



Facility Space Allocation



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Presented by:
TURN KEY
industrial engineering
services, inc.

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Agenda

- What is Space Allocation?
- Goals of Space Allocation
- The “Rule of Thumb” Method
- The “Inside-Out” Method
- 6 Steps for Inside-out Space Planning
- Q&A

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Facility Space Allocation

What is [Space Allocation](#)?

- Defining or designating a 3-dimensional area for a specific purpose.

- Facility Space Allocation is aka:
 - Space Planning
 - Master Planning
 - Facility Planning

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Goals of Proper [Space Allocation](#):

Maximize

- Production efficiency
- Flexibility for future growth
- Employee safety

Minimize

- Total square footage
- Travel distances
- Unused or poorly used space

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The "Rule of Thumb" Method



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Why ["Rule of Thumb"](#) is not relevant?

- Different equipment solutions
- Varying levels of automation
- Diversified product mix
- Use the cube

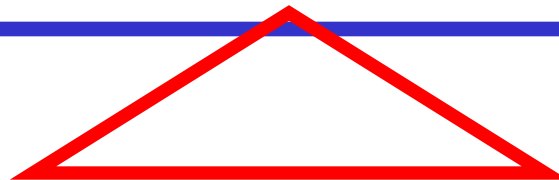
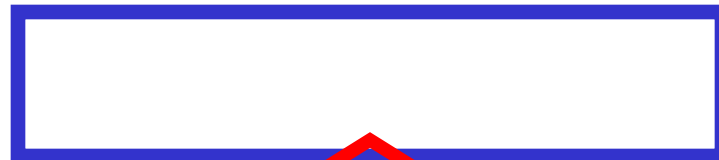
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The “Inside-Out” Method

Start with the process and design the space around it.

The Process



Traditional Method

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6 Steps for [Inside-out Space Planning](#):

1. Define purpose of the space
2. Determine product volume & mix
3. Consider future growth
4. Determine production process
5. Layout production process
6. Design the space around the process

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Example: Garment Sorting Process

1. Define the purpose of the space
 - Sort garments by route/account/user
 - Tie-out garments

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Example: Garment Sorting Process

2. Determine product volume & mix

- Sorting = 61,550 pcs/wk
- Provide Details:
 - % shirts, pants, coveralls, coats, etc.
 - % tunnel vs. pressing
 - # of pieces per route & user

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Example: Garment Sorting Process

3. Consider future growth

- Current Sorting = 61,550 pcs/wk
- 5% annual growth for next 10 years
- Future Sorting = 100,258 pcs/wk

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Example: Garment Sorting Process

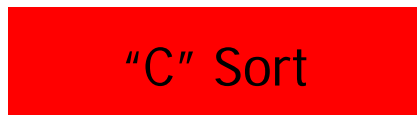
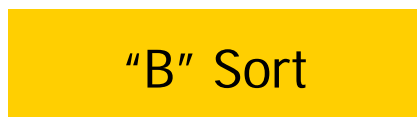
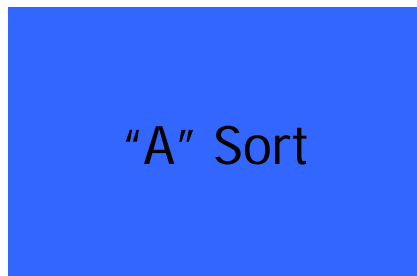
4. Determine production process
 - Manual *vs.* Automated Sorting
 - Single Level *vs.* Multi-level System
 - Day Lot *vs.* Wash Lot
 - Auto *vs.* Manual Tie-out

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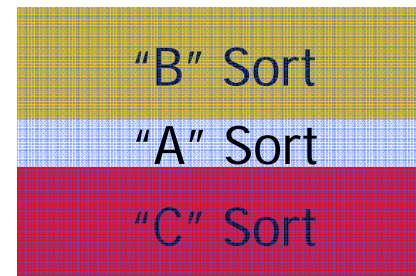
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Example: Garment Sorting Process

