



Transit X, LLC presents a preliminary proposal for

# Taipei–Keelung metro area, Taiwan

For a privately-funded shared mobility service that is

# High capacity · High speed · 24/7 · Nonstop Solar powered · Last mile · Wait-free · Resilient

26-page companion Transit X Handbook is available at transitx.com/transitxhandbook.pdf

# 2,166 km network

90% of population within a 5 min. walk

High-speed nonstop service to 4380+ stops



# Transit X proposes to build and operate a privately-financed automated pod network in Taipei–Keelung metro area, Taiwan that makes the Transit X service convenient to 90% 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 (<u>transitx.com/</u> <u>transitxhandbook.pdf</u>) answers many questions about our service, the company, our technology, and the way we address:



congestion, parking, road safety, pedestrian safety, ADA compliance, sustainability, fares, solar+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. Transit X can integrate into the built environment, providing both short term relief and a long term solution.

# No public funding

Transit X does not require public funding because our business model appeals to investment banks and private equity firms that provide our project financing. Most of our infrastructure is factory-built, so that installation is fast and not disruptive. We have reduced or eliminated many costs of transportation infrastructure including materials, land, construction, fuel, debt service, and driver costs. Our approach to significantly reducing costs makes private financing possible.

# **Proven technology**

Our team and partners have built fully automated transit systems that are now in operation — Morgantown, WV, BART, and several others in Europe. 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. An in-depth (1000+ hours) technical assessment and feasibility analysis has been completed by

Altran. Altran is a global engineering firm with extensive expertise in automated transit systems. The first pilots of Transit X will be deployed by the end of 2018.

Before any groundbreaking, the system will be safety-certified and fully insured.

# **Quality Service**

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

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

Transit X offers a much higher quality of life by eliminating many forms of pollution. Pods are quiet and have no emissions. Pods offer less visual impact than the existing roads and vehicles, and utility lines can be hidden within the track. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced.

# Sustainable

Transit X runs on 100% sustainable energy and has a zero carbon footprint. The energy generated from solar panels on the track and stored within the poles is sufficient in most cases, but sustainable power contracts would provide backup power. Transit X makes it possible to reduce the amount of impervious surfaces and increase green space by reducing the need for parking and roads.

### More transit & less cars

Transit X provides the convenience and privacy that people value in cars, yet without the negative impacts from personal car use. Transit X combines the best of mass transit and personal transportation modes which will lead to higher use of mass transit and less use of personal vehicles.

### **De-risking projects**

Transit X is working with large, established firms to provide fixed-price contracts for the engineering, certification, construction, and operations of a Transit X system. Theses partnerships enable Transit X to de-risk all of the major elements of the project, and provide performance guarantees.

We will work with regional urban planning and construction firms who are familiar with local codes and requirements.

### Jobs and workforce development

Many jobs are created to build a new transportation infrastructure and transition away from roads. Municipalities that first embrace Transit X will be offered the opportunity to have Transit X manufacturing and assembly jobs in their area. The vast majority of the construction jobs will be locally sourced. Preferential hiring would be given to those workers potentially displaced by the transition to automated vehicles.

### **Revenue** generator

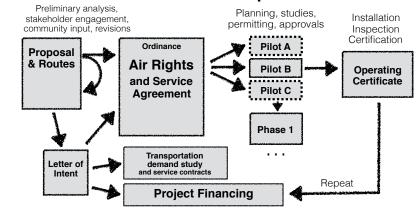
Not only does Transit X not require public financing, but the local municipality receives 5% of gross revenue. For specifics, please see the "Taxes and Fees" section of this proposal.

### Short and long term

A project could be operational within 24 months from the start of a project. Transit X offers a short term 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 would be invested back into the region.

# Moving forward

**Process for municipalities** The diagram shows our general process for working with a municipality. We would refine a proposal to meet your Proposal & Routes needs, then ask for a letter stating that you would like to move forward with a proposal that includes air rights and and a service agreement. Example documents and a sample etter of project schedule can be Intent 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.

