



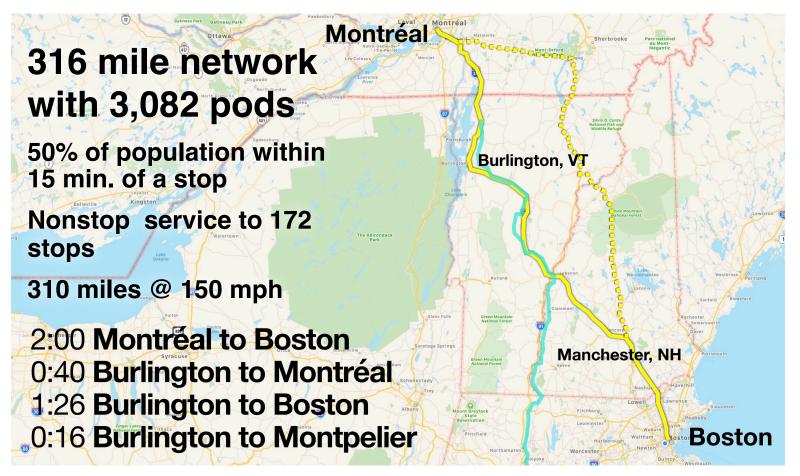
Transit X presents a preliminary proposal for a privately-financed public transit system — a fleet of automated electric vehicles (pods) for passengers and freight on a local and inter-city micro-guideway providing equitable transportation for

# **Montréal to Boston**

This proposal is downloadable at transitx.com/proposals/Transit X for Montreal to Boston.pdf

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

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





#### Transit X proposes to finance, build and operate a sustainable microguideway to carry passengers and freight for Montréal to Boston that makes the Transit X service convenient to 50% 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, accessibility, sustainability, fares,



renewable energy & storage, construction, aesthetics, operations, economic development, quality of service, security, station footprint, equitability, carbon footprint, transit integration, resiliency, reliability, rights-of-way, and open space.

#### Congestion, parking, pollution, and safety

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

#### **High Capacity & High Speed**

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

#### Zero Footprint and Minimal Disruption

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

#### Low-cost Infrastructure & equitable fares

Transit X 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 typically financed by impact investors, private wealth funds, commercial banks, sovereign wealth funds, and governments.

#### **Proven technology**

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

#### **Service Quality**

Transit X provides on-demand, last-mile service that is superior to cars or buses. An operating agreement will guarantee high levels of availability and reliability. Our use of small vehicles (pods) makes this possible. By reducing car use, 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 guideway. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced. Parking lots and roadways can be converted into green space and community paths as they become unnecessary.

#### Sustainable and Efficient

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

#### More Transit & Fewer Cars

Transit X provides the convenience and privacy that people value in cars, yet without their negative impacts. Transit X combines the best of mass transit and personal transportation modes which 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. We welcome labor unions.

#### **Revenue Generator for Government**

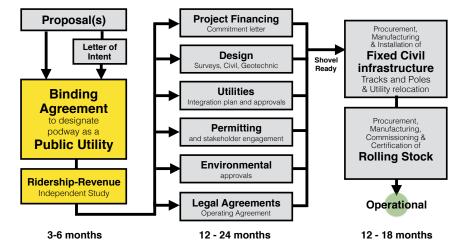
Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$70 million per year average over the first 10 years.

#### 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 are re-invested in the community and region.

#### **Moving Forward**

The diagram shows our process for a project. We submit a project proposal, then ask for a commitment for Transit X to build and operate a podway along rights-of-way easements. 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.

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

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

#### **Other Resources**

The links below provide general information about Transit X:

- One minute video overview (transitx.com/video)
- 7 minute video presentation (https://vimeo.com/366066646/eac953c0cc)
- Transit X Handbook (<u>transitx.com/transitxhandbook.pdf</u>)
- Company profile (transitx.com/about.pdf)
- Other proposals (transitx.com/proposals)
- The process and templates for agreements (transitx.com/process)

#### Addendum

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

- Project Overview and Impact pages 6 and 7
- 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 Montréal to Boston through better transportation.

