

Lego Kanban

Animal Farm

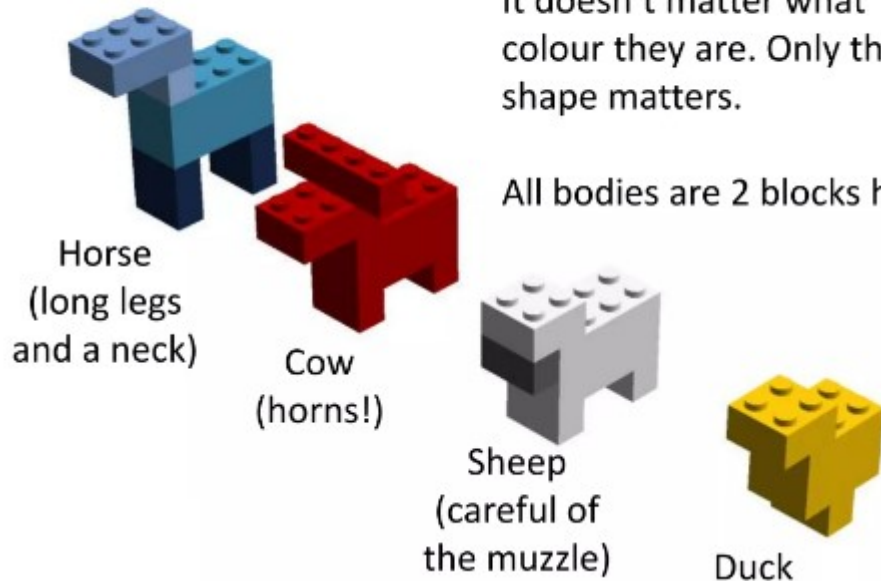


Trainer Notes

Check: Build 1 of each animal

It doesn't matter what colour they are. Only the shape matters.

All bodies are 2 blocks high!



Materials:

1/3 carrier bag of basic lego bricks per team (run through with friends to make sure you have enough). You can leave the irrelevant bricks in (they might not!).

2 dice (or an app)

1 Timer

Printouts per team, with animals cut up and shuffled

Post-its for placeholders for limiting WIP

Team size: 4 people per team (3 is OK). If you only have 1 team you can join in. Otherwise extra people can observe; swap them in and out if you like.

Interesting observations: We usually get a build-up of legs in the early rounds; worth pointing out if that happens with one team. Bring people over to look!

