A New Way to Approach Meat Plant Management

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Keys to Success

- Focusing improvement efforts where they will have an immediate effect on the bottom line.

What is our goal?

Make more money, now and in the future.

- Without jeopardizing family life.
- Without hurting our employees.

What we found: Increasing sales has a 2.7 times higher impact on the bottom line than simple cost cutting.

Common Problems

- Overtime and its cost
- Bad human relationships
- Customer complaints
- Quality problems
- Cheating on HACCP??
- High levels of stress
- High need for capital investment

What to Change?

- Is doing extra set ups or cleans ups good for your bottom line?
  - Why or why not?
- Is making *all* your people work *all* the time good for your bottom line?
  - Why or why not?

What is the impact of reducing cleanups/setups?

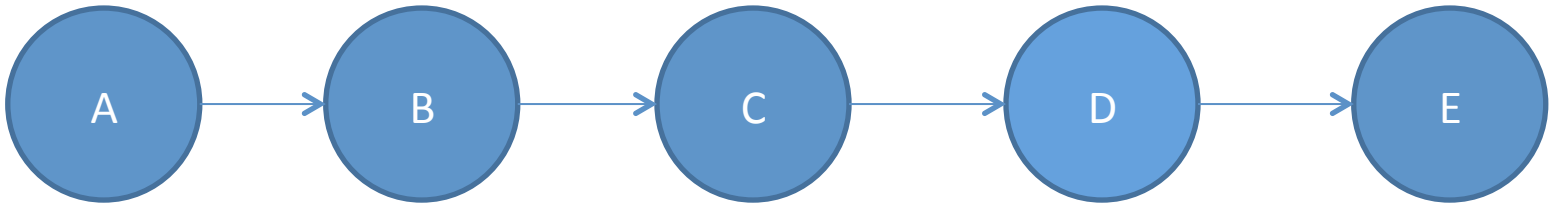
- We run larger batches…
  - Slaughter once or twice a week
  - Larger runs in the sausage kitchen
- What is the impact of large batches?

Why are large batches a problem?

- Customers wait longer for finished product.
- More overtime is used to make up for variability in processes, people, and machinery.
- Problems constantly move around the plant.
- Constant moving and variability cause managerial and employee stress.

Why is running large batches a problem?

Emergency?? Emergency?? Emergency?? Emergency?? Emergency??



When we run large batches, we create artificial waves of work.

What happens when an employee is sick?
A machine breaks down? Murphy strikes?

Saving Cleanups…

- Does saving cleanups make you more money?
  - Maybe…
  - Only under certain conditions that we will discuss.

What to change?

- What happens when we try to make everyone work all of the time?

