



USA Market Size: <https://pitchbook.com/news/articles/uber-v-waymo-in-28-trillion-battle-for-robo-taxis>

## How the investors make money

There are two ways the investor make money. The first is increase in the value of their shares as a Consortia forms for 5 to 10 times the original \$25 million by selling 50% ownership. The second way is generating operating revenues on routes that have been constructed. That is what this Chapter 9 focuses on. These systems are designed for ridership up to 10,000 per hour. After that, level they begin to get congested. Ridership forecast numbers are attainable. Pricing compares to existing transport options. A Surplus grows because of a fixed cost against both price and ridership increase each year for 30 years.

## First Year Budget for Skyways Lab

Phase I Lab		
mobilize company as Skyways Lab		\$ 25,000
build hub and streaming VR connections		\$25,000
build 1/10 <sup>th</sup> scaled model with software		\$100,000
build software lab by testing 3 or more		\$100,000
begin VR beta testing with 5 to 10		\$50,000
engineering for models and test track		\$250,000
full scale mock up on along a guideway		\$250,000
software for test track, media/ streaming VR		\$210,000
Legal LLC, partners, customers		\$102,000
Administration, overhead and Travel		\$190,000
Total Phase I		1,300,000

## Second Year Budget

Phase II Budget for 1/4 mile Test Track		
Admin, Staff, legal, CPA, Docs & broker fees	Mobilization	\$400,000

Economic Feasibility Modeling	Mobilization	\$100,000
Civil, soils, alignment and grounds prep	Mobilization	\$200,000
Design Engineering, Construction Bids	Prototype Track	\$1,400,000
Build 1/4 mile Prototype Track	Prototype Track	\$1,200,000
Six Switches	Prototype Track	\$170,000
Automation Command and Control	Prototype Track	\$750,000
Power Distribution	Prototype Track	\$350,000
Stations, maintenance bays, fuel depot, operations, storage access ramps	Prototype Track	\$400,000
Build 10 chassis with propulsion, switches	Prototype Track	\$530,000
Mockup 6 and 15 passenger cabs	Prototype Track	\$350,000
Sales and Multimedia marketing/tools		\$150,000
Test Track		<b>\$6,000,000</b>

## Third Year Budget

Phase III a One-mile Sales Model w/Stations		
Technology Engineering and Software	Sales Model	\$1,000,000
Planning	Sales Model	\$250,000
Guideway engineering @ 8% of Construction	Sales Model	\$1,000,200
Concrete Guideway 70' Beams at \$10,000 each x 2	Sales Model	\$1,500,000
Steel Roadbed track	Sales Model	\$528,000
Columns and footings at \$ 8,800	Sales Model	\$660,000
Crossbeams every 70' at \$5,300 each	Sales Model	\$397,400
Shipping to job site at 25 mi	Sales Model	\$187,500
Erection of sections at \$5,000 each	Sales Model	\$375,000
Electric power Distribution	Sales Model	\$1,100,000
Control Systems	Sales Model	\$1,700,000
6 stations	Sales Model	\$1,500,000
Maintenance facilities and shops	Sales Model	\$200,000
Vehicles: assumes 8 chassis + cabins to start	Sales Model	\$250,000
Prototype vehicle cabins	Sales Model	\$1,000,000
Administration Mgmt., legal, CPA, travel, office	Sales Model	\$500,000

Working Capital and Contingency	Sales Model	\$850,000
One Mile Sales Model		\$14,000,000

## Economic Studies

Why Skyways makes money: Because it is a fixed cost installation that grows from increasing ridership and pricing over time. These studies show reasonable assumptions for the revenues of ridership and pricing in each case. Over 30 years the earning grow to the 50% per year range. The table below shows examples of ridership and pricing for metro areas, office parks, resorts, parks, downtowns and cross-country routes. These systems start at \$100 Million for a neighborhood size and grow to billions for cross-country sizes.

<b>Brazil Routes</b>	<b>Type</b>	<b>Miles</b>	<b>Cost in Mil</b>	<b>Net 3 yrs</b>	<b>Capacity</b>	<b>R.O.I</b>
1. <a href="#">Olympic Park</a>	Demo	10	\$200.0	\$7.90	18%	4%
2. <a href="#">Rio Coastal</a>	metro	55	\$820.0	\$245.30	22%	29.90%
3. <a href="#">Rio to Sao Paulo</a>	cross country	220	\$4,000.0	\$484.00	23%	12.10%
Rio to Brasilia	cross country	800	\$12,000.0			
<b>USA Routes</b>						
4. Albuquerque	metro	15	\$231.0	\$14.60	26%	6.33%
5. Univ of New Mexico	Campus	480	\$80.0	\$1.87	33%	2.81%
6. Branson	resort	6.6	\$160.0	\$18.60	20%	11.60%
7. Denver Tech Center	Office Park	5.5	\$75.0	\$0.75	30%	10.00%
8. Platte Valley Denver	core	5	\$100.0	\$5.30	22%	4.96%
9. South Florida	coastal	66	\$750.0	\$17.20	22%	8.20%
10. Colorado I-70	mountain	128	\$1,700.0	\$188.96	18%	11.10%
11. Grand Canyon	Nat Park	5	\$75.0	\$2.7	17%	4%

