A proposal for a privately-funded
Smart Eco City for

Petronia City, Ghana

Population of 165K on 6.4 sq. km
34.6K residential units
172K sq m commercial space
64 hectares for industry
37 km podway with 1,061 pods

**Sustainable · Scalable · Efficient · Low cost
Resilient · Convenient · Car-free
Walkable · Affordable · Safe · Healthy**

70% of city is covered by green or open space
209.8M watts of installed solar
38% of food is grown within the city
GHG reduction of 123.1K tonnes CO2e per year
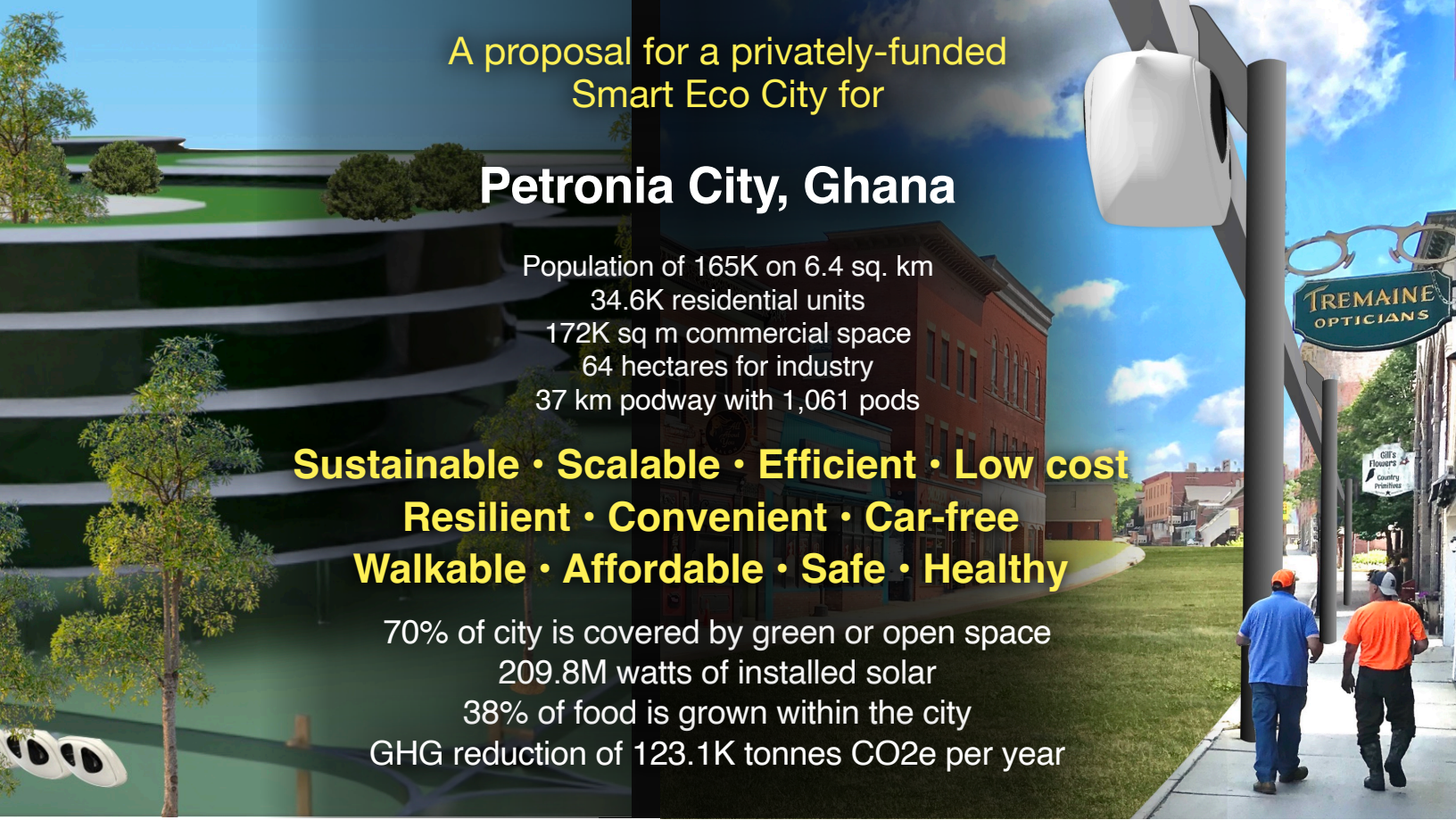
Podway City
A model for Smart Eco Cities

