



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

# Masdar City, Abu Dhabi, UAE

This proposal is downloadable at transitx.com/proposals/Transit X for Masdar City,Abu Dhabi,UAE.pdf

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

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

# 30 km network with 446 pods

95% of population within a 4 min. walk

Nonstop 72 km/h service to 150 stops



## Transit X proposes to build and operate a privately-financed pod network to carry passengers and freight for Masdar City, Abu Dhabi, UAE that makes the Transit X service convenient to 95% of the population.

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

## **Major benefits**

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

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



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

## Congestion, parking, pollution, and safety

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

## No public funding

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

## Proven technology

Our team and partners have built fully automated systems that are now in operation around the world. Transit X may look unique, but the underlying design is very similar to systems that have been operating for 40 years with an exemplary safety record. An in-depth (1000+ hours) technical assessment and feasibility analysis has been completed by Altran, a global engineering firm with extensive expertise in automated transit systems. The first pilots of Transit X will be deployed by the end of 2018.

Before any groundbreaking, the system will be safety-certified and fully insured.

## **Service Quality**

Transit X provides on-demand, last-mile service that is superior to cars or buses. An operating agreement will guarantee high levels of availability and reliability. Our use of small vehicles (pods) makes this possible. By reducing car use, Transit X creates walkable and bike-friendly neighborhoods.

## Less pollution: Air, Sound, Light, Visual, Water

Transit X offers a much higher quality of life by eliminating many forms of pollution. Pods are quiet and have no emissions. Pods offer less visual impact than the existing roads and vehicles, and utility lines can be hidden within the track. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced.

## Sustainable

Transit X runs on 100% sustainable energy. The energy generated from solar panels on the track and stored within the poles is sufficient in most cases, but sustainable power contracts may used to buy and sell power to the grid. Transit X makes it possible to reduce the amount of impervious surfaces and increase green space by reducing the need for parking and roads. By replacing cars, Transit X has a negative carbon footprint.

## More Transit & Fewer Cars

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

## **De-risking Projects**

Transit X is working with large, established firms to provide fixed-price contracts for the engineering, certification, construction, and operations of a Transit X system. Theses partnerships enable Transit X to de-risk all of the major elements of the project, and provide performance guarantees.

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

## Jobs and Workforce Development

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

## **Revenue Generator**

Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$2 million

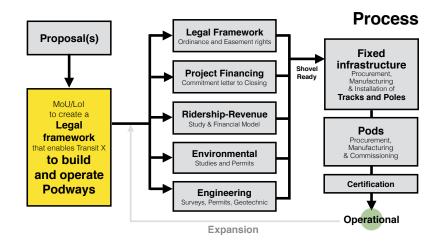
per year average over the first 10 years. For specifics, please see the "Taxes and Fees" section of this proposal. These fees and taxes paid by Transit X enables lower taxes or more spending on public services.

## 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)
- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- · Letters of Project Financing, Due Diligence, Contracts (transitx.com/letters.pdf)
- · Memorandum of Understanding template (transitx.com/process/mou.html)
- Example Resolution (transitx.com/process/resolution.html)
- · Operating Agreement (transitx.com/process/operating\_agreement.html)
- General Q & A (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 Masdar City through better transportation.

Sincerely,

Mike Stanley CEO, Transit X

Telephone: +1 508-596-7024 (also via WhatsApp) Email: <u>mike@transitx.com</u> Zoom eRoom: <u>https://zoom.us/j/8229009123</u> Website: <u>transitx.com</u> LinkedIn: 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**



