

Flexible. Fast. Cost-effective. Losberger Airport Capacity Solutions.

Airport Terminals, Aircraft Hangars and Cargo Warehouses



Departures



Increasing airport capacities

The sky is the limit: Fast solutions for growing demands.

The global aviation industry is continuously growing. And in many parts of the world the building and provision of ground infrastructure cannot keep pace with actual demand. Airports are being expanded and new flight destinations developed. Building new, fixed terminals usually requires long planning and construction periods, not to mention the massive investments involved. Temporary terminals can be a fast and also cost-effective alternative to expand your airport capacities.

Modular airport capacity solutions by Losberger

Losberger provides turnkey solutions for airport capacity demands from concept and design to installation. We deliver complete airport terminals for temporary, semi-permanent and permanent applications including e.g. baggage handling and security systems. We also provide cargo warehouses and hangars as MRO/FBO facilities for aircrafts. All these solutions are completely modular and are specifically designed for the requirements of airports.

Your advantages

- Cost-effective alternative to traditional buildings
- Short planning and implementation period
- Quick installation and dismantling
- Great flexibility through modular structure
- Easy reuse and relocation
- Resource-efficient and therefore sustainable

Applications of mobile airport structures

- Urgent increase of passenger capacities (during trade shows, sport events or cultural events)
- Bridging gaps during refurbishment and renovation works
- Permanent expansions of airports
- Increases in cargo traffic requiring additional storage space
- Increased demand of MRO/FBO facilities for aircrafts

The Losberger Group is one of the world's leading companies in the development, production, sales and rental of mobile structures. Our brand is well-known for premium quality in products and services, flexibility and customer proximity. In other words, we do everything to perfectly meet your challenge – whatever it may look like!

- More than 750 employees worldwide focusing on delivering the Losberger brand promise everyday with highest precision and dedication
- 9 sites in 7 countries
- Representatives in more than 100 countries

(As at: April 2015)

More on the Losberger Group at
www.losberger.com/info



Our project management process

Well-conceived, all-encompassing: Losberger.

Just one point of contact: With Losberger, your project will have its own project manager who you can approach with each and every question. He will also be the one directing the entire Losberger team of airport terminal planning specialists, supervisors, fitters, engineers and other key personnel throughout the process.

1. Analysis

Every project starts with an in-depth requirement analysis to define the strategic need and the project scope. In addition to the functional requirements, the intended duration of operations and climatic conditions have a great influence on the specifications. With this information at hand, we develop a User Requirement Definition (URD), which reflects all of the clients' and stakeholders' needs.

2. Planning, design & engineering

During the planning and design phase, all operational concepts and layouts are discussed with the client and all relevant stakeholders. Thereby, we always work with state of the art CAD systems and full 3-D modelling facilities.

- A 3-D virtual model of the final layout provides a preview of the new terminal.
- In the engineering phase a functional design specification and detailed project plan list all design specifications.
- Our unique and specifically designed operational process modelling tool even allows us to integrate flight schedules and passenger numbers. Thus, our customers can witness both passenger and bag movements and test the concept prior to the implementation phase.

3. Implementation

Implementation includes transportation, site set-up, site installation, testing and commissioning. We also manage operational readiness and training (ORAT).

4. Monitoring & maintenance

Our services don't stop once we have handed over the key: We sit along side our clients through the early days of operation to ensure that all systems and processes are performing as expected. We also offer you maintenance and monitoring of the airport structure to ensure that the facility is performing at the optimum levels.



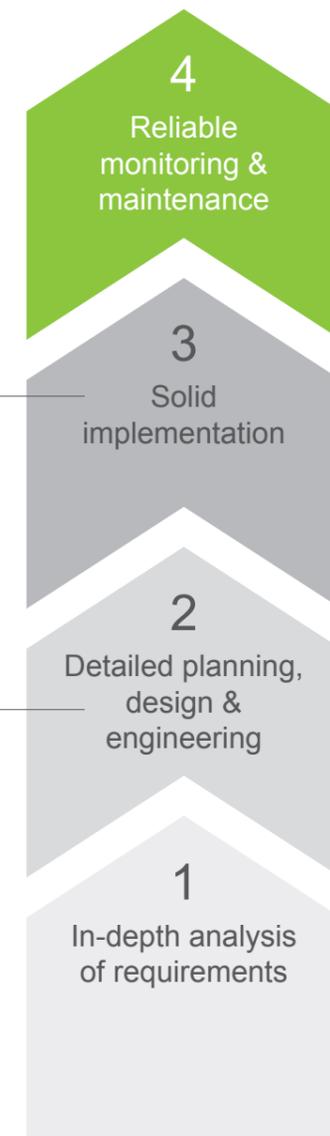
End to end support from concept to handover

including

- Delivery of baggage handling systems
- Delivery of M&E/HVAC
- Testing and commissioning
- Operator training

including

- Process design
- Architectural design (3-D virtual modelling)
- M&E design





The product spectrum

For all capacity needs, all over the world: Losberger.

Wherever airports need to expand their capacities temporarily or permanently, they approach Losberger as a trusted partner. Be it terminals, hangars or warehouses, we always provide for fast, flexible and cost-effective solutions of premium quality to create more sheltered space for people, cargo or airplanes – all over the world.

Relocatable terminals

Where there is no time for long planning and construction periods or where permanent solutions are simply too high of an investment, Losberger FlexiTerminal® solutions are the fastest and most efficient alternative to expand passenger capacities. Established in 2006, the FlexiTerminal® is a bullet proof solution. Thanks to its unique modular construction it can be integrated perfectly into the environment of the existing airport. It can be completed with e. g. baggage handling and security systems for both temporary and permanent use.