Sincerely,



Email: hello@transitx.com Telephone: +1 508-596-7024 (WhatsApp connected) Zoom e-room: https://zoom.us/j/8229009123 Website: transitx.com Twitter: http://twitter.com/TransitXCorp Mail: 1127 Commonwealth Ave #30, Boston, MA 02134 USA



## **Project Overview**



1	Transit X network length	510.2	km	316.9 miles
2	People (resident-equivalent) in region	7,931,042	resident-equivalent p	opulation
3	Route density ratio (route length to service area)	0.05		
4	Number of stops	172		
5	Triple-speed route length	500	km	310 miles
6	Water crossing route length	0	km	
7	Cost of fixed infrastructure	\$5,477,510,204		
8	per person	\$691		
9	Mode share of travel on Transit X (2% after first year)	8%	after 10 years	
10	Distance traveled by passengers on Transit X, per year	2,379,550,531	km	1,477,981,696 miles
11	…per day	6,519,317		4,049,265 miles
12	Daily potential energy generation with standard panels on guideways	3,918.4		
13	Sustainable energy use per day	44.2	MWh	1.0% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$250 per kWh	\$11,050,626		
15	Size (rated power) of solar installation	10,276	KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$10,276,378		
17	Cost of buying sustainable energy at \$0.15 per kWh	\$6,630		1% of OPEX
18	Daily passengers riding Transit X		customers	8% of the pop.
19	Distance per passenger per day	11	km	6.8 miles
20	Average distance per trip (assuming 3 trips per day)		km	2.3 miles
21	Single passenger fare for shared 4 km trip	\$1.04		000.050
22	Passenger distance traveled during peak hour	1,303,863		809,853 miles
23	Breakeven	537,791	customers per day (9 of people convenient	0% of expected and 14% to Transit X)
24	Boarding capacity		passengers per hour	
25	Number of pods for peak demand	3.082	pods at 8% mod	de share
26	Number of customers per pod		and 2,573 people	
27	Distance per pod per year	565,367		
28	Two-layer pod garage area (2% of route with side-parking)	3,390		0.1% of car parking
29	Cost of pods		is \$2 per person	1 0
30	Capital cost of energy generation and storage		is \$3 per person	
31	Project Finances	. , ,		
32	Total Project Cost	\$5,525,268,308		
33	Project cost per km	\$10,829,526	per km	US\$17.5M per mi.
34	Equity financing	\$1,657,580,493		
35	Debt financing	\$3,867,687,816		
36		, - , , , <b>-</b> . •		
37				
38				
39	Debt service (per year)	\$657,506,929		
40	Yearly fees and taxes (US\$11 per capita)	\$88,337,191		
41				
42 43				
44	Project costs – per person	\$697		
45	Number of motor vehicles displaced		motor vehicles	
46	Yearly cost of cars displaced — per person	\$270		
	Operating costs per passenger-km	\$0.12		
47	Full costs per passenger-km	\$0.43		
48	Breakeven revenue distance per day	5,893,602	km	3,660,622 miles
		0,000,002		

## Project Overview p. 2



#### 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 (1,352 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 guideway length	4		
16	Walking speed		km/h	3 mph
17	Width of convenient swath along guideway	9.80	km	6 mile
18	Fixed cost per km (track & posts)	\$2,790,000		
19	Water crossing: additional cost per km	\$8,370,000		
20	Triple-speed: additional cost per km	\$5,580,000		
21	Rate factor for water crossings or high-speed links.	2.2		
22	Average distance traveled per person per year in a developed county for trips under 1600 km)	10,000	km	6,211 miles
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 guideway	23,598	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	242	km/h	150 mph
30	Average # of trips for a daily customer	3	per day	
31	Average passengers per pod during peak hours	2.2	passengers	
32	Average passengers per pod	1.4	passengers	
	Average discount per passenger	18%		
33	Maximum passengers per pod	5	passengers	
34	Empty pods: Percentage non-revenue	25%		
35	Ex-Factory cost per pod	\$5,000		
36	Worldwide Median Income per Household (US\$)	10,000		
37	Average number of residents per household	2.3		
38	Base fare per km	\$0.48		
39	(per mile)	\$0.76		
40	O&M as % of project cost	5%		
41	Percentage debt financed	70%		
42	Length of loan/debt	10	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)	\$13.75		
46	Est. roadway maintenance per year per km	\$100,000		
47	Area of one parking lot space	23	m <sup>2</sup>	247 sf
48	Commercial income of land (annual)	\$1.10	per m <sup>2</sup>	
49	Distance from roadway that is convenient	2.97	km	
50	Stops per km	0.3		
51	Boarding capacity per stop	360	pph	
52	Solar panel area per meter of guideway	2.0		
53	Cost of sustainable energy and storage	\$0.15	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%		
66	Mode share starting discount	67%		
67	Price on Metric Ton of Carbon	\$40		
51		ψro		

