

**Throw the dice**  
**All combinations are winning!**



**One Source**

# **AFCM 2015: FLSmidth Ventomatic speaker**

Leo Carnevale

Area Sales Manager

Asia – Pacific region

Based in Bangkok , Thailand



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

**One Source**

# AFCM 2015: Agenda

- FLSmidth Ventomatic Presentation
- Our Product Range
- Upgrading Technology for a sustainable Development:  
Innovative technological solution for automatic truck loading  
The Flying Fork-Lift®
- Questions & Answers

The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: Company Profile



- One of the world's leading suppliers of packaging and dispatching equipment for powder and granulated products
- Established in 1957 in Bergamo, Italy
- Fully owned by FLSmidth since 1992



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

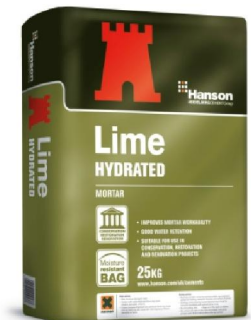
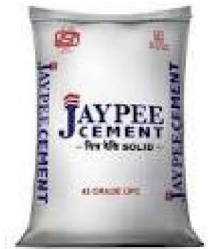
One Source



# FLSmidth Ventomatic Served Industries

- Cement
- Building Materials
- Minerals
- Chemicals
- Fertilizers
- Petrochemicals

**FLSMIDTH**  
VENTOMATIC



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

One Source

# FLSmidth Group: Adding value in cement industry



## FLSmidth in the cement industry



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

One Source

# FLSmidth Ventomatic: Group structure



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

One Source



**FLSMIDTH**  
**VENTOMATIC**



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

## One Source



# AFCM 2015: Agenda

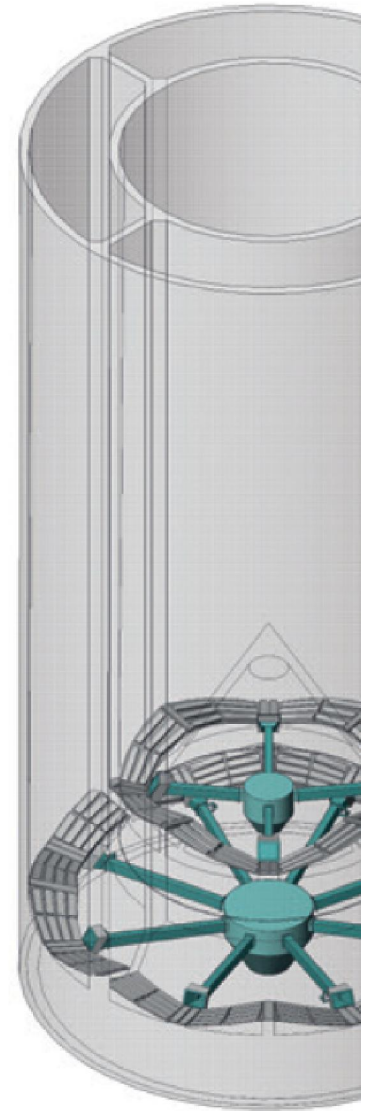
- FLSmidth Ventomatic Presentation
- Our Product Range
- Upgrading Technology for a sustainable Development:  
Innovative technological solution for automatic truck loading  
The Flying Fork-Lift®
- Questions & Answers

The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: Products / Solutions

- **Storage silos** and **extraction** systems

**FLSMIDTH**  
VENTOMATIC

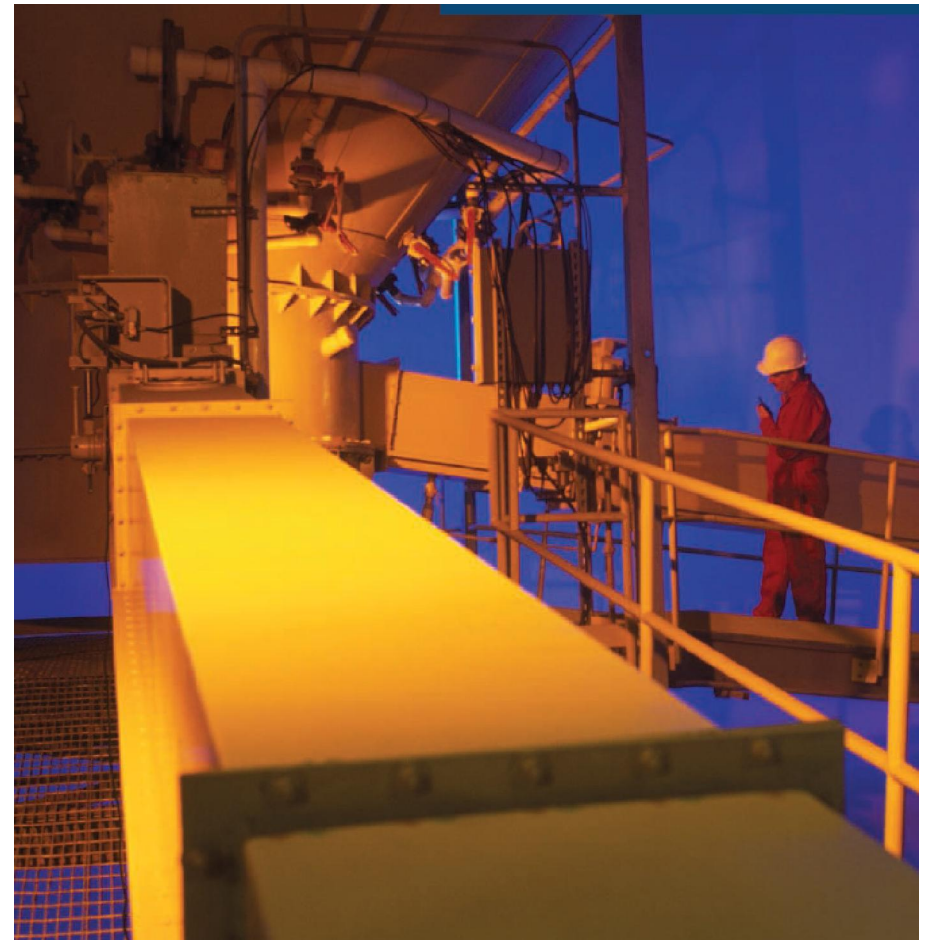


The information contained or referenced in this presentation is confidential and proprietary to FLSMIDTH and is protected by copyright in its own documents.

