



AIRPORT LOGISTICS SOLUTIONS

We create
space and time





WE CREATE SPACE AND TIME

The success of airport logistics depends on the speed of the workflows and the reliability of the processes.

The systems designed by Lödige for reliably handling any amount of cargo and baggage at airports take cycle times to a new dimension. We combine proven technology, innovative processes and intelligent workflows to ensure success, guaranteeing faster handling, efficient space utilisation, and the highest levels of availability.

With nearly 70 years of experience and the constantly increasing expertise of our specialists, we guarantee optimal handling and secure workflows around the globe – 365 days a year, 24 hours a day.



OVERVIEW OF AIRPORT LOGISTICS SOLUTIONS:

AIR CARGO
Systems and individual components for cost-efficient transportation, storage and build & break of unit load devices and consignments.
> P 04 - 11

BAGGAGE ULD HANDLING
Intelligent solutions for efficient baggage sorting and process-reliable loading of baggage in ULDs.
> P 14 - 15

CATERING LOGISTICS
Systems for handling, storing and cooling in-flight catering that are efficient in terms of space, time and cost.
> P 18 - 19

GLOBAL REFERENCES
Some of the successful projects executed with the help of Lödige's expertise.
> P 22 - 23

ULD HANDLING
Autonomous and intelligent transportation of ULDs with automated guided vehicles.
> P 12 - 13

ASSEMBLY AND MAINTENANCE
Automated handling of stored aircraft parts and tools, and working platforms, lifting and lowering equipment for all work on the aircraft.
> P 16 - 17

SERVICE AND MODERNISATION
Customised service and maintenance packages. Permanent availability and optimised performance thanks to scheduled maintenance, servicing and modernisation of your assets.
> P 20 - 21



Freight handling facility of Lufthansa Cargo, JFK Airport New York

Pallet and Container handling system of AAT includes four Elevating Transfer Vehicles (45 m height).



Terminal 2 (T2) of Asia Airfreight Terminal (AAT) at Hong Kong International Airport



NOT A SECOND LONGER THAN NECESSARY ON THE GROUND

We make sure your cargo business is profitable. System solutions from Lödige ensure optimised turnaround performance and generate real time benefits – so your aircraft can earn money.

