

# **Kanban Pizza Online**

## **Facilitator Guide (v2)**

This guide is for facilitators running the Kanban Pizza Online game. It focuses on how to brief the group, observe behaviour, and debrief the learning. You do not need to explain the implementation details of the app to participants.

## 1. Overview of the game

Kanban Pizza Online is a browser-based version of the classic Kanban Pizza Game. Participants work in small teams to prepare, build, and bake pizzas across three timed rounds. Each round adds complexity and makes Kanban concepts more visible: flow, work-in-progress (WIP), bottlenecks, quality, and customer focus.

The game is designed for:

- Agile and Kanban training sessions
- Team retrospectives and continuous improvement workshops
- Taster sessions for students or new team members

## 2. Learning objectives

By the end of the session, participants should have experienced and discussed:

- How limiting work-in-progress can improve flow and reduce waste
- How bottlenecks emerge (for example, in the oven or builders) and how teams respond
- The impact of roles, policies, and communication on team performance
- The tension between volume (number of pizzas) and quality (correct timing and ingredients)
- How customer demand (Round 3 orders) changes the way teams plan and prioritize

## 3. Practical setup

### 3.1 Technical requirements

- Each player needs a device with a modern browser (Chrome, Edge, Firefox, Safari).
- A stable internet connection.
- The game URL: provide this in your invite or on a slide.
- Audio for the facilitator if you are running it remotely (for example via Teams or Zoom).

### 3.2 Group size and rooms

- Recommended: 3–5 players per room.
- Each group chooses a shared room name and password.
- All players in that group must enter the exact same room name and password.
- Maximum 5 players per room and 10 active rooms overall (as shown in the lobby).

### 3.3 Suggested timings

The game timers are fixed in the app (round length and debrief countdown), but you can plan the overall session around them. As a rough guide:

- Intro and briefing: 10–15 minutes
- Round 1 plus debrief: about 10–12 minutes
- Round 2 plus debrief: about 10–12 minutes
- Round 3 plus debrief: about 15–20 minutes
- Final wrap-up and link to real work: 10–20 minutes

## 4. How the game works (player view)

### 4.1 Getting into a room

1. Players open the game URL. The welcome modal appears first.
2. Each player enters the same room name and password, then clicks "Enter Room".
3. The room name and player count appear in the header once they have joined.
4. The facilitator asks one person in each room to be responsible for pressing "Start Round" when everyone is ready.

### 4.2 Round 1 – Basic production

Focus: basic flow, overproduction, and oven timing. Key mechanics: - Players press ingredient buttons (Base, Sauce, Ham, Pineapple) to add items to the Shared Ingredients area. - Each player has a personal Pizza Builder area. They drag or tap ingredients into their builder to assemble pizzas. - Valid pizzas in Round 1: - Ham Pizza: 1 Base, 1 Sauce, 4 Ham - Ham and Pineapple Pizza: 1 Base, 1 Sauce, 2 Ham, 2 Pineapple - When a pizza is complete, the player clicks "Submit Pizza" to move it to Built Pizzas. - Any player can move built pizzas into the Oven, up to the oven's WIP limit of 3 pizzas. - The Oven must be turned on to cook. Pizzas need 30–45 seconds in a switched-on oven to count as Completed.

When the oven is switched off, all pizzas inside are removed: - Correctly timed pizzas (30–45 seconds) go to Completed Pizzas. - Undercooked (less than 30 seconds), burnt (more than 45 seconds), or invalid pizzas go to Wasted Pizzas.

### ***Round 1 scoring***

- Completed Pizzas: +10 points each (properly baked for 30–45 seconds). - Wasted Pizzas: -10 points each (undercooked, burnt, or invalid toppings). - Uncooked Pizzas: -5 points each (built but not baked, or still in the oven at the end). - Leftover Ingredients: -1 point each (unused prepared ingredients).

### ***4.3 Round 2 – Shared builders and collaboration***

Focus: collaboration, role clarity, and flow. Key changes compared with Round 1: - Shared Pizza Builders are now available to the whole team. - Any player can add ingredients to any shared builder and submit pizzas from them. - The rest of the mechanics (ingredients, oven, timing, scoring) remain the same as Round 1.

### ***Round 2 scoring***

Scoring is the same as Round 1: - Completed Pizzas: +10 points. - Wasted Pizzas: -10 points. - Uncooked Pizzas: -5 points. - Leftover Ingredients: -1 point.

### ***4.4 Round 3 – Customer orders and matching***

Focus: customer value, matching demand, and prioritisation. Key changes compared with earlier rounds: - Shared Pizza Builders remain available. - Customer orders appear during the round, each specifying an exact ingredient combination. - Valid order types include: - Ham: 1 Base, 1 Sauce, 4 Ham - Pineapple: 1 Base, 1 Sauce, 4 Pineapple - Ham and Pineapple: 1 Base, 1 Sauce, 2 Ham, 2 Pineapple - Light Ham: 1 Base, 1 Sauce, 1 Ham - Light Pineapple: 1 Base, 1 Sauce, 1 Pineapple - Plain: 1 Base, 1 Sauce - Heavy Ham: 1 Base, 1 Sauce, 6 Ham - Heavy Pineapple: 1 Base, 1 Sauce, 6 Pineapple - Orders appear over time, with the last order at least 45 seconds before the end of the round. - Teams must build and bake pizzas that exactly match these orders; unmatched pizzas count as waste.

