



ishoimpactlab.

THE SMART BUS SYSTEM

PROVIDING SMART CITY TRANSPORT SOLUTIONS

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STATEMENT



Objective

Our mission is to establish a smart, technology-driven bus station network that transforms urban transit into a catalyst for sustainable growth, enhanced livability, and economic opportunity. By integrating advanced technology with value-driven urban planning, we aim to develop efficient, accessible, and attractive transportation hubs that address immediate transit needs while improving public spaces, safety, and environmental impact. Strategically designed to generate revenue, reduce congestion, and strengthen urban resilience, this network will be a key driver of a more dynamic, inclusive, and economically vibrant city.

ECONOMIC DEVELOPMENT

VALUE CREATION TOOL

The proposed bus system is not just a transit solution but a strategic tool for urban planning that drives broad economic benefits and diverse revenue opportunities. By turning bus stations into development hubs, the city can attract amenities like parks, public restrooms, and waste management facilities, enhancing livability and increasing property values. This boosts land utilization, generates higher tax revenues, and supports public-private partnerships for local commerce and real estate growth.

Financially, bus stations can generate income through commercial spaces, retail outlets, and advertising. These stations can also attract development grants, international investments, and infrastructure funds, offsetting costs and fueling further growth. Enhanced emergency and safety infrastructure around transit hubs can lower public costs and insurance premiums while boosting investor confidence.

This integrated approach positions the bus system as a key asset for sustainable urban growth, attracting investors and triggering a self-sustaining cycle of economic development. Achieving this vision requires strong political will, transparent governance, and social consensus, but the financial and economic returns can be substantial.

STAKEHOLDERS

What can the smart bus system do for its stakeholders?

COMMUNITY



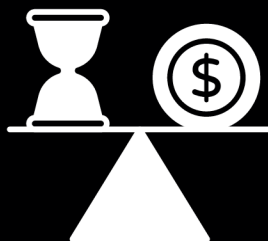
- charging stations
- cooling systems
- wifi
- interactive display boards: schedule, weather, time, news, tourism info, et
- safety alarm and infrastructure

ENVIRONMENT



- solar energy
- air purifier system
- less pollution and traffic congestion

PRIVATE AND PUBLIC ENTITIES



- interactive display boards : leasing and advertising opportunities
- analysis of contextualised IoT public data : air, temperature, motion, surveillance, etc

STAKEHOLDERS

FOR THE CITY

The proposed bus system not only addresses immediate transit needs but also serves as a foundational pillar for broader urban infrastructure development. By establishing reliable and accessible public transportation, the city can build upon this core framework to introduce a range of complementary public amenities and services and add ons to the stations themselves.

One potential extension is the integration of small park systems and open urban spaces along the bus routes, creating recreational areas that enhance community well-being while encouraging more sustainable urban living. These green pockets can provide much-needed respite in dense cityscapes, improve air quality, and promote active lifestyles, forming a network of connected public spaces accessible by bus.

Similarly, the bus system can spur the development of essential public amenities such as public toilets and efficient waste and garbage disposal facilities. By positioning these amenities at key bus stops and terminals, the city can ensure greater cleanliness, hygiene, and accessibility, particularly for under-served areas that currently lack basic infrastructure.

Moreover, adding public services like emergency response units and safety infrastructure along transit routes can improve overall urban resilience. Strategically placed emergency hubs and well-lit, secure bus stops can enhance both safety and rapid response, addressing urgent needs and ensuring that essential services are readily available to citizens. This layered approach—beginning with transportation and extending to parks, amenities, and services—establishes a holistic framework that not only transforms public transit but also acts as a catalyst for creating a more livable, inclusive, and resilient city.

PROPOSED TIMELINE

Phase 01

Research Analysis Mapping

Phase 1a: Research and Analysis
Engage in research and analysis of existing routes and network systems

Phase 1b: Mapping
Identify and map the existing networks, spatial systems and communities

Phase 02

The New Route Field Work

Phase 2a: The new route
Identify one primary bus route which will serve as the demonstration and/or pilot route for the rest of the network. This phase will include the spatial analysis of this route, including open spaces along it.

Phase 2b: Field work
Fieldwork to select location of bus stops along this selected route. During this phase, working with community organizations and volunteers, together with our students, we will ride the route twice to locate the locations of all actual stops, determine average timing within stops, as well as most popular stops.

Phase 03

The Smart Bus Stop

Phase 3a: The Smart Bus Stop
We will select the most impactful stop to be designed first, together with the community organization. Once the stop is selected, we will conduct interviews with street-vendors/bus riders and conduct a community workshop to discuss community needs for this bus stop.

Phase 3b: Design of different types of bus stops according to a modular design that can be expanded depending on location and desired program, including smart programs that provide information and work with environmental criteria.

TEAM

Organization and Management

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