

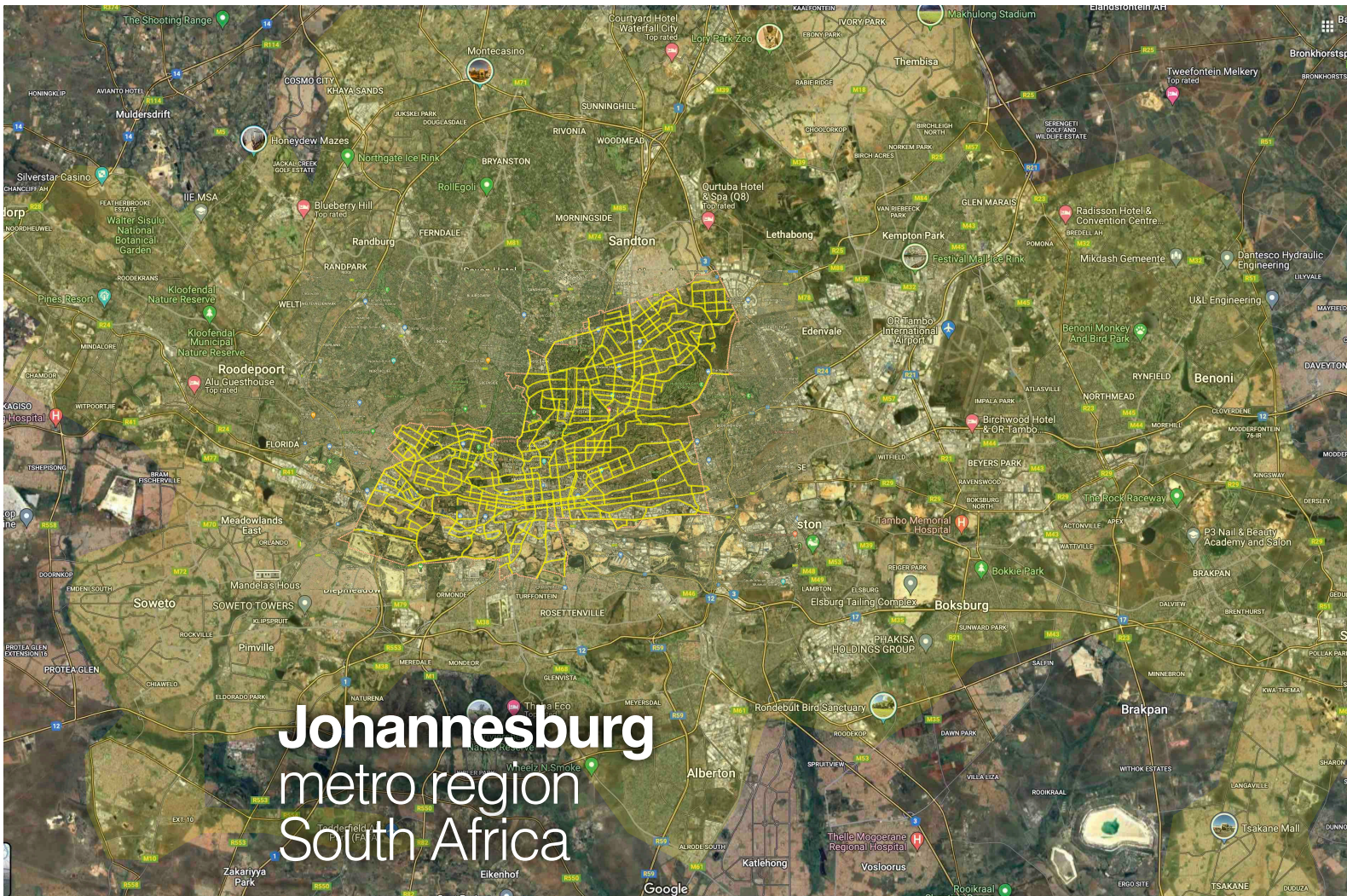
A proposal for a privately-funded solar podway to transport people and goods for

# Johannesburg metro region, South Africa

**2,551 km network with 38,044 pods and 17,183 stops**  
(95% of 5.6M population within a 3.0 min. walk)

**High capacity • No land use • Sustainable  
No waiting • Nonstop • 24/7 • High speed  
Resilient • Equitable • Affordable • Accessible**

Creates 98.2K jobs and adds \$7.2B to GDP.  
Includes 200 km of high-speed podway (242 km/h)  
Includes 1 km of water crossings  
605.7 MW solar & wind power (enough for 2M residents)  
GHG reduction of 1.3M tonnes CO<sub>2</sub>e per year (2.2M cars)



# Johannesburg metro region South Africa



We propose to fund, build and operate a podway that provides safe, fast, sustainable, resilient, and equitable transport for people and freight. Generates local renewable energy.

