



A \$50+ Billion Proposal to Brazil for driverless transport starting at the Olympic Site in Rio De Janeiro - growing to 3300 miles

By Smart Skyways LLC – contact: lloydgoff@hotmail.com

\$50 Billion Proposal To Brazil

To Build up to 3,300 miles of Skyways Backbone to Lima

[Interactive Map](#)



\$200 Million sales model can incubate a \$150 Billion market development in Latin America

Pan American Corridor Transport (PACT)

The Latin American market is larger than the USA and with little passenger or cargo rail infrastructure. It also has an exploding demand for cars from the middle class and very few paved roads to drive them on. Most people use buses for short distance and airlines for long distances. Latin America has a greater chance of getting built than USA and has far less regulation and more need.



Growing
into a
15,000 mile
P.A.C.T.
Backbone

Connecting
33 Major cities
18 Counties

400 Mil population

\$250 Billion

Pan American Corridor Transport

Latin America P.A.C.T. Backbone Continued

- * At \$15 to 18 million per mile the Latin America component is estimated at \$150 Billion over 15 years with transport, media, smart grid, real estate and other revenue potentials.
- * This is a shared aerial easement of 25' by 25' going through 14 countries in Central and South America.
- * A variety of carriers can share this easement and combining these revenues makes it more profitable.

Proposing a Public Private Partnership

to lay a foundation in Brazil with three partners contributing the technology, funds and authority. Graph shows each partners share of the surplus after debt service.

Funder 1/2

Borrower is an ICO
Crypto offering for
\$50 Billion over 10 years
* 3.5% interest
* 30 Year Amortization
* 50% of the surplus

Consortia 1/6

Skyways technology
Development Framework
Builds each route
Operations Management
Capital Marketing

Brazil 1/3

Tax Free
Planning Coordination
Easements R.O.W
Operating Authority.
Crypto Exchange oversight

Development Consortia

The Initial Founders will recruit 5 companies to build the four routes in Brazil: Each company will contribute from \$100 million and up for 10% ownership of Consortium. Each 10% gets a business development potential of \$5 to \$10 billion just for Brazil routes. In addition they will share in the profits for the Rio routes from the Olympic site 28 miles to the airport.

Targets are:

Software: Google or Apple

Manufacturing cars: Ford or GM

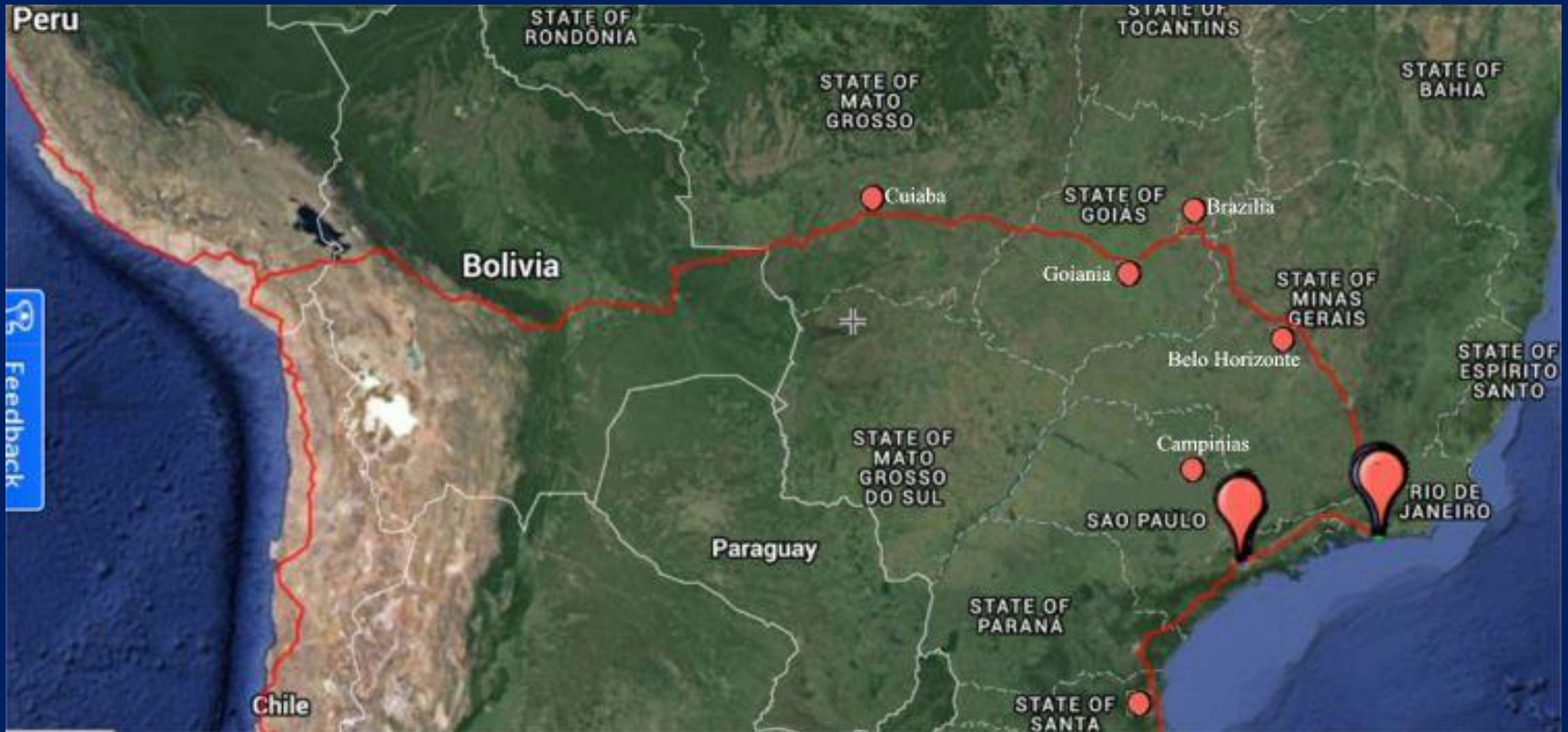
Cargo: UPS or a RR

Engineering/Construction : CM2M Hill or Flour

Systems Integration: Disney or Universal

String of Pearls Concept Sao Paulo to Lima is 3,300-miles

At \$18 million per mile, this is a \$50+ billion investment in stages.

