



Transit X, LLC presents a preliminary proposal for a privately-funded shared mobility service for

# Port St Lucie, Florida

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

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







Transit X proposes to build and operate a privately-financed pod network to carry passengers and freight for Port St Lucie, Florida 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

Transit X does not require public funding because our business model appeals to investment banks and private equity firms that provide our project financing. Most of our infrastructure is factory-built, so that installation is fast and not disruptive. We have reduced or eliminated many costs of transportation infrastructure including materials, land, construction, fuel, debt service, and driver costs. Our approach to significantly reducing costs makes private financing possible.

## Proven technology

Our team and partners have built fully automated transit systems that are now in operation — Morgantown, WV, BART, and several others in Europe. 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. Altran is 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.

## **Quality Service**

Transit X provides on-demand, last-mile service that is superior to cars or buses. A service level 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 and has a zero carbon footprint. The energy generated from solar panels on the track and stored within the poles is sufficient in most cases, but sustainable power contracts would provide backup power. Transit X makes it possible to reduce the amount of impervious surfaces and increase green space by reducing the need for parking and roads.

## **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 local codes and requirements.

## Jobs and Workforce Development

Many jobs are created to build a new transportation infrastructure and transition away from roads. Municipalities that first embrace Transit X will be offered the opportunity to have Transit X manufacturing and assembly jobs in their area. The vast majority of the construction jobs will be locally sourced. Preferential hiring would be given to those workers potentially displaced by the transition to automated vehicles.

#### **Revenue Generator**

Not only does Transit X not require public financing, but the local municipality and right-of-ways owners receive 5% of gross revenue. For specifics, please see the "Taxes and Fees" section of this proposal.

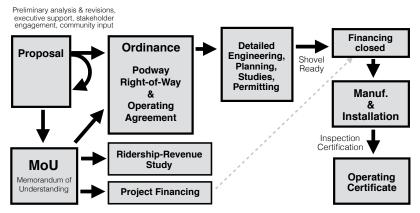
## **Short and Long Term Solution**

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 municipality or rights-of-way owner. We would refine a proposal to meet your needs, then ask for a letter stating that you would like to move forward with a proposal that includes air rights and and an operating agreement. Example documents and a sample project schedule can be viewed at transitx.com/process

## **Process for municipalities**



## **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 ride-sharing 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 on how to move forward, we would ask for a letter (example at <a href="mailto:transitx.com/process/loi.html">transitx.com/process/loi.html</a>) stating that you intend to pass an ordinance for use of air rights along with a service agreement.

The buildout of the network would be rolled out in phases, where a first phase could be a 15 to 30 km pilot.

## **Other Resources**

The resources below provide more general information:

- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- Video overview (transitx.com/video)
- Letters of Project Financing, Due Diligence, Contracts (transitx.com/letters.pdf)
- Sample Ordinance (<u>transitx.com/process/ordinance.html</u>)
- Service Agreement (<u>transitx.com/process/service\_agreement.html</u>)
- · General Q & A (transitx.com/QandA.html)

## Addendum

The remaining pages of this proposal provide more details specific to this project:

- Financial Project Summary with Pro Forma, pages 6-7
- Project Overview, Impact, and Assumptions, pages 8-9
- Taxes and Fees with Footprint, pages 10-11
- Fair Fare Policy, page 12

We look forward to working with you to improve the quality of life in Port St Lucie through better transportation.

Sincerely,

Mike Stanley CEO, Transit X

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## **Project Summary**

	Solar-powered automated transportation network infrastructure
Project type	Project financing of Green Infrastructure
Project cost	\$512 million

Structure	Equity and Debt
Debt term	10 years @ 5%
Equity terms	<ul> <li>46% projected IRR</li> <li>Using a waterfall profit distribution of:</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>
Benefits to society and environment	Extremely high

## **Financials**

(US Dollars in millions)	Year 1	Total Years 1-10
Gross Revenues*	354	5,943
Taxes and fees	\$18	\$297

## ESG (Environmental, Social, Governance) Benefits

Clean energy	yes	Resiliency	yes
Energy security	yes	Sustainable	yes
Emissions-free	yes	Equitable	yes
GHG-free	yes	Recyclable mat.	yes
Lowers pollution	yes	Affordable housing	yes
Clean water	yes	Improved Health	yes
Improved Safety	yes	Economic Devel.	yes
Fix Infrastructure	yes	Food security	yes



#### **About Transit X**

Transit X designs, builds, and operates solar-electric shared mobility infrastructure to supplant buses, trains, cars, and trucks. Transit X offers its service to municipalities and commercial developers. A demonstration system will be ready in early 2018, and pilots will begin by 2019. Transit X is a privately held company founded in 2015, based in Boston, Mass, and intends to be certified as a public benefit company.

