



**PROMAT**

**2015**

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*How robotics &  
other automation  
meet the needs of  
the modern DC*

Sponsored by:



Presented by:  
**Clint Lasher**  
**Alfredo Valadez**

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# Robotics & Other Automation in the DC



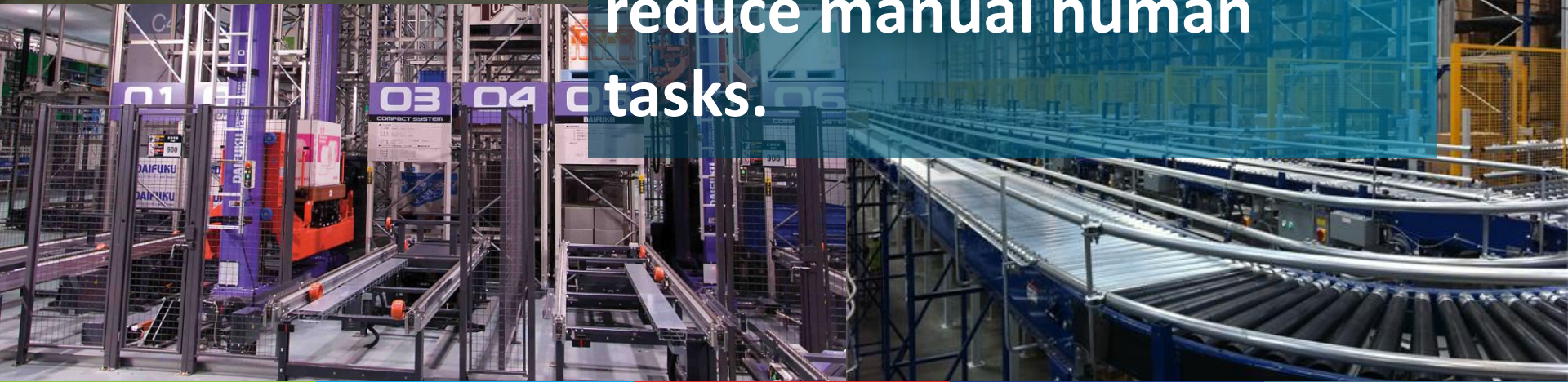


How do you improve  
Competitiveness?

# What is “Robotics” — “Automation”



The use of technology, hardware or software, to reduce manual human tasks.



# Why Use Automation

- Labor Savings
- Accuracy
- Ergonomics
- Efficiency/Capacity

# Effect of Automation

## Cost per unit shipped

- Reduced labor costs
- Reduced number of touches

## Negative impact of manual handling

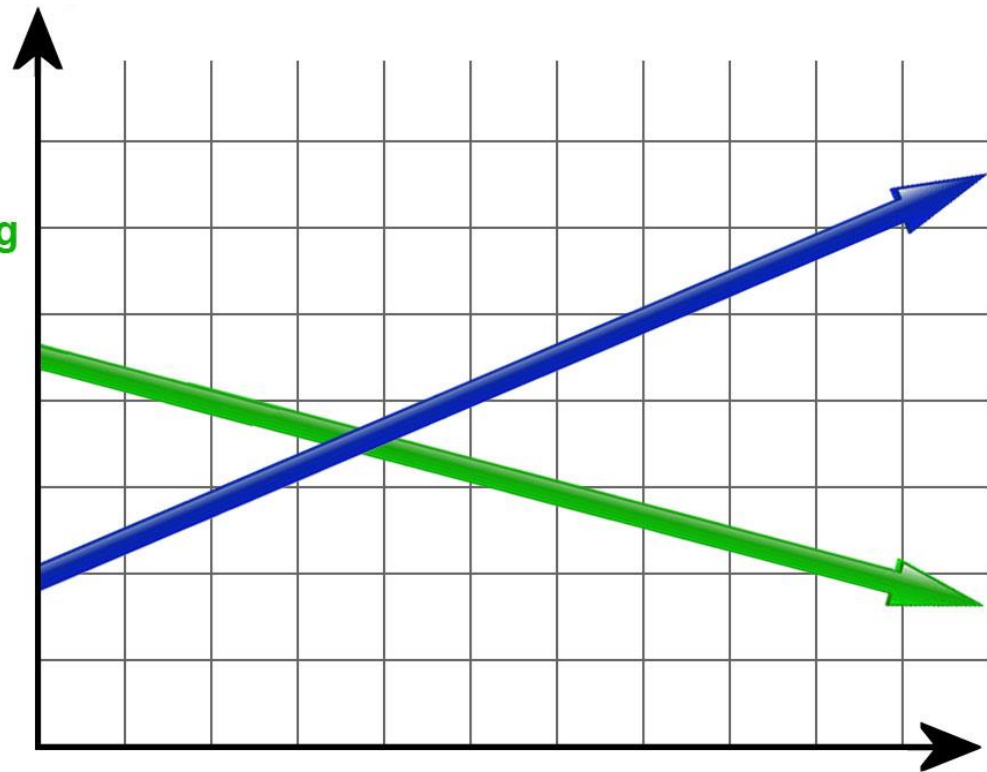
- Fewer hard-to-fill jobs
- Reduced turnover costs
- Fewer workplace injuries
- Less product damage

