

# Lean Workflow Design game

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Acknowledgments: This is based on an exercise I participated in as part of a graduate course many years ago. I no longer know the details of who originated the exercise. The version described here uses card decks the same way, but I've given it the theme of lean workflow design. It also exercises spontaneous leadership, self-organization,

## Setup

### Supplies:

- Two playing card decks that have the same type of backs
- A set of reverse-printed cards (at least 5 trick cards, e.g. red clubs, black diamonds...) with the same backs as the other cards. Obtainable from [CajMagic.com](http://CajMagic.com)
- Room should have a flip chart or white board, for recording the time it takes to sort cards
- Stop watch

Where to get supplies: For trick playing cards see <http://www.magic.org/store/>  
They offer a "Reverse Flush deck" of 20 cards, described here:  
[http://www.magic.org/store/product\\_info.php?products\\_id=1748](http://www.magic.org/store/product_info.php?products_id=1748)

You can get red Bicycle "Rider Back" trick playing cards through the above links. You'll also need a couple decks of regular playing cards with the same backs.

### Timing:

Allow 90 minutes.

World Record: The fastest any team has done this card sorting is 26 seconds. Don't tell the participants this until the proper time, noted in the procedure steps.

### Number of Players: 10 to 15

This is intended to give a challenge in balancing utilisation and efficiency, so about 12 players is ideal. Eighteen was definitely too many – it's been tried with that number! The record-setting team was about 12.

### Starting Conditions:

Session leader places the shuffled double deck of cards face down, as a single stack, on one end of the table (Still do this even if they decide not to use the table – the team will have to move the cards to their desired start place). This starts the timer clock. The deck will initially have only the regular cards, no jokers, no trick cards – just 104 regular cards.

Team needs to agree on one person to signal the session leader when to stop the clock.

### End Conditions (Goal):

Get the cards sorted by rank and suit as quickly and accurately as possible.

End up with one pile for each suit (8 piles in all) with Ace on the bottom and King on top, and the intervening cards in rank order.  
For each error there is a 5 seconds penalty added to the team's time.

### **Rules:**

The team can organize themselves any way they wish to sort the cards as fast as possible. Some or all of the group can participate. When the team is finished, someone must signal the session leader to stop timing the work. For each error in the sorted cards, 5 seconds will be added to the team's time. The team will do two practice runs on their own before the official run.  
If the stop signal is given falsely, the run is over anyway.

## ***Procedure***

### **Explain the Ground Rules**

1. Explain the way the official exercise will be run, and how it will be timed. Explain the conditions of satisfaction and the penalty for errors in the sorted deck.
2. There will be 3 runs – 2 for practice and the last is the official timed one. For each, record these data:

Team's estimated time	Team's actual raw time	Number of errors
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3. Ask the team to give a rough estimate of how long the job will take them. Allow 5 minutes for discussion. If they cannot agree on an estimate, just go ahead without it. (Experience has shown that an infinite amount of time can still be 'not enough' in the opinion of some;-)
4. Have the team arrange the room furniture as they wish.

### **Do the First Practice Run**

1. Shuffle the cards, and record the team's estimate on a flip chart
2. Let the team go through their first run and record the time.
3. Check the sorted cards for errors, and add the penalty for each one found.
4. Tell them the world record for this exercise – 26 seconds.
5. Ask them how this affects their plan for sorting the cards next time. Give them time to discuss changes they want to make in their sorting approach.

### **Do the Second Practice Run**

1. Shuffle the cards, and record the team's estimate on a flip chart
2. Let the team do the second run and record that time. Discuss the effect of any changes they used since their first practice run.
3. Check the sorted cards for errors, and add the penalty for each one found.

4. If they were not using all of the people on the team, ask why. To maximize their speed they will need to find a way to utilize everyone. At this point if they are nowhere close to the record time, encourage them to re-think their approach. Just trying to do the first approach faster is probably not going to work (just like all-night debugging sessions don't work!) Allow them some time to decide how they'll approach the job.

## **Do the Official Run**

1. Secretly shuffle the trick cards into the deck. Use 5 trick cards if you want to keep the same starting conditions that have been used so far, for the recorded times I have collected.
2. Shuffle the cards, and record the team's estimate on a flip chart
3. When the agreed person signals the session leader, the exercise is over, so record the time.
4. Check the sorted cards for errors, and add the penalty for each one found.
5. Ask the team not to tell later teams about the trick cards, so that they won't get an unfair advantage in their score, compared with this team.

## **Discuss what happened:**

### ***Self-organisation***

- Are you happy with the way you decided to organise the work?
- What does this suggest for self-organising your project team?
- When you were told the world record, how did that affect your thinking?
- What other ways could this have been done?

### ***Specialisation***

- Did you have people specialise in particular tasks? Why? Why not?
- Did you keep the same specialties all through, or change them during the sorting?
- Is specialization necessary in your project work?

### ***Utilisation***

- Were you able to utilise everyone? All the time?
- Is being busy the same as being productive?

### ***Other Observations (that relate to agile software work)***

Everyone put the work first. Whatever needed to happen at each point was what guided our actions, rather than what our "job description" was.

It seemed like chaos but we each knew what we needed to do.

Decisions were made at the point closest to the work.

Leadership rotated naturally to the person who had the most compelling idea.

## ***Rules Variation***

As a variant, I have on 2 occasions run additional sets beyond the 3. For the later runs I'd use other variations of strange cards, like putting in the jokers, or the rules cards, but no more than 5 trick cards. This variation was done at a couple of conferences where we had the time to explore the interactions further.

## ***Your Feedback wanted***

I (Nancy V.) would like to hear about your experiences using this game. For about 5 years I have been using it with various Agile teams, and I've seen some surprising patterns – for instance a team composed of all technical team managers who couldn't get their time reduced much below the 3 minutes duration of run #1. My hunch is that they were showing the filtering that their organization uses in promoting people: they kept to a very logical but slow method of initially dealing out the cards.

Likewise, when I added the element of asking them to estimate how long the sorting should take them, it might spark a debate, lengthy analysis, or quick selection of a spokes-person. Whatever happens, it gives you insight into the group's decision-making process.