

OCTOBER
2019



A CONNECTION WE SHARE

► ANALYSIS

**Ropeway transportation
for better sustainable
territorial development
in Africa**

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**LINK WITH
FRANCE'S LONGEST
URBAN AERIAL
TRAMWAY
IN TOULOUSE**

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**POMA PERKS
WHEN
COMPLETION
TIME BECAME
CRUCIAL**

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THE PIONEERING SPIRIT

A unique inter-urban connection over Guayaquil, Ecuador.

EDITORIAL

If cities are drawn to ropeway transportation, it is because we see it as **a link in a chain of interconnected means of transport** which connects isolated and congested areas.

Everywhere our urban tramways create **links with existing networks** in the most logical way possible **to make traveling easier**. It is by taking into account **the human realities and infrastructure of each area** that our aerial lines can play an important role.

While French and European markets are becoming more enthusiastic towards this new transport solution, Latin America has already taken a significant lead, **introducing a strong societal dimension** which allows people living in suburban areas to have faster access to city centers.

In Africa, ropeway transport is convincing decision-makers and urban planners—in particular for flat crossings. Why? Because the continent's **demographic expansion is causing mega cities to expand**, with consequences on the economy and the well-being of its citizens. On this fast-changing continent which is heading towards sustainable development, we are invariably involved with **one active project or another because of our technological expertise**.

With each project **we share useful skills with the local teams**—from the start phase till the operation and maintenance period—to ensure each project is built to last. It is through this strong connection with our partners around the world that we can share **our vision of sustainable, comfortable, economical and environmentally-friendly transport** year after year.

Jean Souchal, POMA chairman of the board

IN OTHER NEWS

SEMER is celebrating 40 years!

Clients, partners and colleagues were invited to celebrate the 40th anniversary of POMA Group's electrical engineering division. It was a fun way to celebrate their continued partnership with SEMER... which for some has lasted since 1979! They also (re)discovered the premises and took a look at the recent extension.

▶ The biggest port on the Pacific coast of Latin America has decided to build a **carbon neutral public transport line**—a 100% horizontal POMA aerial tramway with five stations along a 4-kilometer line—which will complete its public transport network and reduce traffic in the outskirts of the city. **In 2020, the new “Aerovia” gondola lift**, with its 154 cabins painted in the town colors, will link many strategic areas to the historic and commercial center of Guayaquil in the city of Duran on the river Guayas **in 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. “Beyond the technical difficulties of such a complex **construction in an urban environment and across a 1.8 km-wide river**, POMA has taken up the challenge of operating and maintaining this installation **as a concessive model for the next 30 years** alongside its partner, SOFRATESA!” Guillaume Ployon, POMA's Sales Manager for Latin America.

TÉLÉO, FRANCE'S LONGEST URBAN AERIAL TRAMWAY!



15 cabins



10min vs 30min



8000 p/d

➤ **WORK HAS STARTED IN TOULOUSE TO BUILD A NEW TRANSPORTATION LINE... THIS TIME IN THE SKY!**

Tisséo, the Joint Board for Public Transport in the Wider Toulouse Area, chose POMA to build an environmentally friendly and comfortable aerial tramway in the “Pink City”.

After two years of work, **Téléo will cross the Garonne River and rise up Pech David Hill** to serve three major hubs in Toulouse—the Institut Universitaire de Cancer, a hospital and a university—in only **10 minutes as opposed to around 35** by car. With Toulouse being the aerospace capital of France, inhabitants are sure to appreciate an airborne mode of public transportation! **Fifteen cabins will transport up to 8,000 passengers a day**, with boarding taking place **every one and a half minutes** during peak times. This highly anticipated southern

connection should lessen traffic in an area where **85,000 people work**, connecting with three metro lines. Guaranteeing excellent wind resistance, POMA's 3S detachable aerial tramway technology was chosen because it only needs five towers. This limits ground clearance and noise while ensuring almost seamless integration. What's more, its carbon footprint is very low (30 times lower than a car), thanks to its **lightweight infrastructure and 100% electric motors**. The passenger capacity could be **increased to meet the needs in Toulouse**, by adding more cabins to reach a total of **2,000 pphpd**.

