Kanban Policy Game

Introduction

The Kanban Policy Game is a fun way to experience how policies affect performance. The goal of the Kanban Policy Game is to let people practice evolutionary change in the context of a knowledge discovery process.

Here are all the file you need to play the game
http://training.modernmanagement.bg/kanban-policy-game.php

In the game you are hired as a coach to lead an Agile transformation. To achieve success, you have to improve the performance of the teams in the client organization in terms of lead time and throughput.
As Kanban method practitioner you decide to introduce and apply the six Kanban practices, namely:
CP1: Visualize
CP2: Limit work-in-progress (WIP)
CP3: Manage flow
CP4: Make policies explicit
CP5: Implement feedback loops
CP6: Improve collaboratively, evolve experimentally (using models and the scientific method)

Your work with the client organization goes through three periods:
1) In the first period you start by applying CP1, CP4, CP5 for a limited period of 10 days. Your goal is to understand and measure what is the current state of the system. Hence you ask the organization to make explicit their "Collaboration Policy", "Pull Policy" and "WIP Policy". You find out that they measure the individual productivity of the team members, want their resources to be fully utilized and have no WIP limits.
2) In the second period you apply CP2 and CP3 by asking the organization to change only the "WIP Policy" and limit the work in process for 10 days.
3) In the third period you apply CP6 by asking the organization to change the "Collaboration Policy". From now on the organization will not measure individual productivity but the performance of a team as a whole.

Learning outcomes

- "Collaboration Policy", "Performance Evaluation Policy" and "WIP Policy" have huge impact on productivity.
- The J-curve effect can be experienced if we implement CP2 in an organization where collaboration level is low.
- Limiting WIP when we measure individual performance has a negative effect on the productivity of the team as a whole.
- Limiting WIP when we don't measure individual performance has a positive effect on the productivity of the team as a whole.
- Because of the above it is advised to implement CP6 before or along with CP2.
- The collaboration level in a team can be measured.

Terminology

Rules of the game

The game has rules and policies. Rules are fixed and cannot be changed. Policies are changeable.

Teams visualize their work using a kanban board.

Kanban Policy Game

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Ready	Build ( )	Test ( )	Complete ☺

Each team has 10 days to finish 20 work items. Each day begins with a "daily meeting" of the team playing the game. In their "daily meeting", each of the team

members would toss a coin,

share with the other team members the result, then move the work items on the Kanban board according to the rules and the policies.
The teams shall use one coin per person, and it's best that they throw them at the same time.
Please don't think that the team members should take turns to move. In the daily meeting, they share the results of their coin tosses and discuss what moves they plan to make.

If you throw Heads	If you throw Tails
Do one of: - Advance one of your unblocked work items rightward by following what **WIP Policy** says **OR** Unblock one of your items that is blocked and advance it rightward by following what **WIP Policy** says **OR** Start new work by following what the **Pull Policy** says **OR** help others by following what the **Collaboration Policy** says	Do both: - Block one of your currently unblocked items if you have one **AND** follow what the **Pull Policy** says

If you have Heads (H) do only one of:

Ready	Build (4)	Test (4)	Complete ☺
#4	DB #3	→ Advance	
#5	DB ⌀ #2	→ Unblock & Advance	
#6	← Start a new card	XY #1	Help somebody else →
#7	← XY shoould not block a card and start a new card!		

If you have Tails (T) do both...

Ready	Build (4)	Test (4)	Complete ☺
#4	DB #3		
#5	DB ⌀B #2	← Block one card	
#6	Start a new card →		
#7			

Blocking

- When the rules require you to block a work item, mark its sticky note with a "B". If the rules require to block a blocked one don't put another "B".
- When the rules require you to unblock a work item, do that by crossing out the existing "B" on the sticky note. Example of one that has been blocked, unblocked and re-blocked: ~~B~~B

In order to assure that the only changes between periods are policy changes:
- The coin tosses from Period 1 are reused in the next periods. That is to assure us the chance has nothing to do with the changes in productivity.
- The amount of available effort is the same – 10 days per team member for all periods.

Illegal Moves

When you pair to help a teammate both of you are allowed to move only one card. For example:
- Team member DB has T and XY has H.
- They pair and move the card that belongs to DB.
- After that DB has no H left i.e. no card should be blocked and a new card started.

Setup (for each period)

1. All participants to get into teams of 2 - 4 people.
2. Each team to generate a backlog of 20 features using post-it notes of size 51x38 mm.

Write the number of each feature in the center of a sticky note, leaving room top and bottom. Leave the cards in the "Ready" column.

Timing

It takes between 60 and 90 minutes to go through all three periods.

Materials and downloads

In terms of materials it requires:
- A board printed on A3-sized or larger paper or card, a flipchart, or a whiteboard per team. Board (PDF)
- 60 small (51mm x 38mm) sticky notes.
- A supply of suitable pens.
- A coin per player.

