



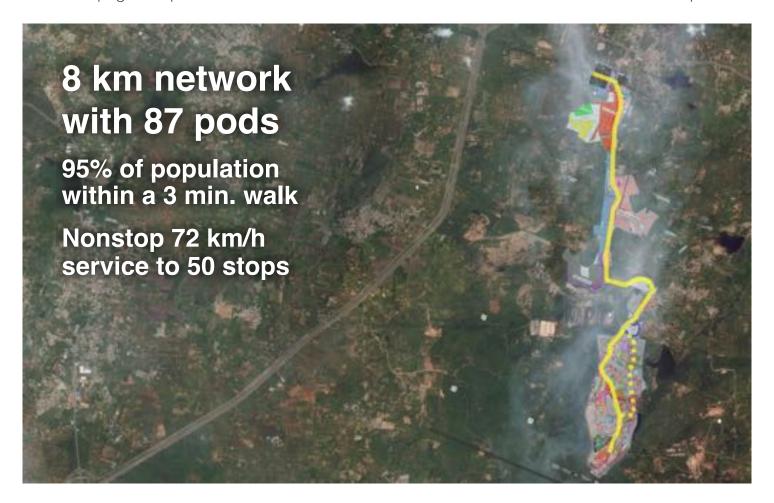
Transit X presents a preliminary proposal for a privately-financed, solar-powered micro-rail network — a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing public transportation for

# Ramoji Film City, Hyderabad, India

This proposal is downloadable at transitx.com/proposals/Transit X for Ramoji Film City, Hyderabad, India.pdf

# High capacity · High speed · Nonstop · 24/7 Solar powered · Zero Wait · Door-to-door · Resilient

A 24-page companion Transit X Handbook is available at transitx.com/transitxhandbook.pdf



# **Proposal Overview**



Transit X proposes to build and operate a green, privately-financed micro-rail podway to carry passengers and freight for Ramoji Film City that makes the Transit X service 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 (<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.

### **High Capacity**

A single track carries 12,000 pods per hour (20,000 to 50,000 passengers per hour). Two boarding areas fit in a single car space and provide 2,000 boardings per hour.

### **Zero Footprint and Minimal Disruption**

Transit X features stops that don't interfere with pedestrians or other forms of transportation. We use easements alongside highway and roads and integrate utility lines and poles Non-stop interchanges fit above existing intersections. Factory-built tracks and posts enable fast installation with minimal disruption. Use of underground tunnels is an option. Posts are typically spaced at 23 m (25 yds).

## No public funding

Transit X does not require government funding because our revenue from fares, freight, and advertising is greater 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 financed by investment banks and private equity firms.

# 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 Transit X system will be demonstrated by the end of 2019.

### **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, 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, efficient and have zero 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. Parking lots and roadways can be converted into green space and community paths as they become unnecessary.

#### Sustainable and Efficient

Pods weigh only 45 kg (100 lbs) and achieve over 20 times the efficiency of electric cars. Solar, wind, and storage installed on our tracks and posts can provide 100% of the clean energy needed to power the system.

#### **More Transit & Fewer Cars**

Transit X provides the convenience and privacy that people value in cars, yet without the negative impacts of personal cars. Transit X combines the best of mass transit and personal transportation modes which will lead 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 Transit X system. Theses 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 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.

#### **Revenue Generator**

Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$1 million per year average over the first 10 years.

### **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 would be invested back into the 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 easements. Example documents and a sample project schedule can be viewed at:

transitx.com/process

#### **Process** Legal Framework Proposal(s) Ordinance and Fasement right **Fixed** infrastructure Shov **Project Financing** Procurement, Manufacturing & Installation of Tracks and Poles MoU/Lot to create a Ridership-Revenue Legal **Pods** framework Procurement, Manufacturing & Commissioning Environmental to build Studies and Permit and operate Certification **Podways** Engineering Operational Expansion

#### **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 ridesharing 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.

Once we agree to move forward, we look to receive a commitment for Transit X to build and operate a podway along rights-of-way easements.

