



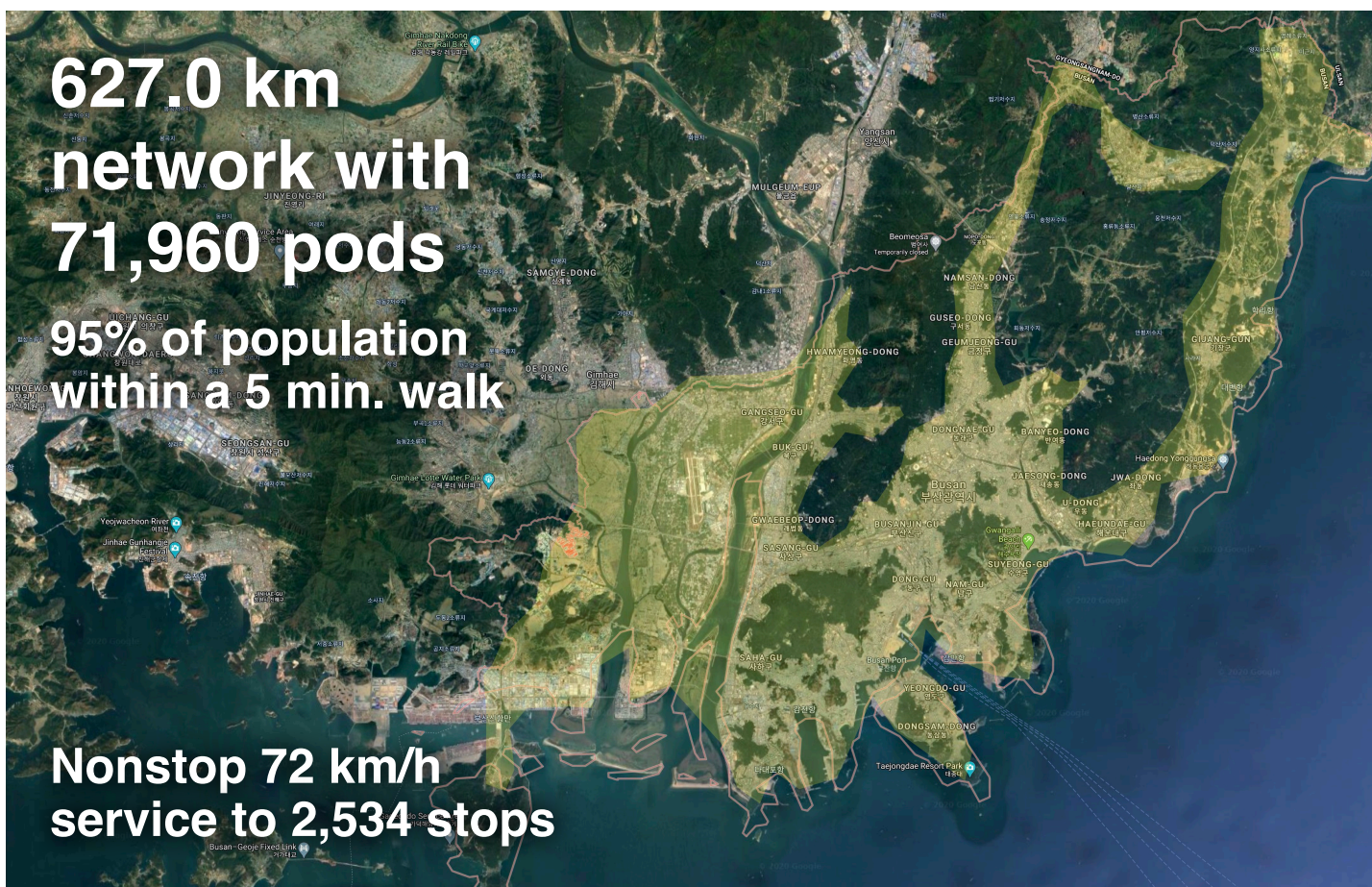
Transit X presents a preliminary proposal for a privately-financed public transit system — a fleet of automated electric vehicles (pods) for passengers and freight on a local and inter-city micro-guideway providing equitable transportation for

Busan, South Korea

This proposal is downloadable at transitx.com/proposals/Transit_X_for_Busan,South_Korea.pdf

**High capacity • High speed • Nonstop • 24/7
Sustainable • Zero Wait • Door-to-door • Resilient**

A companion Transit X Handbook is available at transitx.com/transitxhandbook.pdf



Transit X proposes to finance, build and operate a sustainable micro-guideway to carry passengers and freight for Busan that makes a podway convenient to 95% of the population.

Transit X efficiently services both suburbs and cities and provides for a higher quality of life. See transitx.com for more details. This 3-minute video (transitx.com/video) describes our innovative solution.

Major benefits

- Reduce congestion
- Provide parking relief
- Reduce pollution
- Improve safety

The Transit X Handbook (transitx.com/transitxhandbook.pdf) answers many questions about our service, the company, our technology, and the way we address: congestion, 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.



