



Transit X presents a preliminary proposal for a sustainable micro-rail network a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

# **Montgomery County, PA**

This proposal is downloadable at transitx.com/proposals/Transit X for Montgomery County,PA.pdf

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

A companion Transit X Handbook is available at <a href="https://transitx.com/transitxhandbook.pdf">transitx.com/transitxhandbook.pdf</a>

# 767 mile network with 20,392 pods

95% of population within a 5 min. walk

Nonstop 45 mph service to 5,000 stops



## Transit X proposes to finance, build and operate a sustainable microrail podway to carry passengers and freight for Montgomery County 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 & High Speed**

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. 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 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. There are options for long crossings using bridges or underground tunnels. Posts are typically spaced at 23 m (25 yds).

## 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 investment banks, private equity firms, banks, 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 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 55 kg (121 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 for Government**

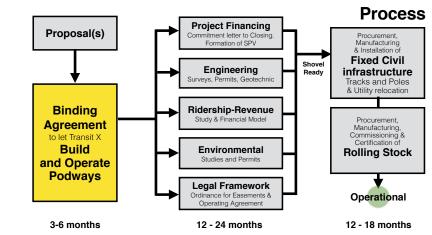
Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$122 million per year average over the first 10 years.

## 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



## 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.

A podway network is rolled out in phases that each take less than 24 months.

#### **Other Resources**

The links below provide general information about Transit X:

- · One minute video overview (transitx.com/video)
- <u>Transit X Handbook</u> (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 Right-of-Way agreement (<u>transitx.com/process/resolution.html</u>)
- · Operating Agreement (transitx.com/process/operating\_agreement.html)
- · 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 Montgomery County through better transportation.

Sincerely,



Email: rodneydixon@transitx.com or hello@transitx.com Telephone: +1 818-855-4106 (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	1,237	km	768.3 miles
2	People (resident-equivalent) in region	828,604	resident-equivalent p	oopulation
3	Route density ratio (route length to service area)	1.16		
4	Number of stops	5,000		
5	Triple-speed route length	0	km	
6	Water crossing route length		km	
7	Cost of fixed infrastructure	\$4,486,447,258		
8	per person	\$5,414		
9	Mode share of travel on Transit X (27% after first year)	81%	after 10 years	
10	Distance traveled by passengers on Transit X, per year	4,683,684,110		2,909,120,565 miles
11	…per day	12,832,011	km	7,970,193 miles
12	Daily potential energy generation with standard panels on tracks	9,499.8		
13	Sustainable energy use per day	87.0	MWh	1.0% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$250 per kWh	\$21,751,015		
15	Size (rated power) of solar installation	20,227	KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$20,227,058		
17	Cost of buying sustainable energy at \$0.15 per kWh	\$13,051		2% of OPEX
18	Daily passengers riding Transit X	669,098	customers	81% of the pop.
19	Distance per passenger per day	-	km	11.9 miles
20	Average distance per trip (assuming 3 trips per day)	6	km	4.0 miles
21	Single passenger fare for shared 6 km trip	\$1.61		
22	Passenger distance traveled during peak hour	2,566,402		1,594,039 miles
23	Breakeven	321.254	customers per day (	48% of expected and 41% to Transit X)
24	Boarding capacity			r (269% of customers)
25	Number of pods for peak demand			
		<u>/// 34/</u>	nodo of 010/m	ada ahara
			pods at 81% m	
26	Number of customers per pod	32.8	and 41 people per	
26 27	Number of customers per pod Distance per pod per year	32.8 168,189	and 41 people per km	r pod
26 27 28	Number of customers per pod Distance per pod per year Two-layer pod garage area (3% of route with side-parking)	32.8 168,189 22,431	and 41 people per km m <sup>2</sup>	r pod 0.2% of car parking
26 27 28 29	Number of customers per pod Distance per pod per year Two-layer pod garage area (3% of route with side–parking) Cost of pods	32.8 168,189 22,431 \$132,548,000	and 41 people per km m <sup>2</sup> is \$123 per person	r pod 0.2% of car parking
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## 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 (2,662 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	4		
16	Walking speed	4.9	km/h	3 mph
17	Width of convenient swath along track	0.82	km	1 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	10,000	km	6,211 miles
	(for trips under 1600 km)			0,211 111100
23	Average distance per day per person		km	
24	Mode share % of people convenient to Transit X		at 5 min walk.	
25	Percentage of daily demand during peak hour	20%		
26	Maximum capacity per track	23,598		
27	Average dwell time during peak hour		seconds	
28	% of pods traveling on route with highest demand	18%		
29	Average speed of pod		km/h	45 mph
30	Average # of trips for a daily customer		per day	
31	Average passengers per pod during peak hours		passengers	
32	Average passengers per pod		passengers	
	Average discount per passenger	18%		
33	Maximum passengers per pod		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	\$0.42		
39	(per mile)	\$0.68		
40	O&M as % of project cost	5%		
41	Percentage debt financed	70%		
42	Length of loan/debt Interest rate for debt	7%	years	
43	kg CO2 emissions per liter of gasoline	2.37		
44	Monetary value of 1 hour personal time (USD)	\$13.75		
45	Eat. roadway maintenance per year per km	\$51,000		
46	Area of one parking lot space		m <sup>2</sup>	247 sf
47	Commercial income of land (annual)		per m <sup>2</sup>	247 51
48	Distance from roadway that is convenient	0.25	1	
49 50	Stops per km	4.0	NIII	
51	Boarding capacity per stop	360	nnh	
52	Solar panel area per meter of track	2.0	ppn	
52	Cost of sustainable energy and storage		per kWh	
54	Global Horizontal Irradiance (GHI)		kWh/m²/dav	
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%		
	5			