Whatever process you use to evaluate this proposal, Transit X is open to working with you on refining this proposal to meet your needs. We hope you will conclude that moving forward with Transit X is an excellent opportunity to meet your current and future challenges.

Once we agree on how to move forward, we would ask for a letter (example at <u>transitx.com/process/loi.html</u>) stating that you intend to pass an ordinance for use of air rights along with a service agreement.

The buildout of the network would be rolled out in phases, where a first phase could be a 15 to 30 km pilot.

### **Other Resources**

The resources below provide more general information:

- Transit X Handbook (<u>transitx.com/transitxhandbook.pdf</u>)
- Video overview (transitx.com/video)
- Letters of Project Financing, Due Diligence, Contracts (transitx.com/letters.pdf)
- Sample Ordinance (transitx.com/process/ordinance.html)
- · Service Agreement (transitx.com/process/service\_agreement.html)
- General Q & A (transitx.com/QandA.html)

# Addendum

The remaining pages of this proposal provide more details specific to this project:

- · Financial Project Summary with Pro Forma, pages 6-7
- · Project Overview, Impact, and Assumptions, pages 8-9
- Taxes and Fees with Footprint, pages 10-11
- Fair Fare Policy, page 12

We look forward to working with you to improve the quality of life in Taipei– Keelung metro area through better transportation.

Sincerely,

Tanks

Mike Stanley CEO, Transit X

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# **Project Summary**



Project Description	Solar-powered automated transportation network infrastructure
Project type	Project financing of Green Infrastructure
Project cost	\$6.79 billion
Projected IRR	86%
Cap rate	166%
Structure	Equity and Debt
Debt term	10 years @ 5%
Equity terms	<ol> <li>15 years with 15% Target IRR</li> <li>With a waterfall profit distribution of:</li> <li>1. 90/10 split until Return of Capital,</li> <li>2. then 50/50 until Target IRR met</li> <li>3. then 10/90</li> </ol>
Benefits to society and environment	Extremely high

# Financials

(US Dollars in millions)	Year 1	Total Years 1-10
Gross Revenues*	12,232	205,319
Operating Expenses	951	13,322
Debt service	\$616	\$6156
Net Operating Income	\$10,665	\$185,841

### ESG (Environmental, Social, Governance) Benefits

Clean energy	yes	Resiliency	yes
Energy security	yes	Sustainable	yes
Emissions-free	yes	Equitable	yes
GHG-free	yes	Recyclable mat.	yes
Lowers pollution	yes	Affordable housing	yes
Clean water	yes	Improved Health	yes
Improved Safety	yes	Economic Devel.	yes
Fix Infrastructure	yes	Food security	yes



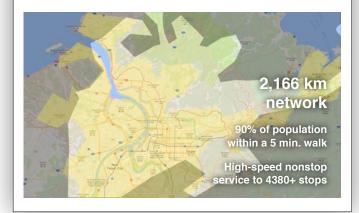


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#### About Transit X

Transit X designs, builds, and operates solar-electric shared mobility infrastructure to supplant buses, trains, cars, and trucks. Transit X offers its service to municipalities and commercial developers. A demonstration system will be ready in early 2018, and pilots will begin by 2019. Transit X is a privately held company founded in 2015, based in Boston, Mass, and intends to be certified as a public benefit company.

#### Status

	Now	Prior to close
Project financing	Letter of Interest	Yes
Proven concept	Yes	Yes
Demonstration system	In development	Yes
Ridership study		Yes
Environmental study		Yes
Air rights	Letter of Intent	Ordinance
Permits	Known process	Yes
Safety certification	Guar. fixed price	Yes
Construction (BOP):	Letter of intent	Guar. fixed price
<b>Operations &amp; Maint:</b>	Letter of intent	Guar. fixed price
<b>Project Engineering</b>	TBD	25% design

General information available at <u>transitx.com</u>. Detailed information and references can be provided under appropriate nondisclosure/non-compete/non-circumvent agreements. Contact: Mike Stanley, CEO, Transit X, <u>mike@transitx.com</u>, 508-596-7024

