



Transit X, LLC offers a preliminary proposal for

Quito Ecuador

For a privately-funded shared mobility service that is

High capacity • Automated • Wait-free
Solar powered • Final destination • Resilient

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





Economics for Quito, Ecuador

Inputs are underlined.

Size of region	<u>372</u> km ²	143.5 sq miles
Number of people in region (residents + visitors)	<u>2,671,191</u>	
Travel distance per year by all people (residents and visitors)	<u>38,732,269,500</u> km	24,057,310,248 mi
Percentage of all travel that occurs within the region	<u>97%</u>	
Road coverage (percent of area conveniently served by paved roads)	<u>90%</u>	
Service area size	<u>334.8</u> km ²	129.2 sq miles
Coverage: percent of people convenient (5 min walk) to Transit X	<u>90%</u>	
Estimate #1 for network length based on desired coverage	<u>369</u> km	229.2 miles
Length of paved roads (non-highway) in region	<u>837</u> km	519.9 miles
Estimate #2 for network length based on paved roadways	<u>377</u> km	233.9 miles
Transit X network length	377 km	233.9 miles
Total fixed costs for Transit X	\$875,711,250	
...per person	\$328	
Mode share of travel on Transit X	77%	
Distance traveled on Transit X, per year	28,741,280,582 km	17,851,727,070 mi
...per day	78,743,234 km	48,908,841 mi
Daily number of people riding Transit X	2,043,461	
Distance per Transit X customer per day	39 km	23.9 mi
Average trip distance	13 km	8.0 miles
Cost for an average trip (at \$0.09 per km)	\$1.20	
Distance traveled during peak hour	7,874,323 km	4,890,884 mi
Number of pods needed to meet peak demand	68,354 pods	
Pod shed parking volume (in cubic shipping containers)	15 cubic sc	
Cost of pods	\$341,770,000	
Cost of pods per person	\$128	
Yearly payment to municipality for RoW	\$134,724,753	
System Economics		
Total system cost	\$1,217,481,250	
OPEX (O&M) per year	\$85,223,688	
Equity	\$608,740,625	
Financed	\$608,740,625	
Revenue from fares	\$2,694,495,055	
EBITA (Profit)	\$2,609,271,367	
Debt service	\$79,136,281	
OPEX + Debt service	\$164,359,969	
Net income	\$2,530,135,086	
Operating Margin	97%	
One-time project costs (per person)	\$456	
Operating costs (per passenger-mile)	\$0.01	
Equivalent number of cars taken off the road	1,982,157 motor vehicles	
Yearly cost of cars removed (per person)	\$6,678	
Breakeven revenue distance per day	4,803,214 km	2,983,363 mi
Breakeven (people riding daily)	124,648 people	
IRR (Internal rate of return)	208%	
Payback period (profits pays back equity)	3 months	
Network capacity (number of pods)	11,229 pods	
Peak demand as % of maximum track capacity	609%	
Externalities (estimated)		
Reduction in CO2 emissions	3,405,841,749 kg CO ₂	
Public cost for maintaining roadways per year	\$42,687,000	
Reduced waste products per year	185,827,245 kg	
Travel time saved (hours per person per year)	684	
Cost savings per household per year over personal car ownership	\$7,402	
Increase in household income from time saving and car costs	91%	
Reported injuries avoided per year	17,820	
Lives saved per year	178	
Land freed from less street parking and parking lots	TBD km ²	
Health care cost savings from lower pollution	TBD	
Change in local temperature heat island (degrees C)	TBD °C	

Transit X Way
Ecuador



Quito

Guayaquil

Quito to Guayaquil
6 hours • 430 km

72 km/h nonstop service to 100+ stops