#### Status

	Now	Prior to close
Project financing	Letter of Interest	Yes
Proven concept	Yes	Yes
Demonstration system	In development	Yes
Ridership study		Yes
Environmental study		Yes
Air rights	Letter of Intent	Ordinance
Permits	Known process	Yes
Safety certification	Guar. fixed price	Yes
Construction (BOP):	Letter of intent	Guar. fixed price
Operations & Maint:	Letter of intent	Guar. fixed price
Project Engineering	TBD	25% design

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



## **Model Inputs and Assumptions**

215	Route length (km)
1,622	Starting number of pods
<u>15%</u>	Projected revenue growth
stops, subsidies, muni party services, mail &	Revenue includes passenger fares, and does not include advertising, developer fees, private leasing, private branch & contracts, carbon credits, water delivery, conduit leasing, 3rd package delivery, para-transit, private shuttlessengers.
\$512,304,769	Project Cost
<u>70%</u>	% Debt financed
\$358,613,338	Debt
\$153,691,431	Equity
\$30,738,286	Capital return per year
15%	Target IRR
\$23,053,715	Target return per year
\$46,442,068	Debt payment (per year)

Travel per year per pod (km)	210,248
Revenue per vehicle-km (US\$)	1.04
Cost per pod	\$5,000
Debt Interest rate	5%
Debt term (yrs)	10
Years to return equity capital	<u>5</u>
Profit share when below capital return	90%
Profit share when below Target IRR	<u>50%</u>
Profit share when above Target IRR	10%

#### **Pro Forma**

	Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Revenue		0	354,069,296	407,179,690	468,256,643	538,495,140	619,269,411	712,159,823	818,983,796	941,831,365	1,083,106,070	1,245,571,981	1,432,407,778	1,647,268,944	1,894,359,286	2,178,513,179
5% RoW+tax+fe	e	0%	17,703,465	20,358,984	23,412,832	26,924,757	30,963,471	35,607,991	40,949,190	47,091,568	54,155,304	62,278,599	71,620,389	82,363,447	94,717,964	108,925,659

#### **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 speak only as of 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 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.





Land area of region	308	km²	118.8 sq miles
Number of people in region (residents + visitors)	185,132		
Travel distance per year by all people (residents and visitors)	1,851,320,000	km	1,149,888,199 miles
Percentage of all travel that occurs within the region	65%		
Road coverage (percent of area conveniently served by paved roads)	<u>60%</u>		
Service area size	184.8	km <sup>2</sup>	71.3 sq miles
Coverage: percent of people convenient (5 min walk) to Transit X	95%		
Estimate #1 for network length based on desired coverage	215		133.5 miles
Length of paved roads in region	<u>747</u>		463.8 miles
Estimate #2 for network length based on length of public roadways	177	km	110.2 miles
Transit X network length	215	km	133.5 miles
Route density ratio (route length to service area)	1.16		
Number of stops	430		
Total costs for project not including pods	\$487,979,769		
per person	\$2,636		
Mode share of travel on Transit X	85%		
Distance traveled on Transit X, per year	1,022,854,300	km	635,313,230 miles
per day	2,802,341		1,740,584 miles
Potential energy generation (ideal)		MWh	
Energy consumption per day		MWh	6% of max capacity
Daily number of people riding Transit X		customers	
Distance per Transit X customer per day	18	km	11.1 miles
Average distance per trip (with 3 trips per day)	6	km	3.7 miles
Passenger fare for 6 km trip (at \$0.52 per km)	\$3.08	KIII	
Distance traveled during peak hour	560,468	km	348,117 miles
Breakeven		customers per day	
		(22% of people conveni	ent to Transit X)
Number of pods needed to meet peak demand	4,865	pods	
Distance per pod per year	210,248	km	
Pod garage volume [unit: cubic shipping containers]	6	sc <sup>3</sup>	
Cost of pods	\$24,325,000		
Cost of pod per person	\$131		
Project finances			
Total project cost (privately financed)	\$512,304,769		Assumes PPA for solar power
OPEX (O&M) per year	\$52,164,978		
Private equity	\$153,691,431		
Financed	\$358,613,338		
Gross Revenue from fares	\$530,994,797		

Project costs — per person	\$2,767	
Number of motor vehicles displaced	<b>102,285</b> motor vehicles	
Yearly cost of cars displaced — per person	\$4,973	
Operating costs per passenger-mile	\$0.21	
Breakeven revenue distance per day	699,308 km	434,353 miles
Network capacity (number of pods)	6,449 pods	
% of max network capacity at peak	38%	