Congestion, parking, pollution, and safety

Most regions suffer from traffic congestion, limited parking, air pollution, and unsafe roads. Potential solutions are costly, but Transit X can solve these challenges without public funding. The Transit X podway can integrate into the built environment, providing both short term relief and a long term solution.

High Capacity & High Speed

A single guideway carries 12,000 pods per hour (20,000 to 50,000 passengers per hour). Two landing areas fit in a single car space and provide 2,000 boardings per hour. For urban commutes, pods trips are 3 times faster than car trips and the high-speed podway provides faster door-to-door trips than air travel for distances of 1,000 miles or less.

Zero Footprint and Minimal Disruption

Transit X features stops that don't interfere with pedestrians or other forms of transportation. We use space alongside highway and roads and integrate utility lines and poles. Non-stop interchanges fit above existing intersections. Factory-built infrastructure enables fast installation with minimal disruption. Multiple options for long crossings using bridges or underground tunnels. Posts are typically spaced at 23 m (25 yds). Multiple options for pods to traverse any grade or slope.

Low-cost Infrastructure & equitable fares

Transit X projects do not require government funding because revenue from fares, freight, and advertising is much higher than our costs. We have reduced or eliminated many costs of transportation including the cost of materials, land, construction, fuel, debt service, and labor. Our projects are typically financed by impact investors, private wealth funds, commercial banks, sovereign wealth funds, and governments.

Proven technology

Our team and partners have built fully automated systems that are now in operation around the world. Transit X may look unique, but the underlying design is very similar to systems that have been operating for 40 years with an exemplary safety record. The rollout and maiden flight occurred on Oct 29, 2018 in Leominster, Massachusetts. The first project groundbreaking will be in 2020.

Service Quality

Transit X provides on-demand, last-mile service that is superior to cars or buses. An operating agreement will guarantee high levels of availability and reliability. Our use of small vehicles (pods) makes this possible. By reducing car use, podways create walkable and bike-friendly neighborhoods.

Less pollution: Air, Sound, Light, Visual, Water

Transit X podways offer a much higher quality of life by eliminating many forms of pollution. Pods are quiet, efficient and have zero emissions. Pods offer less visual impact than the existing roads and vehicles, and utility lines can be hidden within the guideway. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced. Parking lots and roadways can be converted into green space and community paths as they become unnecessary.

Sustainable and Efficient

Pods weigh only 55 kg (121 lbs) and achieve over 20 times the efficiency of electric cars. Renewable energy and storage installed on our guideways and posts provide 100% of the clean energy needed to power the system.

More Transit & Fewer Cars

Podways provides the convenience and privacy that people value in cars, yet without their negative impacts. Transit X combines the best of mass transit and personal transportation modes which leads to greater use of public transit and fewer cars.

De-risking Projects

Transit X partners with large, established firms to provide fixed-price contracts for the engineering, certification, construction, and operations of a podway. These partnerships enable Transit X to de-risk all of the major elements of the project, and provide performance guarantees. We work with local construction firms.

Jobs and Workforce Development

Many regional jobs will be created to build a new transportation infrastructure, as well as many new types of jobs will be created from economic growth. The majority of the construction jobs will be locally sourced and preferential hiring is given to those displaced by the transition. We welcome labor unions.

Revenue Generator

Projects do not require government funding, and owners of the rights-of-way receive a Toll Share that is 5% of gross revenue for rights-of-way, estimated to be US\$110 million per year at the revenue target.

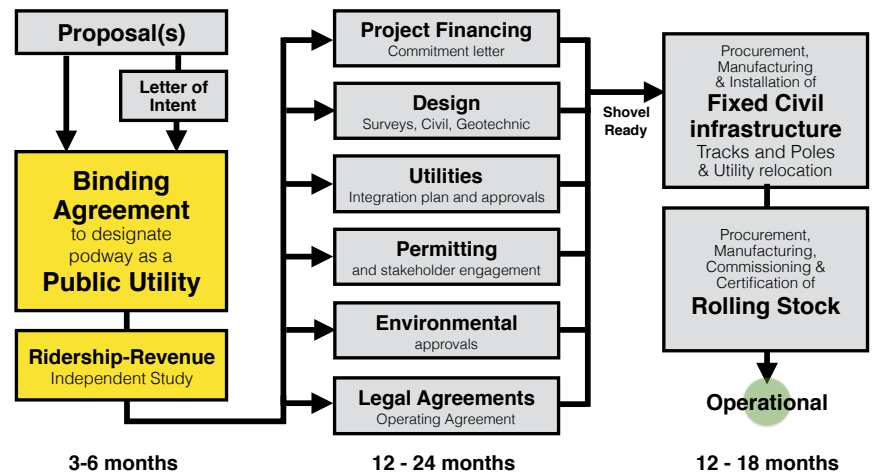
Short and Long Term Solution

A project could be operational within 24 months from the start of a project. Transit X offers a rapidly-deployable solution that provides long term benefits. We would form a local company to build, operate, and maintain the network. At least 75% of the profits are re-invested in the community and region.

