

Körber Supply Chain

# Master Class Series

Today's Class:

How does automation drive cold storage  
efficiencies



# Speakers



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Professor

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Körber Supply Chain

# Supply Chain Master Class: Cold Storage Trends



Why are we here? What are we trying to accomplish?

## Class Schedule:

- June 9: Cold storage and e-grocers: Changing environments (*On-Demand*)
- June 11: Traceability and food safety in cold storage (*On-Demand*)
- June 16: Labor recruitment challenges in cold storage (*On-Demand*)
- June 18: Improve energy efficiency in cold storage warehouses (*On-Demand*)
- June 23: How does automation drive cold storage efficiencies

*Next Master Class Series: Warehouse Technology Excellence*

# Housekeeping



All phone lines are muted

Recording of today's class and slides will be email to you within 48 hours

Questions:

- Ask questions during today's class in the GoToWebinar Questions window
- Questions will be addressed at the end of today's class or we will follow up with questions via email after class

Handout: Evaluating automation for cold storage: key considerations

- Follow up with the PDF via email after the class

Poll Question: Have you automated any steps of your supply chain processes?

# What Cold Storage Builders are saying...



“The speed-to-market is huge for all of these (food industry) clients. It is like an arms race. They need to be out front to grab market share in a new field.”

- Mark Moore, CMC Design Build

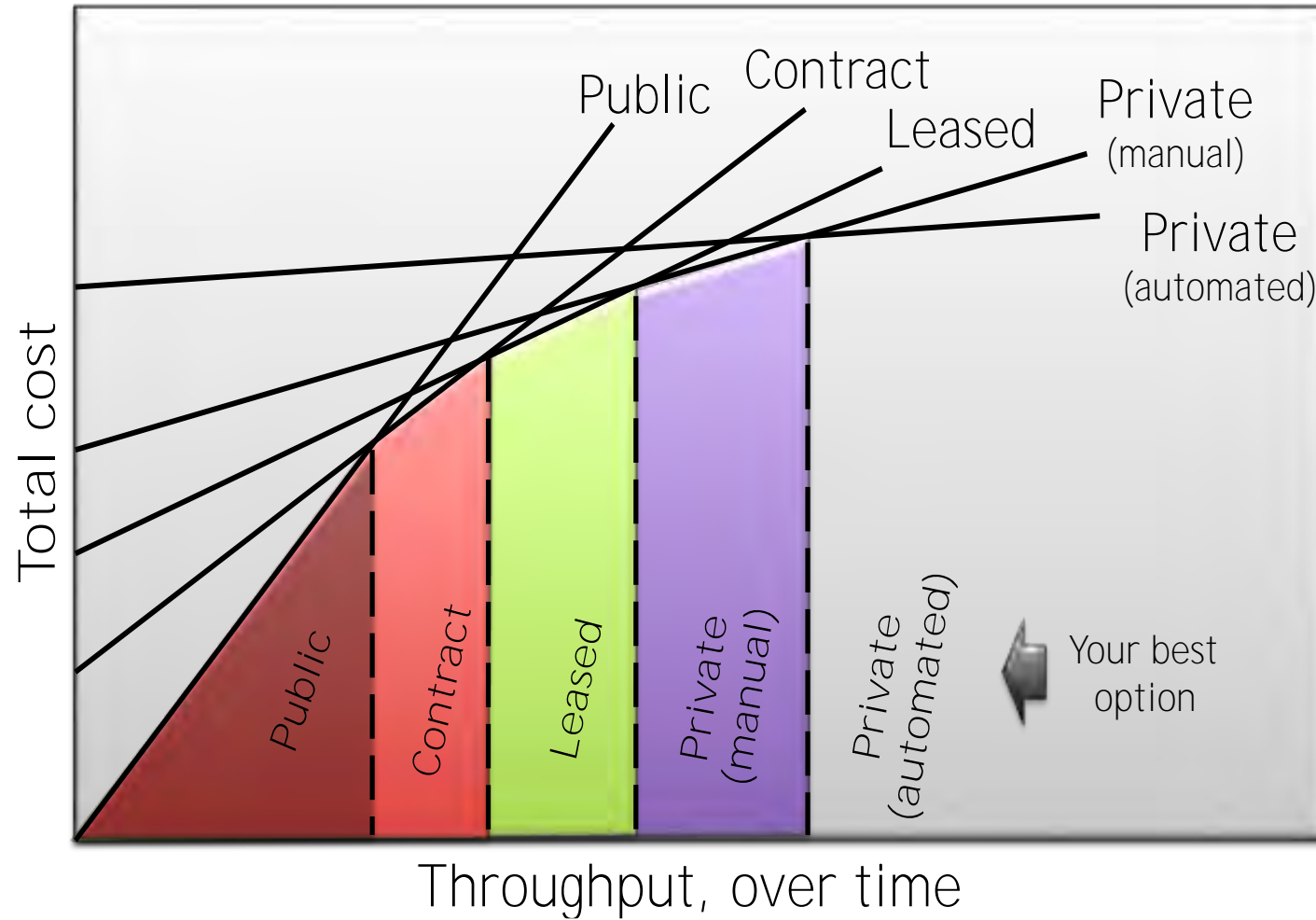
“There is a push in the grocery distribution arena to pursue automated product distribution, given the speed-to-market required for the end user,”

