



Transit X, LLC offers a concept proposal for

Monterrey, Mexico

For a privately-funded mobility service that is

High Capacity · Automated · Wait-free Solar powered · Final destination · Resilient





Economics for Monterrey, Mexico

Number of particular imagen in products of region 1,000 to 1,0				
Number of people in region (respective process) 1,138,1880 10,185,664,566 in People resident part by an people (resident and visitors) 1,165,668,650,000 (m) 10,185,664,566 in People resident part by an people resident part of the people residen	Transit X.	Inputs are underlined		
Travel distance per year by a proper presidents and valuable 15.388,280.000 km 10.185,045.09 km 10.185,045.00 km 10.185,045.09 km 10.185,045.00 km 10.1	=		km²	
Peggon area that is conveniently served by preed of pack Peggon area that is conveniently served by preed of pack Desired covering (pack) and of ordered covering to pack of ordered packs (preed to pack) and to pack of ordered packs (preed to pack) and to pack of ordered packs)			km	10,185,664,596 mi
Contained coverage (percent of people conversere to Tarinal X, 565 Editional of 10 revolench length based on desired coverage (Largh propert case) and providency (Largh pased conference to Tarinal X, 565 Largh pased conference to Tarinal X, 565 Largh pased conference to Tarinal X, 565 Largh pased conference to pased conductors (Largh pased conference to Tarinal X, 565 Largh pased conference to Tar	Percentage of all travel that occurs within the region	90%		
Devide coverage (percent of propole convenient to Tranat X Estimates 4 of Y bin Ligida Min Ligida M				
Estimate 4 ft or networks langth based on desired coverage (Langth of pared closed for highways) in region (1998) 1,000			km ²	
Length of provid codes (non-highway) in aging 1,588 km 467 k	- · · · · · · · · · · · · · · · · · · ·		km	
Transit X network length 10				
Total fued costs for Transit X \$1,085,339,063 \$1,08	Estimate #2 for network length based on paved roadways			
Detail D	Transit X network length	467	km	
Mode share of travel on Transit X	Total fixed costs for Transit X	\$1,085,339,063		
Distance traveled on Transit X, per year 6,899,845,590 km 4,285,618,379 mi 1,741,400 mi 1,741,400 mi 1,741,400 mi 1,800,867 km 1,741,400 mi	per person	\$959.66		
Daily number of people riding Transist X S28,724	Mode share of travel on Transit X	47%		
Daily number of people riding Transit X S28,724	Distance traveled on Transit X, per year	6,899,845,590	km	4,285,618,379 mi
Distance per Transit X oustomer per day 36 km 22.2 ml	per day	18,903,687	km	11,741,420 mi
Cost for an average trip distance 12 km S3.35 59.33 Mexican Peace 18.00,399 km 1.174,142 ml 1.74,142 ml 1.74,141 ml 1.74,142 ml 1.74,142 ml 1.74,141 ml 1.74,	Daily number of people riding Transit X	528,724		
Cost for an average trip Distance traveled during peak hour Number of pods needed to meet peak demand Pod shed parking volume Cost of pods person Milage per year per pod Revenue per pod per year S18,208,000 S82,045,000 S82,045,000 S82,045,000 S118,203 S100,148,718 1,772,632,311 Mexican Peso S118,203 Mexican Peso S82,045,000	Distance per Transit X customer per day	36	km	22.2 mi
Number of pods needed to meet peak demand 1,890,369 km 1,174,142 ml	Average trip distance	12	km	
Number of pods needed to meet peak demand 1,890,369 km 1,174,142 ml	Cost for an average trip	\$3.35	59.33	Mexican Peso
Number of pods needed to meet peak demand Pod shed parking volume Cost of pods per person (Cost of pods per person (Pods of pods per person (Pods of pods per person (Pods of pods per year per pod (Pods of Pods of Po			km	1,174,142 mi
Pod shed parking volume S86 standard 53' traillers				
Cost of pods S82,045,000	·	•		
Cost of pods per person Milage per year per pod 420,492 km Melcan Peco 420,492 km 420,492 k			standard 53' trailers	
Milage per year per pod Revenue per pod per year \$118.263	·			
Yearly payment to municipality for RoW \$100,148,718 1,772,632,311 Mexican Peso ystem Economics			km	
Yearly payment to municipality for RoW system Economics Total system cost OPEX (O&M Ocets) S81,716,384,063 OPEX (O&M Ocets) S81,716,384,063 S81,716,884 1,448,388,853 Meccan Peco S83,692,031 10,331,348,953 Meccan Peco S83,781,782,894,724 10,331,348,953 Meccan Peco S83,782,894,124 10,331,348,953 Meccan Peco S83,783,894,124 10,331,348,953 Meccan Peco S83,782,894,124 10,331,348,953 Meccan Peco S83,782,954 10,331,348,953 Meccan Peco S83,782			MII	Mariana Dana
