Transit X

Transit X, LLC offers an unsolicited preliminary proposal for

BQX: Brooklyn Queens Connector, NYC

For a privately-funded shared mobility service that is

High capacity • Automated • Wait-free
Solar powered • Last mile • Resilient

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

Project Summary

Project Description	Solar-powered automated transportation network infrastructure
Project type	Project financing of Green Infrastructure with Minimum Revenue Guarantees
Project cost	$171 million
Structure	Equity and Debt
Debt term	10 years @ 5%
Equity terms	15 years with 15% Target IRR With a waterfall profit distribution of: 1. 90/10 split until Return of Capital, 2. then 50/50 until Target IRR met 3. then 10/90
Projected IRR	192%
Social & Green Benefits	Extremely high

Financials

(US Dollars in millions)	Year 1	Total Years 1-10
Gross Revenues*	**$554**	**$9,295**
Operating Expenses	**$36**	**$542**
Debt service	**$15**	**$155**
Net Operating Income	**$503**	**$8,598**

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 late 2017, and pilots will begin in 2018. 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
Proven concept	Yes	Yes
Demonstration system	In development	Yes
Minimum Revenue Guar.	Verbal	Yes
Impact studies	TBD	Yes
Air rights	Letter of Intent	Signed agreement
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 transitx.com. Detailed information and references can be provided under appropriate non-disclosure/non-compete/non-circumvent agreements. Contact: Mike Stanley, CEO, Transit X, mike@transitx.com, 508-596-7024

Transit X

15 year Pro Forma

Model Inputs and Assumptions

Route length (km)	**37**
Starting Pods	**4,412**
Projected revenue growth	**15%**
Revenues to include passenger fares, freight, advertising, developer fees, private leasing, private branch & stops, subsidies, muni contracts, carbon credits, conduit leasing, 3rd party services, para-transit, private shuttles, and naming rights.	
Project Cost	$170,685,429
% Debt financed	**70%**
Debt	$119,479,800
Equity	$51,205,629
Capital return per year	$10,241,126
Target IRR	15%
Target return per year	$7,680,844
Debt payment (per year)	$15,473,181

Travel per year per pod (km)	210,240
Revenue per vehicle-km	$0.60
Cost per pod	$5,000
OPEX as % of project cost	5%
OPEX as % of revenue	5%
Debt Interest rate	5%
Debt term (yrs)	10
Equity term (yrs)	15
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

Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Revenue	**$0**	***$553,765,65***	$636,830,501	$732,355,076	$842,208,338	$968,539,588	$1,113,820,52	$1,280,893,60	$1,473,027,64	$1,693,981,75	$1,948,079,06	$2,240,290,92	$2,576,334,56	$2,962,784,74	$3,407,202,45
OPEX	**$0**	$36,222,554	$40,375,796	$45,152,025	$50,644,688	$56,961,251	$64,225,298	$72,578,952	$82,185,654	$93,233,361	$105,938,225	$120,548,818	$137,350,999	$156,673,509	$178,894,394
Debt service	***$0***	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	$15,473,181	0	0	0	0
Free cash flow	$0	$502,069,918	$580,981,524	$671,729,870	$776,090,469	$896,105,157	$1,034,122,04	$1,192,841,47	$1,375,368,81	$1,585,275,25	$1,826,667,65	$2,119,742,10	$2,438,983,56	$2,806,111,23	$3,228,308,06
Waterfall distribution															
1. Capital return	***$0***	$51,205,629	$51,205,629	$51,205,629	$51,205,629	$51,205,629	$20,482,251	$0	$0	$0	$0	$0	$0	$0	$0
2. Expected return	***$0***	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844	$7,680,844
3. Over Exp return	$0	$443,183,445	$522,095,051	$612,843,397	$717,203,996	$837,218,684	$1,005,958,95	$1,185,160,62	$1,367,687,96	$1,577,594,40	$1,818,986,81	$2,112,061,26	$2,431,302,71	$2,798,430,39	$3,220,627,21
Investor share	$0	$94,243,832	$102,134,993	$111,209,828	$121,645,887	$133,647,356	$122,870,344	$122,356,485	$140,609,219	$161,599,863	$185,739,103	$215,046,548	$246,970,694	$283,683,461	$325,903,144
Investor share %		19%	18%	17%	16%	15%	12%	10%	10%	10%	10%	10%	10%	10%	10%
Investor IRR	0%	84%	99%	117%	138%	161%	200%	239%	275%	316%	363%	420%	482%	554%	636%
Investor balance	*-51,205,629*	43,038,204	145,173,197	256,383,024	378,028,912	511,676,268	634,546,612	756,903,097	897,512,316	1,059,112,175	1,244,851,282	1,459,897,830	1,706,868,524	1,990,551,985	2,316,455,129
Investor IRR to date	loss	84%	161%	182%	189%	191%	192%	192%	192%	192%	192%	192%	192%	192%	192%

