

**We  
move  
people.**

**REPORT  
2024**

**HTI** 

# Shaping the Future Through Innovation

As a group of companies with links all over the world, we pool together our experience to create sustainable solutions featuring pioneering, sustainable technologies and eye-catching design.



# Global Network: High Technology Industries

**LEITNER®**

Rope-powered passenger transport systems for use on mountains and in cities

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**POMA**

Rope-powered passenger transport systems for use on mountains and in cities

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 **BARTHOLET**

Rope-powered passenger transport systems for use on mountains and in cities

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 **agudio**

Material transport systems

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**Pinotti**

Snow groomers, crawler carriers, and vegetation management vehicles

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**DEMACLENKO®**

Complete solutions for fully automated technical snowmaking

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**skadii**

Open digital resort management platform

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 **TROYER**

Electromechanical equipment for hydropower plants

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 **LEITWIND®**

Gearless wind turbines in the megawatt category

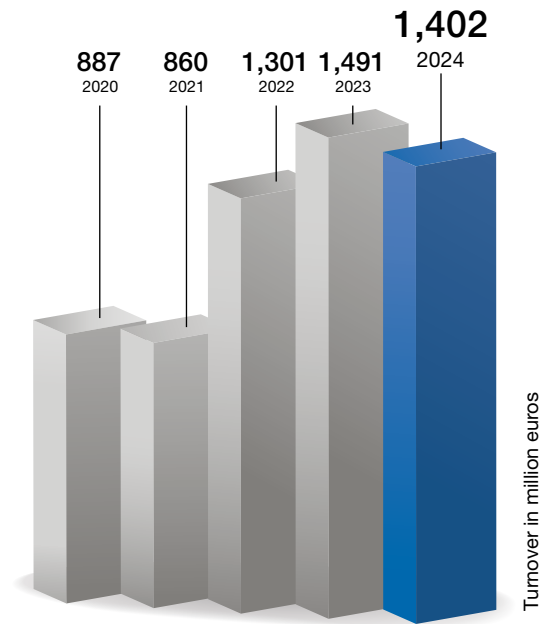
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# More Than Simply On Track

## Turnover

Group turnover was € 1,402 million in 2024.

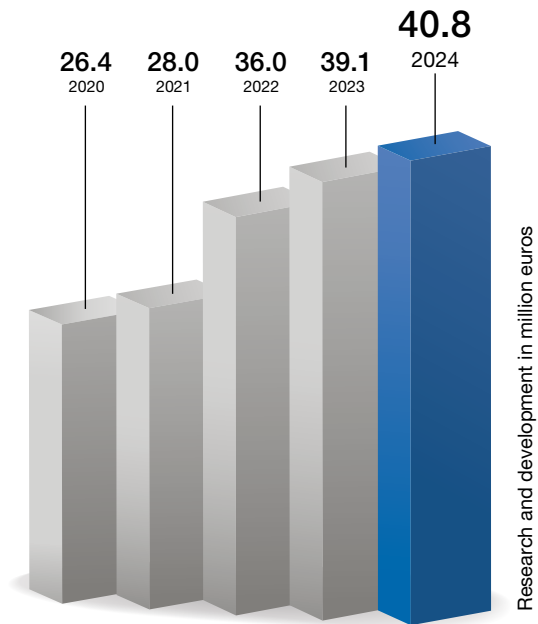
- 107 ropeway systems
- 1,015 snow groomers, crawler carriers, and vegetation management vehicles
- 2,000 snow guns
- 5 wind turbines
- 17 hydroelectric power stations



## Research

For the group, technological innovations are a matter of course. In 2024, € 40.8 million was invested in research and development.

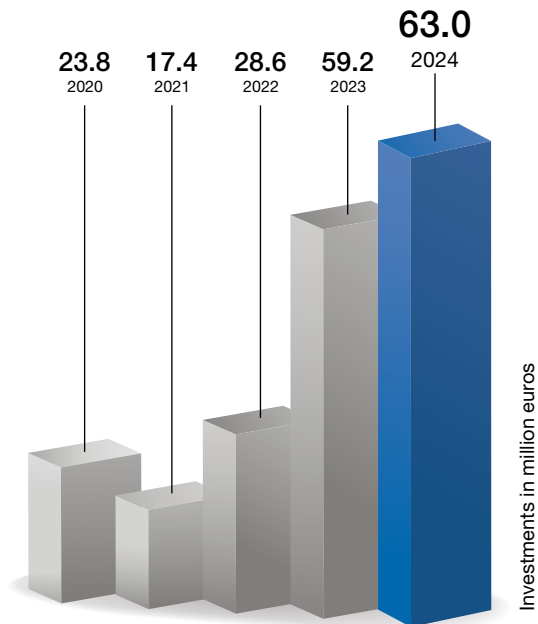
- Ropeway systems: further development of detachable stations and 3S systems
- PRINOTH: product optimization and further development of the portfolio, such as Husky E-Motion, Panther T9R, Jarraff tree trimmers and PRINOTH Connect; market launch of the forestry mulcher Grizzly M350e and the Jarraff RT
- DEMACLENKO: market launch of the Evo 4.0 fan gun



## Investments

In 2024, the network and capacity of the group was expanded with an investment of € 63 million.

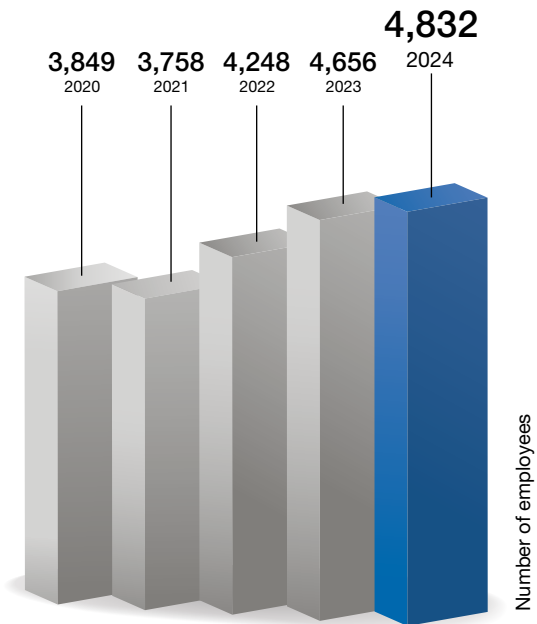
- Expansion at the sites in Granby/Canada and Telfs/Austria
- New sites at Tooele/US and Oppeano/Italy
- New machining line for grip components in Vipiteno/Italy



## Employees

In 2024, the group had an average of 4,832 employees worldwide.

- Approx. € 2,8 million for training and further education





# Sustainable Innovations

**LEITNER®**

LEITNER has been firmly committed to sustainability in the development of its ropeways and new technologies for many years now, and has risen to become a global innovation leader in this segment. As the important new product developments and ambitious ropeway projects clearly show, 2024 was no different. One example is a new generation of ropeway installed at Hauser Kaibling: a high-tech 8-seater chairlift that can be converted into a 10-passenger gondola lift for summer operation. Retrofit projects in Switzerland were another pioneering innovation from LEITNER in 2024, with two chairlifts updated to generate the maximum possible effect while minimizing the use of materials. The focal point of LEITNER's research and development work is also moving increasingly toward optimized resource management. LeitPilot, a new solution for automated ropeway operations, is already being tested at various locations. Autonomous deployment is in the pipeline for 2025 and will help to make more efficient use of staff while also increasing safety thanks to state-of-the-art technology.

LEITNER will continue to make substantial investments in research and development to meet the high standards of new ropeway generations and open the door to innovative solutions.



AUSTRIA – HAUSER KAIBLING

# Innovation, Efficiency, and Flexibility

The Hauser Kaibling skiing area has welcomed the arrival of a brand-new generation of technology in the shape of the new 8-seater chairlift from LEITNER. The new system replaces a 30-year-old ropeway, can transport up to 3,600 passengers per hour up the mountain, and is equipped with Premium Chairs EVO featuring protective hoods, premium upholstery, seat heating, and individual footrests. The new conveyor belt and lifting table makes it much more convenient for passengers to join the chairlift. Children benefit in particular from the innovative new solution, with all passengers shorter than 1.25 m being automatically lifted by 15 cm, resulting in easier and safer boarding. The new ropeway has also been equipped with LEITNER’s LeitPilot system for autonomous station operation, which is currently being used as an auxiliary system. Another major plus

point for the new system is the ability to convert it into a gondola lift for summer operations. And if all that wasn’t enough, work will begin on the next Hauser Kaibling project – the new GD10 “Senderbahn” – in 2025.

<b>CD8C Kaiblinggrat</b>	
Inclined length (total):	1,449 m
Vertical rise:	454 m
Power:	815 kW
Transport capacity:	3,600 p/h
Number of towers:	14
Number of vehicles:	68





# Visionary Ropeway Network

At the Pila skiing area in the Aosta Valley, a project is underway to provide an integrated link from the village all the way to the skiing area. The visionary solution is based on two new 10-passenger gondola lifts starting in Pila, running through the middle station at Gorraz to the top station at Couis, where it reaches the Stella del Couis development at an altitude of 2,700 meters above sea level. While construction for the lower section starting in Pila is set to begin in 2025, the upper part of the ropeway from “Couis” is already in operation in the form of the new GD10 “Couis 1”. The system has been equipped with Premium Cabins Diamond EVO and is capable of transporting 2,400 passengers per hour at a speed of 6 m/s. Coupled with the 8-passenger gon-

dola lift from Aosta to Pila, visitors using the two new

**GD10 Couis I**

Inclined length (total):	1,498 m
Vertical rise:	558 m
Power:	855 kW
Transport capacity:	2,400 p/h
Number of towers:	10
Number of cabins:	41



Pila / IT

# Optimum Link from North to South

With the installation of a 10-passenger gondola lift in 2023, LEITNER completed the first phase of an ambitious construction program at the Ochsenkopf, a leisure region particularly popular among families in Germany’s Fichtelgebirge mountains. Further investment of roughly 17 million euros is now opening up access to the Ochsenkopf from the south side. The GD10 “Ochsenkopf Süd” mirrors the concept of the 10-passenger “Ochsenkopf Nord” gondola lift and is also equipped with practical features for monoskiers. Besides the construction of a spacious bottom station with extra-high ceilings, the number of towers has been reduced from 14 to 11 thanks to the latest building methods. Not only that, sustainability and efficiency are also at the forefront of the new system, which is powered by a 353 kW LEITNER DirectDrive. The station buildings at

the top and bottom of the ropeway have been fitted with roof-mounted PV modules with an installed capacity of 200 kWp, meaning that the entire ropeway can be operated by solar power alone, provided the weather conditions are favorable. The ropeway is also ideally prepared for summer operation thanks to the ability to equip the cabins with LEITNER bike racks.

