaluation. From each city, the toolkit will then evolve by improving the materials learned from the experience the city before. Other cities/ communities also can participate in developing the toolkit media suit to their culture, language and how they see public transport through their needs.

### (4) Obstacles and Solutions

One of the challenges faced in obtaining official permits to use the logos and mascots of each rail-based transportation operator in Indonesia. One approach used as a solution is to reassure the operators that the products using their logos and mascots are not for commercial purposes. Additionally, it is explained that through Navi_Station, besides educating children early on, it also introduces (consistently branding) various rail transport operators to children who will become prospective customers.

The materials presented in Navi_Station are not yet part of the curriculum, especially for PreSchool (early childhood) schools. Efforts are made by applying for program funding from the Ministry of Education, Culture Research and Technology and seeking to include Navi_Station in the International Standard Book Number (ISBN) system, facilitating the escalation of education and inclusion in the curriculum.

### (5) Achieved Outcome

The teaching toolkit will be arranged based on children's competence and their ability to receive teaching materials in accordance with targeted outcomes. The concentration of teaching areas is spread throughout DKI Jakarta through collaboration with Jakarta Transportation Agency. The teaching toolkit includes books and props that are carefully curated and prepared for submission of an ISBN so that these materials can be officially recognized as teaching materials for use in schools. Currently, a teaching toolkit is being prepared for distribution in small batches.

## Lessons Learned

The Covid-19 pandemic massively impacted human mobility, especially the use of public transportation, in various countries, including Indonesia. The passiveness of public transport since Covid-19 became a challenge to address, aiming to restore the prevalence of public transport usage. The Navi_Station program will indirectly contribute to this recovery by educating young children, encouraging them to use public transport in the future.

# An Innovation Towards Pit Emptying Services Through a GIS-mobile Enabled APP



Kampala, Uganda

## Basic City Data

- **Population size:** 3,846,102
- **Population Growth Rate (%):** 5.31
- **Surface Area (sq.km):** 189
- **Population Density (people/sq.km):** 9,352
- **GDP Per Capita (U.S.$):** 2,655
- **Main Source of Prosperity:** Tourism

## Abstract

Kampala, the capital city of Uganda, has a resident population of 1,738,000 as of 2022, a number that doubles during the daytime due to the city's vibrant economic activities and urbanization rate of 5.6%, with a corresponding GDP of $2,655. The Kampala Capital City Authority (KCCA) under the Directorate of Public Health Services and Environment is mandated to facilitate and provide equitable services to ensure a healthy population in a clean, habitable and sustainable environment. Its core responsibilities encompass a comprehensive approach, ranging from Sanitation and Environment Management to Solid waste management, Landfill management, Health Inspection & Education, and Water and Sanitation services, all aimed at ensuring the well-being and environmental sustainability of Kampala's residents.

## Background and Origins

In Kampala, where over 60% of the population resides in informal housing and only 10-15% of the city is connected to formal sewerage, the reliance on On-Site Sanitation (OSS) by 90% of the population necessitates efficient emptying services. In this context, pit latrines and septic tanks are often emptied haphazardly by independent pit emptiers, leading to illegal waste disposal in the environment. Access to improved sanitation is a crucial preventive measure against waterborne diseases such as diarrhea and cholera. Kampala, the capital of Uganda, has recognized the urgency of Faecal Sludge Management (FSM) as a key driver for advancing sanitation. The delivery of sanitation services plays a pivotal role in disease prevention. However, a major challenge lies in the limited access to toilet emptying services, which is where the KCCA aims to bridge the gap by introducing the Weyonje Application, bringing these essential services closer to the communities.

## Key Innovative Aspects

The Weyonje client application is designed for user-friendly access, where citizens can simply download it onto their mobile phones and sign up, enabling them to initiate emptying service requests similar to booking a ride through a platform like Uber.

The Weyonje app introduces several innovative aspects to improve sanitation and faecal sludge management in Kampala, Uganda:

- Digital Accessibility: The app leverages modern technology to provide a digital platform for residents to request and schedule pit latrine or septic tank emptying services conveniently. This digital approach enhances accessibility and efficiency.

●Community Activation Teams/Village Health Teams (VHT): The app ensures inclusivity by allowing urban underprivileged individuals who lack smartphones to access sanitation services through these community-based teams. This innovative approach reaches a broader segment of the population.

● Data-Driven Decision-Making: Weyonje app collects and analyses data on pit emptying and sludge management. This data can help authorities make informed decisions, target interventions effectively, and prevent the outbreak of diseases by identifying areas in need of immediate attention.

● Environmental Sustainability: By regulating the emptying process and ensuring that faecal sludge is transported and managed at treatment plants, the app promotes environmentally sustainable practices, reducing haphazard dumping of waste.

●Women's Empowerment: Aligning with SDG 5, the app helps empower women in emptying jobs, contributing to gender equality and economic opportunities.

●Smart City Integration: The app aligns with the broader Smart City Initiatives, reflecting a forward-thinking approach to urban development and service provision.

●Prioritizing FSM: Kampala City has specifically prioritized Faecal Sludge Management as a key driver for improved sanitation, emphasizing the city's commitment to addressing sanitation challenges proactively.

## Desired Outcome and Measurement

### (1) Desired Outcome

The initiative has dual goals, encompassing both short-term and long-term objectives. In the short term, with a focus on the next year, it seeks to transform the business practices of the private sector by steering them away from outdated methods, such as maintaining inadequate paper records that are prone to loss, or even the absence of any business records. Simultaneously, in the long term, it aims to influence policy changes that mandate all institutional departments to report data based on evidence, ensuring a shift towards more data-driven and transparent decision-making processes.

### (2) Measurement

The collected data comprises essential information, including the customer's name, gender, telephone number, facility type emptied, service provider's name and number, customer location by division and parish. In addition, the service provider's dumping tool records the date, service provider's name and number, service provider type (cesspool or gulper), dump location (at the designated dumping bay), and the volume of sludge dumped. This data is meticulously measured and analyzed by our team of skilled data scientists and bio statisticians. Their expertise is instrumental in enhancing planning, enabling us to allocate resources more effectively, and identifying communities in need of additional support based on evidence-based insight.

## Implementation

### (1) Principal Parties and Partners

The initiative is founded on a public-private partnership, collaborating with licensed toilet emptying service

providers in Kampala City. The application serves as a crucial tool, enabling these providers to efficiently manage and monitor job orders. Ongoing training is provided to ensure service providers are well-versed in using the application effectively. This not only enhances operational efficiency but also encourages the private sector to maintain clear and organized business records.

Furthermore, the successful implementation of the Weyonje initiative in Kampala, Uganda is a collaborative effort involving a range of stakeholders. The KCCA provides essential regulatory and infrastructural support, while private sector service providers are responsible for efficient and responsible waste removal. Community Activation Teams/Village Health Teams extend services to underserved populations. Data scientists and bio statisticians contribute to data-driven decision-making, aiding in better planning. Government regulatory bodies, non-governmental organizations, and international development agencies offer support and expertise. Local communities, residents, and customers play an active role in engaging with and improving the initiative. The integration with Smart City Initiatives and the participation of environmental agencies ensures responsible and efficient waste management.

### (2) Resources for Implementation

The successful implementation of the Weyonje initiative demands a diverse range of critical resources, including financial support for technology development and infrastructure, a skilled workforce, technological tools for data management, ongoing training and regulatory support, resources for community engagement and infrastructure, collaboration and partnership resources for stakeholder coordination, data analysis tools, monitoring and evaluation resources, marketing and communication strategies, and legal compliance resources. These collectively empower the initiative to effectively address sanitation challenges and promote public health in the region.

### (3) Tools and Methods Applied

The development and implementation of the Weyonje app involve a diverse array of tools and methods to ensure its effectiveness and functionality. This includes mobile app development tools like Android Studio and cross-platform frameworks, database management systems for data storage, data analytics and visualization tools, geographical information systems for location-based insights, cloud computing services for scalability, training and education methods, regulatory compliance tools, feedback mechanisms for user input, quality assurance and testing tools, marketing and communication channels, user experience design tools for enhanced usability, and monitoring and evaluation frameworks to assess impact and make data-driven improvements.

The app empowers service providers to monitor customer details, job specifics, and financial earnings, thereby allowing them to build a concise profile for their reference and business improvement.

### (4) Obstacles and Solutions

●Resistance to Change: Overcoming resistance from service providers required intensive training and support to help them adopt the new technology confidently.

●Digital Divide: Efforts were made to bridge the digital divide in informal settlements by providing affordable smartphones and ensuring the app was user-friendly, including local language support.

● Financial Constraints: Securing funding for app development and maintenance was a challenge, but collaborative partnerships with NGOs and international organizations helped address this issue.

● Community Engagement: Building trust and convincing residents of the app's benefits required extensive awareness campaigns and ongoing efforts by community leaders and Activation teams.

### (5) Achieved Outcome

● Remarkable Improvements in Sanitation Services。

● Equitable Interventions for the Urban Poor: by aiming to increase the safe management of faecal sludge in informal settlements to 60%, with a specific focus on elevating sanitation standards for the urban poor. Through subsidies and relief programs, the initiative ensures that even the most vulnerable in urban areas, especially the communities that were severely impacted by the economic repercussions of the COVID-19 pandemic with limited financial means, receive essential services。

● Positive Behavioral Shifts: Over 15,509 positive behavioral changes have been observed in the community, demonstrating the initiative's impactful influence.

● Successful Attraction of more Funding cycles from the BMGF

● Strengthened Public-Private Partnerships, creating a collaborative enabling environment for sustainable progress.

● Establishment of a Medical Call Centre. This has played a fundamental role in providing essential healthcare information and support, further enhancing the scope and quality of public health services. In addition, the utilization of evidence-based data enables the initiative to offer early warnings for areas that may necessitate additional resources and strategic planning by management, ensuring a proactive and efficient response to emerging needs.

● Government Partnerships: Collaborations with the Ministry of Health and Ministry of Water and Environment signify the commitment to working closely with governmental bodies.

● Community-Led Sanitation: Empowering communities to take the lead in sanitation efforts has been a fundamental aspect of the initiative, ensuring locally-driven and sustainable solutions.

