

# Determining what ASRS Solution Is Best For my Application

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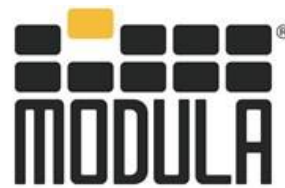


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# Agenda

- 1) What factors do I need to consider before selecting an ASRS?
- 2) What ASRS solutions are available? Which is suitable for me?

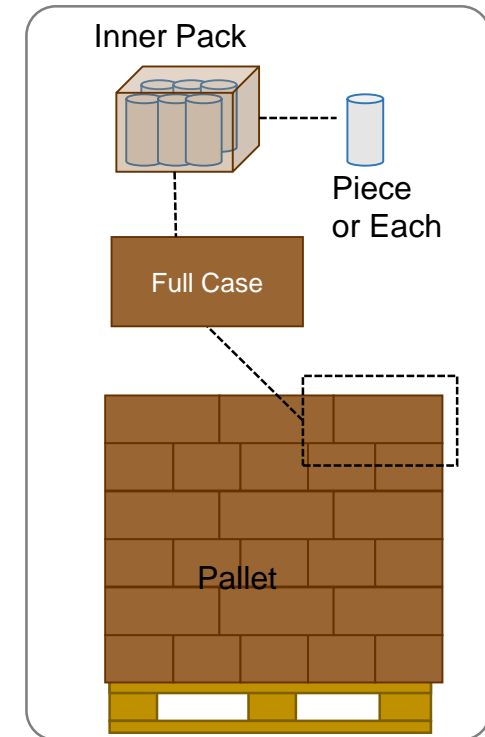
# So You Want To Build An ASRS...?

Some questions to think about...

- What are my load units?
- What are my throughput requirements?
- What is my order structure?
- What are my storage requirements?
- How many SKUs am I storing and what sort of ABC profile do they fit?
- What is my building situation?
- How do I plan for the future?

# In The Beginning There Was A Load Unit...

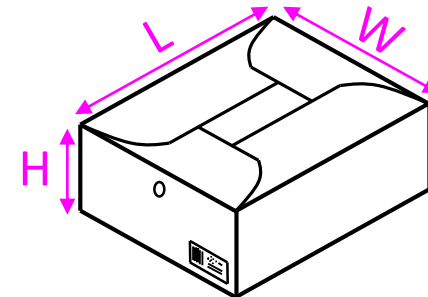
- How are my items received?
- How are my items picked?
- How are my items shipped?
- What are the dimensions of my products?



# What Items Do I Have?

- Item Characteristics

- Ambient vs cold/freezer
- Large or small?
  - Length, width, height, weight....
- Hazardous or caustic?



- Are my products conveyable or “toteable”?

# What Is My Key Data?

## Key Data:

- # of Orders?
- # of Order Lines?
- # of Picks?
- Picks / Order Line?
  
- # of SKUs?
  - How many are active a day?
  - DOH Inventory
  - # of storage locations required?
  
- SKU ABC profile?
  - 80/20?



# Where Do I Put This Thing?

- Install it within my existing facility?
  - What area of the warehouse?
  - What is the clear height?
  - How does it fit into my existing material flow?
- Greenfield (new) construction?
  - Plan your ASRS before you finalize your building!!