**GD10 Ochsenkopf Süd**

Inclined length (total):	1,863 m
Vertical rise:	249 m
Power:	353 kW
Transport capacity:	1,176 p/h
Number of towers:	11
Number of cabins:	25



# Next-Level Ropeway Technology

## ITALY – ALL EYES ON MODERNIZATION

In the Gitschberg Jochtal skiing area, the new 6-seater chairlift “Steinermendl” cuts travel time to the top of the mountain in a half. The project, which is the first in Italy to feature integrated LeitPilot technology for chairlifts, complemented by stations in Pininfarina design. In Cervinia, LEITNER completed another successful, contemporary project with the construction of the 6-seater chairlift “Lago Goillet” after finalizing the “Matterhorn Alpine Crossing”, the highest Alpine traverse by ropeway, in 2023. Two major projects in the Dolomites also decided for LEITNER, with two popular skiing areas seeing some innovative upgrades in the way of the 6-seater chairlift “Porzen” in 3 Zinnen Dolomites and the 10-passenger gondola lift “Valcigolera” in San Martino di Castrozza. The

new ropeway in San Martino di Castrozza is powered by renewable energy making it particularly energy-efficient, and also marks LEITNER’s fourth installation in the skiing area in the past ten years. At the Arabba/ Marmolada ski resort, which forms part of the famous Sellaronda ski circuit, the detachable 6-seater Antercrep chairlift has replaced a 2-seater system that had been in operation for over 40 years. And that’s not the end of the new projects on the Sellaronda, either: In Alta Badia, the new 6-seater “Braia Fraida” chairlift now transports passengers quickly and conveniently along the route of an old ropeway that was installed over 30 years ago. In Abruzzo, extensive expansion works in the Monte Magnola-Ovindoli skiing area have kicked off with the completion of the new CF4 “Max Bartolotti” system.



Churwalden-Vaz-Obervaz / CH



Cervinia / IT

## SWITZERLAND – RETROFITTING FOR A BETTER SKIING EXPERIENCE

In Arosa Lenzerheide, one of the largest skiing areas in the Swiss Canton of the Grisons, LEITNER has replaced a 4-seater chairlift with a current-generation model. True to the desire to pursue a sustainable approach, the decision was made to commit to a retrofit project. The CD4C “Stätzertäli” runs along the existing route, allowing most of the existing towers and foundations to be reused. In addition, solar panels were installed on the top station’s roof to provide it with a renewable energy source. Besides maximizing the sustainability

credentials, the operator was also keen to make the new system visually pleasing. The ropeway’s new Pininfarina design represents an aesthetic upgrade, which combines perfectly with the latest ropeway technology, including LEITNER DirectDrive, the energy-efficient and cost-saving EcoDrive, and LEITNER control system. Thanks to the new Premium Chair EVO, the well-known route up the mountain has been transformed into a trip that offers premium-level comfort.





### **EASTERN EUROPE, GREECE, MONTENEGRO AND BOSNIA HERZEGOVINA**

In Kalavrita, in the northern part of the Peloponnese peninsula in Greece, LEITNER has now added the new 6-seater chairlift “Styga” – replacing the decommissioned 2-seater installation – in addition to the 10-passenger gondola lift completed in 2023. In Poland, three new ropeways were constructed in 2024: the 6-seater chairlift “Doliny III” and a new surface lift in the Szczyrk Mountain Resort, as well as an inclined elevator with capacity for 40 people in Wisła. The 6-seater system, located in the Szczyrk Mountain Resort – one of the country’s largest winter sports areas – features individual footrests and premium upholstery and replaces the existing surface lift, while the inclined elevator with automatic leveling in Wisła provides a shuttle service to the ski jumping hill. For the latter, a 3S cabin from the Symphony

range was specially equipped so that the ropeway can also be used by tourists in the summer. In the Bachledka Ski & Sun skiing area in Slovakia, LEITNER built the new 6-seater chairlift “Franková” featuring LEITNER DirectDrive, protective hood, and individual footrests. This project comes after the completion of a 10-passenger gondola lift in the same skiing area in 2018. In 2024, a total of nine cabins were added to increase overall capacity. The latest ropeway technology has come to the Igrišta – Vlasenica skiing area in Bosnia-Herzegovina in the form of a new detachable 6-seater chairlift from LEITNER. With a capacity of 3,000 passengers per hour, the CD6 “Javor” system represents a significant step-up in quality at the skiing area. In Montenegro, two new LEITNER surface lifts have modernized infrastructure for visitors to the Kolašin skiing area.

### **FRANCE – ENHANCING THE EXPERIENCE WHILE ADDING COMFORT**

Not only was the construction of a state-of-the-art 10-passenger gondola lift the first project the operators of the Gourette skiing area realized in partnership with LEITNER, it also marked the completion of the comprehensive restructuring of the resort’s lift infrastructure. The GD10 “Cotch” was built on the lower part of the route of an existing 6-seater chairlift and transports up to 2,000 passengers per hour – as well as bikes – up to the Snowk’fé restaurant at an altitude of 1,610 meters. Over the past few years, LEITNER has constructed two high-capacity 6-seater chairlifts on the Vars side of the

Forêt Blanche skiing area. Now LEITNER has installed a second ropeway of the same model on the other side of the resort at Risoul. The CD6 “Homme de Pierre” system replaces the 3-seater Césier chairlift as well as the Homme de Pierre surface lift and features individual footrests and bike holders. LEITNER’s project in Font-Romeu – Pyrénées 2000, in the arrondissement of Prades, was also all about renewal, comfort, and extra capacity. The decision to build a new fixed-grip 4-seater chairlift with KidStop technology has increased transport capacity to 2,000 passengers per hour.





# Outlook for 2025

MEXICO

## Urban Ropeway Network Continues to Expand

LEITNER has been awarded contracts for two new ropeways in conjunction with Mexican partner Alfa Proveedores y Contratistas, adding a further 15 kilometers of routes to the 24-kilometer network that has been built over the past few years. Work on a new gondola lift with six stations in Morelia began in the fall of 2024. The two lines converge at a central hub near the city center, with the first running in a north-westerly direction to the bus station near the stadium via two intermediate stations. The second will carry passengers southward, linking the university campus and the zoo and stopping at one sta-

tion in between. The 90-million-euro project is scheduled for completion in the fall of 2026. A further 1.6-kilometer extension to the “Morelia” ropeway has also been announced. The second contract involves a 9.6-kilometer ropeway to be built by the fall of 2026 in Naucalpan on the outskirts of the Mexican capital. The total investment of 200 million euros will result in the creation of three lines serving ten stations, expanding the public transport offering in this part of the city on a sustainable basis.



Carezza / IT



Predazzo / IT



Morelia / MX

ITALY

## Major Investment Push

Italian skiing areas are making significant investments into their ropeway infrastructure in 2025. Among them is an impressive project in Cervinia, where LEITNER has been tasked with installing a state-of-the-art 3S system. The two sections of the ropeway will lead from Cervinia to Plan Maison and then on to Plateau Rosà, linking it to the “Matterhorn Alpine Crossing” built by LEITNER in 2023. In Arabba, where one of the key links in the Sellaronda ski circuit will see the existing ropeway at the Passo Pordoi be replaced with a high-capacity gondola lift featuring LEITNER DirectDrive motorization, HCL (high-capacity loading) stations, offering a capacity of 3,400 passengers per hour. Not only will the GD10 “Lezuo Belvedere” provide a greater level of comfort, it

will also be more efficient. Both the “Lezuo Belvedere” and the new 10-seater gondola lift in the Carezza Dolomites skiing area will feature Premium Cabins Diamond EVO from the X-Line range, interior ski racks, and panoramic windows for a breathtaking view of the mountain scenery. The GD10 “Franzin” traversing the Passo di Costalunga will replace a surface lift from the 2025/26 season and herald a new era of autonomous station operation thanks to LeitPilot technology. In Predazzo, LEITNER is constructing a new inclined elevator with cabins able to accommodate 20 passengers, which will transport the athletes to the ski jumping and Nordic combined events at the 2026 Winter Olympics.





Méribel-Mottaret / FR

## NORWAY

## Ropeway as an Event Location

LEITNER is busy constructing a new 10-passenger gondola lift at the Skistar Group-operated ski resort of Trysil in Norway. Trysil is one of Scandinavia's largest skiing areas and is particularly popular among less-experienced skiers. When open, the new GD10 "Trysilgondolen" will operate all year round, transporting passengers up the mountain at a speed of 6.5 m/s. The ropeway will be equipped with LeitPilot for autonomous station operation as well as LEITNER DirectDrive and 20 event cabins featuring special lighting and tables. Additional ballast on the cabins will increase their wind resistance.

## SPAIN

## Boosting Efficiency and Increasing Speed

LEITNER's development is particularly promising in Spain, where it is constructing two new gondola lifts. The 10-passenger gondola lift "Benasque" will create a convenient link to the Cerler skiing area and, thanks to its hourly capacity for up to 2,400 passengers, also reduce the number of car journeys on the local roads. Work will also soon start on the 10-passenger gondola lift "Candanchú-Astún", which will link the two ski resorts of Astún and Candanchú in La Jacetania. When fully operational, it will also be able to transport up to 2,400 passengers per hour across the two sections. After completion, the 3.4-kilometer-long ropeway will feature 96 cabins and also give a boost to summer tourism.

## AUSTRIA

## Premiere for LeitPilot

A new era is beginning at one of Austria's most famous skiing areas, with LEITNER constructing a new 10-passenger gondola lift at Hauser Kaibling in Styria. It is the second such system built in the region following the installation of the "Kaiblinggratbahn" in 2024. The modern ropeway system, known as the "Senderbahn", will feature LEITNER's new LeitPilot technology and allow station operations to become fully autonomous from the 2025/26 winter season. With this project, the resort operators in Schladming are setting out their stall for innovation, modernization, and optimization of operating resources with an aim to boost efficiency.

## FRANCE

## LEITNER Gondola Lifts Holding Sway

LEITNER is active on two fronts in France: In Méribel-Mottaret, part of the popular Les 3 Vallées skiing area, the high-tech 10-passenger gondola lift "Côte Brune" is currently under construction and will be ready for the new season. It replaces the existing 4-seater chairlift and sets an impressive tempo transporting passengers up the mountain at 7 m/s. LEITNER is also raising the bar in Tignes, which forms part of one of France's largest skiing areas together with Val d'Isère: The new 6-seater chairlift "Aiguille Percée" is powered by the eco-friendly LEITNER DirectDrive motorization and will be able to transport up to 3,000 passengers per hour.