- Michael Jones, Primus Design Services

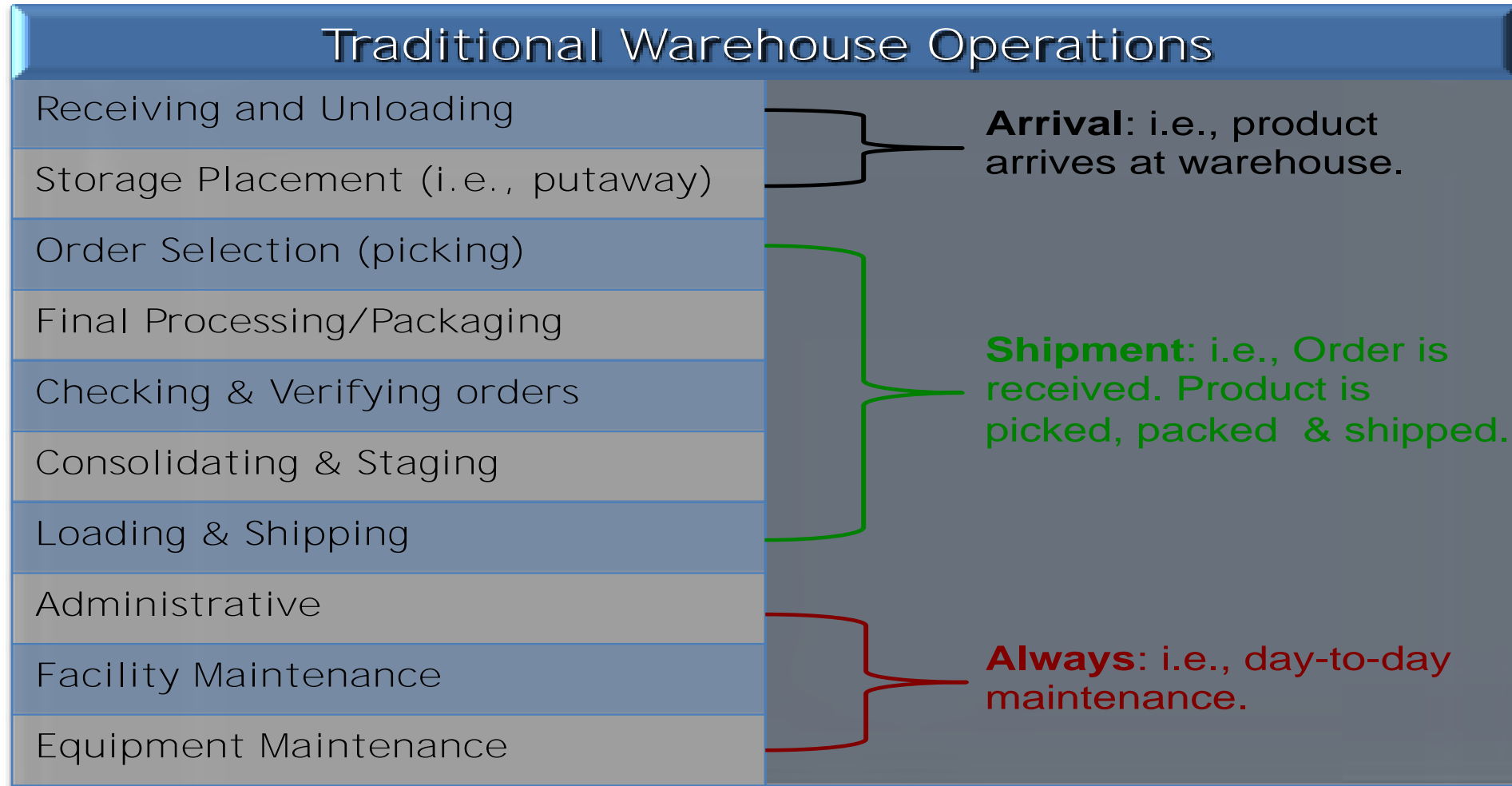
“Automated material handling systems to maximize densities, mix case palletizing and piece picking systems for e-commerce home delivery options will be integral in the outbound shipping configurations.”