TransitX

PODWAY DEVELOPMENT

Capgemini
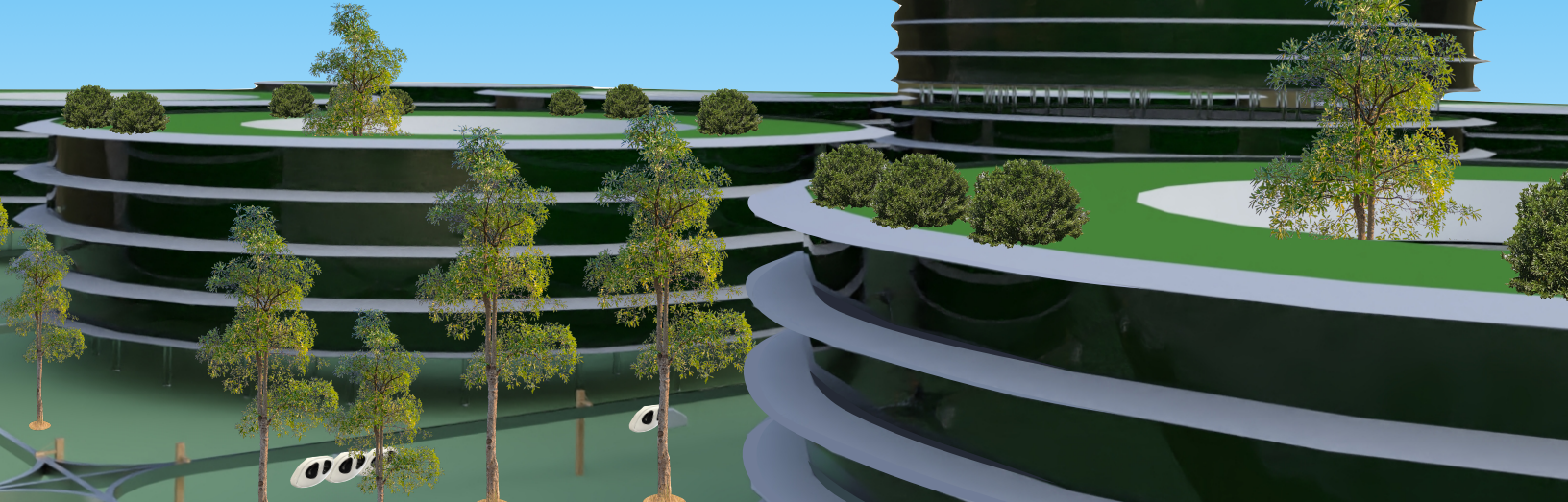
We are proposing to develop Petronia City as a Podway City — our model for a Smart Eco City. Our funding partners invest in sustainable cities that deliver a vibrant economy, a low cost of living, and a high quality of life that makes for a happy, productive, and healthy society.

Green transportation

Podways provide convenient, solar-powered transportation for people, freight, and packages. Most daily needs can be met within a 5 minute trip. Stops are conveniently located on every block and at every large building. Private podways can enter buildings and stop at floors and individual units. High-speed podways connect to airports and nearby cities.

Benefits for Business & Industry

Podway Cities attract businesses due to the low cost of energy, availability of public transportation, and lower taxes.

Renewable energy is generated and stored locally without occupying land, lowering the cost of energy for both businesses and residents.

All businesses have access to reliable, low-cost, high capacity podways. This lowers the cost of transporting goods, and increases the size of the worker pool.

Employees don't need a car to get to work. Commuting via podways is fast, safe, reliable, and stress-free — lowering employee turnover.

A Podway City is more efficient and less costly to run — resulting in lower taxes.

Podway Cities have green spaces and high density

Green & Sustainable

100% renewable energy
Generates renewable energy over distributed grid
Podway Cities include a distributed grid to connect distributed generation, storage, and managed loads. Businesses and homes benefit from low-cost energy.

Batteries and managed loads
On-demand loads and distributed storage makes the electrical grid more resilient and dependable.

Integrated utilities
Utility lines are protected inside the podway to improve resiliency and dependability. High-capacity fiber optic telecom and wireless towers are integrated into the podway.

Negative Carbon Footprint
Podway Cities emit no greenhouse gas emissions from transportation or housing. Our approach minimizes embodied carbon in structures and vehicles while using materials that sequester carbon.

Organic and Recyclable materials
Podway Cities use materials that are long-lasting, compostable, and recyclable. Most structures are made of wood rather than concrete and steel.

Pollution free
The goal of Podway Cities is to create a circular economy and eliminate most pollution. This includes carbon emissions, air pollution including all fumes and most particulates. Water runoff from impervious surfaces is eliminated. Reducing or eliminating packaging and single use plastics. Minimize light pollution. The need for sewers, storm water systems, and centralized waste water treatment plants is eliminated. Solid waste is reduced with systems that promote repair and reuse.

Resilient
Podway Cities are designed to continue operating in floods, extreme heat waves, pandemics, and severe storms. Cities can be rapidly evacuated if necessary.

Green
Green and open spaces supplant roadways and parking lots. This lowers temperatures and eliminates the heat island effect in typical cities.