● Small Business Empowerment: The initiative has made a significant contribution to the growth of small businesses, thereby supporting local economies and livelihoods. By empowering entrepreneurs and nurturing their growth, it has not only created jobs within the city but has also set a positive example for job creation in other cities across the country.

● Improved FS Collection Efficiency from 44% to 61%, leading to a reduction in environmental impact.

● Enhancements in the efficiency, effectiveness, accountability, and transparency of service providers are evident, with over 15,509 jobs successfully completed and a remarkable volume of 721,141,800 m$^3$ of waste safely dumped at designated bays, showcasing substantial progress in sanitation management.

## Lessons Learned

**1. Data-Driven Decision-Making:** The importance of evidence-based data is crucial for implementing effective policies and interventions, particularly in assisting communities, especially the urban poor in informal settlements.

**2. Effective Public-Private Partnerships:** Strong and collaborative relationships between the government and the private sector can enhance accessibility to essential services for citizens and empower service providers to establish small business profiles, thereby formalizing their operations and income.

**3. Replicability and Scalability:** The lessons learned here can be applied on a broader scale to address similar challenges in other urban areas.

**4. The power of collective decision-making.** Inclusivity and diverse perspectives are paramount when implementing transformative solutions. We must ensure that all stakeholders, from local communities to regulatory bodies, have a voice in shaping solutions to sanitation challenges.

**5. Regulatory frameworks are vital.** By embedding our initiative within existing sanitation practices through legal guidance, Kampala has been able to navigate complex regulatory landscapes and ensure the sustainability of our efforts.

**6. Investing in skill development is key.** Capacity-building programs for sanitation workers in digital literacy and data management have empowered them to embrace and effectively use the 'Weyonje App.' This approach can be replicated in other sectors to enhance workforce capabilities.

**7. Overcoming resistance to change** is possible through intensive training and support. Service providers can adapt to new technologies when provided with the right tools and guidance.

**8. Addressing the digital divide is essential.** Efforts to improve digital inclusion, such as providing smartphones and ensuring user-friendly, localized applications, must be at the forefront of technology-driven initiatives.

# Eco-rehabilitation of the City Park "Chaikovoye Lake"



📍 **Kazan, Russia**

| 3 GOOD HEALTH AND WELL-BEING | 6 CLEAN WATER AND SANITATION | 8 DECENT WORK AND ECONOMIC GROWTH | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE |
| 11 SUSTAINABLE CITIES AND COMMUNITIES | 14 LIFE BELOW WATER | 17 PARTNERSHIPS FOR THE GOALS | |

## Basic City Data

- **Population size:** 1,314,685
- **Population Growth Rate(%):** 4.00
- **Surface Area (sq.km):** 638.40
- **Population Density (people/sq.km):** 2,232
- **GDP Per Capita (U.S.$):** 9,300

- **GINI Index:** 0.39
- **Main Source of Prosperity:** Machinery, chemical and petrochemical industry, light industry, food, construction, trade, tourism

## Abstract

In 2022, Kazan implemented a unique project to create a therapeutic park near the hospital, which solved two main tasks: the creation of a rehabilitation zone with different functional sites and the preservation of the lake ecosystem.

The creation of a park near the hospital, open to local residents and aimed at the rehabilitation of patients, is a unique practice of complicity and cooperation of the population and authorities at various levels. The project was highly appreciated by residents, patients and doctors of the hospital, who received a comfortable space for recreation and sports. The implementation of the project had a number of positive social, economic and environmental effects.

## Background and Origins

### ① Problems:

- Negligence of the territory adjacent to the hospital.
- Pollution of the lake.
- Lack of intra-block connections in the neighborhood.
- Absence of a recreation and rehabilitation area for employees and patients.

### ② Tasks:

- Preservation of the ecosystem of the lake, creation of a natural landscape and recreational area.
- Organization of a rehabilitation zone with different functional areas for patients, including simulators for patients with limited mobility.
- Creation of a recreation and sports area for medical staff and residents.

## Key Innovative Aspects

(1) On the territory of the country, creation of a park near the hospital, combining recreational and therapeutic functions, as well as open to the public and aimed at the rehabilitation of patients of various profiles and mobility,

is a unique practice of complicity and cooperation of the population and authorities at various levels.

(2) Throughout all stages of improvement, close cooperation was conducted with representatives of the healthcare industry.

The formation of the concept, development of specifications, selection of equipment, functional zoning were carried out with the participation of employees, patients of the hospital, representatives of the Department of Rehabilitation and Sports Medicine of the Kazan State Medical Academy and residents of nearby houses.

Interdepartmental meetings were regularly held at the territory of rehabilitation project of the park, including meetings and discussions with the participation of medical and scientific staff.

After the completion of the work, the project was transferred to the «Directorate of Parks and Squares», which monitors the maintenance of the territory, conducts various kinds of events (cultural, sports, educational).



## Desired Outcome and Measurement

### (1) Desired Outcome

The project is aimed at complex rehabilitation of hospital patients, psycho-emotional unloading of doctors, as well as recreation and sports activities of residents of nearby houses. Moreover, one of the goals was to reduce the intensity of shallowing, weediness and degradation of lakes, the restoration of the lake ecosystem as a whole.

The project has been implemented. The park was partially landscaped in August 2021, and has been fully operational since the summer of 2022 after the work on the territory was completed.

### (2) Measurement

Groups of people affected by the changes are hospital patients, hospital staff, and local residents.

All patients of the hospital who are in the departments of medical rehabilitation for people with diseases of the central nervous system, musculoskeletal and peripheral nervous system, with somatic diseases, specialists of the multidisciplinary rehabilitation team analyze the condition before and after rehabilitation according to clinical and instrumental data (Rivermead, Bartel, FIM, VFM, SHRM, Rankin, test with 6-minute walking, SAN, Spielberger-Khanin, Beck, etc., RCT, MRI, EEG, etc.), evaluation of effectiveness depending on the duration of the disease, the consequences of health restrictions.

Medical psychologists use profile tests and scales (SAN, Spielberger-Khanin, Beck, etc.) to analyze the condition of hospital staff to prevent emotional burnout.

The positive effect is also seen on the hospital staff. As of 2023, the medical staff includes more than 1,200 employees, of which more than 300 are doctors.

## Implementation

### (1) Principal Parties and Partners

Initiators of the project: the Executive Committee of Kazan, Foundation Institute of Urban Development of the Republic of Tatarstan, Ministry of Construction, Architecture and Housing and Communal Services of the Republic of Tatarstan; the Ministry of Health, the Executive Committee of Kazan, City Clinical Hospital No.7. Representatives of the healthcare industry, patients and hospital staff, representatives of the Department of Rehabilitation and Sports Medicine of the Kazan State Medical Academy made a significant contribution to the formation of the concept.

Citizens had the opportunity to ask questions about implementation of the project both on the city's website or by phone, and by visiting the architects' office. Thus, they formed public control over the process of park improvement and conservation of waterfowl.

### (2) Resources for Implementation

The development and implementation of the project were done within the framework of the federal initiative Formation of a comfortable urban environment from the budget of the Republic of Tatarstan and for two years amounted to $ 2.5 million.

The curators of the federal project are the Ministry of Construction and the Foundation Institute of Urban Development of the Republic of Tatarstan. The Executive Committee of Kazan on behalf of the External Improvement Committee coordinated the rehabilitation of the park Chaikovoye Lake. The Ministry of Health and City Clinical Hospital № 7 of Kazan also took a direct part.

### (3) Tools and Methods Applied

Firstly, work was carried out on the ecorehabilitation of the lake and the formation of a healthy ecosystem of the reservoir: silt bottom sediments were cleaned and construction debris was lifted from the bottom of the lake.

Macrophytes were planted – aquatic plants that allow the lake to self-clean and return to a more natural appearance.

Seven zones have appeared on the territory of the park, where each represents a certain type of therapy. A whole range of rehabilitation equipment has been installed for people with disabilities and people with limited mobility.

The rehabilitation project is based on the concept of «7 sources of health», which represents various functional zones aimed at rehabilitation and recovery. They include aerotherapy, active physical rehabilitation, occupational therapy, terratherapy, aerophytotherapy, bibliotherapy, quiet pier – «auto-relax».

There is a landscape therapy zone in the park, where everyone can enjoy picturesque scenery of the lake sitting on the benches. The social therapy zone involves holding various events, sessions in an outdoor cinema. Psammotherapy (sand treatment), drawing classes, various master classes are held in the art space area. In aroma oasis area, rehabilitation is practiced with medicinal tonic herbs – lavender, sage, catnip, peppermint, etc., including treatment with ionized air enriched with coniferous trees. Garden plants (onions, parsley, dill, etc.) are planted in the area of the established stationary greenhouse, two–level platforms with plants (strawberries, honeysuckle, etc.) are planted outdoors for the possibility of implementing individual rehabilitation programs for patients in wheelchairs.

### (4) Obstacles and Solutions

The pollution of the lake is the major concern. During the construction of the park, eco-rehabilitation of the lake was carried out (more than 4.8 thousand tons of garbage were lifted from the bottom and the coastline was planted with macrophytes). This will help the lake stay clean.

Many attempts were taken to green the lake, but the soil, poor due to anthropogenic impact, did not allow the trees to take root. During the implementation of the initiative, a lot of fertile land was imported and silt from the bottom of the lake was partially used. It made possible to plant a large number of unique trees and shrubs.

Difficulties in involving residents at the project development stage. The project managed to achieve public attention to the project by distributing information in communities in social networks, electronic and printed news sources, official website of the city and the program for the development of public spaces of the Republic of Tatarstan, pasting information leaflets.

A large number of structures responsible for the lake rehabilitation project. A project team is created, which included representatives of each department. They worked closely together, cooperated, kept in touch, supervised and were responsible for the work throughout the entire term. This significantly facilitated the inter-structural interaction.

### (5) Achieved Outcome

Since the start of the project (in two years), more than 6,500 patients of the hospital with limited motor capabilities, in particular, those who have suffered injuries and diseases of the musculoskeletal system (fractures of bones, spine, endoprosthetics, etc.), nervous system (stroke, traumatic brain injuries, etc.), internal organs (pneumonia, heart attack hearts, etc.), received an individual rehabilitation program in the health and wellness

park «7 sources of health». It made it possible to improve their condition according to clinical and instrumental indicators, in particular, the psycho-emotional background by 28.6%, the degree of independence in everyday life by 32.4%, self-care by 21.8%, reduce the level of primary disability by 2.4-4.7% and thereby improve the quality of life of 68.3%.