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.

Project Overview

Size of region	460	km^2	**177.5 sq miles**
Number of people in region (residents + visitors)	4,962,204		
Travel distance per year by all people (residents and visitors)	71,951,958,000	km	**44,690,657,143 miles**
Percentage of all travel that occurs within the region	65%		
Road coverage (percent of area conveniently served by paved roads)	95%		
Service area size	437	km^2	**168.6 sq miles**
Coverage: percent of people convenient (5 min walk) to Transit X	7%		
Estimate #1 for network length based on desired coverage	37	km	**23.3 miles**
Length of paved roads (non-highway) in region	1,748	km	**1,085.7 miles**
Estimate #2 for network length based on length of public roadways	31	km	**19.0 miles**
Transit X network length	**37**	km	**23.3 miles**
Route density ratio (route length to service area)	0.09		
Total costs for project not including pods	$104,505,429		
…per person	$21		
Mode share of travel on Transit X	6%		
Distance traveled on Transit X, per year	2,782,741,976	km	**1,728,411,165 miles**
…per day	7,623,951	km	**4,735,373 miles**
Daily number of people riding Transit X	295,251	customers	
Distance per Transit X customer per day	26	km	**16.0 miles**
Average trip distance	9	km	**5.3 miles**
Cost for an average trip (at $0.30 per km)	$2.57		
Distance traveled during peak hour	1,524,790	km	**947,075 miles**
Breakeven	**24,166**	customers per day (7% of people convenient to Transit X)	
Number of pods needed to meet peak demand	**13,236**	pods	
Distance per pod per year	210,240	km	
Pod shed parking volume [in cubic 40' shipping containers (sc)]	9	sc^3	
Cost of pods	$66,180,000		
Cost of pod per person	$13		

Project finances

Total project cost (privately financed)	$170,685,429		
OPEX (O&M) per year	$50,066,695		
Private equity	$51,205,629		
Financed	$119,479,800		
Gross Revenue from fares	$830,648,480		
EBITA (Profit)	$780,581,784		
Debt service	$17,921,970		
OPEX + Debt service	$67,988,665		
Net income	$762,659,814		
Operating Margin	94%		
Project costs — per person	$34		
Number of cars displaced	**191,913**	motor vehicles	
Yearly cost of cars displaced — per person	$348		
Operating costs — per passenger-mile	**$0.04**		
Breakeven revenue distance per day	624,021	km	**387,591 miles**
Network capacity (number of pods)	1,124	pods	
% of max network capacity at peak	**589%**		

Impact of proposed network

Reduction in CO2 emissions	**274,796**	metric tons CO_2
Est. cost to maintain 1,748 km roadway	**$89,148,000**	
Reduced waste products per year	**30,754**	metric tons
Travel time saved per year	458	hrs/person
Cost savings per capita per year from reduced car ownership	$3,030	
Increase in household income from time saving and car costs	**22%**	
Reported injuries avoided per year	**1,725**	
Lives saved per year	**17**	
Land freed from parking (1,091 acres)	4,414,005	m^2
…and its commercial value	$4,414,005	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