La Jacetania / ES



# Progress is in the Air

**POMA**

POMA enjoyed a successful financial year in 2024 by building on strengths such as its technological expertise and, above all, the ability to choose the right partnerships depending on the region and project complexity. One such example is the 3S Jandri ropeway, which marks a new era of sustainable Alpine mobility in the Les Deux Alpes skiing area. Besides boosting the appeal of the region to tourists, POMA's ropeway solutions have also helped to inject renewed momentum into the local economy and raise the standard of living in the area. Whether it be savoring the breathtaking views from the St. Gervais ropeway or the SkyRider cabins in La Plagne, having more time on the slopes thanks to the new high-capacity ropeway in Les Arcs, or quietly traversing the urban park in the Chinese city of Changsha, POMA has the right solution for every application, with maximum benefit for ropeway users as well as the surrounding environment. Another example of POMA's capabilities can be seen in Antananarivo, the capital of Madagascar and one of the world's most densely populated cities. With air pollution becoming an increasing problem, POMA built the city's first urban ropeway to alleviate the issue. Authorities in the Algerian city of Constantine have also decided to recondition their existing ropeway system, making an important contribution to modern urban mobility. Once again, POMA was able to show in 2024 that the future is in the air and that ropeways can open the door to new, exciting prospects all over the world.



FRANCE – LES DEUX ALPES

# The Future of Les Deux Alpes

The Jandri detachable tricable uni-directional ropeway forms the new backbone of the vast Les Deux Alpes skiing area. It is the most important link in this attractive tourist region, transporting passengers all year round from the center of the resort at an altitude of 1,650 meters all the way to the foot of the legendary glacier at 3,200 meters. The new connection featuring two sections requires just seven towers for the 6 kilometer route, and is equipped with a DirectDrive double motor. The motorization system transports cabins at a speed of 8 m/s while remaining eco-friendly thanks to the 5% reduction in energy consumption and low-noise operation. The 3S Jandri ropeway provides a reliable, rapid connection and has the capacity to transport up to 3,000

passengers per hour. Total travel time from bottom to top is 17 minutes, with 32 passengers able to take their place in the Pininfarina-designed Symphony cabins offering outstanding levels of comfort. One of the 52 cabins is especially equipped for exclusive VIP use and offers an unforgettable experience.

## TD32 Jandri

Inclined length (total): \_\_\_\_\_ 6400 m  
Vertical rise: \_\_\_\_\_ 1500 m  
Transport capacity: \_\_\_\_\_ 3000 p/h







Antananarivo / MG

## MADAGASCAR – ANTANANARIVO

## Sustainable Urban Transport in Madagascar

In Antananarivo, the capital of Madagascar – the fifth-largest island in the world – the population has increased tenfold over the past 60 years to number 3.5 million. As part of a concept to restructure Antananarivo's urban mobility system with sustainability in mind, the city's first urban ropeway was built to transport more than 40,000 passengers per day. The system, which links several districts of the city along seven intermediate stations over its total length of 8.7 kilometers, is a perfect solution to the challenging mountainous topography of the city. The 30-minute journey is a significant reduction in travel time for commuters, who can spend one or two hours in traffic jams on average if they travel by road. Around 70% of the city's inhabitants have no other means of transport

except by foot. The project aims to integrate them better into the economic and social fabric of the city. It also offers a chance to improve quality of life by reducing carbon and microparticle emissions from urban transportation in the city, which according to the World Health Organization (WHO) is one of the most polluted in the world.

**GD12 Ligne Orange-app n°1**  
 Inclined length (total): \_\_\_\_\_ 1060 m  
 Vertical rise: \_\_\_\_\_ 5 m  
 Transport capacity: \_\_\_\_\_ 2200 p/h

## FRANCE – ST. GERVAIS

## Leading the Way on Green Mobility

Lying in the foothills of Mont Blanc, Saint-Gervais-les-Bains is increasingly looking to sustainable solutions when it comes to its mobility concept. The 10-seater Le Valléen gondola lift with its bottom station directly linked to the railway station at Le Fayet provides a rapid, multimodal connection to the center of St. Gervais. The new ropeway is already popular among commuters and students, but is also an ideal solution for tourists traveling to St. Gervais by rail from Paris or London. Skiers can now also leave their cars at home and use both Le Valléen and its sister ropeway, a second new 10-seater, 4.3-kilometer gondola lift, to reach the slopes with ease. Both ropeways are equipped with comfortable EVO XLINE cabins and the latest POMA technology for optimized operation and maintenance. The project features LIFE R'way, POMA's label for its world-first approach to creating sustainable innovations and minimizing the

impact on the environment.

A third innovative and eco-friendly mode of transport – L'Ascenseur des Thermes – links the town with the thermal spa. L'Ascenseur des Thermes is one of only a handful of inclined elevators in the world powered using wastewater in combination with a generator to produce some of the electricity required for its operation.

**GD10 Le Valléen**

Inclined length (total): \_\_\_\_\_ 1785 m  
 Vertical rise: \_\_\_\_\_ 221 m  
 Transport capacity: \_\_\_\_\_ 1200 p/h



Saint Gervais / FR



# Soaring to Success

**FRANCE – LES ARCS**  
**STATE OF THE ART IN THE ALPS**

Transarc forms the backbone of Les Arcs 1800, at the heart of the Paradiski skiing area. The newly constructed 10-seater gondola lift is equipped with EVO Wide cabins offering even greater capacity and higher levels of comfort. Passengers can savor the outstanding views while ascending the mountain at a speed of 7 m/s. The two-section ropeway is 3.3 kilometers long and features special extended stations for easy boarding. It has the capacity to transport 3,600 passengers per hour to an altitude of 2,100 meters, where visitors can enjoy a majestic Alpine panorama from the Tarentaise to Mont Blanc. Transarc is fitted with DirectDrive and EcoDrive motorization for efficient energy management. As part of the plans to modernize the skiing area, the ropeway was constructed using ten fewer towers than the two chairlifts it replaced.

**FRANCE – LA PLAGNE**  
**EXCLUSIVE ALPINE EXPERIENCE**

A new glacier ropeway now links Plagne Bellecôte with the Glacier de la Chiaupe. The two sections of the ropeway can be operated independently, guaranteeing passengers a link between 2,700 meters and 3,000 meters whatever the weather. During the ride, visitors can enjoy the comfort of the EVO XLINE cabins and the outstanding 360° panoramic views they afford. The gondola lift is equipped with DirectDrive motorization, and the stations are the first to feature the new LIFE (Low Impact For Environment) roofing from POMA LIFE R'way. As part of its efforts to diversify its tourist attractions, La Plagne now also features the first pair of SkyRider cabins in the world, which visitors can try out in the new Aérolive experience. SkyRider cabins are open to the elements on all sides and fitted with a grated floor. Safely secured by a rope, passengers can experience a truly unique way to ascend the mountain.



**ALGERIA – CONSTANTINE**  
**REBIRTH OF A GONDOLA LIFT**

Constantine is the largest city in eastern Algeria. With a population of 740,000, it has to contend with the same problems facing any rapidly growing city: dense urban development, traffic chaos, and pollution. Due to the city's complex topography, local authorities decided to order the construction of a 10-seater gondola lift in 2008. After years spent out of service, the ropeway was able to be put back into operation thanks to comprehensive renovation work on the stations and roller batteries. Up to 2,400 passengers per hour can complete the 1.7 kilometer journey in less than seven minutes, utilizing the three strategically positioned stations across the network's east-west axis leading past Constantine University Hospital. Ropeway users soar over the jammed up streets and crossings as well as the deep gorges and overloaded bridges of the Oued Rhumel river on board one of the 58 cabins.

**CHINA – YUELUSHAN**  
**PEACE AND QUIET IN THE CITY PARK**

With its many kilometers of paths, Daoxiang Park is the perfect place for quiet contemplation and to escape the hustle and bustle of the city of Changsha and its seven million people. In order to create a direct link to the peak of Yuelu Mountain, local authorities in Changsha opted for globally renowned technology and local customer service from the POMA teams in China. Visitors can now experience panoramic views over the provincial capital on the four-minute ride with the Yuelushan (Yuelu mountain) gondola lift. The new ropeway can transport up to 2,800 passengers per day, four times as many as the old system. It is also equipped with low-noise DirectDrive motorization, ensuring that the park retains its relaxing ambience and romantic character.



**CANADA – VANCOUVER**  
**MOBILITY UPGRADE FOR OUTDOOR FANS**

A state-of-the-art gondola lift has recently opened at Grouse Mountain, one of Vancouver’s most popular destinations for fans of the great outdoors. The new 8-seater gondola lift replaces the aging Voest Blue Skyride and provides passengers with breathtaking panoramic views of the city, the North Shore Mountains, and the Howe Sound during the 5.5-minute ascent. The ropeway provides simple and efficient access to the many different leisure activities on offer at Grouse Mountain. Visitors can go skiing and snowboarding in the winter, or hiking and mountain biking in the summer, and observe the impressive flora and fauna the whole year round. The significant infrastructure upgrade enhances the visitor experience and makes Grouse Mountain a first-class destination for pursuing outdoor activities and savoring the Canadian landscape.



Vancouver / CA

**CANADA – ALBERTA**  
**NEW ROPEWAY GENERATION**

In Sunshine Village, a famous skiing area in Banff National Park, the high-tech detachable 6-seater Super Angel Express chairlift recently entered operation. The new ropeway replaces a 35-year-old POMA installation and offers a significantly improved visitor experience thanks to comfortable EVO chairs with protective hoods and heated seats. Powered by a DirectDrive motor, the Super Angel Express provides efficient access to the popular Lookout Mountain area of the resort. This significant upgrade with a substantial increase in comfort for skiers and snowboards alike reinforces Sunshine Village’s position as a leading winter sports destination in the Canadian Rockies.



Alberta / CA



Aspen / USA

**UNITED STATES – TETON VILLAGE**  
**IMPROVED EXPERIENCE IN HALF THE TIME**

Jackson Hole Mountain Resort has ushered in a new era for its popular Sublette chairlift. After 37 years of loyal service, the old POMA ropeway has been replaced by a high-tech detachable 4-seater chairlift. The new system features elegant, comfortable chairs and reduces the journey time to the summit from just over eight minutes to only four, all while providing a much gentler ride. As a result, winter sports fans now have more time to discover the fascinating area surrounding the Sublette chairlift, including the steep channels criss-crossing the off-piste terrain and arguably the most impressive views of the Teton Mountains.

**UNITED STATES – ASPEN**  
**SIMPLE ACCESS TO THE SNOWMASS**  
**SKIING PARADISE**

Aspen Skiing Company has further enhanced the visitor experience in Snowmass thanks to the new detachable 4-seater Coney Express chairlift. The system replaces the old chairlift and is equipped with comfortable chairs, allowing visitors to easily access the popular Big Burn area from Snowmass Mall. The innovative angled station makes it easier for skiers and non-skiers to get on and off the chairs, meaning that it can also be used to reach the celebrated Lynn Britt Cabin restaurant. The next upgrade for Aspen is due in time for the 2025/26 ski season at Snowmass Mountain with the detachable 6-seater Elk Camp chairlift from LPOA.



