ancra
LOADING+UNLOADING SOLUTIONS

POST-EXPO 2009

A Fully Automated Solution for Parcel Loading and Unloading

Jasper Van Den Driest – Managing Director Ancra Systems BV

Who is Ancra Systems?

Characteristics

- specialist in loading and unloading solutions
- market leader in Western Europe
- a privately held independent company

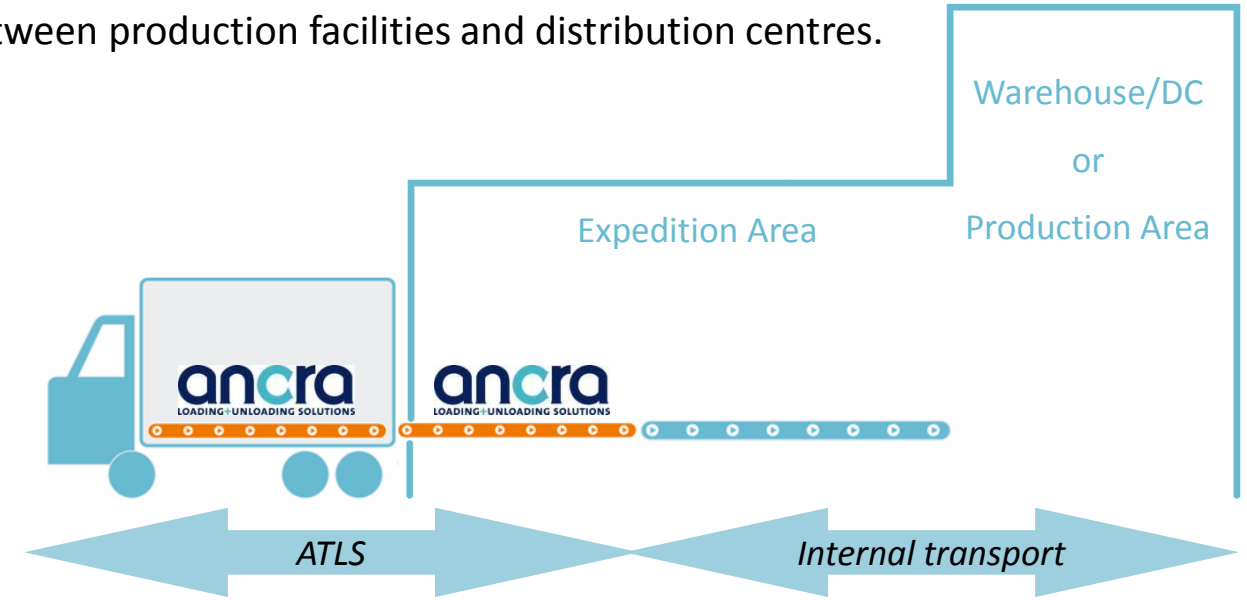
Mission

We develop and deliver integrated solutions for the fully automatic loading and unloading of trucks and trailers

Ancra Systems headquarters in Boxtel – The Netherlands

What are automated truck loading systems (ATLS)?

- ATL systems consist of two ‘combined’ systems:
  - one system build in / on top of the floor of the trailer
  - a ‘fixed’ installation inside the loading and unloading dock.
- When a trailer docks, the entire load is loaded or unloaded automatically.
- The most common applications are shuttle services by dedicated trailers between production facilities and distribution centres.



Why is ATLS interesting?

Trends

- rising personnel costs;
- a shortage of labor;
- increasing lack of space in metropolitan areas;
- more focus on controllable logistic costs;
- more attention for clean, safe and controlled logistic processes;
- more stringent Health & Safety legislation (ergonomics).

What are the benefits of ATLS?

Benefits

- Fewer logistics personnel due to automation of the process;
- Fewer fork-lift trucks and associated equipment due to mechanisation process;
- Fewer docks because each dock can handle higher volumes;
- Fewer trucks, trailers and drivers due to increased fleet utilisation;
- Less warehouse space due to more concentrated flow of goods;
- Less space outside due to less dock doors and quicker turnaround times of trailers;
- Less buffer stock due to quicker inbound and outbound transportation of goods;
- Safer working environment for personnel.

Solutions for what industries?

Automotive

FMGC

Industrial

Paper

Air Freight

and …

… the unloading solution for the parcel industry

In close cooperation with ColiPoste, Ancra Systems has designed, produced and implemented a fully automated system for unloading parcels.

