



Transit X presents a preliminary proposal for privately-financed public transportation using a fleet of fully-autonomous shared electric vehicles on a local and regional podway network for

# Stamford, CT

This proposal is downloadable at transitx.com/proposals/Transit X for Stamford,CT.pdf

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

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

# 44 mile network with 3,038 pods

95% of population within a 4 min. walk

Nonstop 45 mph service to 360 stops



## Transit X proposes to build and operate a privately-financed pod network to carry passengers and freight for Stamford, CT 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.

## No public funding

We have reduced or eliminated many costs of transportation including the cost of materials, land, construction, fuel, debt service, and labor. Transit X does not require public funding because revenue from fares more than covers our costs. Our business model appeals to investment banks and private equity firms that finance green infrastructure projects.

## **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. An in-depth (1000+ hours) technical assessment and feasibility analysis has been completed by Altran, 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.

## **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 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. The energy generated from solar panels on the track and stored within the poles is sufficient in most cases, but sustainable power contracts may used to buy and sell power to the grid. Transit X makes it possible to reduce the amount of impervious surfaces and increase green space by reducing the need for parking and roads. By replacing cars, Transit X has a negative carbon footprint.

## 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 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 would work with regional urban planning and construction firms who are familiar with permitting and applicable codes.

## Jobs and Workforce Development

Many jobs will be created to build a new transportation infrastructure, as well many new types of job will be created as transportation becomes more efficient. Transit X intends to build manufacturing and assembly plants around the world and locate them where Transit X is first deployed in a region. The vast majority of the construction jobs will be locally sourced. Preferential hiring would be given to those workers displaced by the transition to automated podways.

## **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\$15 million

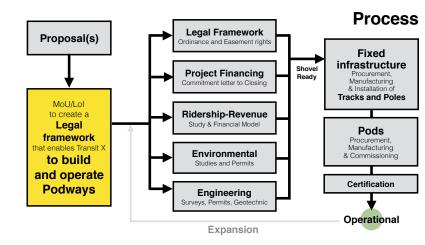
per year average over the first 10 years. For specifics, please see the "Taxes and Fees" section of this proposal. These fees and taxes paid by Transit X enables lower taxes or more spending on public services.

## 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 general process for working with a government or commercial entity. We would refine a proposal that meets your needs, then ask for a letter stating you will create a legal framework for Transit X to build and operate a podway in your region. 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 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.

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 to move forward, we need a memorandum of understanding (example at <u>transitx.com/process/mou.html</u>) stating that you intend to pass an ordinance that enables our use of air rights along with an operating 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 links below provide general information about Transit X:

- 2 minute video overview (transitx.com/video)
- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- · Letters of Project Financing, Due Diligence, Contracts (transitx.com/letters.pdf)
- · Memorandum of Understanding template (transitx.com/process/mou.html)
- Example Resolution (transitx.com/process/resolution.html)
- Operating Agreement (transitx.com/process/operating\_agreement.html)
- General Q & A (<u>transitx.com/QandA.html</u>)
- 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 Stamford through better transportation.

Sincerely,

Mike Stanley CEO, Transit X

Telephone: +1 508-596-7024 (also via WhatsApp) Email: <u>mike@transitx.com</u> Zoom eRoom: <u>https://zoom.us/j/8229009123</u> Website: <u>transitx.com</u> LinkedIn: <u>http://linkedin.com/in/mikestanleymit/</u> Skype: mikestanley49 WeChat: MikeTransitX Facebook Messanger: m.me/MikeStanleyMIT Twitter: <u>https://twitter.com/MikeTransitX</u> Mail: 1127 Commonwealth Ave #30, Boston, MA 02134 USA



