Exercise 9
Conceptual Line Layout

You are now ready to create a block diagram of the proposed new Mixed Model Flow line. You need to have three important documents with you to complete this step:

1. The Mixed Model Process Flow Diagram done previously.
2. The sorted Process Matrix showing commonality by Process.
3. The Resource Calculation Worksheet completed during Exercise 7.
4. The result of Integrating Batch Machines done in Exercise 8.

You will need the following supplies:

1. A set of resource and IPK cards (print and cut).
2. A large workspace.

During this exercise, you will create a block diagram of the proposed Mixed Model Flow line, ignoring for the time being the available floor space, utilities, building columns, etc. These will need to be considered when doing the final CAD-based layout, but not now.

Start at the end of the line, with the PACK process, and lay out the resource cards in accordance with the Mixed Model Process Flow Diagram, working upstream. Optimize the flow based on the highest volume processes. Decide if a process will work in a sequential flow, in parallel as “single station build” workstations, or in some hybrid arrangement.

Hint 1: Analyze the work content variability for each process, to see if it merits breaking the process into separate cells or sub-lines by work content.

Hint 2: The machine in the PACK process is a taping/wrapping machine. Every finished unit must go through this machine.

Hint 3: The TEST process work cannot be divided. The entire test will be done on a single machine.

Hint 4: A Supermarket card is included for a reason. Where does it go? Why?

Place the desired pull signal method between each workstation and/or each process.

Remember to submit a clear photo to the Lean Design Studio to get credit for this activity.