Timeline

- 2002: start design
- 2003: prototype and testing
- 2005: start implementation
- 2008: High capacity version for the Moissy facility live
- Currently: > 430 trailers and 45 docks operational
- Future: development of fully automated parcel loading solution

Benefits of the parcel unloading system

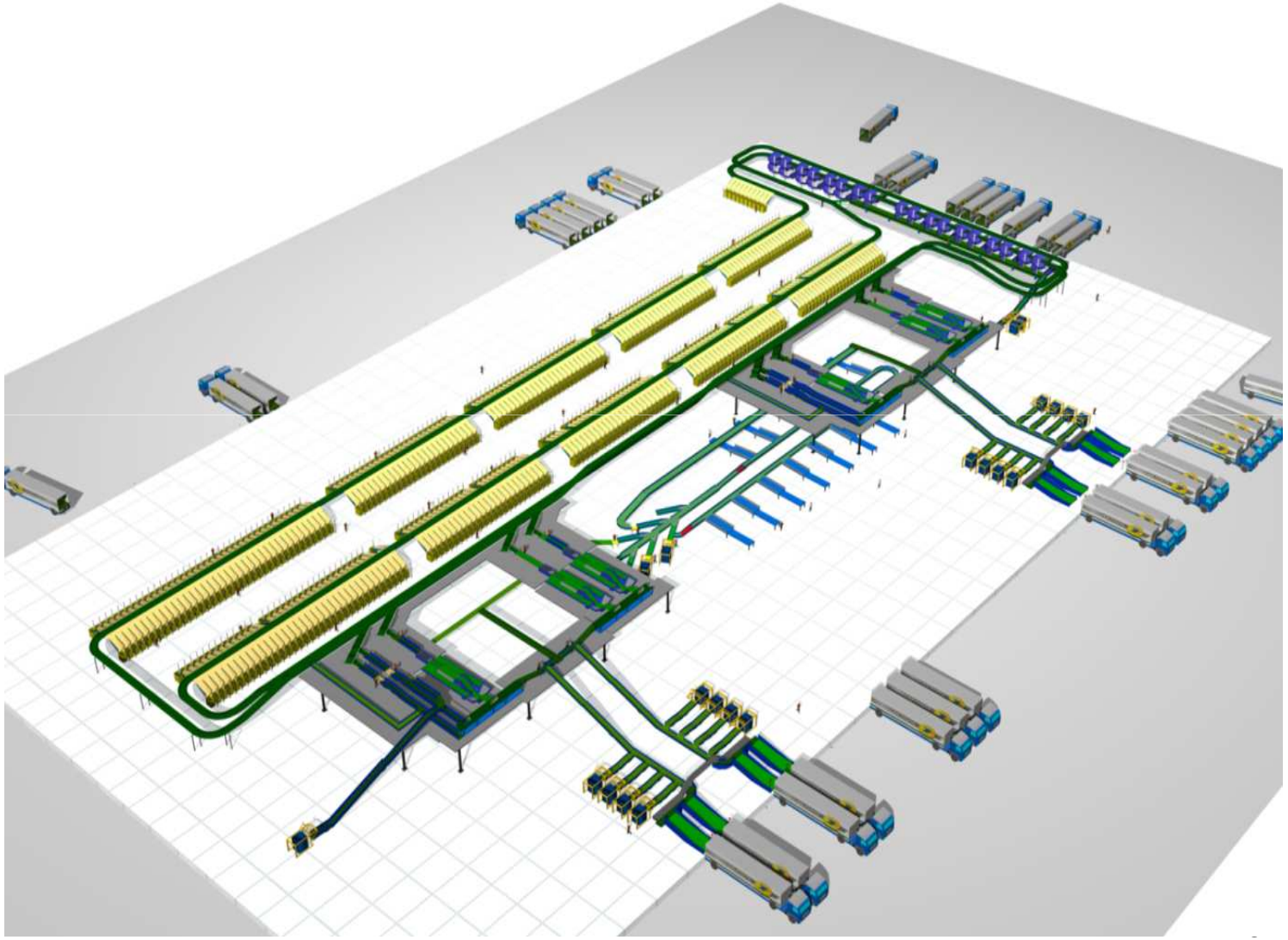
- Instead of wheeled containers the parcels are loaded directly into the trailers, increasing the loading capacity by 200 to 300%;
- The unloading time has been reduced to 25 minutes, increasing trailer utilisation;
- Every dock can process higher volumes, increasing dock utilisation; the automatic unloading system can process up to 6,000 parcels per hour, increasing sorting machines utilisation and constant feeding;
- No more fork-lift trucks are needed, increasing working environment safety;
- Optimization of sorting machine utilization due to constant feeding of parcels;
- Fully comply with the strict EU regulation for manual material handling.