Moving Forward

The diagram shows our process for a project. We submit a project proposal, then ask for a commitment for Transit X to build and operate a podway along rights-of-way. Example documents and a sample project schedule can be viewed at:

transitx.com/process



Evaluation

Please review our preliminary proposal, and then ask us any questions. We would be happy to provide further information, address specific concerns, or meet with specific people or groups. Any routes or coverage areas shown on the map are only preliminary suggestions and actual routes would be determined based on needs, rights-of-ways, utility corridors, location of trees, and many other factors.

We expect this proposal to be reviewed by one or more committees or working groups. Familiar transportation options, such as buses, light rail, subways, and ride-sharing services (including autonomous vehicles) may have already been considered. Very few options offer the convenience of cars with at least the capacity of buses, and most, if not all, require public funding and subsidies.

Private cars have a dominant mode share because people like the privacy and convenience of a car — despite the significant risks and negative impact associated with them. People won't give up their cars unless the alternative is both better and cheaper. That is what Transit X can provide.

We hope you agree that this proposal offers a way to address your challenges in both the short and long term, providing an option that is better and lower risk than any alternative — including continuing with the status quo.

We hope you will conclude that moving forward with Transit X is an excellent opportunity to meet your current and future challenges.

We look to a commitment enabling Transit X to build and operate podways along public rights-of-way, similar to other public utilities.

Other Resources

The links below provide general information about Transit X:

- Video presentations: transitx.com/video (2 min) transitx.com/v (5 min)
- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- Company profile (transitx.com/about.pdf)
- Other proposals (transitx.com/w)
- The process and templates for agreements (transitx.com/process)

Addendum

The remaining pages of this proposal provide project-specific details:

- Project Overview and Impact — *pages 6 and 7*
- Toll Share — *pages 8 and 9*
- Fares — *page 10 and 11*
- Jobs Report — *page 12*

We look forward to working with you to improve the quality of life for Busan through better transportation.

Sincerely,



Email: hello@transitx.com

Telephone: +1 508-596-7024 (WhatsApp connected)

Zoom e-room: <https://zoom.us/j/8229009123>

Website: transitx.com

Twitter: <http://twitter.com/TransitXCorp>

Mail: 1127 Commonwealth Ave #30, Boston, MA 02134 USA



Green &
Walkable



| | | | |
|----|---|------------------------|--|
| 1 | Podway network length | 627.0 | km |
| 2 | People (resident-equivalent) in region | 3,411,829 | resident-equivalent population |
| 3 | Route density ratio (route length to service area) | 1.16 | |
| 4 | Number of stops | 2,534 | |
| 5 | Triple-speed route length | 0 | km |
| 6 | Water crossing route length | 0 | km |
| 7 | Cost of fixed infrastructure | \$2,274,129,000 | |
| 8 | ...per resident | \$667 | |
| 9 | Target podway mode share | 81% | |
| 10 | Distance traveled by passengers on podway, per year | 24,795,467,258 | km |
| 11 | ...per day | 67,932,787 | km |
| 12 | Daily potential energy generation on podway | 7,223.0 | MWh |
| 13 | Sustainable energy use per day | 307.0 | MWh |
| 14 | Energy storage capital cost for 1 day(s) of supply at \$200 per kWh | \$61,405,992 | |
| 15 | Nominal power of solar installation to meet self-demand | 71,380 | kW |
| 16 | Cost to generate sustainable energy (at \$1,000 per kW) | \$71,379,576 | |
| 17 | Cost to buy sustainable energy at \$0.08 per kWh | \$24,562 | per day |
| 18 | Daily podway passengers | 2,755,052 | customers 81% of the pop. |
| 19 | Distance per passenger per day | 25 | km |
| 20 | Average distance per trip (assuming 3 trips per day) | 8 | km |
| 21 | Single passenger fare for shared 8 km trip | \$0.66 | 0.80 KRW |
| 22 | Revenue from Base Fare | \$0.09 | /vehicle-km |
| 23 | Revenue from Market Fare | \$0.09 | /vehicle-km |
| 24 | Total Fare Revenue | \$0.18 | /vehicle-km |
| 25 | Passenger distance traveled during peak hour | 13,586,557 | km |
| 26 | Boarding capacity | 912,240 | passengers per hour (33% of customers) |
| 27 | Number of pods for peak demand | 71,960 | pods at 81% mode share |
| 29 | Percentage of peak demand to break even | 13% | |
| 28 | Number of customers per pod | 38.3 | and 47 residents per pod |
| 29 | Distance per pod per year | 168,192 | km |
| 30 | Operating costs (including Toll Share) | \$0.05 | /vehicle-km |
| 30 | Pod garage area (12% of route with side-parking) | 79,156 | m ² 0.1% of car parking |
| 31 | Cost of pods | \$467,740,000 | is \$105 per resident |
| 32 | Capital cost of energy generation and storage | \$172,621,239 | is \$51 per resident |