234,981	MTCO2-eq annually
\$336,734,694	annually
38,132	metric tons annually
194	hrs/person annually
\$579	per person annually
6%	
1,475	annually
15	annually
5,472,966	m <sup>2</sup>
0.5 to 2	D°
High	

#### Model Inputs (continued)

68	Name of region or project	Montréal to Boston
69	Currency name	
70	Equal to US\$1	1
71	Sustainable energy/electricity generation & storage as	CAPEX
72	Land area of region (sq. km)	100,000
73	Number of residents in region	7,931,042
74	% travel within region	40%
75	% of land area served by roads	10%
76	Coverage: % of pop. convenient (60 min walk) to Transit X	50%
77	Annual median household income (US\$)	\$55,000
78	Convenient walk time to stop (min)	60
79	Triple-speed route length (km)	500
80	Water crossing route length (km)	0.0
81	Visitors per year	0
82	Average length of visit (days)	2
83	Solar production ratio	1.57
84	Regional Fare Factor	1.0
85	EPC costs & contingency	30%
86	Triple-speed (km/h)	242
87	Daily Passengers Adjustment	100%
88	Number of Stops Adjustment	100%
89	Mode Share Adjustment	100%

## Pod & Car

		Pod	Car
90	Service life (years)	20	12
91	Full cost of vehicle per year	\$200	\$9,000
92	Public cost to maintain infrastructure per year per km	\$0	\$100,000
93	Energy consumption (MPGe)	3564	24
94	Energy consumption (liters/100km)	0.07	9.8
95	Energy consumption (Watt-hours/km)	9	1375
96	mass of CO2 per vehicle per km (kg)	0	0.09875
97	Vehicle mass (kg)	45	1950
98	Average speed of urban travel (km/h)	72	16
99	Typical travel time (in minutes) for 4 km trip	3	14
00	Fare/cost per km	\$0.48	\$0.62
01	Number of deaths per 100M passenger-km	0.00001	1
02	Number of injuries per 100M passenger-km	0.0006	62
03	Volume to park (cubic meters)	5.7	70.9

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## **Taxes and Fees**

#### 5% of gross revenue is paid for air rights and local taxes.

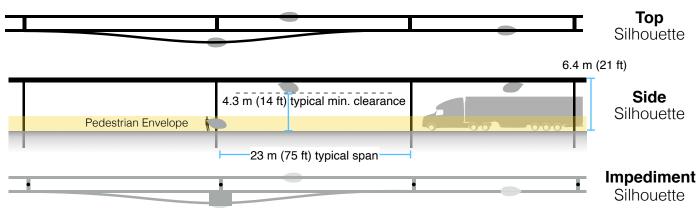
A minimum payment is based on the Footprint and the Transit X Commercial Rate (TXCR).

1	Air-rights and Local Taxes		(for calculating m	ninimums)
2	Total commercial land (estimated)	1,000,000,000	m²	247,105 acres
3	Total commercial gov't revenue (US\$)	\$1,100,000,000		
4	TXCR (Transit X Commercial Rate)	\$1.10	per m <sup>2</sup> (estimated)	
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 (estimated)	
6				
7	Private Easement Fees	For exam	ple	
8	4% of gross revenue	\$34.63	per route-meter	\$10.56 per route-foot
9	Minimum per year	\$1.66	per route-meter	<b>\$0.51</b> per route-foot
10	Transit X payment to Gover	rnment		
11	% of route on government easements	98%	estimated	
12	Total air-rights and local taxes	\$86,923,796	per year	
		\$11		
13	per resident	<b>v</b>		
13 14	with a minimum of	\$847,659	per year	

## 16 Other financial benefits to Government

- 17 Less road maintenance from lower VMT
- <sup>18</sup> Public land made available from less parking and lanes
- 19 Reduced emergency and police services for road-related incidents
- <sup>20</sup> Less investment needed in road-based infrastructure (charging stations, signals, BRT, etc)