Workings of the parcel unloading system

- Both the trailer and the dock are equipped with an conveyor installation;
- The dock systems are fully integrated into the hub's automated conveyor systems;
- The system is designed so that handling of wheeled containers is still possible;
- The unloading system can operate at two different speeds to enable constant feeding of the sorting machine depending on the requested volume;
- By balancing the components of the system, the bulk gets transformed into manageable and constant flow of parcels;
- Trailer systems tolerate temperatures between -20°C and +55°C.

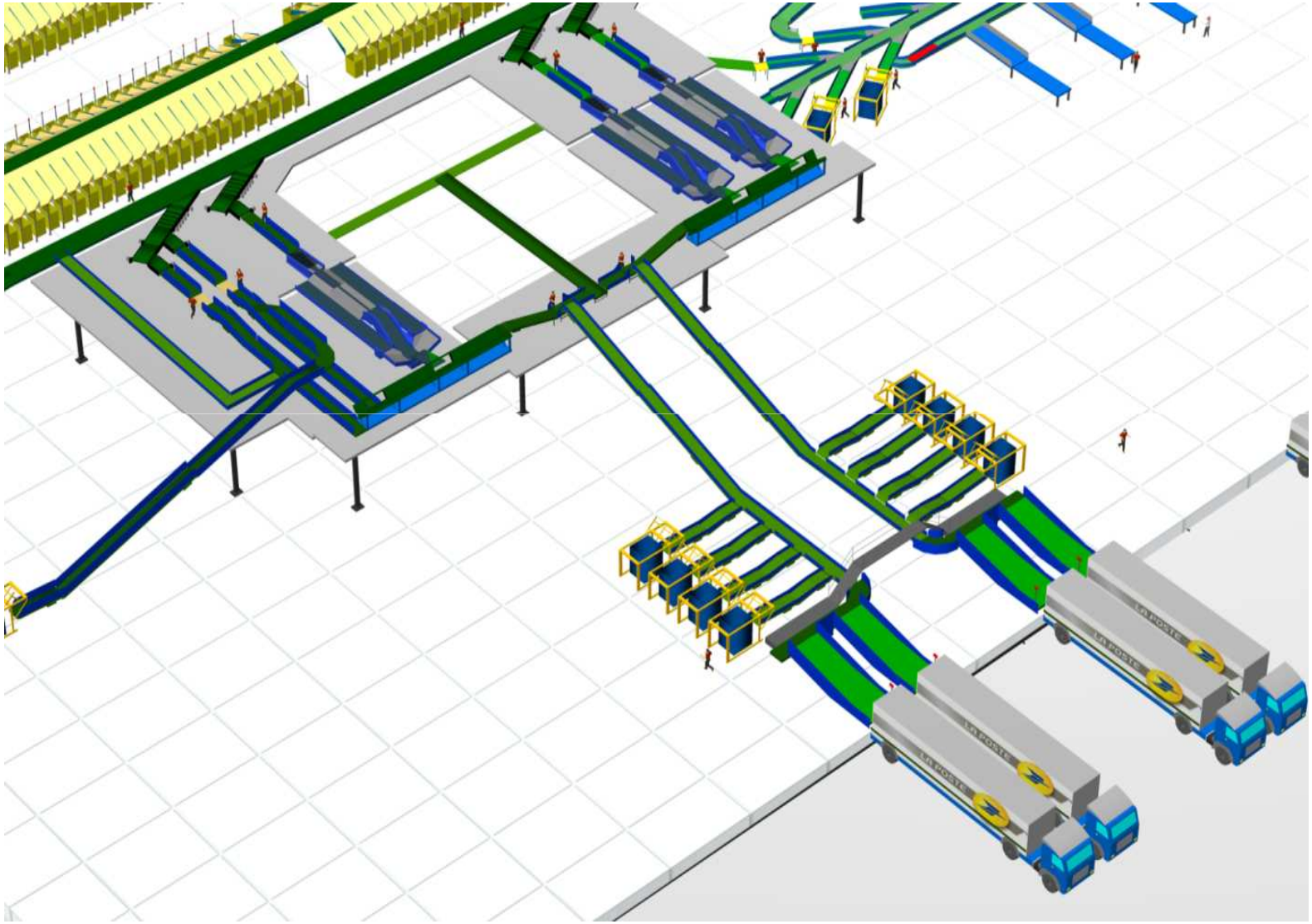
ancra
LOADING+UNLOADING SOLUTIONS

POST-EXPO 2009



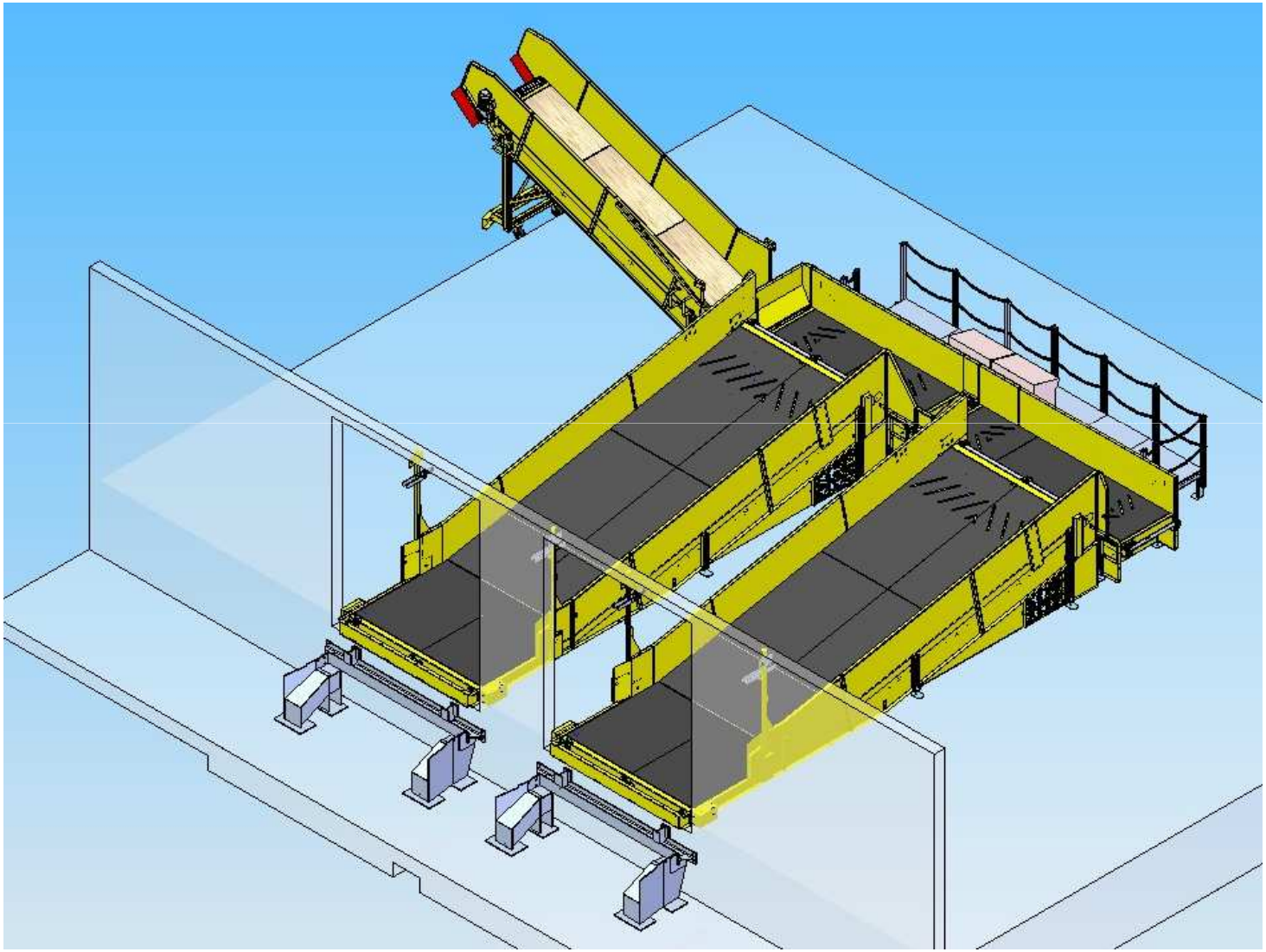
ancra
LOADING+UNLOADING SOLUTIONS

POST-EXPO 2009



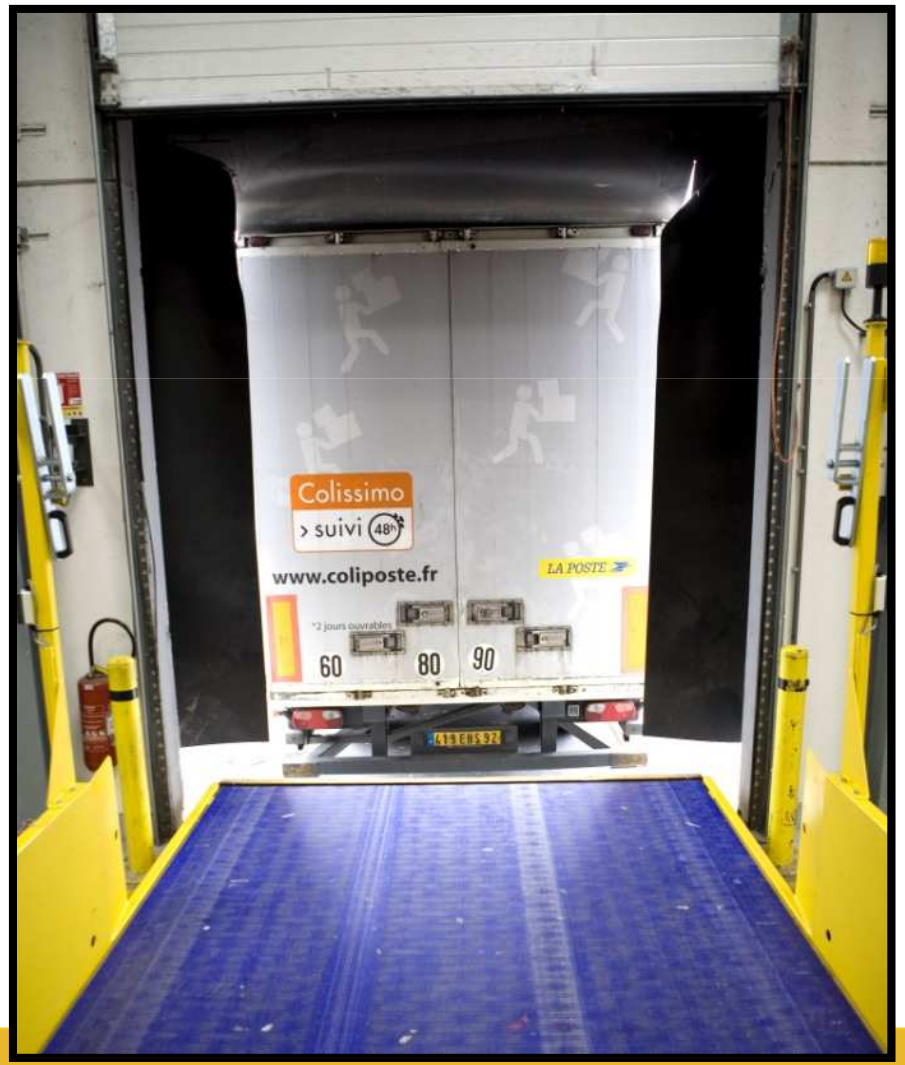