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1	Transit X network length	30	km	
2	People (resident-equivalent) in region	25,000	resident-equivalent p	opulation
3	Route density ratio (route length to service area)	1.45		
4	Number of stops	150		
5	Triple-speed route length	0	km	
6	Water crossing route length	0	km	
7	Cost of fixed infrastructure	\$107,588,663		
8	per person	\$4,304		
9	Mode share of travel on Transit X (27% after first year)	82%	after 10 years	
10	Distance traveled on Transit X, per year	102,448,831	km	
11	per day	280,682	km	
12	Daily potential energy generation with standard panels on tracks	228	MWh	
13	Sustainable energy use per day	2	MWh	1% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$100 per kWh	\$190,309		
15	Size (rated power) of solar installation	442	KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$442,438		
17	Cost of buying sustainable energy at \$0.15 per kWh	\$285	per day	2% of OPEX
18	Daily passengers riding Transit X	20,490	customers	82% of the pop.
19	Distance per passenger per day	14	km	
20	Average distance per trip (assuming 3 trips per day)	5	km	
21	Single passenger fare for shared 5 km trip	\$1.19	4.38	AED
22	Passenger distance traveled during peak hour	56,136		
23	Breakeven		customers per day	
24	Breakeven	5,521	(40% of people conve	enient to Transit X)
24				
05	Number of pode for pook demand	116		
25	Number of pods for peak demand		pods at 82% mo	
26	Number of customers per pod	45.9	and 56 people per	
26 27	Number of customers per pod Distance per pod per year	45.9 168,206	and 56 people per km	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)	45.9 168,206 491	and 56 people per km m <sup>2</sup>	
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<ul> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>30</li> <li>31</li> <li>Pr</li> <li>32</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>57</li> </ul>	Number of customers per pod Distance per pod per year Two-layer pod garage area (3% 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\$139 per capita) OPEX + Debt Service + Tex + Pees Project costs – per person Number of motor vehicles displaced Yearly cost of cars displaced – per person Operating costs per passenger-km	45.9 168,206 491 \$2,899,000 \$822,571 \$111,310,234 \$3,752,461 \$33,393,070 \$77,917,164 \$11,687,575 \$3,487,185 \$20,740,271 \$20,740,271 \$4,452 10,245 \$3,688 \$0.05	and 56 people per km m <sup>2</sup> is \$89 per person is \$33 per person 408,508,558 per km 122,552,567 285,955,991 42,893,399 12,797,969 12,797,969 16,340 motor vehicles 13,536	pod 0.2% of car parking AED AED AED AED AED AED AED AED

## Project Overview p. 2

10,117 MTCO2-eq 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 (58 acres)
12	Temperature reduction (from heat island effect & GHG reductions)
11	Health care savings (from pollution, injuries)

## **Model Inputs**

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

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4		
-	km/h	
0.65	km	
\$2,790,000	10,239,300	AFD
\$8,370,000	,,	
\$5,580,000		
2.2		
<b>LL</b>		
10,000	km	
27	km	
85%	at 5 min walk.	
20%		
23,598	pph	
10	seconds	
18%		
	km/h	45 mph
	per day	
2.2	passengers	
	passengers	
18%	p	
	passengers	
25%	p	
\$5,000	18,350	AED
10,000	36,700	
2.3	00,100	AED
\$0.44	16	AED
\$0.70		AED
5%		
70%		
10	vears	
5%	,	
2.37		
\$13.75	50	AED
\$51,000	187,170	AED
23	m <sup>2</sup>	
\$1.10	per m <sup>2</sup>	AED
0.20		
5.1		
2.0		
\$0.15	per kWh	
3.8	kWh/m²/day	
\$1,000	per kW	
10		
40	kWh	
	kWh m cols/km:	44
23		44
23	m cols/km:	44
23 \$100	m cols/km: per kWh days	44
23 \$100 1	m cols/km: per kWh days	44
23 \$100 1 2.20	m cols/km: per kWh days m <sup>2</sup>	44
23 \$100 1 2.20 40% 500 50%	m cols/km: per kWh days m <sup>2</sup>	44
23 \$100 1 2.20 40% 500	m cols/km: per kWh days m <sup>2</sup>	44
23 \$100 1 2.20 40% 500 50% 20% 40%	m cols/km: per kWh days m <sup>2</sup>	44
23 \$100 1 2.20 40% 500 50% 20%	m cols/km: per kWh days m <sup>2</sup>	44

\$5,255,082	annually
1,642	metric tons annually
243	hrs/person annually
\$922	per person annually
8%	
64	annually
1	annually
235,632	m²
0.5 to 2	°C
High	