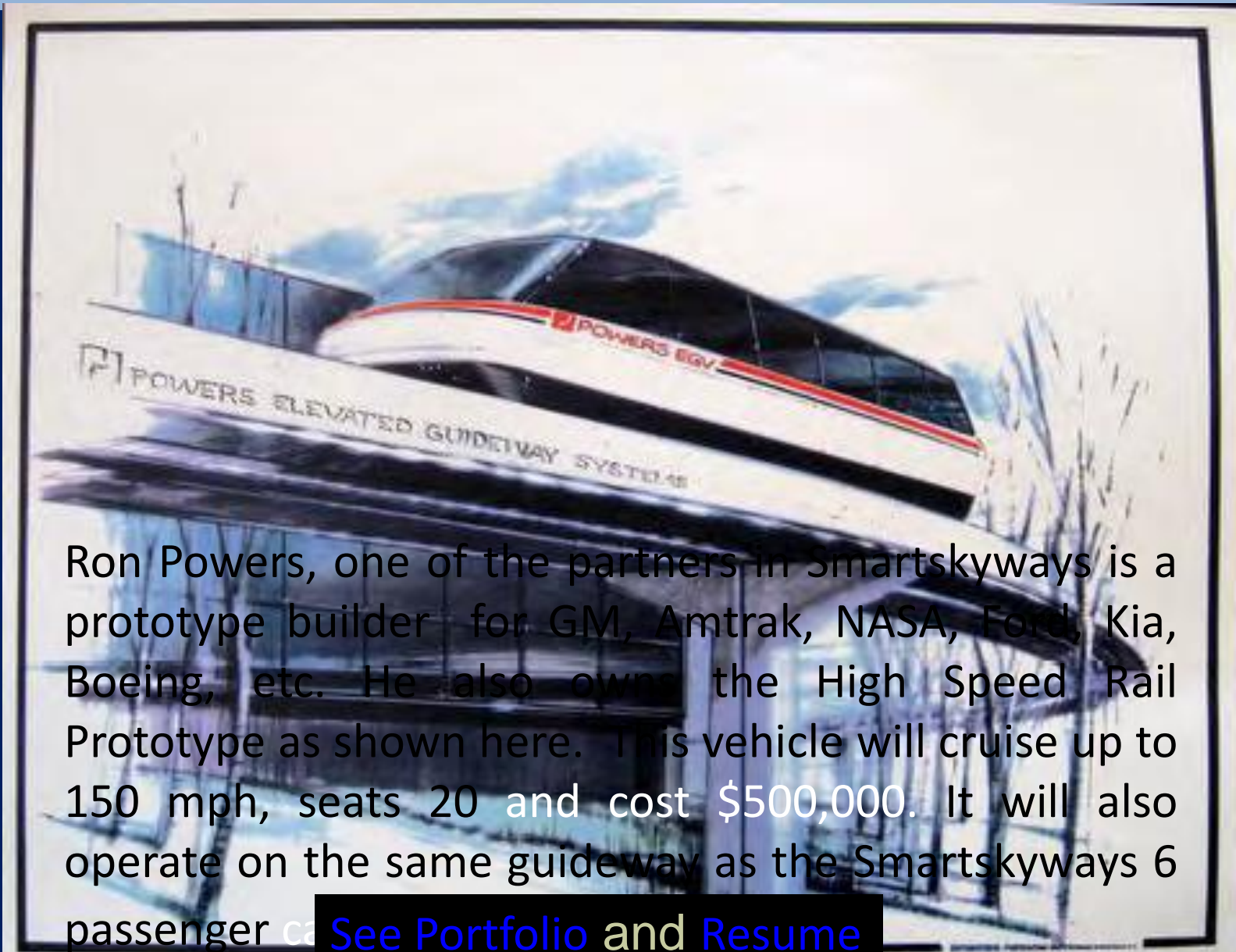


This backbone route links 6 of Brazil's largest cities with a combined population over 50 million people. It connects to La Paz and Lima on the west and someday Buenos Aires on the south. Each city will grow a local circulator that connects to this route

Brazil Layout

- Brazil's population is concentrated in 8 or so major cities. The largest are along the coast and relatively close to each other. The Skyways layout works well between these cities and will result in high profits long term. Adding local loops inside these cities will grow access to the routes and business between towns.
- This project is a backbone and significant demand for spurs is expected.

High Speed Rail Technology



Ron Powers, one of the partners in Smartskyways is a prototype builder for GM, Amtrak, NASA, Ford, Kia, Boeing, etc. He also owns the High Speed Rail Prototype as shown here. This vehicle will cruise up to 150 mph, seats 20 and cost \$500,000. It will also operate on the same guideway as the Smartskyways 6 passenger car [See Portfolio](#) and [Resume](#)

Funders Contribute

\$50+ Billion in 6 routes funded over 10 years This is funding is a 30-year mortgage to Brazil as the owner

Loan Terms are:

3.5 % interest per year

No taxes for 30 years

30-year Amortization

30% of any surplus to Brazil

20% of any surplus to Consortia

50 of any surplus to funders

Capital Raises Funds in 5 offerings

Planned as a 10 Billion share company with 20% for each offering

1st Offering by founders buying 200 Million shares for \$25 Million at 12 cents for phases 1 to 4

2nd Offering by Consortia buying 200 Million shares for \$1 Billion at \$5 each for phases 5 and 6 which builds the 10-mile demo at Olympic Park and then 28-mile Rio coastal route to airport plus another 27-miles in Rio

3rd Offering to Public buying 200 Million shares for \$5 billion at \$25 each for phase 7 from Rio to Sau Palo 225 miles

4th Offering to public buying 200 Million shares for \$12 Billion at \$60 each for phase 8 from Rio to Brazilla 800 miles

5th Offering to China buying 200 Million shares for \$30 Million at \$150 each for phase 9 to build 2,000 miles to the port at Lima to ship its food

Brazil Contributes

Aerial Right-of-Way- A 25' x 25' easement will be provided by Brazil in which all the carriers will share.