There was a decrease in the number of newly recognized disabled people of working age by 10.4% compared to 2017.

Thanks to the project, a significant social effect was achieved. Every day more than 200 disabled patients of the hospital have the opportunity to spend time outdoors at the seven functional zones in the park. This allows them to discharge faster by 2-3 days.

Medical staff received an accessible recreation area for rest after heavy shifts (football, basketball (with two levels of rings), training, «auto-relax»), which improves their mental and physical condition by 18.9% and 34.7%, respectively.

Residents of the district have a comfortable space within walking distance, where the «Directorate of Parks and Squares of Kazan» holds various events.

## Lessons Learned

During the COVID-19 pandemic, an extra hospital for patients with Coronavirus was opened in the hospital located next to the park Chaikovoye Lake. The presence of a well-maintained park helped patients to recover faster, and doctors to restore their strength.

Replication of the practice of landscaping green areas at health facilities is possible in other Russian and foreign cities. The experience of involving all stakeholders in the implementation of the project, including experts and local residents, has proved to be successful and effective.

# Local SDG Implementation: An Annual Report on the Achievement of the SDGs as a Management Tool and the Large Area-Transformation into a SDG-Park

**1** Introduction of an annual report on the achievement of the SDGs not "only" for Monitoring but as a management tool
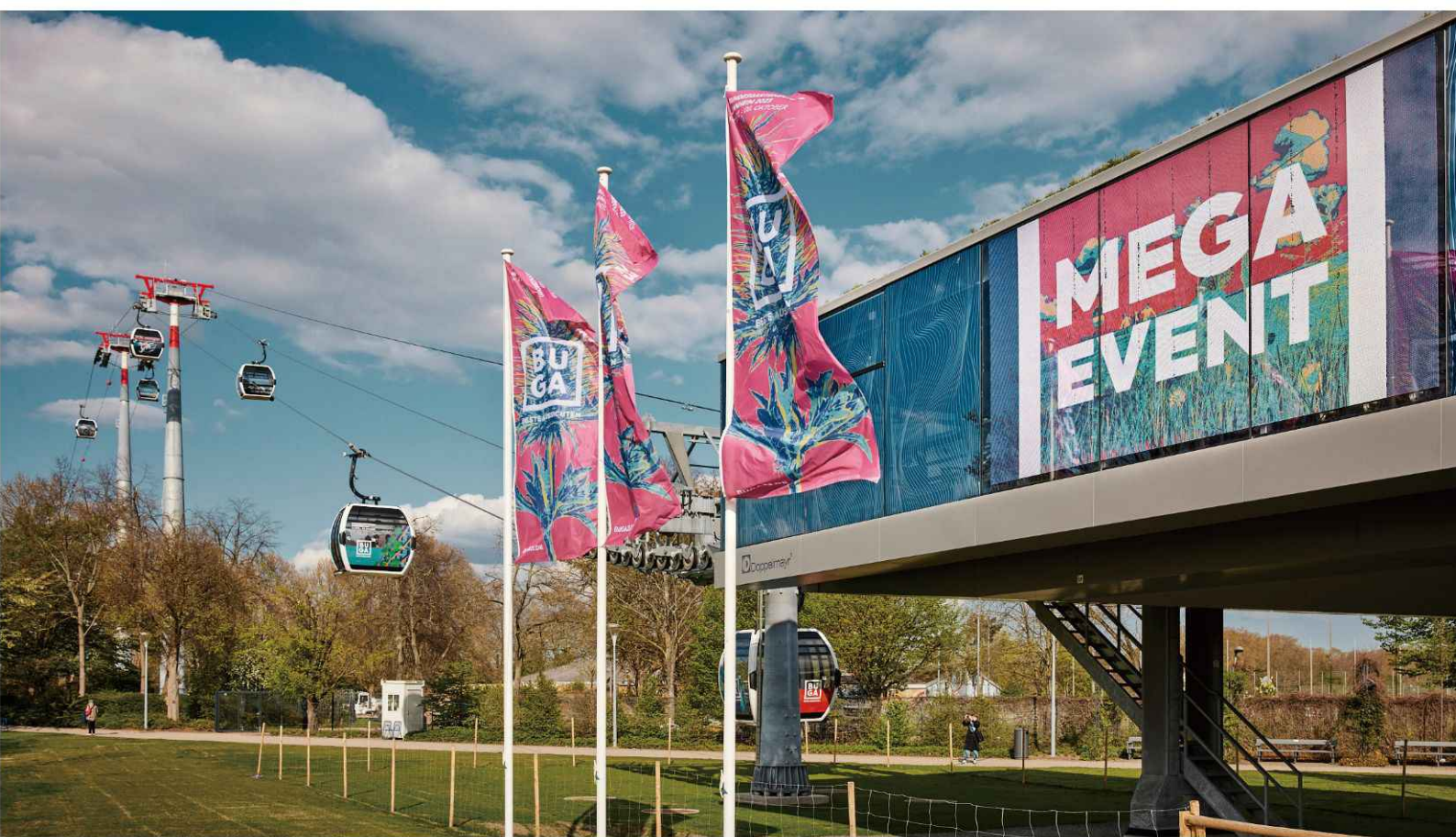


Mannheim, Germany

## Basic City Data

- **Population size:** 329,608
- **Population Growth Rate(%):** 7.40
- **Surface Area (sq.km):** 144.96
- **Population Density (people/sq.km):** 2,274
- **GDP Per Capita (U.S.$):** 3,230.43
- **GINI Index:** 0.3
- **Main Source of Prosperity:** industry

## Abstract

The 17 SDGs are firmly anchored in the management tools of the City of Mannheim. As early as 2015, the city had an overall strategy that advocated environmental and social growth. With the adoption of the 17 UN Sustainable Development Goals, Orberbürgermeister Kurz launched a major citizen participation process to localize the 17 SDGs and a new Mannheim 2030 strategy developed together with the citizenry. But how can local activity synergize with the global level for the common achievement of the goals? How can international comparability and knowledge exchange be established? For the year 2022, the City of Mannheim present the annual report (VLR as a management Tool and not "only" reporting Tool), which will be published regularly from this year on, as one of the main steering instruments alongside the mission statement and its target system, the municipal budget plan and a master list of running projects.

## Background and Origins

### (1) Background

The annual report, and thus also the Voluntary Local Review (VLR), is prepared annually together with all departments and companies of the City of Mannheim and then put annually on the agenda of the municipal council, to show the achievements in achieving the worth the citizens of Mannheim worked out Mannheim2030 vision which is directly related to the SDGs and therefore also showing the contributions globally to the SDG. It can be publicly discussed and adopted by the municipal council and is available to the public.

### (2) Origins

The City is off track in its efforts to achieve the 17 SDGs. The current crises and constant new challenges are causing public administrations to stumble from one crisis to the next. It needs clear goals, actions and simple governance models to help it stay on track both locally and globally to achieve its 2030 goals. The annual report takes on the sustainable, long-term management of the SDG localization.

## Key Innovative Aspects

The Annual Report compiles all activities of the City of Mannheim that are connected to the City's mission statement and SDGs and presents the progress that has been made toward reaching those goals. All departments, independent organizations, societies, etc. must work together. The Democracy and Strategy Department therefore holds annual discussions with all departments of the city and combines the goals, indicators and strategies into a common city-wide approach.

## Desired Outcome and Measurement

### (1) Desired Outcome

The initiative is to develop an Annual Report and thus integrate the VLR as a regular Governance tool in the annual decisions of the municipal council began in 2023. The City wants to make it clear that global and local goals must speak the same language and that it must integrate joint implementation into its local systems.

### (2) Measurement

For the preparation of the Annual Report, indicators are collected related to the city's strategic goals and the SDGs. On the Top Level the Report has 50 Indicators like $CO_2$ Emissions, unemployment rate, transmission rates to higher schools, or mobility. The Report has classical indicators like $CO_2$ emissions, GDP and children's language skills, but also local qualitative indicators like "trust in city government" or "satisfaction of participation of citizens". The indicators are part of its Budget Plan, as well as Mannheim's Mission Statement and are discussed annually by the municipal council.

## Implementation

### (1) Principal Parties and Partners

The City of Mannheim works closely with citizens, civil society, and international partners in these efforts. The mission statement was developed in a broad citizen participation process together with more than 2,500 Mannheim residents, companies, institutions, initiatives and associations, universities, self-help groups and others a variety of suggestions and proposals International cooperation, collaboration, and comparability are needed to jointly achieve the global goals and the respective local implementation. The City did this with formats as UTC, etc. It wants to show that everyone can/should track their successes on the goals implementation and that international cooperation and comparison are possible.

### (2) Resources for Implementation

The team of the Strategic Management of the City of Mannheim was tasked with the preparation of the Annual Report. The personnel costs of this team correspond to the actual costs of the project. As this is a conceptual control measure, no major costs were incurred. In collecting data, the Democracy and Strategy Department works closely with all departments of the city administration.

### (3) Tools and Methods Applied

The institutionalization of VLRs and their implementation in the management system as a management tool require a broad collection of key indicators related to the SDGs. This results in a better understanding and an overall view of the common city-wide goals in all areas of the city administration. It is important that each department has the overall view and also the global goals in mind when making decisions. So when the City has for example its goal "Climate Neutral till 2030", it also has to think about a just transition.

### (4) Obstacles and Solutions

The City faced obstacles in transferring global agendas into local actions and overcoming the siloed thinking of the departments, which have their own reports that they present to the public and the councilors. Due to

limited resources, there can sometimes be a perception of conflicting goals (global-local).

Global commitments are generally very abstract, which raises the question of how they can be transferred locally. Translating global commitments into local action often has to be done by the municipality itself.

National plans for charter implementation are mostly appellative in nature and local staff for charters are mostly lone warriors.

### (5) Achieved Outcome

The Annual Report reflects indicators relevant for every neighborhood and district in the city. Based on these indicators the city makes strategic decisions. It is also clear in which parts of the city there is a greater need for social services to alleviate child poverty, for educational equity, or for greater cleanliness measures in the streets.