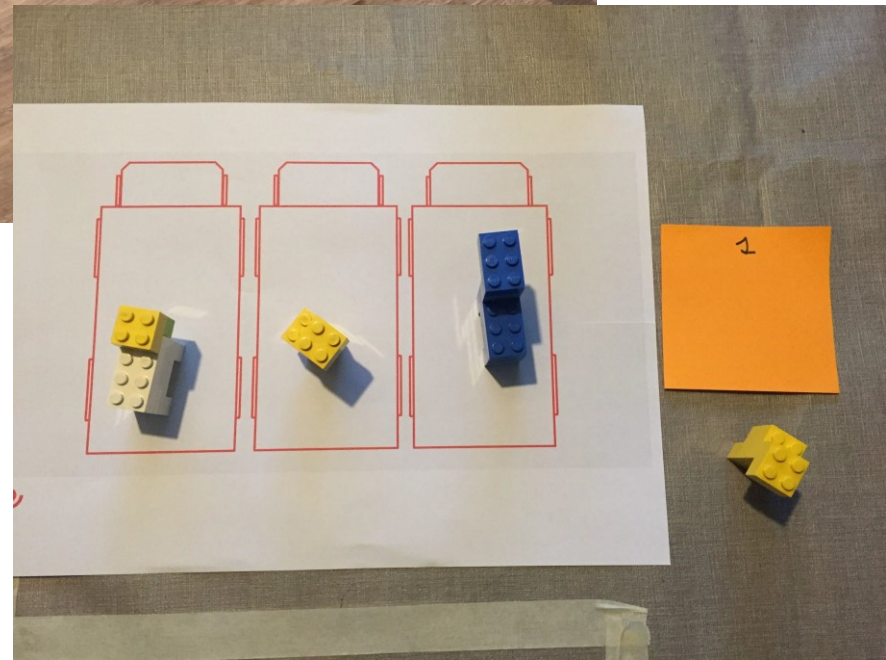
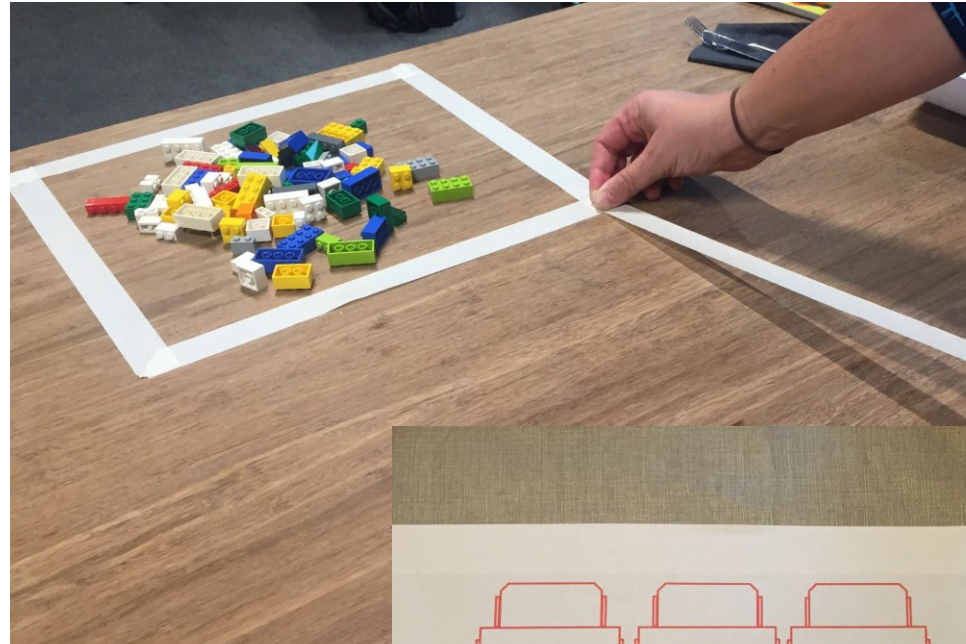
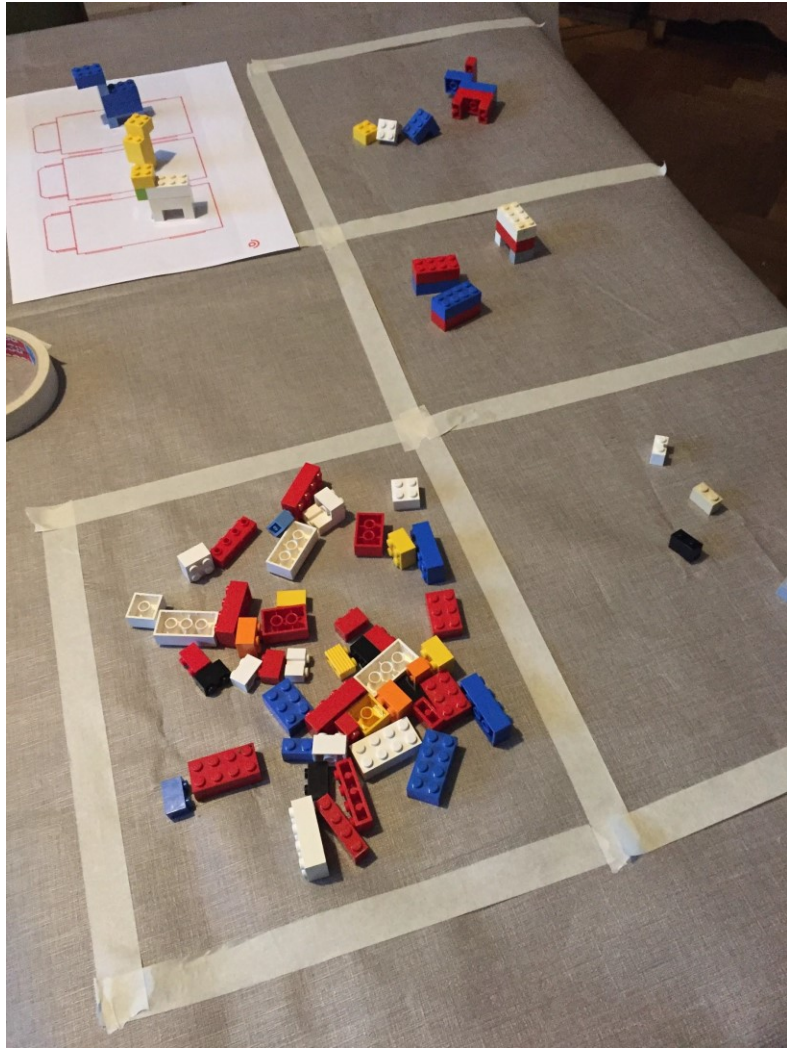
3rd round: Usually the head dev and tester don't actually look to help anyone else, even though it's just opening up the option to help! Suggest that they start the round by pointing, and try it again.