# How Do I Plan For The Future?

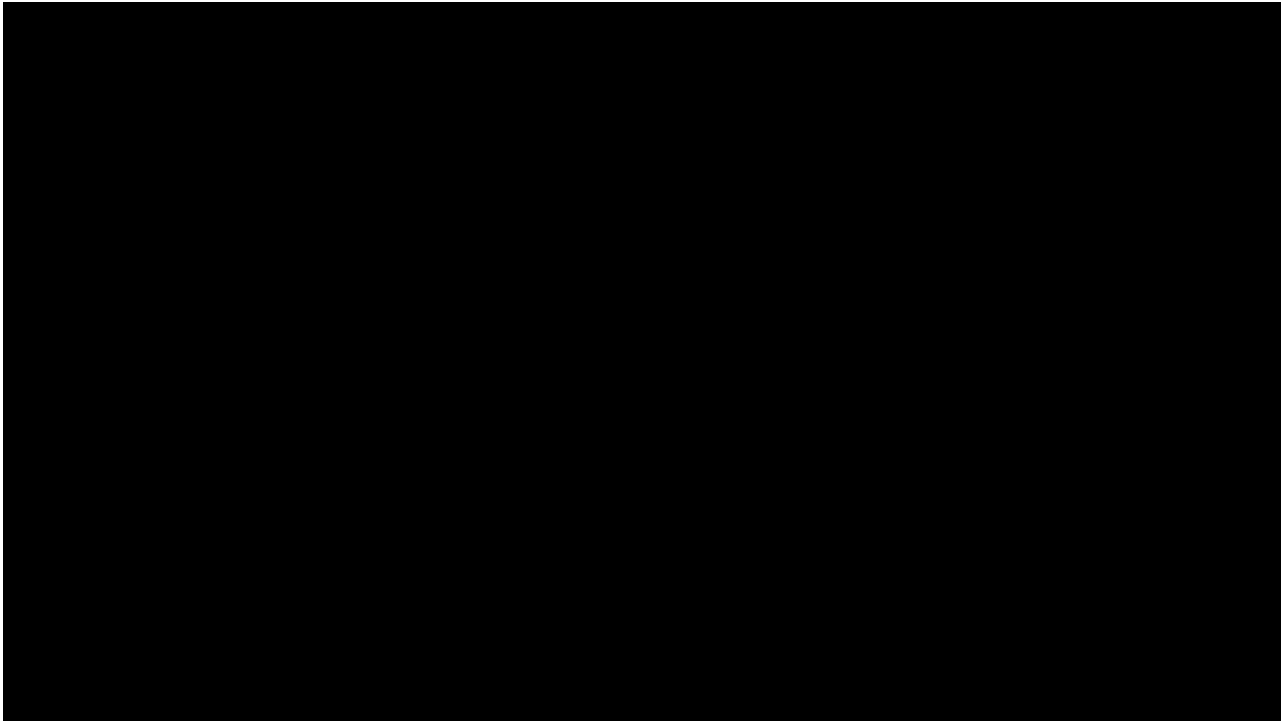
- Do not “land lock” it within your warehouse!
  - Place it near areas of the building that can be used for future expansion
  - Place it next to walls where the building can be expanded
- Leave space within the ASRS design for future aisles
  - 5 year plan vs 10 year plan

# Other Good Things To Consider...

- How far in advance do I pick my orders before they are shipped?
- When does my peak take place?
- What is my current shift structure and what is my plan for after ASRS?
- What are my goals for ASRS?
- What is my timeline?
- What sort of ASRS technology best fits my application?
- What level of IT investment should I make (WMS vs WCS) with my ASRS project?

# What ASRS are available? Which is suitable for me?

## SRM with Forks



<b>Pallet</b>	<b>Case</b>	<b>Split Case</b>
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# What ASRS are available? Which is suitable for me?