# 15 year Pro Forma



# **Model Inputs and Assumptions**

Travel per year per pod (km)	210,240
Revenue per vehicle-km (US\$)	0.50
Cost per pod	\$5,000
OPEX as % of project cost	5%
OPEX as % of revenue	5%
Debt Interest rate	5%
Debt term (yrs)	10
Equity term (yrs)	15
Years to return equity capital	<u>5</u>
Profit share when below capital return	<u>90%</u>
Profit share when below Target IRR	<u>50%</u>
Profit share when above Target IRR	10%

Route length (km)	2,166
Starting Pods	116,944
Projected revenue growth	<u>15%</u>
Revenues to include passenger fares developer fees, private leasing, private branch muni contracts, carbon credits, conduit leasing para-transit, private shuttles	h & stops, subsidies, g, 3rd party services,
Project Cost	\$6,791,175,085
% Debt financed	<u>70%</u>
Debt	\$4,753,822,559
Debt Equity	\$4,753,822,559 \$2,037,352,525
2000	
Equity	\$2,037,352,525
Equity Capital return per year	\$2,037,352,525 \$407,470,505

# **Pro Forma**

Years	: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Revenue	0	12,231,696,062	14,066,450,471	16,176,418,042	18,602,880,748	21,393,312,860	24,602,309,789	28,292,656,257	32,536,554,696	37,417,037,900	43,029,593,585	49,484,032,623	56,906,637,517	65,442,633,144	75,259,028,116
OPEX	0	951,143,557	1,042,881,278	1,148,379,656	1,269,702,792	1,409,224,397	1,569,674,244	1,754,191,567	1,966,386,489	2,210,410,649	2,491,038,434	2,813,760,385	3,184,890,630	3,611,690,411	4,102,510,160
Debt service	0	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	\$615,641,770	0	0	0	0
Free cash flow	0	10,664,910,734	12,407,927,423	14,412,396,615	16,717,536,186	19,368,446,693	22,416,993,775	25,922,822,920	29,954,526,437	34,590,985,481	39,922,913,382	46,670,272,238	53,721,746,887	61,830,942,733	71,156,517,956
Waterfall distribution															
1. Capital return	0	\$407,470,505	\$407,470,505	\$407,470,505	\$407,470,505	\$407,470,505	0	0	0	0	0	0	0	0	0
2. Expected return	0	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879	\$305,602,879
3. Over Exp return	0	9,951,837,351	11,694,854,039	13,699,323,231	16,004,462,802	18,655,373,309	22,111,390,897	25,617,220,041	29,648,923,558	34,285,382,602	39,617,310,503	46,364,669,359	53,416,144,008	61,525,339,854	70,850,915,077
Investor share	0	1,514,708,629	1,689,010,298	1,889,457,217	2,119,971,174	2,385,062,225	2,363,940,529	2,714,523,444	3,117,693,795	3,581,339,700	4,114,532,490	4,789,268,375	5,494,415,840	6,305,335,425	7,237,892,947
Investor share %		14%	14%	13%	13%	12%	11%	10%	10%	10%	10%	10%	10%	10%	10%
Investor IRR	0%	54%	63%	73%	84%	97%	116%	133%	153%	176%	202%	235%	270%	309%	355%
Investor balance	\$(2,037,3	3 \$ (522,643,896)	\$1,166,366,402	\$3,055,823,619	\$5,175,794,793	\$7,560,857,018	\$9,924,797,547	\$12,639,320,990	\$15,757,014,786	\$19,338,354,485	\$23,452,886,975	\$28,242,155,350	\$33,736,571,190	\$40,041,906,615	\$47,279,799,562
Investor IRR to date	loss	-26%	36%	61%	73%	79%	82%	83%	84%	85%	85%	85%	86%	86%	86%