In parallel, we could refine the routes and meet with project stakeholders.

#### **Other Resources**

The links below provide general information about Transit X:

- One minute video overview (transitx.com/video)
- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- Letters of Project Financing, Due Diligence, Contracts (<u>transitx.com/letters.pdf</u>)
- Memorandum of Understanding template (<u>transitx.com/process/mou.html</u>)
- Example Right-of-Way agreement (<u>transitx.com/process/resolution.html</u>)
- Operating Agreement (<u>transitx.com/process/operating\_agreement.html</u>)
- General Q & A (transitx.com/QandA.html)
- Other proposals (transitx.com/proposals)

#### Addendum

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

- Project Overview and Impact pages 6 and 7
- Taxes and Fees pages 8 and 9
- Fares page 10 and 11
- Financial Project Summary with Pro Forma pages 12 and 13

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

Sincerely,



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

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1	aisua.			
	Transit X network length	8	km	
2	People (resident-equivalent) in region	17,000	resident-equivalent p	opulation
3	Route density ratio (route length to service area)	1.94		
4	Number of stops	50		
5	Triple-speed route length	0	km	
6	Water crossing route length	0	km	
7	Cost of fixed infrastructure	\$29,534,143		
8	per person	\$1,737		
9	Mode share of travel on Transit X (27% after first year)	83%	after 10 years	
10	Distance traveled by passengers on Transit X, per year	35,346,455	km	
11	per day	96,840		
12	Daily potential energy generation with standard panels on tracks	63	MWh	
13	Sustainable energy use per day	0	MWh	1% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$100 per kWh	\$36,933		
15	Size (rated power) of solar installation		KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$85,863		
17	Cost of buying sustainable energy at \$0.15 per kWh		per day	1% of OPEX
18	Daily passengers riding Transit X	14,139	customers	83% of the pop.
19	Distance per passenger per day		km	
20	Average distance per trip (assuming 3 trips per day)		km	
21	Single passenger fare for shared 2 km trip	\$0.40	27.00	INR
22	Passenger distance traveled during peak hour	19,368		
23	Breakeven	7,934	of people convenient	56% of expected and 49% to Transit X)
24	Boarding capacity	18,000	passengers per hour	(127% of customers)
25	Number of pods for peak demand	87	pods at 83% me	ode share
26	Number of customers per pod		and 195 people pe	
		.02.0		
27	Distance per pod per year	167,345	km	pou
27 28	Distance per pod per year Two-layer pod garage area (2% of route with side-parking)			0.1% of car parking
28		167,345 96		
28 29	Two-layer pod garage area (2% of route with side-parking)	167,345 96 \$565,500	m²	
28 29 30	Two-layer pod garage area (2% of route with side-parking)  Cost of pods	167,345 96 \$565,500	m² is \$26 per person	
28 29 30	Two-layer pod garage area (2% of route with side-parking)  Cost of pods  Capital cost of energy generation and storage	167,345 96 \$565,500	m <sup>2</sup> is \$26 per person is \$9 per person	0.1% of car parking
28 29 30 31 <b>Pr</b>	Two-layer pod garage area (2% of route with side-parking)  Cost of pods  Capital cost of energy generation and storage  roject Finances	167,345 96 \$565,500 \$159,635	m <sup>2</sup> is \$26 per person is \$9 per person 2,027,371,621	0.1% of car parking
28 29 30 31 <b>Pr</b> 32	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed)	167,345 96 \$565,500 \$159,635 \$30,259,278	m <sup>2</sup> is \$26 per person is \$9 per person 2,027,371,621 per km	0.1% of car parking
