



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

Arizona State University, AZ

This proposal is downloadable at transitx.com/proposals/Transit_X_for_Arizona_State_University.AZ.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



Transit X proposes to build and operate a green, privately-financed microtransit podway to carry passengers and freight for Arizona State University, AZ 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 (transitx.com/transitxhandbook.pdf) 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 be 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. These 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\$8 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 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 to move forward, we need a memorandum of understanding (example at transitx.com/process/mou.html) 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 Arizona State University through better transportation.

Sincerely,



Mike Stanley
CEO, Transit X



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1	Transit X network length	34 km	21.3 miles
2	People (resident-equivalent) in region	100,000	resident-equivalent population
3	Route density ratio (route length to service area)	5.82	
4	Number of stops	340	
5	Triple-speed route length	0 km	
6	Water crossing route length	0 km	
7	Cost of fixed infrastructure	\$124,254,358	
8	...per person	\$1,243	
9	Mode share of travel on Transit X (28% after first year)	86%	after 10 years
10	Distance traveled on Transit X, per year	342,345,040 km	212,636,671 miles
11	...per day	937,932 km	582,566 miles
12	Daily potential energy generation with standard panels on tracks	263 MWh	
13	Sustainable energy use per day	6 MWh	2% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$100 per kWh	\$635,940	
15	Size (rated power) of solar installation	1,478 KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$1,478,459	
17	Cost of buying sustainable energy at \$0.15 per kWh	\$954 per day	5% of OPEX
18	Daily passengers riding Transit X	85,586 customers	86% of the pop.
19	Distance per passenger per day	11 km	6.8 miles
20	Average distance per trip (assuming 3 trips per day)	4 km	2.3 miles
21	Single passenger fare for shared 4 km trip	\$0.97	
22	Passenger distance traveled during peak hour	187,586 km	116,513 miles
23	Breakeven	18,652	customers per day
24			(20% of people convenient to Transit X)
25	Number of pods for peak demand	1,490	pods at 86% mode share
26	Number of customers per pod	57.4	and 67 people per pod
27	Distance per pod per year	168,247 km	
28	Two-layer pod garage area (5% of route with side-parking)	1,639 m ²	0.2% of car parking
29	Cost of pods	\$9,685,000	is \$75 per person
30	Capital cost of energy generation and storage	\$2,748,718	is \$27 per person
31	Project Finances		
32	Total Project Cost (privately financed)	\$136,688,076	
33	Project cost	\$3,989,942	per km US\$6.4M per mi.
34	Equity	\$41,006,423	
35	Private debt financing	\$95,681,653	
36			
37			
38			
39	Debt service (per year)	\$14,352,248	
40	Yearly fees and taxes (US\$118 per capita)	\$11,840,424	
41	OPEX + Debt service + Tax + Fees	\$33,027,075	
42			
43			
44	Project costs — per person	\$1,367	
45	Number of motor vehicles displaced	34,235	motor vehicles
46	Yearly cost of cars displaced — per person	\$3,081	
47	Operating costs per passenger-km	\$0.02	
47	Full costs per passenger-km	\$0.10	
48	Breakeven revenue distance per day	204,409 km	126,962 miles
49	Number of tracks in one direction needed to satisfy peak demand	0.01	



Impact of proposed network

1	Reduction in GHG emissions (metric tons CO2-eq)	33,807 MTCO2-eq annually
2	Estimated cost to maintain public roadways	\$6,069,104 annually
3	Reduced waste products	5,486 metric tons annually
4	Travel time saved (non-stop travel and congestion)	194 hrs/person annually
5	Cost savings from reduced car ownership	\$709 per person annually
6	Increase in household income (from time savings and car costs)	6%
7	Reported injuries avoided	212 annually
8	Lives saved (from safety)	2 annually
9	Land freed from parking (195 acres)	787,394 m ²
12	Temperature reduction (from heat island effect & GHG reductions)	0.5 to 2 °C
11	Health care savings (from pollution, injuries)	High