33 Project Finances

| | | | |
|----|--|-----------------|-------------------|
| 34 | Total Project Cost | \$2,914,490,239 | 3,544,020,130 KRW |
| 35 | Project cost per km | \$4,648,310 | per km |
| 36 | Project costs — per resident | \$854 | 1,039 KRW |
| 37 | Net Revenue | \$2,191,671,806 | |
| 38 | Toll Share | \$109,583,590 | |
| 39 | Operating Expenses | \$438,334,361 | |
| 40 | Interest | \$102,007,158 | |
| 41 | Taxes | \$154,174,670 | |
| 42 | Net Operating Income (NOI) | \$1,387,572,027 | |
| 43 | Cap Rate (NOI / Project Cost) | 0.48 | |
| 44 | Number of motor vehicles displaced | 2,479,547 | motor vehicles |
| 45 | Yearly cost of cars displaced — per resident | \$6,541 | 7,954 KRW |



Impact of proposed network

Project Overview p. 2

| | | |
|----|---|--|
| 1 | Reduction in GHG emissions (metric tons CO ₂ -eq) | 2,448,552 MTCO ₂ -eq annually |
| 2 | Estimated cost to maintain public roadways | \$217,800,000 annually |
| 3 | Reduced waste products | 397,347 metric tons annually |
| 4 | Travel time saved (non-stop travel and congestion) | 437 hrs/person annually |
| 5 | Cost savings from reduced car ownership | \$4,112 per person annually |
| 6 | Increase in household income (from time savings and car costs) | 30% |
| 7 | Reported injuries avoided | 15,373 annually |
| 8 | Lives saved (from safety) | 154 annually |
| 9 | Land freed from parking (14,092 acres) | 57,029,575 m ² |
| 12 | Temperature reduction (from heat island effect & GHG reductions) | 0.5 to 2 °C |
| 11 | Health care savings (from pollution, injuries) | High |

Inputs and Assumptions

| | | | |
|----|--|-----------------------------|---------------|
| 15 | Ratio of road length to guideway length | 4 | |
| 16 | Walking speed | 4.9 km/h | |
| 17 | Width of convenient swath along podway | 0.82 km | |
| 18 | Fixed cost per km (track & posts) | \$2,790,000 | 3,392,640 KRW |
| 19 | Water crossing: additional cost per km | \$8,370,000 | |
| 20 | Triple-speed: additional cost per km | \$5,580,000 | |
| 21 | Rate factor for water crossings or high-speed links. | 2.2 | |
| 22 | Average distance traveled per person per year in a developed county for trips under 1600 km) | 10,000 km | |
| 23 | Average distance per day per person | 27 km | |
| 24 | Mode share % of people convenient to a podway | 85% at 5 min walk. | |
| 25 | Percentage of daily demand during peak hour | 20% | |
| 26 | Maximum capacity per guideway | 35,401 pph | |
| 27 | Average dwell time during peak hour | 10 seconds | |
| 28 | % of pods traveling on route with highest demand | 18% | |
| 29 | Average speed of pod | 72 km/h | 45 mph |
| 30 | Average # of trips for a daily customer | 3 per day | |
| 31 | Average passengers per pod during peak hours | 3.3 passengers | |
| 32 | Average passengers per pod | 2.0 passengers | |
| 32 | Average discount per passenger | 24% | |
| 33 | Maximum passengers per pod | 5 passengers | |
| 34 | Empty pods: Percentage non-revenue | 25% | |
| 35 | Ex-Factory cost per pod | \$5,000 | 6,080 KRW |
| 36 | Worldwide Median Income per Household (US\$) | \$10,000 | 12,160 KRW |
| 37 | Average number of residents per household | 2.3 people/house | KRW |
| 38 | Base fare per km | \$0.16 | KRW |
| 39 | (per mile) | \$0.26 | KRW |
| 40 | Market rate revenue factor | 2.1 | KRW |
| 40 | Percentage of revenue from passenger fares | 60% | KRW |
| 41 | O&M as % of revenue | 20% | |
| 41 | Percentage debt financed | 70% debt | |
| 42 | Interest rate for debt | 5.0% interest | |
| 43 | kg CO ₂ emissions per liter of gasoline | 2.37 kg/liter | |
| 44 | Monetary value of 1 hour personal time (USD) | \$5.47 | KRW |
| 45 | Est. roadway maintenance per year per km | \$100,000 | 121,600 KRW |
| 46 | Area of one parking lot space | 23 m ² | |
| 47 | Commercial income of land (annual) | \$0.44 per m ² | KRW |
| 48 | Distance from roadway that is convenient | 0.25 km | |
| 49 | Stops per km | 4 stops/km | |
| 50 | Boarding capacity per stop | 360 pph | |
| 51 | Solar panel area per meter of podway | 3 m ² | |
| 52 | Cost to buy sustainable energy | \$0.08 per kWh | |
| 57 | Cost of sustainable energy storage | \$200 per kWh | |
| 54 | Capital cost to generate sustainable energy | \$1,000 per kW | |
| 53 | Global Horizontal Irradiance (GHI) | 3.8 kWh/m ² /day | |
| 55 | Storage per column | 40 kWh | |
| 56 | Typical span | 23 m | cols/km: 44 |
| 58 | Energy storage capacity | 1 days | |
| 59 | Area of parked pod | 2.20 m ² | |
| 60 | Distance discount at max distance | 40% | |
| 61 | Max distance discount | 500 km | |
| 62 | Max usage discount at 10,000 km per capita | 50% | |
| 63 | Shared Pod Discount | 20% | |
| 64 | Shared Pod Compartment Discount | 40% | |
| 65 | Price on Carbon | \$40 /tCO ₂ e | |
| 66 | Toll Share (% of revenue for use of rights-of-way) | 5% | |

