

BRT: NOT JUST LOW COST



Quality cities require great pedestrian spaces; thus great public transport.

Buses are an affordable means to high quality public transport.

All public transport is wonderful.

Rail is obviously wonderful.

Buses operating as BRT are wonderful
too.

In some ways, superior to rail.

If buses are so wonderful, why did Paris, London or New York did not create BRT systems instead of subways?

Even with a few subway lines, buses will be crucial.

Few American cities will be dense enough for rail soon, if ever.

Many American cities will continue growing.

Buses: Not just lower costs.

But the difference in investment costs is astounding.

Improved Bus Systems with some BRT characteristics are much better than traditional buses...particularly in traffic.

But they are not quite BRT.

Rail is ALWAYS well done.

With buses we tend to think we can compromise here and there and reduce political and economic costs.

It would have a great impact in the world and all over the United States to have a full fledged BRT.

Buses: Not just lower costs.

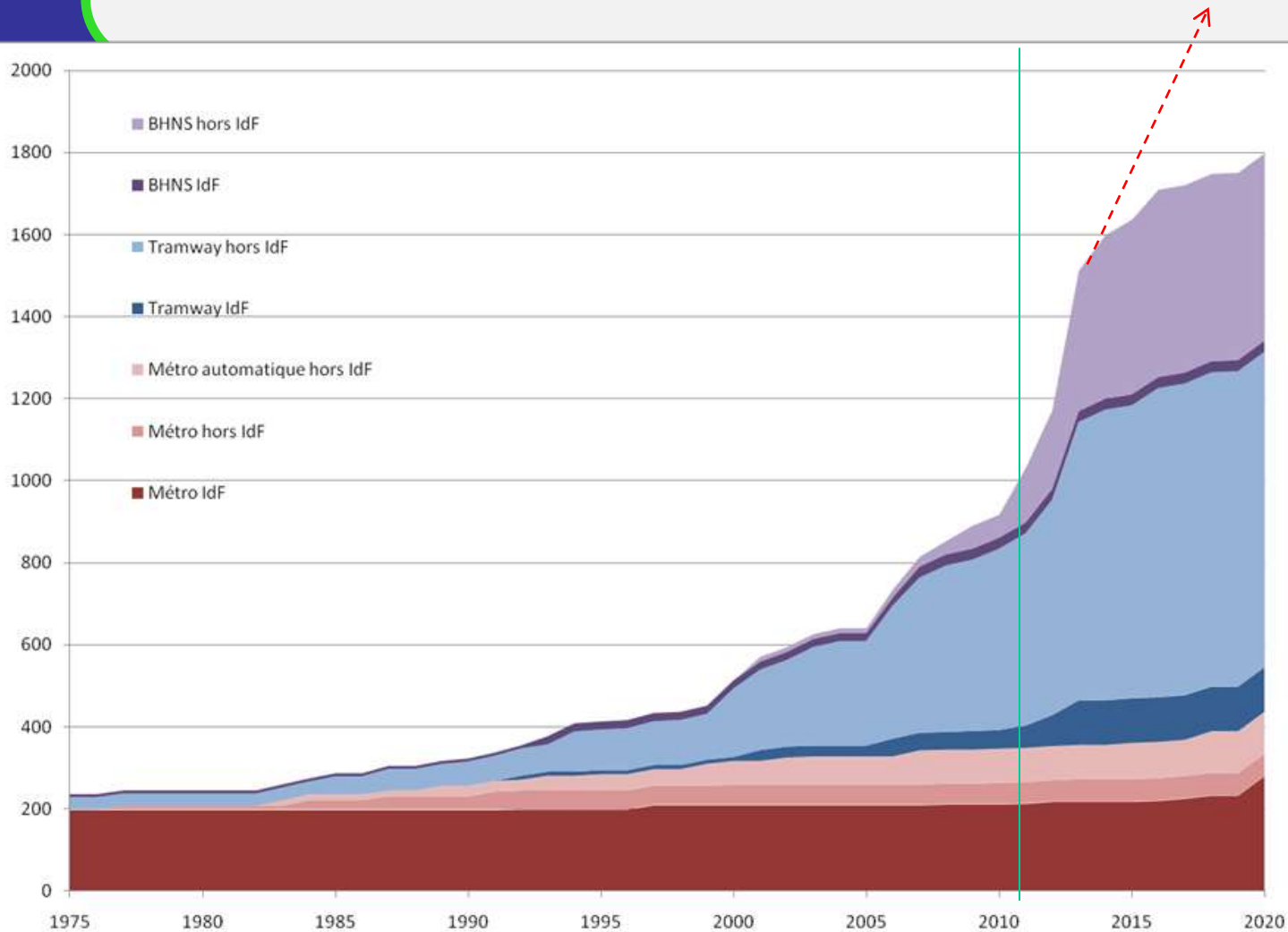
But the difference in investment costs is
astounding.