One Source

# FLSmidth Ventomatic: Products / Solutions

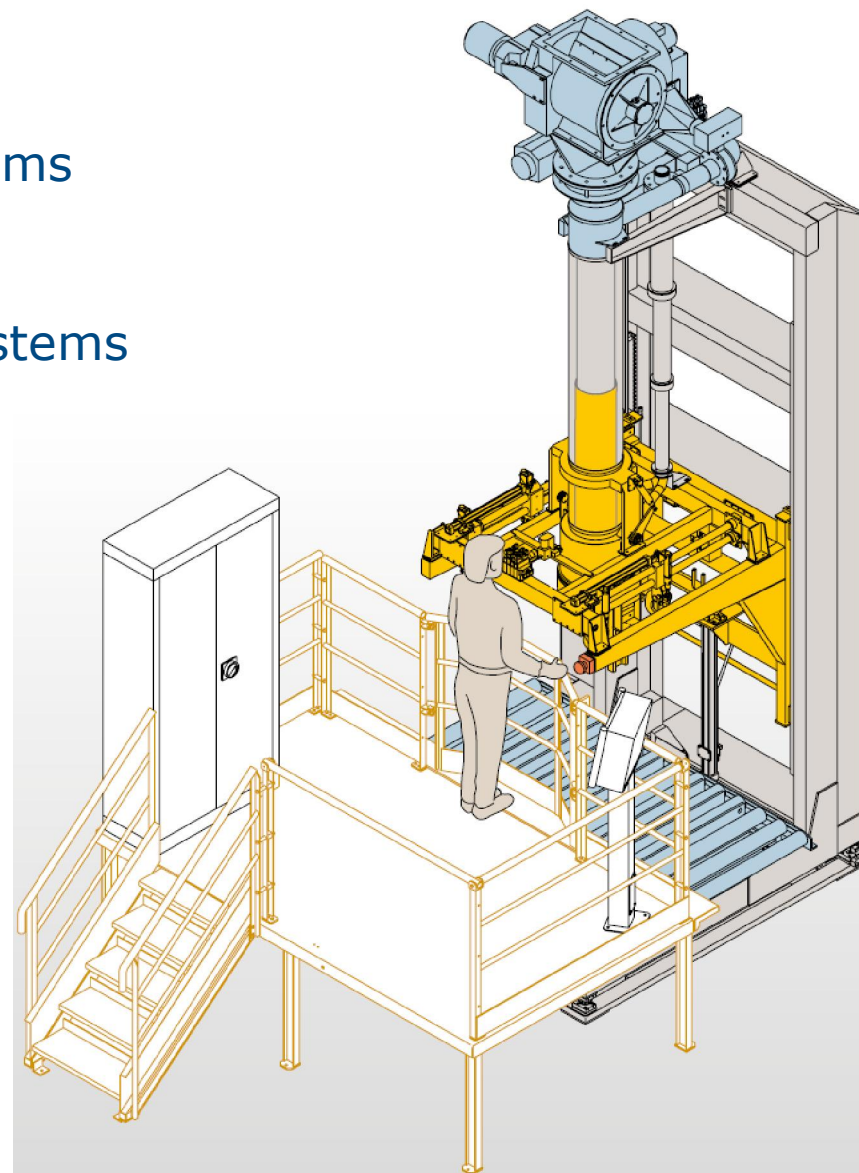
- **Storage silos** and **extraction** systems
- Cement **conveying** systems



One Source

# FLSmidth Ventomatic: Products / Solutions

- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems





# FLSmidth Ventomatic: Products / Solutions

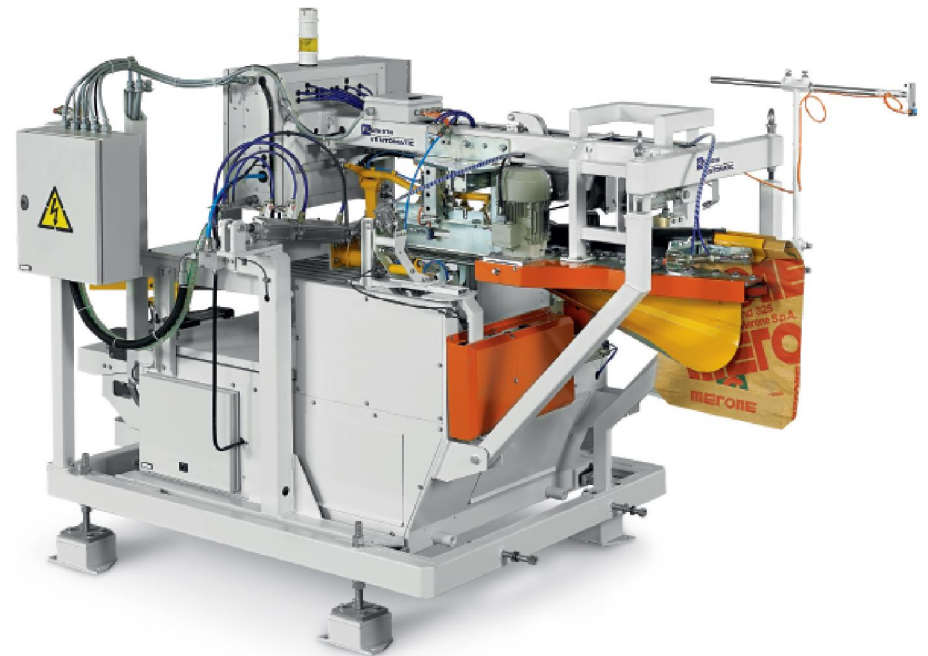
- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: Products / Solutions

- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**



# FLSmidth Ventomatic: Products / Solutions

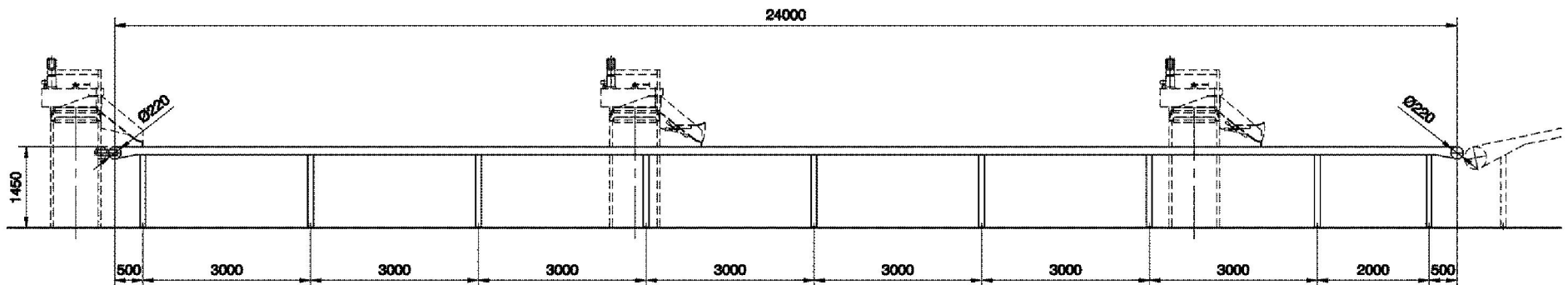
- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**
- **Bag treating** units with dynamic weighing system interacting with the up stream packer



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: Products / Solutions

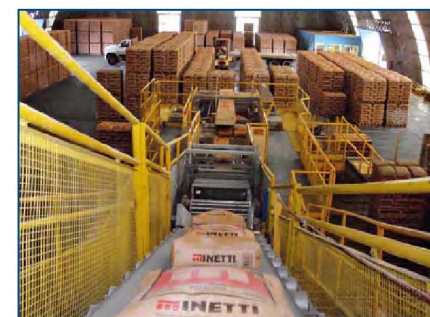
- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**
- **Bag treating** units with dynamic weighing system interacting with the up stream packer
- **Bag transport** and dispatch systems





# FLSmidth Ventomatic: Products / Solutions

- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**
- **Bag treating** units with dynamic weighing system interacting with the up stream packer
- Bag transport and dispatch systems
- Automatic **palletizers**, with **stretch hooding**, **wrapping** or **palletless** unit



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: Products / Solutions

- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**
- **Bag treating** units with dynamic weighing system interacting with the up stream packer
- Bag transport and dispatch systems
- Automatic **palletizers**, with **stretch hooding**, **wrapping** or **palletless** unit
- **Automatic** truck **loaders**



The information contained or referenced in this presentation

# FLSmidth Ventomatic: Products / Solutions

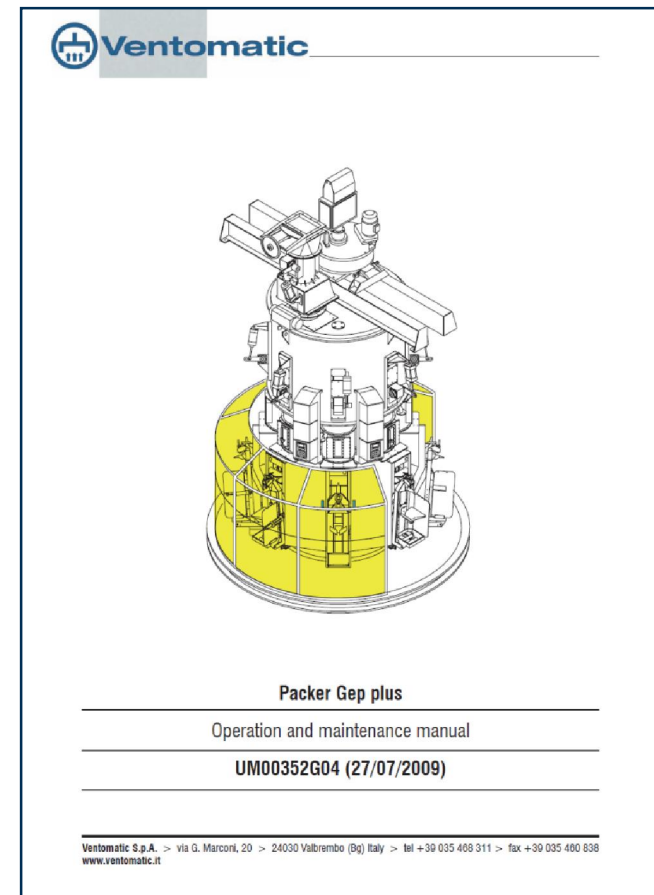
- **Storage silos** and **extraction** systems
- Cement **conveying** systems
- **Bulk loaders** and **big bag** filling systems
- Rotary and stationary **electronic packing** machines
- Automatic **bag applicators**
- **Bag treating** units with dynamic weighing system interacting with the up stream packer
- Bag transport and dispatch systems
- Automatic **palletizers**, with **stretch hooding**, **wrapping** or **palletless** unit
- **Automatic** truck **loaders**
- **Manual** truck and wagon **loaders**