Model Inputs

15	Ratio of road length to track length	4
16	Walking speed	4.9 km/h 3 mph
17	Width of convenient swath along track	0.16 km 0 miles
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 km 6,211 miles
23	Average distance per day per person	27 km
24	Mode share % of people convenient to Transit X	85% at 5 min walk.
25	Percentage of daily demand during peak hour	20%
26	Maximum capacity per track	23,598 pph
27	Average dwell time during peak hour	10 seconds
28	% of pods traveling on route with highest demand	18%
29	Average speed of pod	72 km/h 45 mph
30	Average # of trips for a daily customer	3 per day
31	Average passengers per pod during peak hours	2.2 passengers
32	Average passengers per pod	1.4 passengers
	Average discount per passenger	18%
33	Maximum passengers per pod	5 passengers
34	Empty pods: Percentage non-revenue	25%
35	Ex-Factory cost per pod	\$5,000
36	Worldwide Median Income per Household (US\$)	10,000
37	Average number of residents per household	2.3
38	Base fare per km	\$0.44
39	(per mile)	\$0.71
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 ² 247 sf
48	Commercial income of land (annual)	\$1.10 per m ²
49	Distance from roadway that is convenient	0.05 km
50	Stops per km	10.0
51	Solar panel area per meter of track	2.0
52	Cost of sustainable energy and storage	\$0.15 per kWh
53	Global Horizontal Irradiance (GHI)	3.8 kWh/m ² /day
54	Cost to generate sustainable energy	\$1,000 per kW
55	Storage per column	40 kWh
56	Typical span	23 m cols/km: 44
57	Energy storage cost	\$100 per kWh
58	Energy storage capacity	1 days
59	Area of parked pod	2.20 m ²
60	Distance discount at max distance	40%
61	Max distance discount	500 km
62	Max usage discount at 10,000 km per capita	50%
63	Shared Pod Discount	20%
64	Shared Pod Compartment Discount	40%
65	Mode share starting discount	67%

Model Inputs (continued)

67	Name of region or project	Arizona State Univers
68	Currency name	
69	Equal to US\$1	1
70	Sustainable energy/electricity generation & storage as	CAPEX
71	Land area of region (sq. km)	6.2
72	Number of residents in region	100,000
73	% travel within region	40%
74	% of land area served by roads	95%
75	Coverage: % of pop. convenient (1 min walk) to Transit X	95%
76	Annual median household income (US\$)	\$55,000
77	Convenient walk time to stop (min)	1
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 4 km trip	3 14
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

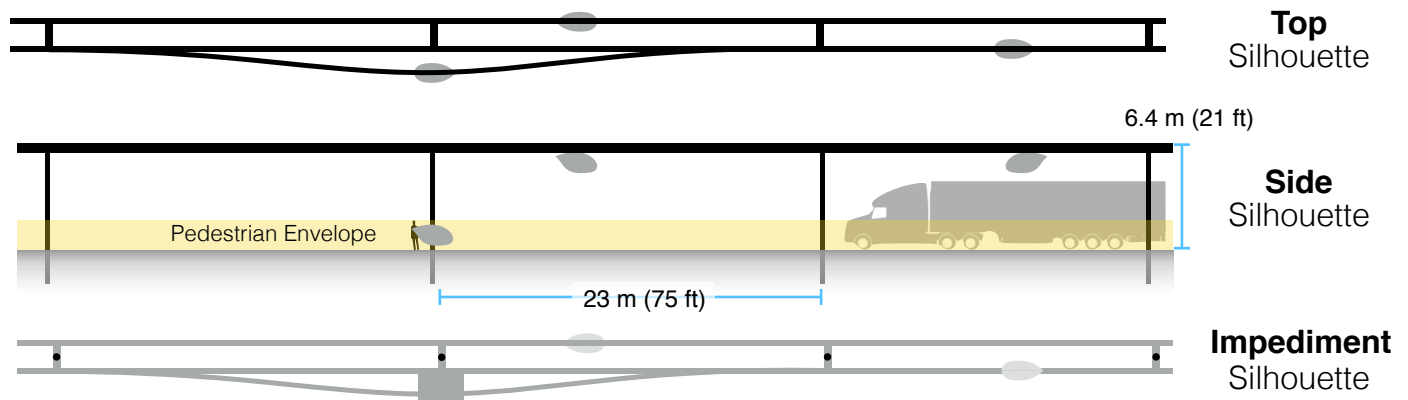


5% of gross revenue is paid to government easement owners for all fees and taxes. When on a private easement, 4% is paid to the private owner and 1% to the government. A minimum payment is based on the Footprint and the Transit X Commercial Rate (TXCR).

