Paper Boats

FLOW SIMULATION

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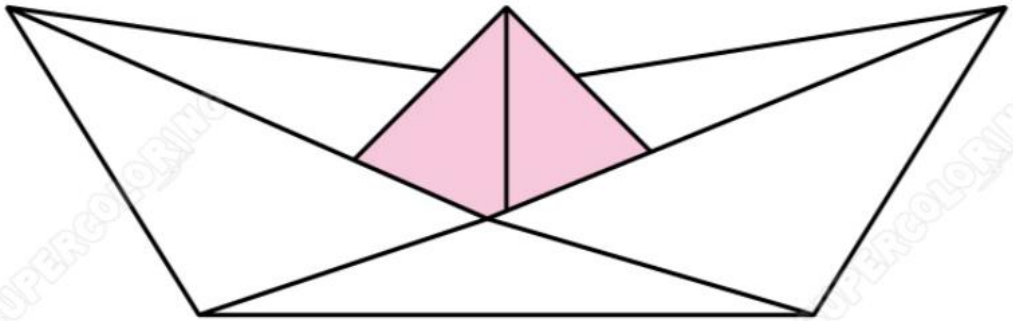
Your company is in the paper boat business.

You are organized in teams of 8:

- 1 Time Keeper
- 7 Workers



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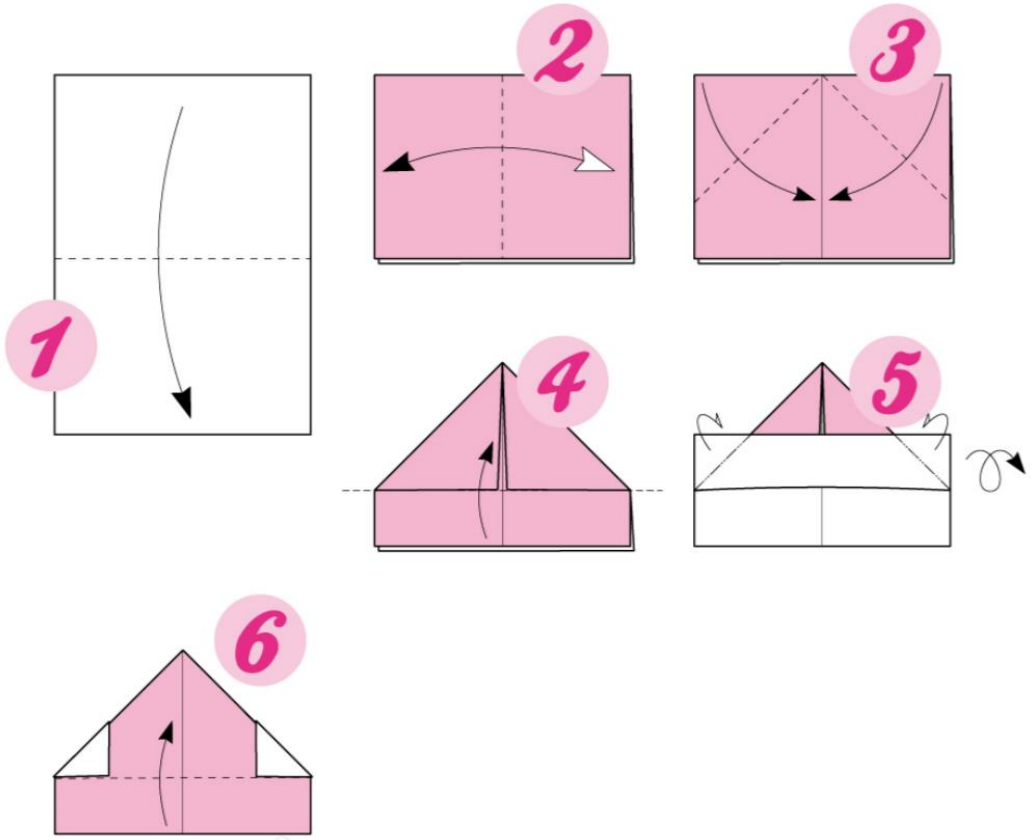
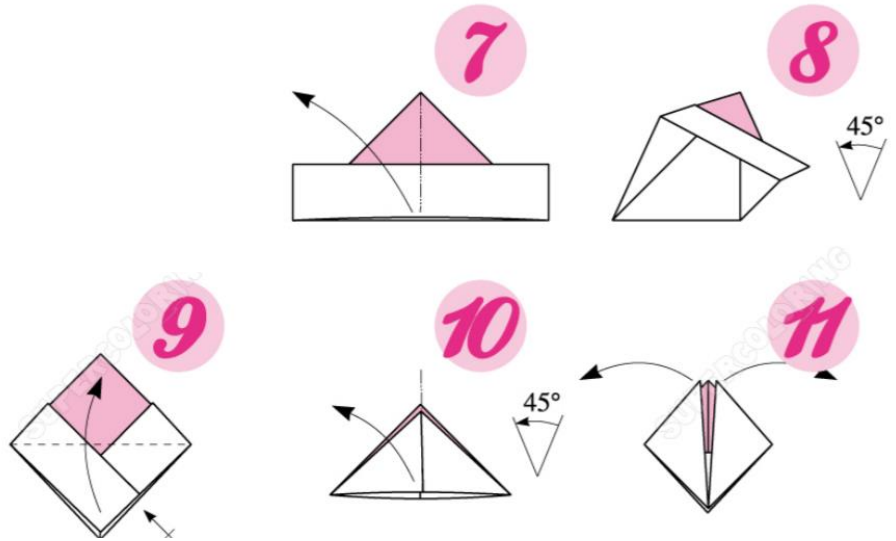
The first 6 workers are responsible for one fold in the process each.