Efficient
Podway Cities are designed to efficiently use resources — including land, food, electricity, heat, natural light, and water. Buildings are designed with many passive features that use no energy — including thermal storage and climate control that takes advantage of natural temperature differences.

Self-sufficient
As much as practical, Podway Cities are designed to create and reuse their own energy, water, waste, food, and goods.

Health, Safety & Privacy

Podway Cities bring better health, safety, and privacy that improves the quality of life for all residents.

Health

Green spaces improve people's well-being and less pollution creates a healthier environment. Podway Cities improve access to health care, prevent the spread of diseases, eliminate stressful commutes, and encourage an active lifestyle.

Safety

Podways eliminate roadway-related incidents and most vehicle-related crimes. Pods are monitored and inaccessible when parked. Eliminating parking lots, cars, buses, and trains removes the places where many crimes occur.

Podway Cities provide affordable housing to eliminate homelessness and poverty — improving everyone's safety.

Privacy

Podway Cities provide individual privacy but maintain the accountability needed to keep people and property safe.

Every podway stop may have access controls (a gated community) based on time, guest list, or banned list.

Future-proof: Scalable & Flexible

The climate is rapidly changing, so Podway Cities are designed to be resilient to storms, floods, fires, and earthquakes. Podway Cities can work in all climates and topographies. Buildings can be of any architectural style.

Podway Cities scale so that they can be expand as needed. Multi-use, standard-height buildings easily adapt to new uses, rather than needing to demolish and rebuild them. Because most utilities are above ground, there is minimal disruption during construction or maintenance.

Low Risk

Podway Cities are designed to be low risk. Both structures and infrastructure can be incrementally developed. This minimizes the risk of low asset utilization (aka Ghost Cities). By building to current demand, you minimize non-revenue producing assets. This method also reduces the interest during construction (IDC).

Podways and most structures are manufactured in a factory rather than built on-site. This reduces disruption, improves quality and reduces costs.

Low Cost and Long Lasting

Podway Cities are designed to be inexpensive to build, inexpensive to run, and built to last — over 100 years..

Low cost infrastructure

Podways lower the cost of utilities and infrastructure by supplanting expensive roadways, highways, bridges, and parking. *Building* a podway is less costly than a few years of *maintaining* conventional transportation systems. *Adding* a new podway is less costly than electrifying the existing transportation systems.

Podways carry and protect utility lines, reducing potential damage from storms and flooding.

Low cost structures

Buildings are multi-purpose and can adapt to new uses in the future. Buildings are low cost because they are low-rise and manufactured. With private podways, no building needs structured parking, hallways, elevators, or stairwells — further reducing their cost and improving safety.

Most buildings are made from engineered wood. A lighter low-rise building has a smaller foundation. Since all buildings are convenient to podway transportation, land is less expensive at a city's center.
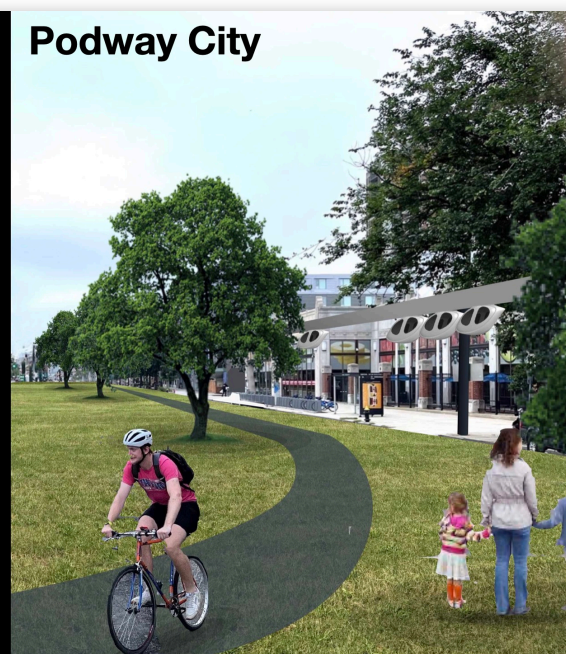
Passive and ultra-efficient climate control reduces operational expenses. Automation and AI (Artificial Intelligence) further reduce the cost of maintenance.

The structures of Podway Cities feature innovative designs to lower their cost, increase their lifespan, and improve the quality of life for the building's users.

NOTE: *Podway Cities can be any architectural style. Any photo or imagery is only showing one possible architectural style.*

Multi-modal mess | **Podway City**

Which city would you rather live in?
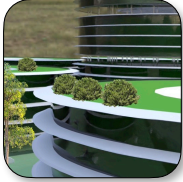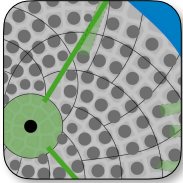
Podway City Solutions

Transportation
Podways provide convenient, low-cost, and high-capacity transport for people and goods. Local and over long-distances.

