Henry Ford Health System

all for you

PDCA Domino Exercise

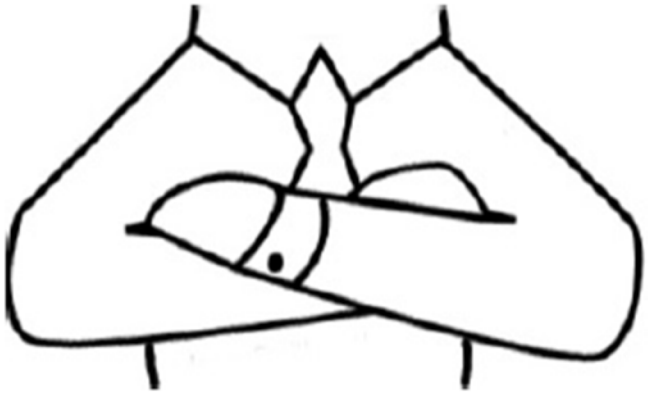
Transformation Consulting

02.13.2020

The Importance or Routine

A QUICK EXPERIMENT

Take a moment... please cross your arms.
Then re-cross them the other way.



How did it feel the second time compared to the first? → For most of us the second time feels odd. You have to consciously think about it and be more deliberate.

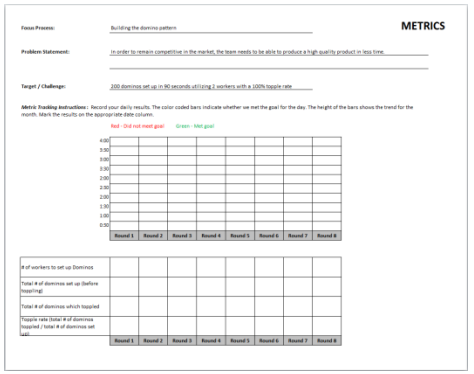
What would happen if you practiced folding your arms the other way every day? → It would become normal; something you can do without thinking about it.

Use Huddling to Create an Improvement Routine

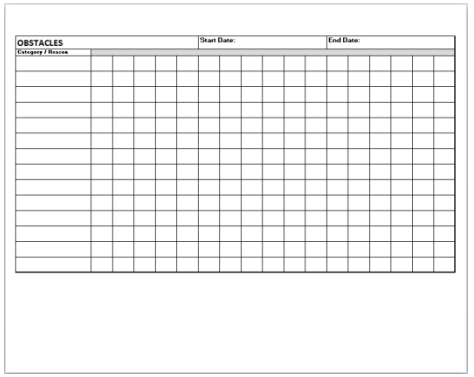
The huddle revolves around 3 simple sheets of paper.

Together, these papers provide a structure for methodically working toward your challenge.