Please watch this overview at [transitx.com/video](https://transitx.com/video)



A podway is light civil infrastructure using a fleet of 100% automated electric vehicles (pods) that travel along an exclusive, grade-separated micro guideway.

### Environment & Climate

#### Green and walkable streets

A podway reduces road traffic and parking which enables streets to transition into green and people-friendly spaces.

#### Sustainable, efficient & zero carbon

Podways are all-electric and 100% powered by renewable energy. Pods are 10 times more efficient than electric cars. Podways significantly reduce greenhouse gas (GHG) emissions from transportation.

#### No pollution: air, sound, light, heat, and water

Podways are quiet, produce no emissions, and produce no water runoff. Pods have no headlights and podways do not need to be lit. As land area is transformed from black asphalt into green space, urban temperatures are expected drop by over 4°C.

#### Resilient, dependable & future proof

Podways operate during floods, pandemics, earthquakes, dust/snow/ice storms, high winds, blackouts, and heat waves. Damaged infrastructure can be repaired within 24 hours. If needed, podways can be relocated.

### Health & Safety

#### Eliminates crashes

With 100% automation, podways eliminate human errors and impaired driving. Orders of magnitude safer than roadways, this project is projected to eliminate 9,387 road-related injuries and 94 deaths annually.

#### Health: improving health and access to care

Podways help prevent the spread of diseases, improve the quality of air and water, eliminate stressful driving, improve access to healthcare, and encourage walking and biking.

#### Security: reduce crime and poverty

Pods transport authenticated people and goods that are physically protected and private. There are no crowds or queues. Sleep pods can provide temporary housing for the homeless. Podways reduce crime and poverty by creating jobs and improving access to jobs.

### Financials & Economics

#### Low Risk: bonded, guaranteed & proven

A pilot podway was installed near Boston, Massachusetts in 2021. The project's turnkey contracts are with large and reputable firms. Project partners have built and operated fully automated transit systems and projects are fully bonded and service levels are guaranteed. An automated small-vehicle transport (PRT) has been operating with a perfect safety record for 50 years in Morgantown, West Virginia. Podways offer a lower risk than any other alternative.

#### No financial commitment from gov't

No government funding, subsidies, guarantees or special tax incentives are necessary. The system's low cost and multiple revenue streams makes it profitable.

#### Revenue Generator

Rights-of-way owners receive a 5% share of revenues which is expected to be 6.7 billion ZAR (US\$395.0M) per year. Corporate income taxes are estimated to be \$754.1M annually. Prior to the start of operations, government receives at least 0.5% (\$37.5M) for permitting and license fees.

### Society & Workforce

#### No disruption

Construction does not significantly disrupt neighborhoods, businesses, or existing travel. Installation is fast, quiet, and clean using all electric equipment without use of diesel trucks.

#### Easements alongside roadways

Podways can fit anywhere because there is no dedicated footprint — pods travel alongside roadways or highways without interfering with roadway traffic.

#### Lower visual impact

Podways have significantly less visual impact than roadways, bridges, vehicles, and parking areas. Utility lines are hidden within the podway.

#### Fewer cars & trucks

Most trips on a podway will replace trips via cars or trucks which reduces the wear and tear on roads and bridges.

#### Economic development and job growth

A podway increases access to jobs, education, food, healthcare, tourist sites, businesses and farms. Faster commutes increase personal time and productivity.

#### Jobs and workforce development

The project is expected to create at least 27,210 local construction/manufacturing jobs, directly employ more than 60,260 workers and create at least 413,620 jobs from secondary effects. Transportation workers who get displaced are given priority.

## PASSENGER BENEFITS

### Fast trips

Pods travel non-stop at 72 kph (45 mph) on metro podways and 242 kph (150 mph) on high-speed podways — delivering the fastest door-to-door trips of any travel mode.

### Convenient

Pod stop can be placed on every block and parking lot. Two pod lifts can fit within one car parking space.

### Accessible

Handicap-accessible roll-on pods are always available. Pods accommodate those with atypical needs including elderly, young, overweight, etc.

### Privacy & security

Pods provide the benefits of cars — a private, single-seat trip anytime and anywhere.

### Equitable & affordable fares

Fares are based on distance and set by a formula to assure that trips on podways are affordable and equitable — similar to fares on public transit and much less than a taxi.

