



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

# Williston, VT

This proposal is downloadable at transitx.com/proposals/Transit X for Williston,VT.pdf

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

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

## 12 mile network with 232 pods

# 80% of population within a 5 min. walk

Nonstop 45 mph service to 80 stops



# Transit X proposes to build and operate a green, privately-financed micro-rail podway to carry passengers and freight for Williston that makes the Transit X service convenient to 80% of the population.

Transit X efficiently services both suburbs and cities and provides for a higher quality of life. See transitx.com for more details. This 3-minute video (transitx.com/ video) describes our innovative solution.

#### **Major benefits**

- · Reduce congestion
- · Provide parking relief
- Reduce pollution
- Improve safety

The Transit X Handbook (<u>transitx.com/</u> <u>transitxhandbook.pdf</u>) answers many questions about our service, the company, our technology, and the way we address:



congestion, parking, road safety, pedestrian safety, ADA compliance, sustainability, fares, solar+storage, construction, aesthetics, operations, economic development, quality of service, security, station footprint, equitability, carbon footprint, transit integration, resiliency, reliability, rights-of-way, and open space.

## Congestion, parking, pollution, and safety

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

## No public funding

Transit X does not require government funding because our revenue from fares, freight, and advertising is greater than our costs. We have reduced or eliminated many costs of transportation including the cost of materials, land, construction, fuel, debt service, and labor. Our projects are financed by investment banks and private equity firms.

## **Proven technology**

Our team and partners have built fully automated systems that are now in operation around the world. Transit X may look unique, but the underlying design is very similar to systems that have been operating for 40 years with an exemplary safety record. The rollout and maiden flight occurred on Oct 29, 2018 in Leominster, Massachusetts. The first Transit X system will be operating by the end of 2019. We partner with local civil engineering and construction firms for the installation.

## **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\$1 million per year average over the first 10 years. For specifics, please see the "Taxes and

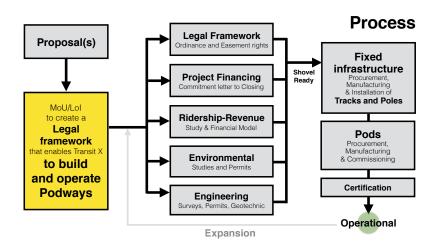
Fees" section of this proposal. These fees and taxes paid by Transit X enables lower taxes or more spending on public services.

## 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.

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

#### **Other Resources**

The links below provide general information about Transit X:

- · 2 minute video overview (transitx.com/video)
- <u>Transit X Handbook (transitx.com/transitxhandbook.pdf)</u>
- · 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 (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 Williston through better transportation.

Sincerely,

Mike Stanley Founder & Owner, Transit X



Telephone: +1 508-596-7024 (WhatsApp connected) Email: <u>mike@transitx.com</u> Zoom e-room: <u>https://zoom.us/j/8229009123</u> Website: <u>transitx.com</u> LinkedIn: http://linkedin.com/in/mikestanleymit/ 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**