462,514	MTCO2-eq annually
\$219,136,904	annually
75,056	metric tons annually
340	hrs/person annually
\$1,404	per person annually
11%	
2,904	annually
29	annually
10,772,473	m <sup>2</sup>
0.5 to 2	°C
High	

#### Model Inputs (continued)

68	Name of region or project	Montgomery County,
69	Currency name	
70	Equal to US\$1	1
71	Sustainable energy/electricity generation & storage as	CAPEX
72	Land area of region (sq. km)	1,251
73	Number of residents in region	828,604
74	% travel within region	70%
75	% of land area served by roads	85%
76	Coverage: % of pop. convenient (5 min walk) to Transit X	95%
77	Annual median household income (US\$)	\$55,000
78	Convenient walk time to stop (min)	5
79	Triple-speed route length (km)	0
30	Water crossing route length (km)	0.0
31	Visitors per year	0
32	Average length of visit (days)	2
33	Solar production ratio	1.57
34	Regional Fare Factor	1.0
85	EPC costs & contingency	30%
36	Triple-speed (km/h)	242
37	Daily Passengers Adjustment	100%
38	Number of Stops Adjustment	100%
19	Mode Share Adjustment	100%

## 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 6 km trip	5	24
97	Fare/cost per km	\$0.42	\$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



## **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).

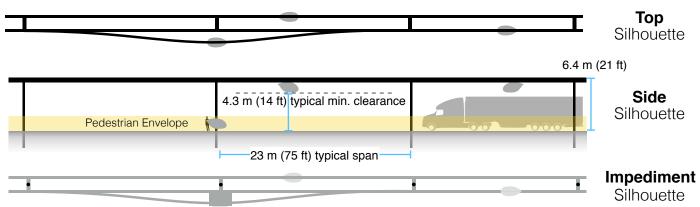
1	Air-rights and Local Taxes		(for calculating m	ninimums)
2	Total commercial land (estimated)	106,335,000	m²	26,276 acres
3	Total commercial gov't revenue (US\$)	\$116,968,500		
4	TXCR (Transit X Commercial Rate)	\$1.10	per m <sup>2</sup> (estimated)	
5	TXCR is the yearly tax rate per land area. Calculation: 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	\$24.82	per route-meter	\$7.57 per route-foot
9	Minimum per year	\$1.63	per route-meter	\$0.50 per route-foot
10	Transit X payment to Gove	rnment		
11	% of route on government easements	98%	estimated	_
	Total air-rights and local taxes	\$151,053,942	per year	
12				
12 13	per resident	\$182		-