## **Project Overview**



Transit X network length	71	km	44.3 miles
People (resident-equivalent) in region	131,000	resident-equivalen	t population
Route density ratio (route length to service area)	1.45		
Number of stops	360		
Triple-speed route length	0	km	
Water crossing route length	0	km	
Cost of fixed infrastructure	\$258,423,750		
per person	\$1,973		
Mode share of travel on Transit X (27% after first year)	82%	after 10 years	
Distance traveled on Transit X, per year	697,881,438	km	433,466,732 miles
per day	1,912,004		1,187,580 miles
Daily potential energy generation with standard panels on tracks	547	MWh	
Sustainable energy use per day	13	MWh	2% of max capacit
Energy storage capital cost for 1 day(s) of supply at \$100 per kWh	\$1,296,384		
Size (rated power) of solar installation	3,014	KW	
Cost to generate sustainable energy (at \$1,000 per kW)	\$3,013,886		
Cost of buying sustainable energy at \$0.15 per kWh	\$1,945	per day	5% of OPEX
Daily passengers riding Transit X	107,366	customers	82% of the pop.
Distance per passenger per day	18	km	11.1 miles
Average distance per trip (assuming 3 trips per day)	6	km	3.7 miles
Single passenger fare for shared 6 km trip	\$1.51		
Passenger distance traveled during peak hour	382,401	km	237,516 miles
Breakeven	24,391	customers per da	W
Diounoion	,		venient to Transit X)
Number of pade for peak domand	2 0 2 0		
Number of pods for peak demand		pods at 82% r	
Number of customers per pod		and 43 people p	er pod
Distance per pod per year Two-layer pod garage area (5% of route with side-parking)	168,214		0.2% of car parkin
		111=	0.2 /0 01 Car parkin
	\$10,342		
Cost of pods	\$19,747,000	is \$116 per perse	
Cost of pods Capital cost of energy generation and storage	\$19,747,000		
Cost of pods Capital cost of energy generation and storage <b>Project Finances</b>	\$19,747,000 \$5,603,350	is \$116 per perse	
Cost of pods Capital cost of energy generation and storage <b>Project Finances</b> Total Project Cost (privately financed)	\$19,747,000 \$5,603,350 \$283,774,100	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage <b>Project Finances</b> Total Project Cost (privately financed) Project cost	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794	is \$116 per perso is \$43 per perso	
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230	is \$116 per perso is \$43 per perso	n
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Cost of pods Capital cost of energy generation and storage <b>Project Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year)	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year)	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$176 per capita) OPEX + Debt service + Tax + Fees	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281 \$23,057,752	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year)	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$176 per capita) OPEX + Debt service + Tax + Pees Project costs — per person Number of motor vehicles displaced	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281 \$23,057,752 \$23,057,752 \$23,057,752 \$22,166	is \$116 per perso is \$43 per perso	n
Cost of pods Capital cost of energy generation and storage Project Finances Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$176 per capita) OPEX + Debt Service + Tex + Fees Project costs – per person	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281 \$23,057,752 \$23,057,752 \$23,057,752 \$22,166	is \$116 per perso is \$43 per perso per km	n
Cost of pods Capital cost of energy generation and storage <b>Project Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$176 per capita) OPEX + Debt service + Tex + Fees Project costs – per person Number of motor vehicles displaced	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281 \$23,057,752 \$33,057,752 \$33,057,752 \$33,057,752	is \$116 per perso is \$43 per perso per km	n
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Cost of pods Capital cost of energy generation and storage <b>Project Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$176 per capita) OPEX + Debt convice + Tax + Fees Project costs – per person Number of motor vehicles displaced Yearly cost of cars displaced – per person Operating costs per passenger-km	\$19,747,000 \$5,603,350 \$283,774,100 \$3,982,794 \$85,132,230 \$198,641,870 \$29,796,281 <b>\$23,057,752</b> \$23,057,752 \$67,042,763 \$2,166 69,788 \$4,795 \$0.02	is \$116 per perso is \$43 per perso per km motor vehicles	n

## Project Overview p. 2

68,916 MTCO2-eq annually

11,184 metric tons annually 316 hrs/person annually \$1,281 per person annually

\$12,622,500 annually

10%

1,605,127 m<sup>2</sup> 0.5 to 2 °C High

433 annually 4 annually



## Impact of proposed network

1	Reduction in GHG emissions (metric tons CO2-eq)
2	Estimated cost to maintain public roadways
3	Reduced waste products
4	Travel time saved (non-stop travel and congestion)
5	Cost savings from reduced car ownership
6	Increase in household income (from time savings and car costs)
7	Reported injuries avoided
8	Lives saved (from safety)
9	Land freed from parking (397 acres)
12	Temperature reduction (from heat island effect & GHG reductions)
11	Health care savings (from pollution, injuries)