Total system Economics				
Total system cost	reariy payment to municipality for Hovv	\$100,148,718	1,772,632,311	Mexican Peso
Total system cost	ystem Economics			
Equity \$583,692,031 10,331,348,953 Modican Peace Financed Finance	Total system cost	\$1,167,384,063	20,662,697,906	Mexican Peso
Financed Revenue from fares Reported in Juris avoided per year Land freed from less street parking and parking loss from lower pollution Revenue from fares \$1,940,581,572 34,348,293,828 Mexican Peace \$1,940,581,572 34,348,293,828 Mexican Peace \$1,940,581,572 34,348,293,828 Mexican Peace \$1,940,581,572 34,348,293,828 Mexican Peace \$1,575,99,848 2,789,964,217 Mexican Peace \$157,596,848 2,789,464,217 Mexican Peace \$1,782,984,724 31,558,829,610 Mexican Peace \$1	OPEX (O&M Costs)	\$81,716,884	1,446,388,853	Mexican Peso
Revenue from fares EBITA (Profit) Bett service OPEX + Debt service Net income Operating Margin Operating Margin Operating costs (per person) S1,032 18,270 Mexican Peso 475,851 cars S0.02 0.40 Mexican Peso 80,02 0.40 Mexican Peso 817,631,702 kg CO2 Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Health care cost savings from lower pollution Reduction in cover person lover pollution Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution S1,888,864,688 32,901,904,974 Mexican Peso \$1,343,075,364 Mexican Peso \$1,555,968,88 2,789,464,217 Mexican Peso \$1,555,829,610 Mexican Peso 475,851 cars \$1,932,829,412 18,270 Mexican Peso 475,851 cars \$1,932,829,412 1,535,829,610 Mexican Peso \$1,535,829,610 Mexican Peso \$1,535,	Equity	\$583,692,031	10,331,348,953	Mexican Peso
Revenue from fares \$1,940,581,572 34,348,293,828 Mexican Peso	Financed	\$583,692,031	10,331,348,953	Mexican Peso
EBITA (Profit) Debt service Debt service S75,879,964 1,343,075,364 Mexican Peso OPEX + Debt service Net income OPEX + Debt service S17,879,964 2,789,464,217 Mexican Peso S17,829,84,724 31,558,829,610 Mexican Peso Operating Agripi 96% Operating costs (per person) Operating costs (per passenger-km) Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Ereakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity IRR (Stimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Health care cost savings from lower pollution EBITA (Profit) S75,879,964 1,343,075,364 Mexican Peso 18,782,984,724 18,270 1	Revenue from fares	\$1,940,581,572	34,348,293,828	Mexican Peso
Debt service \$75,879,964 1,343,075,964 Mexican Peeo \$157,596,848 2,789,464,217 Mexican Peeo \$157,596,848 2,789,464,217 Mexican Peeo \$1,782,994,724 31,558,829,610 Mexican Peeo \$1,782,994,724 31,558,829,610 Mexican Peeo \$1,782,994,724 31,558,829,610 Mexican Peeo \$1,032 \$18,270 Mexican Peeo \$1,032 Mexican P	EBITA (Profit)	\$1,858,864,688	32,901,904,974	Mexican Peso
Net income Operating Margin Operating Margin Operating Costs (per person) Operating costs (per passenger-km) Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Breakeven revenue distance per day IRR (Internal rate of return) Payback period (profits pays back equity) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Increase in household income from time saving and car costs Health care cost savings from lower pollution Reduction on owner pollution Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution Poperating Margin 96% 31,558,829,610 Mexican Peso 18,782,984,724 31,558,829,610 Mexican Peso 18,783,032 31,558,829,610 Mexican Peso 96% 31,032 31,558,829,610 Mexican Peso 4475,851 cars 67,025 Mexican Peso 475,851 cars 67,025 Mexican Peso 1,535,190 km 953,534 ml 96% 96% 1,532,839,610 Mexican Peso 1,535,190 km 963,787 967,025 Mexican Peso 1,535,190 km 963,534 ml 963,787 967,025 Mexican Peso 1,532,333,250 Mexican	Debt service	\$75,879,964	1,343,075,364	Mexican Peso
Net income	OPEX + Debt service	\$157,596,848		
Operating Margin One-time fixed costs (per person) Operating costs (per person) Operating costs (per passenger-km) Operating costs (per passenger-km) Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Retwork capacity (number of pods) Peak demand as % of maximum track capacity IRR (Internal rate of return) Payback period (profits pays back equity) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reported injuries avoided per year Lives saved per year Lives saved per year Lives saved per year Leand freed from less street parking and parking lots Health care cost savings from lower pollution 1817,631,702 kg CO2 1,532,333,250 Mexican Peso 1,532,333,250 Mexican	Net income	\$1,782,984,724		