## SRM with Satellite

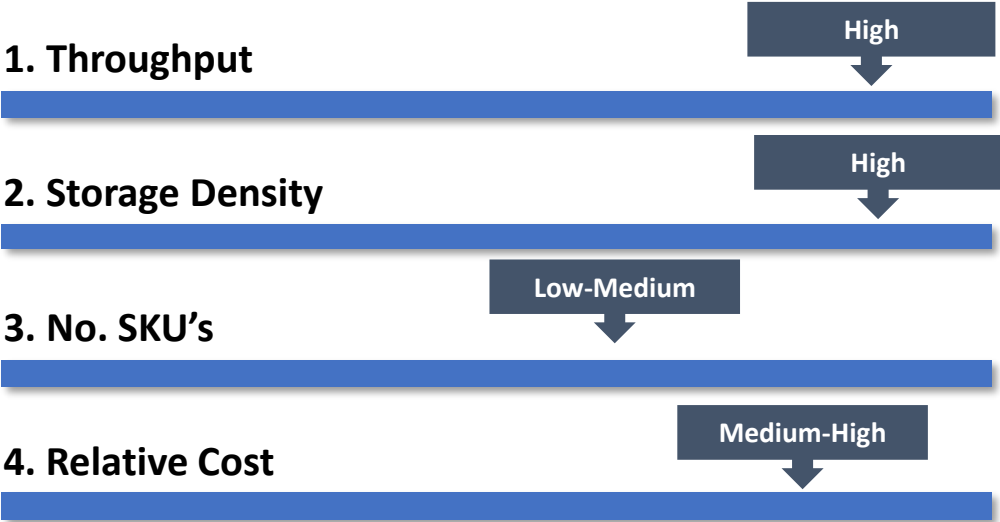
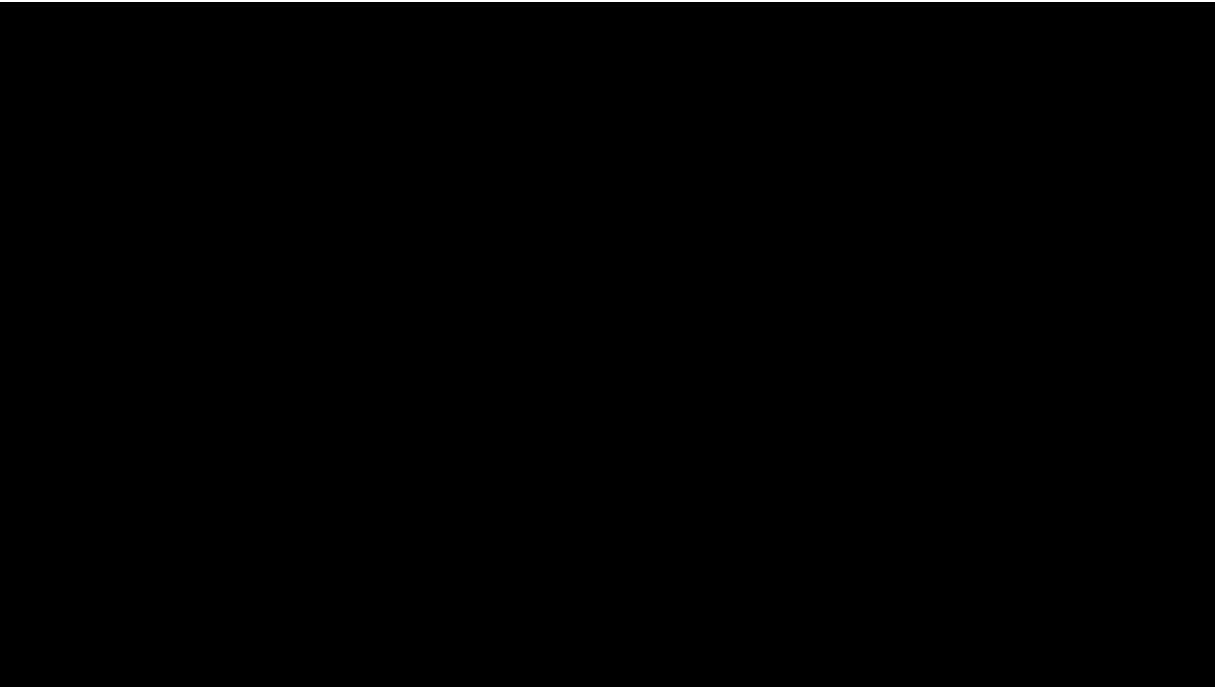


Pallet	Case	Split Case
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# What ASRS are available? Which is suitable for me?