#### Important Notices

The information contained in this document is not an offer to sell or a solicitation to buy any security. These materials and documents and information from which they are derived or which are referred to by or accessible from them may contain forward looking statements within the meaning of Section 27A of the Securities Act of 1933, Section 2E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward looking statements and are subject to risks and uncertainties. Forward looking statements generally can be identified by the use of forward looking terminology such as "may," "will," "expect," "intend," "estimate," "project," "anticipate," "believe" or "plan" or the negative thereof or variations thereon or similar terminology. Although Transit X believes that the expectations reflected in such forward looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. All forward looking statements speak only as of the date made. Except as required by law, Transit X undertakes no obligation to update any forward looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of anticipated or unanticipated events or circumstances. These materials and documents and information from which they are derived or which are referred to by or accessible from them represent Transit X's best estimate as to the allocation of the funding proceeds based upon its present business plan and financial condition. The costs and expenses to be incurred in pursuing the Company's business plan cannot be predicted with certainty. There can be no assurance that unforeseen events will not occur or that the Company's business plan will be achieved or that it will not be changed, and it is possible that the funding proceeds may be applied in a manner other than that described herein.

# **Project Overview**



Size of region	2,457	km²	
Number of people in region (residents + visitors)	7,040,569		
Travel distance per year by all people (residents and visitors)	102,088,250,500	km	
Percentage of all travel that occurs within the region Road coverage (percent of area conveniently served by paved roads)	<u>85%</u> 80%		
Service area size	1965.6	  /m2	
Coverage: percent of people convenient (5 min walk) to Transit X	90%	Km²	
Estimate #1 for network length based on desired coverage	2,166	km	
Length of paved roads (non-highway) in region	<u>7,943</u>		
Estimate #2 for network length based on length of public roadways	1,787		
Transit X network length	2,166	km	
Route density ratio (route length to service area)	1.10		
Tunnel length	0.0	km	
High-speed X Way length	0.0		
Total costs for project not including pods	\$5,037,020,085		
per person	\$715		
Mode share of travel on Transit X	85%		
Distance traveled on Transit X, per year	73,758,760,986	km	
per day	202,078,797	km	
Potential energy generation (ideal)	12,479	MWh	
Energy consumption per day		MWh	45% of max capacity
Daily number of people riding Transit X		customers	
Distance per Transit X customer per day		km	
Average distance per trip (with 3 trips per day)	11		
Passenger fare for 11 km trip (at \$0.25 per km)	\$2.80		TWD
Distance traveled during peak hour	40,415,759		TWD
Broakovon	0/1 700		
Breakeven	941,790	customers per day	iont to Transit V)
		(15% of people convenies	ent to Transit X)
Breakeven Number of pods needed to meet peak demand	941,790 350,831	(15% of people convenies	ient to Transit X)
		(15% of people convenies pods	ent to Transit X)
Number of pods needed to meet peak demand Distance per pod per year	<b>350,831</b> 210,240	(15% of people convenies pods	ent to Transit X)
Number of pods needed to meet peak demand	<b>350,831</b> 210,240 26	(15% of people conveni pods km	ient to Transit X)
Number of pods needed to meet peak demand Distance per pod per year Pod shed parking volume [in cubic 40' shipping containers (sc)]	<b>350,831</b> 210,240	(15% of people conveni pods km	ient to Transit X)
Number of pods needed to meet peak demand Distance per pod per year Pod shed parking volume [in cubic 40' shipping containers (sc)] Cost of pods Cost of pod per person	<b>350,831</b> 210,240 26 \$1,754,155,000	(15% of people conveni pods km	ent to Transit X)
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Number of pods needed to meet peak demand Distance per pod per year Pod shed parking volume [in cubic 40' shipping containers (sc)] Cost of pods Cost of pod per person <b>Project finances</b> Total project cost (privately financed) OPEX (O&M) per year Private equity Financed Gross Revenue from fares EBITA (Profit) Debt service Fees and taxes OPEX + Debt service + Tax + Fees Net income Operating Margin	<b>350,831</b> 210,240 26 \$1,754,155,000 \$249 \$6,791,175,085 \$1,256,933,344 \$2,037,352,525 \$4,753,822,559 \$18,347,491,795 \$17,090,558,451 \$713,073,384 \$917,374,590 \$2,887,381,318 \$15,460,110,478 93%	(15% of people conveni pods km sc <sup>3</sup> 203,735,252,537 37,708,000,320 61,120,575,761 142,614,676,776 550,424,753,860 512,716,753,540 21,392,201,516 27,521,237,693 86,621,439,529	TWD           TWD
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Number of pods needed to meet peak demand Distance per pod per year Pod shed parking volume [in cubic 40' shipping containers (sc)] Cost of pods Cost of pod per person <b>Project finances</b> Total project cost (privately financed) OPEX (O&M) per year Private equity Financed Gross Revenue from fares EBITA (Profit) Debt service Fees and taxes OPEX + Debt service + Tax + Fees Net income Operating Margin	<b>350,831</b> 210,240 26 \$1,754,155,000 \$249 \$6,791,175,085 \$1,256,933,344 \$2,037,352,525 \$4,753,822,559 \$18,347,491,795 \$17,090,558,451 \$713,073,384 \$917,374,590 \$2,887,381,318 \$15,460,110,478 93%	(15% of people conveni pods km sc <sup>3</sup> 203,735,252,537 37,708,000,320 61,120,575,761 142,614,676,776 550,424,753,860 512,716,753,540 21,392,201,516 27,521,237,693 86,621,439,529 463,803,314,331 28,937	TWD TWD TWD TWD TWD TWD TWD TWD TWD TWD
Number of pods needed to meet peak demand Distance per pod per year Pod shed parking volume [in cubic 40' shipping containers (sc)] Cost of pods Cost of pod per person Cost of pod per person <b>Project finances</b> Total project cost (privately financed) OPEX (O&M) per year Private equity Financed Gross Revenue from fares EBITA (Profit) Debt service Fees and taxes OPEX + Debt service + Tax + Fees Net income Operating Margin Project costs — per person Number of motor vehicles displaced	<b>350,831</b> 210,240 26 \$1,754,155,000 \$249 \$6,791,175,085 \$1,256,933,344 \$2,037,352,525 \$4,753,822,559 \$18,347,491,795 \$17,090,558,451 \$713,073,384 \$917,374,590 \$2,887,381,318 \$15,460,110,478 93% \$965 <b>5,086,811</b> \$6,503	(15% of people conveni pods km sc <sup>3</sup> 203,735,252,537 37,708,000,320 61,120,575,761 142,614,676,776 550,424,753,860 512,716,753,540 21,392,201,516 27,521,237,693 86,621,439,529 463,803,314,331 28,937 motor vehicles	TWD TWD TWD TWD TWD TWD TWD TWD TWD TWD
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# Project Overview p. 2