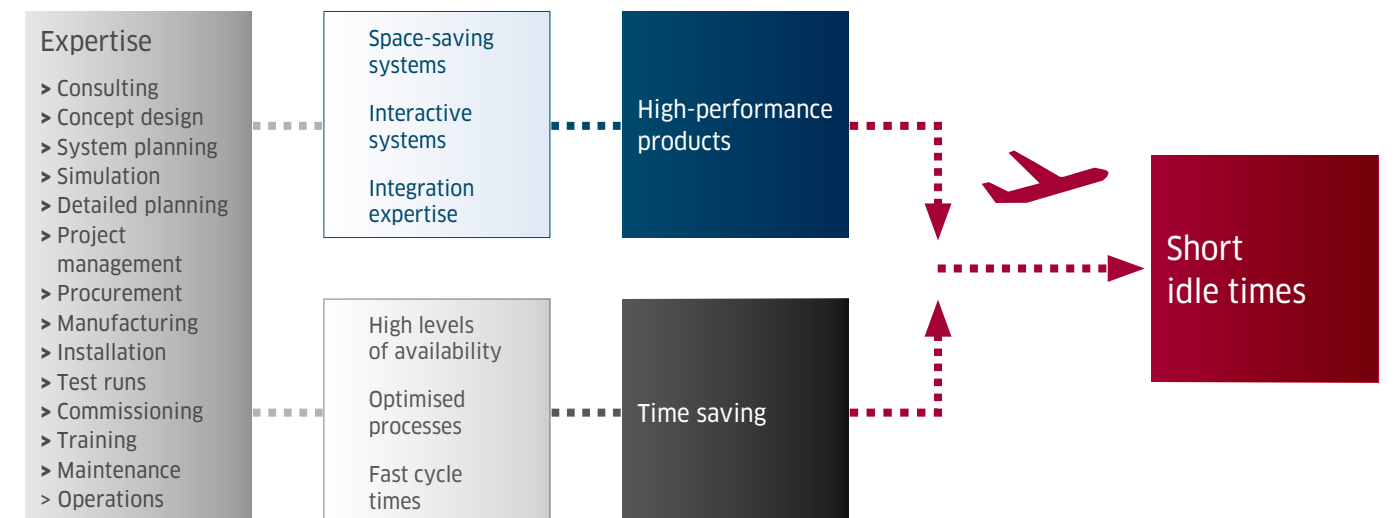
Automatic ETV ULD Handling System



In addition to the fleet, the biggest investment facing air cargo business is the construction of air cargo terminals. The best possible handling facilities have to be provided on limited space to sustainably ensure the cost efficiency of the fleet. After all: aircraft are there to fly, with the highest load factors possible!

This calls for the strength of the market leader: Since 1975, Lödige has been implementing air cargo handling systems on all scales imaginable. A recognised innovator, Lödige brought the Lift and Run Terminal concept to the market in the 1990's, dramatically increasing the efficiency of mega cargo terminal design. We help you to identify the optimal solution for your throughput and capacity requirements.

OPTIMISED WORKFLOWS FOR A QUICKER TAKE OFF:





*Lödige FlexLoader:
The mobile
all-rounder for
ULD handling*

*Automated Storage
& Retrieval System*



FLEXIBLE OPTIMISED PROCESSES

We offer a comprehensive range of conveying equipment. The flexible equipment and special machinery deployed by Lödige make working in HUBs particularly efficient and reliable. The modular design of the integrated components enables customised system planning and rapid responses to changing conditions.



*Pallet Mover
with powered
slave pallet*

Stacker crane



*Lödige pallet
(1,700 x 1,700 mm)*





CARGO OPTIMISED MOVEMENT

Combine mechanised and manual solutions for handling and storing air cargo according to your requirements. Products are designed specifically for air cargo and optimally support standard cargo units.

Conveyor systems have to hold up in the rough cargo processing environment. For decades, Lödige's terminal equipment has been proving its performance capabilities in cargo facilities worldwide, and helping our customers around the globe to turn their cargo around quickly, safely and efficiently.



1 SLAVE PALLET

The basis for moving cargo, even in non-mechanised terminals. The pallet is mounted on 16 rollers to ensure the safe handling of ULDs.



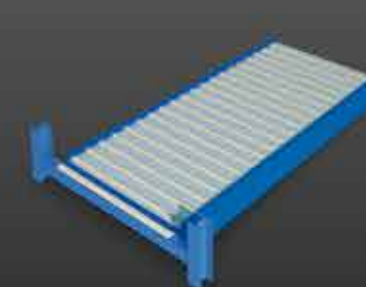
2 SLAVE PALLET MOVER

The slave pallet mover is an electrically operated floor conveyor for transporting slave pallets. It is powered by a battery and has a lifting unit for elevating pallets. Three forks ensure the ULDs are transferred safely. This means slave pallets can be moved throughout the building quickly and easily.



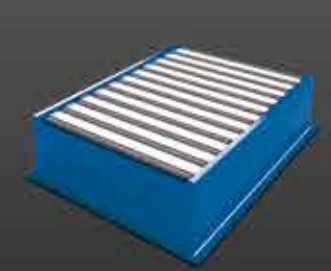
3 FLEXLOADER

The FlexLoader merges the functionality of a truck dock and a pallet transporter. It is remote controlled and battery operated, making it particularly flexible. Its freely steerable drive system allows it to move in any direction. The FlexLoader has an integrated lifting function, which makes it possible to pick up and set down ULDs and pallets from different heights.