Roles

- **Team member**. Starts, moves, blocks/unblocks and completes work items.
- **Scribe**. Writes down the coin tosses (H for Heads, T for Tails) for each team member for each day in the following table:

Day #	Team Name < >			
	Team member name < > #20	**Team member name < > #21**	**Team member name < > #22**	**Team member name < > #23**
1	H	H	T	H
2	T	T	T	T
………………				
10	H	T	H	T

Periods

Period 1: Visualization and measurement

The facilitator plays the role of an Agile coach who as part of the company's Agile transformation is engaged to work with the teams playing the game.
The coach says something to the tune of the following:
"As your coach, I am hired by your leadership to improve your performance. You've been through a two days Kanban training and you do know what the method is.
We will start by measuring how many features you'll be able to deliver in the next 10 days.
The end goal is for us to understand where are the areas that need improvement.
I know that you want to ask me – would your managers see the measurements?
My answer is – I guess so, because we will be transparent in order to improve.
If you ask me – would your managers use the results for your monthly performance appraisals? I don't know. But you can safely assume it is highly likely they would."

I have been looking around the place and talking to people in order to get myself familiar with the polices of your organization. Here are the policies I found to be in use in your organization:

Collaboration Policy	Pull Policy	WIP Policy
We measure the individual productivity of the team members. Your goal is the Done column to have your name on as many work items as possible. Hence only *if you have no other options*, pair up with someone who threw tails and move on their behalf. Note: Follow the "WIP Policy" in regards the amount of work in process.	We want our resources to be fully utilized. Hence when their current work item is blocked team members should start working on a new work item by initial it and move to the Build column. Note: Follow the "WIP Policy" in regards the amount of work in process.	We can have unlimited number of work items in each of the columns.

At the end of the period the facilitator will play the role of the management. The results of the game will be used for the performance appraisals.
The players who had the most cards under their names will be presented with a bonus in the form of a candy.

Debrief

In your teams, list and prepare to report back:
- Concepts, practices, and outcomes simulated in the game
- Your observations
- Workplace parallels

Confirm the application of Kanban Method's three core practices:
- CP1: Visualize
  - Work items
  - Work flow
  - Work item state – where in the work flow, whether blocked
- CP4: Make policies explicit
- CP5: Implement feedback loops
  - Daily standup meeting

Period 2: WIP limits

The facilitator is again playing the role of the Agile coach. He says something the tune of:

"I think it is about time we start limiting our work in process. Don't be worry it will make you more productive and work will be delivered faster.

Here are the policies for this period. We establish WIP limits by changing the WIP Policy. All other policies are the same."

Collaboration Policy	Pull Policy	WIP Policy
We measure the individual productivity of the team members. Your goal is the Done column to have your name on as many work items as possible. Hence only *if you have no other options*, pair up with someone who threw tails and move on their behalf. Note: Follow the "WIP Policy" in regards the amount of work in process.	We want our resources to be fully utilized. Hence when their current work item is blocked team members should start working on a new work item by initial it and move to the Build column. Note: Follow the "WIP Policy" in regards the amount of work in process.	For each of the columns we are limiting our work in process to equal the number of team members. As a result only *if a column has free capacity* you can advance one of your unblocked work items rightwards.

Debrief

Discuss and prepare to report back:
- What changed?
  - Benefits?
  - Drawbacks?
- Workplace parallels

Confirm the application of the two core practices:
- CP2: Limit work-in-progress (WIP)
  - Column limits, one way to balance workload vs capacity
  - We made a true kanban system (pull and limiting WIP)
- CP3: Manage flow
  - Flow (smoothness, timeliness, economic outcomes)

Period 3: Collaboration allowed

The facilitator is again playing the role of the Agile coach. He says something the tune of:

"The results from the last period were as good as we expected. In fact, they were worse for many of you.

Hence, I coached your leadership and manage to pursued them to change the performance evaluation policy that is to be used in the appraisals.

From now on individual performance will not be used as an input to the appraisals. Instead the performance of each team will be taken as a whole and the bonuses will be allocated to the teams to be shared by the team members. "

Here are the policies for this period. We removed "***and you have no other options***" part from the Collaboration Policy. Everything else is the same.

Collaboration Policy	Pull Policy	WIP Policy
We don't measure individual productivity but the productivity of the team as a whole. Your goal is the Done column to have as many work items as possible no matter the name on them. Hence, ***If you want to help the team***, pair up with someone who threw tails and move on their behalf (help your friend before helping yourself) Note: Follow the "WIP Policy" in regards the amount of work in process.	We want our resources to be fully utilized. Hence when their current work item is blocked team members should start working on a new work item by initial it and move to the Build column. Note: Follow the "WIP Policy" in regards the amount of work in process.	For each of the columns we are limiting our work in process to equal the number of team members. As a result only ***if a column has free capacity*** you can advance one of your unblocked work items rightwards.