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# FLSmidth Ventomatic: One Source

- Engineering Services
- Technical Documentation
- Training Seminars
- Technical Assistance Service
- After Sales Services
- Spare Parts
- Equipment Upgrades



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

**One Source**



# AFCM 2015: Agenda

- FLSmidth Ventomatic Presentation
- Our Product Range
- Upgrading Technology for a Sustainable Development:  
Innovative technological solution for automatic truck loading  
The Flying Fork-Lift®
- Questions & Answers

The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# Innovative technological solution for automatic truck loading: Flying Fork-Lift®

There are traditionally several issues with automatic truck loading:

- Varying truck types and dimensions
- Limitation on possibility of packing and loading if no trucks are present
- Bag quality

→ **As a long time pioneer of this industry, FLSmidth Ventomatic developed an innovative solution to address these points:**

**The Flying Fork-Lift®**

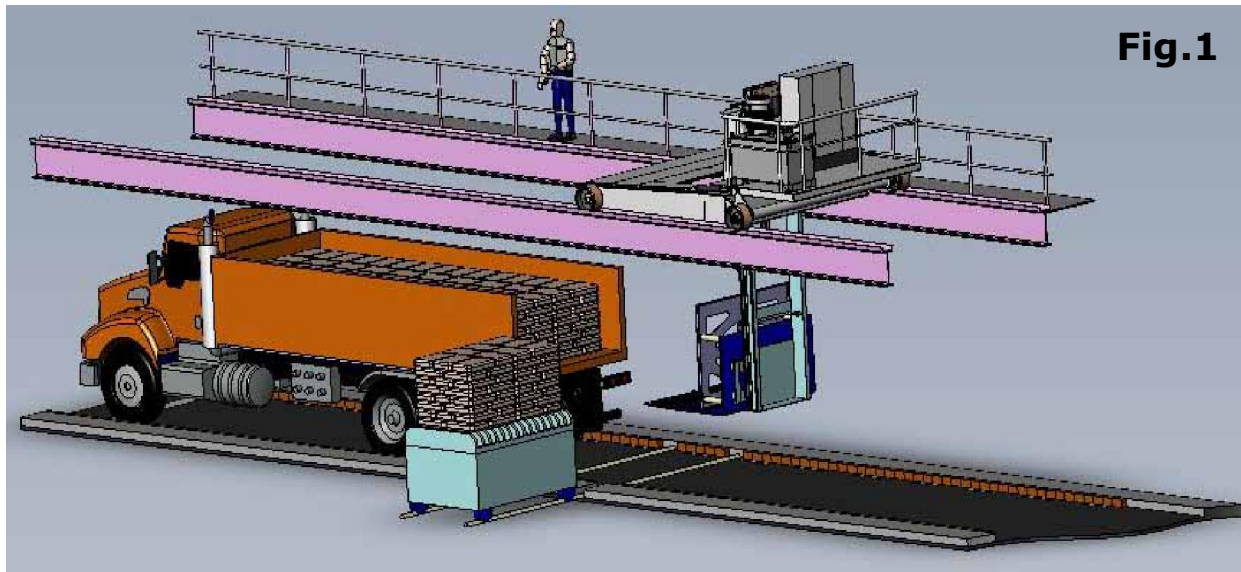


The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

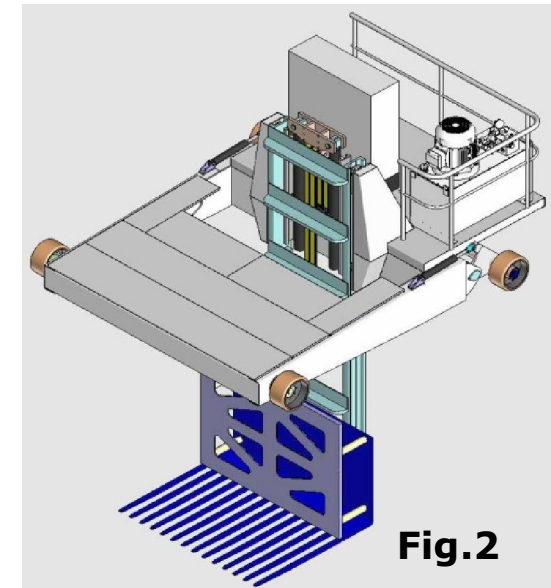
# Innovative technological solution for automatic truck loading: Flying Fork-Lift®

FLSmidth Ventomatic proudly introduces the Flying Fork Lift (or **FFL**) concept (*Fig. 1*), which is based on:

- a **palletizer** unit **specially designed** for the stacking of bags **without support**
- **combined** with an application of a **simplified push-pull** concept (*Fig. 2*) moving on rails.