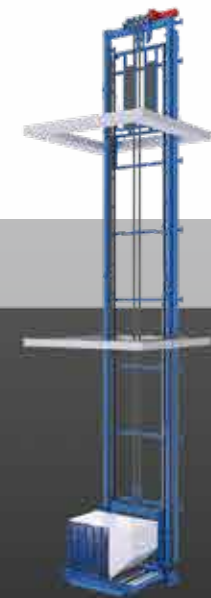
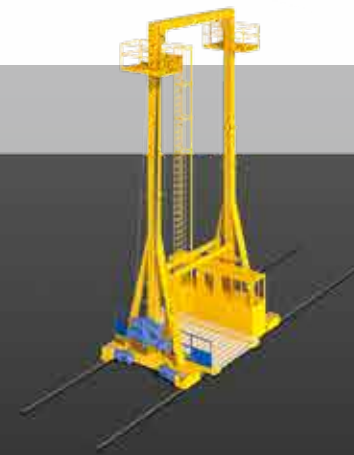
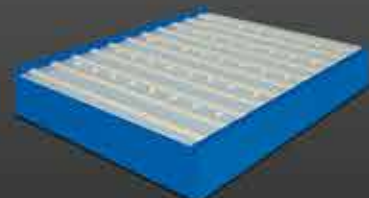