# Outlook for 2025

EL SALVADOR – SAN SALVADOR

## El Salvador's First Urban Gondola Lift

The Salvadoran government has launched a new ropeway project to improve mobility in and around the capital San Salvador. Forming an important strategic component of the comprehensive transportation plan, the intermodal integration is geared toward reducing journey times in the city center. At the same time, the project is to also help improve the quality of life for the city's inhabitants as well as promote economic and social development. The new public transport system will link the district of Mejicanos in the north of the city with San Salvador city center, where it will connect with the future line 1 of the intercity metro.

DOMINICAN REPUBLIC – SANTO DOMINGO

## Third Ropeway Line in Santo Domingo

The third line on the Santo Domingo ropeway network will improve and supplement the existing public transport infrastructure, which consists of the metro system and lines 1 and 2 of the ropeway. The aim of the project is to meet the demands of a growing population and reduce the load on the city's roads. The new ropeway will be 7.6 kilometers in length and connect line 2 of the metro with the port of Haina via seven intermediate stations located in key parts of the city. The project is being supported by the country's government as an important part of boosting the efficiency of the transport system. It is also part of ongoing efforts to transform urban mobility in the city and across the country. POMA is also bidding for the operation and maintenance contract for the new line.



Ajaccio / FR

INDIA – MUSSOORIE

## Flagship Ropeway in Northern India

Mussoorie lies 200 kilometers north of New Delhi in the foothills of the Himalayas, 2,000 meters above sea level. In the future, a detachable monocable uni-directional ropeway will connect this popular tourist destination with the city of Dehradun with a journey time of just 15 minutes. At a total length of 5.2 kilometers and overcoming 1,000 meters of altitude difference, it will be the longest of its kind in South Asia as well as one of the longest in the world. The project will improve access to Mussoorie and increase the appeal of the area. At the same time, commuters will also be able to use the new ropeway to travel to and from work at an affordable cost, reducing the number of cars on the road and pollution in the air.

FRANCE – AJACCIO

## Mobility Reinvented in Ajaccio

The Corsican cultural and economic hub of Ajaccio is experiencing a significant increase in its population. A sustainable solution – a new ropeway system – has now been found to some key challenges, including how to develop the city's mobility infrastructure and how to re-structure key areas such as the Saint Joseph district that stretches along the promenade. A total of four stations perfectly integrated into the surrounding environment will conveniently transport 1,500 passengers per day between the hospital, schools, sporting facilities, and the Mezzavia shopping mall, as well as to the new residential areas located three kilometers away. POMA has been awarded the contract to operate and maintain the Angelo ropeway for the next ten years.

BRAZIL – RIO DE JANEIRO

## Popular Link Makes Comeback

The gondola lift in the district of Alemão in Rio de Janeiro will soon be returning to operation. The ropeway was opened in July 2011 and heralded as a driver of social and economic development in the area. However, it was forced to close in 2016 due to lack of maintenance. The 3.5-kilometer route linking the run-down neighborhood with the city center via Rio's railway network soon became popular among local residents, and also proved

to be a hit with the tourists, turning everyday life on its head in Alemão. Now the Rio de Janeiro local government has chosen to support the renovation of the transport system, offering the in excess of 10,000 daily users new perspectives and helping to reinvigorate social and educational projects, while also providing residents with access to important services.



Santo Domingo / DO





Les Arcs / FR

FRANCE – LES GETS

## Rapid Link

The fixed-grip La Rosta chairlift in the Les Gets skiing area dating back to 1992 is to be replaced with a new detachable 8-seater chairlift. The aim of the project is to create a faster and more seamless connection to the popular Les Perrières area, which is famous for its varied terrain and excellent snow quality. The new chairlift has been designed with comfort, safety, and maximum availability in mind and will offer a unique experience to all skiers when opened.

FRANCE – COURCHEVEL

## Silent and Sustainable

After 55 years of operation, the Chenus gondola lift in Courchevel is being retired in favor of a modern, innovative, and low-impact ropeway. The 10-seater EVO cabins are quieter and more resistant to the wind, while also offering more space and increased capacity. The new ropeway will meet the demands of skiers in the winter as well as tourists in the summer. Not only that, it will make it easier for local restaurants to receive deliveries, therefore reducing the use of snow vehicles for goods transport – one of the many ways Courchevel is helping to protect the environment.

FRANCE – LES ARCS

## Backbone of the Resort

The new 10-seater Villaroger gondola lift in the Villaroger area of Les Arcs marks a major step forward in the modernization of the entire ski resort, replacing two fixed-grip chairlifts. As part of an extensive development strategy, the system is to become the backbone of the resort with its reliable and state-of-the-art technology. Special attention will be paid to passenger comfort as well as successful ecological and aesthetic integration. This major project poses a number of specific technical challenges, particularly when it comes to the bottom station.

FRANCE – LA PLAGNE

## More Sustainable Link

The Roche de Mio gondola lift is the last of four lines making up an ambitious modernization project. The connection from Plagne Bellecôte to Glacier de la Chiaupe via the Roche de Mio plateau provides quicker and more convenient access to the glacier thanks to the 10-seater EVO 2 XLINE cabins with 360° panoramic views. The ropeway, which will transport up to 3,140 passengers per day, is part of an environmental concept involving the removal of old infrastructure to preserve the glacial ecosystem. With their limited number of towers, innovative motorization, and eco-friendly station designs, such systems are perfect for these kinds of projects.

MONGOLIA – ULAANBAATAR

## Driver of Economic and Social Development

Since 1990, the population of Ulaanbaatar has more than tripled. With its 1.5 million inhabitants, the Mongolian capital is home to more than half of the country's people. One of the top priorities for the city authorities is to connect the suburbs with the city center. The Tuul river and the Trans-Mongolian Railway represent significant obstacles, as does the underdeveloped transport network. A modern urban ropeway system therefore proved to be the best solution. Soon a 4.2-kilometer gondola lift with 98 cabins will begin operation, linking the districts to the north of the city with its center. With a journey time of 11 minutes, passengers will have easy access to important public services such as the city hall and the hospital.

SOUTH KOREA – MUNGYEONG

## Ropeway as a New Tourist Destination

The local authorities in Mungyeong, South Korea, have set aside a total of 32.71 million U.S. dollars for the construction of a new 10-seater gondola lift to access hiking trails leading up to Juheulsan Gwanbong Peak. Construction work on the mountain, which is located four kilometers from the city of Mungyeong, is set to begin in the spring of 2026. The Juheulsan gondola lift is to be equipped with 10-seater Diamond EVO cabins and boost Mungyeong's appeal to tourists by offering a new perspective of the surrounding topography. The ropeway will be 1,848 meters in length and overcome an altitude difference of 719 meters, and therefore offer an easily accessible way to explore the area's attractive landscape.





# On the Right Track

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 **BARTHOLET**

BARTHOLET can look back on a successful 2024 with countless new projects, exciting installations, and innovative developments. Two impressive lighting projects at international airports are particularly noteworthy: In Zürich, 37 new lighting masts were installed at heights of between 12 and 33 meters, while at Doha International Airport 17 lighting masts with a height of up to 28 meters were constructed.

BARTHOLET also performed extremely well in its service and aftersales business, where it generated significant growth. So far, some 700 service orders have been successfully completed in 60 countries all over the world. Key BARTHOLET projects in 2024 included the inclined elevator at lake Cauxmasee (Switzerland) and works to increase ropeway capacity to 3,000 passengers per hour at Le Corbier (France). Repairs to the ropeway in San Domenico (Italy) following avalanche damage as well as modifications to the reversible ropeway at the Hinterrhein river (Switzerland) are also among the most important projects of last year.

BARTHOLET also realized a number of other challenging projects in Switzerland, including the renovation of the La Berra bottom station, modifications to the motorization of the Schatzalp ropeway in Davos, as well as major maintenance work in Luxembourg. The company was also tasked with the construction of a new tower in the Hochwang skiing area.



# Panorama Meets Technology

**AUSTRIA – A WHOLE NEW EXPERIENCE AT LOSER: THE STATE-OF-THE-ART PANORAMIC ROPEWAY HAS ARRIVED**

This latest generation of 10-seater panoramic gondola lift opens up the Loser skiing and hiking area at Salzkammergut, replacing the existing chairlifts. With the investment in the new system totaling 30 million euros, the ropeway takes winter and summer tourism in the region to the next level. Spanning two sections, it leads visitors from the Loser Arena bottom station to the Loser Alm top station, with an intermediate stop at Augst parking, and offers quick and convenient access to the Loser plateau.

Featuring panoramic cabins designed by Studio F. A. Porsche and a capacity of 1,800 passengers per hour, the ropeway provides an unforgettable experience for all.

Its sustainability credentials are also second to none, thanks to state-of-the-art PV solutions on the station buildings and plans to build a small-scale hydroelectric plant to cover up to 50% of the ropeway’s energy requirements.

GD10 Loser Panoramabahn	I	II
Inclined length (total):	2,207 m	1,313 m
Vertical rise:	543 m	208 m
Power:	630 kW	560 kW
Transport capacity:	1,800 p/h	1,800 p/h
Number of towers:	11	10
Number of cabins:	46	30



Yixing / CN



Altaussee / CH

**ITALY – OPTIMIZED LINK: NEW GONDOLA LIFT IN OPERATION**

With all testing now complete and the ropeway fully approved by the authorities, the new gondola lift at San Domenico is now officially open to visitors. The ropeway negotiates an altitude difference of 560 meters over its total length of 1.5 kilometers, and is able to transport up to 1,800 passengers per hour.

A total of 40 modern 8-seater cabins designed by Studio F. A. Porsche offer unrivaled comfort and open up a quick and convenient link between the bottom station at 1,375 meters and the top station at 1,935 meters. The new installation significantly improves access to the different parts of the skiing area. A huge thanks goes out to everyone who was involved in planning and realizing this project!

**CHINA – UP ABOVE THE BAMBOO FOREST: NEW PANORAMIC ROPEWAY IN OPERATION**

On 27 September 2024, the new 8-seater panoramic ropeway in Yixing Bamboo Sea Park in China received its official approval from local authorities. The park, nestled in the southern mountains of Yixing in eastern China, is often referred to as the Sea of Bamboo due to its dense bamboo forests that create an emerald green landscape. It is a popular tourist destination that beautifully blends natural beauty, Zen spirituality, regional diversity, the world of ceramics, and a rich bamboo culture. The ropeway operates using 25 spacious and fully equipped cabins designed by Studio F. A. Porsche. Far from simply optimizing transport links around the park, the ropeway also serves as an attraction in its own right. Negotiating an altitude difference of 400 meters along its 1.4-kilometer length, it provides visitors with an opportunity to fully appreciate the unique surroundings and can transport 1,200 passengers per hour.