## Quality

- Reliability
- Accuracy

## Capacity & Speed

- Increased throughput
- Improved cycle time variability

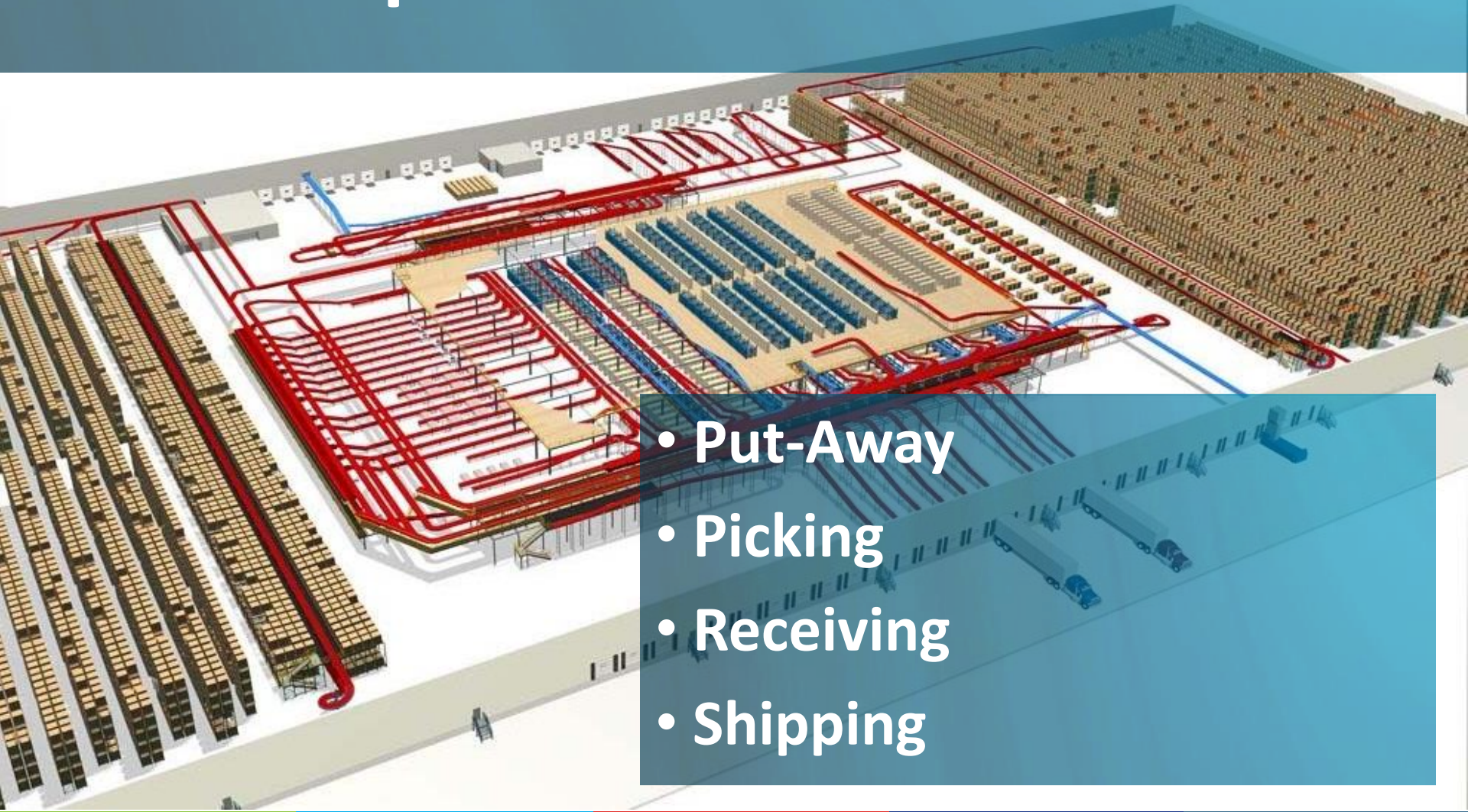


Level of Automation

# Client Application



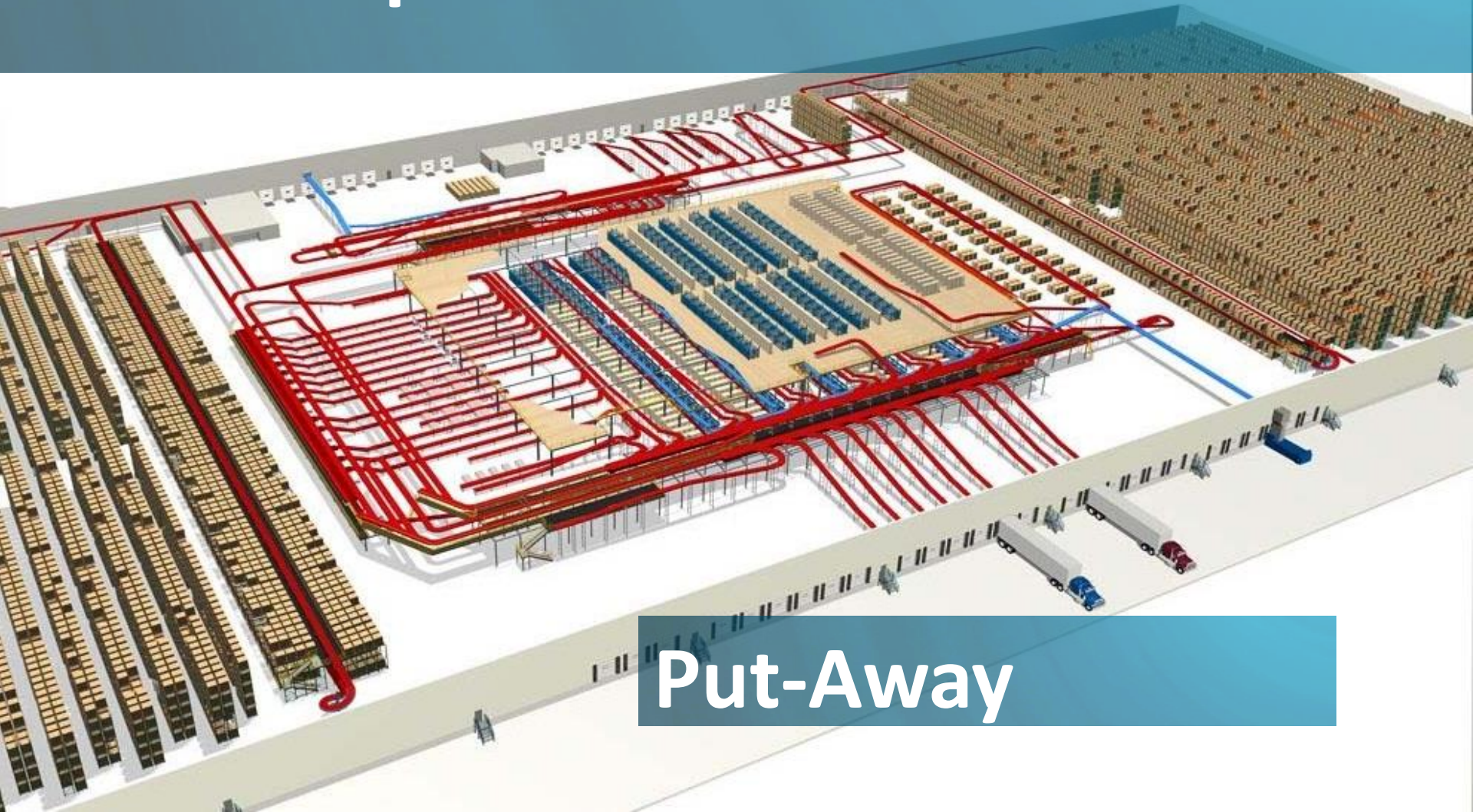