1				
	Transit X network length	19	km	11.9 miles
2	People (resident-equivalent) in region	8,698	resident-equivaler	nt population
3	Route density ratio (route length to service area)	0.98		
4	Number of stops	80		
5	Triple-speed route length	0	km	
6	Water crossing route length	0	km	
7	Cost of fixed infrastructure	\$69,283,102		
8	per person	\$7,965		
9	Mode share of travel on Transit X (22% after first year)	68%	after 10 years	
0	Distance traveled by passengers on Transit X, per year	53,231,760	km	33,063,205 miles
1	per day	145,840		90,584 miles
2	Daily potential energy generation with standard panels on tracks	147	MWh	
3	Sustainable energy use per day	1	MWh	1% of max capacity
4	Energy storage capital cost for 1 day(s) of supply at \$100 per kWh	\$98,883		
5	Size (rated power) of solar installation	230	KW	
6	Cost to generate sustainable energy (at \$1,000 per kW)	\$229,888		
7	Cost of buying sustainable energy at \$0.15 per kWh	\$148	per day	2% of OPEX
8	Daily passengers riding Transit X	5,915	customers	68% of the pop.
9	Distance per passenger per day	25	km	15.3 miles
20	Average distance per trip (assuming 3 trips per day)	8	km	5.1 miles
1	Single passenger fare for shared 8 km trip	\$2.04		
2	Passenger distance traveled during peak hour	29,168		18,117 miles
3	Breakeven	3.420	customers per day	y (58% of expected and 49° ent to Transit X)
24	Boarding capacity			our (487% of customers)
	· · · ·			
5	Number of node for neak demand	232	made at 600/	mada ahara
	Number of pods for peak demand			mode share
6	Number of customers per pod	25.5	and 37 people p	
6 7	Number of customers per pod Distance per pod per year	25.5 168,016	and 37 people p km	per pod
6 7 8	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking)	25.5 168,016 255	and 37 people p km m <sup>2</sup>	0.2% of car parking
6 7 8 9	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods	25.5 168,016 255 \$1,508,000	and 37 people p km m <sup>2</sup> is \$133 per pers	per pod 0.2% of car parking son
6 7 8 9 0	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage	25.5 168,016 255 \$1,508,000	and 37 people p km m <sup>2</sup>	per pod 0.2% of car parking son
6 7 8 9 0	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage Oject Finances	25.5 168,016 255 \$1,508,000 \$427,402	and 37 people p km m <sup>2</sup> is \$133 per pers	oer pod 0.2% of car parking son
6 7 8 9 1 <b>Pr</b> (	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage Oject Finances Total Project Cost (privately financed)	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 3	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	per pod 0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 2 3 4	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> ( 2 3 4 5	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> ( 2 3 4 5 5	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 3 4 5 5 6 7	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 3 4 5 6 6 7 8	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551	and 37 people p km m <sup>2</sup> is \$133 per pers is \$49 per perso	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 2 3 4 5 6 6 7 8 9	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953	and 37 people p km m <sup>2</sup> is \$133 per perso is \$49 per perso per km	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 2 3 4 5 5 6 7 7 8 9 9 0	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$7,477,943	and 37 people p km m <sup>2</sup> is \$133 per perso is \$49 per perso per km	0.2% of car parking son
6 7 8 9 0 1 <b>Pr</b> 2 3 4 5 5 6 7 8 9 9 0 1 2	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$7,477,943	and 37 people p km m <sup>2</sup> is \$133 per perso is \$49 per perso per km	0.2% of car parking son
6 7 8 9 0 1 2 3 4 5 5 6 7 8 9 9 0 1 2 2 3	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita)	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$7,477,943 <b>\$1,724,482</b>	and 37 people p km m <sup>2</sup> is \$133 per person is \$49 per person per km	0.2% of car parking son
6 7 8 9 0 1 2 3 4 5 5 6 7 8 9 0 1 2 3 4	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita) OPEX 4 Debt service + Tex 4 Fees	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$49,852,953 \$7,477,943 \$1,724,482 \$12,763,350 \$8,188	and 37 people p km m <sup>2</sup> is \$133 per person is \$49 per person per km	0.2% of car parking son
6 (7) 8 (9) 9 (1) 1 <b>Pro</b> 3 (1) 5 (1) 8 (1) 9 (1) 1 (1) 2 (1) 3 (1) 1 (1) 2 (1) 3 (1) 1 (1) 2 (1) 3 (1) 1 (1	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita) OPEX + Debt service + Tax + Fees Project costs – per person Number of motor vehicles displaced	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$49,852,953 \$1,724,482 \$1,724,852,953	and 37 people p km m <sup>2</sup> is \$133 per person is \$49 per person per km	0.2% of car parking son
27       28       29       20       21       22       23       34       35       36       37       38       39       30       31       32       33       34       35       36       37       38       39       30       31       32       33       34       35	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Nebt service (per year) <b>Yearly fees and taxes (US\$198 per capita)</b> OFEX + Dobt corvice + Tex + Fees Project costs – per person Number of motor vehicles displaced	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$1,724,482 \$1,725,558	and 37 people p km m <sup>2</sup> is \$133 per person is \$49 per person per km	0.2% of car parking son
6 77 88 99 00 11 22 33 44 55 66 77 88 99 00 11 22 33 4 55 66	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita) OPEX 0 Debt Service 1 fox 0 Fees Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$49,852,953 \$7,477,943 \$1,724,482 \$8,188 \$5,323 \$5,508 \$0.07	and 37 people p km m <sup>2</sup> is \$133 per person is \$49 per person per km	0.2% of car parking son
32 33 34 35 36 37 38 38 39 39 40 41 42 42 43 34 44 45 5 46 47	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side-parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita) OPEX + Diol Solvice + Tex + Peop Number of motor vehicles displaced Yearly cost of cars displaced - per person Operating costs per passenger-km	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$49,852,953 \$1,724,482 \$1,724,482 \$12,763,350 \$8,188 \$5,323 \$5,508 \$0.07 \$0.24	and 37 people p km m <sup>2</sup> is \$133 per person per km per km motor vehicles	ber bod 0.2% of car parking on US\$6.0M per mi. 4 4 4 4 4 4 4 4 4 4 4 4 4
<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>20</li> <li>21</li> <li>21</li> <li>22</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>39</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>44</li> <li>45</li> <li>46</li> <li>47</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (2% of route with side–parking) Cost of pods Capital cost of energy generation and storage <b>Oject Finances</b> Total Project Cost (privately financed) Project cost Equity Private debt financing Debt service (per year) Yearly fees and taxes (US\$198 per capita) OPEX 0 Debt Service 1 fox 0 Fees Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	25.5 168,016 255 \$1,508,000 \$427,402 \$71,218,504 \$3,728,319 \$21,365,551 \$49,852,953 \$49,852,953 \$7,477,943 \$1,724,482 \$8,188 \$5,323 \$5,508 \$0.07	and 37 people p km m <sup>2</sup> is \$133 per person per km per km motor vehicles	oer pod 0.2% of car parking son