28 29 30 31 <b>Pr</b> 32 33	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052	m <sup>2</sup> is \$26 per person is \$9 per person 2,027,371,621 per km	0.1% of car parking INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36	Two-layer pod garage area (2% of route with side–parking)  Cost of pods  Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed)  Project cost  Equity	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783	m <sup>2</sup> is \$26 per person is \$9 per person 2,027,371,621 per km 608,211,486	0.1% of car parking INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37	Two-layer pod garage area (2% of route with side–parking)  Cost of pods  Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed)  Project cost  Equity	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783	m <sup>2</sup> is \$26 per person is \$9 per person 2,027,371,621 per km 608,211,486	0.1% of car parking INR
28 29 30 Final Prints 32 33 34 35 36 37 38	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km  608,211,486 1,419,160,135	0.1% of car parking  INR  INR
28 29 30 Final Pr 32 33 34 35 36 37 38 39	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year)	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135	0.1% of car parking  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km  608,211,486 1,419,160,135	0.1% of car parking  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year)	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135	0.1% of car parking  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year)	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135	0.1% of car parking  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year)	167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135	O.1% of car parking  INR  INR  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43	Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year) Yearly fees and taxes (US\$43 per capita)  OPEX + Debt service + Tax + Foos	\$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495 \$3,600,854 \$725,153	m <sup>2</sup> is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135  241,257,223 48,585,246	O.1% of car parking  INR  INR  INR  INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43 44	Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year) Yearly fees and taxes (US\$43 per capita)  OPEX + Debt service + Tax + Fees  Project costs — per person	\$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495 \$3,600,854 \$725,153	m² is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135  241,257,223 48,585,246	INR INR INR INR INR INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year) Yearly fees and taxes (US\$43 per capita)  OFEX & Debt service in a capita)  Project costs — per person Number of motor vehicles displaced	\$30,259,278 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495 \$3,600,854 \$725,153 \$1,780 3,535	m² is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135  241,257,223 48,585,246  119,257 motor vehicles	INR INR INR INR INR INR
28 29 30 31 <b>Pr</b> 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year) Yearly fees and taxes (US\$43 per capita)  OFFX + Debt service + Tox + Foes  Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person	\$167,345 96 \$565,500 \$159,635 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495 \$3,600,854 \$725,153 \$1,780 3,535 \$1,871	m² is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135  241,257,223 48,585,246  119,257 motor vehicles 125,376	INR INR INR INR INR INR
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage  roject Finances  Total Project Cost (privately financed) Project cost Equity Private debt financing  Debt service (per year) Yearly fees and taxes (US\$43 per capita)  OPEX + Debt service + Tax + Fees  Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	\$30,259,278 \$30,259,278 \$3,716,052 \$9,077,783 \$21,181,495 \$3,600,854 \$725,153 \$1,780 3,535 \$1,871 \$0.04	m² is \$26 per person is \$9 per person  2,027,371,621 per km 608,211,486 1,419,160,135  241,257,223 48,585,246  119,257 motor vehicles 125,376	INR INR INR INR INR INR