# Outlook for 2025

SWITZERLAND – MONTE TAMARO

## Flagship Project in the Mountains of Ticino

Work continues on the construction of a new gondola lift at Monte Tamaro, which is set to become a flagship project in the Swiss ropeway industry. The modernization of the existing ropeway began in May 2024 and is on target to be completed on schedule after just one year. From the 2025 season, the top station will be positioned closer to the Alpe Foppa restaurant, which required adjustments to the ropeway route. The new 8-seater panoramic cabins designed by Studio F. A. guarantee top-quality comfort and incomparable views of the Ticino mountain scenery. Despite the extensive construction work, the 2024 summer season went by without any major hitches thanks to efficient planning and tight scheduling. With

full accessibility and improved ventilation, the new ropeway will provide a much more comfortable link to visitors to Monte Tamaro. Seamless integration of the system into the surrounding landscape was also a major focal point of the project. Efforts were made to keep the number of towers to a minimum and come up with a particularly compact station design. In addition, the bottom station was equipped with solar panels to make the ropeway even more sustainable in its operation. The motorization for the ropeway was placed in the lower floor to reduce noise pollution.



Monte Tamaro / CH



Shaohua Mountain / CN

CHINA – SHAOHUA MOUNTAIN

## Soaring Over the National Forest Park

The Shao Huashan National Forest Park in central China spans an area of 6,300 hectares, with an impressive 90% made up of forest. The park has five main visitor attractions, Hongya Lake, Qianlong Temple, Shimenxia, Shaohuafeng, and Milin Valley, and is home to deep gorges, crystal-clear water, imposing cliffs, dense forest, and Buddhist temples. In future, this impressive landscape will be accessible via a BARTHOLET monocable uni-directional ropeway with 8-seater cabins, providing a modern and comfortable means of moving around the national park while also significantly increasing transport capacity. Up to 1,500 passengers per hour will be able to be transported along the 2.9-kilometer route in each direction.

INDIA – VARANASI

## First Urban Ropeway in India Takes Shape

BARTHOLET is currently building the first urban ropeway in India in the city of Varanasi, one of Hinduism’s holiest sites. To enhance the flow of traffic in the city, which is home to 1.2 million people, and improve access for pilgrims and tourists to over 2,000 temples, the ropeway operates 16 hours per day from the railway station and main transport hub across to the temple district of

CHINA – MEILING

## Idyllic Mountains & Colorful Panoramic Cabins

BARTHOLET is constructing a new ropeway featuring 112 colorful panoramic cabins designed by Studio F. A. Porsche against the backdrop of the picture-postcard scenery of the Meiling National Scenic Area in the center of southern China. The area is located around 15 kilometers from Nanchang, the capital of Jiangxi province. Not only is Meiling National Scenic Area a site of spiritual importance, it is also popular among tourists as a destination for leisure and recreational activities on account of its climate. The new ropeway will extend over a total length of 5.5 kilometers and transport up to 1,500 passengers per hour. The two sections will be able to be operated independently or as a pair, with the first part traversing an unusually long stretch of terrain with a length of 4.2 kilometers.

Godowlia Chowk. The L-shaped route passes across two sections and stops at five intermediate stations. The concession holder, Vishwa Samudra Ropeways, has concluded a multi-year contract to operate the ropeway once it is commissioned. Work on the new ropeway has been in full swing since the construction team broke ground in March 2023.



# Sustained Performance



AGUDIO enjoyed an extremely successful 2024 with significant progress in ongoing orders. One example is the ropeway in the province of Trento for the transportation of apples, which is under construction for the agricultural consortium Melinda. Soon, the 40,000 metric tons of apples will reach to the underground warehouse with a new ropeway instead of by truck. With sustainability at the forefront of this project, the new solution will help to reduce carbon emissions caused by logistical operations by more than 80%.

In addition, growth in the renewable energy sector led AGUDIO to participate in a number of studies on the modernization of funiculars for material and personnel for hydroelectric power plants. The engineering and construction of such systems has been part of AGUDIO's DNA since day one. Funiculars offer a direct and reliable link between the easily accessible machine rooms of hydroelectric power plants that are located at the bottom of the valley and the upstream valve room, which is often difficult to access except by a mountain trail or by helicopter.

AGUDIO also made some promising steps forward with its Flyingbelt technology in 2024. Together with some world-leading engineering companies, the company is busy working on feasibility studies for applications in new quarries and mines – a strong signal that Flyingbelt technology is becoming increasingly attractive as an alternative to conventional material transportation solutions.



# Ropeways for Hydropower

## ETHIOPIA – KOYSHA CABLE CRANE

Koysha is a 2.16 GW hydroelectric power plant currently under construction on the banks of the Omo river in south-west Ethiopia.

Once completed, the system that features eight Francis turbines each with an output of 270 MW will be able to generate up to 6,460 GWh of renewable energy and save approximately 1 million metric tons of carbon emissions every year.

The project also involves the construction of a Roller Compacted Concrete dam with a length of 990 meters, a height of over 200 meters, and a capacity of 9 billion cubic meters.

To facilitate the realization of this imposing structure, Italy’s leading construction company Webuild commissioned AGUDIO with the design and installation of a 35-metric-ton radial cable crane with a 45-meter-high tower and a span of 235 meters. The system, which has been in operation since 2021, has a traverse speed of 6 m/s and a lifting speed of 2.5 m/s and is a key component in managing this complex construction site. The cable crane already has 5,000 hours of operation and will remain in situ until the completion of the dam, which is scheduled for 2029.

## ITALY – VILLA MATERIAL FUNICULAR

The Villa hydroelectric power plant is situated in Valle Orco, some 50 kilometers north of Turin. It has been running since 1962 and generates approximately 80 GWh of renewable energy per year, making use of the water stored in the Agnel (2.14 million m³) and Serrù (14.49 million m³) reservoirs.

From there, the water flows through a 1,000-meter penstock to the power plant 700 meters down in the valley. As it is often the case in these facilities, a funicular was constructed to provide access to the upstream valve room for the transportation of personnel and materials for maintenance work.

The funicular, which was originally built in the 1960s, was fully modernized in 2024, with work started with the renewal of the carrier and ended with the replacement of the LeBus multi-layer winch drum and the hauling rope.

The carrier is attached to the end of the hauling rope with a cast-iron spelter socket. The system has two different types of carrier that can be attached to the rope: one to transport personnel and one for materials.



Valle Orco / IT



# Outlook for 2025

The trust and interest shown in AGUDIO by major construction companies and engineering firms in the mining and material transportation sector reflect the outstanding quality of AGUDIO technologies. The company is able to position itself more and more as a strategic partner in the development of reliable, sustainable, and high-performance ropeways.

From funiculars for materials in the hydroelectric power sector, ropeways for logistics applications, and Flyingbelts in the mining industry to cable cranes for major infrastructure projects, AGUDIO technologies are becoming an increasingly popular choice on the journey toward sustainable industry change.



# Resilient Progress



In 2024, PRINOTH achieved notable milestones across its business units, reinforcing its leadership in innovation, sustainability, and operational excellence. Snow Groomers expanded its global presence with new facilities in strategic locations, strengthened its market position, and advanced sustainability goals through digital tools and zero-emission grooming solutions.

Crawler Carriers celebrated major achievements, including the expansion of the Granby facility and the development of the Panther XL, a vehicle specifically designed to operate in the extreme conditions of Antarctica, underscoring PRINOTH's engineering excellence.

Tree Care showcased its dedication to growth by launching an industry-first rubber-tracked tree trimmer, developed through close collaboration between JARRAFF by PRINOTH and Crawler Carriers. The successful establishment of PrinOTH Vegetation Management North America further cemented its commitment to the market.

Vegetation Management introduced cutting-edge products like the Grizzly M350e and upgrades to the Raptor 300, delivering high-performance solutions that address the demands of forestry operations, highlighting PRINOTH's adaptability and commitment to meeting industry-specific needs.

PRINOTH concluded the year with advancements that reflect resilience, innovation, and a commitment to evolving market needs worldwide.