15

## <sup>16</sup> 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	Imperia	I
2	Track width	<u>0.30</u> m	11.8	inches
3	Track height	<u>0.60</u> m	23.6	inches
4	Post diameter	<u>0.3</u> m	11.8	inches
5	Post cross section	<u>0.07</u> m <sup>2</sup>	0.8	sf
6	Stop landing area	<u>3.75</u> m <sup>2</sup>	40.4	- sf
7	width	<u>1.5</u> m		inches
8	length	<u>2.5</u> m	98.4	inches
9	Ramp length	<u>21</u> m	68.9	feet
10	Typical Span	<u>23</u> m		feet
11	Number of posts per unit length	<u>43.5</u> poles	per km 70.0	poles per mile
12	Post height	<u>6</u> m	19.7	feet
13				
14	Single track	1022.1 m <sup>2</sup>	10998	sf
15	Area of Side Silhouette	678.3 m <sup>2</sup>	7298	sf
16	Area of Top Silhouette	313.1 m <sup>2</sup>	3369	sf
17	Impediment Area (adjusted)	30.7 m <sup>2</sup>	331	sf
18				
19	Dual track	1322.1 m <sup>2</sup>	14226	i sf
20	Area of Side Silhouette	678.3 m <sup>2</sup>	7298	
21	Area of Top Silhouette	613.1 m <sup>2</sup>	6597	
22	Impediment Area (adjusted)	30.7 m <sup>2</sup>	331	sf
23	[			
24	Stop	82.1 m <sup>2</sup>	883	sf
25	Area of Side Silhouette	25.2 m <sup>2</sup>	271	
26	Area of Top Silhouette	19.4 m <sup>2</sup>	208	sf
27	Impediment Area (adjusted)	37.5 m <sup>2</sup>	404	sf
28			10	51
29	Stops with dedicated landing areas	2 stops	perkm 3.2	stops per mile
30	% of dual track	100%	per kill 5.2	
31		10070		
32	Average area per unit length	1,486 m² per	route-km <b>25.793</b>	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		
		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	prices i	n USE			1 m	ile			6	m	ile	)	25 mile
Transit X				<b>0.50</b> to 0.84 2 min., 3.6x faster				<b>2.48</b> to 4.16 8 min., 3.6x faster				<b>9.53</b> to 16.24 33 min., 3.4x faster	
Ρι	ublic tra averaç		:		2.8	81			4	1.4	18		6.56
nodes	Та	xi		2	<b>3.</b> 9 to 6 n	90 ninute:	s			<b>16.9</b> 30 m		es	<b>66.07</b> 30 to 120 minutes
ublic n	Uber/Lyft			<b>2.97</b> 2 to 6 minutes				<b>12.23</b> 8 to 30 minutes		es	<b>46.97</b> 30 to 120 minutes		
Common public modes	Public	c Bus		31	<b>2.2</b> to 12 r	<b>27</b> minute	es		15 tc	<b>2.2</b>		tes	<b>3.47</b> 60 to 240 minutes
Comr	Tra	ain		2	<b>3.4</b> to 12 r	<b>10</b> minute	es		8 to	<b>4.0</b> 60 m	-	es	<b>6.27</b> 30 to 240 minutes
Personal car			2 t	<b>3.</b> 2	25 ninute	es		<b>1</b> 8 to 3	<b>0</b> . 30 m			<b>36.30</b> 30 to 120 minutes	
Travel mod		ed Speed	High speed km/h	Base	Includ	Over	Dist	Max Dist. km	Time cost	6%	e shar 70% 10	-	* All numbers on mode shares, speeds, and cos are rough estimates
Taxi	30 ale		кп/п 80	2.27	es km	per-km	0.5		per min	2 5%	4%	40	<b>,</b>
Uber/Lyft			80	1.81	1		0.5		0.50	10%			
Public Bu	ıs 15	10	40	2.27	20	0.06	0.5	50	0	50%	50%	40%	

