

LEAN KATA

Description of the "Flashlight Exercise"

The purpose of the Exercise can vary, depending on the learning's you want to achieve. It is an excellent and simple way to show IK and CK principles, but you will also be able to draw learning's from Teamwork, standard work and other Lean principles!

Necessary equipment for one team (the exercise works best if you have multiple teams racing against each other!):

1 team with 4-6 people

2 Flashlights incl. batteries

1 roll of electrical tape

Timer (Let people use the timer in their smart phones)

A whiteboard or flipchart

Round 1 = Starting point

- One operator does the work. That is to change batteries and light bulb. The criteria or measurement is from the light turns off until it is shining again. The extra batteries and light bulb is placed a few meters from the flashlight. That way the operator needs to move a bit. This operation takes about 60-80 seconds. Low energy in the group!

Round 2 = No cost

- The teams can now make one improvement that is to place the extra batteries and light bulb next to the machine. This time the operation is down to almost half from the first round. Training gives results! Now could be a good time to ask the teams how fast it is possible to do this operation! Most people guess at around 10 sec, but some wild guy (mostly) say 7-8. Have the team agree that about 10 seconds is reasonable! Write the number on the board. Still low energy in the team

Round 3 = Low cost

- "Invest" in more manpower. Allow the team to cooperate, two people on the operation and see what happens! They quickly reach 10 sec and below. Check again how fast it is possible to do this. Explore their threshold of knowledge! The energy in the group is radically higher!

Round 4 = Low cost

- Explain the Challenge "In benchmarking our industry, the best can do this in 2 seconds" (You can of course elaborate on this, why we need to go there and so on) If you've had people not really engaged before, they will now step in to show the others how it's made.... Throw in a roll of tape and ask what they can do with it! No more instructions. Let more people in the group take part in the problemsolving and let the creativity flow! They will now get close to 5-7 seconds, but it's hard to get lower. Multiple experiments just let the try things out. High energy in the group by now! Make a point out of the fact that we now talk about decimals of seconds

Omgång 5 = High cost

- Throw in an extra cap (the black cap on top of the flashlight) That way they have one less part to fiddle with. Allow the teams to race against each other! They will now get to 2-3 seconds. Now try to finish the exercise, it can be really hard.... ;)

Rounding up:

Reason with the group about the learnings. Look at what we can do with simple means. Look at the board and how variation and total time rapidly goes down. What happens in a process when we have that kind of variation? Do they recognise themselves in that curve? Add the idea about the threshold of knowledge.

Reflect back on observations you did during the exercise. The energy in the room from start to Round 3-5. Big difference, why?

This is a quick creative exercise, you can add coaching cycles and the forms for TC, obstacles and so forth, it's all up to you and the time allocated!

It is supposed to be lots of energy, laughs and fun. So as gameleader, push people and get the energy flowing!

We promise, this is an exercise they will remember! Good luck with it!

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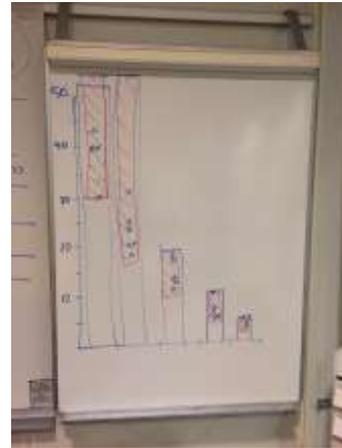
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Materials:



Variation:



Matrix:

	1	2	3
1	47s 35s 37s 34s 31	103s 126s 83s 38s	69s 46s 37s 54s 42s
2	30s 19 25 24s 22	23s 35s 30s 21 8	22s 25 17 19s 25
3	13s 10s 14s	31s 20s 13s	14s 19s 13s
4	11s 11s 10s 9s 8s	11s 10s 7,2	12s, 8,2s 7,6s
5	5s 4s (4s) 3s 3s	4s 8s 25s	5,8s 6,7s 5,0 (7,2s) 2,8
	2,4<	2,3	

7s
Act
Check