Operating Authority- The legislature will approve Brazil's part in the Public Private partnership including the right to operate inside this easement.

Technology Approval- Brazil will provide the Building Permit for each routes subject to local planning and a new safety code from testing.

Planning Coordination- Brazil will provide the final decision over where the routes go and civil engineering approvals.

Crypto Exchange Brazil will approve a Crypto Exchange to operate within the country for the purpose of purchasing shares issued for each segment. An inducement to buy will be tax free earnings and a 30-year mortgage.

Expansion Planning- Brazil will collaborate on future planning for new routes and spurs and set up Improvement Districts around all stations to manage ground based driverless circulators to and from the stations.

Developer Contributes

Development Framework- this includes the financing structure, the legal structures and the founding organization.

Skyways Intellectual Property – This is the configuration and specifications for guideway structures, chassis, vehicles, software, stations, propulsion and engineering.

Consortia Partners – When a one-mile demo is completed in 3 years, Skyways will complete Consortium Memberships to large companies capable of building the routes shown here. Currently we are thinking of \$100 Million for each 10% ownership that desires to grow Billion-dollar business in cars, software, fiber, engineering and construction.

Operations Management- After the consortia builds each route, they will maintain, market and management it for 30 years.

Brazil Economic Benefits

- * Jobs — too many variables to calculate but it has to be a big number.
- * Tax Base- new revenues from property taxes around the station and new business started.
- * Smaller investment in Highways- Skyways will reduce the amount of construction for highway to move people around. Placing columns every 70 feet in cities is a lot cheaper than squeezing in new roads.
- * Ripple Effect- In the USA they say each dollar invested in transportation, ripples through the economy 9 times. Even using a 5 to 1 ripple effect in Brazil is a very large number that will stimulate the economy for decades.
- * Mato Grosso - cheap shipping both east and to Lima could expand the farm industry from 10 to 25 times

International Trade Causes Economic Development in:

Food

Tourism

Hard Goods

Sports

HD Media

Real Estate

Energy

Medical

Commerce

Operating Economics

Ridership

- * Olympic Park 43,000 p/d
- * Rio Coastal 520,000 p/d
- * Rio-Sao Paulo 30,000 p/d
- * Brasilia (not studied yet)

Pricing

- * Olympic Park \$1 per day (subscription)
- * Rio Coastal \$2 pd (subscription) to \$6 per ride
- * Rio-Sao Paulo \$35 each way
- * Brasilia (not studied yet)

Earnings

These systems are designed for ridership up to 10,000 per hour. After that, level they begin to get congested. Ridership numbers are attainable. Pricing compares to existing transport options. Surplus grows because of a fixed cost against both price and ridership increases each year for 30 years.

Phasing Plan for a 3300-miles in 6 legs

(At \$15 million per mile)

- \$200 Million for 10-miles Olympic Park, in 3 years
- \$600 Million for 28-miles Rio Coastal, in 5 years
- \$5 Billion for 270-miles to Sao Paulo, in 6 years
- \$12 Billion for 800-miles to Brasilia, in 7-8 years
- \$30 Billion for 1,860-miles to Lima, is in 8-9 years
- \$17 Billion for 1,100-miles to Port Alegre, in 9-10 years



← 4 money makers

← Not studied yet

PHASE 6 - Build a \$200 Million Demo Model

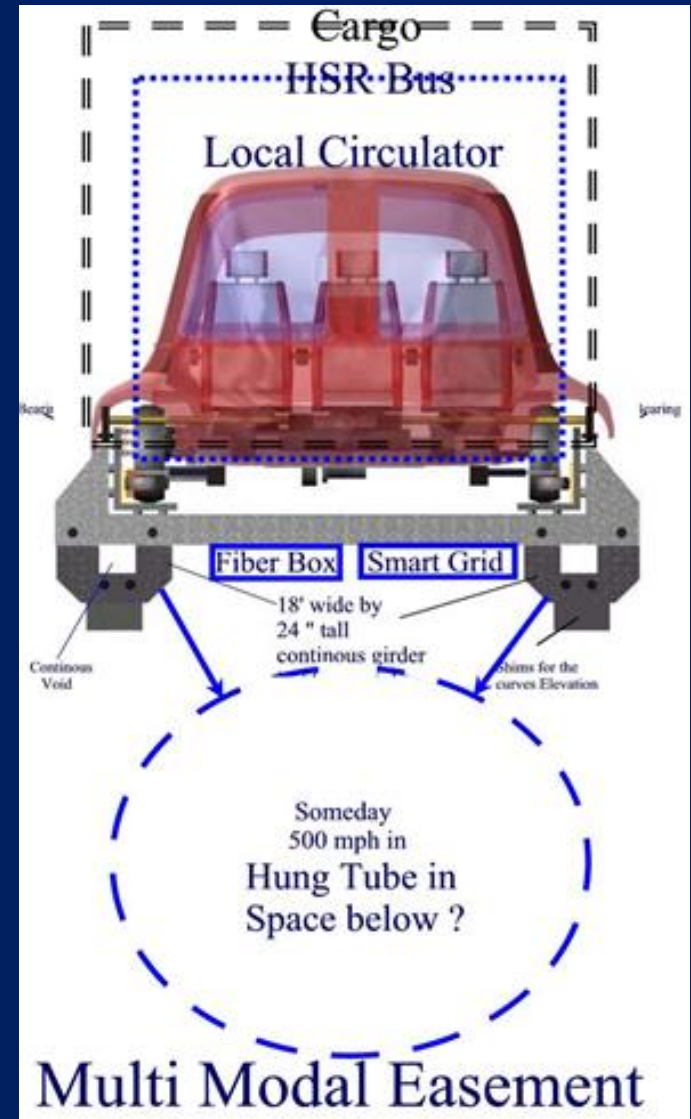
Phases 1 to 5 are scaled models, a consortia and take place in the USA