## Project Overview p. 2

5,257 MTCO2-eq annually

853 metric tons annually 438 hrs/person annually \$1,848 per person 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 (30 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		km/h
17	Width of convenient swath along track	0.82	km
18	Fixed cost per km. Solar+storage not included.	\$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 (for trips under 1600 km)	10,000	
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	10	seconds
28	% of pods traveling on route with highest demand		luna /b
29	Average speed of pod		km/h per day
30	Average # of trips for a daily customer		
31 32	Average passengers per pod during peak hours Average passengers per pod	2.2	passengers passengers
32	Average discount per passenger	1.4	passengers
33	Maximum passengers per pod	5	passengers
34	Empty pods: Percentage non-revenue	25%	passengers
35	Empty pous. I elcentage non-revenue 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	\$0.41	
39	(per mile)	\$0.67	
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	5%	
44	kg CO2 emissions per liter of gasoline	2.37	
45	Monetary value of 1 hour personal time (USD)	\$13.75	
46	Eat. roadway maintenance per year per km	\$51,000	
47	Area of one parking lot space	23	m <sup>2</sup>
48	Commercial income of land (annual)	\$1.10	per m <sup>2</sup>
49	Distance from roadway that is convenient	0.25	km
50	Stops per km	4.0	
51	Boarding capacity per stop		pph
52	Solar panel area per meter of track	2.0	
53	Cost of sustainable energy and storage		per kWh
54	Global Horizontal Irradiance (GHI)		kWh/m²/day
55	Cost to generate sustainable energy		per kW
56	Storage per column		kWh
57	Typical span	23	
58	Energy storage cost		per kWh
59	Energy storage capacity		days m2
60	Area of parked pod Distance discount at max distance	2.20 40%	
61	Max distance discount at max distance	40% 500	km
62	Max usage discount at 10,000 km per capita	500	NIII
63	Shared Pod Discount	20%	
64	Shared Pod Compartment Discount	20% 40%	
65	Mode share starting discount	40 % 67%	
66	woue share starting discount	07 %	