Operational costs:

Rail depreciation costs are rarely correctly accounted for...until aging systems begin to crumble.

Metro, Tramway and BHLS infrastructures in France (1975-2020)

running systems and current projects



- **1985-2015:** 700 km of Tramway
- **2005-2020:** More than 500 km of BHLS
 - **2010:** 22 tramway networks
8 BHLS systems
 - **2020:** 30 tramway networks
More than 40 BHLS systems

2nd example: Most developed network: TEOR in Rouen (400,000 inhabitants)

- Opened in 2001
extended in 2007
- Investment: 165 M€
- 11,5 km of dedicated
bus lanes
- Traffic: 45 000
trips/day.



Rouen
implemented
BHLS after
building a
tramway line.

3rd example:

Trunk and feeder system: Busway® in Nantes (600 000 inhabitants)

- Opened in 2006
- 80 % of exclusive lanes
- Length: 7 km
- Cost: 7 M€ / Km
- Frequency : 4 à 6 min during peak hours
- Traffic: 28 000 trips /day.
- Special vehicles
- Considered as a tramway lines in the PT network



Nantes was the first French city to implement modern tramway in 1985.

In France, powerful rail manufacturers' pressures.

In United States buses are more likely to be locally built.

OBSTACLES TO BRT:

OBSTACLES TO BRT.

Perception as an inferior system.

In 1940 most cities with more than 100.000 inhabitants had trams. As soon as buses appeared, trams disappeared.

OBSTACLES TO BRT

Trams look pretty. Buses can look great too. Some of the money saved can go to public space improvement.





OBSTACLES TO BRT

Doubts about it spurring private investment.

OBSTACLES TO BRT

Trams spurred downtown
revitalization in Portland...but not in
Salt Lake City?

Or is it something else?

OBSTACLES TO BRT

What investors need to see is an effective transit system which works, improves the way the city looks, and cannot be easily taken away.

All new Malls in Bogotá since TransMilenio's creation have been built on its trunkways.



**GANESE LA
VALORIZACION
POR LA NUEVA TRONCAL
DE TRANSMILENIO**



**Laderas
de
Gratamira**

**MAGNIFICOS
APARTAMENTOS**



271 32 89

621 41 11

Avenida Suba No 130A - 32

Buyers Decisions Influenced by Proximity to Public Transportation

MEANING OF DEVELOPMENT LOCATION	Total	Bogotá	Cali	Medellín	B/quilla	Ctga
Proximity to public transportation	56%	69%	44%	41%	27%	43%
Proximity to commercial areas	39%	39%	39%	40%	30%	36%
Increasing price areas	22%	16%	31%	30%	10%	14%
Proximity to relatives	17%	18%	14%	12%	27%	21%
Proximity to office	16%	18%	18%	8%	30%	-
Good view	11%	9%	15%	12%	7%	7%
Proximity to kids' school	5%	5%	6%	4%	7%	-
Safer areas	2%	3%	2%	2%	-	-
#	<u>748</u>	<u>406</u>	<u>143</u>	<u>155</u>	<u>30*</u>	<u>14*</u>