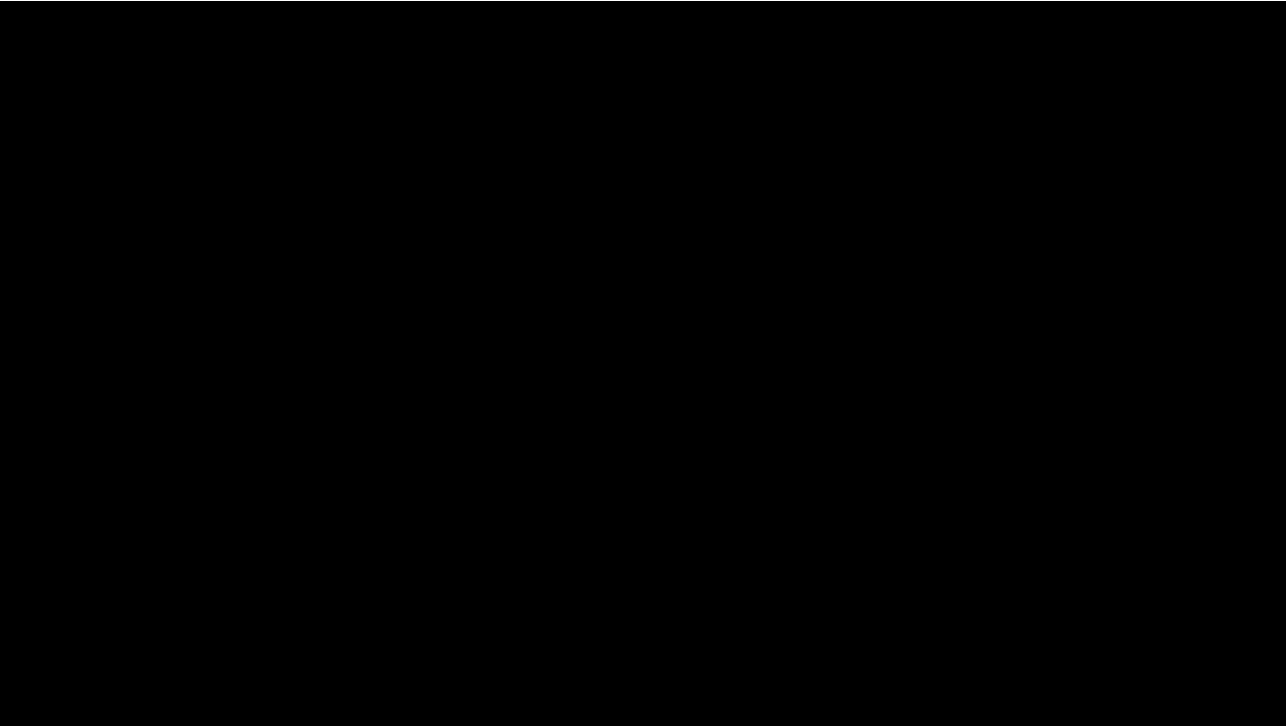
## Shuttle



<b>Pallet</b>	Case	Split Case
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# What ASRS are available? Which is suitable for me?

