

Toss the Chip



Purpose

1. Waterfall versus Agile Awareness
2. Work-in-Progress (WIP) factor Awareness

Material

- Any chip will work fine as long as it is possible to differentiate the sides head/tail
- 12 chips for each team, a team is composed of 2 to 4 members
- Time-box – *the activity is not time-boxed*
- Flipchart/whiteboard and pens

Room Layout

The results are captured in a unique flipchart/whiteboard, shared by everybody

The teams are composed of 3 to 4 people

Each team sit in a row, each team-member is numerated from left to right

12 chips are given to the left team-member

Flipchart or Whiteboard

Draw the following table on the flowchart/whiteboard, visible by everybody. The purpose is to play the 4 scenarios: for simplicity purposes we assume that we have a team to play each scenario.

Alternative #1: there are less than 4 teams. Then 1 or 2 teams will play more than 1 scenario.

Alternative #2: there are more than 4 teams. Then more than 1 team will experience the same scenario: add more columns to capture the results of all the teams who played the same scenario.

Alternative #3: more scenarios can be created for 4 stacks of 3 chips or 6 stacks of 2 chips

Team/Scenario	Total chips	Number of stacks	Chips by stack	Results in seconds	Feelings
#1	12	1	12		
#2	12	2	6		
#3	12	3	4		
#4	12	4	3		
#5	12	6	2		
#6	12	12	6		

Activity #1: Directions to toss the chip

Expected overall time for this activity: 10 minutes (including the understanding of the directions and the game by itself)

1. The team-member who has a full stack in his hand draws the chips one by one as many time as needed to get a head. The chronometer starts when the 1st chip is tossed.
2. Once the team-member has successfully finished an entire stack, the he passes the full stack to his neighbor on his right
3. The process is re-iterated with the neighbor until all team members have successfully processed all stacks. The chronometer ends when the last chip was tossed, drawing a head.
4. The team report the elapsed time, in seconds, on the whiteboard according to the scenario they have experimented

Note: the activity starts with the team-member on the left. There's no reason to start from the left, it's just a matter to have everybody on the same page.

5. Wait until all teams are done
6. Ask to each team or team-members which feelings they throughout the steps 1, 2 and 3. For example: panicked, bored, frustrated, annoyed, angry, sad, happy, overwhelmed, excited, challenged, ...

Note: there's no right or wrong feeling, in a same team, a team-member may feel thrilled whereas another one may feel frustrated.

Activity #2: Discussion

Time-boxed activity: 5 minutes

Discuss the results and the feelings.

Which team performed the best, balancing productivity and pleasure?

Interpretation

Scenario #1 represents the waterfall model: only 1 team-member at a time is working, he's under pressure while the other members are bored. In the real life such a thing doesn't happen because everybody is working on a different iteration/project, however switching the context to understand what the neighbor is providing takes time: this overhead does exist.

Scenario #2 represents an improvement of waterfall: the velocity is improved, the team-member feel less frustrated or bored.

Scenarios #3/#4 represents an Agile model: the team-members are performing, almost everybody gets a stack to process. A process pattern aims at emerging, everybody focuses on his tasks, waiting a new stack from the left to be delivered. People feel well, or at least not frustrated.

Scenarios #5/#6 represents an unsustainable Agile model: the team-members are working while a news tasks are pushed in the pipe creating confusion: frustration and overwhelming are back, even though they may have processed all chips quicker than other teams.

The attendance figures out that

- The waterfall is not efficient and not effective
- The unsustainable Agile model is efficient but not effective
- A sustainable efficient and effective Agile model exist
 - A WIP factor has to be found

The WIP number is determined empirically, it depends of the maturity of the team (Tuckman state) and the process that the team is using within an iteration. When the team improves the process iteration after iteration, the WIP may need to be adjusted accordingly.



To go further: open discussion

My company, or team, is operating following Waterfall scenario #1. What happens if a competitor is operating with a more Agile approach (scenario #4, #5) by processing the same amount of features (12 in our case), with the same head count, at a sustainable pace, with high quality and... in half or one third of the time?

Tips: quicker TAT, better ROI, cost effectiveness