## Footprint calculations for minimum fee



Pod landing area: 1.5m x 2.5m with 3m minimum spacing

1	Footprint Calculations	Metric		Imperial	
2	Guideway width	<u>0.30</u> r	n	11.8	inches
3	Guideway height	<u>0.60</u> r	n	23.6	inches
4	Post diameter	<u>0.35</u> r	n	13.8	inches
5	Post cross section	<u>0.10</u> r	m²	1.0	sf
6	Stop landing area	<u>3.75</u> r	m²	40.4	sf
7	width	<u>1.5</u> r	n	59.1	inches
8	length	<u>2.5</u> r		98.4	inches
9	Ramp length	<u>21</u> r		68.9	
10	Typical Span	<u>23</u> r		75.5	
11	Number of posts per unit length	<u>43.5</u> p	ooles per km	70.0	poles per mile
12	Post height	<u>6</u> r	n	19.7	feet
13					
14	Single guideway	1046.3 r	m²	11258	sf
15	Area of Side Silhouette	691.3 r	m²	7438	sf
16	Area of Top Silhouette	313.1 r	m²	3369	sf
17	Impediment Area (adjusted)	41.8 r	m²	450	sf
18					
19	Dual guideway	1346.3 r	m²	14486	sf
20	Area of Side Silhouette	691.3 r	m²	7438	sf
21	Area of Top Silhouette	613.1 r		6597	
22	Impediment Area (adjusted)	41.8 r	m²	450	sf
23					
24	Stop	82.1 r	m²	883	sf
25	Area of Side Silhouette	25.2 r	m²	271	sf
26	Area of Top Silhouette	19.4 r	m²	208	
27	Impediment Area (adjusted)	37.5 r	m²	404	sf
28					
29	Stops with dedicated landing areas	2 9	stops per km	3.2	stops per mile
30	% of dual guideway	100%		0.2	Stops per mile
31		10070			
32	Average area per unit length	1,510 r	m² per route-km	26,212	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			



SummaryFaster travel saves a household 295 hours per year.\*At 0.46 USD per mile, a typical commute on Transit X is<br/>17% less than public transit and 74% less than a Taxi.\*

									Trip	o Le	eng	th	
All prices in USD					1 m	ile			6	m	ile	)	25 mile
Transit X				2 m	<b>0.</b> to 0		ster			<b>2.8</b> to 4.	71	ster	<b>10.80</b> to 18.40 33 min., 3.4x faster
Public transit average					3.	19			Ę	5.0	)7		7.43
lodes	Тах	i		2	<b>4.4</b> to 6 n	<b>12</b> hinute	S			<b>19.2</b> 30 m		es	<b>74.83</b> 30 to 120 minutes
Common public modes	Uber/Lyft			<b>3.36</b> 2 to 6 minutes				<b>13.86</b> 8 to 30 minutes			es	<b>53.20</b> 30 to 120 minutes	
d uou	ublic	Bus		3	<b>2.</b> to 12 r	57 ninute	es		15 to	<b>2.5</b> 60 r		tes	<b>3.93</b> 60 to 240 minutes
Com	Trai	n		2	<b>3.8</b> to 12 r	<b>35</b> minute	es		8 to	<b>4.5</b> 60 m	-	es	<b>7.10</b> 30 to 240 minutes
Personal car				2 t	<b>3.</b>	65 ninute	es		<b>1</b> 8 to 3	<b>1</b> _4 30 n		tes	<b>40.50</b> 30 to 120 minutes
Travel mode	Avg. Speed km/h	Low Speed km/h	High speed km/h	Base	Includ es km	Over per-km	Min Dist km	Max Dist. km	Time cost per min		shar 70%		* All numbers on mode shares, speeds, and cos are rough estimates.
Тахі	30	20	80	2.57	1		0.5	100	1.14	5%	4%	1%	
Uber/Lyft	30	20	80	2.05	1	1.03	0.5	100	0.57	10%	10%	2%	
Public Bus	15	10	40	2.57	20	0.07	0.5	50	0	50%	50%	40%	
Train	30	10	80	3.85	2	0.09	2	100	0	35%	36%	57%	
Transit X	72	72	72	0	0	0.29	0.1	50	0	-	-	-	

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.