# Impact of proposed network

1	Reduction in GHG emissions (metric tons CO2-eq)	3,490 MTCO2-eq annually
2	Estimated cost to maintain public roadways	\$1,442,571 annually
3	Reduced waste products	566 metric tons annually
4	Travel time saved (non-stop travel and congestion)	122 hrs/person annually
5	Cost savings from reduced car ownership	\$814 per person annually
6	Increase in household income (from time savings and car costs)	26%
7	Reported injuries avoided	22 annually
8	Lives saved (from safety)	0 annually
9	Land freed from parking (20 acres)	81,297 m <sup>2</sup>
12	Temperature reduction (from heat island effect & GHG reductions)	0.5 to 2 °C
11	Health care savings (from pollution, injuries)	High

# **Model Inputs**

	-			
15	Ratio of road length to track length	4		
16	Walking speed	4.9	km/h	
17	Width of convenient swath along track	0.49	km	
18	Fixed cost per km (track & posts)	\$2,790,000	186,930,000	INR
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		
	Average distance traveled per person per year	10.000		
22	(for trips under 1600 km)	10,000	km	
23	Average distance per day per person	27	km	
24	Mode share % of people convenient to Transit X	85%	at 5 min walk.	
25	Percentage of daily demand during peak hour	20%		
26	Maximum capacity per track	41,953	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		passengers	
32	Average passengers per pod		passengers	
	Average discount per passenger	27%	. 5	
33	Maximum passengers per pod	5	passengers	
34	Empty pods: Percentage non-revenue	25%	J	
35	Ex-Factory cost per pod	\$5,000	335,000	INR
36	Worldwide Median Income per Household (US\$)	10,000	670,000	
37	Average number of residents per household	2.3	,	INR
38	Base fare per km	\$0.29	19.7	
39	(per mile)	\$0.47	31.8	
40	O&M as % of project cost	5%		
41	Percentage debt financed	70%		
42	Length of loan/debt		years	
43	Interest rate for debt	7%	,	
44	kg CO2 emissions per liter of gasoline	2.37		
45	Monetary value of 1 hour personal time (USD)	\$0.88	59	INR
46	Eat. roadway maintenance per year per km	\$51,000	3,417,000	
47	Area of one parking lot space		m²	
48	Commercial income of land (annual)	\$0.07	per m <sup>2</sup>	INR
49	Distance from roadway that is convenient	0.15		
50	Stops per km	6.7		
51	Boarding capacity per stop	360	pph	
52	Solar panel area per meter of track	2.0	EE.,	
53	Cost of sustainable energy and storage		per kWh	
54	Global Horizontal Irradiance (GHI)		kWh/m²/day	
55	Cost to generate sustainable energy		per kW	
56	Storage per column		kWh	
57	Typical span	23		44
58	Energy storage cost		per kWh	
59	Energy storage capacity		days	
60	Area of parked pod	2.20	-	
61	Distance discount at max distance	40%		
62	Max distance discount	500	km	
63	Max usage discount at 10,000 km per capita	50%	**	
64	Shared Pod Discount	20%		
65	Shared Pod Compartment Discount	40%		
03	Mode obere starting discount	670/		

# **Model Inputs (continued)**

68	Name of region or project	Ramoji Film City, Hyd
69	Currency name	INR
70	Equal to US\$1	67
71	Sustainable energy/electricity generation & storage as	CAPEX
72	Land area of region (sq. km)	7
73	Number of residents in region	5,000
74	% travel within region	25%
75	% of land area served by roads	60%
76	Coverage: % of pop. convenient (3 min walk) to Transit X	95%
77	Annual median household income (US\$)	\$3,500
78	Convenient walk time to stop (min)	3
79	Triple-speed route length (km)	0
30	Water crossing route length (km)	0.0
31	Visitors per year	4,380,000
32	Average length of visit (days)	1
33	Solar production ratio	1.57
34	Regional Fare Factor	4
35	EPC costs & contingency	30%
86	Triple-speed (km/h)	242
87	Trip Distance Factor	1
88	Number of Stops Factor	1

# Pod & Car

		Pod	Car
87	Service life (years)	20	12
88	Full cost of vehicle per year	\$200	\$9,000
89	Public cost to maintain infrastructure (per km)	\$0	\$100,000
90	Energy consumption (MPGe)	3564	24
91	Energy consumption (liters/100km)	0.07	9.8
92	Energy consumption (Watt-hours/km)	9	1375
93	mass of CO2 per vehicle per km (kg)	0	0.09875
94	Vehicle mass (kg)	45	1950
95	Average speed of urban travel (km/h)	72	16
96	Typical travel time (in minutes) for 2 km trip	2	9
97	Fare/cost per km	\$0.29	\$0.62
98	Number of deaths per 100M passenger-km	0.00001	1
99	Number of injuries per 100M passenger-km	0.0006	62
100	Volume to park (cubic meters)	5.7	70.9

Mode share starting discount



5% of gross revenue is paid to government easement owners for all fees and taxes. When on a private easement, 4% is paid to the private owner and 1% to the government. A minimum payment is based on the Footprint and the Transit X Commercial Rate (TXCR).