## Model Inputs (continued)

67	Name of region or project	Masdar City, Abu Dha
68	Currency name	AED
69	Equal to US\$1	3.67
70	Sustainable energy/electricity generation & storage as	CAPEX
71	Land area of region (sq. km)	34
72	Number of residents in region	25,000
73	% travel within region	50%
74	% of land area served by roads	60%
75	Coverage: % of pop. convenient (4 min walk) to Transit X	95%
76	Annual median household income (US\$)	\$55,000
77	Convenient walk time to stop (min)	4
78	Triple-speed route length (km)	0
79	Water crossing route length (km)	0.0
80	Visitors per year	0
81	Average length of visit (days)	2
82	Solar production ratio	1.57
83	Regional Fare Factor	1.0
84	EPC costs & contingency	30%
85	Triple-speed (km/h)	242

## Pod & Car

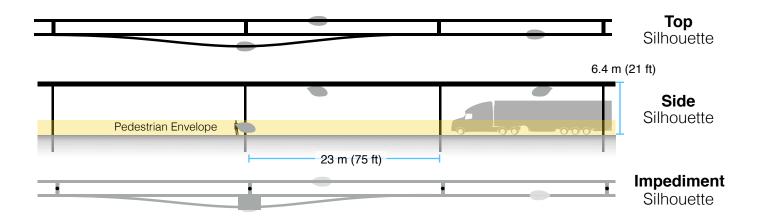
		Pod	Car
86	Service life (years)	20	12
87	Full cost of vehicle per year	\$200	\$9,000
88	Public cost to maintain infrastructure (per km)	\$0	\$100,000
89	Energy Efficiency in MPGe	3564	24
90	Energy Efficiency in liters/100km	0.07	9.8
91	Energy used (Watt-hours/km)	9	1375
92	mass of CO2 per vehicle per km (kg)	0	0.09875
93	Vehicle mass (kg)	45	1950
94	Average speed of urban travel (km/h)	72	16
95	Typical travel time (in minutes) for 5 km trip	4	17
96	Fare/cost per km	\$0.44	\$0.62
97	Number of deaths per 100M passenger-km	0.00001	1
98	Number of injuries per 100M passenger-km	0.0006	62
99	Volume to park (cubic meters)	5.7	70.9



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

1	Government Fees and Ta	x rate	(for calcul	ating minimums)
2	Total commercial land (estimated)	2,040,000	m <sup>2</sup>	acres
3	Total commercial gov't revenue (US\$)	\$2,244,000		8,235,480 AED
4	TXCR (Transit X Commercial Rate)	\$1.10	per m <sup>2</sup>	4.0 AED
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.			
6				
7	Private Easement Fees			
8	4% of gross revenue	\$23.51	per route- meter	
9	Minimum per year	\$1.86	per route- meter	
10	Government Fees a	nd Taxes		
11	% of route on government easements	98%		
12	5% on government easements	\$3,417,441		12,542,009 AED
13	1% on private easements	\$13,949		
14	Total gov't fees and taxes	\$3,431,390	per year	12,593,201 AED
16	per resident	\$137		504 AED
15	with a minimum of	\$55,072	per year	202,114 AED

## Footprint calculations for minimum fee



1	Footprint Calculations	Metric	Imperial
2	Track width	<u>0.41</u> m	
3	Track height	<u>0.61</u> m	
4	Pole diameter	<u>0.3</u> m	
5	Pole cross section	<u>0.07</u> m <sup>2</sup>	
6	Stop landing area	2 m <sup>2</sup>	
7	width	<u>2</u> m	
8	length	1 m	
9	Ramp length	<u>21</u> m	
10	Pole span	<u>23</u> m	
11	Number of poles per unit length	<u>43.5</u> poles per	km
12	Pole height	<u>6</u> m	
13			
14	Single track	1142.1 m <sup>2</sup>	
15	Area of Side Silhouette	688.3 m <sup>2</sup>	
16	Area of Top Silhouette	423.1 m <sup>2</sup>	
17	Impediment Area (adjusted)	30.7 m <sup>2</sup>	
18			
19	Dual track	1552.1 m <sup>2</sup>	
20	Area of Side Silhouette	688.3 m <sup>2</sup>	
21	Area of Top Silhouette	833.1 m <sup>2</sup>	
22	Impediment Area (adjusted)	30.7 m <sup>2</sup>	
23	( <b>)</b>		
24	Stop	67.8 m <sup>2</sup>	
25	Area of Side Silhouette	25.6 m <sup>2</sup>	
26	Area of Top Silhouette	22.2 m <sup>2</sup>	
27	Impediment Area (adjusted)	20.0 m <sup>2</sup>	
28			
29	Stops with dedicated landing areas	2 stops per	km
30	% of dual track	100%	
31			
32	Average area per unit length	1,688 m² per rou	ute-km
33			
34	Contract values		
35	% gross revenue for government on private prop.	1%	
36	% gross revenue for private easement	4%	
37	% gross revenue for government easement	5%	
38	Impediment Factor	10	