## Two Incubators: Rio de Janerio and Albuquerque

<http://smartskyways.com/route/default.htm>

### Rio Economic Study

For simplicity revenues and returns are based on system capacities. Rio has 14 million population crowded on a mountain terrain and needs more transport: Only the rich own cars. A 28-mile route from the Olympic site demo to the airport would go through the heart of Rio along the coast. Cost estimate is \$550 million including fiber optics and a smart grid. Because Rio is so crowded the economic sketch starts at 560,000 ridership which is only 4% of the population. This yields a starting profit of 41% ROI and grow to 96% Roi over 25 years without considering revenues from fiber optics, cargo and a smartgrid. Ridership prices are \$60 p/m for subscriptions of unlimited daily ridership in private cars and \$30 unlimited daily ridership for the poor in 20 passenger buses.

\* Breakeven is less than 20% capacity yielding no surplus, but paying the interest and AM

\* Expected over first 5 years is 40% capacity yielding a 25% or better return

\* Attainable is 66% capacity yielding a 50% or better return

The issue is not if, but when these ROI milestones will arrive. Rio is very congested and has many transport systems now. The ridership can be priced to attract the capacities needed in the early years and then gradually raise prices to control congestion capacity. After studying Rio, the capacity will fill up in the first 5 years offering huge returns after that.

## Albuquerque Economic Study

This is a city of less than 700,000 population. In the middle of the city, it has a 150-acre State owned Fairgrounds that is worn and needing a new theme. The site could serve as an incubation center for Driverless America. It has an old one mile race track with 20 long barns used for horse stables. Each of these could house a 1000 section of new Automated Guideway companies providing a demonstration and marketing opportunity for the industry. Inside the one-mile track could become the trade mart and the grandstands could serve as sales offices. Around the ground are many some pavilions which could be rented to car manufacturers to show their Driverless technology. The site also contains a large coliseum for events. Wiring the entire site with fiber optics could distribute real time marketing, events and data using Virtual Reality for viewers all across America. This site should serve as the hub for an initial 15-mile system that connects 90% of all the activity centers in the city. Estimated costs are \$231 million. An economic sketch for ridership only and no cargo, fiber or energy revenues shows a low 8% ridership of only 54,000 would produce an 11% ROI to start and grow to 41% ROI over 27 years. This is an 25% p/y average. Of Course this is only an illustration and not a professional study.

## Fiber-Optics

These will create an entire new industry of jobs starting with a showcase in the Rio Olympic Park. By broadcasting all activity live in virtual reality and distribute this kind of media over our fiber optics, Skyways will earn additional revenues that have not been calculated yet. But these revenues will be big and may even surpass the ridership revenues with more users. Gradually extensions of Skyways routes throughout Latin America could pass by 250 million people living within 50 miles of Skyways routes. With a market of this size, millions of people could learn to publish virtual reality in sports, medical, banking, investments, real estate, education, entertainment, engineering, planning and government approvals. VR will become a huge industry.

## Oasis-Machines

These are planned as additional power for operating Skyways. This is currently estimated at 1000 watts per 70' section or 1KW. We can get the power needed to start the process from 2 or 3 solar panels. This power is used to split hydrogen and oxygen from water and use these gases to run piston driven electric generators like the kind sold a Lowes. Testing shows 6 times the output can generated more than the input and the research shows 10 times is attainable. An example would be 6,000 watts could be generated and is distributed as: 1000 watts to run Skyways, 3000 watts

to operate Atmospheric Water generators that capture 20,000 gallons of water vapor per day from the sky (with 30% humidity). Over one mile this is envisioned as 150,000 gallons per day. This is enough water to run 9 food farms of 50 acres each using a pivot sprinkler system. This is one square mile of food production for every mile of a cross country route. The remaining 2000 watts is put into a Smart Grid and sold off. This technology is scalable both bigger and smaller. It has technical glitches that appear solvable. You can see why Skyways wants to continue this research and incorporate Oasis Machines into our projects. We have yet to calculate revenues.

## Economic Impacts

Transportation is known to have a stimulating effect on: jobs, the neighborhoods around the stations and the new tax base created. In America the US Chamber of Commerce, says “for every dollar spent on transportation, it ripples throughout the community eight times in new local resident spending”. There is also less money spent on car ownership making more money available for rents and home purchasing. It will also change the urban landscape with less parking and increased city density. Cities will become more walkable.

## Conclusions

Rio and Brazil offer a better incubator than the USA because they need it more than the USA does. USA also has too much competition. The first four routes in Brazil are serious money makers for both people and fiber. Ridership will reach capacity quickly in first five years and create demand for expansion. Within 10 years Brazil earnings will top 50% per year on ridership and perhaps double that with fiber. USA market has hundreds of players and will be slower to develop but is ultimately much larger. These technologies are all feasible. Now it is the political will and the funding that remains.