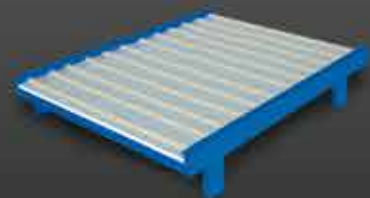
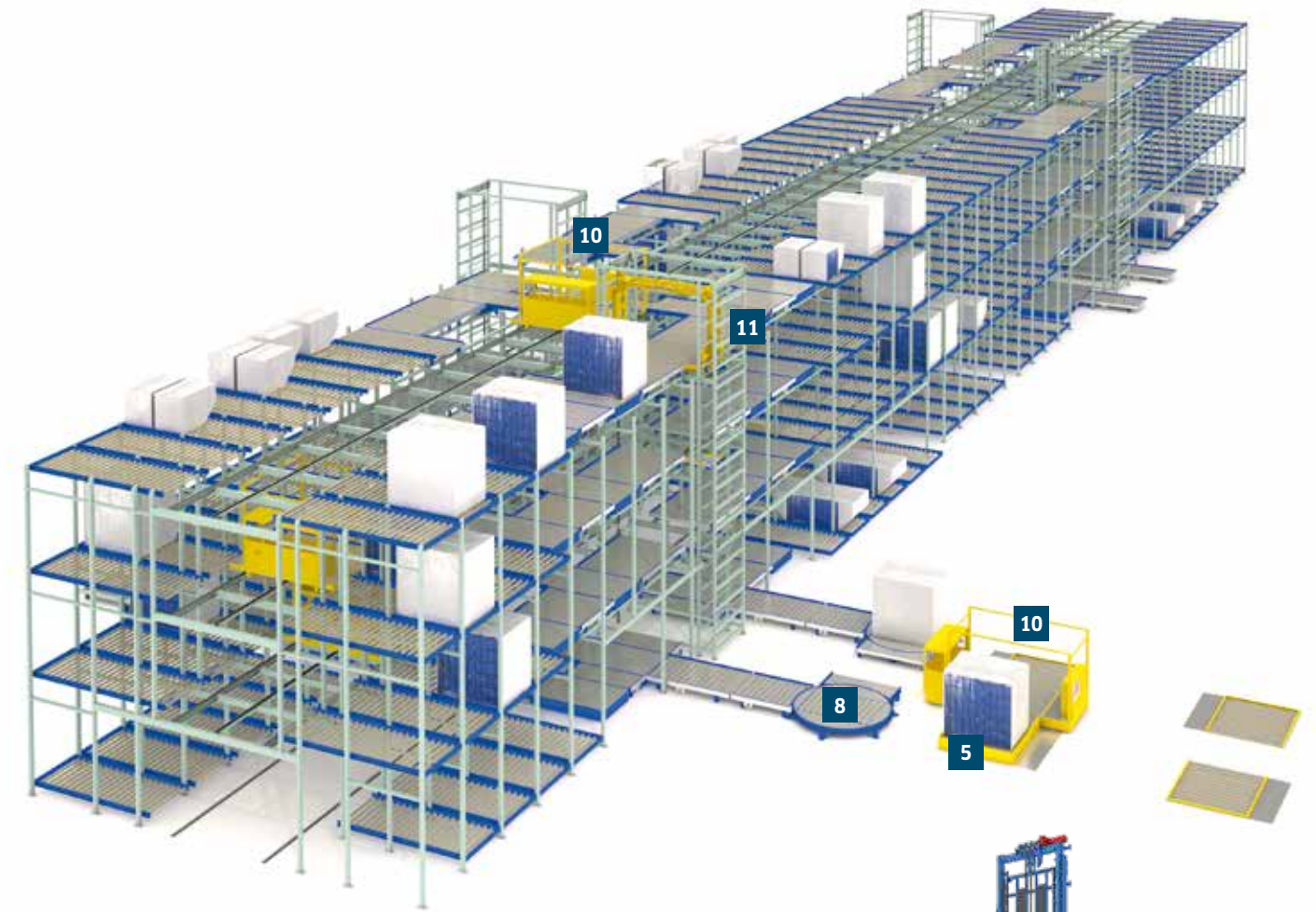
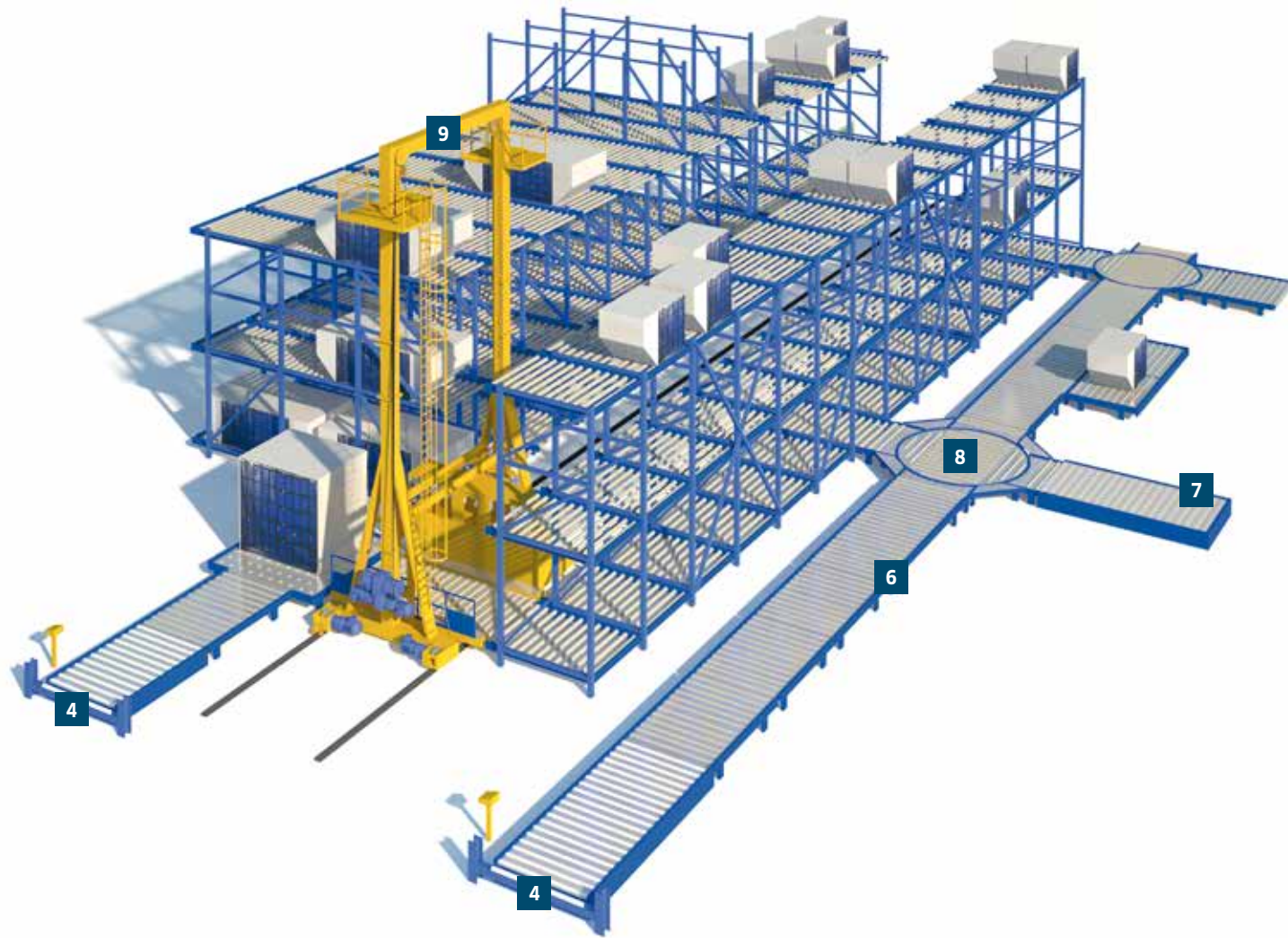
4 TRUCK DOCK