Stacked Pay Zones (see earnings slide 38)

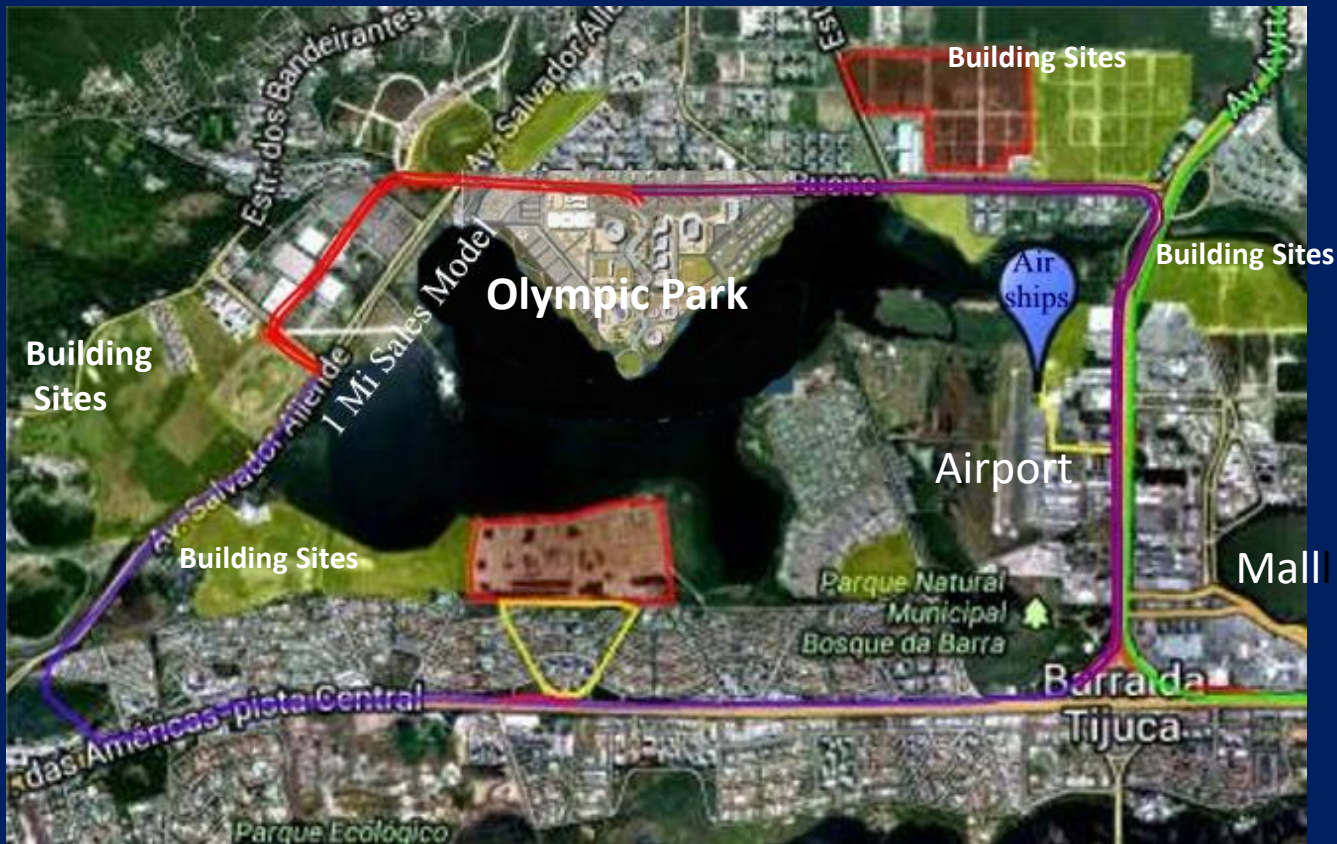
One aerial easement 25' by 25' can carry 5 different kinds of traffic generating revenues. They are:

1. Travelers in either 20 passenger public buses or 6 passenger semiprivate cars at cheaper rates.
2. Cargo in shipping containers 20' by 10' by 10'
3. Fiber Optics with thousands of channels for publishers and millions for cell phones users in data, video and Virtual Reality over the Internet.
4. Smart Grid of Solar power operating the vehicles and selling surplus to locals
5. Oasis Generators that take water vapor out of the air and provides farming water for food.



A \$200 Million Demonstration Model

as a 10 Mile local loop around Olympic site



Red line is 1.5-mile Sales Model and hub, purple line is 8.5-mile loop, yellow is for trolley distribution and blue is possible airship launch site.

Olympic Park as Virtual Reality Stages

- Traffic generator for Skyways Circulator
- Additional Source of Operating Revenue
- Supplies programming to our fiber optic network
- Introduces Skyways to Rio and Beyond
- Grows into a World Stage for events

Olympic Park in Rio - 10 Miles



The Olympic Site is a Model for A Pan American Corridor Trade (PACT) Backbone of 10,000 mi shown in this [illustration](#) (Zoom out to see routes from Rio to Texas).

This route will get ridership from 350,000 existing population, airport, tourism, shoppers, hospital and 16 Olympic venues. This sales model is expected to generate funding for future development over time.