Summary

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

At 0.96 AED per km, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.\*

				Trip Length									
All prices in AED				2 km					10 km				40 km
Transit X				<b>1.91</b> to 3.19 2 min., 3.6x faster				<b>9.47</b> to 15.86 8 min., 3.6x faster			ster	<b>36.33</b> to 61.91 33 min., 3.4x faster	
Public transit average			:		10.	73			1	7.	06	;	25.01
nodes	Тахі			<b>14.87</b> 2 to 6 minutes				<b>64.75</b> 8 to 30 minutes			es	<b>251.82</b> 30 to 120 minutes	
ublic n	Uber/Lyft			<b>11.32</b> 2 to 6 minutes				<b>46.62</b> 8 to 30 minutes			es	<b>179.01</b> 30 to 120 minutes	
Common public modes	Public Bus			<b>8.63</b> 3 to 12 minutes				<b>8.63</b> 15 to 60 minutes			tes	<b>13.24</b> 60 to 240 minutes	
Comr	Tra	ain		2	<b>12.</b> to 12 r	<b>95</b> minute	es		<b>15.25</b> 8 to 60 minutes			es	<b>23.89</b> 30 to 240 minutes
Personal car					<b>11</b> . :o 6 n	74	es		<b>3</b> 8 to 3	<b>5.</b> 30 m			<b>125.46</b> 30 to 120 minutes
	Avg Spee		High speed					Max Dist.	Time cost	Mode 6%	shar 70%	-	* All numbers on mode shares, speeds, and cos
Travel mo	ode km/	h km/h	km/h	Base	Includ es km	Over per-km	km	km	per min	2	10	40	are rough estimates
Taxi	30		80	8.63	1		0.5		3.84	5%	4%	1%	
Uber/Lyf			80 40	6.91 8.63	1 20		0.5 0.5		1.92 0	10%	10% 50%		
	uo 10	10	40	0.00	20	0.20	0.5	50	U	50 /8	50 /0	-U /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 equal or less than the amount of discounted fares. Transit X Fair Fare is a universal passenger fare formula that applies to all regions and all times.