The truck dock facilitates the loading and unloading of air cargo units onto and off trucks. Equipped with a hydraulic lifting unit and a vertical shift function, the truck dock aligns conveyor elements to the truck loading ramp. ULDs or pallets are transferred horizontally by a powered roller conveyor.



5 WORK STATION

Work stations from Lödige are working platforms that enable ergonomic performance of build and break activities. The work station lowers the ULD to the optimum preferred height for ergonomic loading and unloading. The work station can be manufactured in different configurations to meet specific needs.



6 ROLLER DECK
The roller deck is used to transport ULDs in a single direction on a horizontal plane and is combined with other elements to create an overall system.

7 RIGHT ANGLE DECK
Changes the direction of travel of ULDs by 90 degrees by combining two conveyors in a single unit.

8 TURNTABLE
Allows the ULD to be aligned according to preference.

9 ELEVATING TRANSFER VEHICLE
This storage and retrieval vehicle is used for storing ULDs in racks. Equipped with a lift, the vehicle transports ULDs vertically and horizontally at the same time. It runs on rails which also supply the power needed.

10 TRANSFER VEHICLE
The transfer vehicle is used for transporting cargo horizontally on a single level. The individual loading units are moved on and off the racking by interconnecting the integrated roller conveyor with external roller decks. As well as transporting ULDs which can take up the entire surface of the roller deck, it is possible to transfer two containers simultaneously.

11 HOIST
Hoists connect the different levels of an air cargo terminal.

Providing a solution for both 5 ft baggage ULD and 10 ft cargo ULD transportation

Always on time!
Automated ULD delivery

INTELLIGENT TRANSPORTATION **AUTOMATED GUIDED VEHICLE**

Lödige Industries is revolutionising the response to current challenges in air cargo handling with the introduction of intelligent automated guided vehicles (AGV) for flexible and scalable ULD transportation. As integral element of fully automated cargo terminals, our new AGVs provide the link between import/export areas and build & break workzones as well as automated storage and retrieval systems. In manual terminals, they can enable cargo handlers to take the first step towards the benefits of automation.



Revolutionises ULD transportation:
The Lödige AGV



MAXIMUM FLEXIBILITY FOR YOUR CARGO TERMINAL
Quickly and easily route transportation inside your terminal. Assign routes via your warehouse management system (WMS) and free personnel for other tasks. Reduce stationary equipment and create flexible, scalable and reliable cargo flows.

OPTIMUM ACCURACY & EFFICIENCY
The data-based intelligence of our AGVs enables absolute accuracy and complete control over cargo flows. Reduce the potential for ULD damage, enable 24/7 operations and free workforce for higher value tasks.

7,000 kg

or more are lifted every day by a baggage handler. It is high time to facilitate his work and minimise the cost.



