

FIND THE BUG! KANBAN

**A Game of a Kanban
framework in an IT Project**



**for 3-5 players
(playing time 30-60 min)**

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Version 0.2**

SETUP

PLAN

WORK

CLOSE

Internal

The board has adopted lean management and you have been assigned as a team lead. Your first task is to set up the Kanban board.

1. Set up the work state columns.

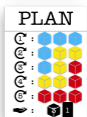



2. Sort the work items cards by dependency 0-3 and order by letter.



Internal

3. Give each team lead 1 team card and 3 WIP discs.
4. Place the 60 blue, red and yellow time cubes in the bag.
5. Put the work card, the work die and the 12 black and white work cubes aside.
6. The most lean team lead is Planner and takes the Plan card.
7. Starting with the Planner and going clockwise, draw 1 dependency 0 work item card and place it with a WIP disc in the backlog.



Now start Iteration 1! 

SETUP

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Your second task is to plan the iteration.

The Planner starts each iteration. Give the team leads 3 time cubes each as per the Plan card (e.g. 2 blue and 1 yellow cube iteration 1). Draw 3 more time cubes per team lead (e.g. 12 for 4 leads) from the bag. This is the time pool.

Starting with the Planner and going clockwise, the team leads choose 1 time cube from the pool or 1 work item card from any pile (and places in the backlog with a WIP disc) until all have taken 3 cubes and 1 card.

Internal

Your third task is to allocate time to to work.

In the same turn order, the team leads take 1 action.

1. Play a time cube to a work item card, adhering to the rules on the next page.
2. Play a time cube to the team card's waste zone.
3. Exchange a work item card for a time cube of any color.

When no more actions are possible, the iteration ends. Return every 2nd time cube in the waste zone to the bag and pass the Plan card to the left. Start the next iteration.

Internal

- You must place cubes in order; blue -> yellow -> red.
- When you place the first cube of a color, move the card to that column and roll the work die.
 - 1 less cube is needed (mark with a white cube).
 - 1 more cube is needed (mark with a black cube).
- You must move work item cards in dependency order (e.g. "A▶GO" means that A must be ahead of G and O).
- You must move work item cards within WIP limit (i.e. no. of cards must be less than no. of team leads).

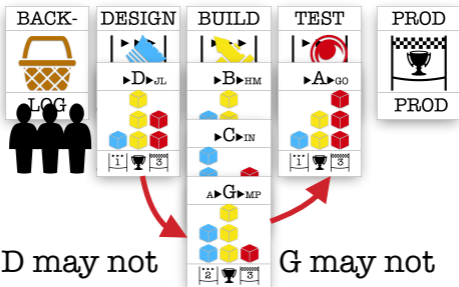
SETUP

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Internal



D may not
move since
Build is full
(3 players)

G may not
move since
it is depen-
dent on A

When you place the last time cube on a work item card, it moves to Prod. Return all cubes to the bag, take back the WIP disc and place the card in front of you. It will earn you points at Close.

Internal

Close after 3/4/5 iterations (5/4/3 team leads). Iteration 3 is only played with 3 team leads and iteration 4 is only played with 3-4 team leads.

For each work item card, earn the following points.



Milestone points for each completed color.



Production points for each completed card.

If any production points were earned on cards depending on other team leads' cards, they also get production points.

Internal

Competitive game

The team lead with the most points wins.

Semi-cooperative game

Team leads may exchange time cubes with each other and even play cubes to each others' work item cards.

Fully cooperative game

Team leads plan and work together. The more work items card with dependency 3 that reach Prod, the better.

Internal

Example: Team lead 1 is the Planner and starts with work item card A, 2 blue and 1 yellow time cube. During Plan, she chooses work item card G, then 1 blue time cube, then 1 yellow time cube and last 1 red time cube. During Work, she wants to play A to Design but rolls a "1" so it costs 1 blue cube less (=0). Thus, she may play A to Build. This time she rolls a "5" so it will cost 3 yellow cubes. Next turn, she may either play a 2nd yellow cube to A or a blue cube to G.



GLOSSARY

Term	Lean concept	Game concept
Iteration	Gradual process towards goal	Game rounds
Kanban board	Board to visualise workflow	3 card columns (Design, Build, Test)
Lean	Waste minimization	Unused time cubes are partially lost
WIP	Work in progress	Work item cards
WIP limit	Limit to improve throughput	Limit for cards in column
Work dependency	Relationship between tasks	Some cards must be completed first

Game Components

- 36 cards; 5 work state cards, 24 work item cards, 5 team cards, 1 plan card, 1 work card
- 72 cubes; 20 blue time cubes, 20 yellow time cubes, 20 red time cubes, 6 white work cubes, 6 work time cubes
- 15 WIP discs (3 blue, 3 yellow, 3 red, 3 white, 3 black)
- 1 work die
- 1 time bag

Credits

Game design: Nicholas Hjelmberg
Production: The Game Crafter
Game testers: Colleagues at Polisen
Special thanks: My wife Su-San Oh
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