0	a mjanee	~ · · ·	0.400	00 am				
ves s	res saved (from safety) 0 and							
om p	parking (3	0 a	cres	) 122,433 m <sup>2</sup>				
	& GHG red							
	n pollution,			·				
(	r ponation,	,	anoo	, ingit				
				<b></b>				
				Model Inputs (c				
	3 mph		68	Name of region or project				
	1 miles		69	Currency name				
			70	Equal to US\$1				
				Sustainable energy/electricity gen				
			71	& storage as				
	6,211 miles		72	Land area of region (sq. km)				
valk.			73	Number of residents in region				
vaik.			74	% travel within region				
			75	% of land area served by roads				
				Coverage: % of pop. convenient (				
	45 mph		76	walk) to Transit X				
			77	Annual median household income				
rs			78	Convenient walk time to stop (min				
			79	Triple-speed route length (km)				
rs			80	Water crossing route length (km)				
			81	Visitors per year				
			82	Average length of visit (days)				
			83	Solar production ratio				
			84	Regional Fare Factor				
			85	EPC costs & contingency				
			86	Triple-speed (km/h)				
			87	Daily Passengers Factor				
				Pod & C				
	247 sf			FUU & C				
			87 88	Service lif Full cost of vehicle				
				Public cost to maintain infra				
			89					
ay			90 91	Energy Efficiency Energy Efficiency in liter				
			92	Energy used (Watt-h				
s/km:	44		93	mass of CO2 per vehicle pe				
			94	Vehicle n				
			95	Average speed of urban trav				
			96	Typical travel time (in minutes) for				

## Inputs (continued)

\$4,018,592 annually

14%

33 annually 0 annually

68	Name of region or project	Williston, VT
9	Currency name	
0	Equal to US\$1	1
'1	Sustainable energy/electricity generation & storage as	CAPEX
2	Land area of region (sq. km)	78
'3	Number of residents in region	8,698
'4	% travel within region	90%
'5	% of land area served by roads	25%
6	Coverage: % of pop. convenient (5 min walk) to Transit X	80%
7	Annual median household income (US\$)	\$55,000
'8	Convenient walk time to stop (min)	5
'9	Triple-speed route length (km)	0
0	Water crossing route length (km)	0.0
31	Visitors per year	0
32	Average length of visit (days)	2
3	Solar production ratio	1.57
34	Regional Fare Factor	1.0
15	EPC costs & contingency	30%
6	Triple-speed (km/h)	242
37	Daily Passengers Factor	1

## Pod & Car

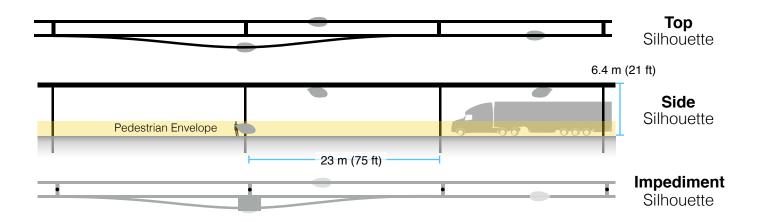
		Pod	Car
87	Service life (years)	20	12
88	Full cost of vehicle per year	\$200	\$9,000
89	Public cost to maintain infrastructure (per km)	\$0	\$100,000
90	Energy Efficiency in MPGe	3564	24
91	Energy Efficiency in liters/100km	0.07	9.8
92	Energy used (Watt-hours/km)	9	1375
93	mass of CO2 per vehicle per 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 8 km trip	7	31
97	Fare/cost per km	\$0.41	\$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



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)	1,950,000	m <sup>2</sup>	482 acres
3	Total commercial gov't revenue (US\$)	\$2,145,000		
4	TXCR (Transit X Commercial Rate)	\$1.10	per m <sup>2</sup>	
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	\$18.06	per route- meter	\$5.51 per route-foot
9	Minimum per year	\$1.63	per route- meter	\$0.50 per route-foot
10	Government Fees a	and Taxes		
11	% of route on government easements	98%		
12	5% on government easements	\$1,689,993		
13	1% on private easements	\$6,898		
14	Total gov't fees and taxes	\$1,696,890	per year	
16	per resident	\$195		
15	with a minimum of	\$31,229	per year	

