

# ENSURING SAFE AND EFFICIENT TRANSFER OF PHOTOVOLTAIC GLASS WITH VISIONNAV AGV/AMR

#A-frame Rack

## PROJECT BACKGROUND

In the photovoltaic (PV) glass industry, handling and transporting fragile and large glass panels present significant challenges. A leading PV glass manufacturer faced issues with the stability and safety of their material transfer processes across multiple production areas. They required a solution to efficiently manage the transportation of PV glass, minimize the risk of breakage, and integrate seamlessly with existing automated equipment.



## SOLUTIONS

VisionNav Robotics provided a comprehensive logistics automation solution tailored to the client's needs:

- VNP30 Autonomous Forklifts: Equipped with anti-tipping devices to stabilize loads and prevent accidents during transport.
- RCS2.0 Central Control Dispatch System: Facilitates efficient coordination and dispatching of autonomous forklifts.
- Intelligent Storage Location Monitoring System: Ensures real-time monitoring and optimization of storage spaces.

## INDUSTRY



Construction Industry  
Building Materials

## SCENARIOS



Ground-to-Ground transportation

## DEPLOYMENTS



VNP30

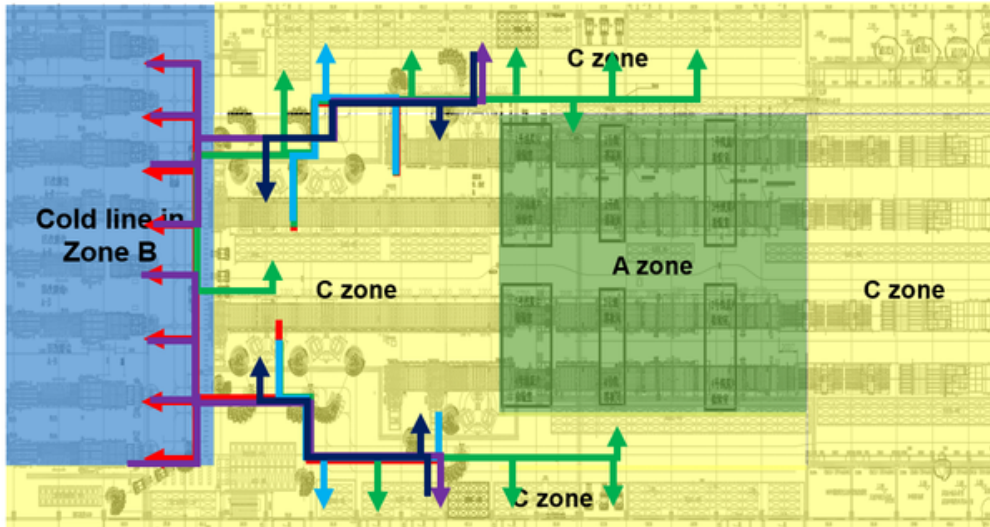
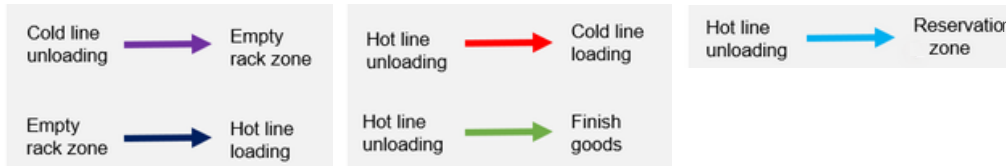


RCS



Smart Monitoring  
system

## WORKFLOW



The project workflow involved the following steps:

- **Hot-End Semi-Finished Products Off-Line:**
  - The client's Manufacturing Operations Management (MOM) system sends detailed material information to the RCS dispatch system.
  - The RCS system selects storage locations and dispatches VNP30 autonomous forklifts to transfer materials to designated areas.
- **Deep Processing Products Online:**
  - Dispatch room staff lock the material attributes in the batching system based on the production schedule.
  - The MOM system sends online material requirements to the RCS dispatch system.
  - The RCS system selects empty rack areas and dispatches VNP30 autonomous forklifts to the processing area.

The VNP30 autonomous forklifts coordinate with the rotary tables in the processing machines to ensure precise placement and retrieval of materials.

VIDEO ▶

Check out the wrap-up video here!



## MATERIAL TYPES



A-frame rack

## CUSTOMER VALUES



**200%**

Efficiency improvement



**9**

Vehicles Deployed to Streamline Operations



**18 months**

Return on Investment



**Digital**

Management and reduced maintenance cost

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