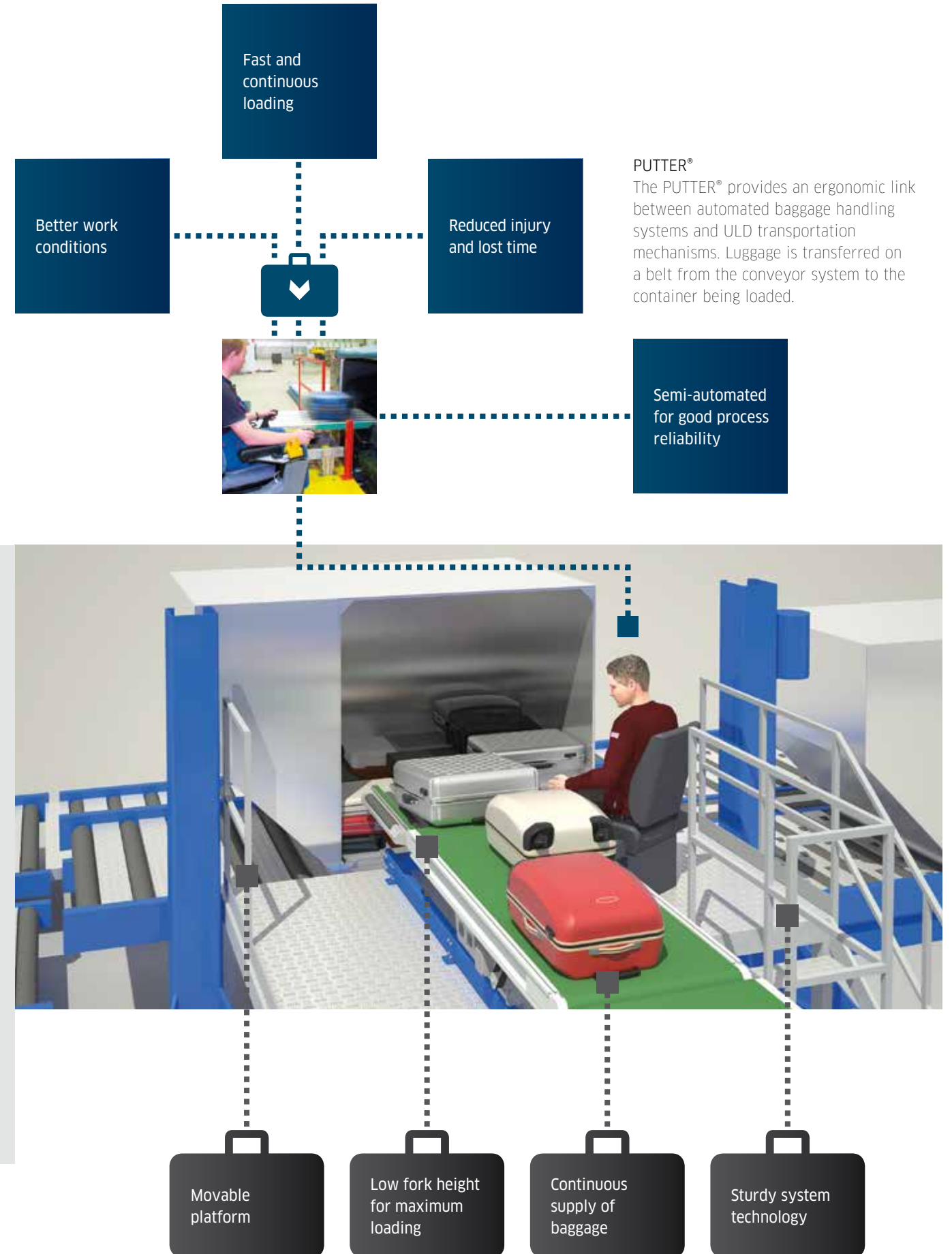
MAKING WORK EASIER MINIMISING COST

Not much time is allowed for transferring baggage to an aircraft. Fast handling combined with good process reliability are the factors that drive efficiency. But the baggage handlers should not be exposed to unnecessary stress. The aim must be to reduce days off work for illness, and to avoid fluctuations and early retirement.

Lödige offers solutions that lead the way in terms of speed, cost efficiency and safety. Our approach completely eliminates the need to lift and lower baggage. And allows you to adhere to the minimal connecting times without any problems.



ULD Storage





Aircraft hangar with heavy-duty platform



Heavy-duty platform for aircraft maintenance

WE CARE ABOUT AIRCRAFT

Lödige offers efficient manufacturing and maintenance systems and components that are tailored to the size of the aircraft.

Special equipment for raising and lowering the aircraft are used for working on the undercarriage, and provide good access to all of the relevant assembly areas. We have also developed lifting equipment for working on the aircraft interior.

Work platforms allow paint to be applied at any height – and are even used for huge aircraft, such as the Airbus A380.



Work platform for painting aircrafts



Lödige develops intelligent storage systems that fully satisfy all customer requirements – after all, aircraft parts and tools need to be quickly and easily accessible. All parts can be stored and transported fully automatically.

