The Flow Game

**Purpose:** Demonstrate how external pressure and overburden impacts the performance.

**Size of the group:** 8-20 people. Additional people can join in the exercise as observers.

**Materials:** A bag containing 50+ sports balls, preferably different kind (tennis balls, shuttlecocks, ping pong balls, squash balls ..).

**Set-up:** People are standing comfortably in semi-circle, having enough space to turn and move their hands.

**Running the simulation**

The idea is to pass balls from a person to another. Group gets +1 point for every successfully transferred ball. Dropped balls have to be picked up back to the flow. If a ball remains on the floor at the end of round, it is -1 point (“bug”). Facilitator controls the speed of incoming balls.

**SETUP**

Ask people to stand in semi-circle. Choose a volunteer to be stats keeper. Explain that you have different kind of balls that need to be processed. The last person puts ball in a bin and it counts as a point. Rules are visible on flip chart.

- Ball must touch everyone
- Have airtime between people
- Max one ball in hand at any time
- Pick up dropped balls
- Balls on the floor = -1 point
- 4 rounds, each 60 seconds

**ROUND ONE**

Make sure the first person is ready. Start timer and throw new ball in immediately when the person is “free”. Many balls will drop.

Stop at 60 seconds and collects results (Input, Bugs, Result) and tell we need to improve. Collect balls back to facilitator bag.

**ROUND TWO**

Change direction of flow (last person becomes the first, bin moves to new last person). Tell that in order to get more we change one thing: Throw balls in as fast as you can.

At the end of the round, count the results on flip chart and tell that something needs to be done. Collect balls to bag.

**ROUND THREE**

Collect balls and change direction of flow again (round 2 last becomes first, move bin). Throw balls in only when the previous ball has traveled to 4th person. At the end of the round, collect results on flip-chart and tell that we make yet another small change.

**ROUND FOUR**

Change direction of flow. Do not throw any balls in, just hand out the bag full of balls to first person. The first person in system now controls the speed of input. Collect results on flip chart and all the balls back to facilitator bag.
Wrap-up:
Ask people to collect all the balls back to facilitator bag and start wrap-up.

Discussion points in the wrap up:
- What was the speed on the first round? Second? How did it change in 3rd and 4th?
- How busy were you? Ask the first people in process and the last people – there is of course big difference
- How is your real work? Which round represents your typical work day?
- Waste and value? What was value adding work and what was waste? How about “removing waste” – does it help? Waste is caused by overload and not anything wrong in the process.
- Tennis balls vs. shuttlecocks? Flow is faster with “easy” items. Shuttlecocks represent either (a) unplanned work that causes extra effort or (b) valuable but difficult work that requires more processing.
- “Stop starting and start finishing”.
- “Stop incoming work before it makes you slow”.

Common issues:
Round one is a mess as people throw balls around and not to the next person → It this persist for longer that 10 seconds, restart the simulation and remind that ball must touch everyone.

You run out of balls during Round Two → Ask the volunteer stats keeper to refill facilitator bag with balls from done-bin.

My notes:
**Purpose:** Demonstrate the evils of *multi-tasking*

**Size of the group:** 2 or more similar size groups, each group 4–6 people.

**Materials:** Pen and piece of blank paper (e.g. Post-Its) for everyone, stop-watch on screen, flip chart paper for collecting results.

**Set-up:** People are sitting in table groups. Pens and paper in tables, stop-watch ready.

**Running the simulation**

A comprehensive guide for running the simulation is available from Henrik Kniberg at [https://www.crisp.se/gratis-material-och-guider/multitasking-name-game](https://www.crisp.se/gratis-material-och-guider/multitasking-name-game)

The idea is to write names on paper: first round with multitasking, second round without multitasking. One person in each table is writer and everyone else is a manager.

**SETUP**

Ask people how long it takes to write a name. Ask also what impacts the time and people usually say length & complexity of the name, writing materials and writing skills (note: people do not usually mention multi-tasking).

Tell people that we try this out. Ask each table to find a writer and everyone else is a manager. Managers need to get their first name on a piece of paper. Make sure writer has a pen and managers have blank paper and a pen.