75% of fares are capped based on the Fair Fare Formula. Rate of 1.95 ZAR per km (US\$0.12/km) for a shared pod. The capped fare for a typical 5 km trip is 9.57 ZAR (US\$0.68)

### No congestion

Six-pod trains with one-second headway can carry over 21,600 pods per hour — similar in capacity to a 40 lane highway. A pod stop with two lifts has a capacity of 720 vehicle boardings/loadings per hour and fits within a single car parking space.

### Fear, Harassment, Race, Justice, Corruption

Podways eliminate most dangers and fears from public transit and motor vehicles, including traffic stops, robberies assaults, and road-rage. International border crossings can be safer and faster.

### Providing shelter for emergencies and homeless

Pod can provide private sleeping and storage,

## ENERGY & UTILITIES

### Generates excess renewable energy

The project will generate 605.69 MW in solar and wind capacity to power equivalent of 2,036,114 households.

On-demand loads and 1,890.35 MW of battery storage help power and balance the local grid.

### Batteries and managed loads

#### Integrated utilities

Utility lines are protected inside the podway to improve resiliency and dependability. Supports fiber and 5G towers.

#### Distributed grid

A podway supports a distributed grid that can provide direct DC connections to businesses and homes located near the podway.

#### Fiber and Wireless

A podway project can integrate broadband fiber and wireless (5G) service mounted on the posts and guideway.

#### Sanitation and Water

The podway can distribute water and provide public toilet pods on-demand.







## FREIGHT TRANSPORT

### Tariffs: predictable & low rates

Most tariffs are determined by a formula that assures equitable and predictable rates that are much less than trucks. Majority of fares are capped using a formula based on weight, volume, distance, timing, and other factors.

### Convenient: delivery to dock or door

Freight — including pallets, parcels, liquids, and bulk — is delivered directly to businesses and residences without the use of trucks.

### Fast and high capacity

Total trip time via podway is 5-6 times faster than trucks, and 3-4 times faster than trains. A podway can carry over 21,000 metric tons per hour — similar to the capacity of 1,000 tractor-trailers per hour.

### Integrated and compatible

Pods and podways easily integrate with existing roadways, railways, seaports, airports, loading docks, forklifts, pallets, carts, and warehouses.

### Secure

Pods travel non-stop and are physically inaccessible which reduces theft and improves security. Pods can be tracked and monitored in real-time and provide chain of custody guarantees. Border crossings can be safer and take less time and money.

### Intermodal

Podways can integrate with intermodal facilities. See [Transit X Intermodal Podway](#)

### Environmental controls

Pods can be individually controlled and monitored to maintain required temperature, ventilation, and humidity levels during transport.

### Dependable

Automated pods travel on an exclusive covered guideway — eliminating delays from congestion and weather. Delivery times can be guaranteed to the second.

### Less Damage and Waste

Smooth ride quality is guaranteed and can reduce the amount of packaging. Reduced handling and transfers reduce potential for damage and loss. Podways are fully automated and provide similar safety levels as commercial aircraft — several orders of magnitude safer than roadways.



## CIRCULAR INFRASTRUCTURE

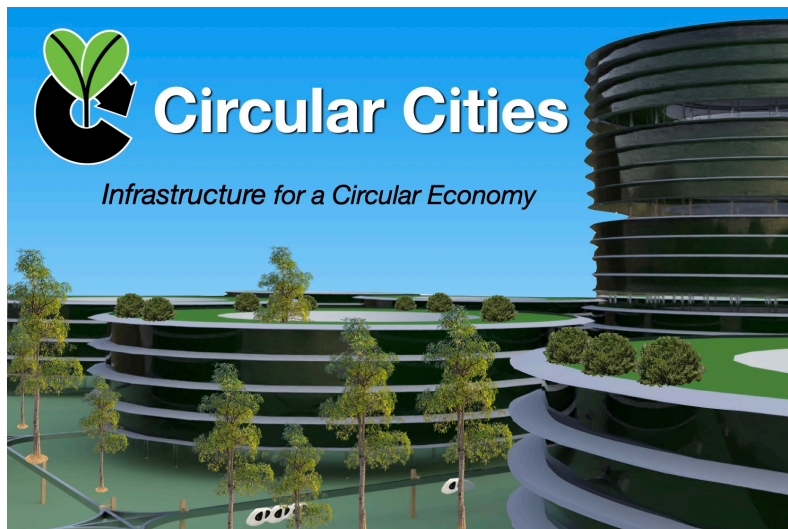
Circular Cities is a model for sustainable infrastructure for any terrain or climate and for new developments or transforming existing cities. Features more than 70% green/open space. Mixed-use developments for living, working, and recreation. A city's infrastructure can be improved with podways including: water, electrical grid, renewable energy, farming, policing, health care, postal service, deliveries, digital identity, telecommunications, waste management, and schools.