# Specific DC Functions



- Put-Away
- Picking
- Receiving
- Shipping

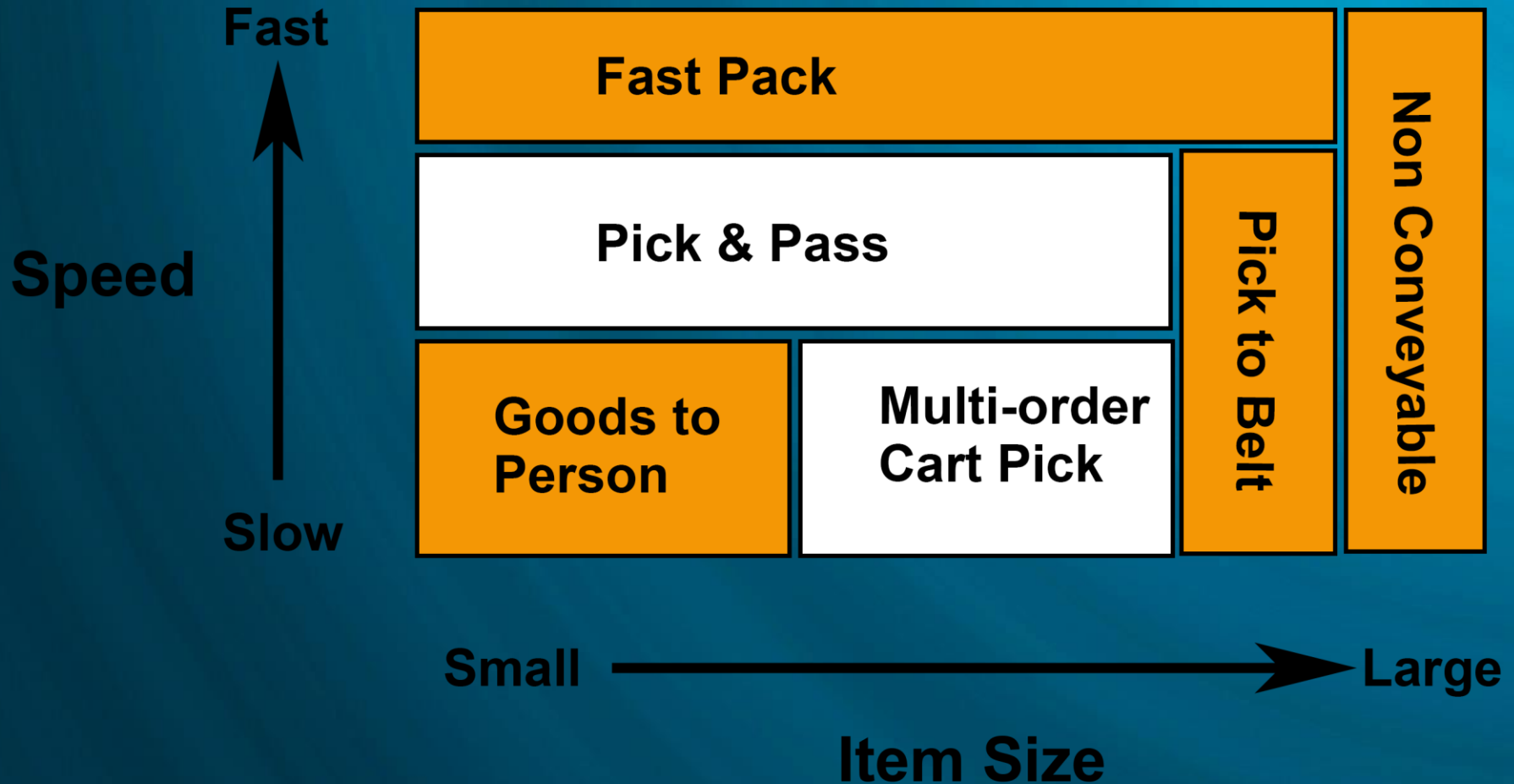


