Kanban Tetris – Facilitator Notes

Section 1. Setting Up

1.1 Materials

1.1.1 General Materials

- A noise maker (bell, horn, whistle) to start/end iterations.
- Tape to fix down the 'Inventory Stores'
- Stop watch or other timing device

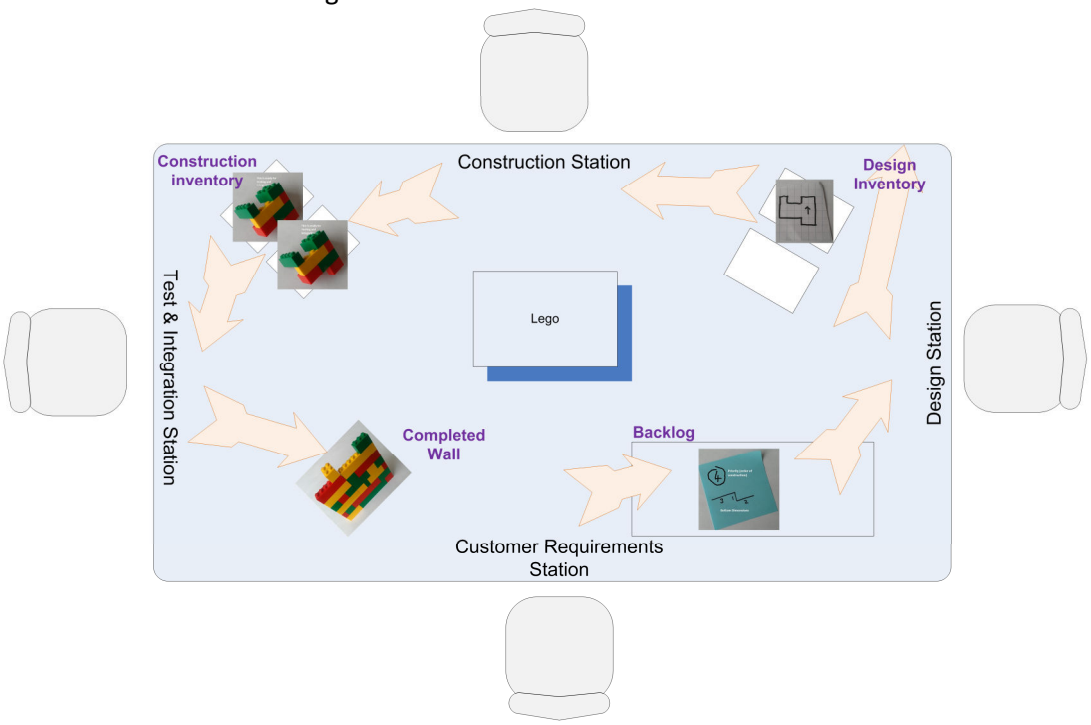
1.1.2 Each Team

- Sticky Note pad– back torn off, so sticky-side is up.
- 4x4 Quad ruled paper – 4 or 5 sheets
- Four sharpies / thick pens
- 4 sheets white paper to represent the inventory stores
- Assorted Lego blocks in three colors
- A strip of Lego Building Platform –32 wide, about 8 deep (one platform cut into 4 works nicely).
- A pair of scissors

1.2 Set Up

The process goes anti-clockwise around the table. Sheets of white paper are taped between the stations to indicate the inventory stores are. The Lego (three colors) is placed in the center, reachable by the Construction Station. Each station is set up as follows:

- Customer Requirements – A thick pen (Sharpie etc), scrap Quad-Ruled paper, Sticky Note pad (upside down)
- Design - A thick pen (Sharpie etc), several sheets Quad-Ruled paper, Scissors
- Construction - Lego
- Test & Integration -



Section 2. Playing the Game

The game should take about 120 minutes. Some time should be taken upfront to familiarize everyone with the mechanics of the Lego Wall building (so that the learning curve does not impact the main lesson of the game).

2.1 Familiarization/Training Exercise

Split the group into five groups, distribute the instructions, and give them time to digest their station instructions.

Under no time constraints or other process restriction, the teams build three blocks from scratch. At the end of this, take questions, and then destroy the artifacts to reset the game.

2.2 Iteration

The wall is hidden/turned away from the customer during construction. It is turned around and shown to the customer during the IPM

2.2.1 Initial Requirements / IPM

1. The Customer will specify the first set of requirements – these will just be for the base of the wall (so a total of 32 across can/should be specified, split into about 6-9 stories)
2. The team commits to how many units to produce (requirements to fulfill)

2.2.2 Iteration

3. Iterations of 4 minutes
4. 5 iterations

2.2.3 Showcase/Retro/IPM

5. Customer is shown the completed wall
6. Customer creates as many requirements that they want and/or are capable of, to based on the appearance of the wall
7. The team has a brief retrospective to discuss how they want to organize the work. They can switch people between roles etc.
8. The team commits to how many units to produce (requirements to fulfill)

2.3 Kanban

The wall is facing the customer throughout

1. Start with all the inventory slots filled
2. The customer can create new requirements whenever they like.
3. Stations only start working on something when there is an open inventory slot to their right (this is very unnatural, so stress the importance of this)
4. Run the exercise for 15 minutes

Section 3. Variations / Enhancements

3.1 Collecting the Cumulative Flow Diagram Statistics

Every minute take an inventory count. This will be used to construct the Cumulative Flow Diagram. Have the Customer Requirement Stations in each team call out the count, or have facilitators walk around the room capturing the count.

	1 min	2 min	3 min	4 min	5 min	6 min	7 min	…
Backlog								
Design Inventory								
Construction Inventory								
Completed Wall Units								

3.2 Multi-skilled Workers

- Instead of having a workflow split between three people, allow each person to do all three roles

3.3 Team Kanban

Before you move on to 'cell production' if you have time you can play this using larger teams at each station, so there is more of a production-line feel to multiple people working on a single task.

- Single team with multiple people at each station
- Each station separated somewhat from the others (to simulate communication friction)

3.4 Quality Shocks

- Designers secretly and deliberately miscount squares – 14 or 16 for instance
- Designers deliberately design something not possible to build
- Designers secretly and deliberately do not follow the requirements
- Constructors secretly and deliberately use same color adjacently
- Constructors secretly and deliberately do not follow the design

3.4.1 Requirement Shocks

- Product Owners decide that they want all one color, or just two colors, and so re-issue requirements

3.5 Discussion Points

- Fill out and Review the CFD – for the Iterative and the Kanban process
- Do the teams' CFD's differ – if so why?
- What did we learn?
- How did we feel?
- What were the advantages?
- What are the disadvantages?
- How could we use this?