- Timothy Nugyen, ESI Group USA

# MYTH: Automated solutions require high volumes of standard product



# Also, where can we expect to deploy automation?





# Cold Storage Trends



- The market of deep frozen goods is growing (additional growth is caused by COVID-19).
- Variance of products is getting higher.
- Taking care of the cold chain and to document it, is very important.
- Traceability – “from farm to fork”  
How the product was produced, is getting more important.
- The ordered number of pieces of a product is getting down.
- More different kinds of a product (different flavors) at the same space in the shop
  - Products will be more often ordered in smaller numbers
    - Delivery of incomplete pallets or even item wise
    - Changes in the logistic process / picking

**Automation gains  
in importance!**





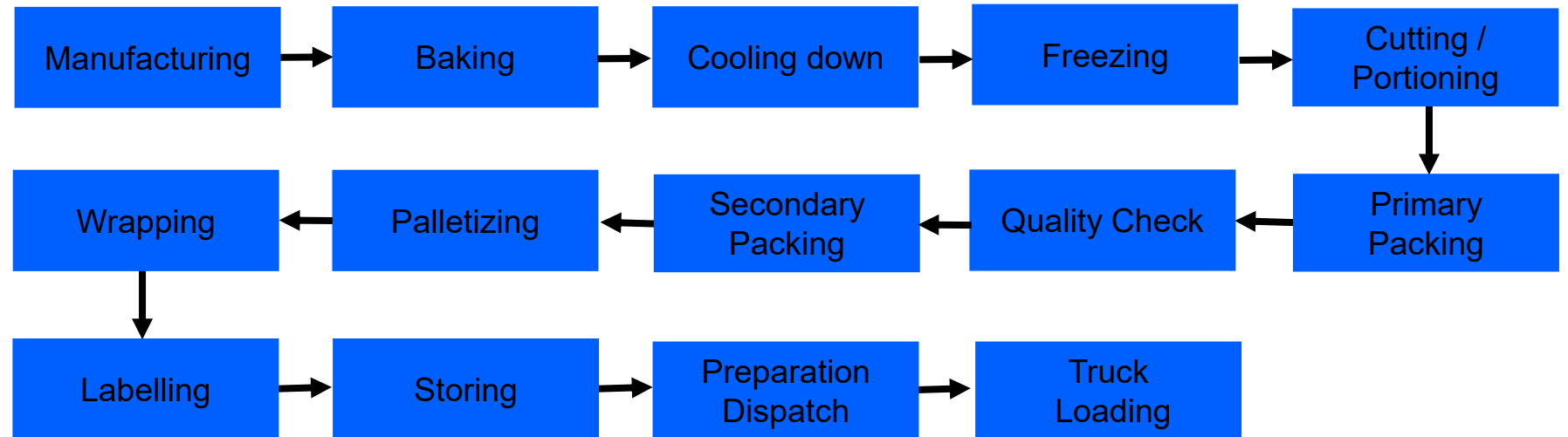
# Process of the deep frozen goods

From the Oven  
into the Truck

*Example:*  
Deep frozen bakery  
products

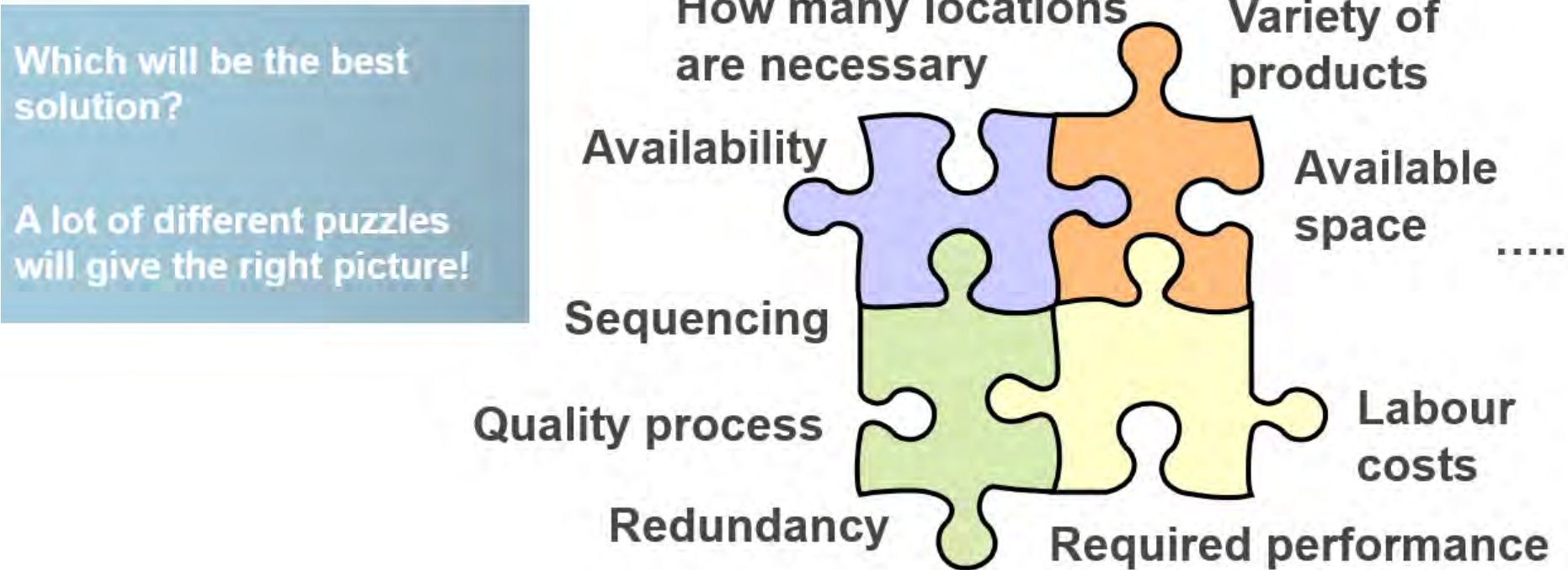
Picking as  
additional possible  
step:

- Different flavor  
in a secondary  
packet
- Building  
mixed pallets with  
different products



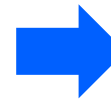
# Cold Storage Benefits of Automation: Costs / ROI

- Investment is higher but the running costs are lower
- Different parameters are relevant to get the automated solution more efficient than manual operation



# Cold Storage Benefits of Automation: Labor

- Automation reduces expenses / costs for labor especially if you run your system in a 3-shift operation
- Difficult to hire suitable employees
- Independence from labor is getting an additional higher importance caused by the COVID-19
- Working in harsh conditions like
  - => temperature (-24°C)
  - => reduced oxygen as fire protection (16-17% oxygen)
- Automation helps to create ergonomic workplaces, for example for the picker
  - => goods to man concepts
  - => handling equipment
  - => picking tools





# Cold Storage Benefits of Automation: Secured Processes



- Secured processes concerning damages
  - to avoid damages (goods / equipment), for example caused by labor riding on a fork lift
- Secured processes concerning quality of the frozen goods
  - minus temperature => to keep and to control the cold chain of the goods from production to end customer
  - to avoid contamination caused by labor / manual operation
  - automated control check of the goods (for example by x-ray)
- Secured processes concerning traceability
  - to track and trace the frozen goods during the complete supply chain
  - to check if there might be any complains of a customer
  - to keep the costs low in case of a recall