Single Level System



Multi-Level System

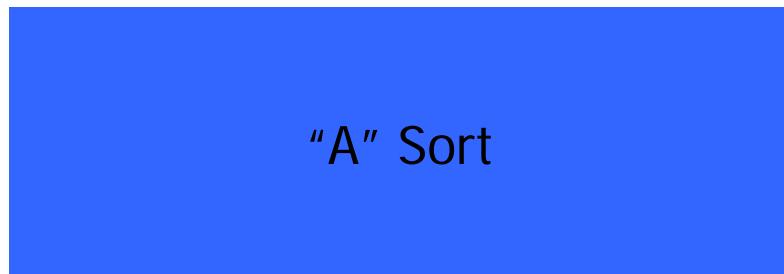


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Example: Garment Sorting Process

Day Lot System

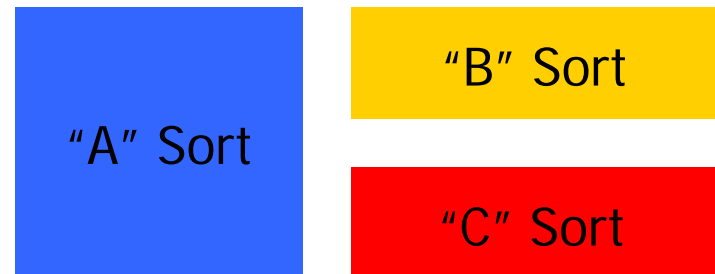


"A" Sort

"B" Sort

"C" Sort

Wash Lot System



"A" Sort

"B" Sort

"C" Sort

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Example: Garment Sorting Process

5. Layout production process

- Small Space – Layout on plant floor
- Large Space – Use scaled drawings
- Sweat the details!
 - Include personnel, carts, control panels, building columns, etc.

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Example: Garment Sorting Process

6. Design the space around the process

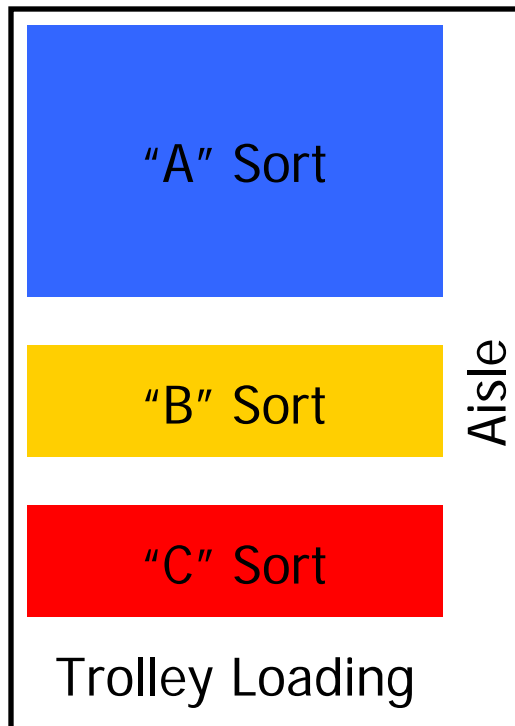
- Include space for access
- Provide adequate clear height
- Maximize employee safety



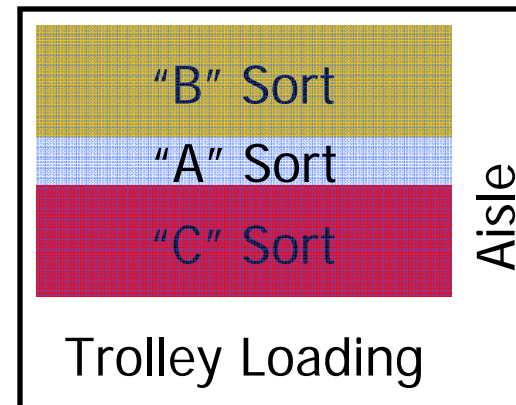
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Example: Garment Sorting Process

Single Level System



Multi-Level System



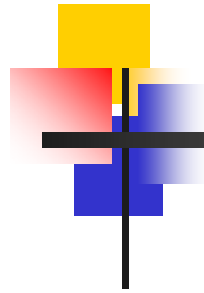


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Conclusion:

Follow the “**Inside-out**” space planning method to maximize efficiency and minimize costs.



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Question & Answer

Thank you for your attention

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