Reserva de Bogotá

CASAS EN DÍA



<p>Área de 100 m² con sala de 40 m² y gran cocina</p> <ul style="list-style-type: none"> 3 dormitorios 2 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 120 m² y 3 dormitorios (100 m²)</p> <ul style="list-style-type: none"> 3 dormitorios 2 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 140 m² y 3 dormitorios (100 m²)</p> <ul style="list-style-type: none"> 3 dormitorios 2 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 160 m² y 3 dormitorios (100 m²)</p> <ul style="list-style-type: none"> 3 dormitorios 2 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño
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<p>Área de 180 m² y 4 dormitorios</p> <ul style="list-style-type: none"> 4 dormitorios 3 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 200 m² y 4 dormitorios</p> <ul style="list-style-type: none"> 4 dormitorios 3 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 220 m² y 4 dormitorios</p> <ul style="list-style-type: none"> 4 dormitorios 3 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 240 m² y 4 dormitorios</p> <ul style="list-style-type: none"> 4 dormitorios 3 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño 	<p>Área de 260 m² y 4 dormitorios</p> <ul style="list-style-type: none"> 4 dormitorios 3 baños Sala de estar Cocina con electrodomésticos Alcoba principal con baño
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<p>Área de 100 m²</p> <ul style="list-style-type: none"> 2 dormitorios 1 baño Sala de estar Cocina con electrodomésticos 	<p>Área de 120 m²</p> <ul style="list-style-type: none"> 2 dormitorios 1 baño Sala de estar Cocina con electrodomésticos 	<p>Área de 140 m²</p> <ul style="list-style-type: none"> 2 dormitorios 1 baño Sala de estar Cocina con electrodomésticos 	<p>Área de 160 m²</p> <ul style="list-style-type: none"> 2 dormitorios 1 baño Sala de estar Cocina con electrodomésticos 	<p>Área de 180 m²</p> <ul style="list-style-type: none"> 2 dormitorios 1 baño Sala de estar Cocina con electrodomésticos
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Call Center: (1) 643 42 00 - 793 (1) 634 00 00 - 754 (1) 618 44 26 - www.metrocuadrado.com



OBSTACLES TO BRT

It takes space from cars

If there was fuel for only 5% of vehicles in your city:

Would you allocate it to cars?

Or would you allocate it to buses?

OBSTACLES TO BRT

It takes space from cars

Democracy:

- All citizens are equal before the Law
- Public good over private interest

TRANSMILENIO















Parking is not a constitutional right in
any country.



139
WATERLOO

LR06 BVF

RIGHT →

Traffic indicates a road is ripe for public transport.



Busways in highways?.







Beyond costs:

- Capacity
- Speed
- Comfort
- Private investment stimulus

30,000 traditional bus owners



CAPACITY:

TransMilenio moves 47,000 passengers / hour / direction.

More than 95% of the world subways.

TRANSMILENIO



CAPACITY:

TransMilenio could move up to 68,000 passengers / hour / direction with a few adjustments.

With only 84 kilometers, it has moved up to 1,718 million passengers in a day.

CAPACITY:

Guangzhou's BRT is moving 27,000 P/H/D, more than all Chinese subway lines except for Beijings # 2 line.



SPEED:

More important is “travel time” from origin to destination.

TRAVEL TIME:

No need to get off and walk to the other line in order to wait for the next “train”.

TRAVEL TIME:

Buses can have “express” routes at low costs.

TRAVEL TIME:

Stations are closer to each other,
therefore walking time is less.

TRAVEL TIME:

For a given amount of passengers, frequencies are much higher for buses than for metros; particularly at off peak times.

(For the same amount of passengers, for example, 3 trains, or 80 buses...)

COMFORT:

One advantage to rail: Ride is less bumpy.

COMFORT:

It is much more pleasant to be on the surface, with natural light, watching the city.

COMFORT:

If we are to give priority to public transport users, why put them underground?

The privilege of natural sunlight and views of the city should be for public transport users.

COMFORT:

It is not pleasant to take long stairs down or up, even if they are mechanical.

COMFORT:

Those who are not in a hurry, generally prefer buses...the big obstacle, they are slow.

TRANSMILENIO



TransMilenio buses are privately owned

Fare collection is contracted out to private sector

Fare cards system is contracted out to private sector

BRT is spreading



ONLY

LOW CLEARANCE
3.4m

NO
ENTRY
AUTHORIZED
VEHICLES
EXCEPTED
20

NO
ENTRY
AUTHORIZED
VEHICLES
EXCEPTED



20

ONLY
BUS





If there was fuel for only 5% of vehicles in your city:

Would you allocate it to cars?

And if it was space that was scarce?