## **Model Inputs**

15	Ratio of road length to track length	
16	Walking speed	
17	Width of convenient swath along track	¢0.70
18	Fixed cost per km. Solar+storage not included.	\$2,79
19	Water crossing: additional cost per km Triple-speed: additional cost per km	\$8,37 \$5,58
20 21	Rate factor for water crossings or high-speed links.	φ0,00
21	Average distance traveled per person per year	
22	(for trips under 1600 km)	
23	Average distance per day per person	
24	Mode share % of people convenient to Transit X	
25	Percentage of daily demand during peak hour	
26	Maximum capacity per track	i
27	Average dwell time during peak hour	
28 29	% of pods traveling on route with highest demand Average speed of pod	
30	Average # of trips for a daily customer	
30	Average passengers per pod during peak hours	
32	Average passengers per pod during peak nours Average passengers per pod	
52	Average discount per passenger	
33	Maximum passengers per pod	
34	Empty pods: Percentage non-revenue	
35	Ex-Factory cost per pod	5
36	Worldwide Median Income per Household (US\$)	
37	Average number of residents per household	
38	Base fare per km	
39	(per mile)	
40	O&M as % of project cost	
41	Percentage debt financed	
42	Length of loan/debt	
43	Interest rate for debt	
44	kg CO2 emissions per liter of gasoline	
45	Monetary value of 1 hour personal time (USD)	5
46	Eat. roadway maintenance per year per km	\$!
47	Area of one parking lot space	
48	Commercial income of land (annual)	
49	Distance from roadway that is convenient	
50	Stops per km Solar panel area per meter of track	
51 52	Cost of sustainable energy and storage	
53	Global Horizontal Irradiance (GHI)	
54	Cost to generate sustainable energy	9
55	Storage per column	
56	Typical span	
57	Energy storage cost	
58	Energy storage capacity	
59	Area of parked pod	
60	Distance discount at max distance	
61	Max distance discount	
62	Max usage discount at 10,000 km per capita	
63	Shared Pod Discount	
64	Shared Pod Compartment Discount	
65	Mode share starting discount	

4		
4.9	km/h	3 mph
0.65	km	0 miles
90,000		
70,000		
80,000		
2.2		
10,000	km	6,211 miles
27	km	
85%	at 5 min walk.	
20%		
	pph	
10	seconds	
18%	00001140	
72	km/h	45 mph
3		45 mpn
2.2		
1.4	passengers	
18%	passengers	
5	passengers	
25%		
\$5,000		
10,000		
2.3		
\$0.42		
\$0.68		
5%		
70%		
10	years	
5%		
2.37		
\$13.75		
51,000		
23	m <sup>2</sup>	247 sf
\$1.10	per m <sup>2</sup>	
0.20	km	
5.1		
2.0		
\$0.15	per kWh	
3.8	kWh/m²/day	
\$1,000	per kW	
40	kWh	
23	m cols/km:	44
\$100	per kWh	
1	days	
2.20	m <sup>2</sup>	
40%		
	km	
50%		
20%		
40%		
40 %		
01/0		

## Model Inputs (continued)

67	Name of region or project	Stamford, CT
68	Currency name	
69	Equal to US\$1	1
70	Sustainable energy/electricity generation & storage as	CAPEX
71	Land area of region (sq. km)	98
72	Number of residents in region	131,000
73	% travel within region	65%
74	% of land area served by roads	50%
75	Coverage: % of pop. convenient (4 min walk) to Transit X	95%
76	Annual median household income (US\$)	\$55,000
77	Convenient walk time to stop (min)	4
78	Triple-speed route length (km)	0
79	Water crossing route length (km)	0.0
80	Visitors per year	0
81	Average length of visit (days)	2
82	Solar production ratio	1.57
83	Regional Fare Factor	1.0
84	EPC costs & contingency	30%
85	Triple-speed (km/h)	242