Aircraft hangars

Our rapid deployment hangars are designed to be as light as possible while withstanding the harshest climates on earth. They are air tight and can be humidity controlled in order to reduce maintenance and spare parts costs. Furthermore, their thermal efficiency allows to reduce power and AC consumption significantly. This makes our hangars the perfect fit for MRO/FBO clients as well as airlines, private jet companies and armed forces.

Warehouses

Whether it is container storage facilities or palletised cargo destined to air freight: Where cargo facilities become the bottleneck, Losberger warehousing solutions offer air cargo hubs the necessary flexibility in order to quickly answer the needs of the dynamic logistics industry. They are available with climate control, ideal for storing and protecting specialty goods and can be equipped with windows, gates, ramps, etc.

Proofs of our experience

Losberger has successfully realised terminal, hangar and warehouse solutions all over the world. The following pages of exemplary cases shall give you an impression of what we could also achieve for you.

Please don't hesitate to contact us for further information.

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Case 1: FlexiTerminal®

The temporary solution: Helping out Berlin Tegel Airport.



The challenge

Berlin Tegel Airport urgently had to expand its capacities until the new Schöneberg Airport would be finished. What we mean by urgent? Let's put it this way: We only had eight weeks from the order to the due opening date of the finished terminal – quite a short period even by our standards!

The solution

In close cooperation with Berlin Tegel Airport and their engineers Losberger designed the Arcum structure and equipped the FlexiTerminal® with a specially reinforced floor for baggage belts, hard wall panels, interior lighting, HVAC and interior fit-out. As always, we finished the terminal in time and were able to hand over the keys on the due date.

The benefits

The FlexiTerminal® instantly achieved a higher capacity for Berlin Tegel Airport. The terminal is now in permanent use for non-Schengen flights. After further modifications it now includes waiting zones, duty-free areas and even lounges.





Case 2: FlexiTerminal®

The semi-permanent solution: Expanding Lisbon Airport capacities.

The challenge

As the existing airport had reached its maximum capacity of passengers, Lisbon had an urgent capacity issue. That's why the city asked to quickly plan, design and deliver a FlexiTerminal® for Lisbon Airport.

The solution

In close cooperation with the customer and his civil construction partner we planned the construction and achieved a smooth building process together. After finishing the foundation platform three 'Revolution' buildings were assembled one by one. In the end, Losberger was able to finish the project both in budget and in time.



The benefits

Terminal 2 is a semi-permanent solution, which has originally been planned to be operated for 10 years. However, this world class facility can be used a lot longer than that. Thus, Lisbon airport is not only able to take advantage of a fully operational terminal that was deployed very quickly and within a tight budget. It also allows the client to calmly review their options for future expansions as if they had all the time in the world!



Case 3: FlexiTerminal®

The permanent solution: Keeping São Nicolau connected to the sky.

The challenge

The island of São Nicolau is a remote island off the West African coast which predominantly provides inter-island flights with a flight capacity requirement of up to 500,000 passengers per year. The challenge was to design, manufacture and deliver a turnkey solution that was cost-effective whilst utilizing the latest technology.

The solution

Through exact design processes and modular manufacturing we were able to finish the project both on time and within the client's budget. After designing the foundations we engaged a local contractor to deliver them. Constant and precise project management from start to finish allowed us to hand over a fully operational facility to the operator after only 6 weeks, despite the island's remote and therefore challenging location.

The benefits

For the operator in São Nicolau cost-effectiveness was a key criterion from the beginning. As usual, Losberger was able to deliver a state of the art facility that will last for over 40 years for a fraction of the cost of a traditional design and build solution. Of course, the customer didn't think twice about taking full advantage of our FlexiTerminal® instead of renovating the old existing facility.



Case 4: Hangars

The repair and assembling shop: Providing jets with robust shelters.

The challenge

At the Airbus facilities in Toulouse the airplane manufacturer assembles the A320 Family, A330, A380 and A350 XWB. When the Toulouse delivery centre at Saint-Martin had reached its maximum capacity, the team asked Losberger to help them out. What they needed was a robust hangar that could house A340 aircrafts for in situ maintenance and repairs.

The solution

We delivered Airbus a metal-frame, textile-covered hangar, which is specifically designed for aeronautical use. The 72.5 m long hangar is supported by three smaller arches with a 43 m span at the front, and by three large ones (76 m) at the rear, for heights of 15.5 m and 27 m. This made it the perfect size for A340 aircrafts.

The benefits

Losberger aircraft hangars are extremely flexible in use. A complete re-installation, including disassembly, transport and reassembly, can be done in only 56 days! At the same time, it is 100 % rainproof, capable of withstanding 95 kg of snow per square meter as well as 180 km/h winds, making it perfectly suitable for permanent use as well. Airbus, for example, have been successfully using their Losberger hangar for over 10 years now!



Case 5: Warehouses

The additional storage space: Keeping ground crews happy.

The challenge

Sometimes things have to happen very fast. When the roof of the hall 2E of the Paris Airport 'Charles de Gaulle' collapsed in 2004, it was critical to repair it as quickly as possible. In order to store the huge glass and steel parts of the roof, the airport instantly needed an additional 5.000 m² of storage space for the period of the reconstruction.

The solution

'Prostock' was the perfect answer: The metal-framed, textile-covered structure could be assembled in next to no time and was the perfect shelter for the roof parts. The warehouse, which was planned to be used only temporarily, is still in use to this very day, now sheltering snowploughs and other airfield maintenance units.

The benefits

One of the main benefits for the 'Charles de Gaulle' Airport was that additional storage facilities could be erected on a turnkey basis in a matter of days. Of course, Losberger also provided all the necessary warranties in terms of QC, environmental and health & safety regulations. After experiencing the premium quality of the flexible solution, the customer simply kept the warehouse in use – and has been pleased with this 'Prostock' for almost ten years now.



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