

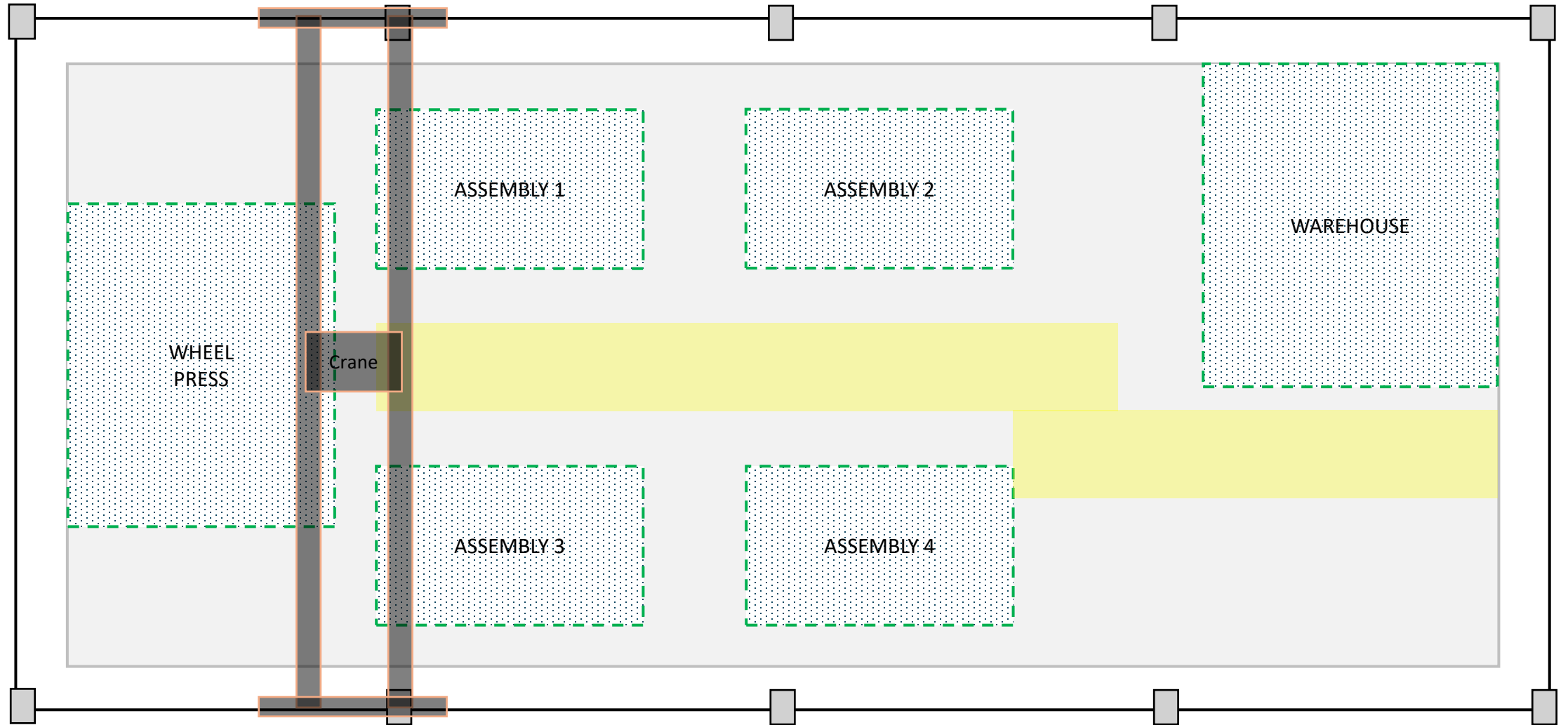
The Siemens logo is displayed in a bold, teal, sans-serif font. To its right is a large, light blue circular graphic composed of several concentric, semi-transparent rings. The word **SIEMENS** is positioned to the left of this graphic.