The annual report is available to all citizens of the City of Mannheim. It can be read by all. As an example, the Annual Report shows in which districts child poverty prevails, where accessibility still has deficits and in which districts offers for older people are available.

## Lessons Learned

The Mannheim 2030 mission statement and thus the Annual Report has been continuously adapted and improved. For example, at an Urban Thinkers Campus event, the City discussed with citizens and global experts the lessons learned from the Covid-19 pandemic and, based on this citizen engagement, added a goal for a flexible and attractive public space in all its city districts.

The importance of designing public spaces as outdoor lounges has been given new priority. Urban gardening, parks and the consideration of social as well as gender aspects in the design of public spaces got a new higher prioritization.

Mannheim recognized early on the importance, potential and global responsibility for advancing city-to-city learning. The City wants to motivate other municipalities to create VLRs that are both aligned with their activities and can help them take local action. Because only with togetherness can sustainable localization of the global goals be achieved.

**2** The transformation of an 80 hectare former military area into a park in the city as a symbol for the localization of the 17 SDGs



📍 **Mannheim, Germany**

3 GOOD HEALTH AND WELL-BEING

11 SUSTAINABLE CITIES AND COMMUNITIES

13 CLIMATE ACTION

## Abstract

The Federal Republic of Germany promotes the greening of cities with the Federal Gardening Show (BUGA) program. With the departure of the U.S. military bases in 2014 in Mannheim, large areas of the city became vacant.

There were quick responses for allocating big logistics enterprises, which had been meant a large sealed area, buildings, relatively few jobs, a high traffic volume. With the adoption of the SDGs, the City of Mannheim initiated a large citizen participation process that included the localization of the SDGs into a new Mannheim 2030 strategy. Every effort was made to develop the area in terms of an overall ecological and social concept for the whole city. This idea was to be implemented by means of the vehicle of the BUGA. In this way, the topics of "urban greening and fresh air supply to cool down the inner city", "local recreation areas", "biodiversity" and "social housing" could be combined. The idea became clear to dedicate this Federal Gardening Show specifically to the SDGs and thus symbolically and above all concretely demonstrate solutions for achieving them.

## Background and Origins

### (1) Background

Through the Charter management, the City is screening and identifying relevant international charters, coordinate, adopt them with the councilors and bring the local relevant items of this charters directly in its management target system of the departments. And it works with the NUA and others.The decision to organize the Federal Gardening Show (BUGA) program was first made as a citizens referendum and then confirmed by the resolution of the Municipal Council. Subsequently, the strategy was developed in connection with the localization of the 17 SDGs and presented to the municipal council in 2017.

### (2) Origins

The City is off track in its efforts to achieve the 17 SDGs. The current crises and constant new challenges are causing public administrations to stumble from one crisis to the next. It needs concrete actions in terms of SDG localization, which is reinforced concretely with the BUGA.

## Key Innovative Aspects

Mannheim is the most sustainable BUGA ever. Environmental and climate protection, resource-saving energy generation and sustainable food security are the focus. In addition, the BUGA is an experimentation and information field especially for the topics "regional urban food production" and "clean and climate-friendly energy production in cities".

## Desired Outcome and Measurement

### (1) Desired Outcome

Within a few years, the BUGA site has been transformed from an 80-hectare sealed U.S. military site for

armored vehicles into a landscaped park and recreation area that is a habitat for many different species as well as a place for sports and recreational activities. The BUGA Park will continue to exist as a fresh air supply to cool the city center by an average of 1.5 degrees and as a public park to enhance the quality of life for Mannheim's citizens.

### (2) Measurement

At BUGA, a wide variety of links are created and related to the 17 SDGs adopted by the UN. In addition to the unsealing of 80 hectares of land, the cooling down of Mannheim's City centre by up to 1.5 degrees and the expected visitor numbers of 2 million, 5,000 events related to the SDGs, New Flats for 4,500 people with 30% quota emerging species, biodiversity rises are also surveyed and the clean energy production by solar panels and new quickly attainable recreation area for 40,000 people in the surrounding living areas.

## Implementation

### (1) Principal Parties and Partners

For the implementation of the BUGA, a non-profit limited liability company was founded, which worked closely with politicians, the city's urban planners, landscape architects, citizens, initiatives and many other stakeholders. Several participation processes were carried out for the development of the Federal Gardening Show and results were presented in the process in the neighborhood. During this time, the exhibition area serves as a stage for associations, government and initiatives of various topics, all related to the SDGs with at least 5000 events. Examples of events today: "New Mobility for families"; "Climate neutral Mobility-Flying with fuel cell"; "Insect friendly green care".

### (2) Resources for Implementation

A non-profit company with temporarily hired 65 persons was founded in 2014 for the preparation and implementation of the Federal Gardening Show Mannheim 2023, which will be dissolved after the event and will then be transferred to the City of Mannheim. Investment in the transformation of military land (contaminated site disposal, unsealing, etc.) into ecological green space about 100 million euros.

### (3) Tools and Methods Applied

With the BUGA, Mannheim has established a format to actively inform residents and visitors about the SDGs and encourage people to act.

The City is still in a movement and the BUGA and the SDG as a tool catalyzed its ambitions, so that it now – what was not seen be able three years ago – proclaimed the Goal to be CO2 neutral by 2030, which leads the City to be officially accepted as one of European 100 Climate Neutral Cities in Europe.

### (4) Obstacles and Solutions

The City faced obstacles to transform the area during Covid-19 pandemic, where a lot of work was not possible. Also with the Refugee crisis, there were a lot of refugees temporarily located in the former military buildings. It was not clear whether the Federal Government would use this area permanently as a Refugee Camp. There was also unexpected soil contamination on parts of the site. All of these issues, as well as financial considerations, required extensive consultations and discussions.

### (5) Achieved Outcome

The BUGA site not only brings fresh air from the mountains into the city center and cools it down by up to 1.5 degrees. In addition to providing local recreation opportunities for citizens and especially for families, it also offers habitat for many protected and rare animal and plant species this a new, green area with 80 hectares in the city. Social housing could be created on part of former military areas. In addition, a new bicycle expressway has been created, which is driving the mobility turnaround in Mannheim.

The city is using the document to examine how to develop and green former U.S. military land (German Federal Garden Show). From 2024, the BUGA will be a recreational area and meeting place for the entire city and especially its neighboring areas. As an example of work, Mannheim created a park that provides a fresh air corridor to the city center, reducing temperatures by 1.5 °C in the summer (Federal Garden Show). Beneficiaries are not just Mannheim residents, but also inhabitants of the metropolitan region (2.3 million). And now there are 2 million visitors expected for the BUGA year.

## Lessons Learned

Globally, the Covid-19 pandemic has demonstrated the importance of recreational areas with green space, fresh air, and opportunities for exercise, especially in urban areas, especially during times of lockdown.

The unsealing of an 80-hectare area, which provides habitat for a wide variety of plant and animal species, has created a space for this. Children's playgrounds for all ages, opportunities for exercise for cyclists, track athletes, roller skaters, joggers and many more are of paramount importance for the health and well-being of urban citizens.

# Navi Disha:
# Community Toilet Model



Vidhisha Self Help Group E Zone,
Bopakhel Ramnagar, PCMC
Lat long = 18.587106084610856

📍 **Pimpri Chinchwad,**
**India**

1 NO POVERTY

3 GOOD HEALTH AND WELL-BEING

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

## Basic City Data

- **Population size:** 2,960,000
- **Population Growth Rate(%):** 4.63% CAGR
- **Surface Area (sq.km):** 181
- **Population Density (people/sq.km):** 9,600

- **GDP Per Capita (U.S.$):** 3,840
- **Main Source of Prosperity:** Industrial Development

## Abstract

With a vision to reduce the open defecation in the city, the municipal corporation provided 160 community toilets in 71 slums of the city, and the operation of these toilets was handed to the external agencies. There were challenges in operation and maintenance of these community toilet as a result, the corporation ideated initiative of Navi Disha under Swachhagrah aimed at operating and maintaining the community toilets by the beneficiary- women groups. With this initiative the corporation envisaged to involve community and women self-help groups ensuring gender empowerment in operation and maintenance of the toilets. A bottom-up approach to identify the challenges and probable solution was adopted to drive the initiative.

Navi Disha intends to create a sustainable impact by providing clean and safe sanitation to the community resulting in developing ownership of the facilities.

## Background and Origins

### (1) Background

Non maintenance of community toilet, vandalism by community with toilet infrastructure, security of women for late night and early morning triggered the Navi Disha initiative. To provide safe sanitation for all and a gender inclusive approach is main objective of Navi Disha. Navi Disha closely aligns to SDG Goal 6, towards providing clean water and sanitation and touches the targets for SDG goals 1,3,5,11 & 16. It works towards providing basic services and reducing risk to strengthen resilience of Pimpri Chinchwad as per New Urban Agenda.

### (2) Origins

The group lacked vision and confidence to implement this initiative. As a result, training of trainer's model was adopted to build the capacity of the women groups to operate and maintain the toilets. Sheer handholding by PCMC has been established by involving senior officials and Sanitary Inspectors of the city, 17 Social Coordinators, were trained to build the capacity of women groups and enable them to avoid nuisance from community and smoothly operate & maintain the toilet.

## Key Innovative Aspects

- Gender inclusion being the prime pillar of Navi Disha focuses on inclusive and holistically strengthening the community.

● Agile administration with adaptation of changes from remuneration to women till building strategy framework monitoring systems, and motivation for women groups.

## Desired Outcome and Measurement

### (1) Desired Outcome

① The goal of Navi Disha initiative is to provide clean, safe and Sustainable Sanitation facilities for the community. The focus is to establish a strong partnership between the community and the urban local body (PCMC). The initiative converges aspects of health improvement, women empowerment, and economic development.

② Navi Disha focuses on gender inclusion, wherein the community toilets are to be operated by women thus strengthening gender security by providing safe and secured toilets for women even during late hours.

③ Through the Navi Disha program, women will be empowered beyond the operation and maintenance of toilets. This includes building their confidence, ensuring their security, enabling them to become a strong support system for other women within the community. This not only deters vandalism but also provides a foundation for secure livelihoods.