## Impact of proposed network

Reduction in CO2 emissions	101,007 metric tons CO <sub>2</sub>
Est. cost to maintain 747 km roadway	\$38,083,886
Reduced waste products per year	<b>16,391</b> metric tons
Travel time saved per year	316 hrs/person
Cost savings per capita per year from reduced car ownership	\$656
Increase in household income from time saving and car costs	9%
Reported injuries avoided per year	634
Lives saved per year	6
Land freed from parking (581 acres)	2,352,565 m <sup>2</sup>
and its commercial value	\$2,352,565 per year
Health care savings	High
Heat island mitigation from replacing asphalt with green space	1 to 3 °C
Change in global temperature	TBD °C
Decrease in sea level	TBD mm

## **Model Inputs**

Ratio of road length to track length	4		
Convenient walk time to Transit X route	5	min.	
Walking speed	4.9	km/h 3 m	ph
Width of convenient swath along track	0.82	km 1 m	iles
Fixed cost for main route per km, no solar/storage	\$3,100,000		
Fixed cost per km for branch	\$1,550,000		
Percent of Dual Track	46%		
Percent of High Speed or Water Tunnel	0%		
Project cost per km for track	\$2,269,975		
Average distance traveled per person per year (for trips under 1600 km)	10,000	km 6,21	
Average distance per day per person	<u>27</u>	km	
Mode share % of people convenient to Transit X	85%	at 5 min walk.	
Percentage of daily travel during peak hour	<u>20%</u>		
Max capacity: number of pods per km of track	150	pods	
Max track capacity during peak hour as % of capacity	<u>20%</u>		
Average speed of pod	72	km/h 45 r	nph
Average # of trips for people riding Transit X	3	per day	
Average occupancy per pod during peak hours	2	people	
Average occupancy per pod	1.25	people	
Maximum occupancy per pod	5	people	
Empty pods: Percentage non-revenue vehicle travel	25%		
Cost per pod	<u>\$5,000</u>		
Median household income (US\$)	60,000		
People per Household	2.3		
Base fare per km	\$0.52		
(per mile)	\$0.84		
O&M as % of project cost	<u>5%</u>		
O&M as % of gross revenue	<u>5%</u>	Includes solar energy P	PA
Percentage debt financed	70%		
Length of loan/debt	<u>10</u>	years	
Interest rate for debt	<u>5%</u>		
kg CO2 emissions per liter of gasoline	2.37	•	
Monetary value of 1 hour personal time (USD)	15		
Eat. roadway maintenance per year per km	<u>\$51,000</u>		
Area of one parking lot space	23	m <sup>2</sup> 247	sf
Commercial income of land	\$1	per m <sup>2</sup>	
Distance from roadway that is convenient	0.25	km	
Stops per km	2.0		
Solar panel area per meter of track	1.5		
Global Horizontal Irradiance (GHI)	<u>3.8</u>	kWh/m2/day	

## Pod & Car

Car	Pod	
12	20	Service life (years)
\$9,000	\$200	Full cost of vehicle per year
\$100,000	\$0	Public cost to maintain infrastructure (per km)
24	1188	Energy Efficiency in MPGe
9.8	0.20	Energy Efficiency in liters/100km
1375	28	Energy used (Watt-hours/km)
0.09875	0	mass of CO2 per vehicle per km (kg)
1950	45	Vehicle mass (kg)
16	72	Average speed of travel (km/h)
22	5	Typical travel time (in minutes) for 6 km trip
\$0.62	\$0.52	Fare/cost per km
1	0.00001	Number of deaths per 100M passenger-km
62	0.0006	Number of injuries per 100M passenger-km
70.9	5.7	Volume to park (cubic meters)

## **Currency conversion**

CAR

FREE





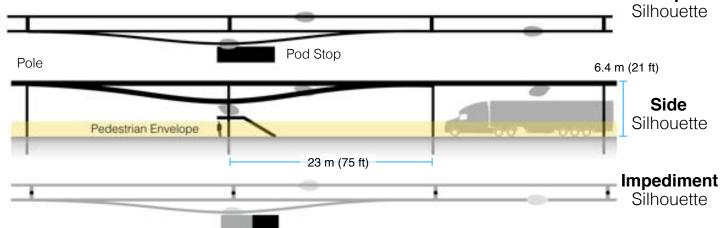
4% of gross revenue proportioned to air rights owners and a municipal fee/tax of 1% of gross revenue. Both air rights and fee/tax have a minimum payment based on the Footprint and the Transit X Commercial Rate (TXCR).