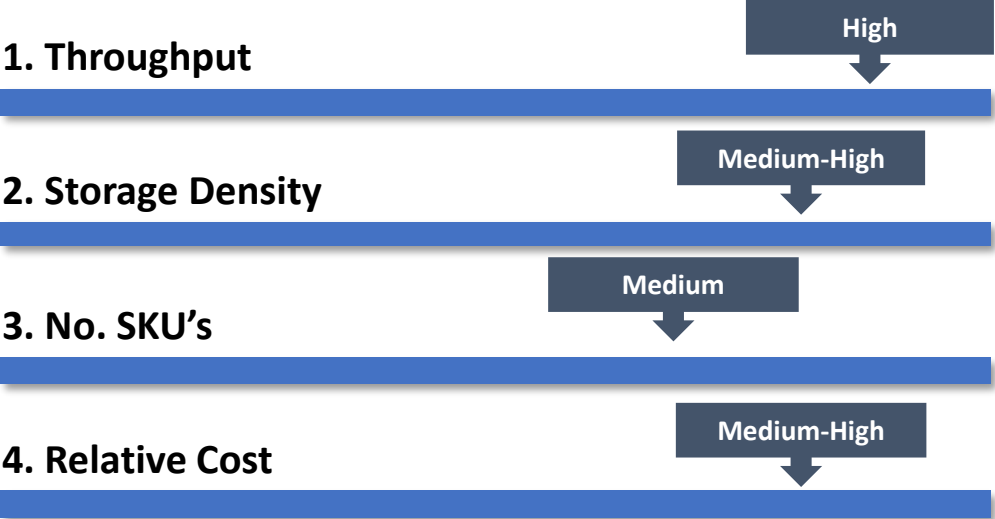
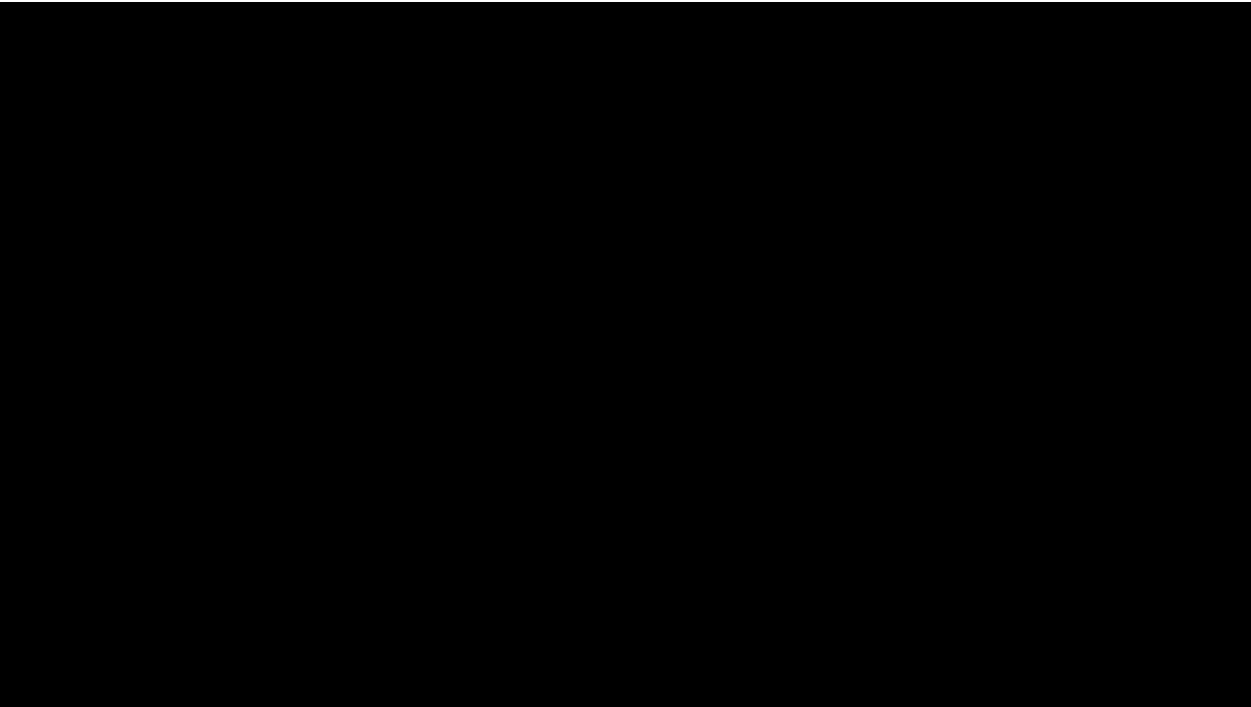
## Miniload



Pallet	<b>Case</b>	Split Case
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# What ASRS are available? Which is suitable for me?