1	Government Fees and Tax rate	(for calculating minimums)	
2	Total commercial land (estimated)	589,000 m ²	146 acres
3	Total commercial gov't revenue (US\$)	\$647,900	
4	TXCR (Transit X Commercial Rate)	\$1.10 per m ²	
	<i>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.</i>	\$11.84 per sf	
5			
6			
7	Private Easement Fees		
8	4% of gross revenue	\$69.12 per route-meter	\$21.08 per route-foot
9	Minimum per year	\$1.86 per route-meter	\$0.57 per route-foot
10	Government Fees and Taxes		
11	% of route on government easements	98%	
12	5% on government easements	\$11,603,615	
13	1% on private easements	\$47,362	
14	Total gov't fees and taxes	\$11,650,977 per year	
16	per resident	\$117	
15	with a minimum of	\$63,603 per year	

Footprint calculations for minimum fee

Yearly fees and taxes



1	Footprint Calculations	Metric	Imperial
2	Track width	0.41 m	16.1 inches
3	Track height	0.61 m	24.0 inches
4	Pole diameter	0.3 m	11.8 inches
5	Pole cross section	0.07 m ²	0.8 sf
6	Stop landing area	2 m ²	21.5 sf
7	...width	2 m	78.7 inches
8	...length	1 m	39.4 inches
9	Ramp length	21 m	68.9 feet
10	Pole span	23 m	75.5 feet
11	Number of poles per unit length	43.5 poles per km	70.0 poles per mile
12	Pole height	6 m	19.7 feet
13			
14	Single track	1142.1 m ²	12289 sf
15	...Area of Side Silhouette	688.3 m ²	7406 sf
16	...Area of Top Silhouette	423.1 m ²	4553 sf
17	...Impediment Area (adjusted)	30.7 m ²	331 sf
18			
19	Dual track	1552.1 m ²	16701 sf
20	...Area of Side Silhouette	688.3 m ²	7406 sf
21	...Area of Top Silhouette	833.1 m ²	8964 sf
22	...Impediment Area (adjusted)	30.7 m ²	331 sf
23			
24	Stop	67.8 m ²	730 sf
25	...Area of Side Silhouette	25.6 m ²	276 sf
26	...Area of Top Silhouette	22.2 m ²	239 sf
27	...Impediment Area (adjusted)	20.0 m ²	215 sf
28			
29	Stops with dedicated landing areas	2 stops per km	3.2 stops per mile
30	% of dual track	100%	
31			
32	Average area per unit length	1,688 m ² per route-km	29,291 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	



Fair Fare Formula

Summary	<p>The average commute would be 3.5 times faster saving each commuter 295 hours per year.*</p> <p>At 0.43 USD per mile, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.*</p>
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All prices in USD		Trip Length		
		1 mile	6 mile	25 mile
Transit X	0.53 to 0.88	2.62 to 4.39	10.06 to 17.14	
	2 min., 3.6x faster	8 min., 3.6x faster	33 min., 3.4x faster	
Public transit average		2.97	4.72	6.92
Common public modes	Taxi	4.12 2 to 6 minutes	17.93 8 to 30 minutes	69.72 30 to 120 minutes
	Uber/Lyft	3.13 2 to 6 minutes	12.91 8 to 30 minutes	49.56 30 to 120 minutes
	Public Bus	2.39 3 to 12 minutes	2.39 15 to 60 minutes	3.67 60 to 240 minutes
	Train	3.59 2 to 12 minutes	4.22 8 to 60 minutes	6.61 30 to 240 minutes
Personal car		3.42 2 to 6 minutes	10.71 8 to 30 minutes	38.05 30 to 120 minutes

Travel mode	Avg. Speed	Low Speed	High speed	Base	Includ es km	Over per-km	Min Dist.	Max Dist.	Time cost	Mode share		
	km/h	km/h	km/h				km	km	per min	2	10	40
Taxi	30	20	80	2.39	1	1.20	0.5	100	1.06	5%	4%	1%
Uber/Lyft	30	20	80	1.91	1	0.96	0.5	100	0.53	10%	10%	2%
Public Bus	15	10	40	2.39	20	0.06	0.5	50	0	50%	50%	40%
Train	30	10	80	3.59	2	0.08	2	100	0	35%	36%	57%
Transit X	72	72	72	0	0	0.27	0.1	50	0	-	-	-
Personal car	30	20	80	1.59	0	0.80	0.1	400	0.23	-	-	-

* All numbers on mode shares, speeds, and costs are rough estimates..