| | | |
|----|---|--------------------|
| 1 | Name of region or project | Busan, South Korea |
| 2 | Currency name | KRW |
| 3 | Equal to US\$1 | 1.216 |
| 4 | Energy in CAPEX or OPEX | CAPEX |
| 5 | Land area of region (sq. km) | 770 |
| 6 | Number of residents in region | 3,411,829 |
| 7 | % travel within region | 90% |
| 8 | % of land area served by roads | 70% |
| 9 | Coverage: % of pop. convenient (5 min walk) to a podway | 95% |
| 10 | Annual median household income (US\$) | \$21,882 |
| 11 | Convenient walk time to stop (min) | 5 |
| 12 | Triple-speed route length (km) | 0 |
| 13 | Water crossing route length (km) | 0.0 |
| 14 | Visitors per year | 0 |
| 15 | Average length of visit (days) | 2 |
| 16 | Solar production ratio | 1.57 |
| 17 | Regional Fare Factor | 1.0 |
| 18 | Price adjust (EPC costs & contingency) | 30% |
| 19 | Triple-speed (km/h) | 242 |
| 20 | Daily Passengers Adjustment | 100% |
| 21 | Number of Stops Adjustment | 100% |
| 22 | Mode Share Adjustment | 100% |
| 23 | Corporate Tax Rate | 10% |
| 24 | Interest Rate on Debt | 5.0% |

| | | Pod | Car |
|----|--|---------|-----------|
| 25 | Service life (years) | 20 | 12 |
| 26 | Full cost of vehicle per year | \$200 | \$9,000 |
| 27 | Public cost to maintain infrastructure per year per km | \$0 | \$100,000 |
| 28 | Energy consumption (MPGe) | 3564 | 24 |
| 29 | Energy consumption (liters/100km) | 0.07 | 9.8 |
| 30 | Energy consumption (Watt-hours/km) | 9 | 1375 |
| 31 | mass of CO ₂ per vehicle per km (kg) | 0 | 0.09875 |
| 32 | Vehicle mass (kg) | 45 | 1950 |
| 33 | Average speed of urban travel (km/h) | 72 | 16 |
| 34 | Typical travel time (in minutes) for 8 km trip | 7 | 31 |
| 35 | Fare/cost per km | \$0.16 | \$0.62 |
| 36 | Number of deaths per 100M passenger-km | 0.00001 | 0.62 |
| 37 | Number of injuries per 100M passenger-km | 0.0006 | 62 |
| 38 | Volume to park (cubic meters) | 5.7 | 70.9 |



Toll Share for Rights-of-Way

Rights-of-Way owners' Toll Share is 5% of gross revenue
with a minimum payment based on the Footprint and the Transit X Commercial Rate (TXCR).

7 **Toll Share Payment** (inclusive of all fees and taxes)

| | | | |
|----|---|-------------------------------|-------------------|
| 8 | Estimated Annual Payment at target revenue | \$109,583,590 annually | \$32 per resident |
| 9 | with a minimum of | \$512,347 annually | 623,014 KRW |
| 10 | | | 0 KRW |

11 **Other financial benefits to Owners of Rights-of-way and/or Local Government:**