## Pod & Car

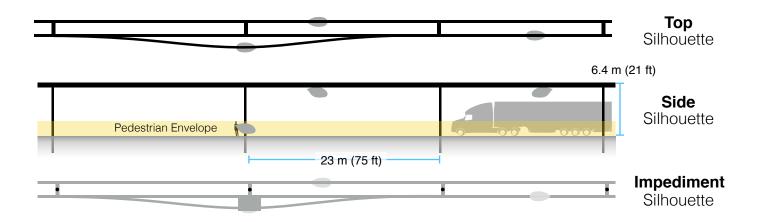
		Pod	Car
86	Service life (years)	20	12
87	Full cost of vehicle per year	\$200	\$9,000
88	Public cost to maintain infrastructure (per km)	\$0	\$100,000
89	Energy Efficiency in MPGe	3564	24
90	Energy Efficiency in liters/100km	0.07	9.8
91	Energy used (Watt-hours/km)	9	1375
92	mass of CO2 per vehicle per km (kg)	0	0.09875
93	Vehicle mass (kg)	45	1950
94	Average speed of urban travel (km/h)	72	16
95	Typical travel time (in minutes) for 6 km trip	5	22
96	Fare/cost per km	\$0.42	\$0.62
97	Number of deaths per 100M passenger-km	0.00001	1
98	Number of injuries per 100M passenger-km	0.0006	62
99	Volume to park (cubic meters)	5.7	70.9



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).

1	Government Fees and Ta	ax rate	(for calculating minimums	)
2	Total commercial land (estimated)	4,900,000	m <sup>2</sup>	1,211 acres
3	Total commercial gov't revenue (US\$)	\$5,390,000		
4	TXCR (Transit X Commercial Rate)	\$1.10	per m²	
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.	\$11.84	per sf	
6				
7	Private Easement Fees			
8	4% of gross revenue	\$64.72	per route- meter	\$19.74 per route-foot
9	Minimum per year	\$1.86	per route- meter	<b>\$0.57</b> per route-foot
10	Government Fees a	and Taxes		
11	% of route on government easements	98%		
12	5% on government easements	\$22,596,597		
13	1% on private easements	\$92,231		
14	Total gov't fees and taxes	\$22,688,828	per year	
16	per resident	\$173		
15	with a minimum of	\$132,280	per year	

## Footprint calculations for minimum fee



1	Footprint Calculations	Metric	Imperial
2	Track width	<u>0.41</u> m	16.1 inches
3	Track height	<u>0.61</u> m	24.0 inches
4	Pole diameter	<u>0.3</u> m	11.8 inches
5	Pole cross section	<u>0.07</u> m <sup>2</sup>	0.8 sf
6	Stop landing area	2 m <sup>2</sup>	21.5 sf
7	width	<u>2</u> m	78.7 inches
8	length	<u>1</u> m	39.4 inches
9	Ramp length	<u>21</u> m	68.9 feet
10	Pole span	<u>23</u> m	75.5 feet
11	Number of poles per unit length	43.5 poles per km	n 70.0 poles per mile
12	Pole height	<u>6</u> m	19.7 feet
13			
14	Single track	1142.1 m <sup>2</sup>	12289 sf
15	Area of Side Silhouette	688.3 m <sup>2</sup>	7406 sf
16	Area of Top Silhouette	423.1 m <sup>2</sup>	4553 sf
17	Impediment Area (adjusted)	30.7 m <sup>2</sup>	331 sf
18	[·····		
19	Dual track	1552.1 m <sup>2</sup>	16701 sf
20	Area of Side Silhouette	688.3 m <sup>2</sup>	7406 sf
21	Area of Top Silhouette	833.1 m <sup>2</sup>	8964 sf
22	Impediment Area (adjusted)	30.7 m <sup>2</sup>	331 sf
23			
24	Stop	67.8 m <sup>2</sup>	730 sf
25	Area of Side Silhouette	25.6 m <sup>2</sup>	276 sf
26	Area of Top Silhouette	22.2 m <sup>2</sup>	239 sf
27	Impediment Area (adjusted)	20.0 m <sup>2</sup>	215 sf
28	impediment Area (adjusted)	20.0 11-	210 31
	Other a with the dealer at a diamatic a survey	0	
29	Stops with dedicated landing areas % of dual track	2 stops per kn	a 3.2 stops per mile
30	% of dual track	100%	
31			
32	Average area per unit length	1,688 m <sup>2</sup> per route	-km 29,291 sf per route-mile
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	



