A Production Game

The factory and the product:

1. The factory consists of five work centers, WC1, …, WC5, arranged in a line.
2. Each work center has a worker assigned to it.
3. The factory produces a single product that must be processed through WC1, …, WC5, in order.
4. There is variability in the processing time of each unit at each work center.
5. Units can only be positioned directly in front of each worker and they *cannot be stacked up*. (Hence if the worker at WC3 has finished a unit, but the worker at WC4 is still processing a unit, then the worker at WC3 cannot start on a new unit even if the worker at WC2 has finished one.)

The starting conditions:

1. There is at least one day's worth of raw materials.
2. The work centers are idle.

Tasks of the game:

1. Estimate how many finished products can be produced in one day. (One day is one eight hour shift of factory time, which equals *five minutes* of game time.)
2. Play the game and record the actual throughput.
3. Identify the main source of problems in this factory.
4. Propose some ways to improve the throughput and test these with simulation.