Assumptions

Ratio of road length to track length	**4**		
Convenient walk time to Transit X route	**5**	min.	
Walking speed	**4.9**	km/h	3 mph
Width of convenient swath along track	**0.82**	km	1 miles
Fixed cost for main route per km	**$3,100,000**		
Fixed cost per km for branch	**$1,550,000**		
Percentage of Dual Track	**80%**		
Average cost of fixed infrastructure per km	***$2,790,000***		
Median distance traveled per person per year (for trips under 1600 km)	**14,500**	km	9,006 miles
Mode share % of people convenient to Transit X	**85%**		
Percentage of daily travel during peak hour	**20%**		
Max capacity: number of pods per km of track	**150**	pods	
Max track capacity during peak hour as % of capacity	**20%**		
Average speed of pod	**72**	km/h	45 mph
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	**$5,000**		
Median income per capita	**$30,000**		
Base fare per km	**$0.30**		
(per mile)	**$0.48**		
O&M as % of project cost	**5%**		
O&M as % of gross revenue	**5%**		
Percentage debt financed	**70%**		
Length of loan/debt	**10**	years	
Interest rate for debt	**5%**		
kg CO2 emissions per liter of gasoline	**2.37**		
Monetary value of 1 hour personal time	**$8**		
Eat. roadway maintenance per year per km	**$51,000**		
Area of one parking lot space	**23**	m^2	247 sf
Commercial income of land	**$1**	per m^2	
Distance from roadway that provides convenience	**0.25**	km	

Pod & Car

	Pod	Car
Service life (years)	**20**	**12**
Full cost of vehicle per year	**$200**	**$9,000**
Public cost to maintain infrastructure (per km)	**$0**	**$100,000**
Energy Efficiency in MPGe	**1000**	**24**
Energy Efficiency in liters/100km	**0.24**	**9.8**
mass of CO2 per vehicle per km (kg)	**0**	**0.09875**
Vehicle mass (kg)	**45**	**1950**
Average speed of travel (km/h)	***72***	**16**
Typical travel time (in minutes) for 9 km trip	***7***	***32***
Fare/cost per km	***$0.30***	**$0.62**
Number of deaths per 100M passenger-km	***0.00001***	**1**
Number of injuries per 100M passenger-km	***0.0006***	***62***
Volume to park (cubic meters)	**5.7**	**70.9**

Currency conversion

Currency name	
Equal to US$1	1

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	m^2	**32,289,000**	**sq ft. (741.3 acres)**
Total commercial income to muni	$3,000,000			
TXCR (Transit X Commercial Rate)	$1.00	per m^2	**$0.093**	**per sq ft**

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	37	km	**23**	**miles**
Estimated gross revenue per unit length	$22,175,970	per km	**$35,767,694**	**per mile**

Local Municipal Tax

% of gross revenue with minimum.

1% gross revenue	$221,760	per route-km	**$357,677**	**per route–mile**
Minimum	$1,408	per route-km	**$2,270**	**per route–mile**

Air Rights Leasing Fee

% of gross revenue with minimum. Proportioned based on length.