Summary

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

At 0.41 USD per mile, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.\*

				Trip Length									
All p	orices i	n USI	D		1 m	ile			6	m	ile	)	25 mile
Transit X				<b>0.51</b> to 0.84 2 min., 3.6x faster				<b>2.50</b> to 4.19 8 min., 3.6x faster			ster	<b>9.61</b> to 16.37 33 min., 3.4x faster	
Public transit average			t	2.84				4.51				6.61	
Taxi				<b>3.93</b> 2 to 6 minutes				<b>17.13</b> 8 to 30 minutes			es	<b>66.60</b> 30 to 120 minutes	
Common public modes	Uber	/Lyft		2	<b>2.</b> to 6 n		S			<b>12.</b> 30 m		es	<b>47.34</b> 30 to 120 minutes
d nom	Publi	c Bus	5	<b>2.28</b> 3 to 12 minutes				<b>2.28</b> 15 to 60 minutes			tes	<b>3.50</b> 60 to 240 minutes	
Train				<b>3.43</b> 2 to 12 minutes				<b>4.03</b> 8 to 60 minutes			es	<b>6.32</b> 30 to 240 minutes	
Personal car				2 t	<b>3.</b> 2		es		<b>1</b> 8 to 3	<b>0.</b> 30 n			<b>36.55</b> 30 to 120 minutes
Travel mode	Avç Spe	ed Speed	High d speed km/h	Base	Includ	Over	Dist	Max Dist. km	Time cost per min	6%	e shar 70% 10	-	* All numbers on mode shares, speeds, and cos are rough estimates
Taxi	30		80	2.28	es km 1	per-km	0.5		1.01	5%	4%	1%	
Uber/Lyft	30		80	1.83	1		0.5		0.51		10%		
Public Bus Train	15 30		40 80	2.28 3.43	20 2	0.06 0.08		50 100	0		50% 36%		

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 equal or less than the amount of discounted fares. Transit X Fair Fare is a universal passenger fare formula that applies to all regions and all times.

0

0.23

0.25 0.1 50

0.76 0.1 400

72

30

72

20

72

80

0

1.52

0

0

Transit X

Personal car



## **Fair Fare Formula**

## Fare rates are updated annually using this formula

	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	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 global constant.
4	GlobalRate	0.09	USD/km	Global rate: Globalincome * PercentincomeForTransport / AliTravel
5	IncomeFirst	\$55,000	USD	Median household income at first stop (per person per day). External input. Based on reliable public data source updated annually.
6	IncomeDest	\$82,500	USD	Median household income at destination per trip. External input. Based on reliable public data updated annually.
7	RegionalRate	0.48	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	0.48	USD/km	Nominal rate: RegionalRate + UnderIncomeRate
10	RegionalFactor AdjustedRate	1.00		Regional Fare Factor. Negotiated upfront to make network financially viable.
11	Population	0.48	USD/km	Regional adjusted rate: NominalRate * RegionalFactor
13 12	UsageMaxDiscount	131,000 50%		Population in region. Updated annually based on trusted public data source. Fare Discount when Transit X travel per household equals AllTravel. Global constant.
14	PassengerTravel	697,881,438	km	Total passenger distance traveled previous calendar year. Based on expected mode share for first 3 years. Based on actual passenger trips. Audited.
15	ModeShare	23%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)
16	BaseRate	0.42	USD/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	0.93	USD/km	Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor
19	DistanceDiscount	40%		Distance discount at max distance. Global constant.
20	MaxDistanceDiscount	500	km	Max distance discount. Global constant.
21	DistanceDiscountPerKm	0.000338	USD/km	Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount
22	SeniorDiscount	20%		Senior discount set according to local regulations
23	StudentDiscount DisabilityDiscount	20% 20%		Student discount set according to local regulations
0.4	-	0.34		Disability discount set according to local regulations
24	DiscountBaseRate	0.34	USD/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	0.34	USD/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	0.25	USD/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)
29	SingleOccupancyMaxDistance	0.29	USD/km	Rate for 500 km in single-passenger pod. Rate for a Senior taking a 500 km trip in a shared compartment.
30	Senior + SharedCompartmentRate	0.12	USD/km	BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount)
31	50PctIncomeAtDest	25%	USD/km	% Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2
32	DistanceBase	516,432,264	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	178,973,498	USD	Annual revenue from all travel under base rate. Audited value from operational data. Average fare discount from Base Rate:
35	AverageDiscount	18%		1 - (BaseRevenue / (DistanceDase x BaseRate))
36	MarketFactor	1.0		Market rate factor. Negotiated value for setting ratio of AverageDiscount
37	MarketRateCap	18%		Cap on passenger travel distance at market rate: AverageDiscount x MarketFactor
38	MarketTravelCap	93,199,652	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap