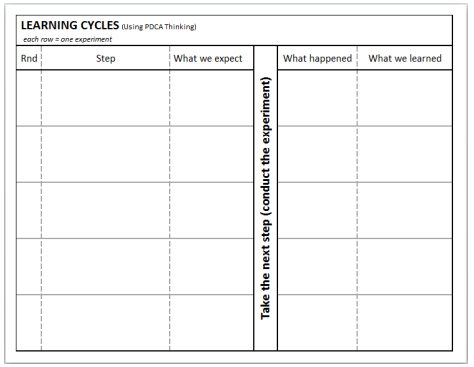
1. **METRICS**



2. **OBSTACLES**



3. **LEARNING CYCLES**

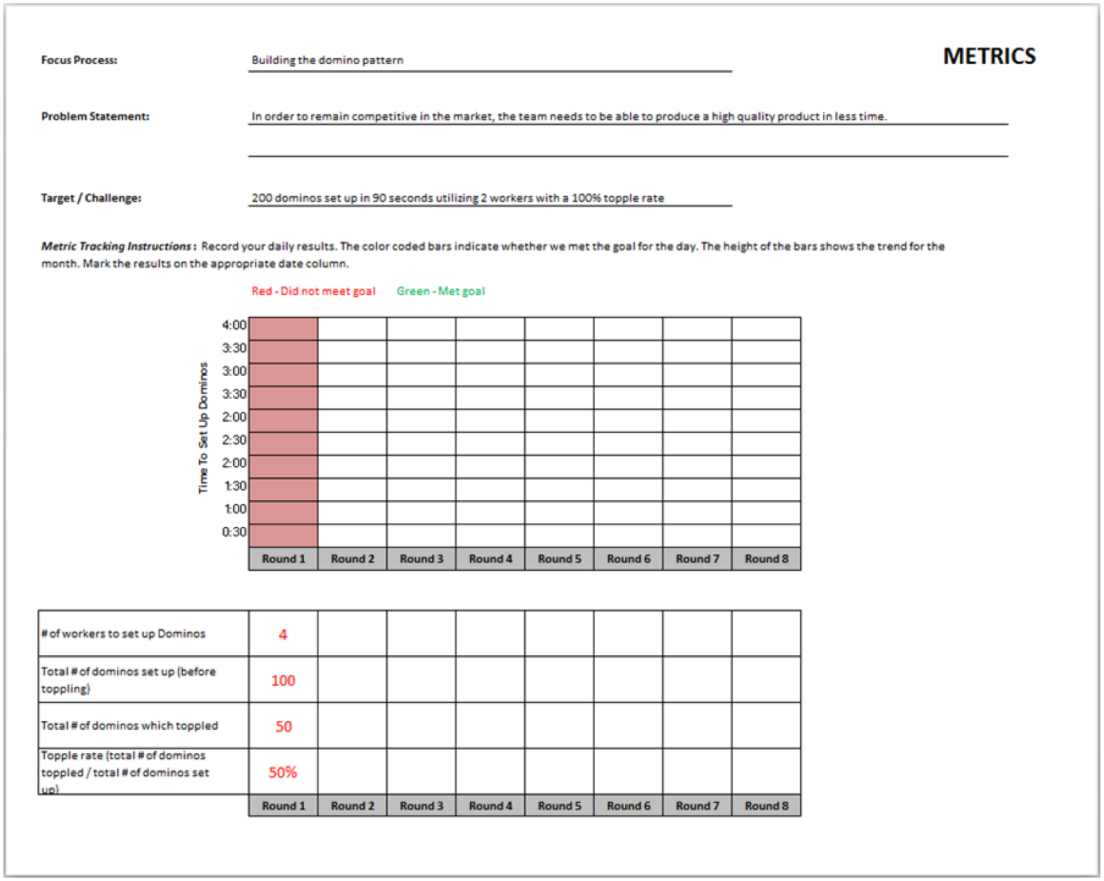


How To Use the *Metrics* Sheet

<u>Good News!</u>
You've Already Done it!

The purpose of this sheet is to:

1. To specify the Process, the Problem, & the Challenge
2. To provide **<u>visibility</u>** to everyone as to how the process is performing on a daily basis



METRICS

Focus Process: Building the domino pattern

Problem Statement: In order to remain competitive in the market, the team needs to be able to produce a high quality product in less time.

Target / Challenge: 200 dominos set up in 90 seconds utilizing 2 workers with a 100% topple rate