# Specific DC Functions



Put-Away

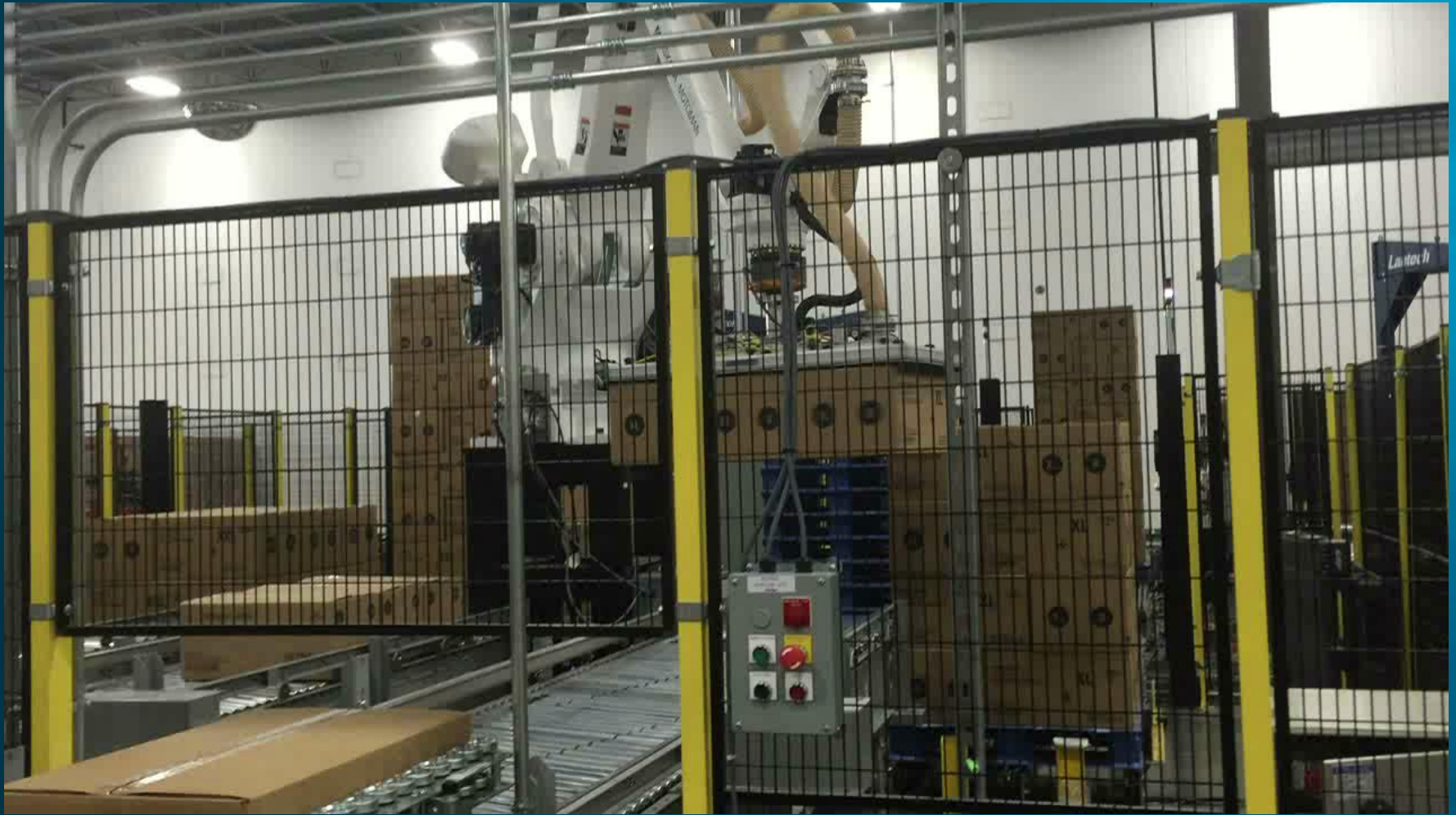
# Automation Opportunities Put-Away and Picking