## **Government Fees and Tax rate**

(for calculating minimums)

2	Total commercial land (estimated)	420,000 m <sup>2</sup>	acres
3	Total commercial gov't revenue (US\$)	\$29,400	1,969,800 INR
4	TXCR (Transit X Commercial Rate)	\$0.07 per m <sup>2</sup>	4.7 INR
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		

6

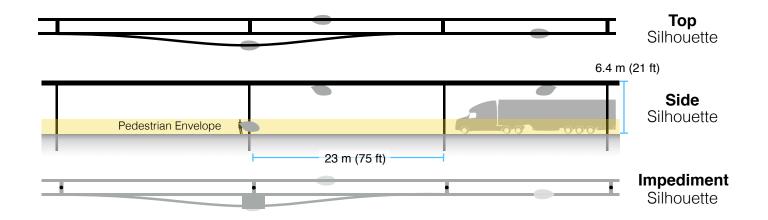
minimum tax/fee.

# Private Easement Fees

8	4% of gross revenue	J0.110	per route- meter		
9	Minimum per year	DU. 10	per route- meter		
10	Government Fees ar	nd Taxes			
11	% of route on government easements	98%			
12	5% on government easements	\$710,650		47,613,541 INR	
13	1% on private easements	\$2,901			
14	Total gov't fees and taxes	\$713,550	per year	47,807,882 INR	
16	per resident	\$143		9,562 INR	
15	with a minimum of	\$847	per year	56,758 INR	

# Footprint calculations for minimum fee

# Yearly fees and taxes



1	Footprint Calculations	Metric		Imperial
2	Track width	0.30	m	
3	Track height	0.60	m	
4	Post diameter	0.3	m	
5	Post cross section	0.07		
6	Stop landing area	<u>3.75</u>	m <sup>2</sup>	
7	width	<u>1.5</u>		
8	length	<u>2.5</u>	m	
9	Ramp length	<u>21</u>		
10	Typical Span	<u>23</u>		
11	Number of posts per unit length		poles per km	
12	Post height	<u>6</u>	m	
13				
14	Single track	1022.1	m <sup>2</sup>	
15	Area of Side Silhouette	678.3	m <sup>2</sup>	
16	Area of Top Silhouette	313.1	m <sup>2</sup>	
17	Impediment Area (adjusted)	30.7	m <sup>2</sup>	
18				
19	Dual track	1322.1	m <sup>2</sup>	
20	Area of Side Silhouette	678.3	m <sup>2</sup>	
21	Area of Top Silhouette	613.1		
22	Impediment Area (adjusted)	30.7	m <sup>2</sup>	
23	,			
24	Stop	82.1	m <sup>2</sup>	
25	Area of Side Silhouette	25.2		
26	Area of Top Silhouette	19.4		
07	•	07.5	•	
27	Impediment Area (adjusted)	37.5	m²	
28				
29	Stops with dedicated landing areas	2	stops per km	
30	% of dual track	100%		
31				
32	Average area per unit length	1 /186	m² per route-km	
	Average area per unit length	1,400	m² per route-km	
33				
34	Contract values			
35	% gross revenue for government on private prop.	1%		
36	% gross revenue for private easement	4%		
37	% gross revenue for government easement	5%		
38	Impediment Factor	10		



# **Fair Fare Formula**

# Summary

The average commute would be 3.5 times faster saving each commuter 295 hours per year.\*

At 11.83 INR per km, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.\*

			Trip Length	
A	II prices in INR	2 km	10 km	40 km
	Transit X	<b>23.60</b> to 39.38 2 min., 3.6x faster	<b>116.76 to 195.65</b> 8 min., 3.6x faster	<b>448.10 to 763.67</b> 33 min., 3.4x faster
Р	ublic transit average	132.30	210.45	308.51
sepou	Taxi	<b>183.42</b> 2 to 6 minutes	<b>798.78</b> 8 to 30 minutes	<b>3106.36</b> 30 to 120 minutes
Common public modes	Uber/Lyft	<b>139.64</b> 2 to 6 minutes	<b>575.12</b> 8 to 30 minutes	<b>2208.18</b> 30 to 120 minutes
d uou	Public Bus	<b>106.50</b> 3 to 12 minutes	<b>106.50</b> 15 to 60 minutes	<b>163.31</b> 60 to 240 minutes
Com	Train	<b>159.76</b> 2 to 12 minutes	<b>188.16</b> 8 to 60 minutes	<b>294.66</b> 30 to 240 minutes
Р	ersonal car	<b>142.02</b> 2 to 6 minutes	<b>426.09</b> 8 to 30 minutes	<b>1491.35</b> 30 to 120 minutes
Travel m	Avg. Low High Speed Speed speed ode km/h km/h km/h	d Dist D	lax Time Mode share ist. cost 6% 70% 24% m per min 2 10 40	* All numbers on mode shares, speeds, and cost are rough estimates

