

# Layout improvements

San Aziz

2018-12-18





# Layout improvements

## Layouts improvements

- Improvement with parallel workstations.
- Improvement with mixed model lines.
- Competence development.
- Improvement with cell/group technology.
- Improvement of warehouse layouts.
- Improvement of office layout.



# Layout improvements

## Improvement with parallel workstations

- Parallel workstations increase the work flow.
- Provide flexibility.
- Reduce bottlenecks.



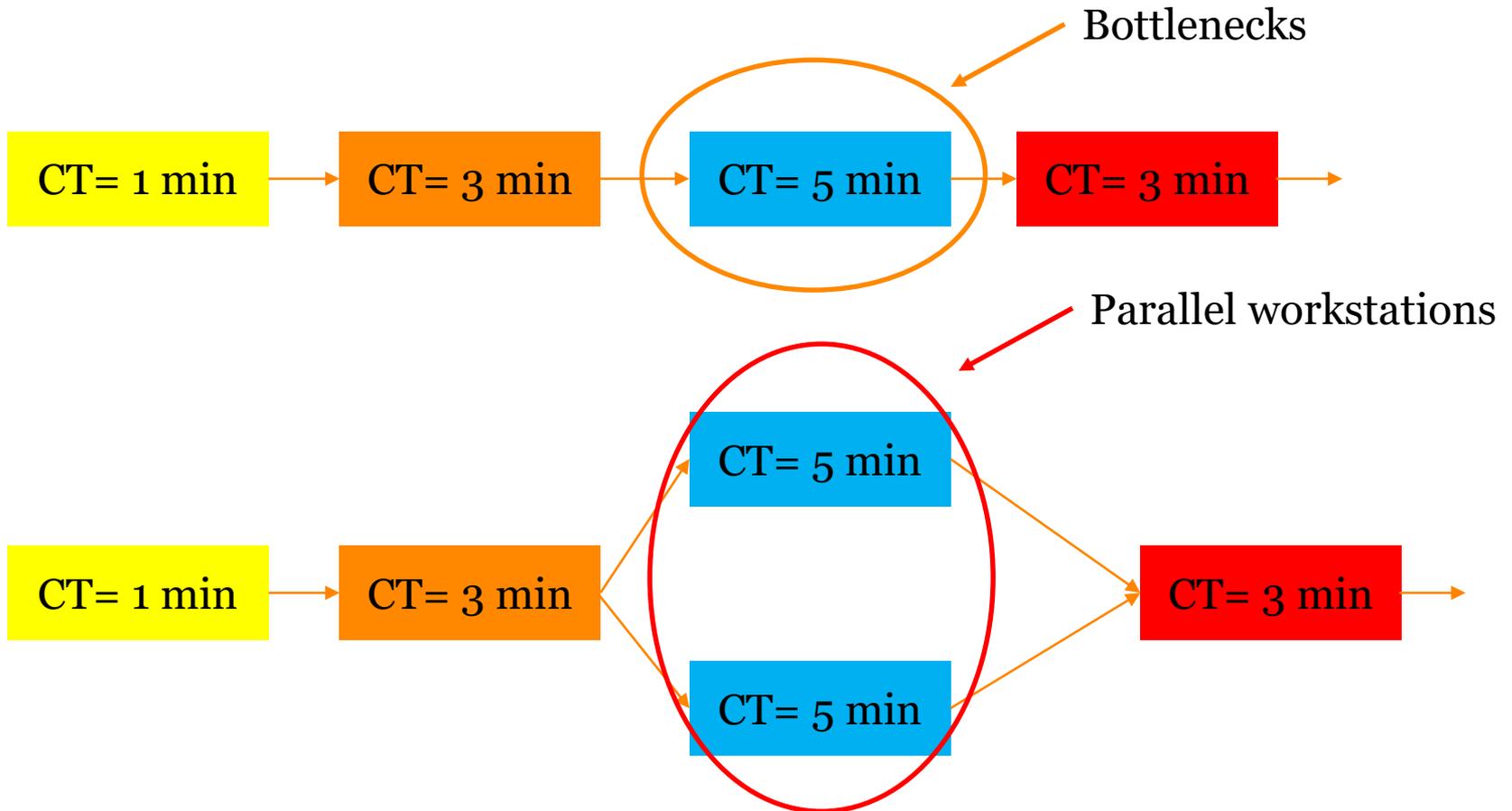
# Layout improvements

## **Example 4: Parallel workstations**



# Layout improvements

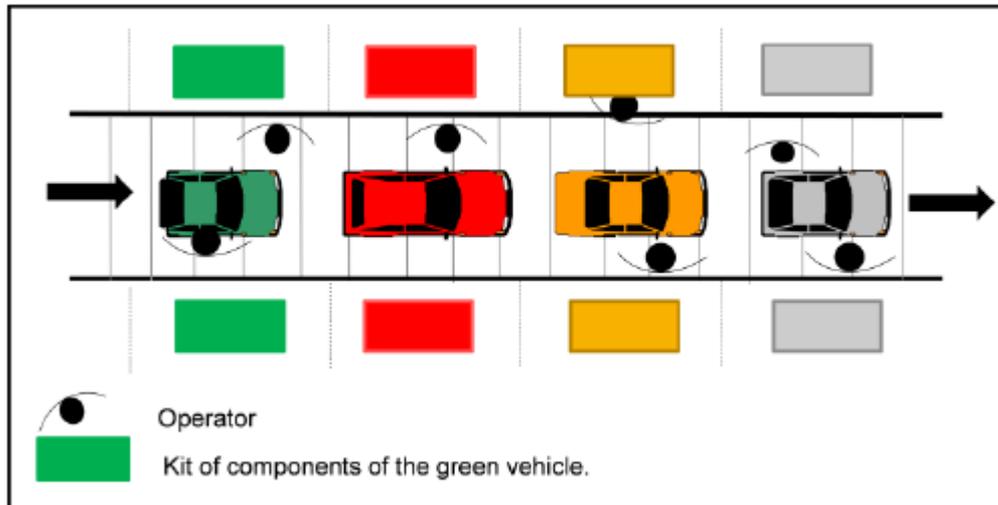
- **Example 6:** Improvement with parallel workstations



# Layout improvements

## Improvement with mixed model lines

- Mixed model line is a line to handle multiple products, without changeover.
- For example cars with different colors.