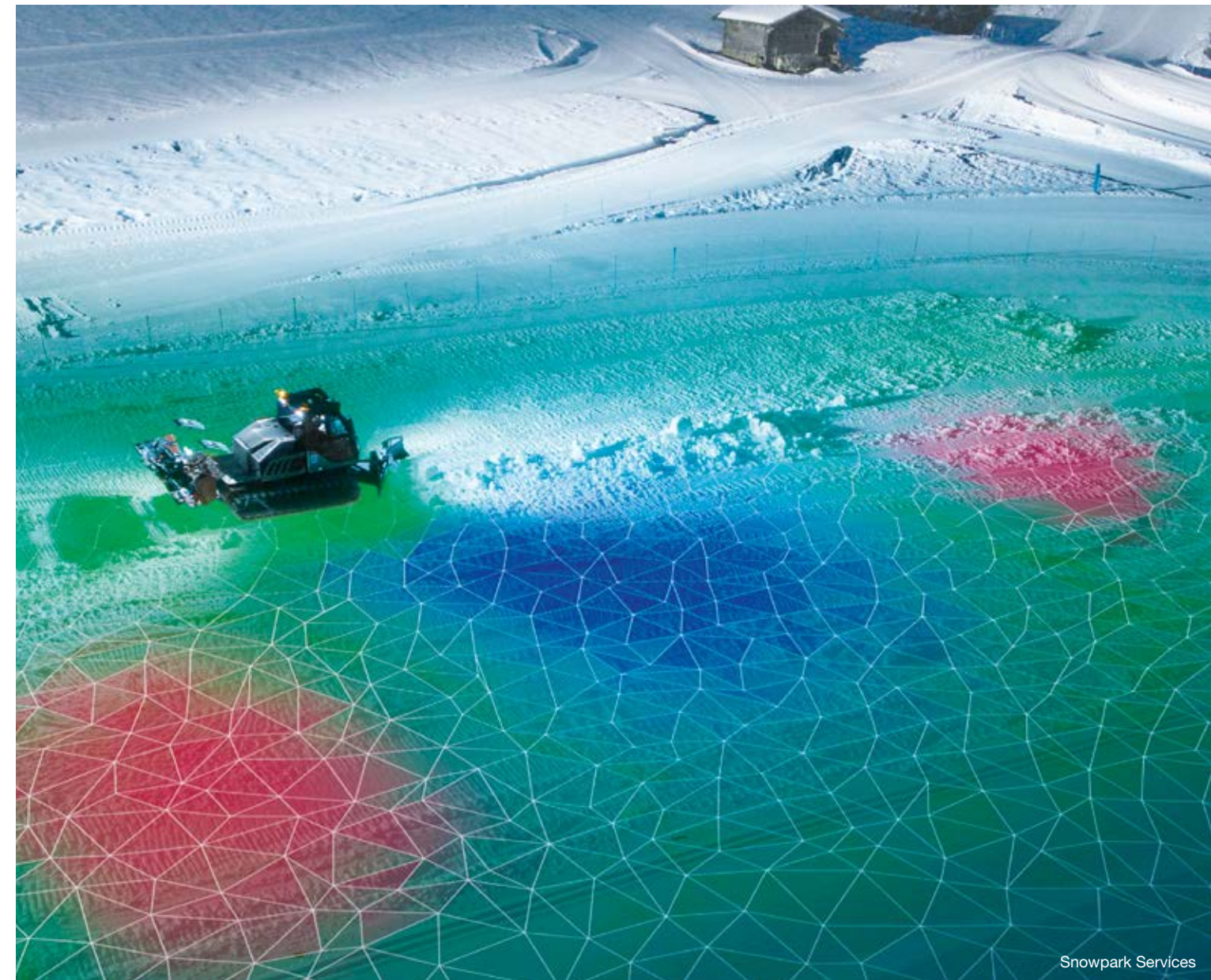
# Snow Groomers

## Building a Strong Foundation

Over the past year, the Snow Groomers division has further expanded its global service and sales network to meet the steadily growing demand for its products and to continue serving customers as a reliable partner. With new facilities in Reno (USA), Tooee (USA), and Telfs (Austria), significant steps have been taken to ensure stability and efficiency.

The Reno location was moved closer to a strategically advantageous transport route. The new facility expands capacity and improves the availability of services, vehicles, and spare parts. In Tooee, a modern sales and service center was built as part of the new HTI campus. Workshop capacity has quadrupled, while the

fully digitized warehouse accelerates spare parts supply. Benefiting from synergies within the HTI Group, a Leitwind wind turbine was installed and covers the entire power demand, highlighting its commitment to sustainability. In Telfs, a new hall with fully automated storage systems expands the logistics center ensuring short delivery times and a reliable supply of spare parts. For snow groomer customers, these investments mean dependable and faster service to support them—today and tomorrow. In addition to these significant investments, the Snow Groomers division has further strengthened its market presence in North and South America, Europe, Asia, and Australia.



## Zero Emissions and Resource Conservation

PRINOTH continues to support ski resorts and cross-country centers in achieving their sustainability goals. The Husky E-Motion has now been in use for three seasons, demonstrating that zero-emission grooming is already a reality. With the digital tools from PRINOTH Connect, operators and managers gain valuable insights into the performance of their vehicles and precise knowledge of snow depth on the slopes. Combined with the precise planning and implementation of snow parks, slopes, and trails by PRINOTH Snowpark Services, resources are used even more efficiently and ski seasons are being extended.

## Innovative Transport Cabin

A true product highlight: In spring, the new transport cabin for the Leitwolf and Bison was unveiled at the Mountain Planet trade show in France. It offers ski resorts greater versatility in daily operations. Accommodating up to 15 people with their skis and snowboards, it is ideal for shuttle services and tourist excursions. It also enables efficient material transport and rapid rescue operations—all while the snow groomer continues to prepare perfect slopes even with the transport cabin attached. The cabin is already proving its value in several ski resorts across Europe this winter season.



# Crawler Carriers

## Investing in Growth Amidst Challenges

In 2024, the Crawler Carriers division navigated economic challenges while staying true to PRINOTH's commitment to innovation and organizational development. Strategic investments in the production facility in Canada and advancements in product innovation ensured a solid foundation for future growth. The expansion of the Granby facility Québec, marked a significant milestone. Nearly doubling in size, the expanded plant reflects PRINOTH's dedication to meeting the growing demand for high-quality crawler carriers. A key focus of the new space is custom project development, reinforcing efforts to deliver tailored solutions across diverse industries. The additional

capacity also supports enhanced production efficiency and aligns with the company's long-term growth strategy.

Entering the forestry sector, the business unit introduced forwarder vehicles designed for transporting felled logs in hard-to-reach locations. Leveraging the vehicles' low ground pressure, agility, and maneuverability, PRINOTH made substantial progress in this new application area, further diversifying its offerings. Growth in Europe and the continued success of bare chassis vehicle sales solidified 2024 as a year of significant achievements in product innovation and operational excellence, underscoring PRINOTH's resilience in challenging times.



Panther XL

## Engineering for Extreme Environments

In 2024, PRINOTH delivered two specialized vehicles, the Panther XL, developed for the Norwegian Polar Institute to meet the demanding conditions of Antarctica. Designed to navigate the continent's icy, rugged terrain, these vehicles support critical transportation and logistical operations in one of the harshest environments on Earth.

The Panther XL is equipped with advanced features tailored to extreme conditions. Its robust engine is engineered to perform reliably in sub-zero temperatures and high altitudes, while its large tracks distribute weight evenly, ensuring superior mobility on deep snow and soft surfaces. The unit's high payload capacity allows

it to transport essential supplies, fuel, and equipment to Norway's Troll research station, overcoming steep inclines and long distances. Built for endurance, the vehicle incorporates advanced heating systems and materials designed to function seamlessly at temperatures as low as -40°.

The Panther XL exemplifies PRINOTH's engineering excellence, showcasing the adaptability of Panther machines for the most specialized and demanding applications. This achievement reinforces PRINOTH's position as a global leader in innovation and reliability, enhancing its reputation in tackling extreme challenges with tailored solutions.



Granby Plant / CA



# Tree Care

## Driven by Dedication

JARRAFF by PRINOTH successfully navigated 2024 despite facing significant challenges. This success can be attributed to the unwavering hard work and dedication of their employees. With a focus on growth and innovation, the team achieved several key milestones including launching a new JARRAFF model and successfully integrating Prinoth Vegetation Management North America into the organization.

## An Industry First JARRAFF

JARRAFF introduced the industry's first rubber-tracked mechanical tree trimmer, a milestone in innovation and intercompany collaboration. The track system, adapted from PRINOTH's Panther T8, was seamlessly integrated with JARRAFF's trimming platform. This synergy enabled JARRAFF to leverage a proven undercarriage, optimize costs, and maintain its tree-trimming expertise. Customers value its roadability while benefiting from excellent ground pressure for efficient operation in swamps, bogs, and muddy terrain.



## New Company Joins JARRAFF

Effective February 1, 2024, the JARRAFF by PRINOTH campus began accommodating the newly formed Prinoth Vegetation Management North America (PRINOTH VM NA) organization. This initiative required a significant effort from JARRAFF employees, including many assuming additional responsibilities to support the new entity. Concurrently, space was allocated within the JARRAFF facility to accommodate PRINOTH VM NA's parts inventory, including the addition of another Kardex unit.

A crucial milestone was achieved in November 2024 with the successful relocation of the entire PRINOTH VM NA spare parts inventory from the Granby campus to the JARRAFF/PRINOTH VM NA campus in St. Peter. The establishment of PRINOTH VM NA underscores PRINOTH's unwavering commitment to the North American market and further solidifies the mission to deliver sustainable and dependable vegetation management solutions.

Jarraff Rubber Track / USA





# Vegetation Management

## Resilience Through Innovation

Throughout 2024, despite the economic climate, PRINOTH Vegetation Management maintained a strong focus on innovation and progress. Efforts included the introduction of new products such as the Grizzly M350e, additional attachments for the Raptor 100, advancements in the Raptor 300, exciting product developments, and the establishment of new partnerships. These initiatives collectively strengthened the brand’s offerings and market presence while maintaining a commitment to delivering modern, high-performance solutions and reliable service, even in challenging times.

## A Powerful New Mulcher

The introduction of the Grizzly M350e represents a significant enhancement to PRINOTH’s product offerings in vegetation management. Designed for use with smaller excavators, this forestry mulcher addresses the growing demand for solutions that excel in challenging environments such as residential areas, roadsides, and riverbanks. Engineered with durability, safety, and efficiency in mind, the Grizzly M350e underscores PRINOTH’s commitment to innovation and adaptability in meeting diverse operational needs. Its versatility and modern design mark another step forward in delivering effective, high-performance tools for forestry and vegetation management professionals.



Raptor 300



Grizzly M350e

# Innovation in Forestry Operations

The Raptor 300 has undergone significant updates to elevate its performance, comfort, and safety. Notable advancements include the redesigned cabin 2.0, which enhances visibility and operator comfort, as well as refined controls for intuitive operation. Reinforced protective features and robust components ensure reliability even in the most demanding conditions. The paired Grizzly M650 mulcher has also been enhanced to deliver improved stability, efficiency, and ease

of use. With upgrades to its structure and performance, this combination is optimized for modern forestry applications. The updated Raptor 300 and its enhanced Grizzly M650m mulcher set a new benchmark for reliability, efficiency, and operator comfort, reinforcing PRINOTH’s leadership in delivering advanced solutions for modern forestry challenges.



# Pioneers of Innovation

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**DEMACLENKO®**

The year 2024 will go down as the second-most successful in DEMACLENKO's history. It was marked by many achievements on the international stage, which have laid the foundations for further growth around the world. One of the highlights was the introduction of the new Evo 4.0, which was launched to great acclaim among customers. Thanks to its ability to provide outstanding snowmaking performance while minimizing energy consumption, the new model proved to be a hit on the market.

Two DEMACLENKO locations saw some significant changes in 2024: The branch office in Austria moved from Zirl to Telfs, where HTI Group companies have their Austrian headquarters. In North America, the newly opened LPOA-Skytrac production site will now serve as a new support, service, and spare parts center for DEMACLENKO in the western part of the continent, supplementing the existing branch offices in Concord (New Hampshire) and Grand Junction (Colorado).

One particular highlight for DEMACLENKO in 2024 was the installation of a Ghost in Zermatt. This unique product concept allows the snow gun to be fully retracted into the pit.

Also for WLP, 2024 marks another successful year in the company's history. The company realized a whole host of exciting projects and solutions to improve air quality everywhere from Italy to Thailand to Brazil.





Evo 4.0, Piz Sella / IT

## Global Presence, Local Service

One particularly important project in 2024 was the extensive construction and modernization work on the snowmaking infrastructure at the skiing areas of Corvatsch and St. Moritz – Corviglia in Switzerland. The work was commissioned ahead of the FIS Freestyle Ski and Snowboarding World Championships, which are set to take place at the resorts in March 2025. As an official supplier to the event, DEMACLENKO successfully implemented an efficient, futureproof snowmaking solution in collaboration with the other project partners. Armenia's first DEMACLENKO snowmaking system was also successfully commissioned in 2024. The state-of-the-art, fully automatic solution in the newly

developed Myler Mountain Resort consists of 80 snow guns, two pump stations with water cooling, 20 kilometers of cast iron pipework, and DEMACLENKO's Snowvisual control software.