**Fig.1**

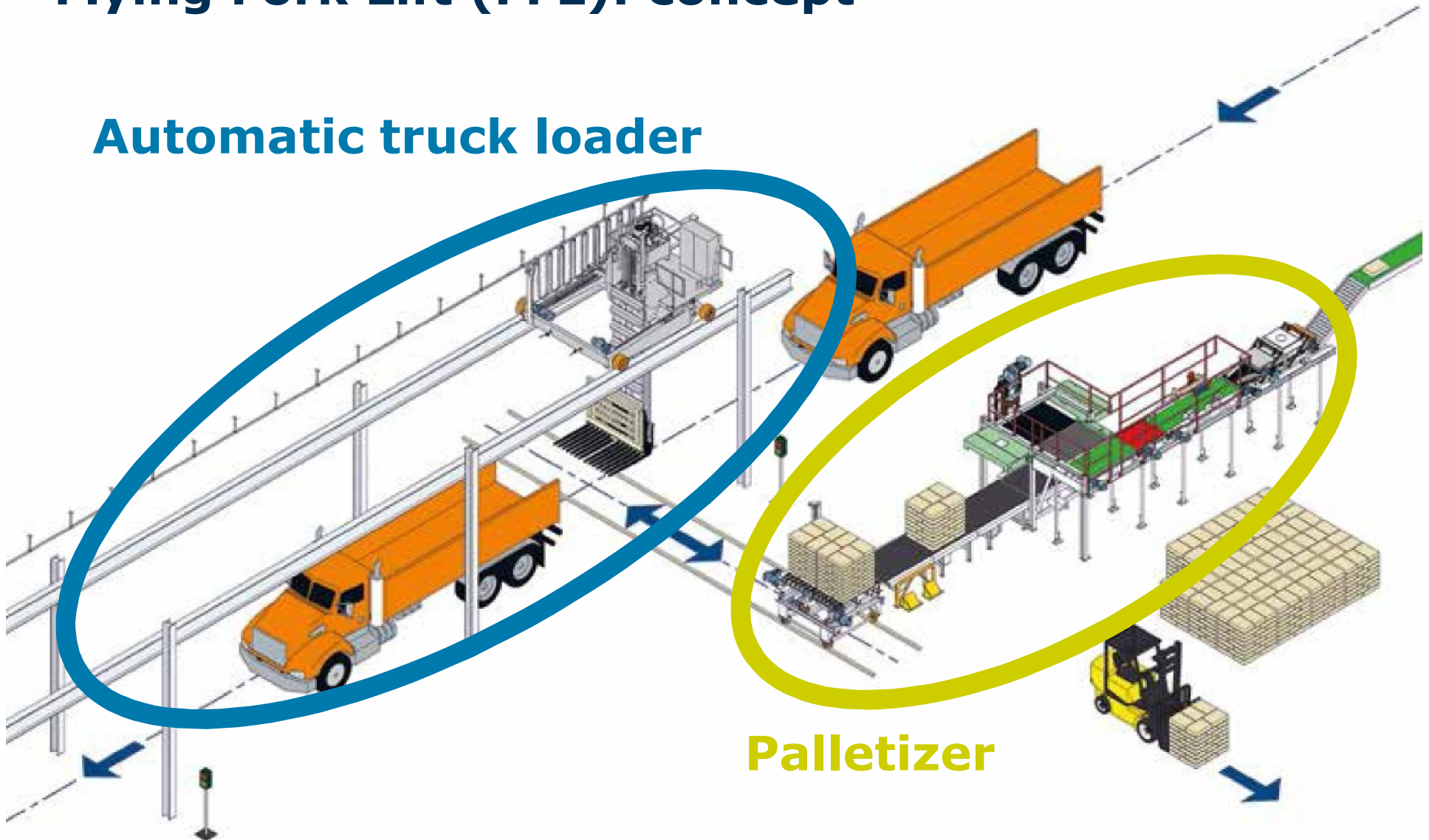


**Fig.2**

Information in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# Flying Fork Lift (FFL): concept

## Automatic truck loader

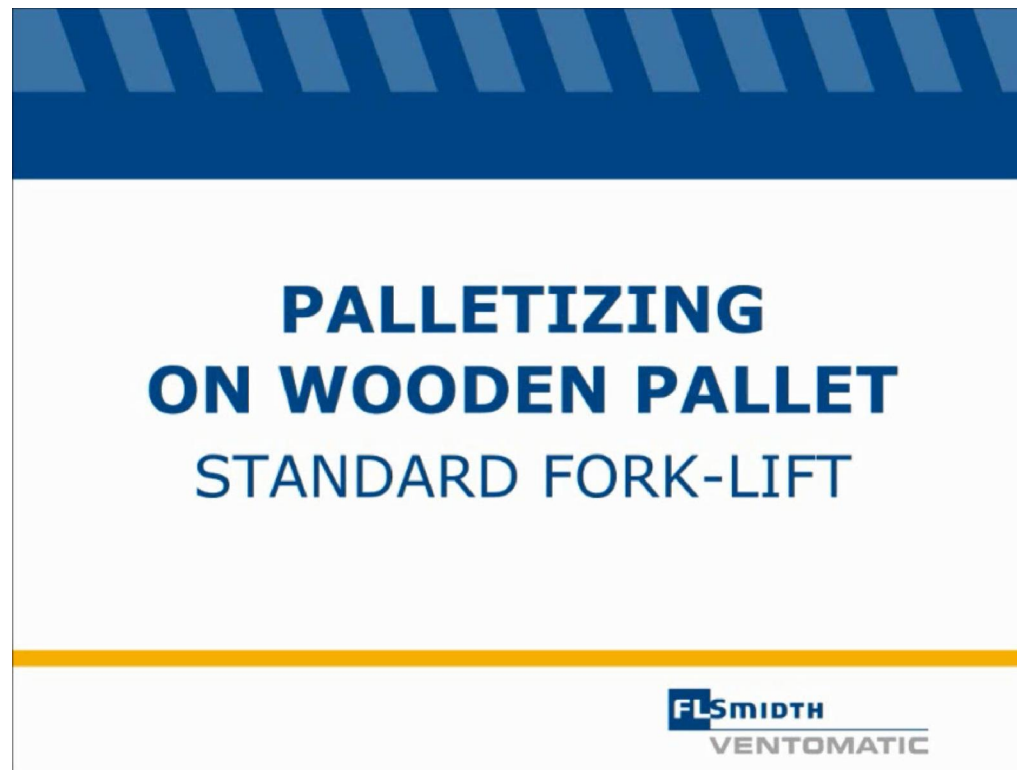


## Palletizer

One Source

# Flying Fork Lift (FFL): concept

Use when no trucks / build stock: palletizing on slip-sheets



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.