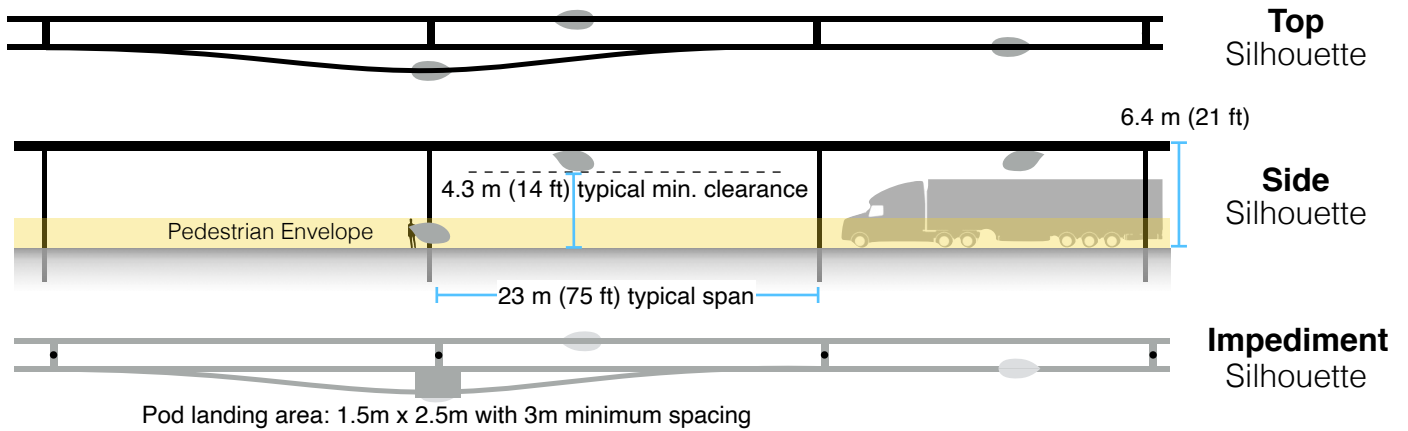
- 12 Less road maintenance from lower VMT
- 13 Public land made available from less parking and lanes
- 14 Reduced emergency and police services for road-related incidents
- 15 Less investment needed in road-based infrastructure (charging stations, signals, BRT, etc)

1 **Minimum payment calculations**

| | | | |
|---|---|---------------------------------------|----------------|
| 2 | Total commercial land (estimated) | 53,900,000 m ² | acres |
| 3 | Total commercial gov't revenue (US\$) | \$23,588,796 | 28,683,976 KRW |
| 4 | TXCR (Transit X Commercial Rate) | \$0.44 per m ² (estimated) | 0.5 KRW |

5 *TXCR is the yearly tax rate per land area. Calculation: total land area of commercial properties in the governmental region, divided by all the governmental income generated by those properties. The TXCR is used to calculate the minimum tax/fee.*

Toll Share Minimum Calculation



| 1 | Footprint Calculations | Metric | Imperial |
|----|-------------------------------------|-----------------------------------|----------|
| 2 | Guideway width | 0.35 m | |
| 3 | Guideway height | 0.65 m | |
| 4 | Post diameter | 0.4 m | |
| 5 | Post cross section | 0.13 m ² | |
| 6 | Stop landing area | 3.75 m ² | |
| 7 | ...width | 1.5 m | |
| 8 | ...length | 2.5 m | |
| 9 | Ramp length | 21 m | |
| 10 | Typical Span | 23 m | |
| 11 | Number of posts per unit length | 43.5 poles per km | |
| 12 | Post height | 6 m | |
| 13 | | | |
| 14 | Single guideway | 1172.2 m ² | |
| 15 | ...Area of Side Silhouette | 754.3 m ² | |
| 16 | ...Area of Top Silhouette | 363.2 m ² | |
| 17 | ...Impediment Area (adjusted) | 54.6 m ² | |
| 18 | | | |
| 19 | Dual guideway | 1522.2 m ² | |
| 20 | ...Area of Side Silhouette | 754.3 m ² | |
| 21 | ...Area of Top Silhouette | 713.2 m ² | |
| 22 | ...Impediment Area (adjusted) | 54.6 m ² | |
| 23 | | | |
| 24 | Stop | 86.3 m ² | |
| 25 | ...Area of Side Silhouette | 27.3 m ² | |
| 26 | ...Area of Top Silhouette | 21.5 m ² | |
| 27 | ...Impediment Area (adjusted) | 37.5 m ² | |
| 28 | | | |
| 29 | Stops with dedicated landing areas | 4.0 stops per km | |
| 30 | % of dual guideway | 100% | |
| 31 | | | |
| 32 | Average area per unit length | 1,867 m ² per route-km | |
| 33 | | | |
| 34 | Impediment Factor | 10 | |



Fair Fare Formula

| | |
|---------|--|
| Summary | <p>Faster travel saves a household 295 hours per year.* At 0.10KRW per km, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.*</p> |
|---------|--|

| All prices in KRW | | Trip Length | | |
|-------------------------------|-------------------|---|---|--|
| | | 2 km | 10 km | 40 km |
| Transit X | | 0.20 to 0.33 2 min., 3.6x faster | 0.97 to 1.62 8 min., 3.6x faster | 3.71 to 6.31 33 min., 3.4x faster |
| Public transit average | | 1.09 | 1.74 | 2.55 |
| Common public modes | Taxi | 1.52 2 to 6 minutes | 6.61 8 to 30 minutes | 25.69 30 to 120 minutes |
| | Uber/Lyft | 1.15 2 to 6 minutes | 4.76 8 to 30 minutes | 18.26 30 to 120 minutes |
| | Public Bus | 0.88 3 to 12 minutes | 0.88 15 to 60 minutes | 1.35 60 to 240 minutes |
| | Train | 1.32 2 to 12 minutes | 1.56 8 to 60 minutes | 2.44 30 to 240 minutes |
| Personal car | | 1.27 2 to 6 minutes | 3.98 8 to 30 minutes | 14.15 30 to 120 minutes |