④ PCMC will involve them as peer educators encouraging cross-learning initiatives among these women and embark upon other initiatives of corporations.

### (2) Measurement

SHG's operating the toilets have a major responsibility of maintaining monthly utilization records of cleaning products, master cleaning and user feedback records. The monthly invoices are to be cleared by the respective zonal office only upon visiting these registers. In addition, social coordinators regularly visit these toilets to keep a track of cleanliness in the toilets and further conduct capacity building of the women. PCMC is in the process of conducting yearly competition amongst these Navi Disha Community Toilets for monitoring their performance and providing motivation to the women groups.

## Implementation

### (1) Principal Parties and Partners

Community led model has been taken into consideration for strategizing. The knowledge partner to this initiative was the City Transformation Office at PCMC. The women groups are the leading partners of the initiative, who are governed by Social Development department primarily with support from Health Department and Zonal Offices. This partnership involves PCMC to construct the toilet infrastructure and provide safe toilet cleaning material, and women groups are responsible for O&M, generating awareness and strive towards achieving behavioral change in community.

### (2) Resources for Implementation

The contracts ensure that a monthly cost of INR 900 (~USD 11)/toilet seat/month is paid to the group by the PCMC. INR 900 (~USD 11) includes purchasing broom, floor wiper, bucket, mugs etc., and miscellaneous expenses.

In addition, PCMC ensures that safe consumables like disinfectant, hand gloves, soaps, buckets, and mugs are provided to the SHG's. Special focus has been given to improving the record-keeping capacity. Also 17 social coordinators were trained to support the groups. Groups ensuring zero vandalism were incentivised by $60 flexi-fund on half yearly basis to conduct running repairs and envisage innovative ideas within their premises.

### (3) Tools and Methods Applied

Multiple Focus Group Discussions (FGD's), infrastructure surveys, benchmarking studies, awareness campaigns and perception analysis were conducted with community representatives and stakeholders from time to time to build an agile and transparent community led framework.

### (4) Obstacles and Solutions

The major obstacle for PCMC was building a sense of ownership within the community for sensible usage of their Community Toilets. Round of consultations were conducted with the community and with interest shown by the women of the society, the Navi Disha model was envisaged. While building the institutional framework, city administration came across various challenges that were addressed in due course.

**Challenges addressed by PCMC:**

a. Lack of family & community support towards the women group and the overall initiative.

b. User group behavior towards sanitation leading to vandalism.

c. Lack of robust monitoring framework for the operation and maintenance of these community toilets.

d. Lack of institutionalization.

**Solutions undertaken by PCMC:**

a. Conducting capacity building sessions and building a hassle-free formalization process for these women groups.

b. Conducting multiple Information-Education-Communication (IEC) activities in the community hotspot areas. Building firm administration support for resolution of all acts of vandalism and nuisance.

c. Formalization of the entire strategy and adoption of change processes.

d. For expedited scaling of the model, training of trainers was done with Social Coordinators, Area Health Officers, and Regional Officers of the administration. This way 40 community toilets were covered under Navi Disha encompassing all areas of the city.

e. Conducted several capacity building activities with their families and the community. Also, a hassle-free formalization process was built to register these women groups.

f. The city administration stood firmly alongside of the women groups in dealing with vandalism by community and nuisance of infrastructure. Multiple IEC activities were also conducted by the women's groups to educate beneficiaries for behavior change.

### (5) Achieved Outcome

① Over 400 women are now engaged within the initiative managing 40 toilets with total of 862 toilet seats.

Over 30,000+ beneficiaries are getting access to clean and safe toilets every day.

② The women groups have been economically strengthened resulting in improved social security.

③ The ripple effect created by these women, has resulted in overwhelming interest from other women groups to take up the operations of the remaining community toilets. Thus, PCMC has planned to scale over 120 Community Toilets with engagement of 1,200+ women managing 2,062+ seats in total under Navi Disha over the next year. PCMC targets to increase the impacted beneficiaries by at least three folds.



## Lessons Learned

(1) PCMC has transitioned from a traditional vendor-based system to a community-led model. The officers from Social Development department along with the technical consultants facilitated these women groups with capacity building sessions ensuring smooth operations. Adaptation of change in PCMC administration, and involvement of officials was done in order to facilitate seamless flow of activities.

(2) Navi Disha converges aspects of health improvement, women empowerment, and economic development. Providing end-to-end support to beneficiaries, encompassing capacity building, training, registration, regulatory guidance, and onboarding assistance, represents a key innovation. Community partnership and community consultative process stand out as a crucial takeaway, along with the establishment of a monitoring framework and the implementation of Standard Operating Procedures. Maintaining clean toilet leads to improvement in health and hygiene aspect of the community thus impacting on economic improvement.

(3) The initiative focusses on utilizing local knowledge to provide income generation opportunities to women. This endeavor was designed not only to enhance sanitation standards but also to empower and integrate women into the processes, ensuring equitable gender participation. Navi Disha is a replicable model and has impacted over 400 women and has provided more than 30,000 beneficiaries with clean and safe sanitation facilities. It is a testament to the power of collaborative efforts and innovative thinking in the pursuit of inclusive and sustainable urban development.

# Forum of Expertise - Active Aging for a Vibrant Future - Empowering Seniors to Thrive Through Voluntarism, Lifelong Learning, Wellbeing, and Community Led Initiatives



📍 **Ramallah, Palestine**

**3** GOOD HEALTH AND WELL-BEING

**10** REDUCED INEQUALITIES

## Basic City Data

- **Population size:** 85,000
- **Population Growth Rate(%):** 2.00
- **Surface Area (sq.km):** 19
- **Population Density (people/sq.km):** 4474
- **GDP Per Capita (U.S.$):** 3,789.3
- **GINI Index:** 0.33
- **Main Source of Prosperity:** trade and tourism

## Abstract

The Ramallah Municipality's initiative focuses on promoting active ageing and well-being within the urban context through an innovative community center known as the "Forum of Expertise." This initiative is dedicated to enriching the lives of elderly men and women by enhancing their quality of life, championing their resilience and well-being.

The initiative comprises four core programs: a cross-generational platform for the exchange of knowledge and expertise, a tailored avenue for voluntary engagement of old population, targeted capacity-development program, and comprehensive well-being programs that touch every aspect of the elderly lives.

The "Forum of Expertise"encourages community led initiative that help cultivating mental, social, and psychological well-being while fostering a sense of belonging.

By prioritizing inclusivity and addressing the needs of the poor and vulnerable, the initiative ensures a lasting impact that benefits all segments of society.

## Background and Origins

### (1) Background

The establishment of the "Forum of Expertise" is underpinned by a significant municipal decision reflecting the City's dedication to inclusivity and social cohesion. It embodies its shared responsibility to prevent any community member from being marginalized. This commitment underscores the value of each life story within its community. The Forum symbolizes its pledge to empower and respect the elderly, echoing the principle of "leave no one behind", and its dedication to SDG-related principles in every initiative, reinforcing its commitment to a sustainable and equitable future.

### (2) Origins

The "Forum of Expertise" addresses the pressing concerns of social isolation, health disparities, reduced community participation, and declining independence among the elderly, as highlighted by the World Health Organization. In Palestine, the absence of social security programs and comprehensive health insurance accentuates these challenges. This initiative aims to counter these issues by fostering well-being, engagement, and connectivity among the elderly, cultivating a more inclusive and supportive Palestinian community.

## Key Innovative Aspects

(1) "The Forum of Expertise" harnesses the talents and experiences of elderly members to drive a diverse range of activities. These activities, spanning from physical well-being programs like chair yoga to intellectually stimulating pursuits like book clubs and workshops, are all designed to promote active engagement and well-being among the elderly.

(2) Organizational changes include a decentralized and bottom-up structure, involving the community in decision-making, supervision, and evaluation. For example, the community choir's formation and training decisions are member-driven. Regular feedback loops enable ongoing improvement.

## Desired Outcome and Measurement

### (1) Desired Outcome

● The main objective is to address the issue of social isolation, among the elderly. It aims to improve their wellbeing and promote programs that encourage interaction and connection between generations. Through shifting in society structures, policies, and attitudes to create inclusive environments that promote senior social engagement.

● This change is not a one-time event. Overcoming the issue of isolation requires commitment and the development of evolving strategies. As a long term endeavor this initiative strives to integrate these changes into the fabric of society.

### (2) Measurement

The initiative employs indicators such as senior engagement, volunteer numbers, and intergenerational exchange sessions to assess change. Forum volunteers carry out measurements, maintaining attendance records with age and gender disaggregation. Visual documentation includes photos and videos. These metrics information is crucial for planning, adaptation, and improvement.

## Implementation

### (1) Principal Parties and Partners

The Ramallah Municipality's Forum of Expertise partners with private medical companies, pioneering a collaborative approach to elderly healthcare. This alliance advances early detection and management of age-related health issues, promising better outcomes. Leveraging each partner's resources and expertise, the partnership enhances efficiency and cost-effectiveness. It maintains a balance between private sector interests and elderly well-being, prioritizing transparency, and public welfare. Additionally, the forum's collaboration with charitable organizations and youth clubs enables elderly members to volunteer, reinforcing their value to the community and supporting city organizations.

### (2) Resources for Implementation

The initiative utilizes a building in the old city of Ramallah. The "Global Community" provided the initial

premises rehabilitation as a donation. The operational funding comes from Ramallah Municipality, while activities are led by elderly volunteers, showcasing a synergistic blend of private, public, and community resources. This dynamic relationship utilizes both tangible and intangible assets, capitalizing on senior volunteers' expertise for vibrant activities. The community's voluntary contributions and dedication further enhance program implementation. Moreover, the in-kind donations also play a pivotal role, underscoring the diverse resource utilization strategy that underpins the initiative's achievements.

### (3) Tools and Methods Applied

● Evidence of change lies in improved senior engagement, witnessed through increased participation in activities, volunteerism, and knowledge exchange. Seniors report improved well-being, recognized through positive feedback and anecdotes.

● To achieve these targets, it continually diversifies activities, encourage inter-generational interactions. Regular assessments and evaluations guide adaptations, ensuring meaningful progress towards these global goals.