World Stage Exposure

The 16 Olympic Venues can become a hub for Virtual Reality using our fiber optics



System Feeders Ground Transport

Trolleys - Our original engineer Kent Bingham had an interest in this Trolley company that offers the Disney's high brass look. These feed and distribute the station traffic within a mile or so. They cost about \$1 million each and can run on a fuel cell for two days for an additional cost. In a dedicated street path they could be driverless and solve part of the last mile problem. Funded by local districts.



Olympic Park 10-Miles Demo

Rio Cash Flow Proforma for a 10 Mile Local Loop

	year 1	year 10	year 20	year 30	30 yr Totals	Category
Revenues: ave dailey pass	\$2.50	\$3.26	\$4.38	\$5.89		Ave dailey pass
Daily Tourist Ridership	5,000	7,117	10,534	15,593		Daily Riders
Daily Tourist Income	\$12,500	\$23,214	\$46,180	\$91,866		
Local Residents (unlimited at \$1 pd)	30,000	\$30,000	42,699	63,205	93,560	Revenues per day
Employees at \$1.50p/d	4,000	\$4,500	6,981	11,371	18,523	Employees
Cargo Packages	150	\$500	776	1,263	2,058	Cargo Packages
Total daily traffic	34,150					Total Weekday traffic
Total Traffic per week	239,050					
Advertising Revenues p/d	\$1,000	1,689	3,026	5,418		Weekend traffic at 12.5%
Daily Revenues	\$53,503	\$82,479	\$135,584	\$227,024		Weely Revenues
Annual Revenues	19,528,413	30,104,847	49,488,202	82,863,792	1,307,030,751	30 yrs of Cumulative Revenues
Costs and expenses:						Costs and expenses:
Operating & Maint Costs @ 30%	5,858,524	9,031,454	14,846,461	24,859,138	392,109,225	Operating Costs @ 30%
less Upgrade/Replacement @ 4%	781,137	1,204,194	1,979,528	3,314,552	52,281,230	less upgrades & replacement res
less Reserves @4%	781,137	1,204,194	1,979,528	3,314,552	52,281,230	Reserves
Total Costs and Expenses	7,420,797	11,439,842	18,805,517	31,488,241	496,671,685	Total Costs and Expenses
Net Operating Income	12,107,616	18,665,005	30,682,685	51,375,551	810,359,065	Net Operating Income
or Debt Service on \$200 mil at 3.5%/30AM	8,954,775	8,954,775	8,954,775	8,954,775	268,643,250	
Surplus	3,152,841	9,710,230	21,727,910	42,420,776	541,715,815	

Types of Stations

animation



Free Standing

Costs \$200,000 and uses solar windows.



Linked by Walkway

Stations can be linked with nearby building or parking.