# Layout improvements

## Competence development

- Workers should be able to perform multiple tasks.
- To help other workers to maintain the flow of the line, so called dynamic line balancing.



# Layout improvements

## Improvement with cell/group technology

- Cell/group technology is a manufacturing philosophy.
- It is about that similar products produces together.
- To take advantages of their similarities, in design and production.



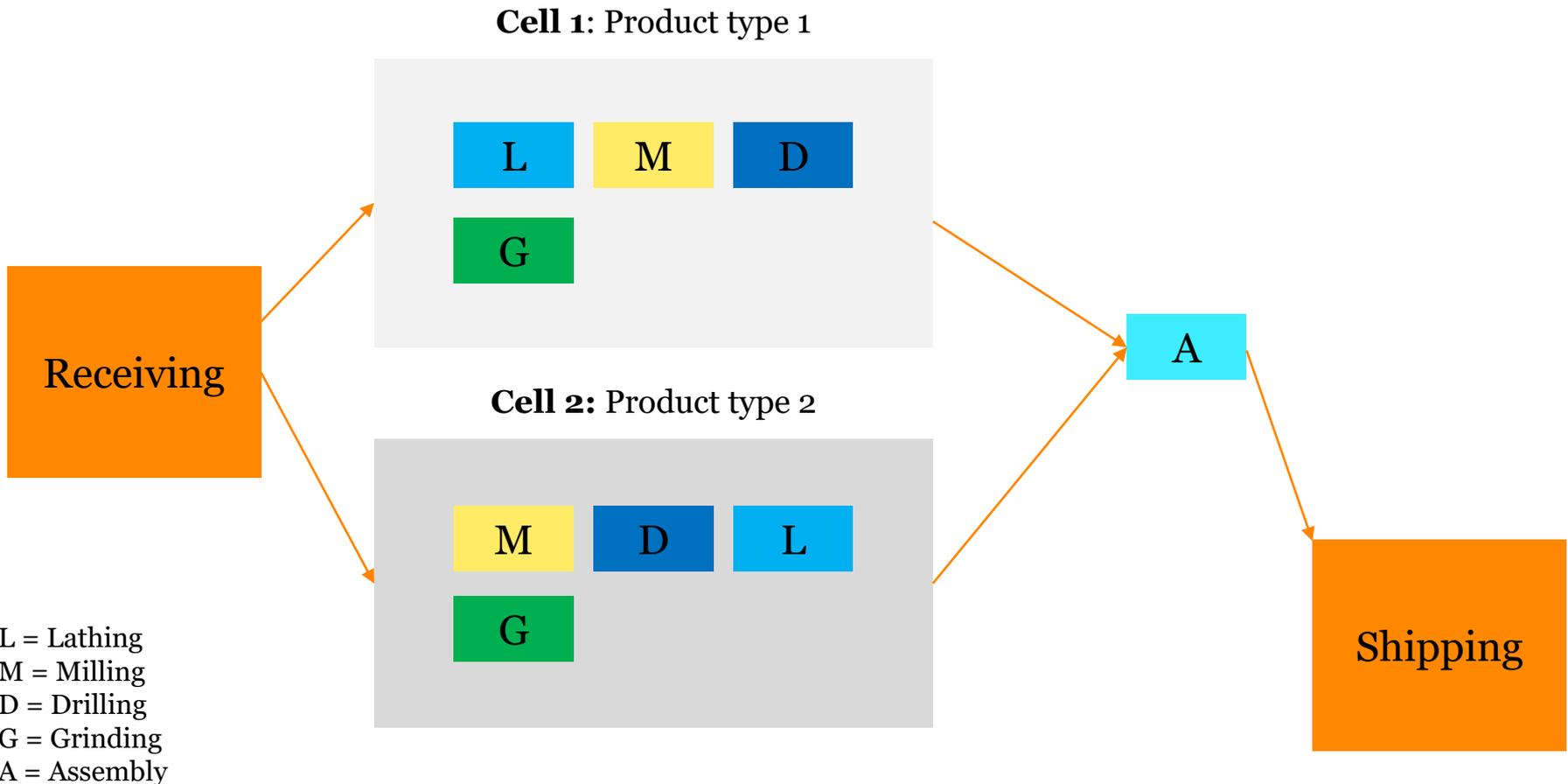
# Layout improvements

**Example 5: Cell/group  
technology**



# Layout improvements

- **Example 5:** Cell/group technology





# Layout improvements

## Improvement of warehouse layouts

- The goal is to minimize picking time and transportation.
- Items that are ordered frequently should be placed close to the entrance of the facility.
- Items that are ordered infrequently should be placed far from the entrance of the facility.
- If items are ordered/sold together should be placed close to each other.



# Layout improvements

## Improvement of office layout

- Electronic communication instead of paperwork, less need of physical flow.
- Cooperation between each other are of course important.



# Pages in coursebook

- 212, 238