One-time fixed costs (per person) Operating costs (per passenger-km) Source Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution \$1,032 \$0.40 Mexican Peso 0.40 Mexican Peso 87,025 Mexican Peso 87,025 Mexican Peso 886,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 634 634 634 634 634 634 634 634 634 634	Operating Margin	96%		
Operating costs (per passenger-km) Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Land freed from less street parking and parking lots Health care cost savings from lower pollution \$0.40 Mexican Peso 475,851 cars 67,025 Mexican Peso 1,535,190 km 953,534 mi		\$1.032	10 270	Marriaga Daga
Equivalent number of cars taken off the road Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 475,851 cars 67,025 Mexican Peso 42,938 people 153% 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 54,421 1ncrease in household income from time saving and car costs 31% Reported injuries avoided per year Lives saved per year Lives saved per year A3 Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD			10,270	Mexican Peso
Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution \$3,787 67,025 Mexican Peso \$42,938 people \$44,611,071 kg \$42,631,702 kg CO ₂ \$86,572,500	Operating costs (per passenger-km)	\$0.02	0.40	Mexican Peso
Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution \$3,787 67,025 Mexican Peso \$42,938 people \$44,611,071 kg \$42,631,702 kg CO ₂ \$86,572,500	Equivalent number of care taken off the read			
Breakeven (people riding daily) Break (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution Breakeven (people riding daily) 42,938 people 1,532,938 people 13,917 pods 13,917 pods 187,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg \$44,611,071 kg \$44,611,071 kg Breakeven (people riding daily) 1,53% people 13,917 pods 1,532,333,250 Mexican Peso 44,611,071 kg Breakeven (people riding daily) 1,53% people 13,917 pods 1,532,333,250 Mexican Peso 44,611,071 kg Breakeven (people riding daily) 1,53% people 1,53% peopl	Equivalent number of cars taken on the road	475,851	cars	
Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution TSOM A ponths months 13,917 pods 13,917 pods 1,532,333,250 Mexican Peso 44,611,071 kg 634 64,421 634 64,421 634 64,421 634 64,421 654 654 64,421 654 654 654 654 654 654 654 65	•			Mayiaan Daga
IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 13,917 pods 13,917 pods 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg \$4,411 \$4,42	Yearly cost of cars removed (per person)	\$3,787	67,025	
Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Ternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Acost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution Table ### months 13,917 pods 1,592,170 kg CO2 \$86,572,500 \$1,532,333,250 Mexican Peso 44,611,071 kg 634 44,611,071 kg 634 44,211 Fall Fa	Yearly cost of cars removed (per person) Breakeven revenue distance per day	\$3,787 1,535,190	67,025 km	
Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Acost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 13,917 pods 13,917 pods 118% 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 634 54,421 54,421 55,421 56,34 56,34 57,501 58,632,333,250 Mexican Peso 44,611,071 kg 44,211 57,631,702 kg CO2 58,65,72,500 58,65,72,500 59,632,333,250 Mexican Peso 44,611,071 kg	Yearly cost of cars removed (per person) Breakeven revenue distance per day	\$3,787 1,535,190	67,025 km	
Network capacity (number of pods) Peak demand as % of maximum track capacity Xternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 13,917 pods 118% 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 634 634 64,421 4,278 4,278 Lives saved per year 43 Land freed from less street parking and parking lots TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily)	\$3,787 1,535,190 42,938	67,025 km	
Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reversal time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution Reduction in CO2 emissions 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 634 64,421 634 64,421 657 658 669 678 678 678 678 678 678 67	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return)	\$3,787 1,535,190 42,938 153%	67,025 km people	
Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste proson per year Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 817,631,702 kg CO2 \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg 634 \$4,421 \$4,278 \$4,278 \$4,278 \$5,278 \$6,34 \$7,631,702 kg CO2 \$6,34 \$6,421 \$7,631,702 kg CO2 \$6,34 \$7,631,702 kg CO2 \$6,34 \$7,631,702 kg CO2 \$6,34 \$7,631,702 kg CO2 \$7,631,	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity)	\$3,787 1,535,190 42,938 153% 4	67,025 km people months	
Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Reduced waste products per year A4,611,071 kg Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 817,631,702 kg CO ₂ \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg \$4,421 \$4,421 Lives savings and car costs 31% Reported injuries avoided per year Lives saved per year The Difference of the control of the	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods)	\$3,787 1,535,190 42,938 153% 4	67,025 km people months	
Public cost for maintaining roadways per year Reduced waste products per year A4,611,071 kg Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year 43 Land freed from less street parking and parking lots Health care cost savings from lower pollution \$86,572,500 1,532,333,250 Mexican Peso 44,611,071 kg \$4,421 \$4,421 \$4,278 \$4,278 \$4,278 \$5,72,500 1,532,333,250 Mexican Peso	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity	\$3,787 1,535,190 42,938 153% 4	67,025 km people months	
Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution 44,611,071 kg 634 44,421 84,421 184,621 84,421 185 186 187 188 189 189 189 189 189 189	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity	\$3,787 1,535,190 42,938 153% 4	67,025 km people months	
Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated)	\$3,787 1,535,190 42,938 153% 4 13,917 118%	67,025 km people months pods	
Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year 43 Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated) Reduction in CO2 emissions	\$3,787 1,535,190 42,938 153% 4 13,917 118%	67,025 km people months pods	953,534 mi
Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year 43 Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
Reported injuries avoided per year Lives saved per year 43 Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year)	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
Lives saved per year 43 Land freed from less street parking and parking lots TBD Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity xternalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634 \$4,421	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
Land freed from less street parking and parking lots Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity IRR (Internal rate of return) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634 \$4,421 31%	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
Health care cost savings from lower pollution TBD	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity IRR (Internal rate of return) Reductin (number of pods) Peak demand as % of maximum track capacity IRR (Internal rate of return) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634 \$4,421 31% 4,278	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
•	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity Internalities (estimated) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634 \$4,421 31% 4,278 43	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi
	Yearly cost of cars removed (per person) Breakeven revenue distance per day Breakeven (people riding daily) IRR (Internal rate of return) Payback period (profits pays back equity) Network capacity (number of pods) Peak demand as % of maximum track capacity IRR (Internal rate of return) Reduction in CO2 emissions Peak demand as % of maximum track capacity IRR (Internal rate of return) Reduction in CO2 emissions Public cost for maintaining roadways per year Reduced waste products per year Travel time saved (hours per person per year) Cost savings per household per year over personal car ownership Increase in household income from time saving and car costs Reported injuries avoided per year Lives saved per year Land freed from less street parking and parking lots	\$3,787 1,535,190 42,938 153% 4 13,917 118% 817,631,702 \$86,572,500 44,611,071 634 \$4,421 31% 4,278 43 TBD	67,025 km people months pods kg CO ₂ 1,532,333,250	953,534 mi