Structures
Provide flexible, efficient multi-use buildings to lower costs, increase resiliency, and improve the quality of life for both residents and businesses.

New City
New city layouts provide resiliency without the typical constraints imposed by topology, conventional transportation and sanitation systems.

Healthcare
Pods enable in-home health care and efficient equipment utilization. Medical pods provide testing, diagnostics, and secure communication with provider.
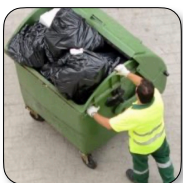
Privacy with accountability
Significantly reduce cyber and real-world crimes. Protects privacy while providing accountability. Notary and SCIF pods. Distributed PKI methods.

Fiber and 5G everywhere
Fiber-optic cables are protected inside the podway. Micro-antennas (5G) can be placed on top of podway. Infrastructure is secured.

Waste Management
Clean, silent, and on-demand waste management collection at dock or door. Innovative recycle and reuse systems are possible using podway.

Education
Fast, safe and flexible trips to school without buses. Educational content is available while traveling in a pod. Pods get children to and from school safely.

Postal Service
Fast, reliable delivery for letters, packages, and on-demand delivery. Secure delivery to dropbox at posts or stops. Low cost and zero emissions.

Agriculture
Increase yield more than 3X with year-round production using 90% less water and no fertilizers. Resilient to extreme heat. Faster transport.

Renewable Energy
Distributed solar and wind energy generation without land use or transmission losses.

DC Grid
Safe, distributed energy storage and physically protected cables. Instant auto-balancing with managed loads. DC distribution and transmission.

Public Safety & Emergency
Podway Cities eliminate vehicular-related incidents. Enable new methods to improve police, fire, and emergency response.

Water & Sanitation
Over 90% reduction in water use. Dry toilets eliminate need for sewers and centralized water treatment. Fresh and filtered water is delivered via podways.

Disaster Response
Fast emergency response and high-capacity evacuation during natural disasters. Podways continue to operate in floods and high winds.

Activeways
Healthy, active lifestyles encouraged by paths along podways for people, bicyclists, and other non-motorized vehicles.

Parks and Waterways
Green spaces can be engineered to mitigate urban flooding and provide waterways for recreation and natural beauty.

Administration & Governing
Innovative tools for decision making and problem solving can help facilitate cooperative and rational choices that benefit society.

Problems with **New Cities**

New City developers often run into these **problems.** We have the **solutions** ✅

❌ **Lack of clear vision or strategy**
✅ We can help you articulate a clear and compelling vision that can be implemented in a reasonable timeframe

❌ **Limited land availability**
✅ With better transportation, higher density, and use in hilly terrain, Podway Cities are viable in many more locations.

❌ **Limited water rights**
✅ Podway Cities uses 90% less water

❌ **High cost and poor financial viability**
✅ Our solutions are low-cost with a viable business model—even in developing countries

❌ **Environmental approval delays**
✅ Podway Cities are more environmentally friendly than any other form of development

❌ **Overbuilding**
✅ Podway Cities can be developed in phases without needing to build expensive infrastructure to meet potential future needs

❌ **Road-centric & multi-modal mess**
✅ Podway Cities provide a better alternative to road-based infrastructure.

Problems with **Smart Cities**

Smart City developers often run into these **problems**. We have the **solutions** ✅

❌ **Poor resiliency**
✅ Podway Cities protect from flooding, severe heat, fires, storms, and earthquakes.

❌ **Lack of reliable energy sources**
✅ We build local renewable generation and storage with demand-side management. Provides reliable renewable energy.

❌ **Congestion**
✅ Automated Podways provide the capacity of trains with the convenience of cars.

❌ **Data privacy and trust issues**
✅ Distributed public key infrastructure assures privacy while maintaining accountability.

❌ **Cyber Threats**
✅ Less complex systems are easier to defend. Podways are less complex and the private network reduces the severity of impact compared to a multi-modal environment.

Safe
Quiet
Green
Walkable

Financial Viability

Total cost for all development is $515.1M which is $3.1K per household, or $3.0M per hectare). The annual city budget is estimated to be $97.0M ($2,806 per household). The financials make the project attractive for private investment, and the project could be developed in phases. A financial summary with a 10-year pro forma is available upon request.

Next Steps

A feasibility study is available under a non-disclosure agreement by emailing hello@transitx.com. The feasibility study provides additional details on everything mentioned in this overview — as well as many other topics.

We look forward to meeting to discuss how we can work together and answering your questions.

Sincerely,

Petronia City, Ghana

Feasibility Study

For governments, developers, and to conduct due diligence and analyze business, financial, and technical feasibility of this Podway City project.

Request from hello@transitx.com