Solutions that combine power and mobility are also available for working on aircraft.

LIFTING PLATFORMS/LOWERABLE GROUND ELEMENTS
Heavy-duty platforms that raise the aircraft for maintenance and lower it for works on the undercarriage.

WORK STATIONS
Work platforms for painting at different heights.

PARTS STORAGE
Space-saving and automated solutions, commissioning and distribution for storing aircraft parts and tools of different sizes.

Lifting platform for landing gear inspection



KEEPING COOL WHEN THE GOING GETS HOT

The cycle time for loading in-flight catering is 15 minutes. The food and drink not only has to be first sorted quickly and efficiently by passenger class; it also has to be cooled consistently and cost efficiently.

Lödige has developed a compact storage and transportation system that relieves the burden on airport kitchens in every respect. The trolleys, transport containers and frames are stored in specially designed elevator towers where preliminary sorting takes place and the food is also cooled at the same time. As such, it is only the tower, and not the building, that has to be cooled to storage temperature. Space saving, efficient, and with a high throughput - the perfect supply system.



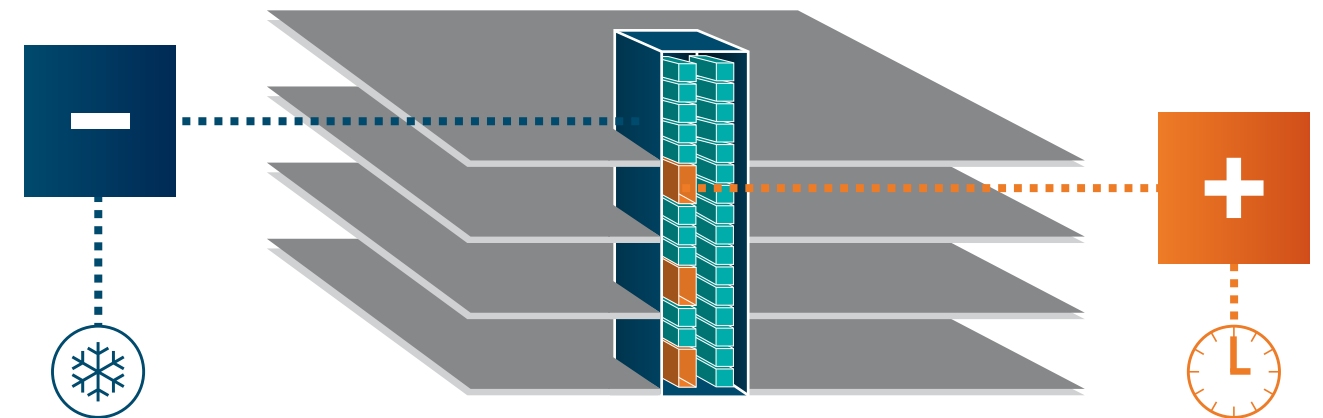
Typical array of temperature controlled Trolley Towers.



SPACE TOWER forms an integral part of the production process.



SPACE TOWER - THE PERFECT COOLING AND TRANSPORTATION SYSTEM



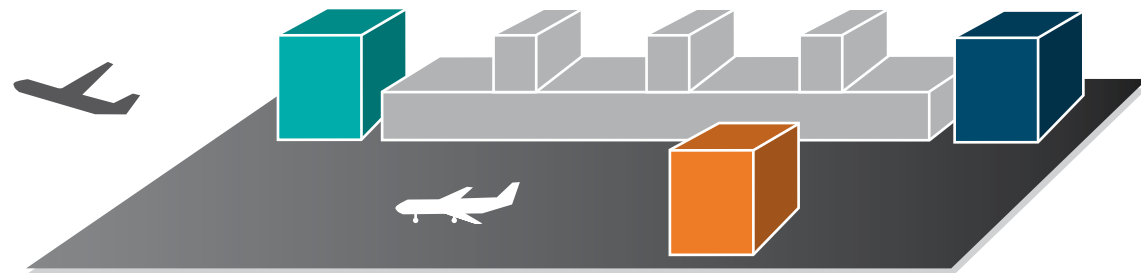
LESS REFRIGERATION SPACE
Only the storage towers are cooled, which lowers unit costs.