	Avg. Speed	Low Speed	High speed				Min Dist	Max Dist.	Time cost	Mode 6%	shar 70%	
Travel mode	km/h	km/h	km/h	Base	Includ es km	Over per-km	km	km	per min	2	10	40
Taxi	30	20	80	06.50	1	53.25	0.5	100	47.34	5%	4%	1%
Uber/Lyft	30	20	80	85.20	1	42.60	0.5	100	23.67	10%	10%	2%
Public Bus	15	10	40	06.50	20	2.84	0.5	50	0	50%	50%	40%
Train	30	10	80	59.76	2	3.55	2	100	0	35%	36%	57%
Transit X	72	72	72	0	0	11.83	0.1	50	0	-	-	-
Personal car	30	20	80	71.00	0	35.50	0.1	400	0.01	-	-	-

sts

Base fares are set for first 5 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 a to 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.



# **Fair Fare Formula**

# Fare rates are updated annually using this formula

	Formula Name	Value	Units	Description of the value or model input
1	GlobalIncome	670,000	INR	Global median household income. Updated annually based on most recent standard published data.
2	AllTravel	23,000	km	Travel distance per household per year on any mode for trips under 1600 km. A global constant
3	PercentIncomeForTransport	20%		% of median household income for all transportation under 1600 km trips. A
4	GlobalRate	5.83	INR/km	global constant. Global rate: GlobalIncome * PercentIncomeForTransport / AllTravel
5	IncomeFirst	\$234,500	INR	Median household income at first stop (per person per day). External input.  Based on reliable public data source updated annually.
6	IncomeDest	\$351,750	INR	Median household income at destination per trip. External input. Based on reliable public data updated annually.
7	RegionalRate	2.04	INR/km	Regional rate based on median income:  MedianIncomeFirst * PercentIncomeForTransport / AllTravel
8	UnderIncomeRate	3.79	INR/km	Under global income adjustment: if (RegionalRate < GlobalRate, GlobalRate - RegionalRate, 0)
9	NominalRate	5.83	INR/km	Nominal rate: RegionalRate + UnderIncomeRate
10	RegionalFactor	4.00	INID#	Regional Fare Factor. Negotiated upfront to make network financially viable.
11	AdjustedRate Population	23.30	INR/km	Regional adjusted rate: NominalRate * RegionalFactor
13	Population	5,000		Population in region. Updated annually based on trusted public data source.  Fare Discount when Transit X travel per household equals AllTravel. Global
12	UsageMaxDiscount	50%		constant.
14	PassengerTravel	35,346,455	km	Total passenger distance traveled previous calendar year. Based on expected mode share for first 3 years. Based on actual passenger trips. Audited. Percent of Total Travel Per Capita on Transit X:
15	ModeShare	31%		PassengerTravel / (Population x AllTravel)
16	BaseRate	19.72	INR/km	Base rate for single-passenger pod (without discounts) (1 - UsageMaxDiscount x min(1,ModeShare)) x AdjustedRate
17	SpecialRateFactor	2.20		Rate factor for water crossings or high-speed links. Global constant.
18	SpecialBaseRate	43.39	INR/km	Base rate for high-speed travel or water crossings:  BaseRate * SpecialRateFactor
19	DistanceDiscount  MaxDistanceDiscount	40%		Distance discount at max distance. Global constant.
20	MaxDistanceDiscount	500	km	Max distance discount. Global constant.
21	DistanceDiscountPerKm	0.015778	INR/km	Discount amount per km:  BaseRate x DistanceDiscount / MaxDistanceDiscount
22	SeniorDiscount StudentDiscount	20%		Senior discount set according to local regulations
23	DisabilityDiscount	20% 20%		Student discount set according to local regulations
0.4		15.78	1115.4	Disability discount set according to local regulations
24	DiscountBaseRate	15.76	INR/km	Discounted base rate: BaseRate x (1 - SeniorDiscount)
25	SharedPodDiscount	20%		Discount for a shared pod. Set by Transit X per year. 15% minimum and 30% maximum. Maximum yearly change is one percentage point.
26	SharedPodRate	15.78	INR/km	Rate for a shared pod: BaseRate x (1 - SharedPodDiscount)
27	SharedCompartmentDiscount	40%		Discount for shared compartment. Set by Transit X per year. 25% minimum and 40% maximum. Maximum yearly change is one percentage point.
28	SharedCompartmentRate	11.83	INR/km	Rate for shared compartment  BaseRate x (1 - SharedCompartmentDiscount)
29	SingleOccupancyMaxDistance	13.41	INR/km	Rate for 500 km in single-passenger pod.
30	Senior + SharedCompartmentRate	5.68	INR/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	26,156,377	km	Passenger distance under base fare. Audited value from operational data.
33	PercentBase	74%		Percent of passenger distance under base fare:  DistanceBase / PassengerTravel
34	BaseRevenue	377,117,043	INR	Annual revenue from all travel under base rate. Audited value from operational data.
35	AverageDiscount	27%		Average fare discount from Base Rate: 1 - (BaseRevenue / (DistanceDase x BaseRate))
36	MarketFactor	1.0		Market rate factor. Negotiated value for setting ratio of AverageDiscount
37	MarketRateCap	27%		Cap on passenger travel distance at market rate:  AverageDiscount x MarketFactor
38	MarketTravelCap	7,035,636	km	Cap on passenger travel distance at market rate:  DistanceBase x MarketRateCap