SIEMENS

Project Velocity: Aurora Express

Wheel Assembly Layout Proposal

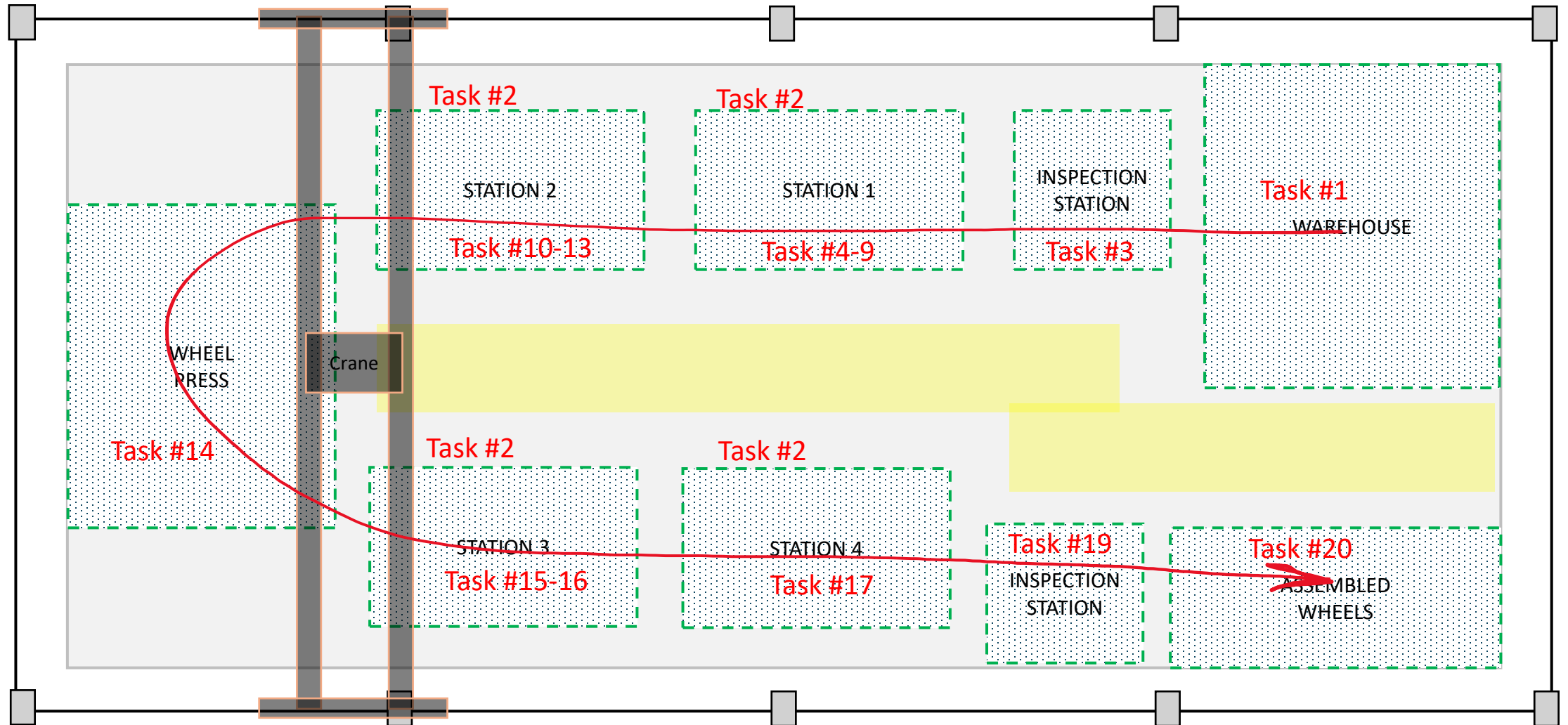
Original Layout



Original Layout – Key Bottlenecks

- **Functional layout**, not optimized for sequential flow.
- **Wheel Press** and Assembly stations positioned separately, causing transfer delays.
- **Inspection step is embedded** in the flow, blocking subsequent tasks.
- No dedicated **finished product area**, leading to workstation congestion.
- **Nonlinear material and worker movement**, increasing travel and waiting times.

Proposed Layout



Proposed Layout – Key Addresses

- Converted into an **assembly line (process layout)** with clear sequential flow.
- **Workstations dedicated by task**, with tools/equipment pre-positioned to reduce setup time.
- **Separate Inspection Station** avoids blocking downstream steps.
- Longest steps (#4–#9) grouped in Station 1 → enables **continuous downstream flow**.
- Added “**Assembled Wheels**” area frees stations quickly.
- Simplifies **QA and supervisory monitoring**, easier to spot and address bottlenecks.

Rationale & Benefits of Proposed Layout

- **Efficiency Gains**

- Sequential flow reduces material transfer delays and unnecessary worker movement.
- Pre-positioned tools and local stock reduce setup time per cycle.

- **Workflow Stability**

- Grouping longest tasks first balances the line, preventing downstream idle time.
- Separate Inspection prevents bottlenecks from blocking Step 4 and beyond.

- **Bottleneck Relief**

- Restructured flow reduces pressure on Step 14 (Wheel Press), smoothing throughput.

- **Improved Oversight**

- Clear workstation segmentation makes it easier for QA and supervisors to monitor progress.
- Faster detection of new inefficiencies or process deviations.

- **Sustainability Impact**

- Less wasted motion and waiting → lower overall resource use.
- Consistent flow enhances long-term productivity without costly automation.