| Travel mode | Avg. Speed km/h | Low Speed km/h | High speed km/h | Cost | | | Min Dist km | Max Dist. km | Time cost per min | Mode share Distance (km) | | |
|--------------|--------------------|-------------------|--------------------|------|-------------|-------------|----------------|-----------------|----------------------|-----------------------------|-----------|-----------|
| | | | | Base | Includes km | Over per-km | | | | 6% 2 | 70% 10 | 24% 40 |
| Taxi | 30 | 20 | 80 | 0.88 | 1 | 0.44 | 0.5 | 100 | 0.39 | 5% | 4% | 1% |
| Uber/Lyft | 30 | 20 | 80 | 0.70 | 1 | 0.35 | 0.5 | 100 | 0.20 | 10% | 10% | 2% |
| Public Bus | 15 | 10 | 40 | 0.88 | 20 | 0.02 | 0.5 | 50 | 0 | 50% | 50% | 40% |
| Train | 30 | 10 | 80 | 1.32 | 2 | 0.03 | 2 | 100 | 0 | 35% | 36% | 57% |
| Transit X | 72 | 72 | 72 | 0 | 0 | 0.10 | 0.1 | 50 | 0 | - | - | - |
| Personal car | 30 | 20 | 80 | 0.59 | 0 | 0.29 | 0.1 | 400 | 0.09 | - | - | - |

* All numbers on mode shares, speeds, and costs are estimates based on global averages.

Base fares are set for first 3 years, then adjusted by formula. A 20% discount on a shared pod and a 40% discount on a shared compartment. Trips are discounted proportional to their length reaching a maximum of a 40% discount on a 500 km trip. No congestion-based pricing. Fares are proportional to the median income of the area and inversely proportional to per capita use, so the more use of Transit X, the lower the base fare up to a 50% discount. The amount of market-rate fares must be less than the amount of discounted fares. Transit X Fair Fare Formula and Fair Freight Formula is universal and applies to all regions and all times. Market rate fares must account for less than half of all fares.