TOUCH OF DESIGN

PANORAMIC VIEWS AND UNIQUE COMFORT

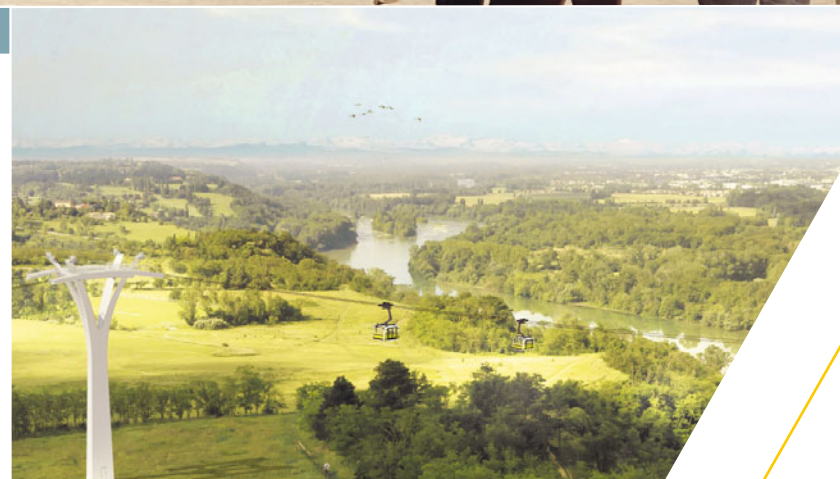
Pininfarina, a designer for Ferrari, has designed the sleek look of Toulouse's “Symphony Urban” cabins.

The **34 passengers** on board the Symphony can enjoy **optimum comfort** as they take in the view over the Pyrenees. To ensure accessibility, the cabins' interior design has been submitted to and **approved by CARUT**, an association representing urban transport users with disabilities.

Furthermore, **thanks to its large doors, boarding is made easy, especially for bulky items** (strollers, bikes etc.).



Non-binding photo



POMA STORY

The first foundations of the 1st urban aerial tramway in the Indian Ocean were laid on September 20.

This POMA installation with **4 sections and 46 cabins** will work alongside the 12 bus lines, linking East and North of Saint Denis in **14 minutes**. According to Denis Baud-Lavigne (POMA Sales Manager), **“People are already really excited for this mode of transportation!”**. There is a bid to create a second line to complement the construction of the tramway and complete the town's public transport system.



Ropeway transportation for better sustainable territorial development in Africa

The African continent has been experiencing internal growth for years.

If the current rate continues, the GDP per capita will have more than doubled between 2010 and 2030. “Africa is a central, global and vital continent, because it is where contemporary challenges are being confronted. It is where a major part of world growth will be played out,” declared Emmanuel Macron to the students of the University of Ouagadougou, Burkina Faso, in November 2017.

Essentially, while in the process of expansion and rapid transformation, cities in Africa are encountering new problems, such as urban sprawling, overcrowding and urban pollution. Mobility has become a key issue in their development.

Streamlining traffic is more than a wish—it is a necessity

In cities with more than 10 million inhabitants such as Lagos, Nairobi, Kinshasa or Cairo, traffic jams are damaging the national economy. They eat up between 1.5 and 3% of the GDP of some countries like Kenya. Measures have to be taken, especially as the African population is set to double and reach 2 billion by 2050. However, in Africa, as elsewhere, the question remains: how do you reconcile fast

development, respect for the environment, efficiency and safety at the lowest cost possible? More and more cities are finding the answer in urban ropeway transportation.

Linking people to their regions

POMA's expertise has been sought after in Africa where “the idea of sustainable development has become one of the main guidelines for urban planning and development,” commented Mehdi Caillis, POMA's Africa

Area Manager. Ropeway transportation offers new perspectives for everyday travel, while bringing a valuable response to the challenges of sustainable mobility. It is easy to integrate into existing transport networks with its high transport capacities on both the ground and in the air. This electric-powered transport solution helps lower CO₂ emissions and has fast turnaround times.