# Flying Fork Lift (FFL): concept

Alternative use when no trucks / build stock: palletizing on slip-sheets



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# Flying Fork Lift (FFL): concept

Use when trucks are present: direct loading with FFL



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# Flying Fork Lift (FFL): your benefits

This combination palletizer / automatic truck loader solves a lot of traditional logistics issues:

- Use of normal pallets or slip-sheets for storage  
→ **100% line availability (regardless of trucks presence)**
- Bag stacks loaded automatically onto trucks WITHOUT support  
→ **elimination of empty pallet logistics**
- Pallets can be loaded onto walled trucks  
→ **Increased loading possibilities**
- Storage of different products  
→ **easy dispatching**



## Flying Fork Lift (FFL): your benefits

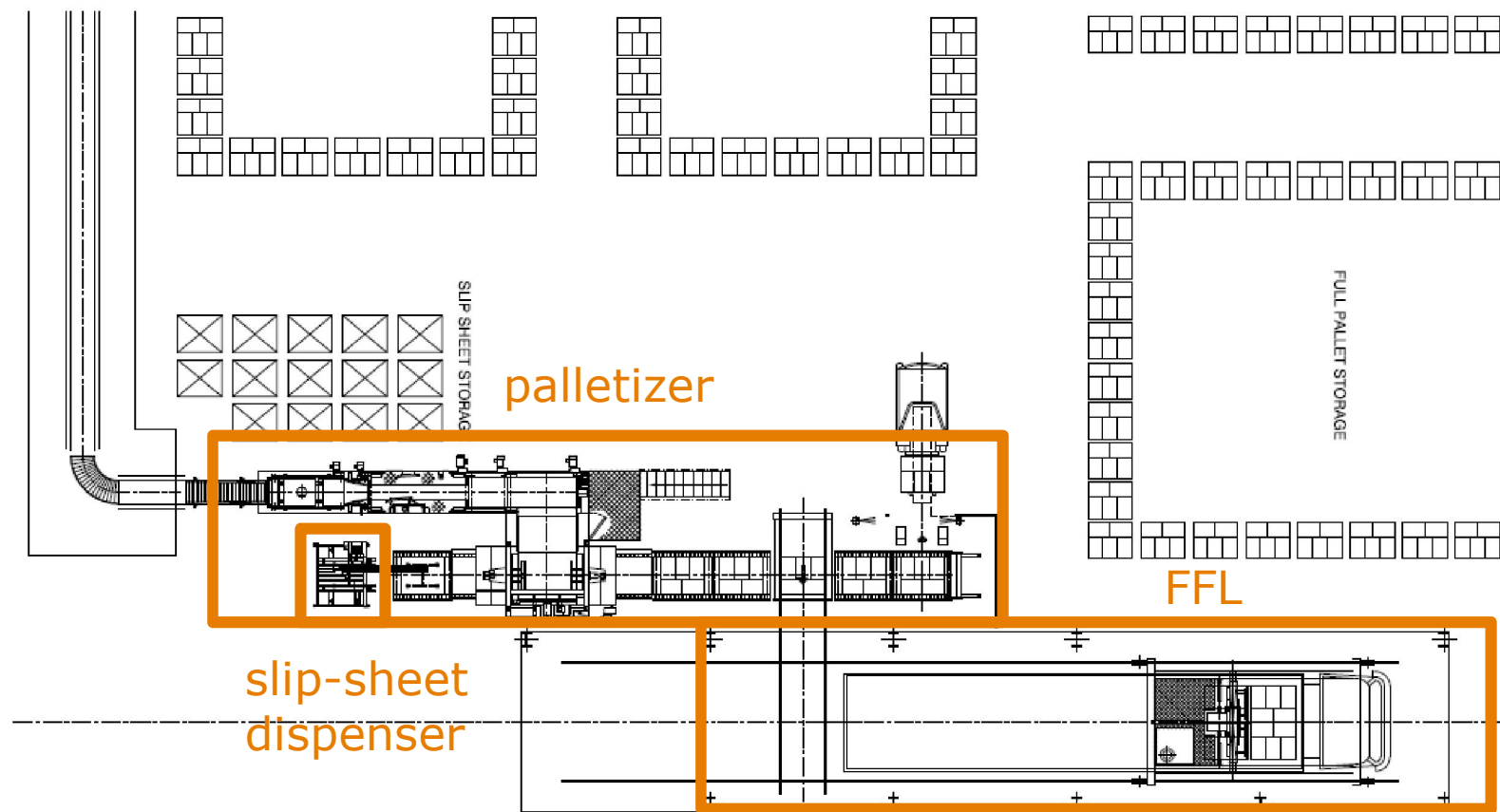
- **Extreme flexibility** in terms of dispatching solutions:
  - direct truck loading of bag stacks (WITHOUT slip-sheet or pallet);
  - storage of palletized loads (WITH slip-sheet or pallet);
  - possibility to load the stored stacks with the FFL;
- **Minimal civil infrastructure** required:
  - all equipment installed on the ground;
  - can easily be installed in existing plants;
- **Low operation costs**
  - simple design, hence limited maintenance costs
  - inferior power consumption than other systems
- Fast operating cycle: **up to 240 ton/hour**
  - Adaptable to packing line(s), existing or new
- **Safest operating** conditions
- Suitable for **different bag layer pattern**



