PRESS KIT 2019

### POMA, WORLD LEADER IN ROPEWAY TRANSPORTATION







The Metrocable M line in Medellin was inaugurated in January 2019. A high-capacity, complementary means of transport, the gondola lift improves transport flow in a dense, confined environment.



### URBAN ROPEWAYS, allies for tomorrow's cities

Today, 55% of the world's population lives in cities, and the numbers will exceed 70% in less than a generation. At the same time, existing traffic and transit infrastructures will become saturated in metropolitan areas and their suburbs. Cable-propelled transit (CPT) offers new options for aerial transport which are also consistent with sustainable mobility. Ropeways ensure high-capacity transport (up to 4000 passengers per hour in each direction), are accessible for people with reduced mobility and bicycles, and provide the most suitable solution for clearing obstacles (waterways, motorways, railways or steep slopes). Plus, they integrate easily into existing transport networks as well as the landscape. This 100% electric, low-carbon mobility solution limits its environmental footprint further by its relatively small ground-level infrastructure (towers and stations).

# An optimal solution FOR IMPROVED URBAN MOBILITY

By using airspace, ropeways are an excellent solution for relieving urban traffic congestion, especially in downtown areas. By clearing ground-level obstacles, they offer passengers a guaranteed travel time, a unique experience and an exceptional view.

In addition to incredibly rapid construction and bestin-class environmental performance, urban ropeways connect to existing transit networks, complementing ground transport infrastructures.

#### A COMPLEMENTARY MEANS OF TRANSPORT

Steep slopes, waterways, railways, road systems... some areas present constraints that grounded means of transport cannot mediate without considerable expense and largescale infrastructures. In fact, when the usual means of transport reach their practical limits, ropeways are the natural alternative.

#### CONNECTING, LINKING, FILLING IN THE GAPS

When other means of transport reach the end of the line, ropeways are the ideal solution for the famous last mile. Serving as liaison, they can bridge the distance between two separate sites (hospitals, factories, industrial parks, parking lots, etc.). They not only link isolated sites with each other, but also improve existing transit systems by augmenting network coverage and creating intermodal connections.

#### > ENERGY TRANSITION

Ropeways take up very little ground space which means roadways and underground infrastructures are left intact. Plus, this 100% electric, lowcarbon, silent means of transport is a trump card in the energy transition game: it uses only one motor to drive the entire system and a single braking system. Moreover, it has been identified by Grenelle I (The programming law relating to the implementation of the Grenelle de l'environnement) as one of the effective alternatives in worldwide efforts to reduce greenhouse gas emissions.





The first stone of Téléo, the urban aerial tramway in Toulouse, was laid on July 5, 2019 and should be completed by yearend 2020.

#### LOW CONSTRUCTION COSTS

Cable-propelled transit (CPT) systems are low-cost alternatives to other means of transport such as high-capacity bus lines. Their light infrastructure requires less ground space and doesn't involve any expensive bridges or tunnels, or major detours. Plus, they can be built quickly (12 to 24 months) thanks to off-site pre-mounting and pre-assembling techniques. This saves a considerable amount of time and reduces construction-related inconvenience for nearby residents. Another advantage of urban aerial ropeways is their flexible operating mode (number and size of cabins, speed, frequency) which enables costs to be adjusted depending on the needs and constraints of each city. Maintenance is also cost-efficient since controls can be carried out at night or during cabin downtime. Cities now understand the benefits of CPT systems which meet a number of urban constraints: limited space availability, cost control, urban integration and intermodal services. Wherever mobility, organizing transport and creating positive

cityscapes and experiences are at the heart of tomorrow's cities, new projects are in the pipeline. The number of calls for tenders is growing constantly; in fact POMA recently won the contracts for Toulouse, Orléans and Saint-Denis de la Réunion.



## promoting urban ropeways worldwide

In 15 years, POMA has installed over twenty urban cable-propelled transit (CPT) lines worldwide, on every continent and in cities of every size and shape, including Medellin, Cairo, Santo Domingo, as well as New York, Miami and Algiers. Around the world, over 6.5 million people are transported every hour on POMA equipment. Positive feedback has confirmed urban ropeway performance, integrated into public transport networks.

In 2018, POMA once more demonstrated its technical know-how and CPT expertise in the four corners of the globe. From Columbia to the Dominican Republic and Ecuador, from Reunion island to Egypt and India, South Korea, Russia and Georgia, not to mention France, projects are under development on every continent.



Medellín (Columbia), a model of urban mobility, today boasts 5 Metrocable lines, all interconnected to the public transport network.

#### COLUMBIA, PRECURSOR IN CABLE TRANSIT SYSTEMS

The Medellín public transport network has become an international benchmark, boasting 5 MetroCable lines with a 99.8% availability rate. In 2004, the K line was the world's first gondola lift to integrate a public transport network. Today, the sixth line, the P (Picacho) line, is nearing completion and will be the first 12-seat urban gondola lift in the world, able to carry 4000 people per hour to the city centre.