### (4) Obstacles and Solutions

The Ramallah Municipality's Forum of Expertise encountered significant obstacles, primarily due to the COVID-19 pandemic and the elderly's limited technology literacy. To address these challenges, the initiative adopted a resourceful approach, arranging personalized training sessions by involving young volunteers as mentors. These mentors guided the elderly in utilizing smartphones and apps like Zoom, effectively bridging the technological gap. Additionally, innovative online programs like "Nasma wa Nastamteh" and "Raseef 18" were introduce during the lockdown, featuring interviews with 35 Palestinian musicians and 18 creative writers.

To maintain connectivity, Facebook, WhatsApp, and Telegram groups were established, promoting continuous interaction and support. Through these strategies, "The Forum of Expertise" adeptly surmounted obstacles, enabling the success of innovative initiatives.

### (5) Achieved Outcome

"The Forum of Expertise"'s Active Aging initiative has accomplished and aims to achieve:

● Increased senior community engagement and volunteerism, promoting holistic well-being.

● Empowered seniors, finding purpose by sharing expertise, gaining community recognition.

● Organized physical activities enhancing active lifestyles, positively impacting urban Palestinian seniors' health.

● Document the stories of the elderly, this year it published the first book to document 25 members' stories.

## Lessons Learned

(1) Recent events, such as the COVID-19 pandemic, have imparted significant lessons that have been integral in enhancing its community's resilience. It initiated technology training for the elderly, ensuring their continued engagement even during lockdowns. Collaboration at the local level, involving volunteers to support the

vulnerable. This collective experience has made its community more resilient, responsive, and open to evolving strategies in times of crisis. An innovative approach, like creating online documentaries and conducting interviews, maintained elderly engagement during the crisis, showcasing the power of creativity.

(2) "The Forum of Expertise" has become a model that resonates beyond its community. Neighboring municipalities, including Al Bireh and Selfeet in Palestine, as well as Madaba Municipality in Jordan, have been inspired to establish similar centers. A pivotal lesson it offers is the early involvement of the elderly, tapping into their wisdom and expertise. Its community stands ready to share these insights through workshops, consultations, and collaborative endeavors.

The initiative provides a blueprint for fostering resilience, inter-generational connections, and overall well-being. It is committed to inspiring other cities to create inclusive spaces, thereby unlocking the full potential of senior citizens and enriching communities at large. Its initiative's success story is transferable and holds the potential to make a meaningful impact on a global scale.

# Programa Tô Legal



São Paulo, Brazil

| Basic City Data | |
| --- | --- |
| • **Population size:** 12,300,000 | • **GDP Per Capita (U.S.$):** 60.750 |
| • **Population Growth Rate(%):** 11.00 | • **GINI Index:** 47.1 (most recently measured in 2021) |
| • **Surface Area (sq.km):** 17,000 | |
| • **Population Density (people/sq.km):** 24.821 | |

## Abstract

"Tô Legal" electronic system was conceived as a gateway for those who need to work legally and with dignity, but who lack formal qualifications, education, or the experience usually needed to seek formal employment. Many of these citizens make their own merchandise, improve themselves and their production over time, which, in many cases, allows them to graduate from street vendors and formalize their activity within companies or as micro-entrepreneurs. "Tô Legal" has enabled the creation of a new type of document – Authorization Ordinance for Commerce and Service Provision (PCS) – which is easily and readily obtained, due to application automated analysis. The PCS authorizes work in public areas for up to 90 days. There is no limit as to how many authorizations a citizen may hold, providing the authorized dates and times do not overlap. The system issues a total of 14 documents – 11 different permits and 3 types of authorization, for commerce and service provision on sidewalks and public areas.

## Background and Origins

### (1) Background

Tô Legal system, a municipal internet portal, which sets procedures for the electronic issue of permits and authorization for commerce and service provision in the local ambit. It also creates Authorization Ordinance, a document that authorizes its holder to practice economic activities on public areas and sidewalks. It was conceived to foment entrepreneurship among unemployed, youth and senior workers who lack job opportunities.

### (2) Origins

Until 2019, the only way merchants and service providers could legally work on public roads was through the attainment of a Use Permit Term (TPU), a document granted by means of public convocation or call, public application or competition, which rarely occurred and could take place only on locations predetermined by the local deputy prefect.

Each of the 11 types of TPU available on Tô Legal has a specific set of legislation. Some of them include legal instruments for ensuring social and economic inclusion for the elderly, disabled people, egresses of the penitentiary system, and war veterans.

PCS are granted in a democratic way, for up to 90 days. The entrepreneur may choose, in the platform, locations (GIS) and time periods where and when they wish to work. Simultaneously, in exhibiting the activities in

a visual manner on a services map, all authorized activities in the entire city are shown. Such information may aid in the choice of location and the type of commerce or service the worker intends to practice. It also gives them the chance to test a location and activity to check whether or not they meet their needs.

The first step, prior to accessing the system, is to formalize themselves before The Municipal Treasury Office or to become a MEI – Individual Micro-Entrepreneur. Then, they are apt to access Tô Legal and choose a location where they intend to work.

At this stage, information is openly available on Tô Legal website, via e-mail, or in person at any of the 32 municipal Subprefectures.

The system is available for any citizen who practices economic activity on public roads wishing to legalize their activity. It also serves those who already hold a document – permit holders and entrepreneurs – as it consolidates their relationship with the municipality. All the data pertaining to the worker or entrepreneur, as well as their practiced activity, may be readily accessed by the users themselves, by office administrators, and by inspection personnel.

The nature of the documents available on Tô Legal promotes economic inclusion, as it offers flexibility for applicants to choose a time period, days of the week and locations more adequate to their needs.

Tô Legal also created a grid for payment control where the administrators may monitor revenue collection according to the type of document. It also shows on a city map the georeferenced location of each issued document.

## Key Innovative Aspects

"Tô Legal" was conceived to be technology-based, especially GIS, and is integrated with 15 databases. For PCS, the application allows the citizen to choose the desired place to work. The analysis happens in real time, and after payment, the entrepreneur may print the PCS at their home. The use of technology improved the services, and changed the "going in person" culture, bringing transparency, centralized collection, and budget reports.

## Desired Outcome and Measurement

### (1) Desired Outcome

Tô Legal's main goal is to ease and expedite the issue of authorization and permit for commerce and service in public areas and sidewalks providing opportunities for those who are unable to enter the formal employment market to legally work, as well as fomenting entrepreneurship. Other important goals, due to the issue of 14 permit/authorization types: improve transparency, efficiency, location monitoring (GIS), and battle corruption through payment control.

### (2) Measurement

The managing team monitors the system daily, reporting on 14 documents. The dashboard (graphics/ revenue) is available for administrators. The data is used to measure the progress of the initiative and to identify issues in advance. As an impersonal system, the holder's age, race or gender data are not collected. Nevertheless, other information such as: chosen location, activity and equipment are collected; which shows the location's economic vocation, which may aid in public policy development.

## Implementation

### (1) Principal Parties and Partners

Innovative partnerships with the Municipal Treasury and other Municipal Offices are in place, which expedite data processing, database-problem correction and update, and help reduce bureaucracy in the public service. Also, the Commerce/Trade Association has proposed a partnership to improve the promotion of the PCS and other documents issued by Tô Legal. They intend to be a hub for entrepreneurs who want to develop other businesses.

### (2) Resources for Implementation

The initiative was implemented using funds included in the District's Secretariat annual budget. Its support is under contract with said Office, which encompasses system maintenance, error correction, regular upgrades, and the inclusion of more tools and documents to the scope of the portal.

### (3) Tools and Methods Applied

● Since the implementation of Tô Legal. on July 1st, 2019 (until 2023 October 14th):

55,829 Authorization Ordinance for Commerce and Service Provision issued;

9,565 Use Permit Terms issued;

Over 19 thousand ordinance/permit holders;

Over R$ 40,3 million collected in municipal charges (9 TPU types + 3 Authorization Permit types) + 28,3 million (Permits for Street, Farmer's and Produce Markets) = over R$ 72,5 million, or over US$ 14 million.

● Tô Legal targets are deeply committed to fomenting social and economic growth, better governance through corruption battling, and crisis response as a gateway to entrepreneurs.

### (4) Obstacles and Solutions

Since Tô Legal brought significant change to application analysis and document issuing procedures, there was an adaptation period for both permit holders and public office employees. To ease the transition, the system's managing team offered internal training sessions for office employees as well as open office hours for citizens to clarify questions about the new system. Several user manuals were created for both citizens and civil servants, which are permanently available for download on the internet and intranet portals.

### (5) Achieved Outcome

The initiative is a municipal policy, affecting all citizens. The system has improved the lives of entrepreneurs, as they no longer need to travel to a sub-prefecture to apply for documents, change their registry or pay municipal fees, since those services are now available online. Civil servants can readily access permit and authorization information, expediting inspection procedures. Revenue collection is streamlined, with funds going directly to the Municipal Treasury.

## Lessons Learned

During the pandemic years, City Mayor Bruno Covas signed decrees reducing charges for PCS and for other Permits, as a response to the economic crisis, as a way to encourage and help those working on public areas and sidewalks.

Even after the suspension due to lockdowns, the PCS was rapidly re-issued and assured the workers the right to keep working. Tô Legal system provided a fast and efficient tool for applying Government guidelines and public policies to expand work possibilities for São Paulo citizens.

Tô Legal system was built by a small, hard-working team, and has so far issued more than 40 thousand documents. Tô Legal is based on innovation, technology, and even more so in efficiency, transparency and agility. There are many parameterized tools that are constantly managed and updated by the Tô Legal administrators, a small all-women Division with 4 civil servants.

As a learned lesson, process simplification brings benefits to citizens and to civil servants. For the Municipality, the gain with better governance, transparency, corruption battling, centralized collection, debtor map, and budget report are goals achieved.

The team is always dreaming new dreams, working to issue more documents, and pursuing innovative solutions to improve public services, to make the city better for every citizen. They are ready to share their 5 years experience.