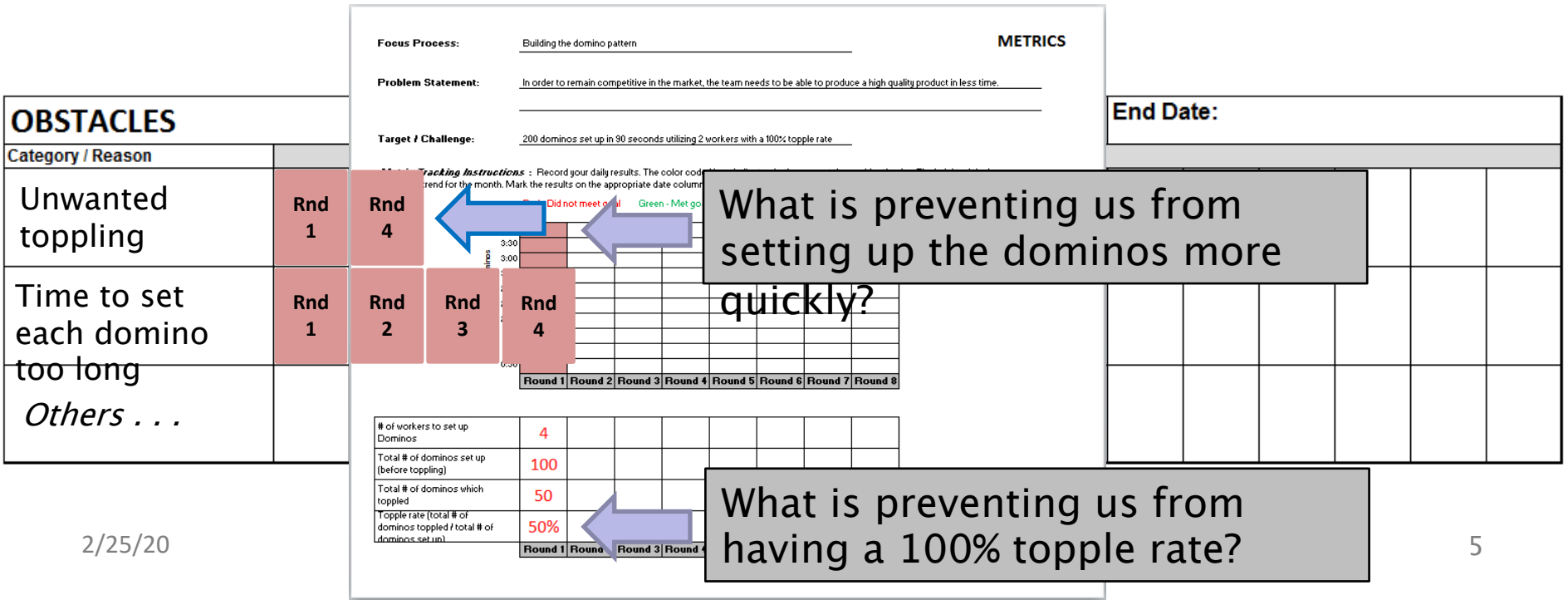
***Metric Tracking Instructions*:** Record your daily results. The color coded bars indicate whether we met the goal for the day. The height of the bars shows the trend for the month. Mark the results on the appropriate date column.

Red - Did not meet goal Green - Met goal

# of workers to set up Dominos	4							
Total # of dominos set up (before toppling)	100							
Total # of dominos which toppled	50							
Topple rate (total # of dominos toppled / total # of dominos set up)	50%							
	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7	Round 8

How to Use the *Obstacles* Sheet

1. Each round that your team doesn't hit your challenge, ask the question "what is preventing us?"
2. Document the answer(s) to that question along the left hand side of the "Obstacles" sheet. These are **obstacles** to achieving your challenge.
3. Each round that a specific obstacle occurs, color in another cell in that row and write the round # in that box.
4. Choose one obstacle that the group is going to focus on eliminating first.



The *Learning Cycles* Sheet

1. You've chosen an obstacle to focus on eliminating. Seek to understand what the root cause of that obstacle is.
2. Decide on the next step your team will try in order to reduce or eliminate the root cause of this obstacle. Document the step and your expectations.
3. Implement that step in the next domino round and then document the outcome along with your learnings. What you learned should influence your next step.

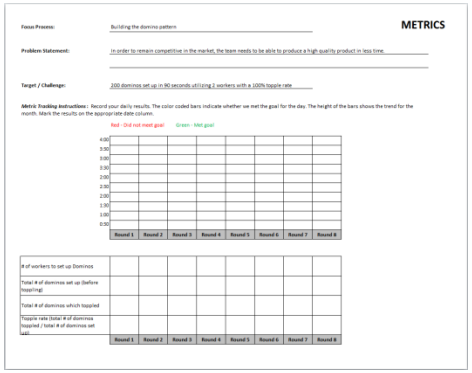
LEARNING CYCLES (Using PDCA Thinking)

each row = one experiment

Rnd	Step	What we expect	Take the next step (conduct the experiment)	What happened	What we learned
2	Remove neckties	No Unwanted toppling		Unwanted toppling due to wristwatch	All dangling accessories need to be removed
3	Remove all dangling accessories (watches, necklaces, etc.)				