0.86 0.1 400 0.23

-

20

80

1.71

0

30

Personal car



## **Fair Fare Formula**

## Fare rates are updated annually using this formula

	Name	Value	Units	Description of the value or model input	
1	GlobalIncome	10,000	USD	Global median household income. Updated annually based on most recent standard published data.	
2	AllTravel	23,000	km	Travel distance per household per year on any mode for trips under 1600 km. A global constant	
3	PercentIncomeForTr ansport	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 / AllTravel	
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	1.00		Regional Fare Factor. Negotiated upfront to make network financially viable.	
11	AdjustedRate	0.48	USD/km	Regional adjusted rate: NominalRate * RegionalFactor	
13	Population	7,931,042		Population in region. Updated annually based on trusted public data source.	
12	UsageMaxDiscount	50%		Fare Discount when Transit X travel per household equals AllTravel. Global constant.	
14	PassengerTravel	2,379,550,531	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	1%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)	
16	BaseRate	0.48	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	1.05	USD/km	Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor	
19	DistanceDiscount	40%		Distance discount at max distance. Global constant.	
20	MaxDistanceDiscou nt	500	km	Max distance discount. Global constant.	
21	DistanceDiscountPe rKm	0.000380	USD/km	Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount	
22	SeniorDiscount	20%		Senior discount set according to local regulations	
23	StudentDiscount	20%		Student discount set according to local regulations	
	DisabilityDiscount	20%		Disability discount set according to local regulations	
24	DiscountBaseRate	0.38	USD/km	Discounted base rate: BaseRate x (1 - SeniorDiscount)	
25	SharedPodDiscount	20%		Discount for requesting a shared pod. 15% minimum and 30% maximum.	
26	SharedPodRate	0.38	USD/km	Rate for a shared pod: BaseRate x (1 - SharedPodDiscount)	
27	SharedCompartment Discount	40%		Discount for requesting a shared compartment. 25% minimum and 40% maximum. At least 10 percentage points higher than SharedPodDiscount.	
28	SharedCompartment Rate	0.29	USD/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)	
29	SingleOccupancyMa xDistance	0.32	USD/km	Rate for 500 km in single-passenger pod.	
30	Senior + SharedCompartment Rate	0.14	USD/km	Rate for a Senior taking a 500 km trip in a shared compartment. BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount)	
31	50PctIncomeAtDest	25%		% Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2	
32	DistanceBase	1,760,867,393	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	685,670,306	USD	Annual revenue from all travel under base rate. Audited value from operational data.	
35	AverageDiscount	18%		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	18%		Cap on passenger travel distance at market rate: AverageDiscount x MarketFactor	
38	MarketTravelCap	317,780,742	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap	

## **Project Summary**

**Project** A micro-guideway automated pod network **Description** providing a public transportation utility.

Project type Sustainable Transportation Infrastructure Design, Build, Finance, Own, Operate, Maintain (DBFOOM)

Project equity US\$1.66 billion (30% of total)

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 \$86,923,796 per year

Benefits to society and Extremely high environment

Estimated return (28%) average IRR at 5 yrs 3% average IRR at 10 yrs

Financials (US\$ in millions)	Year 1	Total Years 1-12
Gross Revenues	583	16,908
Taxes and fees	29	845
Debt service	\$271	\$2,978

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

Clean Energy	yes	Improve Resiliency	yes
Energy security	yes	Sustainable	yes
Zero Emissions	yes	Equitable	yes
Zero GHG	yes	<b>Recyclable Materials</b>	yes
Lowers Pollution	yes	Affordable Housing	yes
Clean Water	yes	Improved Health	yes
Improved Safety	yes	Economic Development	yes
Add Green Space	yes	Access to Food	yes
Accessible	yes	Add Quality Jobs	yes





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

#### Montréal to Boston

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



#### About Transit X

Transit X finances, designs, builds, and operates sustainable micro-guideway 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 2019. First pilots will break ground in 2020 and begin operations in 2021. Transit X is a privately held company founded in 2015, based in Boston, Massachusetts.