Changing the situation by grasping the realities

We cannot begin to understand a transport system without first comprehending the user expectations and the disparities in space which characterize the area, such as rural/urban and city center/suburb divides. “Understanding the needs of foreign and local decision makers, acting collectively to meet their needs and bring value to our French expertise—that is POMA's ambition,” explains Mehdi Caillis. In Egypt, for example, POMA supported the development of Galala City with a record-breaking 4.37-kilometer-long gondola lift, which links the residential area with the coastal holiday destination of Ain Sokhna.

Listen, share, grow together

Apart from our expertise, it is also because of our unique approach that POMA leads the way in Africa. Simply selling the materials doesn't cut it. “We support and train the operators with whom we work. Our strength is in our openness to all forms of

partnership on a case-by-case basis, taking into account local needs,” insists Mehdi Caillis. In 2014, POMA signed a joint venture agreement with the Algiers Metro Company (EMA) and the Algiers Urban and Suburban Transport Company (ETUSA). This successful partnership has created the number one urban ropeway transportation operator in the world, which is also in charge of the national network. But POMA is going the extra mile with tailor-made financing solutions. Charlotte Riché, the Head of Project Financing, explains, “We help cities structure the funding for our projects with lenders and donors such as the World Bank, African Development Bank, Green Climate Fund and French Development Agency. We are committed to manage projects with a number of African cities.”

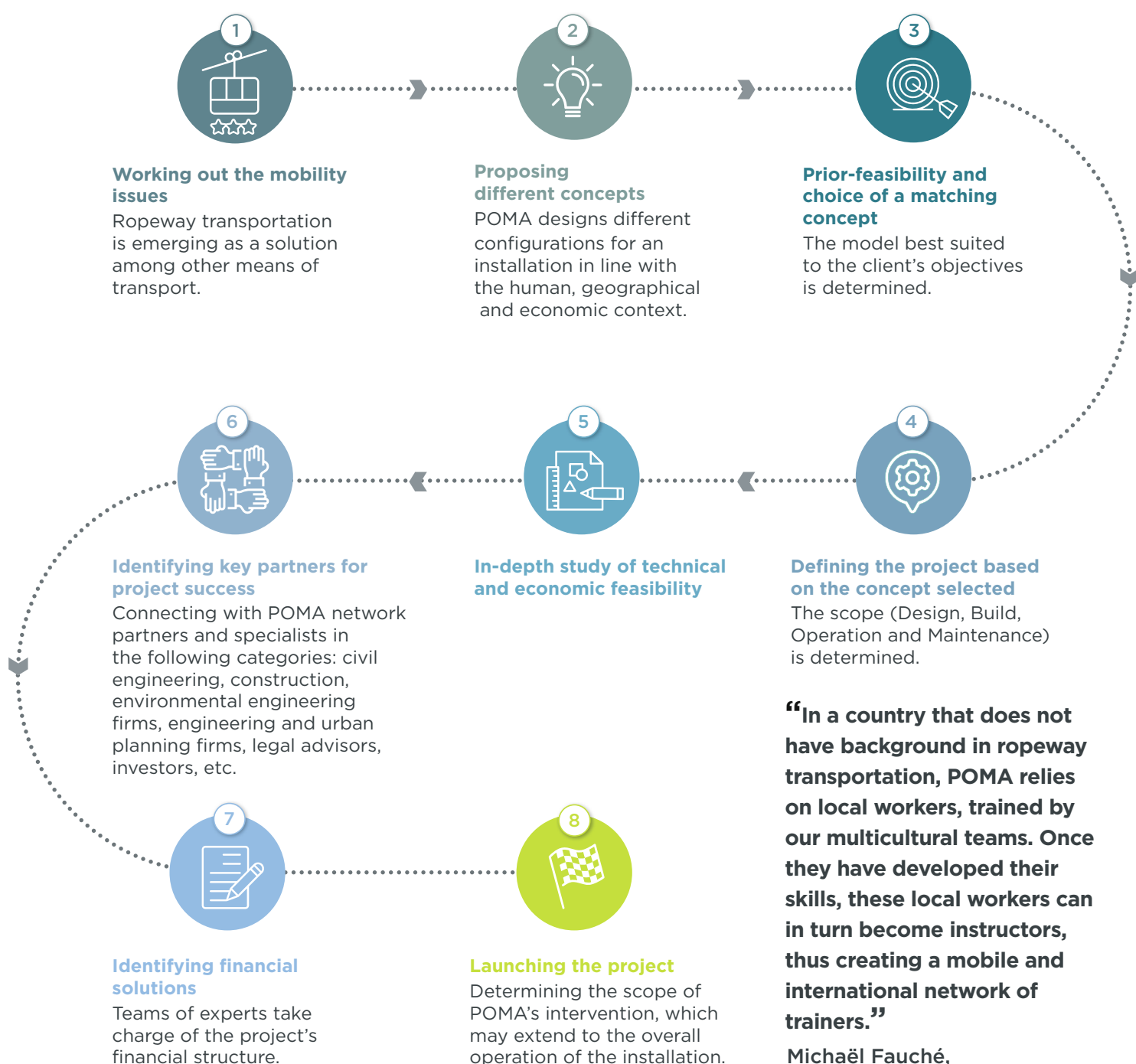
This committed co-development approach has a particular resonance, as the 28th Africa-France Summit on Sustainable Cities is to be held in June 2020, where French companies