Make sure everyone understands the rules! Particularly with respect to testers and dice. Suggest that devs build the animals on the pieces of paper (so far they always do this anyway).

Remember to switch to the next slide with the animals on during each round. Alternatively you can provide print-outs to the teams.

Larger tables with space between participants works better.

Keep score for each round... and be really strict with the timing! Only *tested* animals count!



Objective

The goal of the game is to create as many complete animals as possible within each round.

From a training perspective, these are the primary goals for the participants:

- Experience an existing process, which can seem quite chaotic and see how a Kanban system can give it more structure and flow
- Practice in visualizing the existing workflow and optimizing it through WIP limits and other improvements
- Experience, inspect and adapt

Proposal

Teams should have at least 4 team members to build the animals. There is a fifth role in keeping track of the number of finished animals and dismantling the animals. If you do not have enough participants, however, you can consider combining the 'Leg builder' with the 'Quality Assurance' team member.

Each team (you can have multiple teams which will add some competition to the game) will have their own set of Lego blocks, a transport and scoring sheet and a 'supply box', which you as a facilitator will set-up at the start with masking tape. Any Lego blocks in the 'supply box' are safe from being marked as waste. However, don't explain this to them until after the first round. Also, don't make the 'supply box' too big. It should be big enough for all the loose Lego pieces to fit in, but small enough so that the participants should not be able to assemble the animals inside the taped square.

Dynamic

Round 1

There is no backlog in the first round, so you just let the teams create animals at will. Soon they will realize they do not have enough materials to build many animals, so they will have to make choices of what animals to build.

During the first round, you do not show them the complete points system yet, which means they are not aware that we will penalize them for wasting material.

At the end of round 1 (after 5-7 minutes) you tell everyone to stop building and leave all the pieces on the table as they are.

In round 2 and round 3

Introduce the animal 'backlog'. It's a deck of cards with one type of animal written on it. One participant (usually the Leg builder) introduces a card from the backlog and places the legs on top of the card. We pass the card through the system so that all team members are aware of the type of animal which needs to be built.

Again, after 5-7 minutes, you tell everyone to stop and make sure they leave all the Lego blocks where they are. The points are counted and this time you give them 1 minute retrospective time to come up with improvements for the final round (round 3).

After round 3, we debrief the simulation, for example, by asking the following questions:

- What went well?
- When and where did work pile up (=bottleneck)?
- Where did you introduce improvements?
- What was the difference between the different rounds?
- Did you experience flow? In which round?
- Did you change your WIP limits after round 2?
- Did anything change when you started using the backlog?

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