## **Project Summary**

Project Description	Transportation utility: a fully-automated, solar-powered, ultra-light, micro railway				
Project type	<b>Privately-funded Public Transportation</b> Design, Build, Finance, Own, Operate, Maintain (DBFOOM)				
Project cost	US\$284 million				
Cost to Gov't	\$0				
Structure	Privately financed equity and debt				
Debt term	10 years @ 5%				
Equity terms	<ul><li>A waterfall profit distribution with:</li><li>90/10 split until Return of Capital,</li><li>then 50/50 until Target IRR met</li><li>then 10/90 onwards</li></ul>				
Taxes & Fees	\$22,688,828 per year				
Benefits to society and environment	Extremely high				

## **Financials**

(US\$ in millions)

	Year 1	Total Years 1-12
Gross Revenues	152	3,707
Taxes and fees	8	185
Debt service	\$26	\$257

## 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, LLC presents a preliminary proposal for a privately-funded fleet of fully-autonomous shared electric vehicles on local and regional podway network for

## Stamford, CT

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 transit infrastructure to supplant buses, trains, cars, and trucks. Transit X offers its service to governments and commercial developers. First pilots will begin in 2019. Transit X is a privately held company founded in 2015, based in Boston, Massachusetts, and intends to be certified as a public benefit company.

## Status

	Now	Prior to close
Project financing	Financing letter	Yes
Demonstration system	Ready	Yes
Rider-Revenue study	Preliminary	Yes
Environmental study	Expedited	Yes
Air rights	Letter of Intent	Yes
Permitting	Expedited	Yes
Safety certification	Expedited	Yes
Construction firm	Letter of interest	Contract
Design and major subs	Letter of interest	Contract
<b>Operations &amp; Maint</b>	Letter of interest	Contract
Utility relocation	Identified	Agreements

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

## 12-year Pro Forma



## **Model Inputs and Assumptions**

Route length (km)	71			
Starting number of pods	1,003			
Projected revenue growth	15%			
Project Cost (Privately funded)	\$283,774,100			
% Debt financed	70%			
Debt	\$198,641,870			
Equity	\$85,132,230			
Capital return per year	\$17,026,446			
Debt payment (per year)	\$25,725,031			

#### Travel per year per pod (km) 168,214

- Revenue per vehicle-km (US\$) 0.90
  - OPEX as % of project cost 5%
    - Debt Interest rate 5%
      - 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%

#### Pro Forma

Ye	ars O		1	2	3	4	5	6	7	8	9	10	11	12
Revenue	0	)	152,250,992	175,088,640	201,351,936	231,554,727	266,287,936	306,231,126	352,165,795	404,990,665	465,739,264	535,600,154	615,940,177	708,331,204
5% RoW+tax+fee	0%	b	7,612,550	8,754,432	10,067,597	11,577,736	13,314,397	15,311,556	17,608,290	20,249,533	23,286,963	26,780,008	30,797,009	35,416,560
Debt service	٥	)	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	\$25,725,031	0	0
Investor balance			-\$55,169,414	-\$23,135,663	\$11,279,662	\$48,433,797	\$88,737,565	\$132,663,410	\$167,133,486	\$206,393,760	\$251,162,759	\$302,266,795	\$363,228,624	\$432,568,537

#### **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 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.