ancra
LOADING+UNLOADING SOLUTIONS

POST-EXPO 2009



The process of automated parcel unloading

1. Docking of the trailer



The process of automated parcel unloading

2. Operator starts the system by 1 push on the button

The process of automated parcel unloading

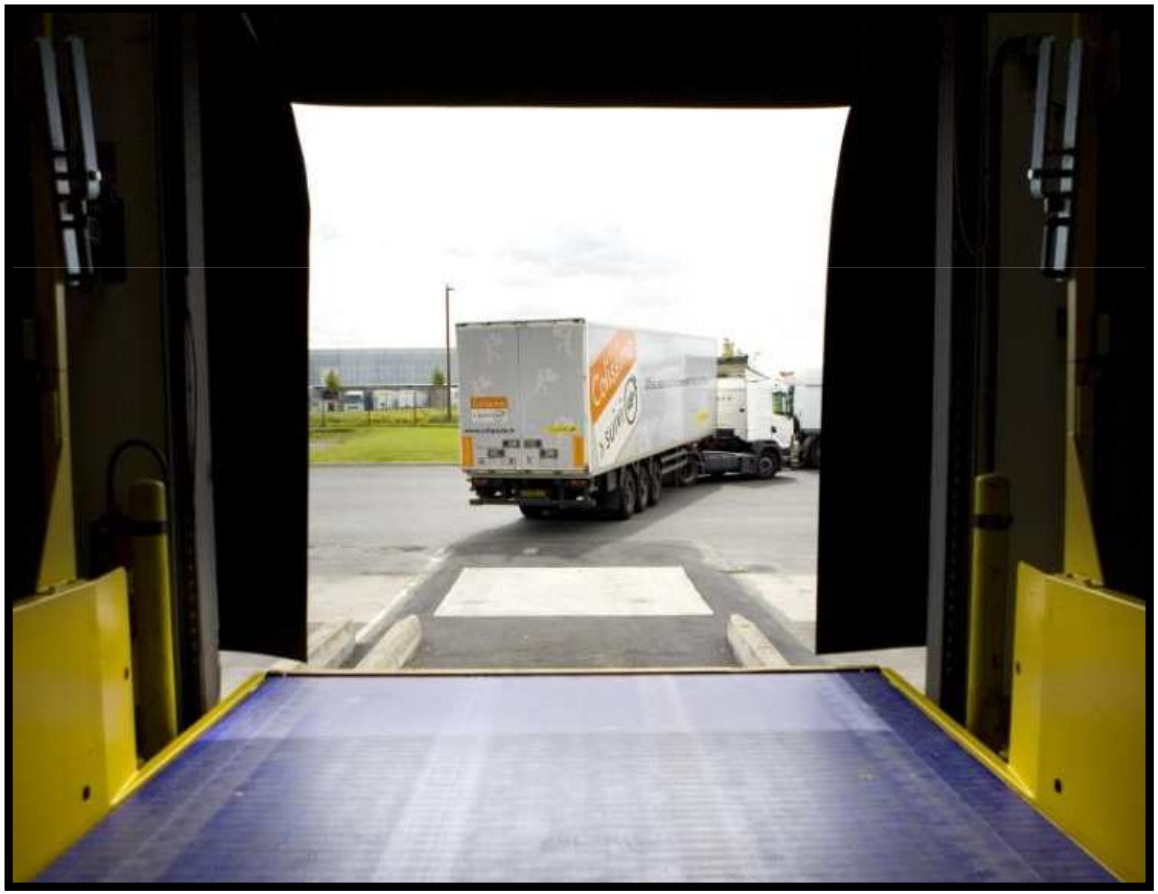
3. The parcels are transported from the dock system onto the orthogonal conveyor

