

GROUP 15 : WAREHOUSE MEGA PRIME WAREHOUSE DESIGN FOR COSMETIC DISTRIBUTION

GROUPMATES:

- | | |
|------------------|--------------------|
| 1- LUQMAN | 9-SHIFA |
| 2-FADZLI | 10-AININ |
| 3-ASYRAF | 11-FARAHIAH |
| 4-ZARIF | 12-BALQIS |
| 5-SOFEA | 13-SYAZA |
| 6-WADIHAH | 14-THANIA |
| 7-IZZATI | 15-NABILA |
| 8-AFRINA | 16-ATHIRAH |



Introduction :

- Logistics services offer a variety of services, especially warehousing services. There are different warehouse models used depending on the suitability of the type of merchandise. The warehouse design we chose is an "I" shape.

• Purpose of the Warehouse :

- To store and distribute cosmetics efficiently.
- Ensure fast order fulfillment.

Layout Type :

- I-shaped layout.

Objective :

- Maximize efficiency, reduce errors, optimize material handling.



WAREHOUSE LAYOUT & FLOW

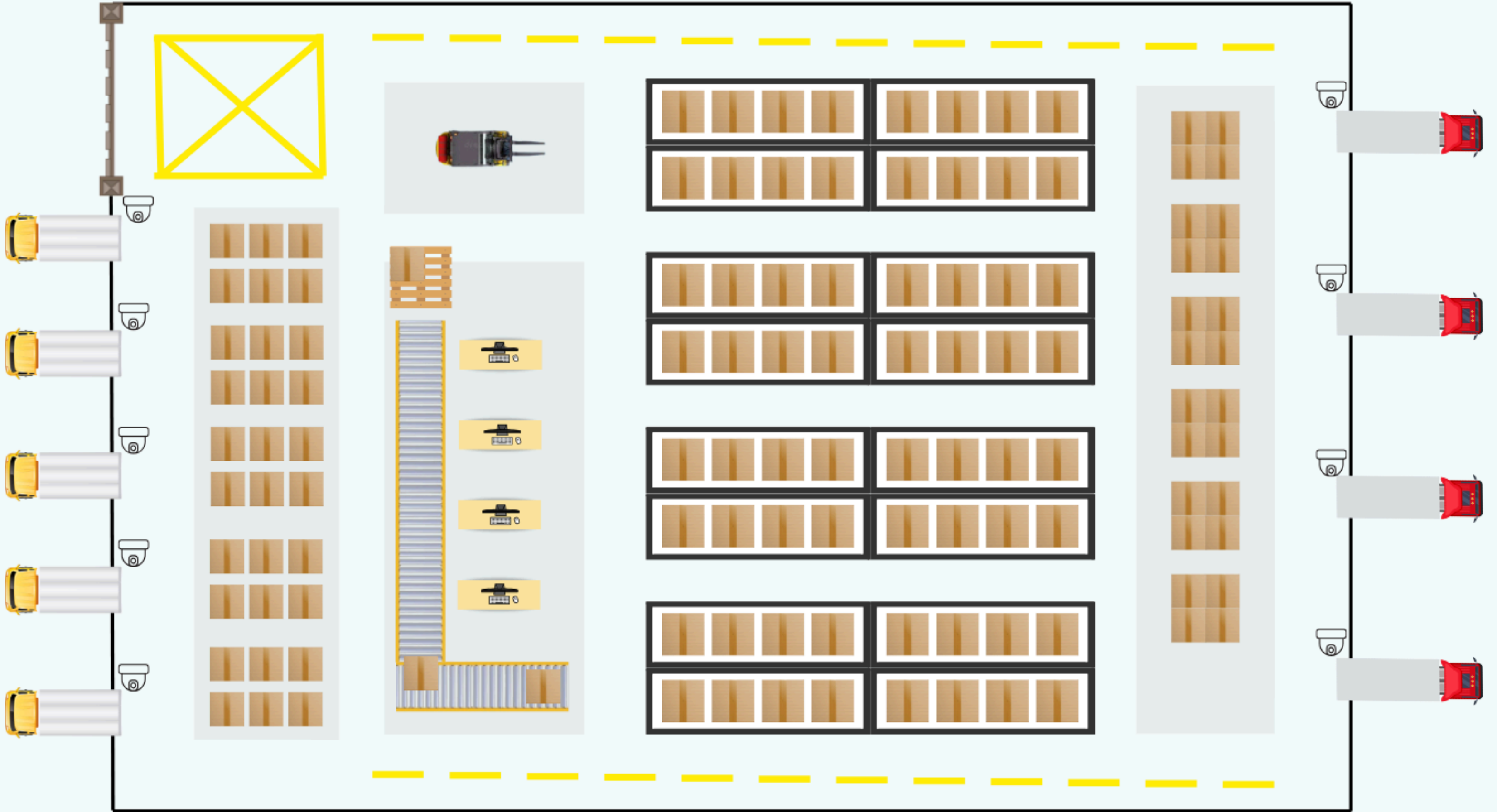
Diagram of the warehouse layout :
2D/3d representation

Key areas :

- Inbound (Receiving)
- Storage (Racking & Sorting)
- Picking and Packing
- Outbound (Shipping)
- Walkways & Safety Zones
- Why i shapes layout ?

STRAIGHT MOVEMENT OF GOODS, reducing congestion.





Slide 4: Material Handling Equipment



- Equipment Used:

- Forklifts .
 - For pallet movement.
- Conveyors.
 - For automated product movement.
- Racking Systems.
 - FIFO/FEFO storage.
- Packing & Labeling Stations.
 - For order preparation.
- -RFID & Barcode Scanners.
 - For inventory tracking.
- Benefits
 - Increases speed, accuracy, and efficiency.



Inventory Management & Sorting System

- **Sorting Strategy:**
- By brand, product type, demand level.
- FIFO (First-In-First-Out) & FEFO (First-Expire-First-Out) methods.
- Technology Integration: AI-based sorting for better efficiency.
- Impact: Faster order fulfillment, minimal storage errors.



Future Technologies & Innovations

Potential Enhancements:

- Automated Storage & Retrieval Systems (AS/RS).
- AI-powered inventory tracking & smart sorting bins.
- Smart packaging with IoT sensors.
- Why Future Tech?
 - Reduces errors, increases speed, prepares for scalability.
- Idea for future :
 - Forkking (automatic wrapping + forklift)



Challenges & Solutions

Key Challenges and Solutions Improve Efficiency :

- Space constraints → Solution: High-density racking.
- Order delays → Solution: Automated picking & sorting.
- Manual vs. Auto Wrapping → Solution: Hybrid wrapping system.



Conclusion



- Efficient I-Shaped Layout.
- Optimized material handling & inventory management.
- Future-ready with automation & AI.



MALU BERTANYA SESAT DI JALAN

QNA

- Q&A Session: Invite questions & feedback.

**INI DIKELAS BUKAN DI JALAN, JADI
NGGAK USAH NANYA-NANYA, GABAKAL TERSESAT**

THANK YOU!!