To Reinforce, Think of the Sheets This Way

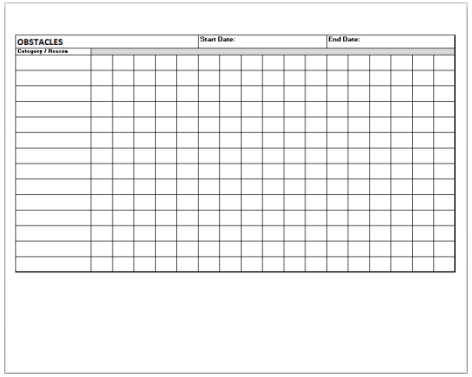
METRICS



What's the process, problem, & challenge?

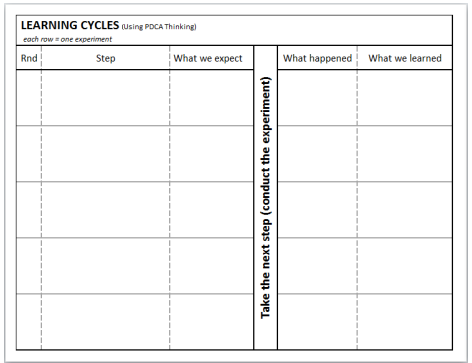
What's the current performance of the process?

OBSTACLES



What's preventing you from achieving the challenge?

LEARNING CYCLES



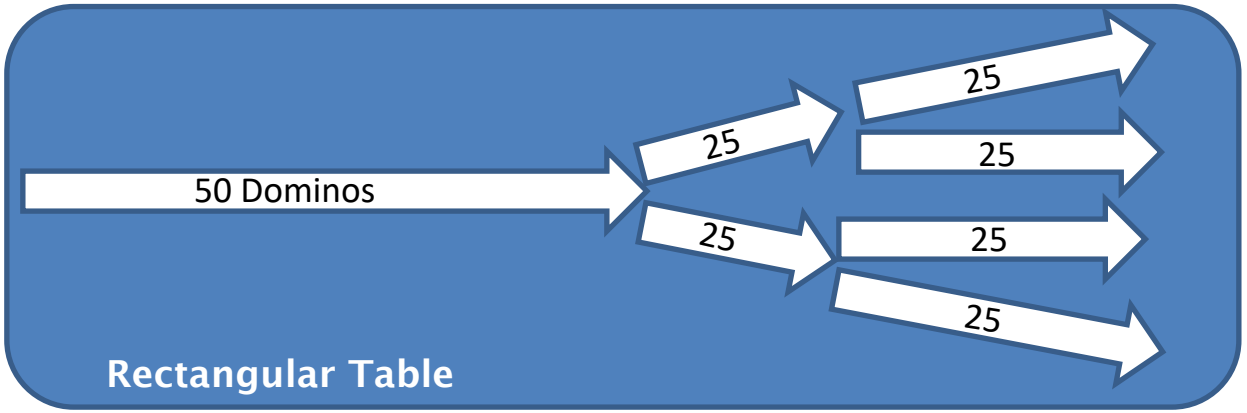
What's the next step to eliminate your selected obstacle? And. . .

What did you learn by taking that step?

Instructions for Round 1

- First, Number off! 1, 2, 3 ….
- Each table will work together to build a product for our company's customers. Our product for this exercise is a completed domino pattern shown in the picture below.

- Customer Requirements & Rules:
  1. You must produce the pattern below with the quantities shown below
  2. Use as many as 4 team members for up to 4 minutes in order to produce the pattern
  3. At the end of the 4 minutes, count how many dominos were set up
  4. Next, you must topple all of the dominos by only touching the first one
  5. Next, gather your remaining metrics and document it on your Metrics sheet
  6. Return your dominos to the starting position when finished