Train 30 3.40 0.08 2 100 10 80 2 0 35% 36% 57% Transit X 72 72 72 0 0 0.25 0.1 50 0 Personal car 0.76 0.1 400 30 20 80 1.51 0 0.23

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

	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	828,604		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	4,683,684,110	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	25%		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	0.92	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	500	km	Max distance discount. Global constant.	
21	nt DistanceDiscountPe rKm	0.000336	USD/km	Discount amount per km:	
22	SeniorDiscount	20%		BaseRate x DistanceDiscount / MaxDistanceDiscount 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	0.34	USD/km	Discounted base rate: BaseRate x (1 - SeniorDiscount)	
	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)	
	SharedCompartment			Discount for shared compartment. Set by Transit X per year. 25% minimum and 40% maximum.	
	Discount	40%		Maximum yearly change is one percentage point.	
28	SharedCompartment Rate	0.25	USD/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)	
29	SingleOccupancyMa xDistance	0.29	USD/km	Rate for 500 km in single-passenger pod.	
30	Senior + SharedCompartment Rate	0.12	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	3,465,926,241	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	1,191,540,263	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	625,489,810	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap	

## **Project Summary**

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

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

Project equity US\$1.40 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 \$151,053,942 per year

Benefits to society and Extremely high environment

Estimated return 15% average IRR at 5 yrs 25% average IRR at 10 yrs

Financials (US\$ in millions)	Year 1	Total Years 1-12
Gross Revenues	1,013	29,382
Taxes and fees	51	1,469
Debt service	\$229	\$2,519

#### 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

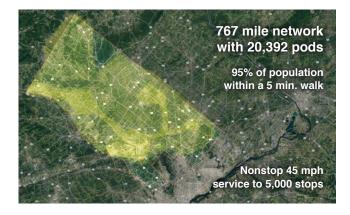




Transit X presents a preliminary proposal for a sustainable micro-rail network – a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

## Montgomery County, PA

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	Available	Yes
Outdoor Test Track	Nov 2019	Yes
Rider-Revenue study	Preliminary	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, CEO, Transit X, <u>mike@transitx.com</u>, 508-596-7024

## 12-year Pro Forma



## **Model Inputs and Assumptions**

Route length (km)	1,237
Starting number of pods	6,729
Projected revenue growth	15%
Project Cost (Privately funded)	\$4,673,566,754
% Debt financed	70%
Debt	\$3,271,496,728
Equity	\$1,402,070,026
Debt payment (per year)	\$229,004,771

- Travel per year per pod (km) 168,189
- Revenue per vehicle-km (US\$) 0.90
  - OPEX as % of project cost 5%
    - Debt Interest rate 7%
      - Debt term (yrs) 10
- Profit share when below capital return 90%
  - Profit share when below Target IRR  $\,50\%$
  - Profit share when above Target IRR 10%

## Pro Forma

	Years	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue		0	1,013,112,484	1,165,079,357	1,339,841,260	1,540,817,449	1,771,940,067	2,037,731,077	2,343,390,738	2,694,899,349	3,099,134,251	3,564,004,389	4,098,605,047	4,713,395,804
5% RoW+tax+fee		0%	50,655,624	58,253,968	66,992,063	77,040,872	88,597,003	101,886,554	117,169,537	134,744,967	154,956,713	178,200,219	204,930,252	235,669,790
Debt service		0	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771	\$229,004,771

Investor share	0	404,816,739	493,363,329	595,191,908	247,392,267	262,355,411	279,563,026	299,351,784	322,108,856	348,279,488	378,375,715	412,986,377	452,788,637
Investor share (%)		90%	90%	90%	31%	28%	25%	23%	21%	19%	18%	17%	16%
Share / Orig Capital	0%	29%	35%	42%	18%	19%	20%	21%	23%	25%	27%	29%	32%
IRR to date	loss	(71%)	(25%)	3%	10%	15%	18%	21%	23%	24%	25%	26%	27%

#### **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.