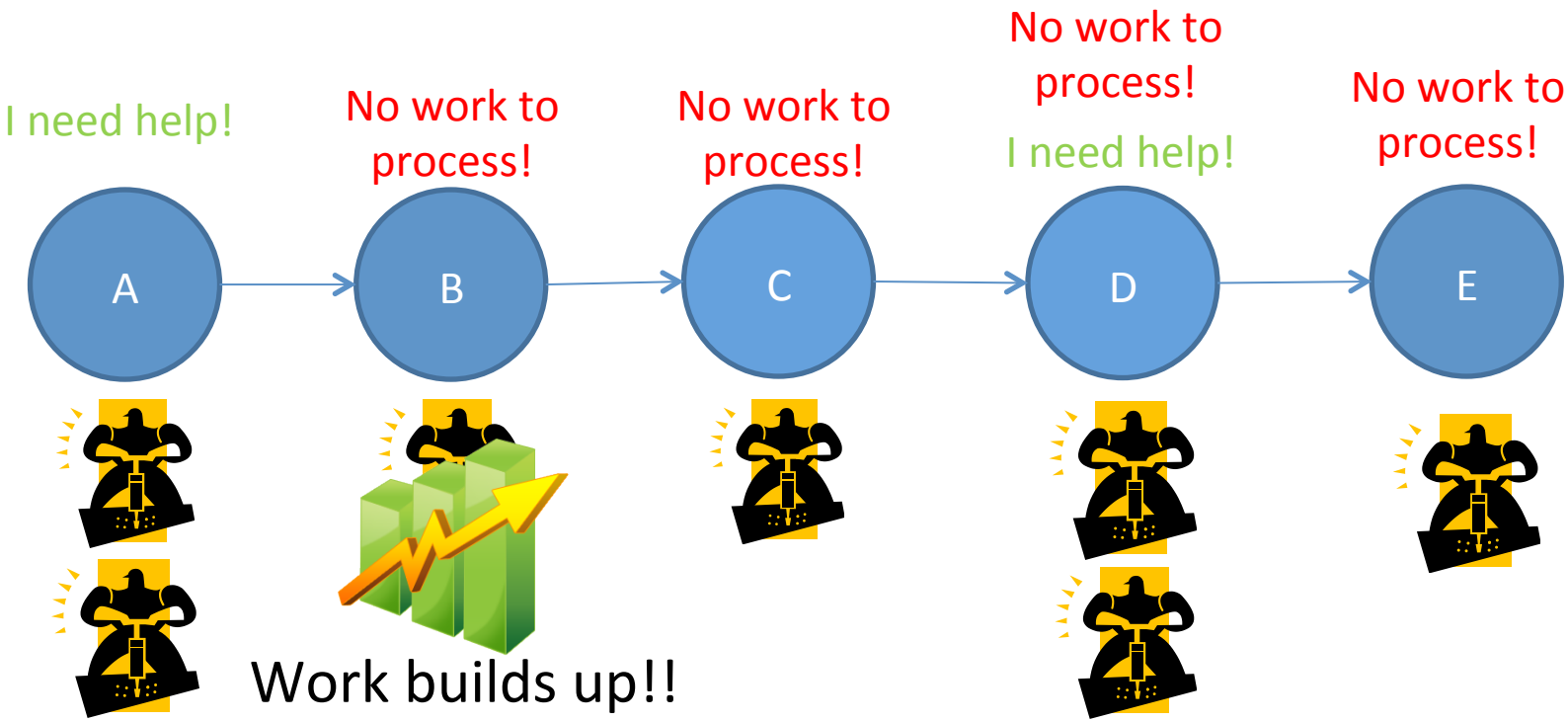
Does keeping people busy make you money?

Don't stand around, go help at D!

Don't stand around, go help at A!

It's stuck at B…

Where is my order?!



What to change?

- Just because someone is working does not mean that you are making money off of them.
  - Activation
  - Utilization

Why is making people work all of the time a problem?

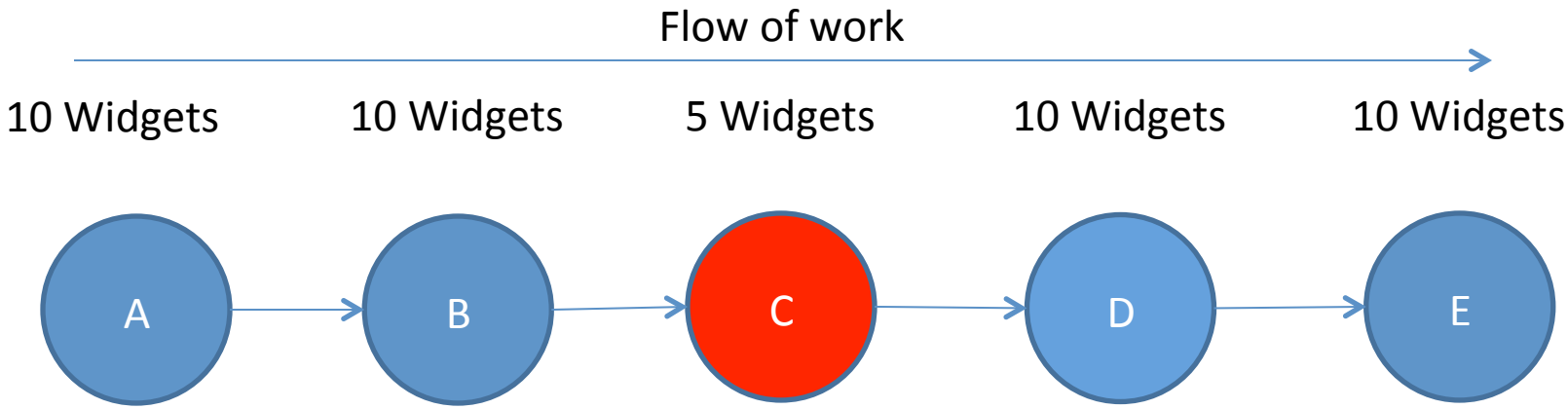
- The result of making people constantly work:
  - Stress
  - Bad human relationships
  - Employees find work to do (regardless of whether it makes you money or not)
  - Employees do not show initiative/have no idea what the priorities are
  - Spreads managerial focus too thin/ your quality of life and ability to make money is at stake

Describing the meat plant system

- You need to kill it before you grill it!
  - You need to take more than one action to get a finished product.
  - You have a general direction of flow.
  - You have variability in your machinery, people, processes.