Medellin's Metrocable has relieved city roads of the equivalent of 100 busses per hour or 2000 vehicles per hour, reducing CO<sub>2</sub> emissions by over 17,000 tonnes.

#### > IN ALGERIA, SOLUTIONS FOR CHALLENGING URBAN TOPOGRAPHY

Working in Algeria since 2014, POMA continues to participate in the development of cable-propelled transit systems throughout the country.

Restricted by the narrow streets and sheer density of its cities, Algeria found the solution: going up and over. In Algiers, the new gondola lift not only facilitates travel for the 6.7 million inhabitants of the capital but also provides access for a hilltop village. This new 1,8 km and 2,400 pph line consists of 66 10-seat cabins, connected to the existing transport network, operated and maintained by the ETAC which already manages a number of lines



in the capital and throughout the country (Algiers, Blida, Annaba, Tlemcen, etc). The ETAC (Algerian Cable Transport Company) is a joint venture between the Algiers Métro Company (EMA), the Algiers Public Authority of Urban and Suburban Transport (ETUSA) and the French partner POMA.

#### ► IN THE DOMINICAN REPUBLIC, THE 1<sup>ST</sup> AERIAL ROPEWAY IN THE CARIBBEAN

Faced with strong urban development, Santo Domingo is experiencing a number of mobility challenges: dense road traffic and frequent traffic jams especially at the bridges that cross the natural urban barrier, the Ozama river. One of the solutions implemented by the municipality was a 5-km long aerial tramway. Inaugurated on May 22, 2018 by the president Danilo Medina, this 100% horizontal line now connects the centre to the north-east of the city in a mere 20 minutes. Linked to the metro system, the Teleférico Santo Domingo and its 215 10-seat cabins connect over 23 neighbourhoods and carry some 3000 people per hour in each direction, crossing the river twice.



POMA was chosen to equip the city of Toulouse with its 1<sup>st</sup> urban aerial tramway, slated to be the longest in France. Work has just begun on the 2.8 kilometre-long ropeway which will cross the Garonne river and rise up Pech-David hill. A cable transit system was the ideal solution to serve three of the city's major hubs, connecting the Oncopole research centre, Rangueil Hospital and Paul Sabatier University. The whole trip will take 10 minutes against 30 to 40 minutes by car.

In Lyon, POMA and its subsidiaries SIGMA, SEMER and COMAG have fully refurbished and renovated the 4 iconic Fourvière and Saint Just funicular railway cars. The challenge of this renovation was to preserve the vehicles' identity while providing passengers with both comfort and new technologies. This operation lasted 5 months for each funicular, including 3 months just to renovate the two train cars.

In Orléans, a ropeway will carry people from the Les Aubrais station to the future Interives district located partially within the city limits of Orléans, moving away from urban cuts such as rail lines and moving away from urban cuts such as rail lines and tramway tracks.

This 380-metre ropeway will enable passengers to cover the distance in 2.5 minutes. It will carry 1500 people per hour in each direction and resist winds of up to 70 km/ hour maximum.

Many projects are emerging in France: Ajaccio and Grenoble are already in the tender phase.



In Algeria, the gondola lift is the ideal solution to connect isolated neighbourhoods and improve traffic flow.

#### ► IN SAINT-DENIS DE LA REUNION, THE 1<sup>ST</sup> URBAN AERIAL TRAMWAY IN THE INDIAN OCEAN

Work is about to begin on the 1st gondola lift in the Indian Ocean which will link the Le Chaudron urban area near the coast to the Bois-de-Nèfles district located on the hilltops of Saint-Denis de La Réunion. Stretching 2.68 kilometres, the gondola lift will carry people from Le Chaudron located east of downtown Saint-Denis to the Bois-de-Nèfles Sainte-Clotilde district on the north, passing through the Moufia neighbourhood along the way. The trip will take 14 minutes, stopping at 3 intermediate stations.

Operating 46 10-seat cabins, its capacity will reach 1000 people per hour. It will also have a clean, silent motor thanks to DirectDrive technology.

This aerial tramway will be a showcase for French expertise as well as an international benchmark for urban transport. Connected to the existing public transport network, it takes into account future integrated network projects planned by the city of Saint-Denis.

It is slated to open to the public in 2021.



#### A UNIQUE INTER-URBAN CONNECTION OVER GUAYAQUIL, ECUADOR

The largest port on the Pacific coast of South America has chosen to adopt a low-carbon urban transport line: a 100% horizontal POMA aerial tramway over 4-km long with 5 stations and which will complete its public transport network and relieve heavy peri-urban traffic.

In 2020, the new "Aerovía" cable transit system and its 154 cabins, painted in the city's colours, will connect several strategic points of the historic downtown and business district of Guayaquil to Duran city located on the opposite bank of the Guayas river. The trip will take 17 minutes instead of the 45 it takes over the jam-packed bridge during rush hour. This sustainable urban mobility project is being undertaken by the Guayaquil district council, Ecuador's economic hub, and is supported financially by the French Development Agency.



In Saint-Denis de la Réunion, the 1st urban aerial tramway in the Indian Ocean will open in 2020.