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

# Innovative technological solution for automatic truck loading: Flying Fork-Lift®

**Typical layout: N.1 palletizer + N.1 Flying Fork-Lift**

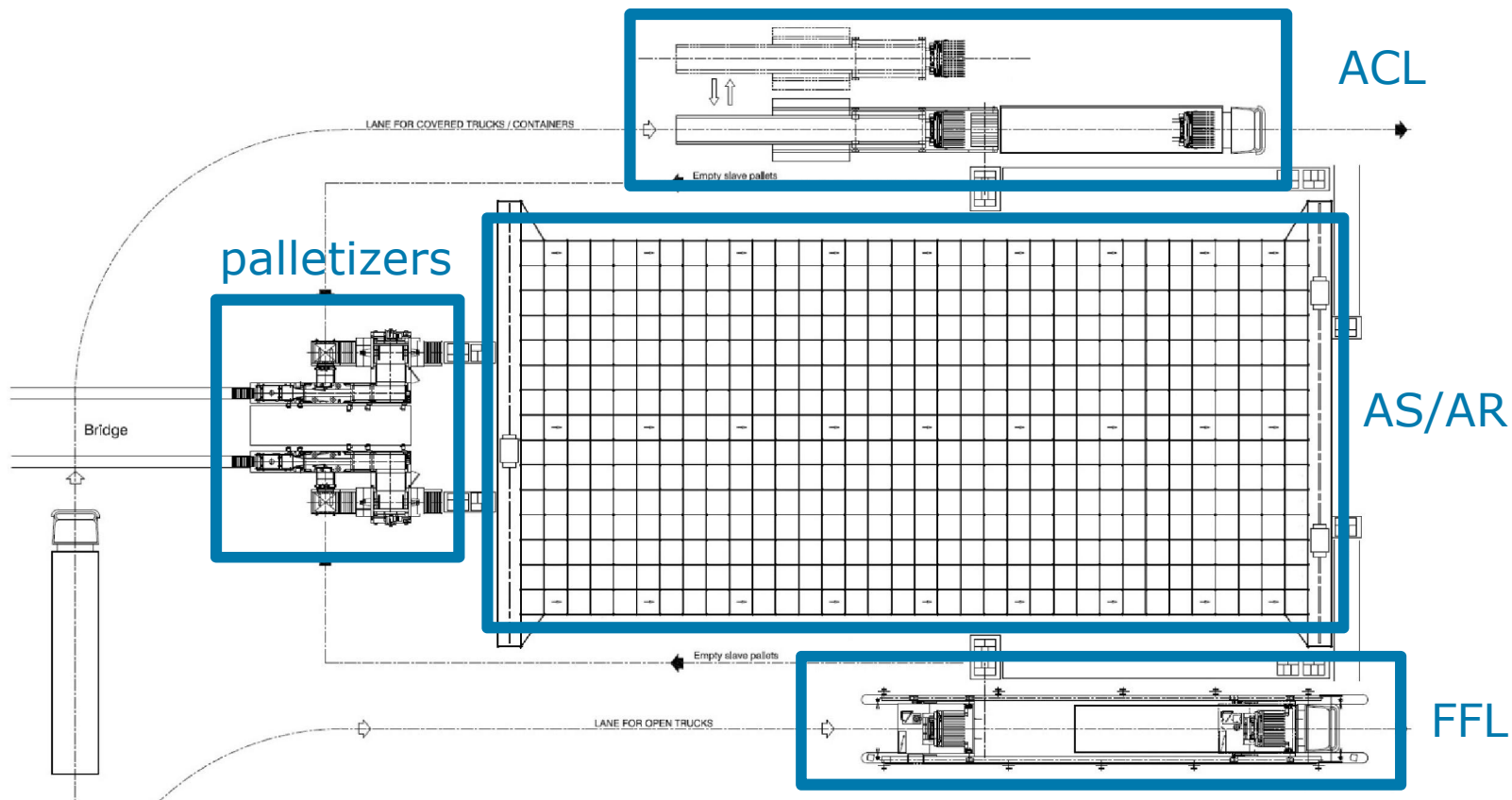


The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.