What stops you from making more money?

- You have a constraint!



What is the capacity of this system?

Step 1: Identify the Constraint

- The constraint should be your point of focus.
  - How can we identify it?
    - Where, if you had more capacity, would you be able to produce more out of your plant?
    - What process has the least capacity in your plant?
    - Where do you consistently run the most overtime?
    - Where do you have the most meat waiting to be processed?

Step 2: Exploit the Constraint

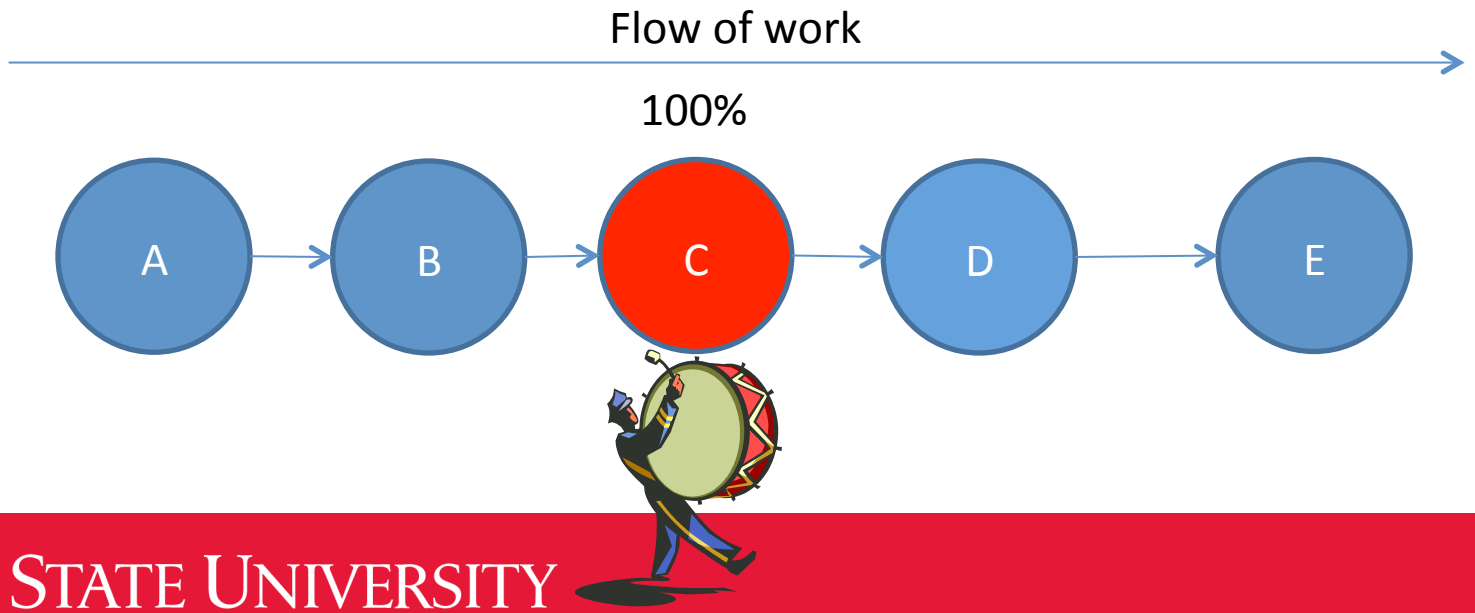
- Is your constraint always busy?
  - Do you leave your constraint idle because you are busy with something else?
  - Are the products that you put through your constraint making you the most money?

Step 3: Subordinate Everything to the Constraint

- Focus on keeping the constraint busy, not your people.
- Don't measure employees based on their activation!
  - Reward activities that keep the constraint busy!
  - Reward a style of work that says, when work is available, work as fast as you can. When work is not available, get ready for when work is coming.