MORE TIME, MORE PROFIT
Time-saving preliminary sorting of the trolleys, transport containers and frames increases throughput and efficiency.



24/7 Lödige
Remote Assistance
Professional Service
on the highest level

ALWAYS THERE WHERE WE ARE NEEDED



Operation	Maintenance	Modification/Modernisation
Host interface management	System check	Upgrade
Work planning	Preventive maintenance	Extension
Operator supervision	SLA improvement	Relocate
	24/7 Remote Control Centre	

ALWAYS AT YOUR SERVICE

Systems designed by Lödige are renowned for the highest levels of availability. In addition to the engineering quality and redundant design, our comprehensive preventive maintenance concept ensures added safety. We operate service centres around the globe and very close to the logistics centres of our customers to ensure our ability to respond immediately when problems arise.

Depending on the maintenance contract, the services provided by Lödige range from maintenance, modernisation and repairs to individual assets, right up to monitoring and modernising entire air cargo systems.

Lödige maintenance organisations are typically located close to international cargo hubs worldwide. Our full service contracts guarantee the highest availability of cargo handling systems and are mediated at the lowest possible cost.

Our local teams are backed up by international experts such that no problem is too difficult to solve and no part impossible to obtain.

Lödige Service Technicians are available worldwide.



OVERVIEW OF SERVICES

MAINTENANCE

Customised maintenance strategies ensure the safety and value preservation of individual assets and systems. Multi-level maintenance contracts enable you to adapt the maintenance of your assets in accordance with your specific requirements.

REPAIR AND SPARE PARTS

Our regional proximity enables us to respond quickly when problems arise and repairs are needed.

MODIFICATION AND MODERNISATION

Lödige Service offers you a whole host of options for adapting your assets to changed work conditions and for bringing them in line with the current state of technology.

CUSTOMER CARE CENTRE

We offer 24/7 remote monitoring for all Lödige products. Errors in the system can be detected quickly via remote diagnosis and in many cases corrected directly from the control centre without having to resort to a local technician.



Cargologic, Zürich, Switzerland



British Airways, World Cargo Centre, London Heathrow, UK

Air Cargo Terminal (Landside and ULD storage)

MORE THAN 15 M TONS OF AIR CARGO

handled annually by Lödige Industries systems around the world.

GLOBAL PRESENCE - LÖDIGE INDUSTRIES



■ References
■ Worldwide locations of Lödige Group

EXAMPLES OF REFERENCES

- AAT Asia Airfreight Terminal T2, Hong Kong
- BAA London, T5, London Heathrow, UK
- British Airways, World Cargo Centre, London Heathrow, UK
- Cargo City Süd, Fraport Cargo Services, Frankfurt, Germany
- Cargo City Süd, Schenker, Frankfurt, Germany
- Cargo City Süd, Cargoport, Frankfurt, Germany
- Cargologic, Zürich, Switzerland
- Lufthansa Cargo, New York, USA
- NDIA New Doha International Airport, Doha, Qatar
- SCSC, Ho-Chi-Minh, Vietnam
- MASKargo Malaysia, Kuala Lumpur, Malaysia
- KLM Cargo, Amsterdam, the Netherlands
- Finnair Cargo, Helsinki, Finland
- Moscow Cargo, Moscow, Russia
- Cathay Pacific Catering Services, Hong Kong

Founded in 1948, Lödige Industries is headquartered in Warburg, Germany. Today we have more than a thousand employees in Europe, Asia, the Middle East and the United States.

Lödige Industries supplies solutions for a broad range of industries and specialises in providing complex material flow systems for logistics tasks.

-  **SMART CITY SOLUTIONS**
Innovative parking and last mile delivery solutions for urban living spaces.
-  **AIRPORT LOGISTICS**
High-performance logistics solutions from the market leader.
-  **INDUSTRIAL LOGISTICS**
State of the art systems for automated handling of goods and merchandise.
-  **LIFT SOLUTIONS**
High-performance lift solutions for goods and passengers.
-  **LIFE CYCLE SERVICE**
Global excellence in service, support and maintenance.

