Medellin Metro Cable: A urban redevelopment success story
New transport solutions for the future
Cable technology for urban transportation
Medelin transport master plan and development
Medelin Central Oriental Corridor implementation
Medelin as the most successful urban cable car
What urban development?

Number of personal vehicles x2 every 7 years in developing countries

2017 to 2050 = 500,000,000.00 additional population in Indian urban area

70% Of the world population will be urban in 2050

Public transport issues

Social issues

Environmental issues
Since 1936 POMA offers solutions of transportation that are fast, silent and sustainable!
Ropeway Systems: Aerial or Land way

**TOP-SUPPORTED**
- GD Monocable Detachable Gondola
- 2S Bicable Detachable Gondola
- 3S Tricable Detachable Gondola
- PULSED GONDOLA
- AERIAL TRAM

**Up to 5,000 pphpd capacity (top supported)**

**BOTTOM-SUPPORTED**
- FUNICULARS
- INCLINED ELEVATORS
- MINI-METRO

**Up to 10,000 pphpd capacity (bottom supported)**
Used as a cost effective « feeder »

Integration of Cable car in public transport network
Adapted to hilly area but not only...

**Santo Domingo**, Dominican Republic: 5km line, 4 stations and... 4 meters rise only!
Successful Urban Integration
Cities in: Algeria, Brazil, Colombia, France, Georgia, Italy, Korea, Taiwan, Turkey…
Medellín success story: 2000’s context

Second largest Colombian city (2,4M hab.)

Drug violence and highest homicide rate (380/100 000 in 1991)

➔ 2000’s « targeted social urbanism » policy = massive investments to unprivileged area (transport, education, sports,...) to provide “the best to the poorest”
City is built in a large valley between hills with a North/South development

Transportation infrastructure as a way to boost urban redevelopment & social transformation

Master plan & corridor priority determined with: Current and future demand? Greater incentive for social inclusion? Where to reduce social exclusion risks due to mobility issue? Where to propose alternative to private car?...
Feeding lines of main « backbone »

- Metro
- Tramway
- Metro Cable
- Future Metro Cable
Metro Cable implementation phases

- **Linea K (2004)**
  2km - 3000pphpdp – 4 stations

- **Linea J (2008)**
  2,7km – 3000pphpdp – 4 stations

- **Linea L (2010)**
  4,6km – 1200pphpdp – 2 stations

- **Linea H (2016)**
  1,4km – 1800pphpdp – 3 stations

- **Linea M (2018)**
  1km – 2500pphpdp – 3 stations

- **Linea P in (2020)**
  2,6km – 4000pphpdp – 4 stations
  - MRT new rolling stocks
  - MRT station design modification
Center Oriental Corridor project

Transport infrastructure investment to connect Central East part of the city (350 000hab)

Global project implies:

- Tram line (TA) of 4,2km with 12 tram-trains
- Two Metro Cable lines (M & H) as feeder of TA
- 113,000m² of new public spaces, green area, bike paths...etc

2016: Tram line and «H» Metro Cable line completed and open to public.
Transport network evolution (2006-2016)

From 123,000,000 passengers/year in 2006...

... to 269,000,000 passengers/year in 2016!
Key success factors

Use of various adapted technologies

- Línea A: Niquía – La Estrella
- Línea B: San Antonio – San Javier
- Línea J: San Javier – La Aurora
- Línea K: Acevedo – Santo Domingo
- Línea L: Santo Domingo – Arví
- Línea M: Miraflores – Trece de Noviembre
- Línea H: Oriente – Villa Sierra

One single operator for
One integrated network

Integrated fare system

Physical integration
The world most successful urban cable car

Technical Success
→ With extensive operating hours (20h/day, 355/year), MetroMedellin reaches great availability rates: 99,82% (2014), 99,81% (2015), 99,83% (2016) for K line.

Social Inclusion
→ From 2003 to 2012, the homicide rate dropped by 84% in the direct area of K Metro Cable

Economical Impact
→ Last 10 years, average time saving of 80min/day for public transport user = 20 days/year

Environmental Impact
→ 2010-2016, Metro Cable of Medellin allowed a 121,000 tons of CO² emissions reduction
Under the United Nation CDM program, the city received a grant of US$ 1,9M for this period
Intermodality: Medellin success story
THANK YOU FOR YOUR ATTENTION