Note: Inputs have box outline						
Municipal rates						
Total commercial land area	3,000,000	m²	32,289,000	sq ft. (741.3 acres)		
Total commercial income to muni	\$3,000,000					
TXCR (Transit X Commercial Rate)	\$1.00	per m²				
TXCR is the yearly tax rate per land area. Calculation: total land area of commercial properties in the municipality, divided by all the municipal income generated by those properties. The TXCR is used to calculate the minimum tax/fee.						
Project Revenue						
Length of Transit X route	215	km	133	miles		
Estimated gross revenue per unit length	\$2,470,071	per km				
Municipal Tax	% of gross revenue wit	h minimum.				
1% gross revenue	\$24,701	per route-km				
Minimum per year	\$1,421	per route-km	\$2,292	per route-mile		
Air Rights Leasing Fee	% of gross revenue wit	h minimum.	Proportioned based	on length.		
% of route on municipal land	90%					
4% gross revenue	\$98,803	per route-km				
Minimum per year	\$1,421	per route-km	\$2,292	per route-mile		
Taxes and Fees						
Paid to Municipality	\$24,425,761	per year				
with minimum	\$580,347					
Paid to Private land owners	\$2,123,979					
with minimum	\$30,545					

## Footprint calculations for minimum fee

## Yearly fees and taxes

Top



Note: Diagrams for illustrative purposes.

Footprint Calculations	Metric	Imperial
Track width	<u>0.41</u> m	16.1 inches
Track height	<u>0.61</u> m	24.0 inches
Pole diameter	<u>0.3</u> m	11.8 inches
Pole cross section	0.07 m <sup>2</sup>	0.8 sf
Stop landing area	<u>1</u> m <sup>2</sup>	10.8 sf
width	<u>1</u> m	39.4 inches
length	<u>1</u> m	39.4 inches
Ramp length	<u>21</u> m	68.9 feet
Pole span	<u>23</u> m	75.5 feet
Number of poles per unit length	43.5 poles per km	70.0 poles per mile
Pole height	<u>6</u> m	19.7 feet
Single track	1126.7 m <sup>2</sup>	12124 sf
Area of Side Silhouette	688.3 m <sup>2</sup>	7406 sf
Area of Top Silhouette	423.1 m <sup>2</sup>	4553 sf
Impediment Area (adjusted)	15.4 m <sup>2</sup>	165 sf
Dual track	1536.7 m <sup>2</sup>	16535 sf
Area of Side Silhouette	688.3 m <sup>2</sup>	7406 sf
Area of Top Silhouette	833.1 m <sup>2</sup>	8964 sf
Impediment Area (adjusted)	15.4 m <sup>2</sup>	165 sf
Stop	51.8 m <sup>2</sup>	558 sf
Area of Side Silhouette	25.6 m <sup>2</sup>	276 sf
Area of Top Silhouette	21.2 m <sup>2</sup>	228 sf
Impediment Area (adjusted)	5.0 m <sup>2</sup>	54 sf
Stops	2 stops per km	3.2 stops per mile
% of dual track	46%	o.z stops per fille
Average area per unit length	1,421 m² per route-km	24,659 sf per route-mile
Contract values		
% gross revenue for muni tax/fee	1%	
% gross revenue for air rights (RoW)	4%	
% gross revenue for RoW+tax+fee	5%	
Impediment Factor	5	



## **Fair Fare Policy**

Fares will be similar to existing mass transit, and several times less than taxis or ride-sharing services. Transit X Fair Fare is a universal passenger fare model that applies to all regions and all times. Fares are proportional to the median income of the area and inversely proportional to per capita use, so the more people that use Transit X, the lower the base fare. Market-rate fares are offset by Half-price fares. There are no pre-set escalations.

		Initial	50% share +50% Income		90% Usage	
Median household income	US\$	60,000	\$60,000	\$90,000	\$60,000	
Nominal fare	US\$	0.52	\$0.52	\$0.78	\$0.52	
% of total travel on Transit X		1%	50%	50%	90%	
Discount for usage	US\$	0.00	\$0.13	\$0.20	\$0.23	
Base Fare (US\$)	per km	0.52	\$0.39	\$0.59	\$0.29	
per passenger-mile		0.84	\$0.63	\$0.95	\$0.46	
% Fares at Market rate		<u>20%</u>	<u>30%</u>	<u>40%</u>	<u>50%</u>	
% Fares at Base rate		80%	60%	40%	20%	
% Fares at Half Base rate		0%	10%	20%	30%	
Estimated average fare	per km	0.83	\$0.72	\$1.23	\$0.67	

## Price comparison with common travel modes (in Boston, USA)

	Mode »	Bus	Commuter Rail	Subway	Personal Car	Taxi / TNC's
Average distance (km)		5	18	8	8	5
Price per trip	US\$	\$1.85	\$8.00	\$2.50	\$6.00	\$12.00
Typical price per km	US\$	\$0.37	\$0.44	\$0.31	\$0.75	\$2.40

## **Base Inputs**

Travel distance per household per year (trips under 1600 km)	23,000	km
% of median household income for 23,000 km transportation	<u>20%</u>	
Fare Discount when Transit X travel per household is 23,000 km per year	<u>50%</u>	