will present what they propose to build in Africa, as part of the “doing together” method. Setting up, training and hiring locally generates social and economic sustainability in cities and villages, while also saving money. POMA will obviously participate, as a representative of French Tech: “Ropeway transportation solutions in dense urban areas are really hitting the nail on the head in Africa, where urban congestion is affecting the health of city residents and the economy of metropolitan areas,” Stéphanie Rivoal (Secretary General of the Africa-France 2020 Summit) reminds us.

THE GUARANTEE of personalized support

The success of each project is the result of a partnership between POMA and each of our customers. Communication is the masterword and influences all shared decision-making from design to financing and even more!

► OUR EIGHT-STEP PROCESS TO DEVELOP EACH PROJECT



“In a country that does not have background in ropeway transportation, POMA relies on local workers, trained by our multicultural teams. Once they have developed their skills, these local workers can in turn become instructors, thus creating a mobile and international network of trainers.”

Michaël Fauché,
POMA Services Director

LET'S SHARE our “ropeway culture”!

For POMA, it is important to hand over the keys to **the facilities, ready to be used**, with the option for continued support depending on their needs, ranging from initial assistance to a comprehensive takeover of the operation and maintenance of each system.

After a **thorough analysis of the human and material resources** (tools, spare parts) required to ensure the intended operating conditions—opening hours of the system, annual operating time, authorization and stop time, expected availability rate—POMA teams are able to recommend appropriate support solutions. **To guarantee the durability of each installation**, POMA supports **future operators with on-site or digital training**.

► THE DIFFERENT ROLES INVOLVED IN THE POMA TRAINING OFFER

Platform agent, driver, maintenance technician, maintenance manager, operations manager: At least **five professional roles** and nearly **100 key skills** take advantage of a system implemented in **ten countries** and in **eight languages**.

POMA PERKS

Customized support depending on the installation's operating conditions and the country's background in ropeway transportation, which ranges from start-up assistance to total operation as an overall service.



E-LEARNING WITH UPILOT®

► THREE PROJECTS, THREE SUPPORT TYPES

► IN SANTO DOMINGO IN THE DOMINICAN REPUBLIC, POMA WAS ENTRUSTED WITH ALL O&M

The extensive operation and maintenance contract includes launching the company, recruiting and training staff, setting up the workshop, providing tools and handling equipment and ensures results analysis to guarantee a system availability rate of 99.5%.

60 people trained in three months.

► AT THE ZOO IN BEAUVAL, FRANCE

POMA trained and supported the team as it discovered the world of aerial ropeways and also set up the IT tools, established a technical assistance hotline and offered monthly operations reports containing analyses and advice on how to best use the “Nuage de Beauval”.