## Shuttle

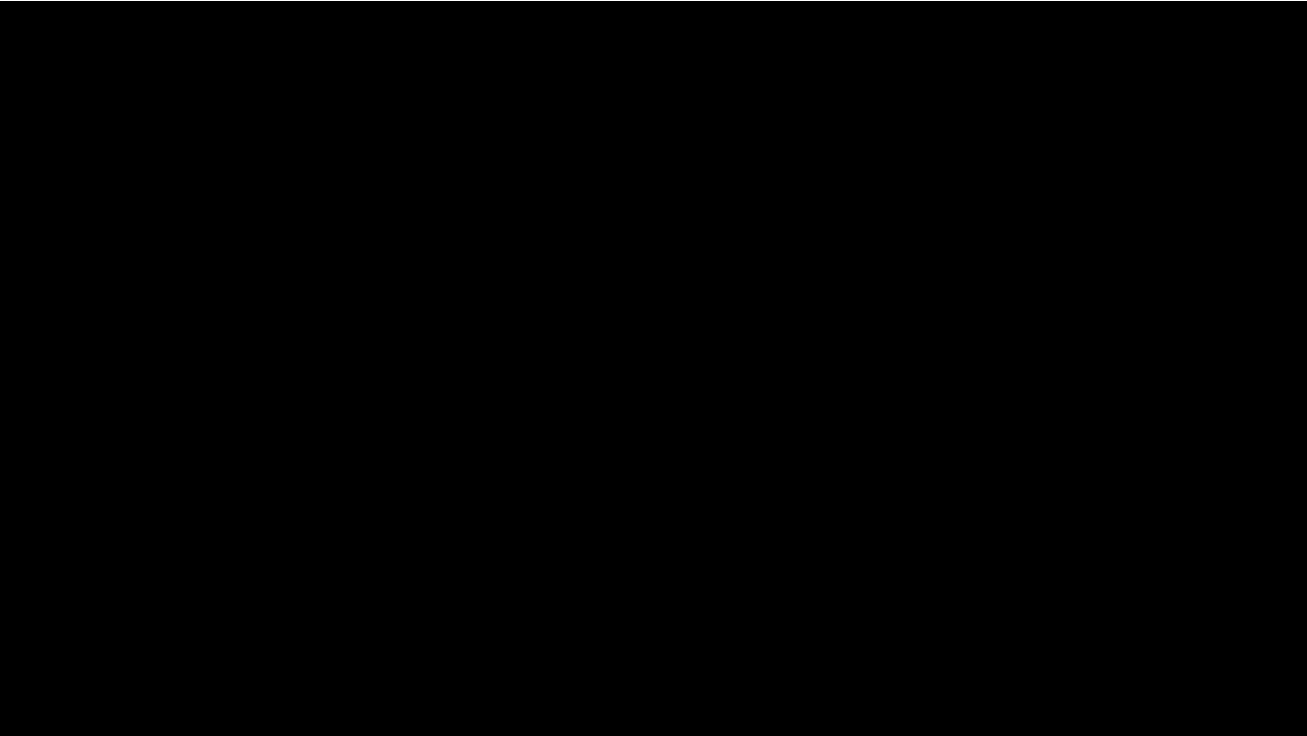


Pallet	Case	Split Case
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