See [CircularCities.cc](http://CircularCities.cc)

## HIGH SPEED INTERCITY

High Speed Podways can be built alongside highways for 242 km/h (150 mph) transport of people and goods — without disruption or modifying overpasses.

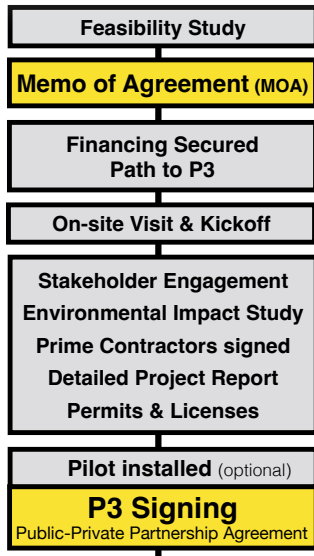
See [High Speed Podway](#)





# Project Timeline

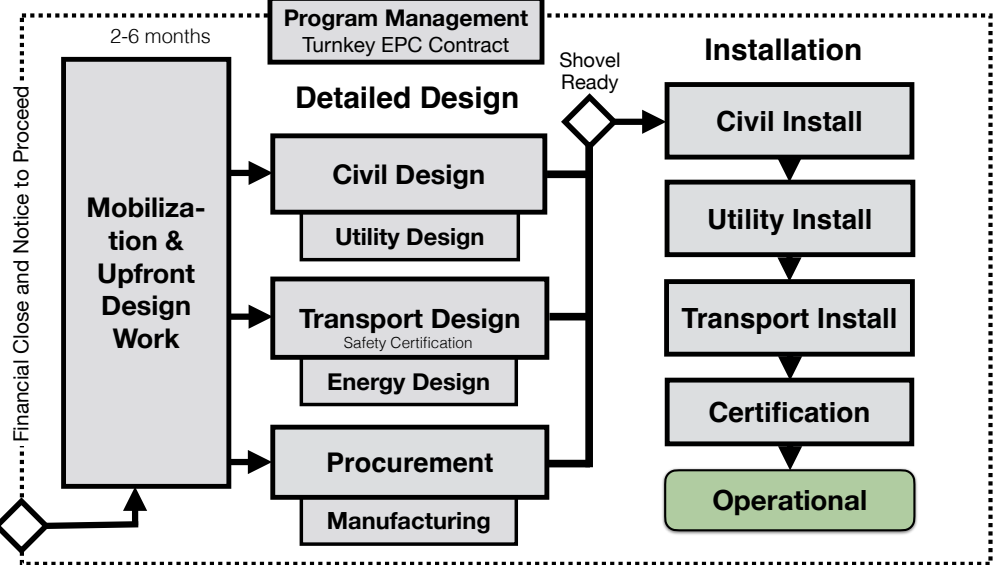
**PRE-IMPLEMENTATION**  
3-9 months



**IMPLEMENTATION / Development**

First phase ready in 12 months. Fully operational in 18 months,

**Phased rollout: Design → Install → Test**



## Financial Viability

The project cost is \$7.5B (\$2.7K per customer, \$2.9M per km) and expected 8,435,934 trips per day (50% of trips) after 4 years. The financials make the project attractive for private investment. An investment document is available upon request.

## Next Steps

To move forward, we need a signed Memorandum of Agreement (MOA). That would start the pre-implementation phase that secured funding and concludes with signing a 20-year Public-Private Partnership (P3). See MOA at: [transitx.com/moa.pdf](http://transitx.com/moa.pdf)

For more information — including presentations, other proposals, and videos — visit [transitx.com/South\\_Africa](http://transitx.com/South_Africa)

A 110+ page feasibility study is available under a non-disclosure agreement by emailing [hello@transitx.com](mailto:hello@transitx.com). The feasibility study answers many questions about the project, the company, the system, and detailed analysis of capacity, parking, road safety, pedestrian safety, accessibility, sustainability, fares, renewable energy & storage, construction, aesthetics, operations, economic development, quality of service, security, station footprint, equitability, carbon footprint, transit integration, resiliency, reliability, rights-of-way, and open space.

We look forward to answering your questions and moving forward on a project.

Sincerely,



Transit X, Project Developer



Safe  
Quiet  
Green  
Walkable