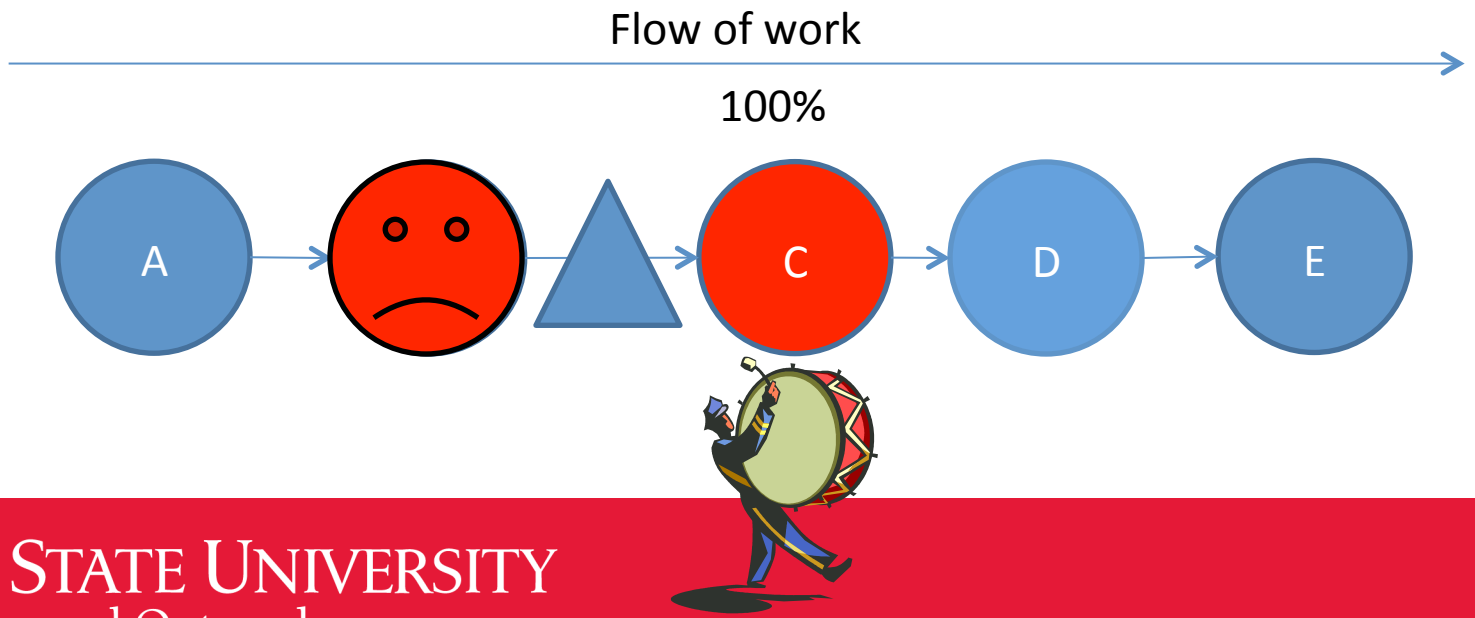
What should we change to?

- Set up the drum (the constraint)!
  - Schedule work according to the constraint or bottleneck!