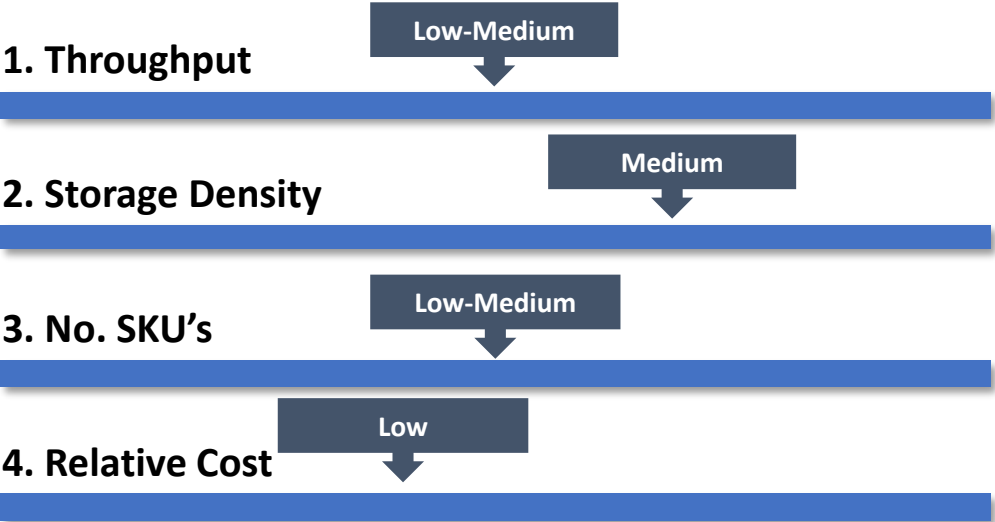
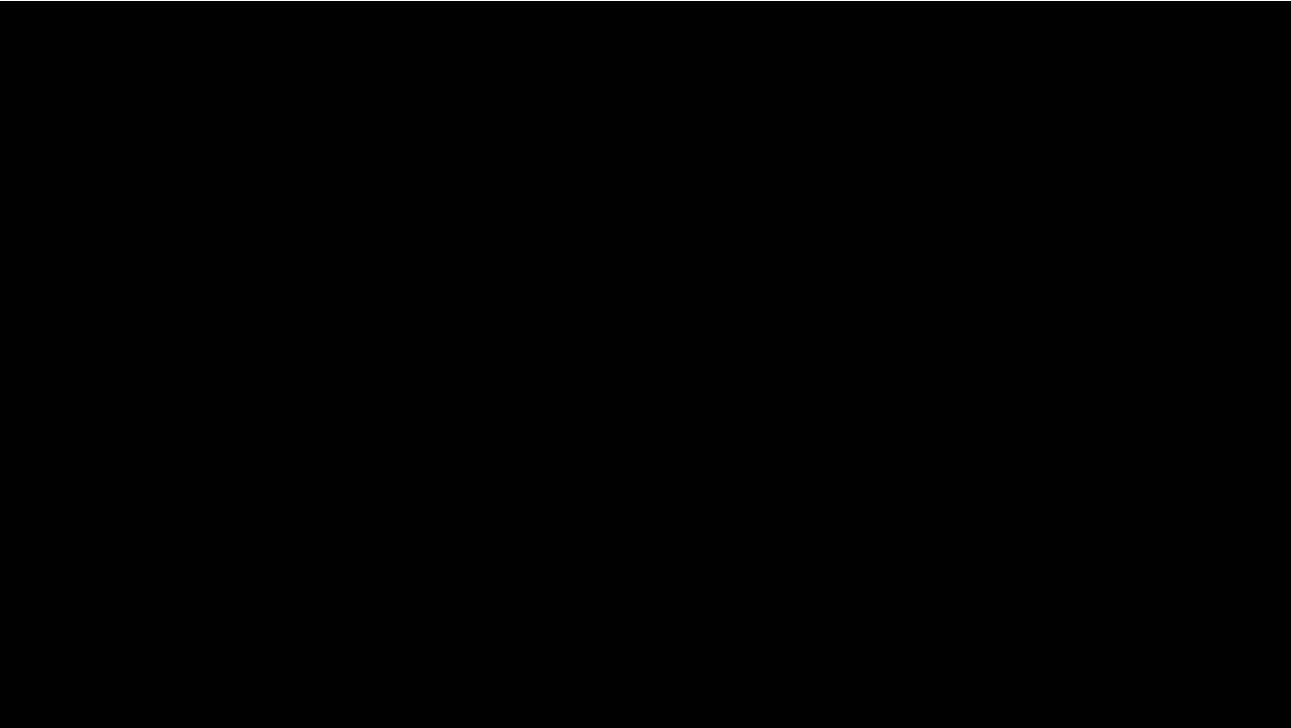
# What ASRS are available? Which is suitable for me?