The process of automated parcel unloading

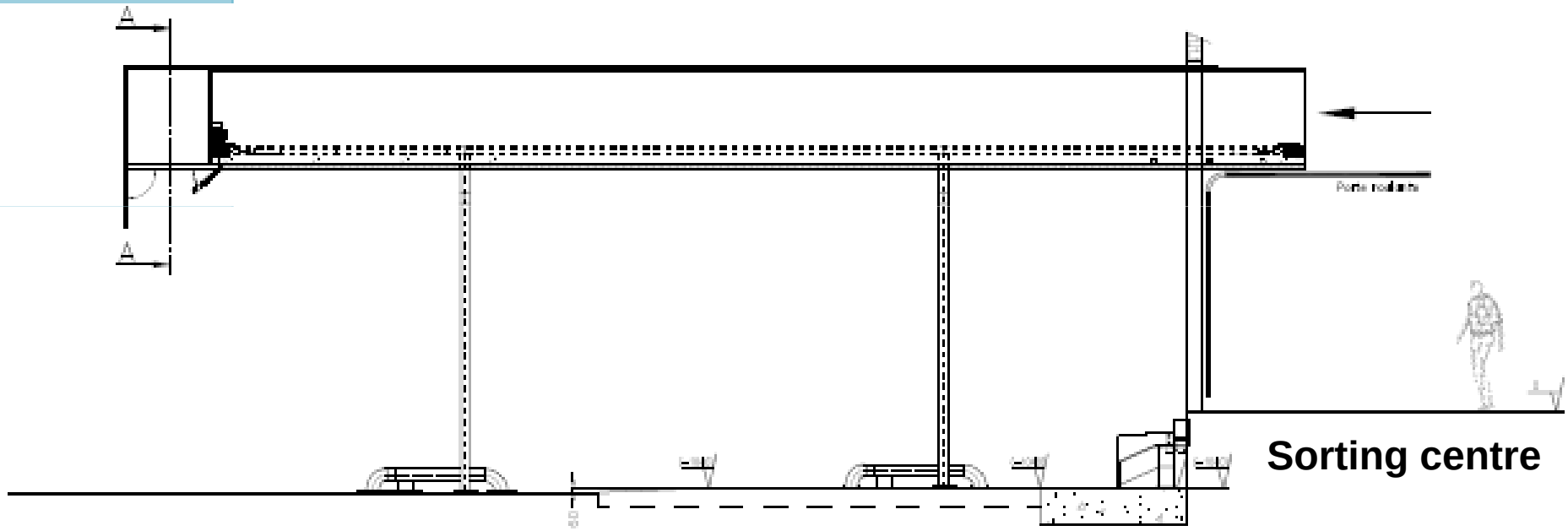
4. Transportation of the parcels towards the sorting machine

The process of automated parcel unloading

6. Driver takes off within 30 minutes

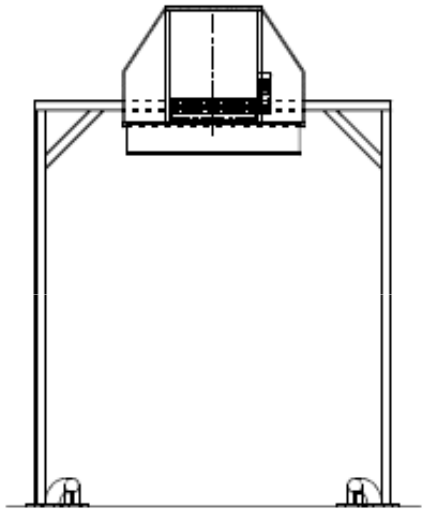


The loading process is the last frontier in parcel handling and Ancra Systems now has an automated solution