# **Project Summary**

**Project** A fully-automated, solar-powered, micro-**Description** rail network. A transportation utility.

Project type Privately-funded Public Transit

Design, Build, Finance, Own, Operate,

Maintain (DBFOOM)

Project cost US\$30 million

Cost to Gov't \$0

Structure Privately financed equity and debt

Debt term 10 years @ 7%

**Equity terms** A waterfall profit distribution per year with:

1. 90% until capital payback,

2. then 50% until Target% is reached

3. then 10%

Taxes & Fees \$713,550 per year

Benefits to society and environment

Extremely high

18% average IRR over 12 yrs

# **Financials**

(US\$ in millions)

	Year 1	Total Years 1-12
Gross Revenues	5	140
Taxes and fees	0	7
Debt service	\$1	\$16

# ESG (Environmental, Social, Governance) Benefits

Clean energy	yes	Resiliency	yes
Energy security	yes	Sustainable	yes
Emissions-free	yes	Equitable	yes
GHG-free	yes	Recyclable materials	yes
Lowers pollution	yes	Affordable housing	yes
Clean water	yes	Improved Health	yes
Improved Safety	yes	Econ. Development	yes
New infrastructure	yes	Access to Food	yes
Equitable transport	yes	New job creation	yes

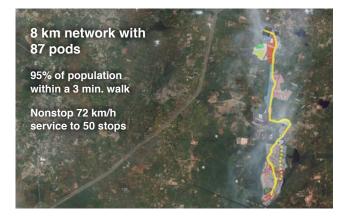




Transit X presents a preliminary proposal for a privately-financed, solar-powered public transit network — a fleet of fully-autonomous, shared, electric, 4-passenger vehicles (pods) on a local and regional podway

# Ramoji Film City, Hyderabad, India

High capacity • High speed • Nonstop • 24/7 Solar powered • Zero Wait • Door-to-door • Resilient



#### **About Transit X**

Transit X finances, designs, builds, and operates solar-electric micro-rail public transit podways to supplant buses, trains, cars, and trucks. Transit X offers its service to governments and commercial developers. Maiden Flight was on Oct 29, 2018 and pilot projects started in 2018. First pilots will break ground in 2019 and begin operations in 2020. Transit X is a privately held company founded in 2015, based in Boston, Massachusetts.