#### Status

	Now	Prior to close
Project financing	Available	Yes
Test System	2018	Yes
Rider-Revenue study	Internal model	Yes
Environmental study	Per region	Yes
Air rights	Per project	Yes
Permitting	Per project	Yes
Safety certification	Per country	Yes
Construction firm	Per project	Yes
Design and major subs	Per project	Yes
<b>Operations &amp; Maint</b>	Partners	Yes
Utility relocation	Per project	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, Transit X, <u>mike@transitx.com</u>, 508-596-7024

## 12-year Pro Forma



#### **Model Inputs and Assumptions**

Route length (km, miles)	510	316	Travel per year per pod (km)	565,367
Starting number of pods	1,017		Revenue per vehicle-km (US\$)	1.01
Projected revenue (and OPEX) growth	15%		OPEX as % of project cost	5%
Project Cost (Privately funded)	\$5,525,268,308		Debt Interest rate	7%
% Debt financed	70%		Debt term (yrs)	10
Debt	\$3,867,687,816	Profit	share when below capital return	90%
Equity	\$1,657,580,493	Pro	fit share when below Target IRR	50%
Debt payment (per year)	\$270,738,147	Pro	fit 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	582,991,066	670,439,726	771,005,685	886,656,538	1,019,655,019	1,172,603,271	1,348,493,762	1,550,767,826	1,783,383,000	2,050,890,450	2,358,524,018	2,712,302,620
Revenue as % of target		33%	38%	44%	50%	58%	66%	76%	88%	101%	116%	133%	154%
5% RoW÷tax÷fee (\$)	0%	29,149,553	33,521,986	38,550,284	44,332,827	50,982,751	58,630,164	67,424,688	77,538,391	89,169,150	102,544,523	117,926,201	135,615,131
Debt service (\$)	0	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147	270,738,147

Investor share (\$)	0	5,540,360	39,266,099	78,050,698	122,652,988	173,945,621	232,932,149	300,766,656	378,776,340	468,487,475	262,426,913	275,609,466	290,769,402
Investor share (%)		90%	90%	90%	90%	90%	90%	90%	90%	90%	41%	36%	32%
Share / Orig Capital	0%	0%	2%	5%	7%	10%	14%	18%	23%	28%	16%	17%	18%
IRR to date	loss	loss	loss	(62%)	(42%)	(28%)	(17%)	(9%)	(3%)	1%	3%	5%	6%
Carbon Offset Credits (\$)	0	3,101,561	3,566,795	4,101,815	4,717,087	5,424,650	6,238,347	7,174,099	8,250,214	9,487,746	10,910,908	12,547,545	14,429,676

#### **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 made. Except as required by law, Transit X undertakes no obligation to update any forward looking statement to reflect two courrence 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 awill be achieved or which are referred to by or accessible form them represent present in pursuing the Company's business plan awill 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.

# Jobs Report\*

This would create 24,100 new jobs in manufacturing, construction, and operations. About 95,200 existing transportation jobs would be impacted — of which 1,400 workers would need significant retraining. Improving the transportation infrastructure will boost the economy overall and lead to 40,400 new jobs. Lowering the cost of transportation and reducing travel times raises household income by 6%.

1	Annual median household income (US\$)	\$55,000	
2	CAPEX	400,000	
3	Average gross CAPEX salary (% of median HH)	125%	
4	Average gross CAPEX salary	\$68,750	
5	% of CAPEX as salary	15%	
6	Years of CAPEX	2	
7	# of CAPEX jobs	6,030	
8	% of jobs that are manufacturing vs. construction	75%	
9	Manufacturing jobs	4,520	
10	Construction jobs	1,510	
11	Supply chain jobs factor	3	
12	Jobs in supply chain	18,090	
13	Average gross OPEX salary (% of median HH)	115%	
14	Average gross OPEX salary	\$63,250	
15	% of OPEX as salary	30%	
16	<b>Operations and Maintenance jobs</b>	1,310	
17	Secondary-effect jobs factor	7%	
18	Secondary effect jobs	40,380	
19	Job transitioning and training		
20	Expected mode share at 10 years (from page 6, line 9)	8%	
21	% of population with a full-time job	60%	4,758,625
22	jobs in transportation	10%	475,863
23	jobs impacted with this proposed network	20%	95,173
24	jobs requiring significant retraining	20%	19,035
25	Jobs needing retraining with this proposed network (over 10 years)	0.0%	1,430
26	Training cost per person as % of salary (from line 13)	100%	\$63,250
27	Number of years that training is divided across	10	
28	Ratio (as %) of training costs vs. gov't revenue from Transit X	10%	\$9,044,750

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