Debrief

Discuss and prepare to report back:
- What changed?
  - Benefits?
  - Drawbacks?
- Workplace parallels

Confirm the application of the last core practice:
- CP6: Improve collaboratively, evolve experimentally (using models and the scientific method)
  - We created conditions for collaboration in delivery
  - Nothing collaborative, experimental or scientific about our change

Final debrief

After Period 3 is finished hold a final debrief. Ask all teams playing the game to share their results and reflect on them through the lens of the J-curve model of change.
It is possible that the results did not follow the J-curve and that is OK.

The goal of the Kanban Policy Game is to let people practice evolutionary change in the context of a knowledge discovery process.

J-Curve model

The y-axis in the figure below shows the capability a.k.a. a specific measure of fitness for purpose.
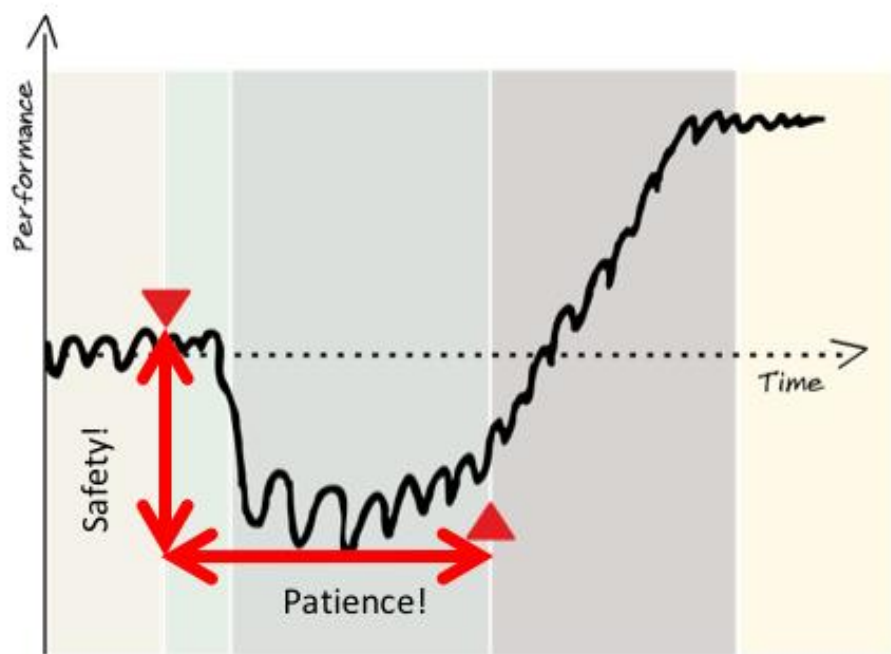
Virginia Satir's J- Curve Model of Change

A capability might be lead time, or quality, or due date performance or performance against an SLA.

The current capability or fitness level is shown as the horizontal oscillating curve on the diagram. This level of capability is delivered by the current process. The model assumes that the current level of capability is not sufficient and isn't fit for purpose, so we are motivated to improve. Once we start the change initiative the current level of capability falls. We can measure the depth of the drop as the negative delta in capability. The depth and length of the drop incurred by the change can be thought of as the pain of change. If things go well then we gradually recover back to our previous level of capability and eventually we achieve a new improved level of capability.

It is the drop in capability and the eventual improvement that gives the concept its name – "the J-curve effect."

Facilitation information

- When Period 1 is finished give the best performer from each of the teams a small real reward e.g. a candy. That should assure us players will compete in Period 2.
- When debriefing Periods 1 and 2 make sure to count the cards delivered per person (individual productivity) and mention the name of team member who performed the best. That should assure that the "Collaboration policy" change in Period 3 feels a real change.
- After Period 2 the individuals with most cards delivered could be different from Period 1. For instance, the most productive individual for team X for Period 1 was say Tom, but for Period 2 Tom has no cards delivered at all! If there is such a case, then do emphasize that limiting WIP can hurt the professional self-esteem for some people.
- When debriefing Period 1 use phrases such as "Being busy is not the same as being productive", "All starting and no finishing" and "Lots of activity, little delivery".
- During periods 2 and 3 make sure the teams don't use the recorded coin tosses to "look into the future" and thus able to plan their moves.
- Ensure everyone agrees before playing Period 2 that the only change has been the introduction of WIP limits. It is only a policy change – emphasize on that if needed.
- Ensure everyone agrees before playing Period 3 that the only change has been the removal of the collaboration constraint. It is only a policy change – emphasize on that if needed.
- After Period 3 is finished stick the paper boards on the wall. Use that for the final debrief.

Customization

Kanban Policy Game is released under a [Creative Commons Attribution-ShareAlike 4.0 International License](#).
Customisation and translation is encouraged. To obtain the original source files (.pptx and .docx) rather than the PDFs, just ask @dimiterbak.