#### Status

	Now	Prior to close
Project financing	Letter of intent	Yes
Outdoor test system	Dec, 2019	Yes
Rider-Revenue study	Preliminary	Yes
Environmental study	Per region	Yes
Air rights	Per project	Yes
Permitting	Per project	Yes
Safety certification	In process	Yes
Construction firm	Per project	Yes
Design and major subs	Per project	Yes
<b>Operations &amp; Maint</b>	Yes	Yes
Utility relocation	Per project	Agreements

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



## **Model Inputs and Assumptions**

Route length (km) 8

Starting number of pods 29

Projected revenue growth 15%

Project Cost (Privately funded) \$30,259,278

% Debt financed 70%

**Debt** \$21,181,495

**Equity** \$9,077,783

Capital return per year \$1,634,001

Debt payment (per year) \$1,482,705

Target % 15%

Target amount per year \$1,361,668

Revenue per route-km at 7 years \$1.37M

Income tax rate 10%

RoW fee 5%

Profit at target \$2,723,335 **Pro Forma** 

Travel per year per pod (km) 167,345

Revenue per vehicle-km (US\$) 1.00

OPEX as % of project cost 5%

Debt Interest rate 7%

Debt term (yrs) 10

Years to return equity capital 5

Profit share when below capital return 90%

Profit share when below Target IRR 50%

Profit share when above Target IRR 10%

P-Revenue per vehicle-km from base fare \$0.39

Market rate revenue factor 2.1

P-Revenue per vehicle-km from market fare \$0.21

Passenger revenue per vehicle-km \$0.60

Percentage of revenue from passengers 60%

Non-passenger revenue per vehicle-km \$0.40

Years	. 0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue	0	4,834,353	5,559,506	6,393,432	7,352,446	8,455,313	9,723,610	11,182,152	12,859,475	14,788,396	17,006,655	19,557,653	22,491,301
5% RoW+tax+fee	0%	241,718	277,975	319,672	367,622	422,766	486,181	559,108	642,974	739,420	850,333	977,883	1,124,565
Debt service	0	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705	\$1,482,705
OPEX	0	1,512,964	1,739,908	2,000,895	2,301,029	2,646,183	3,043,111	3,499,577	4,024,514	4,628,191	5,322,420	6,120,783	7,038,900
Waterfall for distrib	0	1,437,270	1,853,026	2,331,145	2,880,981	3,513,294	4,240,453	5,076,686	6,038,354	7,144,272	8,416,078	9,878,655	11,560,618
1. Capital return	0	\$1,293,543	\$1,667,723	\$2,098,030	\$2,592,883	\$1,425,604	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2. For Target%	0	\$718,635	\$926,513	\$1,165,572	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668	\$1,361,668
3. Over Target%	0	0	0	0	15,765	78,996	151,712	235,335	331,502	442,094	569,274	715,532	883,728
Investor share	0	1,293,543	1,667,723	2,098,030	2,592,883	2,866,267	1,513,379	1,597,003	1,693,169	1,803,761	1,930,942	2,077,200	2,245,396
Investor share (%)		90%	90%	90%	90%	82%	36%	31%	28%	25%	23%	21%	19%
Share / Orig Capital	0%	14%	18%	23%	29%	<b>32</b> %	17%	18%	19%	20%	21%	23%	25%
Capital balance	\$(9,0	-\$7,784,240	-\$6,116,517	-\$4,018,487	-\$1,425,604	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
IRR to date	loss	loss	(49%)	(23%)	(6%)	5%	8%	11%	13%	15%	16%	17%	18%

#### **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.