Once again, renowned skiing areas in Austria (such as Kitzbühel, Snow Space Salzburg, Planai-Hochwurzen, and Mayrhofen) and Italy (including Sestriere, Cimone, and Abetone) were a major part of DEMACLENKO's business activities in 2024, particularly when it came to large-scale projects. However, thanks to the growth strategy pursued over the past few years, DEMACLENKO is also reporting a rising share of international orders, especially from outside of Europe.

## Evo 4.0: Compact but Powerful

With the launch of the new Evo 4.0, innovation leader DEMACLENKO has redefined fan gun standards. The previous Evo 3.0 model has been completely revised and updated. Aside from the streamlined design adapted in line with the 4.0 line of DEMACLENKO fan guns, the pioneering technology under the hood is what really makes the new fan gun stand out.

Power consumption is unparalleled at just 14 kW, around 2 kW lower even than the Evo 3.0, which was already prized by customers as one of the most

efficient compact fan gun models on the market. This additional efficiency has been achieved thanks to a number of innovative features, including the addition of a heat exchanger, which heats the nozzle ring while also cooling the compressed air without requiring any additional power. Another technological achievement with the Evo 4.0 is that it produces 15% more snow despite using less power than the previous model. Not only that, noise levels have also been considerably reduced, making the Evo 4.0 one of the quietest fan guns available.



Titan 4.0, KitzSki / AT



# New Partnership with the Italian Winter Sports Federation

In 2024, DEMACLENKO and the Italian winter sports federation FISI finalized their new strategic partnership. As part of a multi-year cooperation, DEMACLENKO will be supplying its advanced snowmaking solutions for a variety of federation activities to allow Italian athletes

to train in partner skiing areas on the best possible slopes. The long-term agreement between DEMACLENKO and the Austrian ski association Ski Austria was extended in 2024 with a view to expanding the already successful partnership.

# All-Weather Snowmaking

DEMACLENKO also made significant progress in the increasingly important area of all-weather snowmaking in 2024. Thanks to its strategic partnerships, DEMACLENKO's portfolio features a variety of technologies (SNOW4EVER and SNOWPRO) that offer the most complete solution for temperature-independent snowmaking on the market. SNOW4EVER, for example, provided outstanding results at the IBU World Cup in Hochfilzen in 2024. In order to produce snow for the

biathlon trail efficiently, a solution was needed that could perform at inconsistent temperatures and in changeable weather. The organization committee was particularly impressed by the quality of the snow. There was also considerable interest in SNOWPRO systems, with sales in Japan, the Czech Republic, Poland, and Saudi Arabia. The first delivery of a SNOWPRO to a customer in Australia is in the pipeline for 2025.



# Innovations to Improve Air Quality

Ever since it was founded, WLP has been committed to developing systems and products to improve air quality. What began 20 years ago with a dust suppression system has since developed into a broad range of products that now also includes fire safety, disinfection, odor neutralization, and greenkeeping solutions – attracting customers worldwide operating in a wide variety of industries. In Brazil, WLP reached an important supply agreement with CHB Rental, one of the country's

leading providers of recycling and earthwork machinery, in 2024. More than 70 machines have already been marketed under the new partnership. Poseidon, an all-in-one fire-extinguishing system, has also attracted plenty of attention. In Thailand, for instance, two units have been installed on two fireboats in Bangkok harbor to enable a rapid and effective response in the event of a fire.

# Outlook for 2025

DEMACLENKO will be focusing even more strongly on its internationalization in 2025 with an aim to further enhancing its positioning in additional countries, particularly the United States and Canada, alongside its core markets. Research and development activities will center on resource efficiency, quality, and diversi-

fication to an even greater extent moving forward. In May, DEMACLENKO will once again be presenting the latest industry innovations at the Interalp trade fair in Innsbruck together with other HTI Group companies. What's more, 2025 also marks WLP's 20th anniversary.



# Everything Connected

skadii

SKADII saw strong growth once again in 2024 and confirmed the strategic trajectory the company has been following since 2019: the development of a digital platform that blends a range of digital services and solutions and helps customers make optimum use of their hardware and structure their processes more efficiently.

SKADII Resort Management has established itself as an essential part of any skiing area's management toolkit, pooling together all relevant applications and providing access via a single login. In 2024, SKADII was able to further expand its market-leading position, with growth of over 20% recorded in core markets of the United States, Canada, and Scandinavia. More than 500 resorts from all over the world utilize SKADII Resort Management for both winter and summer operations.

One of SKADII's main priorities in 2024 was the continuous development of its digital platform. SKADII has made targeted expansions and optimizations to the platform and the numerous applications, which include maintenance, resource planning, and infrastructure monitoring. The enlargement of the development team and the creation of a dedicated UX department with a clear focus on optimizing the user experience marked further milestones.



**PEOPLE-COUNTING WITH SKADII FLOW**

The innovative SKADII Flow AI technology for GDPR-compliant counting of people and vehicles is meeting increasing demand. More and more resorts are utilizing the solution – which was developed fully in-house – to efficiently monitor and effectively control utilization of slopes and parking areas. A significant achievement in 2024 was the patenting of the system to count the number of skiers on specific sections of the slopes. SKADII Flow also has a great deal of potential in the tourism sector, where it is opening up new market opportunities.

**BRAND-AGNOSTIC SOFTWARE INTEGRATION**

SKADII is one of only a handful of platforms on the market without any restrictions in terms of integration, which really sets it apart from the competition. As well as offering compatibility with other HTI solutions, SKADII has also developed significant expertise in the integration of data and software from other providers. All this means that customers can enjoy the benefits of a comprehensive, brand-agnostic platform that puts their needs and requirements front and center. In 2024, SKADII realized numerous custom data and software integration projects for customers all over the world.



# Outlook for 2025

**NEW MARKETS**

The SKADII platform is developing increasingly into an all-in-one digital ecosystem offering countless digital products and services. Alongside proven systems for skiing areas such as SKADII Resort Management, an increasing number of solutions are being developed for non-Alpine applications, all with the same aim: to simplify interactions and optimize hardware usage with reliable data, seamless connectivity, and user-friendly interfaces, regardless of the application.

**NEW CORPORATE DESIGN**

SKADII will be taking the next step in its development in 2025 with a new brand identity. The new design will place an even greater focus on the customer and underscore SKADII's function as an innovative and customer-centric ecosystem.



# 90 Years of TROYER

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TROYER achieved milestone after milestone in 2024. First and foremost, the company celebrated its 90th year of excellence in hydroelectric power technology. The anniversary festivities took place at the TROYER headquarters in Vipiteno, with customers and partners from all over the world attending. The day began with a number of keynotes presenting our latest technologies and projects and concluded with a special gala in honor of what we have accomplished together.

Another highlight of 2024 was the opening of our site in Kathmandu, Nepal, on 1 December, which was attended by our Nepali customers and partners as well as representatives from the Italian embassy. The new site reflects the expansion of our presence in a region with huge potential.

In total, 17 new systems were successfully commissioned in 2024, and 38 new orders submitted. Our anniversary year stands for growth, innovation, and partnership – values that TROYER has embodied since 1934 and form the basis of a successful future.



# Renovation of Historic Hydroelectric Power Plants

TROYER took a major step forward in its development in 2024. Numerous systems around the Alpine region went into operation, including the renovated power plant in Interlaken. This historic small-scale hydroelectric facility, which has been generating energy from the flow of water between the Brienersee and Thunersee lakes since 1894, was completely modernized. In this project, TROYER expertly combined the requirements of the plant’s listed status with the latest technology. Three new Kaplan turbines each generating 340 kW of energy were installed without affecting the character of the building.

The Robbia project in the Grisons was another highlight of the year. With total investment of 125 million Swiss francs, TROYER was tasked with bringing the system up to modern standards. Three 4-nozzle Pelton turbines now generate 120 GWh of green energy every year, an increase of 10%. Both projects are emblematic of the way TROYER blends history and innovation and show how forward-thinking hydroelectric power can be realized in a sustainable manner.

Mewa Khola, Taplejung / NP



## Outlook for 2025

**NEW MARKETS AND MAJOR PROJECTS FOR 2025**  
TROYER is kicking off 2025 with a clear focus: the ongoing internationalization of the company. Following success in existing markets, TROYER is now expanding its activities in Georgia and Nepal. A renewed increase in new orders taking shape in 2025 is also being seen in Switzerland.

**GROWTH MARKETS: GEORGIA AND NEPAL**  
In Georgia, three significant projects are on the brink of completion and are set to be signed off by the end of 2025:

- Bakhvi 1: Featuring two Pelton4D turbines (each generating 5.7 MW), this project is a key development in the west of the country.
- Bakhvi 2A and Bakhvi 2B: Also based on Pelton4D technology but at an even larger scale, Bakhvi 2A is set to produce 2 x 6 MW and Bakhvi 2B will generate 2 x 12.3 MW.

TROYER is also looking to build on its progress in Nepal. Two major projects will be completed in 2025:

- Mewa Khola: With three vertical Francis turbines (each generating 18.8 MW), this power plant will make a significant contribution to the power supply.
- Thulo Khola: This project with its three horizontal Pelton2D turbines (7.5 MW of output each) is set to be concluded in May 2025 and is a further testament to TROYER’s expertise in the area of high-performance hydroelectric power technology.

**ON STRONG FOOTING IN SWITZERLAND**  
Switzerland will remain a key market for TROYER in 2025. As part of the Vissoie project, a second module with two horizontal Pelton2D turbines (each generating 9.7 MW) is to be handed over by July 2025. The first unit is already in operation, with a third set to follow in 2026.

Through these projects, TROYER is underscoring its role as a leading provider of innovative solutions in the hydroelectric power industry. Expansion in Georgia and Nepal as well as the solid position in Switzerland show that the company is ideally equipped to tackle the challenges of the global energy market.





# The Rise of Small-Scale Wind Power

© Alessandro Casali

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Over the past few years there has been an increasing push among leading wind turbine manufacturers toward larger rotors and greater power output. This trend has caused the range of megawatt-class turbines to shrink, putting LEITWIND at a strategic advantage: By specializing on small to medium-sized projects and repowering initiatives, the company has become a key partner for municipal authorities, SMEs, and local investors. With uncertainty surrounding the issues of approval and regulation, small-scale wind power remains an essential factor in making the best use out of installed capacity. LEITWIND is ideally set up to further cement its leading position in this sector.