# Substitution of Chemical Pesticides by Using Pruning Waste in the Production of Herbal Formulations
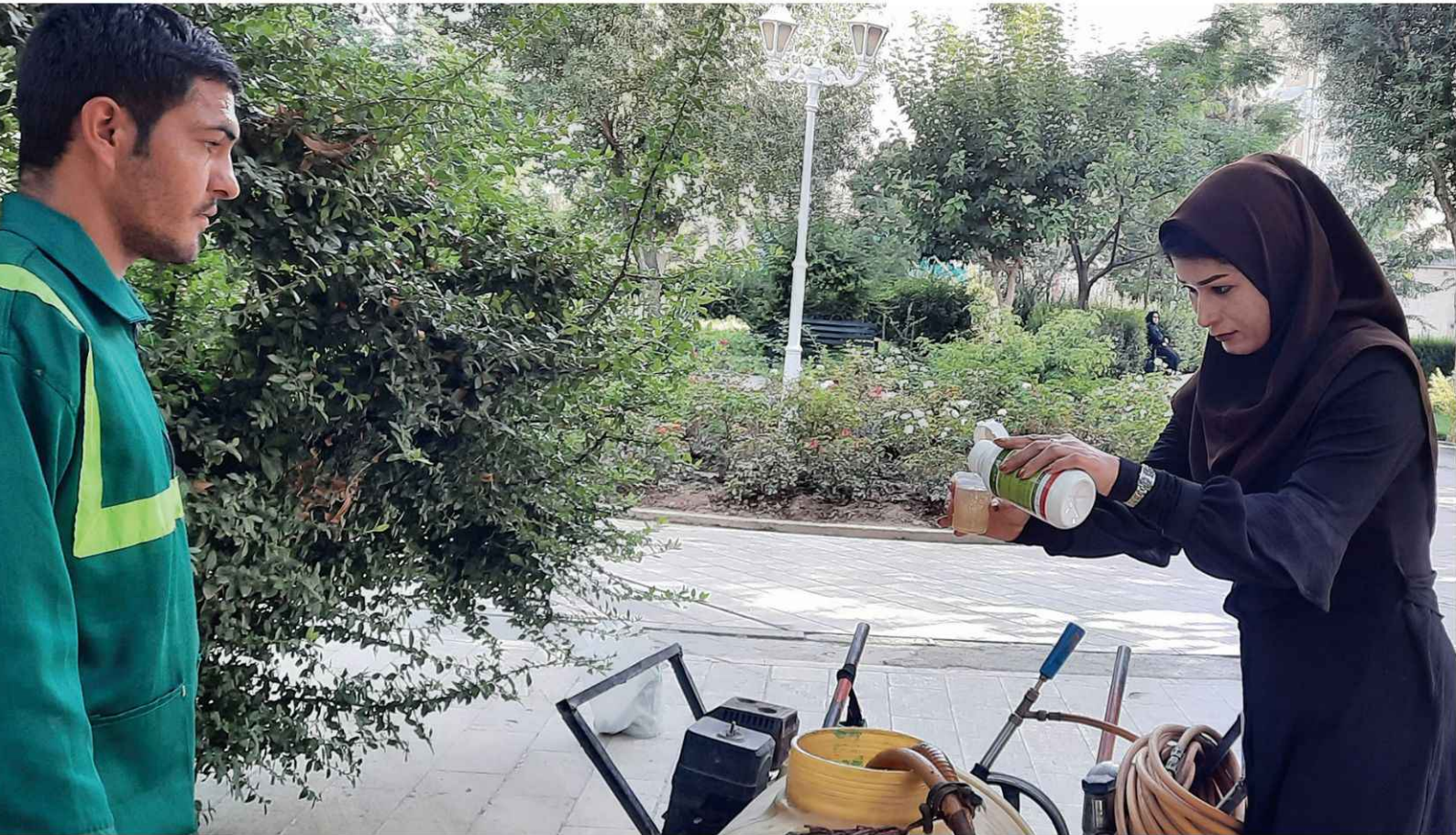


📍 **Tehran, Iran**

| Basic City Data | |
|---|---|
| • **Population size:** 9,013,700 | • **GDP Per Capita (U.S.$):** 4,091 |
| • **Population Growth Rate(%):** 1.20 | • **GINI Index:** 0.4 |
| • **Surface Area (sq.km):** 730 | • **Main Source of Prosperity:** Iran(Tehran)- |
| • **Population Density (people/sq.km):** 11800 | From Nature, for Nature |

## Abstract

The most important effect of green spaces in cities is their environmental functions or ecological efficiency, which make cities suitable for living. The effect of several herbal essential oils formulated by use of rosemary, peppermint and eucalyptus in comparison with the chemical pesticide diazinon (Basodox 60%) has been carried out in Bostan Sufi located in the Tehran municipality of region 17 against the whitefly pest Aleuroclava jasmini, and the use of herbal formulation Caesalpinia gilliesii plant, some examples of urban pests such as white-winged sparrow Siphoninus phillyreae, black willow aphid Chaitophorus niger Mordvilko, ornamental cabbage waxy aphid Brevicoryne brassicae, rose bush aphid Macrosiphum rosae, marshmallow aphid (Aphis gossypii Glover) have been done and 5 articles were published to record its scientific achievements.

With the output of this project, it's possible to promote the use of pruning plants in the green space and to start domestic production with knowledge-based companies to replace the use of chemical pesticides. The plants which have been used in this project include Arizona cypress, lavender, rosemary, etc. The Tehran-Iran municipal plan aligns with the 2030 Sustainable Development Goals, and its main focus is to promote the achievement of results in urban management and the maintenance of green space with the criterion of environmental sustainability in the world. By the use of these organic compounds, Tehran announces that we are stepping towards a clean earth.

## Background and Origins

### (1) Background

The article (HSE-WI-03-01) refers to health, safety and environmental services and urban green space, the requirements for maintaining green space and ensuring the health and safety of the citizens. Under this paragraph, amelioration of the health and environmental issues related to the use of pesticides and attention to environmentally friendly methods are emphasized.

### (2) Origins

During the outbreak of mulberry whiteflies in the urban green space of Tehran between 2016 and 2018 in Atrat Park located in the 2nd district of the 17th municipality, the performance of the Caesalpinia gilliesii plant naturally attracting adult insects (whiteflies) was the first spark of study as an investigation of the trap plant. It was included in the executive agenda. The presence of toxic trichomes in the glassine and fruit (seeds) of the Caesalpinia gilliesii plant has been one of the executive observations of the herbal medicine department in eliminating white-winged insects.

## Key Innovative Aspects

The application of the Caesalpinia gilliesii plant is completely innovative and for the first time in the world to be used in the production of herbal formulations. Also, the financing of the project was in cooperation of the research cooperation with the herbal laboratory department of the 17th municipality of Tehran with the herbal research institute of the country.

The culture of plant pesticide production has been on the agenda of researchers and research organizations for several years to save the environment to produce healthy agricultural products. So that in the scientific and technical research interactions, the primary formulations have been sent to the municipality of the 17th district of Tehran for experimental tests in vitro and in vivo conditions, and in addition to the laboratory investigations, detailed statistical studies on the effects of herbal formulations compared to the laboratory functions has been done and its scientific output has been the registration of scientific research articles and the publication of the Tehran Studies and Planning Center.

## Desired Outcome and Measurement

### (1) Desired Outcome

The promising stage of this project is that with cultivation and mass production biocompatible pesticides based on the Caesalpinia gilliesii plant or using the waste pruning of evergreen plants (rosemary, lavender, etc.) can pave the way for the production of plant formulations. This aim requires taking big steps towards the health of the urban community in the direction of urban pest control, and economically, it also reduces maintenance costs in the municipal community.

### (2) Measurement

The evaluation indicators of this project have been based on biometric tests in basic and agricultural sciences with POLO-PC, SPSS, and Disgn expert software, and the income groups of this project branch of the formulation industry are fully prepared economically in the utilization of pruning waste. slow and at the same time protect the social group of citizens and managers from the health of society.



## Implementation

### (1) Principal Parties and Partners

This initiative includes public-private and urban society and the environment, which has been a partner of this initiative of the municipal organization in the extensive planting of Caesalpinia gilliesii plant to trap whiteflies, and the formulation of these plant compounds has been in cooperation with the Institute of Plant Medicine

Research. So far, this initiative has been used in the green space to control urban pests, which the municipal organization has benefited from to replace the consumption of chemical poisons and reduce the consumption costs in purchasing exorbitant costs of chemical poisons so that the health of the urban community has also been included.

### (2) Resources for Implementation

Human resources for the implementation of this project are selected among herbal medicine experts to check the performance of the formulations. All human resources have been employed from the herbal medicine institute of the country for the implementation of these plans. At the same time, all results of laboratory tests and related papers have been published with the financial support of the Municipal Organization.

### (3) Tools and Methods Applied

Controlling the whiteflies in the planted areas of the Caesalpinia gilliesii plant in pilot gardens, controlling aphid pests in the Salamat Park family farm with a designed formulation.

The environmental program according to the circular number specified in the health of the urban community should have an agreement between research institutes and knowledge-based companies with the municipality to utilize pruning waste during the seasons for the use and production of plant formulations in the recovery cycle, that is why follow the steps above, environmental health will be achieved.

Relying on chemical sciences, efforts will be made to make the best quality formulations for the use of the mentioned plants in association with the pesticide production sector, and the acceptance and culture of this will be with the municipal officials.

### (4) Obstacles and Solutions

The main obstacles are the culturalization of the use of biocompatible pesticides and the promotion of the removal of chemical toxins in the treatment of plant diseases in the urban green space. Other obstacles have been the non-acceptance of some organizational managers to trust the performance of herbal formulations despite providing positive solutions and successful results in urban society. Other obstacles to the financial support of the municipality have been in not accepting contracts with knowledge-based companies for the use of pruning plants in domestic production to maintain the green space in the urban society, which requires the organizational authority to provide full support for the necessary orders to put into practice this innovative and revolutionary initiative in preserving the urban environment.

### (5) Achieved Outcome

The strategy of reducing the use of chemical pesticides against the urban pest, which has a large number of generations in the peak of the heat of the year and is resistant to chemical pesticides, is one of the desired changes in the use of mass production of the Caesalpinia gilliesii plant to attract whiteflies in the urban green space.