### ***Round 3 scoring***

- Fulfilled Orders: +20 points each (cooked pizza that matches an order). - Unmatched Pizzas: -10 points each (cooked but does not match any order). - Wasted Pizzas: -10 points each (undercooked, burnt, or invalid builds). - Uncooked Pizzas: -5 points each (built but not baked, or still in the oven at the end). - Leftover Ingredients: -1 point each. - Remaining Orders: -15 points each (unfulfilled customer orders at the end).

## **5. Debriefing each round**

After each round the game automatically shows a debrief modal with basic statistics and a timer for team discussion. Use this time to guide reflection rather than explaining mechanics again.

### ***5.1 Round 1 debrief (flow versus overproduction)***

Suggested questions: - What did you notice about the flow of work from ingredients to completed pizzas? - Where did work pile up (ingredients, builders, oven, completed, wasted)? - Did you prepare more ingredients than you actually needed? Why? - How did you decide when to switch the oven on and off?

### ***5.2 Round 2 debrief (roles and collaboration)***

Suggested questions: - Did you change how you worked together once Shared Pizza Builders were available? - Did anyone naturally take on a role (prep, builder, oven, coordinator)? Was that helpful? - Did communication become easier or more chaotic when everyone could work on everything? - What would you change about your roles or policies next time?

### ***5.3 Round 3 debrief (customer focus and demand)***

Suggested questions: - How did customer orders change your strategy compared with earlier rounds? - Did you ever build pizzas without a matching order? Why? - How did you decide which order to work on next? - Where did you see the most waste: ingredients, unmatched pizzas, or remaining orders?

### ***5.4 Final wrap-up***

To close the session, connect key observations back to Kanban principles: - Visualising work (ingredients, builders, oven, completed, wasted, orders). - Limiting WIP to reduce queues, waiting, and chaos. - Managing flow end-to-end, not just optimising one step. - Making policies explicit (who does what, when to bake, how to prioritise orders). - Focusing on customer value, not just throughput.

## 6. Variations and extensions

You can vary the learning experience by changing team policies, roles, and the focus of reflection, while still using the standard game flow.

### 6.1 Extra challenges

Use these options to deepen learning without changing how the app itself runs.

#### a) Team-defined WIP-style limits

Ask teams to define their own "soft" work-in-progress limits, such as: - A maximum number of prepared ingredients in the Shared Ingredients pool. - A limit on how many pizzas may sit in Built before anyone is allowed to prepare more. - A rule that players must clear the oven area before starting new pizzas. Use the debrief to connect this back to Kanban ideas: smaller queues, less multitasking, and smoother flow.

#### b) Role experiments

Use roles to highlight the impact of structure versus chaos: - Play one round with no roles – everyone does everything. - Play another round with clear roles, for example: - Ingredient Preppers - Pizza Builders - Oven Manager - Flow Coordinator or Team Lead Debrief prompts: - Was communication easier or harder with roles? - Where did work pile up? - Did anyone feel stuck waiting or overloaded?

#### c) "Improvement coach" team

If you have multiple teams: - Assign one team as improvement coaches for another team. - They silently observe a round and then suggest one or two concrete changes, for example: - Stop over-prepping bases. - Only the Oven Manager moves pizzas in and out. - Announce when the oven is about to be switched off. - Then run another round and see whether these changes improved flow, quality, or score.

#### d) Score-based retrospective

Use the built-in scoring to drive a short retrospective: - Compare final scores between rooms. - Ask higher-scoring teams: - What did you deliberately do differently? - Did you limit anything (ingredients, builders, oven)? - How did you reduce waste or rework? - Capture these as a list of team policies that seemed to work well. Other teams can then pick one or two ideas they might try in future sessions.

### 6.2 Linking the game back to real work

To turn the game into practical learning:

1. Ask each team to sketch a simple board for their own work, mirroring the pizza flow: - Ingredients: requests, specs, tickets, requirements, inputs. - Builders: people or roles doing the core work (developers, analysts, writers, support agents, etc.). - Oven: finishing step (testing, review, deployment, sign-off, delivery). - Customers: internal stakeholders or external clients. 2. Have them mark where work tends to pile up, where people are often waiting, and where mistakes or rework appear. 3. Ask each team to agree on one small experiment they could try in their real work, inspired by the game, such as: - Limiting how many items can be in progress at once. - Clarifying who owns the final sign-off step. - Adding a short end-of-day mini debrief like the game's round debrief.

The aim is for participants to see Kanban Pizza Online as a safe practice space for changing how they work together, not just a one-off game.