## Footprint calculations for minimum fee



1	Footprint Calculations	Metric	Imperial
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	59.1 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	75.5 feet
11	Number of posts per unit length	43.5 poles per kr	n 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 sf
20	Area of Side Silhouette	678.3 m <sup>2</sup>	7298 sf
21	Area of Top Silhouette	613.1 m <sup>2</sup>	6597 sf
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 sf
26	Area of Top Silhouette	19.4 m <sup>2</sup>	208 sf
27	Impediment Area (adjusted)	37.5 m²	404 sf
28			
29	Stops with dedicated landing areas	2 stops per kr	n 3.2 stops per mile
30	% of dual track	100%	1 3.2 3.0p3 per fille
31		10070	
32	Average area per unit length	1,486 m <sup>2</sup> per route	e-km 25,793 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 0.40 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 in USD				1 mile					6 mile				25 mile
Transit X				<b>0.50</b> to 0.83 2 min., 3.6x faster					<b>2.45</b> to 4.11 8 min., 3.6x faster				<b>9.42</b> to 16.05 33 min., 3.4x faster
Public transit average				2.78				4.42				6.49	
Taxi				<b>3.86</b> 2 to 6 minutes				<b>16.79</b> 8 to 30 minutes			es	<b>65.30</b> 30 to 120 minutes	
Common public modes	Jber/L	_yft		<b>2.94</b> 2 to 6 minutes					<b>12.09</b> 8 to 30 minutes			es	<b>46.42</b> 30 to 120 minutes
d uou	ublic	Bus		<b>2.24</b> 3 to 12 minutes				<b>2.24</b> 15 to 60 minutes			tes	<b>3.43</b> 60 to 240 minutes	
Comr	Trai	n		<b>3.36</b> 2 to 12 minutes				<b>3.96</b> 8 to 60 minutes			es	<b>6.19</b> 30 to 240 minutes	
Personal car				2 t	<b>3.</b> 2	<b>21</b> ninute	es		<b>1</b> 8 to 3	<b>0.</b> 30 n			<b>35.93</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		Max Dist. km	Time cost per min	• / -	shar 70% 10		* All numbers on mode shares, speeds, and cost are rough estimates
Тахі	30	20	80	2.24	1	1.12	0.5	100	1.00	5%	4%	1%	
Uber/Lyft	30	20	80	1.79	1	0.90	0.5	100	0.50	10%	10%	2%	
Public Bus	15	10	40	2.24	20	0.06	0.5	50	0	50%	50%	40%	
Train	30	10	80	3.36	2	0.07	2	100	0	35%	36%	57%	
Transit X	72	72	72	0	0	0.25	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.

0.23

0.75 0.1 400

30

20

Personal car

1.49

0

80



## **Fair Fare Formula**

## Fare rates are updated annually using this formula

	Than Broth			, , , , , , , , , , , , , , , , , , , ,
	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 / 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	8,698		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	53,231,760	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	27%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)
16	BaseRate	0.41	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	0.91	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	0.000332	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	0.33	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	0.33	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	0.28	USD/km	Rate for 500 km in single-passenger pod.
30	Senior + SharedCompartmentRate	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	39,391,502	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	13,385,373	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	7,108,917	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap

## **Project Summary**

Project Description	A fully-automated, solar-powered, micro- rail network. A transportation utility.				
Project type	<b>Privately-funded Public Transit</b> Design, Build, Finance, Own, Operate, Maintain (DBFOOM)				
Project cost	US\$71 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	\$1,696,890 per year				
Benefits to society and environment	Extremely high				

## **Financials**

(US\$ in millions)

	Year 1	Total Years 1-12
Gross Revenues	11	332
Taxes and fees	1	17
Debt service	\$6	\$65

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

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





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

## Williston, VT

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



#### About Transit X

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

## Status

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

General information available at <u>transitx.com</u>. Detailed information and references can be provided under appropriate 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)	19
Starting number of pods	77
Projected revenue growth	15%
Project Cost (Privately funded)	\$71,218,504
% Debt financed	70%
Debt	\$49,852,953
Equity	\$21,365,551
Capital return per year	\$4,273,110
Debt payment (per year)	\$6,456,186

#### Travel per year per pod (km) 168,016

- Revenue per vehicle-km (US\$) 0.88
  - 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	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue		0	11,446,994	13,164,043	15,138,649	17,409,447	20,020,864	23,023,993	26,477,592	30,449,231	35,016,616	40,269,108	46,309,475	53,255,896
5% RoW+tax+fee	(	0%	572,350	658,202	756,932	870,472	1,001,043	1,151,200	1,323,880	1,522,462	1,750,831	2,013,455	2,315,474	2,662,795
Debt service		0	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	\$6,456,186	0	0
Investor balance			-\$20,078,657	-\$17,727,142	-\$14,151,316	-\$9,673,303	-\$4,295,759	\$1,345,213	\$3,805,623	\$6,539,648	\$9,588,329	\$12,998,865	\$17,471,152	\$22,421,993

#### **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.