They received **140 hours of training over 20 days**: 5 days for managers / 15 days of training in operations and maintenance level 1-2 including simple adjustments and settings, troubleshooting and minor preventive maintenance operations.

► **IN PATNITOP, INDIA**—a country which already has a background in ropeway transportation—POMA is supporting local operational teams with a training course on targeted topics, aimed particularly at understanding the technology. The necessary infrastructure for O&M were in place for the operation team to be ready before the recent opening of the ropeway.

98 hours of training over 14 days for 7 people.



VERTICAL RESCUE DRILL



IN THE SAN FRANCISCO SKY

► **THE AERIAL TRAMWAY
IS A SURPRISING SIGHT IN CALIFORNIA.**

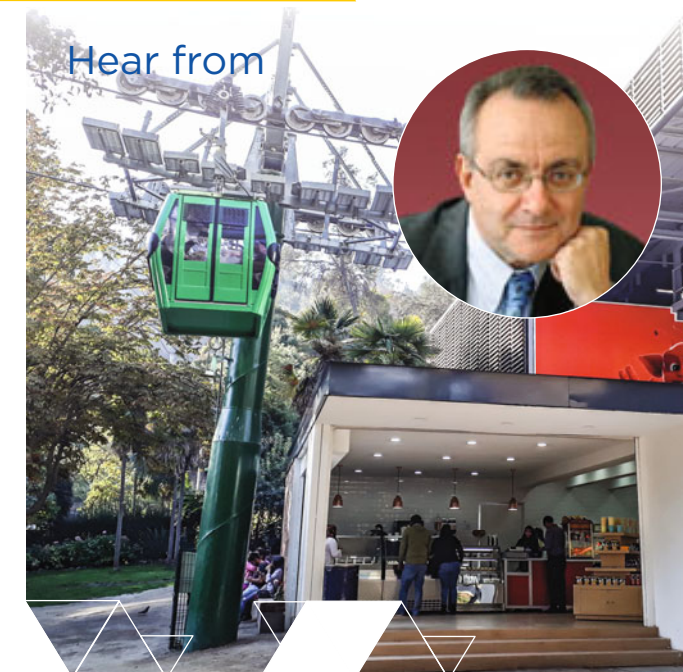
Can you really get from the heart of San Francisco to the top of a building in just a few seconds?

The experience has been running since June 2018. **The 25-passenger cabin with glass windows** rises to the Rooftop Gardens on the 4th floor (45 m) of the bus station beside the Salesforce Tower—the highest building in the western United States. **Enjoy the Salesforce gardens** with its amphitheater, restaurant, fountains and playground.

A five-year contract with Salesforce Transit Center covers preventive maintenance, **24/7 remote monitoring** and technical assistance provided within 24 hours..



Hear from



Gérard Wolf

**INTERNATIONAL SUSTAINABLE CITY
FEDERATOR UNDER THE FRENCH
MINISTER OF EUROPE AND FOREIGN
AFFAIRS, PRESIDENT OF THE MEDEF
INTERNATIONAL SUSTAINABLE CITY
TASK FORCE, VICE-PRESIDENT OF
THE AFRICA COMMITTEE, CHAIRMAN
OF BRICS ACCESS***

What is your vision for future cities?

All over the world, cities of all sizes will experience exponential population growth, with 2.5 billion more people in 2050. Pollution and mobility issues are therefore already at the heart of the concerns of political and industrial decision-makers. We can already imagine that the “town square” will become a hub with several modes of transport.

A kind of huge transit center through which city residents will pass to get to work?

It will not only be a transit center but a large complex offering all kinds of services, such as medical homes, nurseries, shops and more.

What solutions can French companies bring to the Sustainable City?

Developed and emerging countries expect energy-efficient, clean and sustainable solutions. Ropeway transportation is a link in the multimodal transport chain that meets these challenges. It is quickly installed, with little footprint and is flexible. It is the perfect complement to subways and periurban trains for congested or difficult to access areas.