# Impact of proposed network

Reduction in CO2 emissions	7,283,678 metric tons CO <sub>2</sub>
Est. cost to maintain 7,943 km roadway	\$405,074,057
Reduced waste products per year	815,161 metric tons
Travel time saved per year	599 hrs/person
Cost savings per capita per year from reduced car ownership	\$4,576
Increase in household income from time saving and car costs	33%
Reported injuries avoided per year	45,730
Lives saved per year	457
Land freed from parking (28,909 acres)	116,996,655 m <sup>2</sup>
and its commercial value	\$116,996,655 per year
Health care savings	High
Heat island mitigation from replacing asphalt with green space	1 to 3 °C
Change in global temperature	TBD °C
Decrease in sea level	TBD mm

# Pod & Car

		Pod	Car
Service life	(years)	20	12
Full cost of vehicle p	oer year	\$200	\$9,000
Public cost to maintain infras (	tructure per km)	\$0	\$100,000
Energy Efficiency ir	n MPGe	1188	24
Energy Efficiency in liters	/100km	0.20	9.8
Energy used (Watt-ho	urs/km)	28	1375
mass of CO2 per vehicle per	km (kg)	0	0.09875
Vehicle ma	ass (kg)	45	1950
Average speed of trave	l (km/h)	72	16
Typical travel time (in minutes) fo	or 11 km trip	9	42
Fare/cost	per km	\$0.25	\$0.62
Number of deaths per 100M passer	nger-km	0.00001	1
Number of injuries per 100M passer	nger-km	0.0006	62
Volume to park (cubic	meters)	5.7	70.9