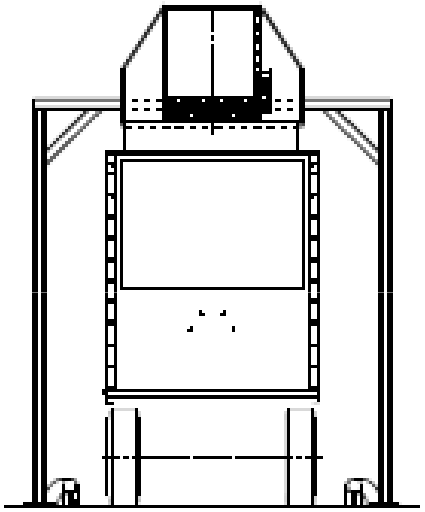


Side view loading dock

Front view of the loading dock

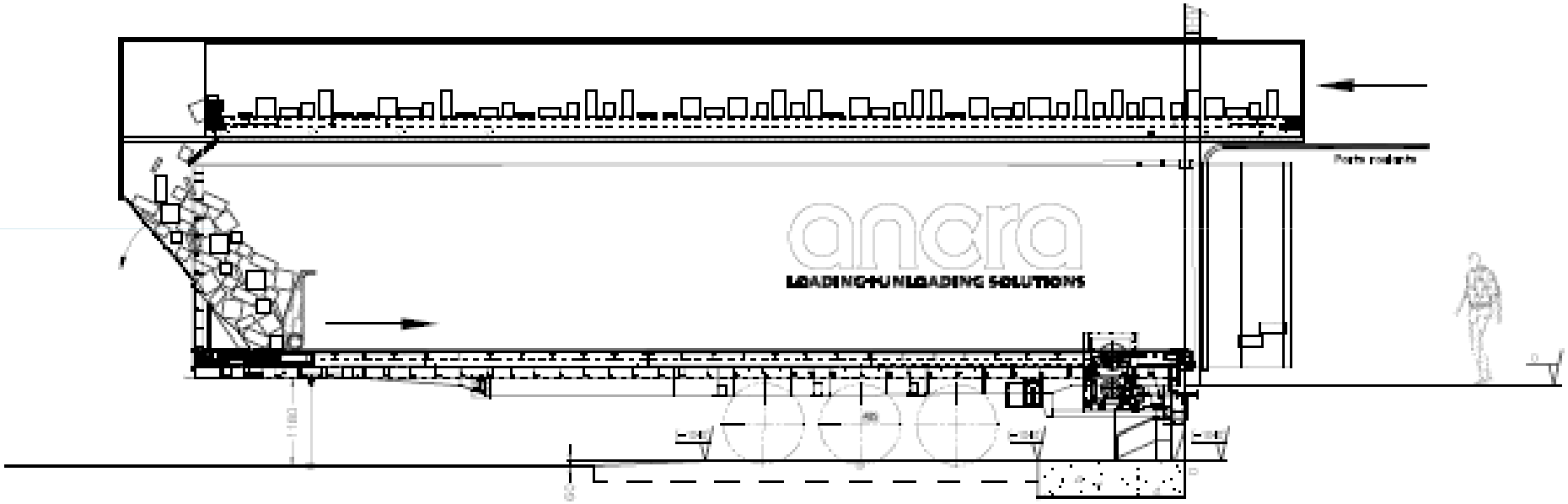


Empty loading dock

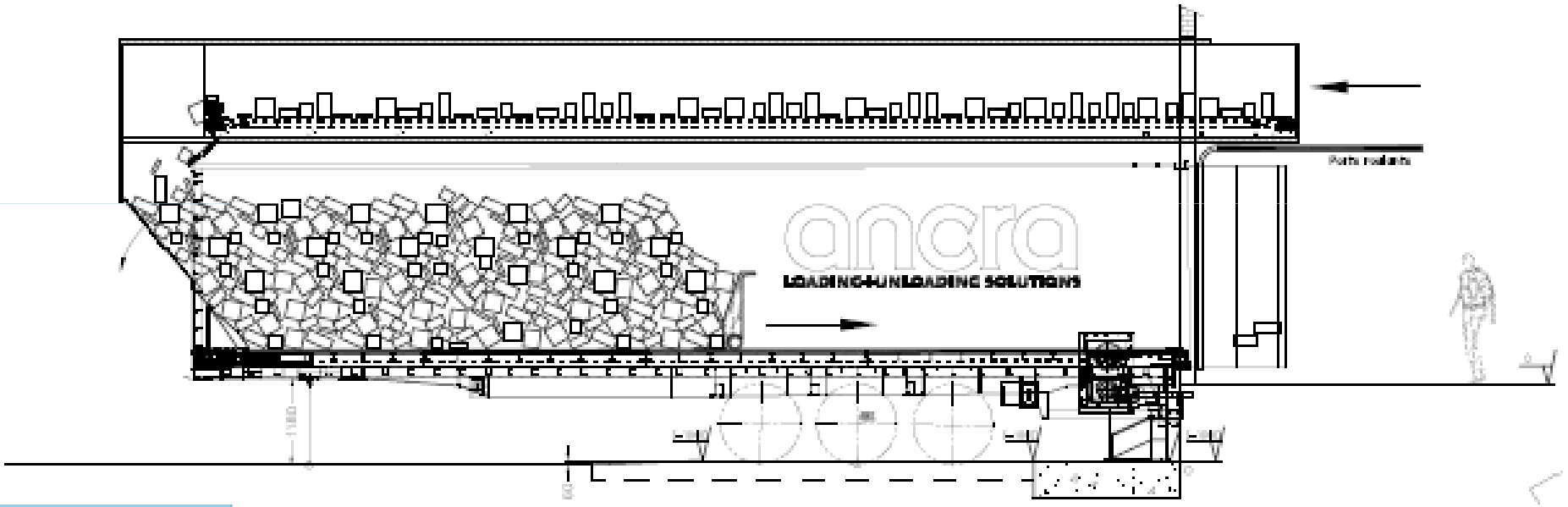