# Innovative technological solution for automatic truck loading: Flying Fork-Lift®

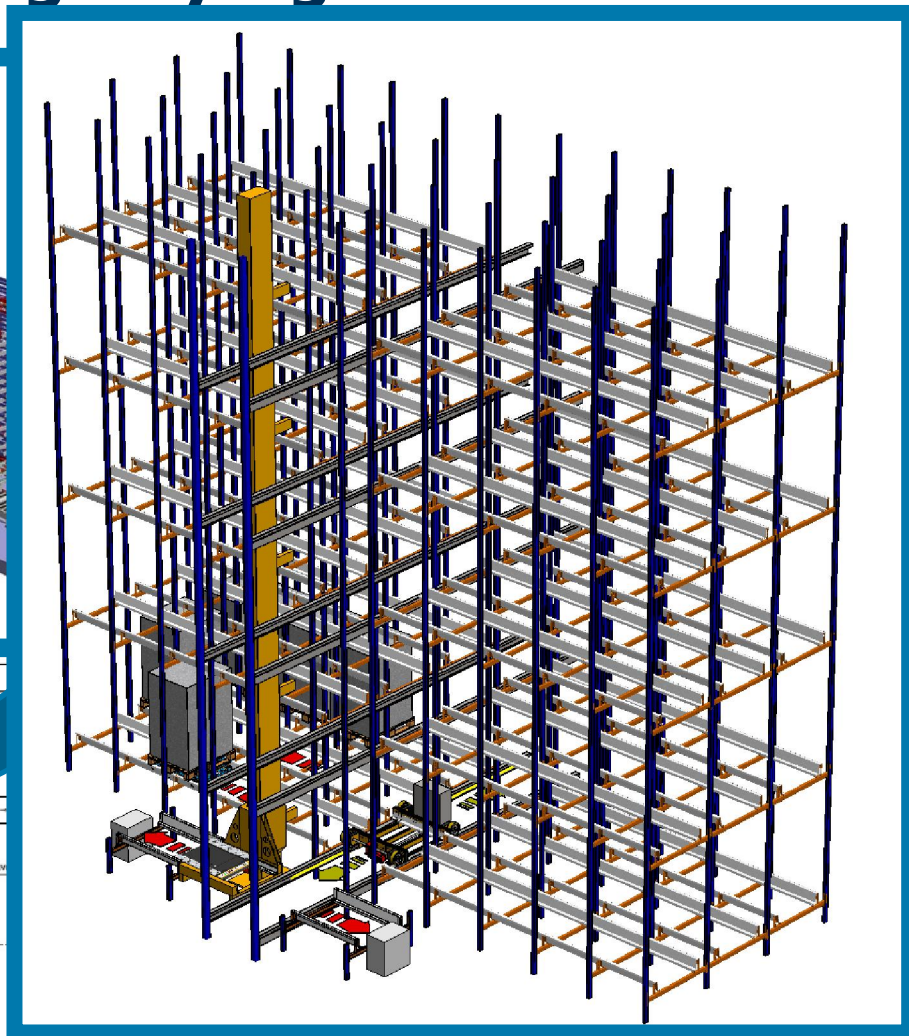
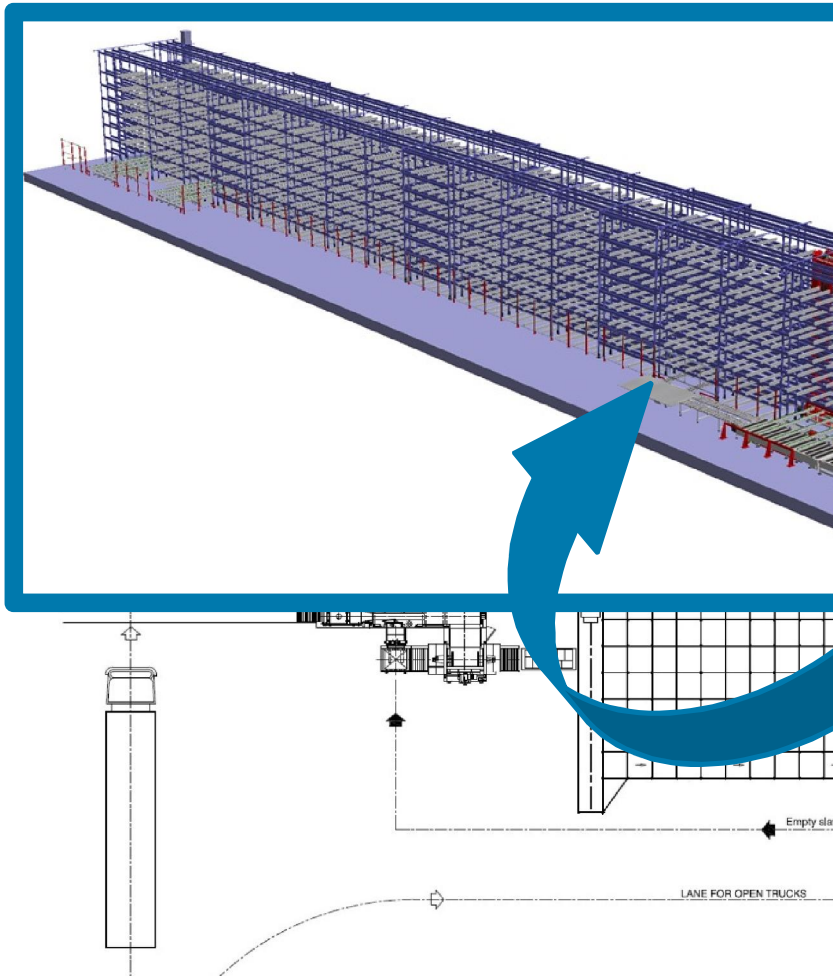
**Typical layout: N.2 palletizers + N.1 Automatic Storage (AS/AR) + N.1 Flying Fork-Lift + N.1 Automatic container loader**



The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

**One Source**

# Innovative technological solution for automatic truck loading: Flying Fork-Lift®



or trade secret laws.

One Source

## Conclusion:

FLSmidth Ventomatic can offer high efficiency logistics solutions for your packing plant, thanks to:

- Single supplier for a complete range of products
- High level of automation
- Proven technology over the years
- Low to very high capacity equipment
- Customizable solutions to fulfill Customer's needs, requirements and budget

In our example:

- Flexibility required for the market
- Capacity and automation level required for the market
- Solution offered unmatched by our competitors

The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

## Questions and answers:

Don't hesitate to ask any question you might have



Please visit us at our booth!

The information contained or referenced in this presentation is confidential and proprietary to FLSmidth and is protected by copyright or trade secret laws.

**One Source**