# **Currency conversion**

Currency name	TWD	
Equal to US\$1	<u>30</u>	
$\boldsymbol{O}$	LA	イ
	-D	_

# **Model Inputs**

Potio of road longth to track longth	4		
Ratio of road length to track length Convenient walk time to Transit X route	5	min.	
Walking speed		km/h	
Width of convenient swath along track	0.82		
Fixed cost for main route per km	\$3,100,000	93,000,000	
Fixed cost for main route per kin	\$1,550.000	46,500,000	
Percentage of Dual Track	50%	40,000,000	TWD
Project cost per km for track	\$2,325,310	69,759,300	TWD
Water tunnel: additional cost per km	\$13,000,000	390,000,000	IWD
High-speed X Way: additional project cost per km	\$10,000,000	000,000,000	
Median distance traveled per person per year (for trips under 1600 km)	<u>14,500</u>	km	
Mode share % of people convenient to Transit X	85%	at 5 min walk.	
Percentage of daily travel during peak hour	20%		
Max capacity: number of pods per km of track		pods	
Max track capacity during peak hour as % of capacity	20%		
Average speed of pod	72	km/h	45 mph
Average # of trips for people riding Transit X	3	per day	
Average occupancy per pod during peak hours	2	people	
Average occupancy per pod	1.25	people	
Maximum occupancy per pod	5	people	
Empty pods: Percentage non-revenue vehicle travel	25%		
Cost per pod	<u>\$5,000</u>	150,000	TWD
Median income per capita (US\$)	25,000	750,000	TWD
Base fare per km	\$0.25	7.5	TWD
(per mile)	\$0.40	12.0	TWD
O&M as % of project cost	<u>5%</u>		
O&M as % of gross revenue	<u>5%</u>	_	
Percentage debt financed	<u>70%</u>		
Length of loan/debt	<u>10</u>	years	
Interest rate for debt	<u>5%</u>		
kg CO2 emissions per liter of gasoline	<u>2.37</u>		
Monetary value of 1 hour personal time	6.25		TWD
Eat. roadway maintenance per year per km	<u>\$51,000</u>	1,530,000	TWD
Area of one parking lot space		m <sup>2</sup>	
Commercial income of land	\$1	per m <sup>2</sup>	TWD
Distance from roadway that is convenient	0.25	km	
Stops per km	2.0		
Solar panel area per meter of track	1.5		
Global Horizontal Irradiance (GHI)	<u>3.8</u>	kWh/m²/day	

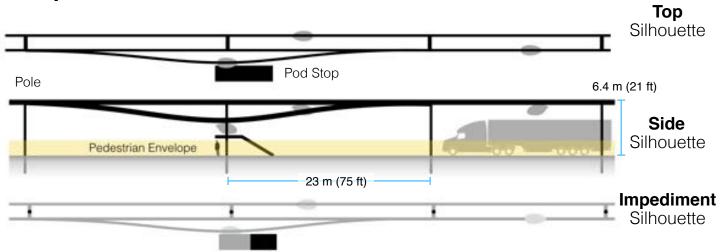


4% of gross revenue proportioned to air rights owners and a municipal fee/tax of 1% of gross revenue. Both air rights and fee/tax have a minimum payment based on the Footprint and the Transit X Commercial Rate (TXCR).

Note: Inputs have box outline					
Municipal rates					
Total commercial land area	3,000,000	m²			
Total commercial income to muni	\$3,000,000		90,000,000	TWD	
TXCR (Transit X Commercial Rate)	\$1.00	per m²	30.0	TWD	
TXCR is the yearly tax rate per land area. Calculation: total land area of commercial properties in the municipality, divided by all the municipal income generated by those properties. The TXCR is used to calculate the minimum tax/fee.					
Project Revenue					
Length of Transit X route	2,166	km			
Estimated gross revenue per unit length	\$8,470,009	per km	254,100,274	TWD	
Municipal Tax	% of gross revenue with	n minimum.			
1% gross revenue	\$84,700 <sub> </sub>	per route-km	2,541,003	TWD	
Minimum per year	\$1,436	per route-km			
Air Rights Leasing Fee	% of gross revenue with	n minimum.	Proportioned based of	on length.	
% of route on municipal land	90%				
4% gross revenue	\$338,800	per route-km	10,164,011	TWD	
Minimum per year	\$1,436	per route-km			
Taxes and Fees					
Paid to Municipality	\$843,984,623	per year	25,319,538,678	TWD	
with minimum	\$5,908,139		. , , =		
Paid to Private land owners	\$73,389,967		2,201,699,015	TWD	
with minimum	\$310,955		, ,, <del>-</del>		