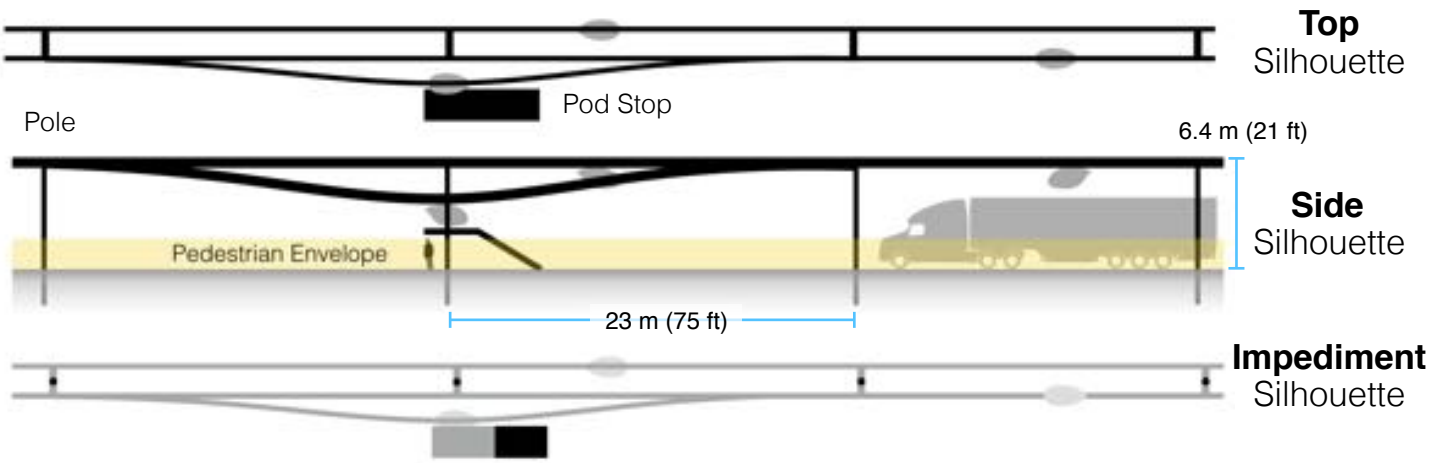
% of route on municipal land	90%			
4% gross revenue	$887,039	per route-km	**$1,430,708**	**per route–mile**
Minimum	$1,408	per route-km	**$2,270**	**per route–mile**

Taxes and Fees

Local municipal income	**$38,209,830**	per year
…with minimum	$100,184	
Non-municipal income	**$3,322,594**	
…with minimum	$5,273	

Footprint calculations for minimum fee

Yearly fees and taxes



Note: Diagrams for illustrative purposes.

Footprint Calculations	Metric		Imperial	
Track width	0.33	m	13.0	inches
Track height	0.61	m	24.0	inches
Pole diameter	0.3	m	11.8	inches
Pole cross section	0.07	m^2	0.8	sf
Stop landing area	1	m^2	10.8	sf
…width	1	m	39.4	inches
…length	1	m	39.4	inches
Ramp length	21	m	826.8	feet
Pole span	23	m	905.5	feet
Number of poles per unit length	43.5	poles per km	5.8	poles per mile
Pole height	6	m	236.2	feet
Single track	1046.7	m^2	11263	sf
…Area of Side Silhouette	688.3	m^2	7406	sf
…Area of Top Silhouette	343.1	m^2	3692	sf
…Impediment Area (adjusted)	15.4	m^2	165	sf
Dual track	1376.7	m^2	14814	sf
…Area of Side Silhouette	688.3	m^2	7406	sf
…Area of Top Silhouette	673.1	m^2	7243	sf
…Impediment Area (adjusted)	15.4	m^2	165	sf
Stop	48.5	m^2	522	sf
…Area of Side Silhouette	25.6	m^2	276	sf
…Area of Top Silhouette	17.9	m^2	192	sf
…Impediment Area (adjusted)	5.0	m^2	54	sf
Stops	2	stops per km	3.2	stops per mile
% of dual track	80%			
Average area per unit length	1,408	m^2 per route-km	**24,430**	**sf per route–mile**

Contract values	
% gross revenue for muni tax/fee	1%
% gross revenue for air rights	4%
Impediment Factor	5

Fair Fare

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 income per capita	US$	**$30,000**	**$30,000**	**$45,000**	**$30,000**
Nominal fare	US$	$0.30	$0.30	$0.45	$0.30
Per Capita Usage %		1%	50%	50%	**90%**
Discount for usage	US$	$0.00	$0.08	$0.11	$0.14
Base Fare (US$)	per km	**$0.30**	**$0.23**	**$0.34**	**$0.17**
% Fares at Market rate		**20%**	**30%**	**40%**	**50%**
% Fares at Base rate		80%	60%	40%	20%
% Fares at Half Base rate		0%	10%	20%	30%
Estimated average fare	per km	$0.48	$0.42	$0.71	$0.39

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

Median travel distance per capita per year (under 1000 mile trips)	20,000	km
% of per capita median income for 20,000 km transportation	20%	
Fare Discount when Transit X travel per capita is 20,000 km per year	50%	