Docked trailer

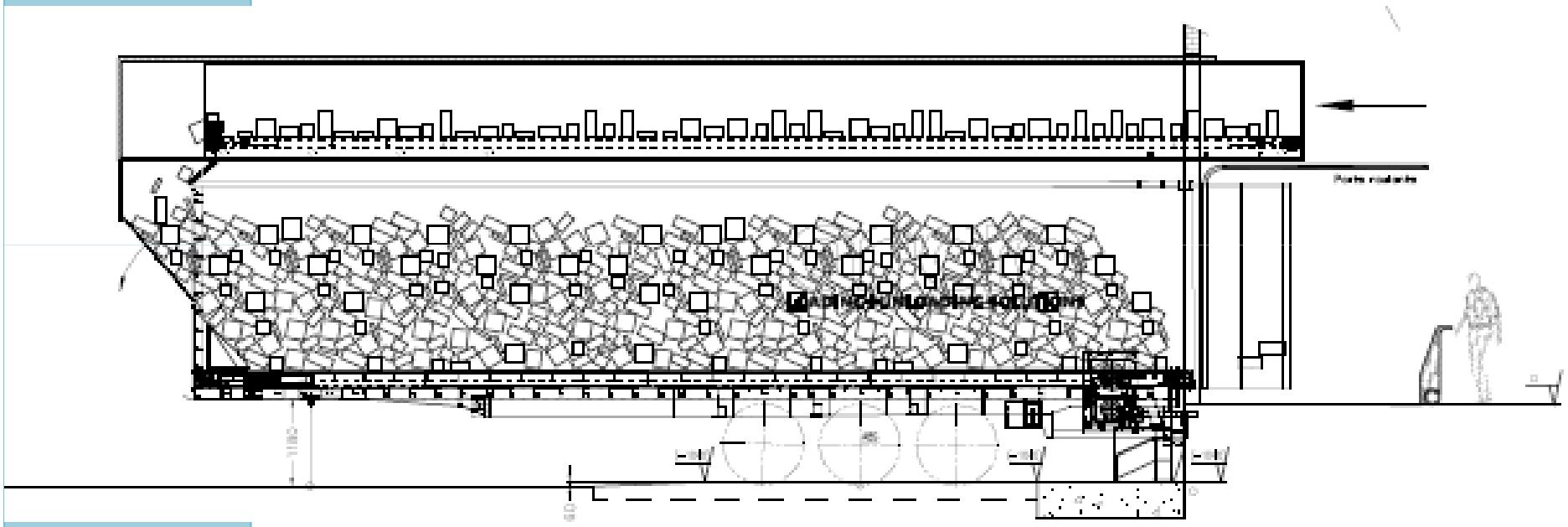
Loading process - I



Loading process - II



Loading process - III



Thank you for your attention!

Any questions?

ancra
LOADING+UNLOADING SOLUTIONS