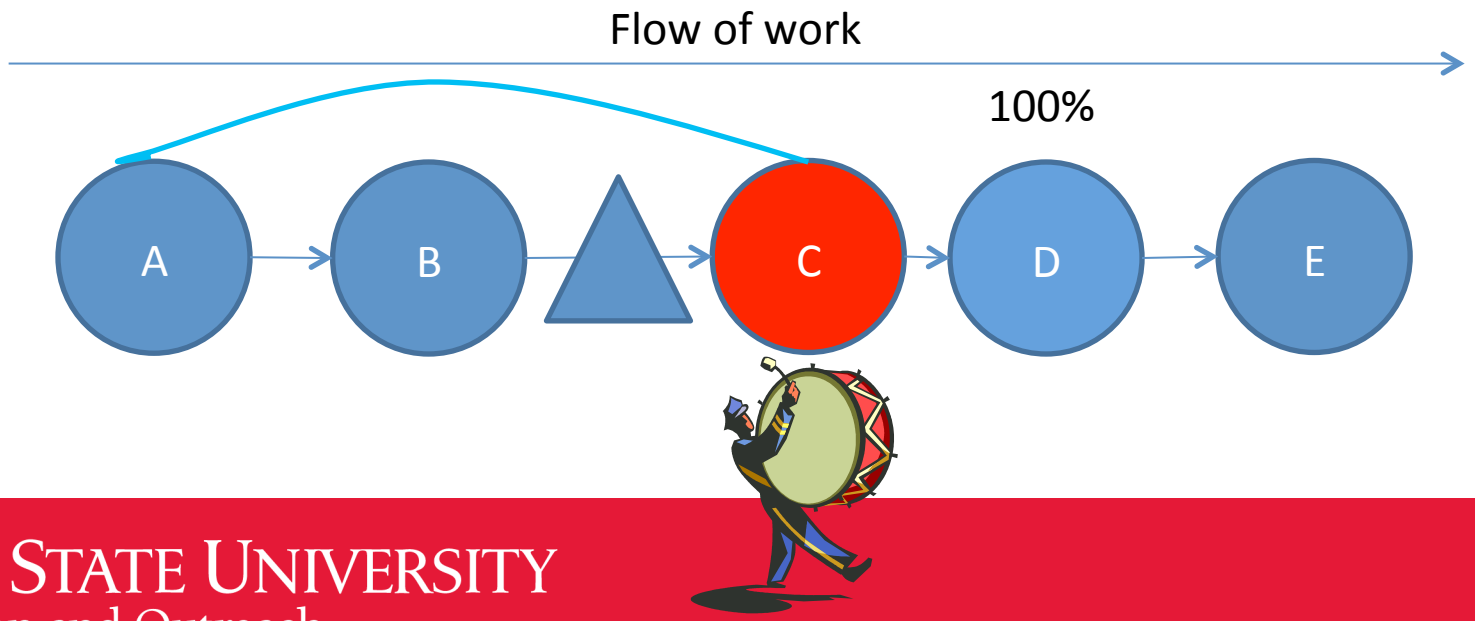
What should we change to?

- Create a buffer!
  - The buffer is set up so that there is sufficient work for the constraint even if something goes wrong.



What should we change to?

- Tie the rope!
  - Only release work at the pace that the constraint is able to process it.



Step 4: Elevate the Constraint

- Increase the capacity of your constraint.
  - Time to invest in new equipment?

Step 5: If you break your constraint, go back to the beginning.

- Don’t stop improving, find the next constraint and repeat the process!

The real world?

- Official Locker; North Central Iowa
  - Too much overtime
  - Too much employee turnover
  - High stress
  - Required significant capital expansion to improve the business.
  - Variability (unreliable employees, unreliable customers, unreliable machinery) was killing the business.
  - Low profits

Solutions

- Step 1: Identify the Constraint
  - Difficult at first. This plant only slaughtered once per week. The bottleneck shifted day to day depending on where the previous weeks beef and hogs were in the plant.
  - We decided to move to daily slaughter to smooth flow through the plant.
  - The cooler ended up as the constraint or bottleneck in the plant.

Step 2: Exploit the Constraint

- We set up systems that were designed to keep the cooler full at all times.
  - What happens when customers don't show up?
    - We have a buffer of animals ready to slaughter and enter the cooler
  - How can we squeeze more dollars out of the system?
    - Choose animals (hogs) that move through the cooler more rapidly. Generate cash faster.

Step 3: Subordinate the Constraint

- Never accept more animals than the constraint can process.
  - This means that some people will be idle some of the time…
  - It is okay of non-constraint resources are idle some of the time.
  - Employees focus on keeping the cooler full, not working all the time.

Overall Solutions

- Move to slaughter everyday
  - Smooth flow through the plant
- Keep employee placement stable.
  - Constantly moving employees around undermines productivity and makes it impossible for employees to be proactive
- Strive for smaller batches
  - Smoother flow through the plant. Faster service to customers.

Test I

- A worker, who is paid $15/hrs. (+ benefits), stands idle at the sausage stuffer. How much is it costing the meat plant to have this worker stand idle?
  1. $15.00/hr. + benefits
  2. As long as we don't know if the sausage stuffer is a bottleneck or non-bottleneck, we can't determine the damage on the plant.

Test II

- A new sausage stuffer ($20,000) will stuff sausage twice as fast and require half the labor. Labor savings will exceed $10,000/yr*. What will be the payback period?
  1. 2 yrs.
  2. Until we know if the resource is a bottleneck or not, we don't know what the payback period will be.

* Labor savings rarely means we actually fire someone. It usually means we use less labor *at that resource!* Additionally, would we want to fire people, even if we could?

Test III

- Where will saving cleanups and increasing production translate into bottom line results?
  - We need to save cleanups and labor everywhere in the plant.
  - Only saving cleanups at the constraint will have an effect on the bottom line