Fair Fare Formula

Fare rates are updated annually using this formula

| | Name | Value | Units | Description of the value or model input | |
|----|--------------------------------|------------------|--------|---|--------|
| 1 | GlobalIncome | 10,000 | USD | Global median household income. Updated annually based on most recent standard published data. | |
| 2 | AllTravel | 20,000 | km | Travel distance per household per year on any mode for trips under 1600 km. A global constant | |
| 3 | PercentIncomeForTransport | 25% | | % of median household income for all transportation under 1600 km trips. A global constant. | |
| 4 | GlobalRate | 0.13 | USD/km | Global minimum rate: GlobalIncome * PercentIncomeForTransport / AllTravel | |
| 5 | IncomeFirst | <u>\$21,882</u> | USD | Median household income at first stop (per person per day). External input. Based on reliable public data source updated annually. Maximum is 8 times GlobalIncome | |
| 6 | IncomeDest | <u>\$32,823</u> | USD | Median household income at destination per trip. External input. Based on reliable public data updated annually. Maximum is 8 times GlobalIncome | |
| 7 | RegionalRate | 0.27 | USD/km | Regional rate based on median income: MedianIncomeFirst * PercentIncomeForTransport / AllTravel | |
| 8 | UnderIncomeRate | 0.00 | USD/km | Under global income adjustment: if (RegionalRate < GlobalRate, GlobalRate - RegionalRate, 0) | |
| 9 | NominalRate | 0.27 | USD/km | Nominal rate: RegionalRate + UnderIncomeRate | |
| 10 | RegionalFactor | <u>1.00</u> | | Regional Fare Factor. Negotiated upfront to make network financially viable. | |
| 11 | AdjustedRate | 0.27 | USD/km | Regional adjusted rate: NominalRate * RegionalFactor | |
| 12 | Population | <u>3,411,829</u> | | Population in region. Updated annually based on trusted public data source. | |
| 13 | UsageMaxDiscount | 50% | | Fare Discount when Transit X travel per household equals AllTravel. Global constant. | |
| 14 | ModeShare | <u>81%</u> | | Percent of Total Travel Per Capita on Transit X podways. Based on target mode share for first 3 years, then adjusted based on actual travel. PassengerTravel / (Population x AllTravel) | In KRW |
| 15 | BaseRate | 0.16 | USD/km | Base rate for single-passenger pod (without discounts) (1 - UsageMaxDiscount x min(1,ModeShare)) x AdjustedRate | 0.20 |
| 16 | SpecialRateFactor | 2.20 | | Rate factor for water crossings or high-speed links. Global constant. | |
| 17 | SpecialBaseRate | 0.36 | USD/km | Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor | 0.44 |
| 18 | DistanceDiscount | 40% | | Distance discount at max distance. Global constant. | |
| 19 | MaxDistanceDiscount | 500 | km | Max distance discount. Global constant. | |
| 20 | DistanceDiscountPerKm | 0.000130 | USD/km | Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount | |
| 21 | SeniorDiscount | <u>20%</u> | | Senior discount set according to local regulations | |
| 22 | StudentDiscount | <u>20%</u> | | Student discount set according to local regulations | |
| 23 | DisabilityDiscount | <u>20%</u> | | Disability discount set according to local regulations | |
| 24 | DiscountBaseRate | 0.13 | USD/km | Discounted base rate: BaseRate x (1 - SeniorDiscount) | 0.16 |
| 25 | SharedPodDiscount | 20% | | Discount for requesting a shared pod. 15% minimum and 30% maximum. | |
| 26 | SharedPodRate | 0.13 | USD/km | Rate for a shared pod: BaseRate x (1 - SharedPodDiscount) | 0.16 |
| 27 | SharedCompartmentDiscount | 40% | | Discount for requesting a shared compartment. 25% minimum and 40% maximum. At least 10 percentage points higher than SharedPodDiscount. | |
| 28 | SharedCompartmentRate | 0.10 | USD/km | Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount) | 0.12 |
| 29 | SingleOccupancyMaxDistance | 0.11 | USD/km | Rate for 500 km in single-passenger pod. | |
| 30 | Senior + SharedCompartmentRate | 0.05 | USD/km | Rate for a Senior taking a 500 km trip in a shared compartment. BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount) | |
| 31 | 50PctIncomeAtDest | 25% | | % Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2 | |
| 32 | DistanceBase | - | km | Passenger distance under base fare. | |
| 33 | PercentBase | <u>74%</u> | | Percent of passenger distance under base fare. Audited value from operational data. DistanceBase / PassengerTravel | |
| 34 | AverageDiscount | 24% | | Average fare discount from Base Rate. Audited value from operational data. 1 - (BaseRevenue / (DistanceDase x BaseRate)) | |
| 35 | MarketFactor | 1.0 | | Market rate factor. Negotiated value for setting ratio of AverageDiscount | |
| 36 | MarketRateCap | 24% | | Cap on passenger travel distance at market rate: AverageDiscount x MarketFactor | |

Jobs Report*

This project would create 32,000 new jobs in manufacturing, construction, and operations. About 40,900 existing transportation jobs would be impacted — of which 6,600 workers would need significant retraining. Improving the transportation infrastructure will boost the economy overall and lead to 98,200 new jobs. Lowering the cost of transportation and reducing travel times raises household income by 30%.

| | | | |
|----|---|---------------|--------------|
| 1 | Annual median household income (US\$) | \$21,882 | |
| 2 | CAPEX | | |
| 3 | Average gross CAPEX salary (% of median HH) | 125% | |
| 4 | Average gross CAPEX salary | \$27,353 | |
| 5 | % of CAPEX as salary | 15% | |
| 6 | Years of CAPEX | 2 | |
| 7 | # of CAPEX jobs | 7,990 | |
| 8 | % of jobs that are manufacturing vs. construction | 75% | |
| 9 | Manufacturing jobs | 5,990 | |
| 10 | Construction jobs | 2,000 | |
| 11 | Supply chain jobs factor | 3 | |
| 12 | Jobs in supply chain | 23,970 | |
| 13 | Average gross OPEX salary (% of median HH) | 115% | |
| 14 | Average gross OPEX salary | \$25,164 | |
| 15 | % of OPEX as salary | 30% | |
| 16 | Operations and Maintenance jobs | 5,230 | |
| 17 | Secondary-effect jobs factor | 7% | |
| 18 | Secondary effect jobs | 98,230 | |
| 19 | <u>Job transitioning and training</u> | | |
| 20 | Expected mode share at 10 years (from page 6, line 9) | 81% | |
| 21 | % of population with a full-time job | 60% | 2,047,097 |
| 22 | ...jobs in transportation | 10% | 204,710 |
| 23 | ...jobs impacted with this proposed network | 20% | 40,942 |
| 24 | ...jobs requiring significant retraining | 20% | 8,188 |
| 25 | Jobs needing retraining with this proposed network (over 10 years) | 0.3% | 6,610 |
| 26 | Training cost per person as % of salary (from line 13) | 100% | \$25,164 |
| 27 | Number of years that training is divided across | 10 | |
| 28 | Ratio (as %) of training costs vs. gov't revenue from Transit X project | 15% | \$16,633,602 |

* Numbers are approximations based on a universal model. A regional study could analyze data based on local conditions.