# Footprint calculations for minimum fee

Yearly fees and taxes





Footprint Calculations	Metric	Imperial
Track width	<u>0.41</u>	m
Track height	<u>0.61</u>	
Pole diameter	<u>0.3</u>	m
Pole cross section	<u>0.07</u>	m <sup>2</sup>
Stop landing area	_	m <sup>2</sup>
width		m
length		m
Ramp length	<u>21</u>	
Pole span	<u>23</u>	
Number of poles per unit length	<u>43.5</u>	poles per km
Pole height	<u>6</u>	m
Single track	1126.7	m <sup>2</sup>
Area of Side Silhouette	688.3	m <sup>2</sup>
Area of Top Silhouette	423.1	
Impediment Area (adjusted)	15.4	
Dual track	1536.7	m <sup>2</sup>
Area of Side Silhouette	688.3	m <sup>2</sup>
Area of Top Silhouette	833.1	m <sup>2</sup>
Impediment Area (adjusted)	15.4	m <sup>2</sup>
Stop	51.8	m <sup>2</sup>
Area of Side Silhouette	25.6	m <sup>2</sup>
Area of Top Silhouette	21.2	
Impediment Area (adjusted)	5.0	
04	0	steres a subm
Stops		stops per km
% of dual track	50%	
Average area per unit length	1,436	m <sup>2</sup> per route-km
Contract values		
% gross revenue for muni tax/fee	1%	
% gross revenue for air rights	4%	
Impediment Factor	- 70	
	5	

# **Fair Fare Policy**



Fares will be similar to existing mass transit, and several times less than taxis or ride-sharing services. Transit X Fair Fare is a universal passenger fare model that applies to all regions and all times. Fares are proportional to the median income of the area and inversely proportional to per capita use, so the more people that use Transit X, the lower the base fare. Market-rate fares are offset by Half-price fares. There are no pre-set escalations.

		Initial	50% share	+50% Income	90% Usage
Median income per capita	US\$	25,000	\$25,000	\$37,500	\$25,000
Nominal fare	US\$	0.25	\$0.25	\$0.38	\$0.25
Per Capita Usage %		1%	50%	50%	90%
Discount for usage	US\$	0.00125	\$0.06	\$0.09	\$0.11
Base Fare (US\$)	per km	0.25	\$0.19	\$0.28	\$0.14
in loca	al currency	7.5 TWD	5.6 TWD	8.4 TWD	4.1 TWD
% Fares at Market rate		<u>20%</u>	<u>30%</u>	<u>40%</u>	<u>50%</u>
% Fares at Base rate		80%	60%	40%	20%
% Fares at Half Base rate		0%	10%	20%	30%
Estimated average fare	per km	0.40	\$0.35	\$0.59	\$0.32

# Price comparison with common travel modes (in Boston, USA)

	Mode »	Bus	Commuter Rail	Subway	Personal Car	Taxi / TNC's
Average distance (km)		5	18	8	8	5
Price per trip	US\$	\$1.85	\$8.00	\$2.50	\$6.00	\$12.00
Typical price per km	US\$	\$0.37	\$0.44	\$0.31	\$0.75	\$2.40

# **Base Inputs**

Median travel distance per capita per year (under 1000 mile trips)	<u>20,000</u>	km
% of per capita median income for 20,000 km transportation	<u>20%</u>	
Fare Discount when Transit X travel per capita is 20,000 km per year	<u>50%</u>	