0.29 2 100

2.88 0.1 400

0.96 0.1

0

0

0.23

35% 36% 57%

2

0

0

30

72

30

10

72

20

80 12.95

0

5.76

72

80

Train

Transit X

Personal car

50



## **Fair Fare Formula**

## Fare rates are updated annually using this formula

	Transforts			
	Formula Name	Value	Units	Description of the value or model input
1	GlobalIncome	26 700		Global median household income. Updated annually based on most recent
1	Giobalincome	36,700	AED	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	0.32	AED/km	Global rate: Globalincome * PercentincomeForTransport / AllTravel
5	IncomeFirst	\$201,850	AED	Median household income at first stop (per person per day). External input. Based on reliable public data source updated annually.
6	IncomeDest	\$302,775	AED	Median household income at destination per trip. External input. Based on reliable public data updated annually.
7	RegionalRate	1.76	AED/km	Regional rate based on median income: MedianIncomeFirst * PercentIncomeForTransport / AllTravel
8	UnderIncomeRate	0.00	AED/km	Under global income adjustment: if (RegionalRate < GlobalRate, GlobalRate - RegionalRate, 0)
9	NominalRate	1.76	AED/km	Nominal rate: RegionalRate + UnderIncomeRate
10	RegionalFactor	1.00		Regional Fare Factor. Negotiated upfront to make network financially viable.
11	AdjustedRate	1.76	AED/km	Regional adjusted rate: NominalRate * RegionalFactor
13	Population	25,000		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	102,448,831	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	18%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel) Passenger Travel for single passenger pad (without discounts)
16	BaseRate	1.60	AED/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	3.52	AED/km	Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor
19	DistanceDiscount MaxDistanceDiscount	40%	Luca	Distance discount at max distance. Global constant.
20	MaxDistanceDiscount	500	km	Max distance discount. Global constant.
21	DistanceDiscountPerKm	0.001279	AED/km	Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount
22 23	SeniorDiscount StudentDiscount	20% 20%		Senior discount set according to local regulations
20	DisabilityDiscount	20%		Student discount set according to local regulations Disability discount set according to local regulations
04	DiscountBaseRate	1.28		Discounted base rate: BaseRate x (1 - SeniorDiscount)
24	Discounibasenale	1.20	AED/km	
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	1.28	AED/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	0.96	AED/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)
29	SingleOccupancyMaxDistance	1.09	AED/km	Rate for 500 km in single-passenger pod. Rate for a Senior taking a 500 km trip in a shared compartment.
30	Senior + SharedCompartmentRate	0.46	AED/km	BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount)
31	50PctIncomeAtDest	25%	AED/km	% Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2
32	DistanceBase	75,812,135	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	99,337,404	AED	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 Cap on passenger travel distance at market rate:
37	MarketRateCap	18%		AverageDiscount x MarketFactor
38	MarketTravelCap	13,681,687	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap

## **Project Summary**

Project Description	A fully-automated, solar-powered, ultra- light, micro railway						
Project type	<b>Privately-funded Public Transportation</b> Design, Build, Finance, Own, Operate, Maintain (DBFOOM)						
Project cost	US\$111 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	\$3,431,390 per year						
Benefits to society and environment	Extremely high						

## **Financials**

(US\$ in millions)

		Total		
	Year 1	Years 1-12		
Gross Revenues	23	560		
Taxes and fees	1	28		
Debt service	\$10	\$101		

## ESG (Environmental, Social, Governance) Benefits

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

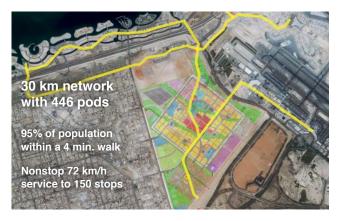




Transit X, LLC presents a preliminary proposal for a privately-funded fleet of fully-autonomous shared electric vehicles on local and regional podway network for

## Masdar City, Abu Dhabi, UAE

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



#### About Transit X

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

## Status

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

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

## 12-year Pro Forma



## **Model Inputs and Assumptions**

Route length (km)	30
Starting number of pods	147
Projected revenue growth	15%
Project Cost (Privately funded)	\$111,310,234
% Debt financed	70%
Debt	\$77,917,164
Equity	\$33,393,070
Capital return per year	\$6,678,614
Debt payment (per year)	\$10,090,629

#### Travel per year per pod (km) 168,206

- Revenue per vehicle-km (US\$) 0.93
  - 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

٢	/ears	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue		0	22,987,273	26,435,364	30,400,669	34,960,769	40,204,884	46,235,617	53,170,960	61,146,603	70,318,594	80,866,383	92,996,341	106,945,792
5% RoW+tax+fee	e	0%	1,149,364	1,321,768	1,520,033	1,748,038	2,010,244	2,311,781	2,658,548	3,057,330	3,515,930	4,043,319	4,649,817	5,347,290
Debt service		0	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	\$10,090,629	0	0
Investor balance	e		-\$27,056,058	-\$19,412,415	-\$10,770,974	-\$1,783,929	\$7,600,560	\$17,442,111	\$22,466,392	\$28,095,136	\$34,419,014	\$41,542,295	\$50,593,954	\$60,702,823

#### **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 the date made. Except as required by law, Transit X undertakes no obligation to update any forward looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of anticipated or unanticipated events or circumstances. These materials and documents and information from which they are derived or which are referred to by or accessible from them represent Transit X's best estimate as to the allocation of the funding proceeds based upon its present business plan and financial condition. The costs and expenses to be incurred in pursuing the Company's business plan awill 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.