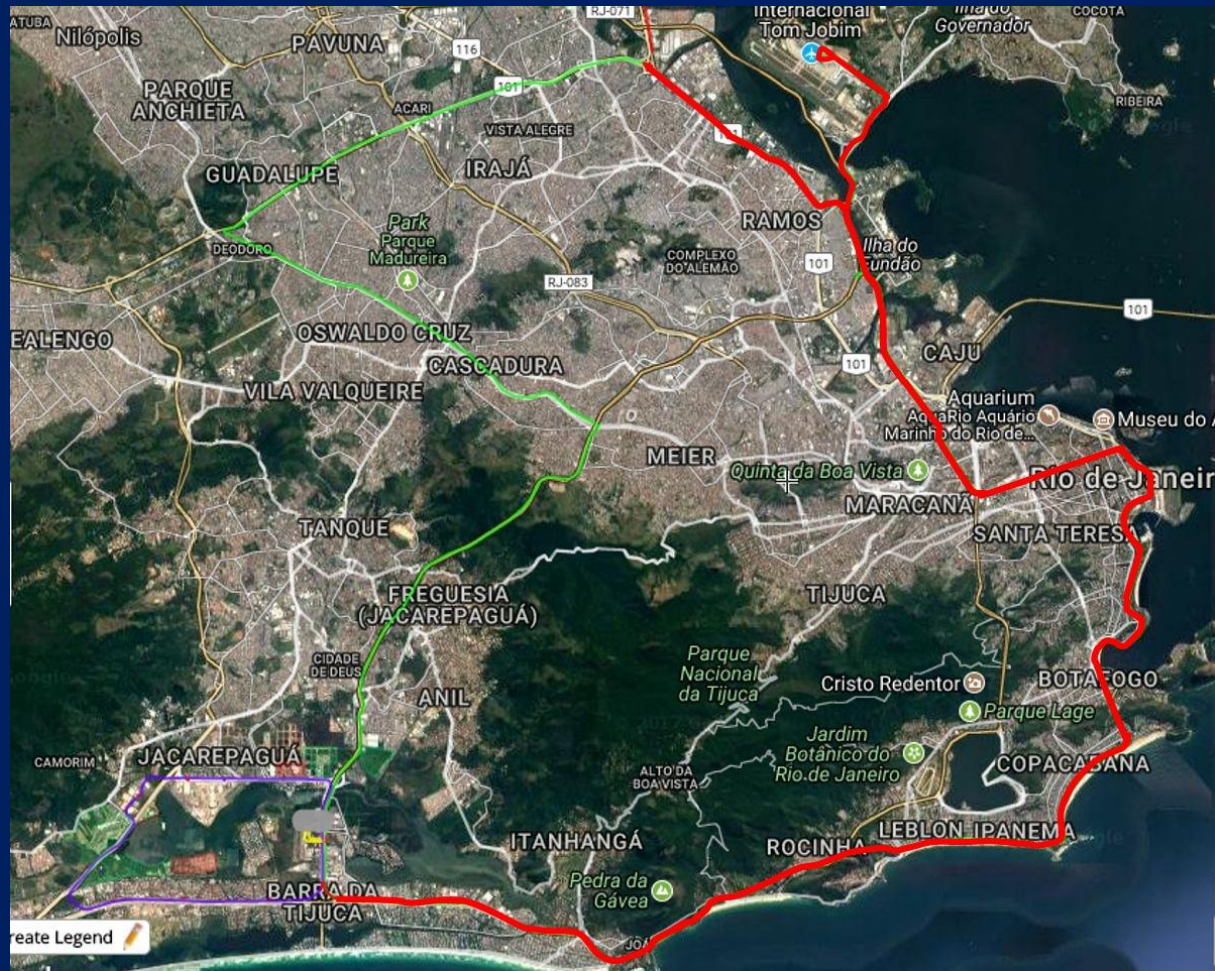
In Between Buildings/ Parking

Each station has at least one bay loading while another unloads. Activity centers may have many bays.



Built Into Buildings

\$820 Million Dollar Rio Circulator



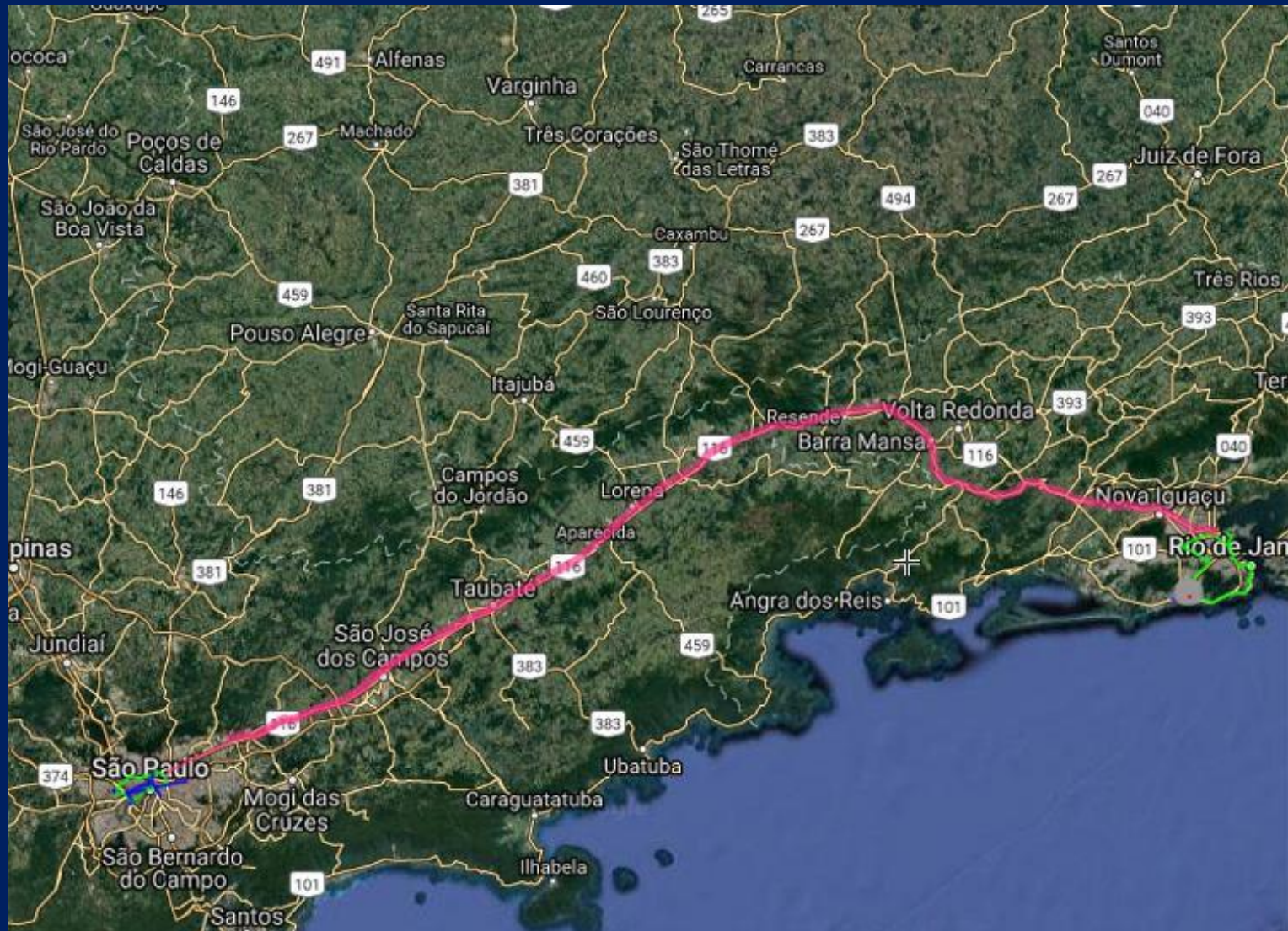
[Interactive Map](#)

The red line starting at Olympic Park is the first 1/2 of a 55-mile local circulator that connects 3 airports, downtown, beaches, a University and the major activity centers of Rio. The green line is the later 1/2.