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.



Fair Fare Formula

Fare rates are updated annually using this formula

	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	100,000		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	342,345,040	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	15%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)
16	BaseRate	0.44	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	0.97	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	0.000354	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	0.35	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	0.35	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	0.27	USD/km	Rate for shared compartment BaseRate x (1 - SharedCompartmentDiscount)
29	SingleOccupancyMaxDistance	0.30	USD/km	Rate for 500 km in single-passenger pod.
30	Senior + SharedCompartmentRate	0.13	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	253,335,330	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	91,904,970	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 / (DistanceBase 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	45,718,996	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap

Project Summary

Project Description Transportation utility: a fully-automated, solar-powered, microtransit network

Project type **Privately-funded Public Transit**
Design, Build, Finance, Own, Operate, Maintain (DBFOOM)

Project cost US\$137 million

Cost to Gov't \$0

Structure Privately financed equity and debt

Debt term 10 years @ 5%

Equity terms A waterfall profit distribution with:
1. 90/10 split until Return of Capital,
2. then 50/50 until Target IRR met
3. then 10/90 onwards

Taxes & Fees \$11,650,977 per year

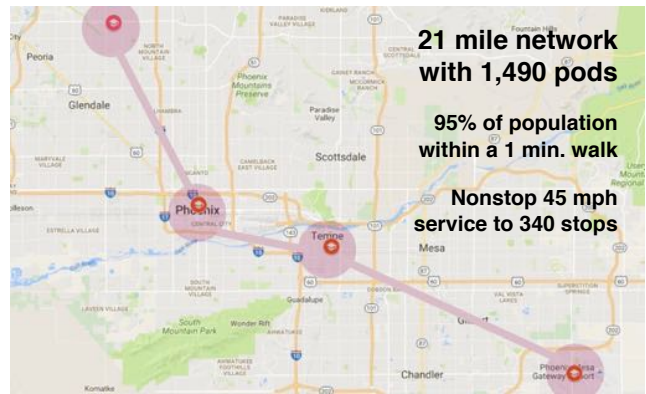
Benefits to society and environment Extremely high



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

Arizona State University, AZ

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



Financials

(US\$ in millions)

	Year 1	Total Years 1-12
Gross Revenues	78	1,904
Taxes and fees	4	95
Debt service	\$12	\$124

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

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. Rollout and Maiden Flight occurred 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	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
Operations & Maint	Letter of interest	Contract
Utility relocation	Identified	Agreements

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



Model Inputs and Assumptions

Route length (km)	34	Travel per year per pod (km)	168,247
Starting number of pods	492	Revenue per vehicle-km (US\$)	0.94
Projected revenue growth	15%	OPEX as % of project cost	5%
Project Cost (Privately funded)	\$136,688,076	Debt Interest rate	5%
% Debt financed	70%	Debt term (yrs)	10
Debt	\$95,681,653	Years to return equity capital	5
Equity	\$41,006,423	Profit share when below capital return	90%
Capital return per year	\$8,201,285	Profit share when below Target IRR	50%
Debt payment (per year)	\$12,391,212	Profit share when above Target IRR	10%

Pro Forma

Years	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue	0	78,194,476	89,923,647	103,412,194	118,924,023	136,762,627	157,277,021	180,868,574	207,998,860	239,198,689	275,078,492	316,340,266	363,791,306
5% RoW-tax+fee	0%	3,909,724	4,496,182	5,170,610	5,946,201	6,838,131	7,863,851	9,043,429	10,399,943	11,959,934	13,753,925	15,817,013	18,189,565
Debt service	0	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	\$12,391,212	0	0
Investor balance		-\$26,088,124	-\$10,099,424	\$7,120,238	\$25,755,504	\$46,018,717	\$68,154,069	\$85,881,351	\$106,084,536	\$129,135,010	\$155,459,864	\$186,789,379	\$222,449,263

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.