# LTW90: Tailor-Made Wind Power Performance

LEITWIND is delighted to announce that a Turkish customer who has installed a LTW90 1,500 kW in 2023, has once again opted for the company's technology. In December 2024, the company signed a deal for another LTW90 – this time with a capacity of 2,000 kW – and a 97.5 m tower. The new turbine is set to be installed in the province of Kırklareli in spring 2026 and will become the world's first LTW90 with a nominal power of 2,000 kW.

The LTW90 confirmed its status as the leading product in LEITWIND's portfolio in Italy too in 2024. In the fall, the first LTW90 wind farm was successfully completed in the province of Trapani on the island of Sicily, despite the challenging logistics of the site. The project allowed LEITWIND to further enhance its expertise in handling installations in demanding locations and underscored the company's ability to successfully realize more projects in challenging conditions moving forward.



## Outlook for 2025

### BEYOND BORDERS: LEITWIND ENTERS NEW MARKETS

The lack of long-term thinking on energy policy in Italy last year has driven LEITWIND to search out and enter new markets, including the United States and United Kingdom. Not only that, LEITWIND is also busy reactivating its operations in markets such as Poland and Greece that have lain dormant in recent years. As the major players in the industry turn their focus to large turbines, competition in the small-scale segment both for new systems and repowering projects is decreasing – presenting LEITWIND with numerous interesting prospects for the future.

### LTW42 IN GERMANY AND DEVELOPMENT OF HYBRID SYSTEMS

The LTW42 wind turbine is LEITWIND's answer to the question of how to combine various renewable energy sources – such as wind and solar energy – into hybrid systems. Due to the complementary nature of wind and solar, energy can be produced without interruptions, regardless of weather conditions and utilizing the same electricity grid input. Such solutions are particularly attractive in Germany, where specific incentives are available for hybrid concepts. LEITWIND will be attending Husum Wind, a leading trade fair for the wind power industry, for the first time in 2025, with a view to developing this area of business further. The trade fair takes place in Husum, Germany, from 15 to 19 September.



# Responsibility as Far as the Eye Can See

© Klaus Rockenbauer

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Creating sustainable value for society and the environment around us is a key concern in everything we do as a group. Whether it's in research, product development, modernizing operating infrastructure, or optimizing internal processes, keeping an eye on tomorrow and thinking about the generations to come are deeply rooted in our corporate culture. These values allow solutions to be created that are enduring while also having a direct impact on all of the environments where our company is active. Besides focusing on energy-efficient technologies, it's also important to keep our own actions at the forefront of our minds. Renewable energy generation at our sites is just as important to us as continuing to develop sustainable mobility solutions for our employees. Responsibility for the environment therefore spans all areas of the company and is having an extensive impact on what we do. This is our understanding of a modern business that never loses track of the bigger picture: a successful future for us all.



# The Future is Now

**NEW LPOA-SKYTRAC PLANT IN TOOELE (UTAH)  
WITH LEITWIND WIND TURBINE**

On 20 June 2024, LEITNER-POMA OF AMERICA heralded the start of a new era with the opening of a state-of-the-art facility in Tooele, Utah. The site is home to 120 employees and serves as the headquarters and sole production location for SKYTRAC as well as an additional production facility for LPOA, which is based in Grand Junction, Colorado. In the design of the site, particular value was placed on sustainable, low-resource operation. An LTW42 250 kW wind turbine from LEITWIND was installed to provide power and underline

the group’s efforts to constantly strive for renewable energy. The turbine provides a decentralized source of electricity that is able to be consumed directly by the site. The compact design also minimizes the visual impact of the system – in a market in which turbines generating less than 1 MW are becoming increasingly scarce, a feature that really sets the LTW42 apart. With plans to install solar panels in the future, the site will soon be able to generate and operate on its own supply of green electricity around the clock.



LTW42 250 kW, Tooele / USA



Tooele / USA



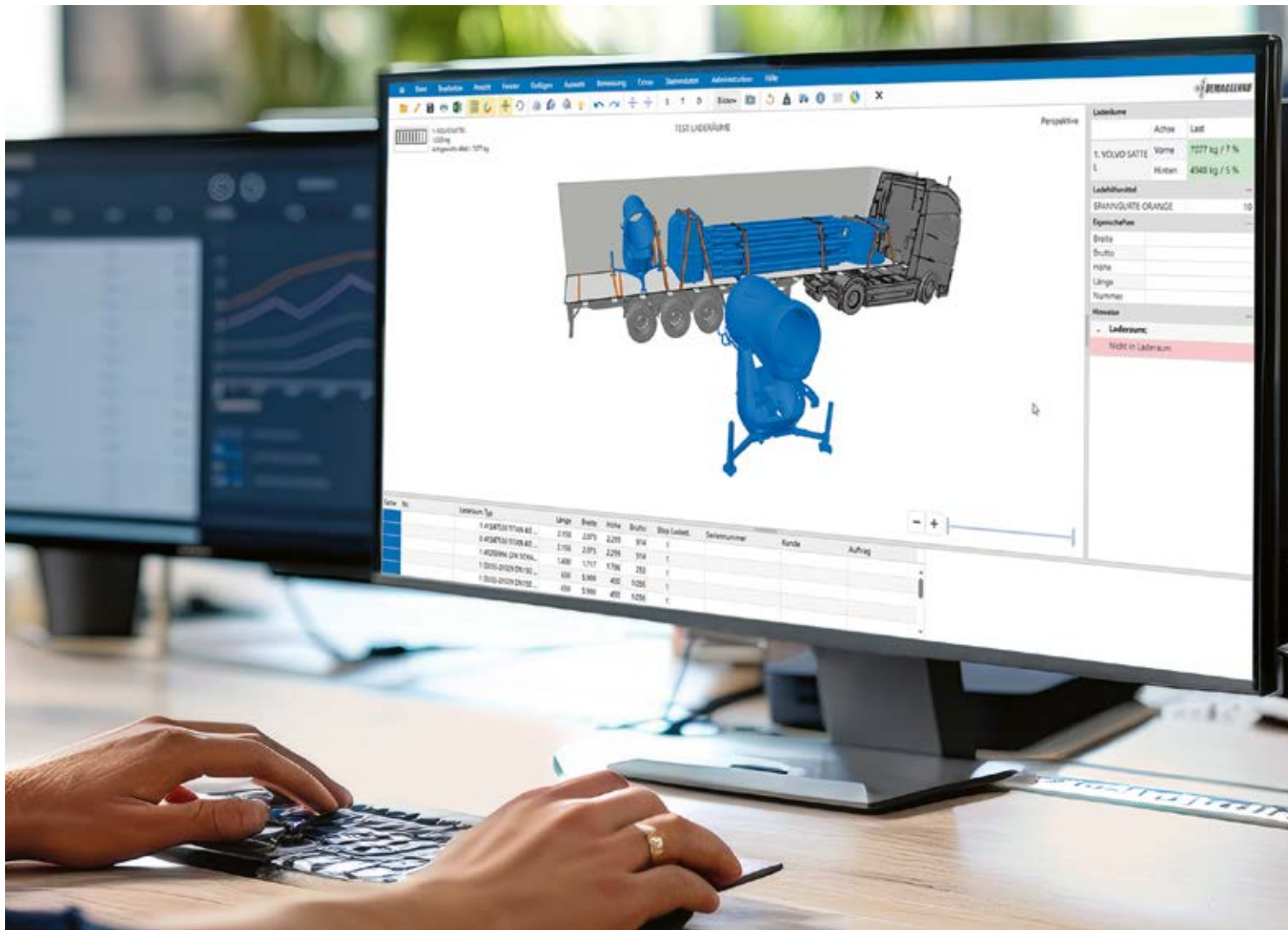
PRINOTH Connect

**PRINOTH CONNECT – DIGITALIZATION  
AS THE KEY TO MORE SUSTAINABILITY**

Prinoth Connect comprises a range of connected technologies that make machines more capable, cut carbon footprints, and increase efficiency. Thanks to precision digital snow measurement, snow groomers can be used to perfectly prepare ski slopes. The snow groomers deliver accurate snow data, improve the quality of the slopes, reduce the amount of artificial snowmaking, and save valuable resources such as water and energy. Smart fleet management can also help to reduce fuel consumption and boost efficiency. The latest remote control technology installed in tracked utility vehicles

makes for greater safety and sustainability. Machines can be moved without needing to be physically relocated, reducing idle time, emissions, and fuel use. At the same time, building site safety is also being increased. In the tree maintenance sector, Jarraff tree trimmers feature telemetry systems to provide real-time data, optimizing maintenance and productivity while cutting downtime and minimizing waste. In vegetation management, Raptor carrier vehicles utilize fleet management tools for efficient maintenance and sustainable operation.





### SMART TECHNOLOGY OPTIMIZES LOGISTICS PROCESSES

The HTI Group is constantly optimizing its logistics processes. The challenges it faces in this area are as wide-ranging as the products offered by HTI Group companies. At DEMACLENKO, for example, truck or container shipments can vary significantly depending on the order and be made up of a wide range of larger and smaller components, such as fan guns, lances, pumps, pipework, cable reels, etc. That's why a digital planning tool has been implemented that allows the different components and loading space to be mapped virtually on a computer in advance. The tool makes optimal use of the available loading space and keeps the number of necessary transport carriers and containers to a

minimum. With a loading plan, time can also be saved when loading components with the forklift, as the best possible loading order has already been defined. Smart planning also simplifies the process of consolidating multiple orders into a single shipment. The software divides the loading space into sectors and determines the correct sequence in which the components should be loaded, ensuring that everything can be unloaded quickly and easily at the respective destinations. The tool also allows load securing to be taken into account when planning loading space. This is particularly relevant in container deliveries, as the limited number of retaining rings means that the placement of the lashing straps has to be carefully considered.

### GREENER ON THE ROAD

The HTI Group has put together an effective range of measures to make mobility at our sites more sustainable. As part of efforts to reduce our carbon footprint in France, a number of new vehicle charging points have been installed and vehicle fleets switched to more eco-friendly models for journeys between company locations or building sites. In addition, the number of flights has been halved in favor of more journeys by rail. In Italy, bicycles are available for trips between the various sites in and around Vipiteno.

There are also a number of daily shuttle services from the Vipiteno railway station to the site as well as to the company canteen at lunchtime. In Austria, bike hire is available as well as a KlimaTicket offering free public transport for employees who have a longer commute to work. In Switzerland, BARTHOLET covers the cost of Swiss Railways' Halbtax reduction card for all trainees and apprentices, giving them a 50% reduction on all rail fares.





# Global Production and Administration Locations











COMPANIES OF HIGH TECHNOLOGY INDUSTRIES

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 **BARTHOLET**

 **agudio**

***Pinoth***

**DEMACLENKO**

**skadii**

 **TROYER**

 **LEITWIND**