In 2016 and 2017, in the hot seasons of the year, the use of the Caesalpinia gilliesii plant as a trap plant has been very useful in controlling white-winged flying insects. This plant attracted more whiteflies due to its yellow glaze. The extensive planting of this plant in several gardens under the pilot to eliminate the annoying whiteflies in the city has been one of the creations of the city management in those years.

## Lessons Learned

Registration of recent articles from this project can be a successful event in promoting the science of herbal pesticides and urban pest control.

The organizations of the municipalities and the agricultural community in the food and drug industry must be fully justified to this science (herbal formulations) and the agricultural organization has the necessary enthusiasm to distribute these herbal pesticides against chemical pesticides and a new law for Gardens, municipalities, and greenhouses aim to reduce the consumption of chemical pesticides and reduce the exorbitant costs in the technical use of chemical pesticides for embargoed countries, therefore, supporting domestic production can play an important role in preserving the health of agricultural products, gardens, and green spaces.

# Enhancing Traffic Safety Near Schools Through Child-Friendly Collaborative Construction and Sharing Approach



📍 **Xianning, China**

## Basic City Data

- **Population size:** 3,036,100
- **Population Growth Rate(%):** 0.77
- **Surface Area (sq.km):** 9,752
- **Population Density (people/sq.km):** 268

- **GDP Per Capita (U.S.$):** 8,590
- **GINI Index:** 0.46
- **Main Source of Prosperity:** Agriculture, tourism, and Public Health related Services

## Abstract

In China, traffic congestion and safety concerns near schools pose significant challenges for management in some cities. Many parents, apprehensive about their children's safety, choose to drive them to school, exacerbating not only traffic issues but also a lot of time wasted. However, with financial constraints and no national directives, particularly in medium-sized cities like Xianning, prioritizing and executing effective solutions remains an uphill task. Addressing this issue demands collaboration across multiple departments, such as education, transportation, policing, and more, coupled with enhanced awareness among parents and students.

## Background and Origins

Traffic congestion around city schools poses a significant challenge to urban management in Xianning. A primary contributor to this problem is the limited space around schools. It often leads to congestion when parents drive to drop off or pick up their children, creating a major headache known as the "school run". Furthermore, disparities in educational resources across different parts of the city, largely stemming from economic variations, exacerbate the issue.

The 7th Elementary School of Xianning is situated in a suburban area, with its access roads in poor condition. These roads lack essential infrastructure such as street lights, surveillance equipment, and proper pavements. The intersection leading to the school doesn't have traffic signals, forcing teachers to manage traffic and escort students. All these problems have been overlooked for a long time. The initiative emphasizes the importance of creating high-quality public spaces for urban residents. By transforming disadvantaged school environments into child-friendly, learning-oriented spaces, the initiative can address educational inequality in cities, and encourage marginalized children to engage in social interactions, strengthening their communication skills and problem-solving abilities. It also offers a fun, creative outlet so as to prevent negative psychological outcomes in these children.

The initiative is based on the UN's 1996 "Child-Friendly Cities" concept and China's 2021 directives: the "China Children's Development Program (2021-2030)" and the "Guiding Opinions on Promoting the Construction of Child-Friendly Cities." It drew inspiration and alignment from multiple Sustainable Development Goals (SDGs). Moreover, it embodies the principles of the New Urban Agenda, championing equal urban opportunities and fostering safe, accessible, and green public domains.

## Key Innovative Aspects

1. Approaching the project from a "one-meter height" perspective, engineers collaborate closely with children, listening carefully to their thoughts. Creative concepts such as wall painting and 'protecting the Earth' originate from the imaginative ideas of the students.

2. Public participation is encouraged. The proposed public spaces are designed with children's inputs and prioritize learning. Local residents are invited to rejuvenate abandoned spaces, turning them into shared gardens.

3. A franchise policy has been implemented to incentivize real estate developers to remove boundary walls of residential complexes to expand communal spaces. Apart from that, ancillary businesses such as restaurants and after school related business are also encouraged.

4. Promoting green, low-carbon, and environmentally friendly lifestyles. In the scheme of "Shared Garden", the construction materials were sourced from discarded bottles and cans collected by children. In public space construction around the school campus, more than 50 percent of the materials used were derived from recycled content. The entire process was conceived, from the start, as a means to educate children and their respective families to adopt low-carbon and environment-friendly habits and lifestyles.

5. Strengthening communication to build linkages among seven government sectors and multiple departments. As a result, cooperation has been enhanced among bureaus of urban management, housing and construction, public security, and education, as well as with the communities and the school.

6. Establishing four pedestrian-only school routes, supported by over 100 parent volunteers.

7. The practices have been extended to other twenty schools rapidly. At the same time, city-wide design guidelines and implementation standards have been established.

## Desired Outcome and Measurement

### (1) Desired Outcome

This initiative seeks to significantly improve traffic safety around schools and upgrade road infrastructure, fostering a safe and appealing route for students to walk to school and diminishing the necessity for parents to engage in the "school run". The initiative also aims to elevate these concerns to the municipal government level. By doing so, it aims to create city-wide positive change with participation from various entities including Housing and Urban-Rural Development Bureau, Urban Planning Department, City Management Committee, Traffic Police, Neighborhood Committees, Education Bureau, schools, and private developers. A set of guidelines has been formulated and disseminated to numerous schools and cities.

### (2) Measurement

The assessment of the initiative's impact is spearheaded by the project implementation department and the design team. They are evaluating the project's effectiveness by contrasting satisfaction levels pre- and post-implementation among students, parents, and local residents, as well as examining the shifts in traffic operation indicators. This data collection is nuanced, with disaggregation by gender, age, and income brackets to ensure an understanding of the project's impact across different demographic groups. Before/after photos are also being done.

## Implementation

### (1) Principal Parties and Partners

The initiative represents the true essence of public-private-community sectors partnership. The school was donated by 19 local companies and 73 citizens in 1998. In 2023, the initiative brought a new opportunity to reignite the foundational spirit of collaboration that gave birth to the school, and extend it to public-public, public-private and public-community engagement.

With the personal involvement of the mayor and a wide range of departments, the city worked tirelessly to ensure the initiative's success and build bridges between different sectors.

The private sector, recognizing the challenge, responded commendably. Private developers not only donated land for safer pathways and bike lanes butalso went a step further. They transformed an entire street in the neighbouring estate into a pedestrian-only zone. The walls and fences were dismantled to open up the vista along the paths to make the walking experience more agreeable for 1-meter tall persons.

Parents, in an expression of community involvement, organized four "walking bus routes", increasing the proportion of students walking to school from a mere 30% to an impressive 95%. Furthermore, in a unique melding of responsibility and education, each class, comprising teachers and students, is now charged with plant care, seamlessly integrating this task with the biology curriculum.

### (2) Resources for Implementation

The initiative was financed by the city's Xianning Urban Management Committee and the Xianning Housing and Urban-Rural Development Bureau. This funding accelerated infrastructure enhancements around the school. Additionally, the initiative saw the elimination of sidewalk parking and the inception of a school bus service. Private developers voluntarily dismantled barriers, allowing pedestrian access, and offered vacant space for temporary school parking. Moreover, local factories supplied waste materials like bottles, metal, and tires, donated recycled soil derived from water plant sludge. Talented local artists, working together with the school children, ingeniously transformed these waste materials into imaginative street furniture and public space decorations.

### (3) Tools and Methods Applied

Several innovative tools and methods were employed. A human-centered approach was integral to the entire process, with pathways tailored for student commutes and a co-created garden doubling as a high-quality community space. Additionally, the initiative drew inspiration and alignment from multiple Sustainable Development Goals.

### (4) Obstacles and Solutions

● International advanced concepts are incorporated into urban needs and projects. This process aims to create high-quality project proposals that align with local requirements and receive strong support from city leaders and relevant decision-makers for this innovation.

● The initiative indeed encountered some challenges, not least the need for increasing additional funding as many of the innovations involved infrastructure re-design and thus additional expenses. The initiative, nonetheless, gained government support and resulted in the adjustment in the allocation on departmental budgets to fund different projects of the overall initiative.

● The non-traditional and unique structures created by students were transformed into physical objects using methods such as 3D printing and handcrafting with fiberglass in compliance with engineering practice and accepted norms and standards.

● The extensive use of recycled materials in the project posed challenges during the engineering acceptance and auditing processes. To address this issue, the initiative collaborated with the urban planning bureau to develop city-level design guidelines, providing clarity and promotion for the incorporation of recycled materials.

### (5) Achieved Outcome

1) After the implementation of the initiative, there was a clear separation between private car drop-offs and students walking to school. The proportion of students walking to school increased significantly from 30% to 95%. The number of private cars for student drop-offs decreased from 120 cars per hour to just 8 cars per hour. Within a 1-kilometer radius of the school, the number of traffic accidents decreased from 50 incidents per year to just one (an accident unrelated to children).

2) The renovation project directly impacts 800 school students and extends its benefits to their parents, families, and neighboring residents. With the initiative serving as a model, it has been replicated in 20 schools in Xianning, benefiting more than 30,000 primary school students and preschoolers.

## Lessons Learned

Due to the spread of the COVID-19 pandemic, many cities have been hit hard in terms of vitality and economic strength. Therefore, it is urgent to enhance the resilience of the city, achieve environmental sustainability, improve traffic safety, enhance urban vitality, and construct high-quality public spaces, encouraging people to go out and build a city for children and youth. This initiative aims to integrate these goals and take advantage of the opportunities provided by traffic safety improvement projects to build a successful public space for children, promoting their learning and interaction with parents and neighbors, and fostering a sense of community ownership and pride. The project requires low investment, has a short implementation time, and has excellent promotional value.

Child-friendly projects should truly understand the needs and thoughts of children, allowing them to actively participate in and influence the actual projects, developing their creativity, self-confidence, and social skills, laying a solid foundation for their future.

Urban sustainability and growth necessitate the collective involvement of all stakeholders. Beyond the conventional players like governments and construction firms, it's imperative to incorporate students, parents, community members, and local businesses in urban projects. Other cities can glean insights from its "co-funding, co-building, and co-creating" ethos, with its emphasis on collaboration and a people-first approach. By sharing its model, the initiative aims to inspire similar transformative efforts elsewhere, ultimately realizing more child-centered, vibrant, and resilient urban landscapes.

Guangzhou Luhu Park

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