Change in local temperature heat island (degrees C) TBD

Change in global temperature

Change in sea level

90 00	0		
		Value	Assumptions
		2	Ratio of road length to track length
	min.	5	Convenient walk time to Transit X route
(3 mph)	km/h	4.9	Walking speed
(1 mi)	km	0.82	Width of convenient swath along track
Mexican	54,870,000	\$3,100,000	Fixed cost for main route per km
Mexican	27,435,000	\$1,550,000	Fixed cost per km for branch
		50%	Percentage of main route vs. all routes
Mexican	41,152,500	\$2,325,000	Average cost of fixed infrastructure per km
(9,006 m	km	14,500	Distance traveled per person per year across all modes
		85%	Mode share % of people convenient to Transit X
		10%	Percentage of daily travel during peak hour
	pods	149	Max capacity: number of pods per km of track
		20%	Max track capacity during peak hour as % of capacity
	km/h	72	Average speed of pod
	per day	3	Average # of trips for people riding Transit X
	people	2	Occupancy per pod
	people	4	Maximum occupancy per pod
		25%	Empty pods: Percentage non-revenue vehicle travel
Mexican	88,500	\$5,000	Cost per pod
Mexican	531,000	\$30,000	Median household income
Mexican	4.98	\$0.28	Typical fare per km
Mexican	8.01	\$0.45	(per mile)
		7%	O&M per year as a % of capital costs
		50%	Percentage debt financed
	years	20	Length of loan/debt
		8%	Interest rate for financing
	per liter of gasoline	2.37	kg CO2 emissions
Mexican	132.75	\$8	Monetary value of 1 hour personal time
Mexican	902,700	\$51,000	Public roadway maintenance costs per year per km
(62 sf)	m²	5.78	Infrastructure's footprint per km
Mexican	20,465	\$1,156	Lease rate per m²
(247 sf)	m²	23	Parking footprint for road vehicle
Mexican	1,770,000	\$100,000	Cost of land per km²

	Transit X	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 (MPGe)	1000	20
mass of CO2 per vehicle per km (kg)	0	0.1185
Vehicle mass (kg)	45	1950
Average speed of travel (km/h)	72	16
Average travel time (hours)	0.50	2.23
Fare per km	\$0.28	\$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

Assumptions	Value		
% of HH income for 16km travel	15%		
Width of convenient swath for road	0.4	km	

Currency conversion

Currency name	Mexican Peso
Equal to US\$1	17.7

TBD: ratio of main route vs. branch route length should be dependent upon density and mode share. If high density, then less branches. If higher convenience to Transit X, then more branching.

Add: health care costs from air pollution

Add: capital depreciation Add: other sources of revenue

http://ccgovernment.carr.org/ccg/pubworks/
Maintenance%20Information%20Brochure.pdf
https://ohioauditor.gov/trainings/lgoc/2012/
Are%20Your%20Road%20Dollars%20Struggling%20to%20Keep%20U
p%20with%20Deterioration.pdf

IRR flows 12 years

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