**ROUND ONE**

Start stopwatch. Managers say their first name and writer writes names one letter at the time, i.e. moves from a name to another after writing one letter. Managers will eventually get their name on paper, but it takes long time. Collect time to complete one name and time to complete all names. Discuss what happened and how to improve.

**ROUND TWO**

Ask groups to find a new writer and previous writer becomes manager. This time managers want their middle name on paper. Rules change so that the writer completes one name before moving on to next. Start stopwatch and once all names are done, collect the time it took to complete one name (first) and time to complete all names.

**My notes:**
Wrap-up

Kniberg’s document provides one alternative for wrap-up. Here is another approach to evils of multitasking.

Key points

- Multitasking causes terrible delays – although everyone is doing their best!
- Multitasking in knowledge work is invisible and hence difficult to remove.
- It is not only about individual multitasking, it damages performance on team & company level, too.
- Ideal number of parallel task may not be one (..but most likely less than currently)
- Multitasking increases the amount of unfinished work, work-in-progress (WIP)
- WIP is harmful in many ways

  **Investment:** Large amount of WIP is inventory and not producing value. This is bad for financial performance.

  **Learning:** Long feedback cycles == Slow learning. (“We apply learning after all of this is done”).

  **Prioritization:** Once work hits the organization, it is almost impossible to prioritize without damage to other work. Prioritization decisions are affected by current work and not the real priority.

  **Resourcing:** Adding people (capability) only helps if added people do not create dependency. Imagine adding a new writer so that one writes vowels and the other writes consonants: double resources but lower throughput & speed.

Common issues

- Someone says they’ve done the exercise \(\rightarrow\) Ask them nicely “to play along”
- Someone says “multitasking” when asked about things that impact name writing \(\rightarrow\) Try to avoid writing it down as such, you can use other wording e.g. “prioritization of work”
- Some people do not have middle names (e.g. people from India or China) \(\rightarrow\) You can use the first name again on the second round, just make sure the first round writings are put away

My Notes
Learning Game
(a.k.a Ball Point game)

by Boris Gloger

Purpose: Demonstrate that improvement requires learning and creativity, and improvement happens only when system structures are changed.

Size of the group: 5 or more people, no fixed upper limit. Large groups can be divided to smaller groups of 10 people.

Materials: 5 ping pong balls (per group), flip chart for recording the results, timing device, e.g. stop watch app in phone (in each team).

Set-up: Rules available on flip chart or screen.

Running the simulation

SETUP

Ask people to stand up. If group is very big (more than 20), ask them to organize into smaller similar size groups (about 10 people each).

Goal of the game is to process balls through the group and measure how long it takes. We run five iterations and groups will have one minute break between the iterations to discuss and improve.

Share the rules on flip chart and hand out balls to groups.

RUNNING THE SIMULATION

Say “Go” and observe when the slowest group is done. Write down the results and tell group(s) they have one minute to discuss & agree how to improve their result.

Run another round and collect results. Again, spend one minute to plan improvements. Facilitator can motivate further improvement and say “You can cut the time in half” or “National record is 5.64 seconds, you can do it!”.

After five iterations collect people for wrap-up.

My notes

THE RULES

• Ball must have air-time
• Ball must be touched at least once by every team member.
• Balls cannot be passed to person to your immediate left or right.
• Ball must return to the same person who put it into the system.
• We run five iterations.
Wrap-up

Ask people to discuss in (table groups) about their experience:

• What happened (in your group) during the simulation?
• What was the iteration that felt best, what iteration was the most relaxed?

Share some insights

1. Velocity (amount of things done) is not the point. Usually lead time is more useful metric.
2. Every system has a natural speed, defined by boundaries of the system. Getting faster (or better) requires changing these boundaries.
3. Flow requires that (i) the challenge is doable by the team, (ii) the people are not disturbed or interrupted and (iii) the work has a meaning

Scrum supports Flow but is silent on how to push system boundaries. Changing boundaries is Scrum Masters task.

Common issues

Some teams may decide after 2-3 iterations they are already good enough ➔ Facilitator can hint this is a competition. Also, lack of motivation to improve can be discussed in wrap-up, since it may be one of the system boundaries.

An alternative of game suggest running 2 min iterations and counting how many balls are processed ➔ This may lead to misconception that Scrum is about producing more. Measuring throughput is more relevant for organization’s performance.

My Notes