*BRICS ACCESS: International trade and development with developing countries (Brazil, Russia, India, China and South Africa)

Hear from



Mathieu Babaz

**HEAD OF INNOVATION,
RESEARCH & DEVELOPMENT POMA**

How does the POMA group support the efforts of environmentally friendly cities?

With the most compact stations possible and as few towers as possible, we are limiting the environmental, visual, noise and ground space impact of our aerial transport solutions, often linking them to existing networks.

Which technologies are you developing to achieve these improvements?

Our silent DirectDrive motorization is energy-efficient and requires minimal maintenance due to a small number of moving parts. The oil savings help in protecting the environment and heat recovery is used to heat additional rooms.

We also limit the carbon footprint of our construction sites. For the aerial tramway under construction in Toulouse, we pre-assemble as many elements as possible in the workshop, to limit the impact on urban spaces, noise, the presence of machinery, etc.

Do you have any other ideas for future urban transport?

We are constantly improving the service life of our products and reducing their energy consumption. We are currently working on implementing solar panels to our new projects or on installations that are already in operation.

Innovation: POMA PERKS

► **WHEN PRODUCTION TIME IS
CRUCIAL: AN ORGANIZATION THAT
CAN OVERCOME ANY OBSTACLE**

Known for having designed the pods for the largest observation wheels in the world—London, Macau, Las Vegas, and more—POMA was asked to produce and install pods for the wheels in Shenzhen (130m) and Dubai (which will hold the world record for the highest observation wheel at 230 m).

As both projects (taking place simultaneously!) have a tight schedule, POMA has rolled out teams in record time, combining the group's expertise (POMA, SEMER, SACMI, SIGMA and POMA Beijing) with that of external specialists since November 2018. An essential “project platform” organization to meet the technical constraints and numerous specific developments of these non-standard projects.

POMA PERKS

A strong experience of special international projects, ensuring realistic and achievable schedules, a flexible organization capable of meeting short deadlines.



THE DUBAI OBSERVATION WHEEL WILL BE THE TALLEST IN THE WORLD, AT TWICE THE HEIGHT OF THE LONDON EYE.

► POMA'S WORLD



FEBRUARY 28, 2019

POMA is continuing to develop the Metrocable

In Medellín, POMA has launched its 5th MetroCable line. It will increase the transport capacity—2,500 people/hour, three stations, 49 cabins—for the 350,000 inhabitants of the city's central-east district.



250 METERS

The city of excess breaks another record

The 48 capsules in Ain Dubai designed, built and installed by POMA for the largest observation wheel in the world will soar above Bluewaters Island, offering a spectacular view of the remarkable landscape!



150 METERS

The tourist gondola lift in Mokpo breaks records

This monicable lift spans over the ocean, and boasts a distance of 1.2 km between two towers. It offers a fantastic views from its record-breaking concrete towers, which soar 150 meters up.

AVAILABILITY RATE: 99.99%

The Maokong gondola lift's success over the last 10 years

Since opening in 2007, the gondola lift has been flirting with a 100% availability rate. This 4.3-km line with its colorful cabins, links Maokong Hill and its Buddhist temples to the famous Taipei zoo.



ANOTHER 6,000 M²

The Gilly-sur-Isère site is expanding

POMA continues to invest in its industrial tools by anticipating the expansion of the Gilly-sur-Isère site. The objective is to match the strong growth in the group's activities everywhere in the world.



6TH LINE

The 1st 12-seater gondola lift in the world

The Picacho line (P line) is the 6th Metrocable line in Medellín and will give new life to the neighborhood, home to 420,000 people, by serving the town center as well as several social infrastructures.



20,000 LESS

Transporting talc by aerial material goods tramway

In Luzenac, a town in the French Pyrénées Mountains, POMA is replacing the aerial tramway which lowers talc extract from the largest quarry in the world to the Imerys factory, 5 km below. With the renovation of this aerial tramway, there will be 20,000 fewer trips by road, resulting in a more environmentally friendly transportation.



POMALINK POMA'S NEWSLETTER

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