Overcoming Barriers to the Ideal Process

Barrier	Solutions
Missing Information • May be the result of long lead times, and cause of longer lead times (Catch 22)	• Require all information from the customer before the job launches (don't enable bad behavior) • Put in hard stops that don't allow partial information (e.g., online hotel reservations)
Inaccurate Information	• Use menus where a small number of choices exist • Only collect the information you need • Clearly define the information you need • Create a review process with the customer before the job launches • Create and report on measurements for information accuracy
Assumptions • Assumptions are usually the result of incomplete information, or information that does not arrive when it should and add defects to the process	• Get the right information at the right time
Poor Information Flow • Contributing factors: batching, varying employee performance levels (takt time), distance and physical structure, lack of trust (*I don't trust you to do this job correctly*.), control issues (*This is mine, you can't have it!*), defects/errors, past practice	• Eliminate non-value added steps • Eliminate batching (see Batching Q&A) • Combine tasks or functions to reduce handoffs and waits • Ask and challenge responses to "Can fewer people perform more steps in the process?" • Shift roles and responsibilities to address high service flow (e.g., "Bus!") • Give permission for people to take on more process steps • Provide training to help people take on new responsibilities • Identify parts of the process that can be done at the same time (concurrent) • Provide clear guidance so that Collect Make sure clear, accurate information is gathered at the earliest possible step in the process • Document standard work and note exceptions to the typical process • If the structure is creating information silos, clarify process requirements for those upstream and downstream. Also move people closer together to enhance communication and collaboration. • Co-locate work to reduce motion and transportation • Are there significant variations in the time it takes employees to perform the same task (takt time)? • Eliminate or reduce batching • Solve the root cause of problems • Automate process steps where possible and appropriate

Batching Q & A

Q: What is Batching?

A: Processing multiple work items/products at a time. Batching means you wait for a certain amount of items (i.e., batch) or time before you perform the next steps in the process. Batching can contribute to wait time for our customers when we effectively hold up work that is ready to move to the next step in a process while it waits for the batch to complete. Batching often leads to additional non-value added activity just to keep track of batches.

Q: Under what conditions is batching OK?

A: Batching is effective when there is a high "switching cost" in setup time between activities and larger runs reduce unit cost.

History Lesson: Single Minute Exchange of Dies (SMED) and Setup Reduction

- When a line needed to start producing a different car model, switching the dies took between12 hours to a few days to complete
- Single Minute Exchange of Dies was a technique the allowed Toyota engineers to reduce the changeover time to less than 10 minutes – reducing the effective lot size to one vehicle!
- When setup took multiple days to complete, Toyota had to produce Large lots of a given car in order to keep production costs down
- This also leads to high inventories!

Why do we Batch?

- In service environments, batches are often used because functions aren't co-located and moving one item at a time would be cost prohibitive
- Logging in and out of systems can impact productivity – so our team members complete large batches while they are logged in to a particular system
- When we perceive there is a cost to switching tasks, we will batch in our current task

The Solution

- Remember: batching is non-value added activity!
- Setup Reduction prompts us to address the root cause of high switching costs
- Sometimes we batch for no good reason
- Creating work cells and combining tasks into fewer people can reduce handoffs – and significantly reduce the need to batch