## Cube Storage



# What ASRS are available? Which is suitable for me?

## Horizontal/ Vertical Carousels

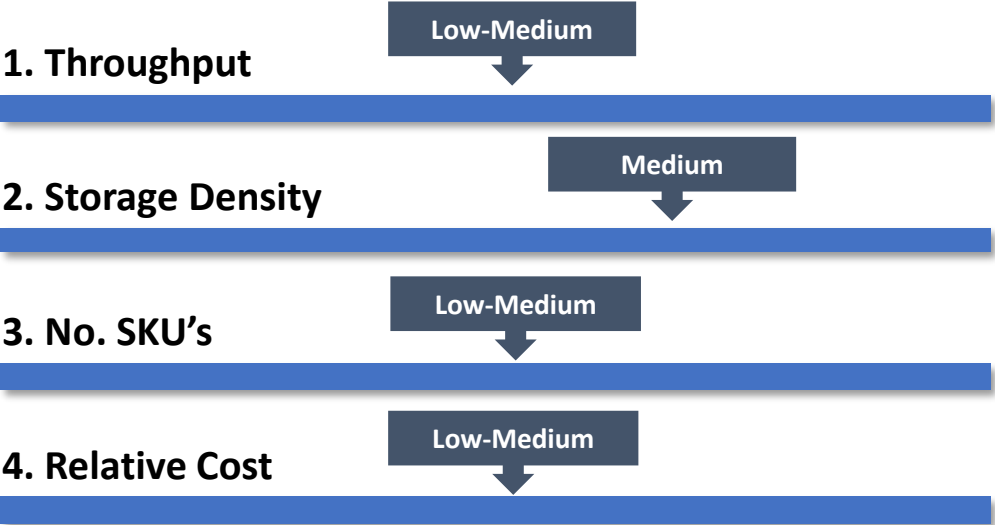
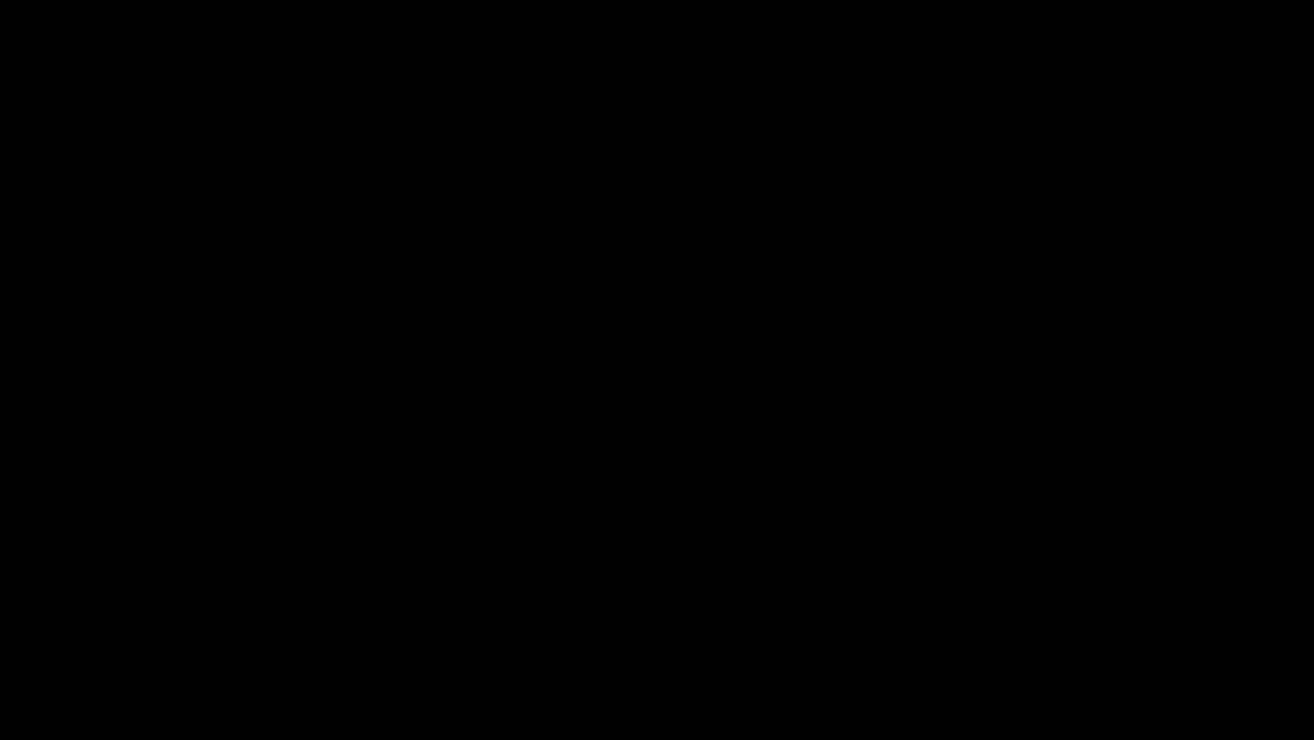


<b>Pallet</b>	<b>Case</b>	<b>Split Case</b>
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# What ASRS are available? Which is suitable for me?

## Vertical Lift Modules (VLM's)



Pallet	Case	Split Case
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