Rio 28-mile Economic Feasibility

RIO Coastal Proforma Sketch									
Ridership Assumptions		Revenues			30 YEAR SUMMARY				
*Total Ridership per day	520,000	costs	Day Revenue	Y1	Yr-10	Yr-20	Yr-30	Totals	
Commuters with \$60 monthly passes	125,000	\$2.00	\$250,000	91,250,000					
Students with \$30 monthly passes	70,000	\$1.00	\$70,000	25,550,000					
tourists with \$7 day passes	10,000	\$7.00	\$70,000	25,550,000					
Business local with \$3 day tickets	75,000	\$3.00	\$225,000	82,125,000					
night life \$2 evening passes	100,000	\$2.00	\$200,000	73,000,000					
poor subsidized \$30 monthly passes	100,000	\$1.00	\$100,000	36,500,000					
one way trip to airports	15,000	\$5.00	\$75,000	27,375,000					
trip to Sao Paulo Rail Terminal	25,000	\$2.00	\$50,000	18,250,000					
Cargo @3%			100,000	36,500,000					
Services, Advertising, vending @3%			50,000	18,250,000					
Mail, FedEx @3%			25,000	9,125,000					
* Fiber Optics 50,000 channels	140,000	\$0.3	\$35,000	12,775,000					(Billions)
Total Gross Revenues			1,250,000	456,250,000	621,821,917	877,141,226	1,237,294,326	23,552,846,508	Gross
Less Operating Expenses at 33%				150,562,500	205,201,233	289,456,605	408,307,128	7,772,439,348	Operating Exp
Less Reserves at 3%				13,687,500	18,654,658	26,314,237	37,118,830	706,585,395	Reserves
Less Replacement at 4%				18,250,000	24,872,877	35,085,649	49,491,773	942,113,860	Replacement
Total Expenses				182,500,000	248,728,767	350,856,490	494,917,731	9,421,138,603	Total Expense
Net Operating Income				273,750,000	358,915,551	482,352,487	648,241,408	13,085,663,351	Net Income
* less debt at 3.5% + 30 AM on \$500Mil				268,643,000	268,643,000	268,643,000	268,643,000	8,059,290,000	Debt
Surplus				5,107,000	90,272,551	213,709,487	379,598,408	5,026,373,351	Surplus
* Notes study does not consider new ridership built around stations which could double the revenues over 30 years.									
* Notes: Fiber Optics revenue of \$36,000 per day is considered a place holder, until we learn how to calculate it. Someday it could easily be \$1 million per day.									
* Notes: \$500,000,000 is for first 28 mile coastal route to Airport. Latr another 27 miles for a loop around Rio of 55 Miles									
* 520,000 riders per day is only 3% In a congested city of 14 Mil residents + 2 mil tourists has to be considered conservative									

\$5 Billion 270-mile Rio to Sao Paulo



[Interactive Map](#)

Brazil Tries to Build High Speed rail

- Brazil revives bullet-train project

- *Published August 23, 2012*

“Brazil's government has announced the revival of a \$16.5 billion high-speed railway project that would link Rio de Janeiro and Sao Paulo. Interested companies will have until April 30, 2013, to submit their bids, which will be opened a month later. The agency estimates the total cost of the project at 33 billion reais (\$16.5 billion). The project was first announced nearly four years ago and initially formed part of the preparations for Brazil's role as host nation of the 2014 soccer World Cup.”

Brazil tried for 4 years to get a bidder, but all the consortiums formed to bid, said it was too expensive. The expense came from having to build the rail for a train in a level line for its speed. Too much of the budget was for tunneling and large viaducts between the mountains to make it level. Skyways follows roads and docks offline for faster thru put.

Rio To Sao Paulo Proforma

Category		30 YEAR SUMMARY					
REVENUES		Yr-1	Yr-10	Yr-20	Yr-30	Totals	
50%	tourist ridership 10,000 p/d x4% p/y (in	3.65	5.20	7.70	11.40		
	rountrip fare \$75 x 4% p/y inc	\$273.75	\$405.64	\$600.45	\$414.78	\$10,386.97	Revenues from tourists
50%	Local ridership (20,000p/d x 4%p/y inc)	7.30	10.39	15.38	22.77		
	rountrip fare \$40 x 4%p/y Inc	\$292.00	\$415.61	\$615.20	\$910.65	\$12,160.61	revenues from Locals
	Cargo & short trips at 1/2 Local ridership	\$146.00	\$207.80	\$307.60	\$455.32	\$6,080.30	Revenues from other
	Advertising, vending at 1/0 local ridership	\$29.20	\$41.56	\$61.52	\$91.06	\$1,216.06	ads, vending, souveni
	Fiber, Water & electricity not included						
	GROSS REVENUES	\$741.0	\$1,070.6	\$1,584.77	\$1,871.81	\$29,843.94	Total Revenues
	Costs and Expenses:						Costs and expenses:
	Operating Costs @ 30%	222.29	321.18	475.43	561.54	8,953.18	Operating Costs
	General Reseves at 3%	22.23	32.12	47.54	56.15	895.32	Reserves
	less Replacement Costs@4%	29.64	42.82	63.39	74.87	1,193.76	less Replacement Cost
	Total Costs & Expenses	244.51	353.30	522.97	617.70	9,848.50	Total Expenses
	Net Operating Income	496.44	717.31	1,061.80	1,254.12	\$19,995.44	Net Income
	less debt at 3.5%/30 am on \$4 Bil Invested	214.91	214.91	214.91	214.91	6,447.30	Debt
	Surplus	281.53	502.40	846.89	1,039.21	19,354.57	Surplus