# Pallet, Case & Tote Storage



# Pallet Building



# Specific DC Functions



Picking

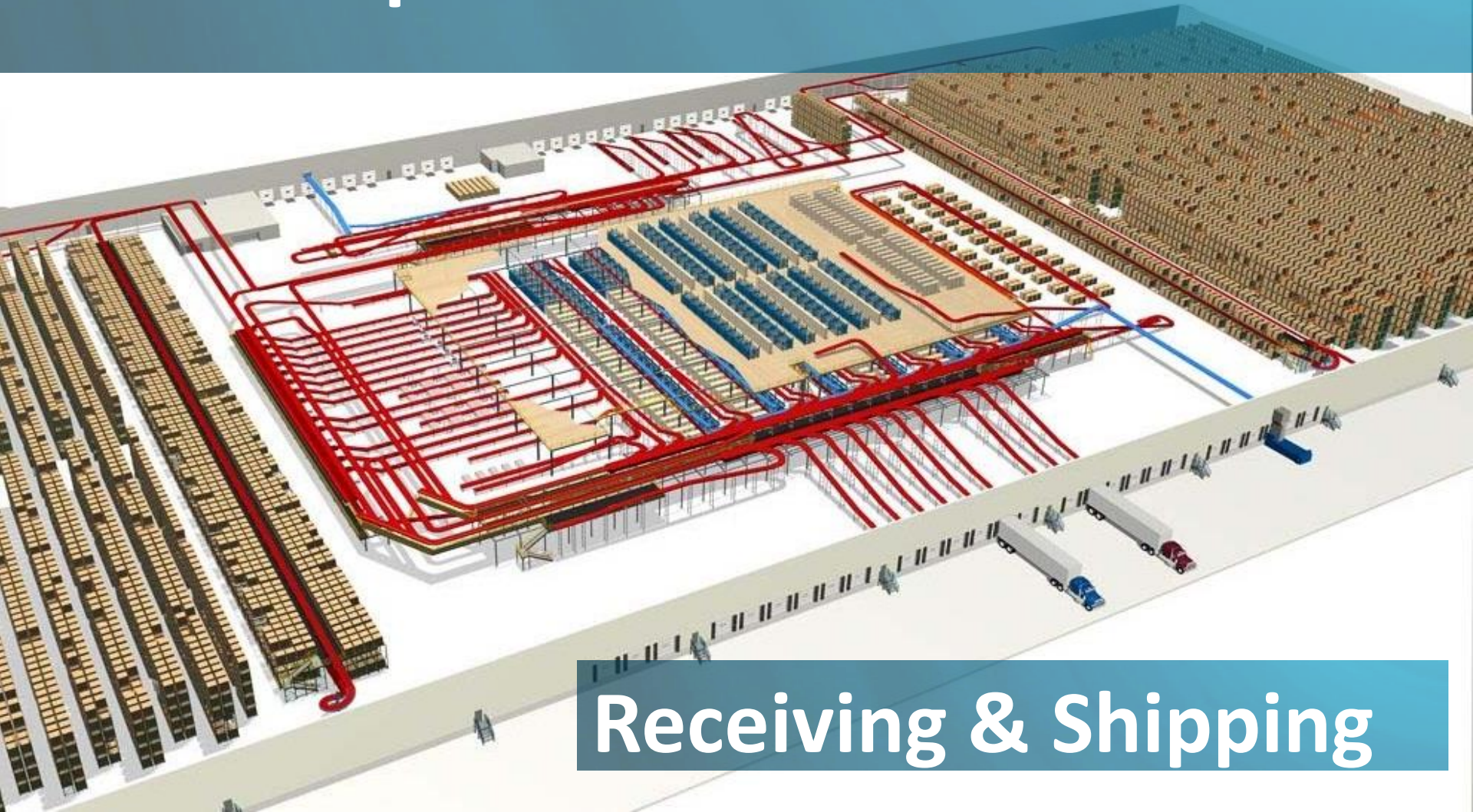
# Full Case/Totes Picking



# Each Picking



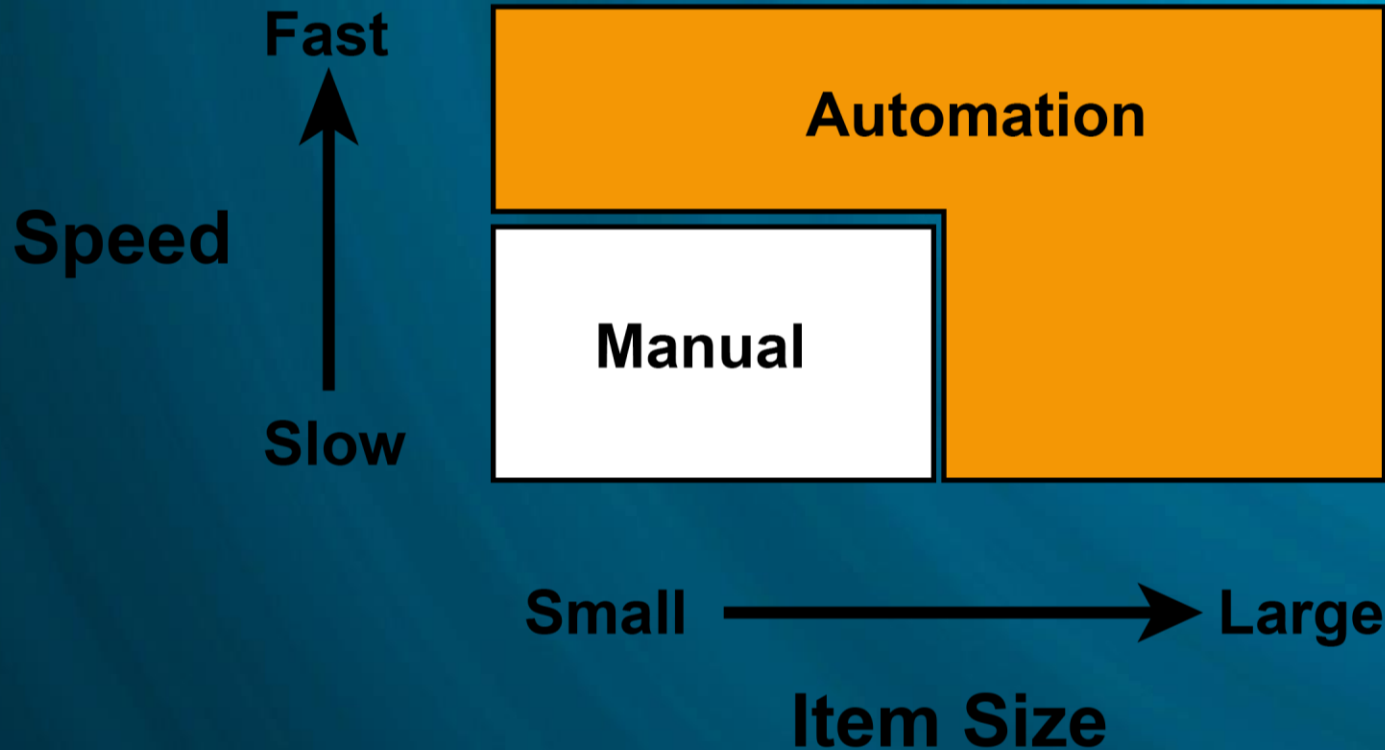
# Specific DC Functions



Receiving & Shipping



# Automation Opportunities Receiving & Shipping



# Dock - The Last Frontier



# Semi-automatic & Automatic Truck Unloading/Loading



 **CALJAN**  
**HITE-HITE**

Caljan BeltTrack

# When Considering Automation for Unloading

- Load Profile-Pallet or Floor Stacked
- Volume and Rate Requirements
- Product profile (size, weight, etc.)
- SKU mix

# Palletizing





**Strategic Solutions  
& Technology**

# Acknowledgements

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RSW

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