Starting Position for Each Round

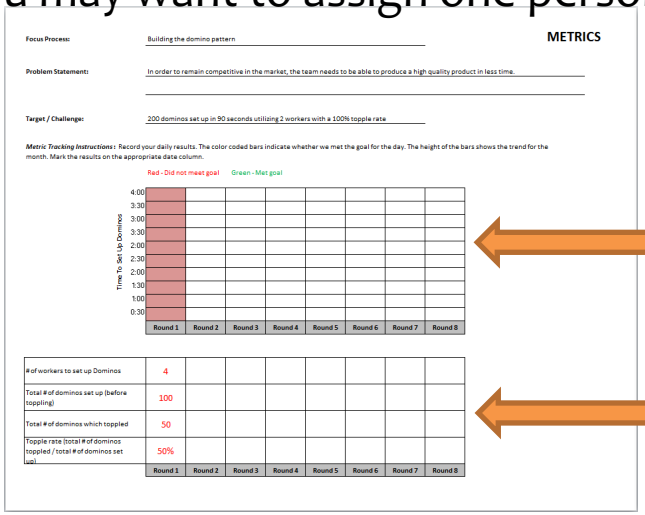
- 4 rows, with 50 dominos in each row (as seen below)
  - Must be in this exact formation, no gaps, etc.

Tracking Metrics

- At the end of each round, the metrics you want to gather are:
  - Time used to set up the dominos
  - # of workers
  - Total # of dominos set up (before toppling)
  - Total # of dominos which toppled
  - Topple rate (total # of dominos toppled / total # of dominos set up)

- Use the sheet in your packet labeled **Metrics** to document this data.

- You may want to assign one person on the team to be the metrics tracker



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Document your **"time" metric** here by coloring in the cells

Document your **other metrics** here by writing a number

Tracking Metrics (continued)

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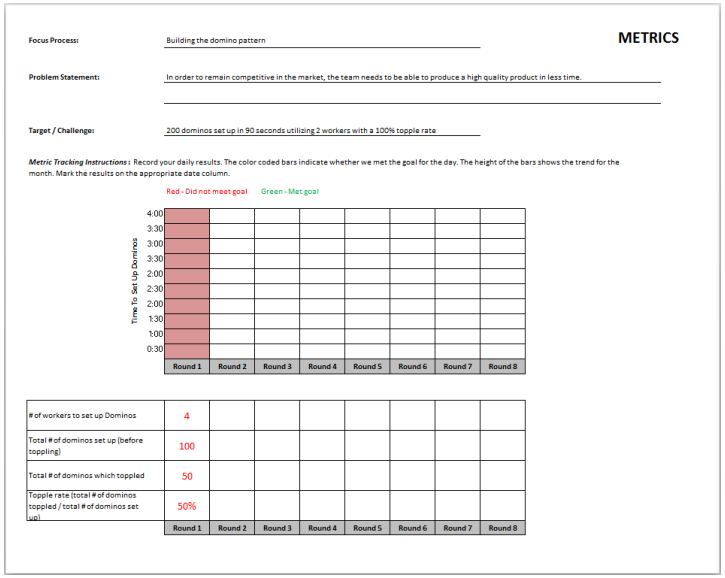

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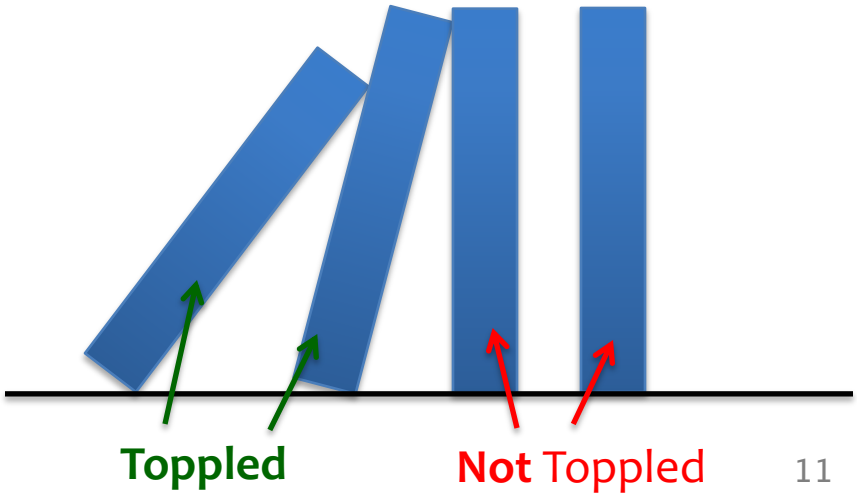

Questions?