# Cold Storage Benefits of Automation: Conclusion

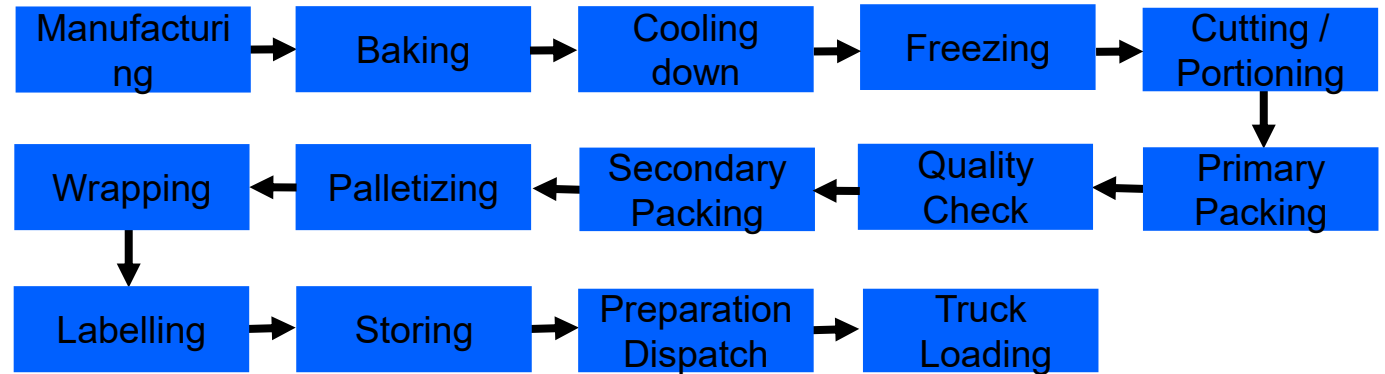


- Statement => Automation is needed for the efficiencies in the cold chain

- Main questions are:

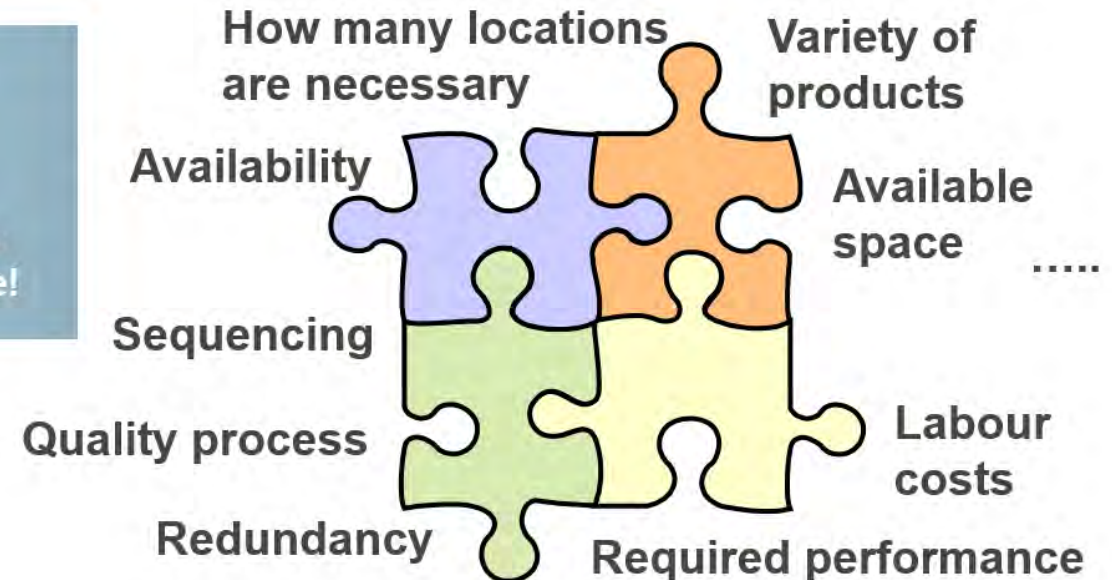
- What is the right application rate?
- Which process step should be automated?

- There is not only one solution which fits for all!



Which will be the best solution?

A lot of different puzzles will give the right picture!



# Questions & Discussion



# Next Supply Chain Master Class Starts on July 14!



## Warehouse Technology Excellence

Warehousing is one of the biggest areas for supply chain differentiation. How do you plan to stay competitive and meet your consumer's needs?

Deep dive into the warehouse with topics on critical capabilities, cloud vs. on-prem infrastructure, ROI and automation.

### Register for the 5 upcoming classes:

- July 14: 10 Critical Capabilities of a WMS
- July 16: WMS in the Cloud
- July 21: Getting your ROI in an Enterprise or SMB WMS Implementation
- July 23: From production to last mile delivery: WMS as the integration point
- July 28: From a Manual to a Fully Automated Warehouse

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