Breakeven Rio to Sao Paulo

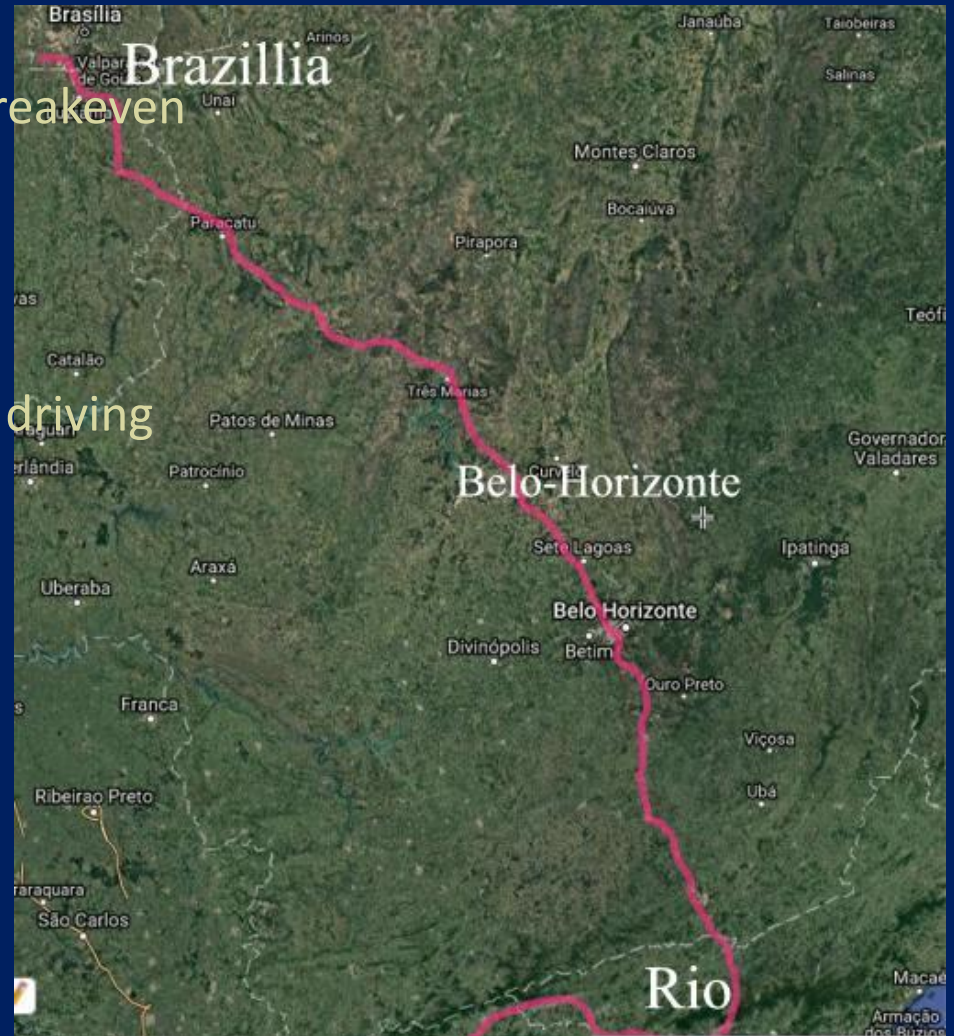
Rio metro Population of 14,000,000 + Sao Paulo metro population of 24,000,000

- 17,000 riders per day pay \$35 each way x 365 days = \$434,000,000 p/yr - 50% expenses = \$ 217 Million NET
- Debt Service on \$4 Bil at 3.0%/30 yr Am=\$ 170 Mil p/y
- Price of flying one way = \$110 Trip of 1 hr + 2 hr Terminals
- Gas prices in Rio is \$4 USA p/gallon driving = \$40 each way
- Bus Tickets are \$35 to \$50 one way for a 7 hr trip
- Skyways time less than 2 hours and \$37 one way

\$12 Billion for 800-miles to Brasilia

Rio population 14 Million + Belo-Horizonte 6 Mil + Brasilia Population 3 million

- 40,000 riders per day needed to breakeven
- Price of flying one way = \$125
- Price of gas in Rio is \$5 per gallon- driving
- Bus prices \$80 for 18 hr trip
- Spreadsheet not available



World Food Bank in Mato Grosso - a State larger than Texas



China has announced a rail study with Brazil to build a huge port in Lima to import products and buy a food grown in Mato Grosso to export to China. This would fill their ships in both directions and justify the cost of a 2000-mile rail. Cuiaba is a city about one million population in the State of Mato Grosso and currently warehouses and packages food produce. It is located along this yellow route about in the middle. See the link below for how Chinese Interests—and Money—operate in Mato Grosso: <https://psmag.com/economics/how-chinese-interests-and-money-have-revived-brazils-ambis-amazon-rail-network>

GM Driverless Truck Platform and Shipping Containers

<https://gmauthority.com/blog/gm/general-motors-concepts/2017-general-motors-surus-concept/>



An example of the GM new Fuel-Cell Truck in a Driverless Platform called SURUS/ This can deliver shipping containers and it could go off guideway for pick up and delivery

Economic Development of Mato Grosso

- * \$10 billion in ag products now and only 1/3 of land is used
- * 15 to 25 times growth in 10 years with Skyways to Lima
- * Provides nighttime traffic for food cargo entire 3300 miles
- * China gets huge food supply faster and cheaper with Skyways

Overall Economic Returns

We can illustrate the economic results conceptually with these three assumptions:

1. Daytime use is dominated by travelers with some cargo use and accounts for 2/3 of the guideway traffic uses.
2. Nighttime use from 9pm to 7 am is dominated by cargo and accounts for 1/3 of all uses. Shipping food and other cargo is assumed to be needed all along the route. Our studies indicate both demands will fill to capacity within 5 years.
3. Other uses such as fiber optics and electric generation add to returns

Conservation sketch within 5 yrs

Travelers by day	10% ROI
Cargo by night	5% ROI
Fiber Optic uses	8% ROI
Solar Generation	<u>2% ROI</u>
Total return	25%ROI p/y

Attainable sketch within 10 yrs

Travelers by day	25% ROI
Cargo by night	15% ROI
Fiber Optic uses	20% ROI
Solar Generation	<u>5% ROI</u>
Total return	65%ROI p/y

Conclusion

Our study's show the first \$20 Billion is a significant money maker from Brasilia to Sao Paulo with circulators in 5 or 6 cities feeding the cross-country routes. As China's food plans grow, there will be a cargo market to Lima. Combined, these routes look like they can breakeven at only 20% of operating capacity and grow to 66% of capacity quickly. They should be fundable by the private sector because they generate significant revenues. Brazil should be interested