### UNIQUE KNOW-HOW for bespoke solutions



In New York City, the two aerial tramways are each propelled on an independent cable and have two separate motors to meet local regulatory and safety requirements.



Since it was founded in 1936 in Grenoble, POMA has never stopped innovating both in terms of products and processes, supporting in the technological vanguard. Its latest major product innovation is the DirectDrive, or slow motor, which allows the pulley and the cable to be drawn without lubricated reduction gears. This technology uses much less energy (-8%) and can help cities reduce their ecological footprint. It also reduces noise by 15 decibels compared to classic kinematic chains, offering more comfortable conditions for passengers as well as operators and maintenance teams. POMA has also innovated in terms of industrial processes to shorten the construction timeframe and adapt to dense urban environments: a worksite in an urban area must be completed as quickly as possible to avoid disturbing daily life for residents. The Group also relies on pre-mounting and pre-assembling techniques which enable them to put a system into service in less than 24 months. POMA has also developed an "integrated recovery system" allowing passengers to remain passive while being towed to a station, thus avoiding vertical evacuation and any risk of disturbing the transport network.

### AN ANSWER

Always on the cutting edge of innovation, POMA offers personalized solutions. In Russia, to connect the cities of Nijni Novgorod (fifth largest city in Russia with 1.3 million inhabitants, located 400 km to the east of Moscow) and Bor, on the opposite side of the Volga. POMA had to find solutions for particularly difficult technical challenges, between the width of the river and the fact no pylons could be built there since the Volga freezes in winter. Two 82-metre pylons (out of the ten used for the ropeway) were installed on either bank, with an exceptional span of 900 metres of cable between the two.

In New York City, POMA had to take into account extremely rigorous regulatory and safety requirements. As a result, the carrying cables are 4 metres apart to ensure the stability of the cabins in any wind conditions. The two cabins are each propelled on an independent ropeway and have two separate motors.

In Toulouse, a ropeway nearly 3-km long will serve 3 major nodal points located south of the city in a 10-minute ride (instead of 30 minutes by car). The urban aerial tramway will carry up to 8000 passengers a day in its fifteen 34-person cabins. Thanks to its 3-cable system (3S System) suspended from five towers, it will be able to operate in winds of up to 108 km/hour.

### CUSTOMER SERVICE, at the core of POMA development



Working closely with its customers, POMA offers to train operators and manages multi-year maintenance contracts.

For its customers, in France and abroad, POMA sets up operating and maintenance contracts and is able, in particular, to ensure operation of its installations 7 days a week. Customers can ask POMA to recruit, train and provide a team 100% dedicated to maintenance and/or operation of an installation. To meet the growing demand for operation and maintenance of installations built by the company, POMA has created a new service offer: operations and maintenance engineering. Via this offer, POMA has developed a unique engineering approach to operating and maintenance, working closely with its customers.

For optimal long-term cost control, quality and safety monitoring, the POMA Group provides operating and maintenance support, covering everything from knowledge transfer to training operating teams to acting as operator upon request. Maintenance tracking analysis enables POMA to define the best maintenance policy for each installation: preventive maintenance, conditional maintenance with vibratory analysis systems, writing up maintenance plans adapted to the installation's profile, providing data to be fed into the Computer-Assisted Maintenance Management system. These 'à la carte' operating and maintenance contracts enable to ensure maximal availability for all types of urban installations, 20 hours a day, year-round, with optimized maintenance time: in Santo Domingo, for example, the availability rate is 99.8%.

With its ability to manage interfaces, POMA also creates groups, whose form, size and duration are specific to each project.



## A continuously improved MANUFACTURING BASE

POMA invests in its value chain. The Group is pursuing its target growth by continuous improvement in terms of facilities, equipment, and timeframes.

POMA and its 4 industrial subsidiaries located in the Rhône-Alpes region, the Group's headquarters, have sized their sites for optimal management of operations, engineering, manufacturing, assembling and installation. Global management of ropeway projects, including engineering and planning, is a Group effort: SACMI manages production and pre-mounting of mechanical sub-systems, SEMER manufactures electrical equipment and industrial automation, SIGMA designs and manufactures the cabins and, finally, COMAG is in charge of installation and maintenance. POMA organizes its core business by skill hubs, based on pooling skills and savoir-faire.

The new Gilly-sur-Isère industrial site, inaugurated in January 2018, built by 100% local and French businesses, is the illustration of an optimised skill hub, regrouping the activities of the SACMI and COMAG on a single 100,000m<sup>2</sup> site.

In 2019, POMA is looking forward to launching "phase 2" of the extension of its Gilly-sur-Isère site, and investing in 30% more surface area to create new activities on the site. The objective is to strengthen its manufacturing base and reduce transport in the production chain, enabling POMA to work even faster and adopt increasingly virtuous production methods.

In addition to 10 new hectares dedicated to industrial activities, 6000m<sup>2</sup> of new buildings will enhance production capacity. Work on the plans should begin soon, enabling construction to begin before the end of the year.



POMA produces all its ropeway equipment at its Gilly-sur-Isère site, in the foothills of the French Alps.



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