The 7th worker is responsible for the remaining folds [7 to 11].



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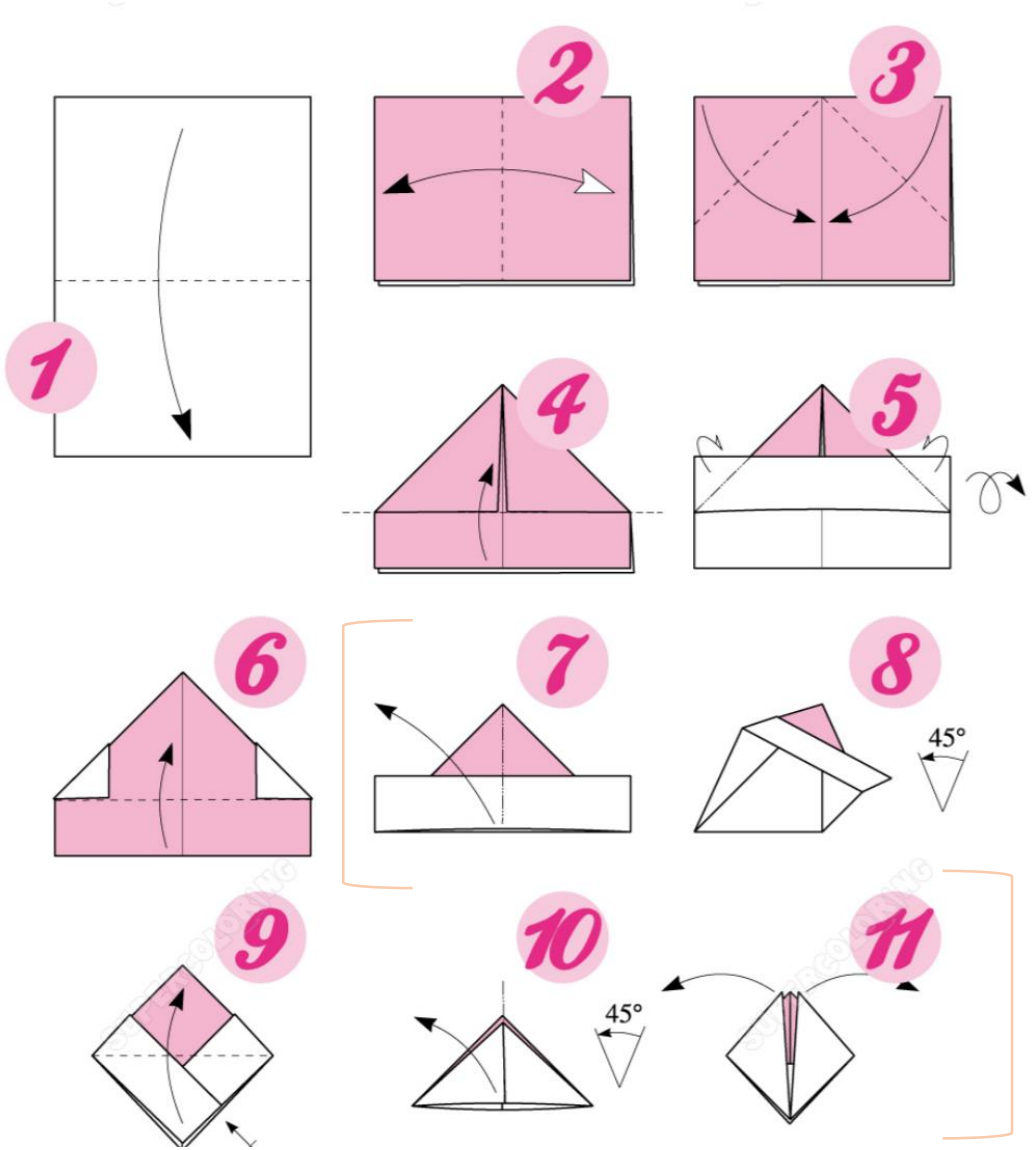
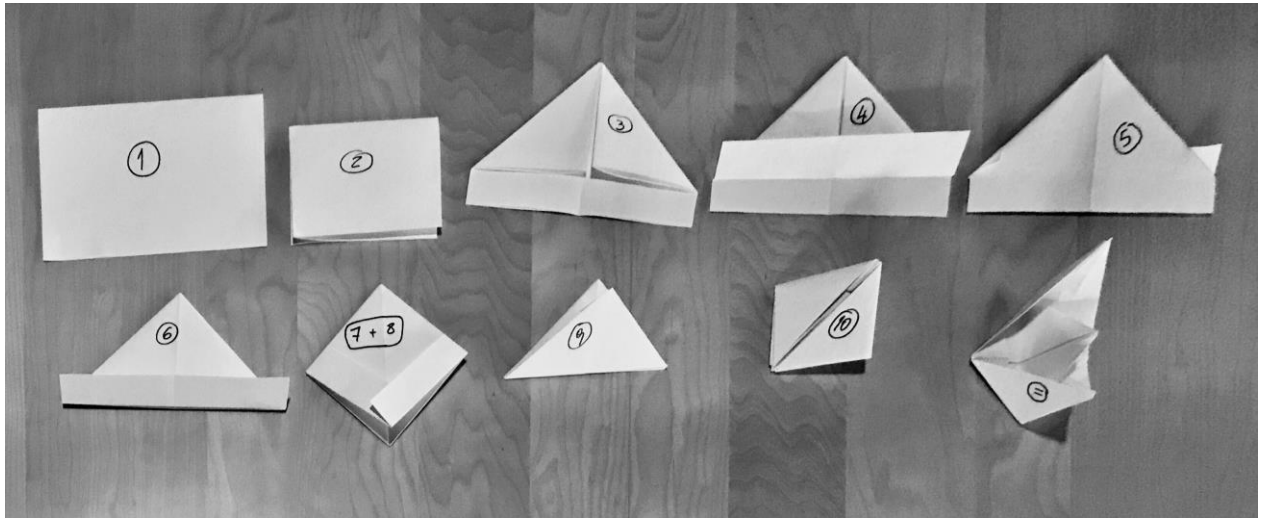
LETS PRACTISE!





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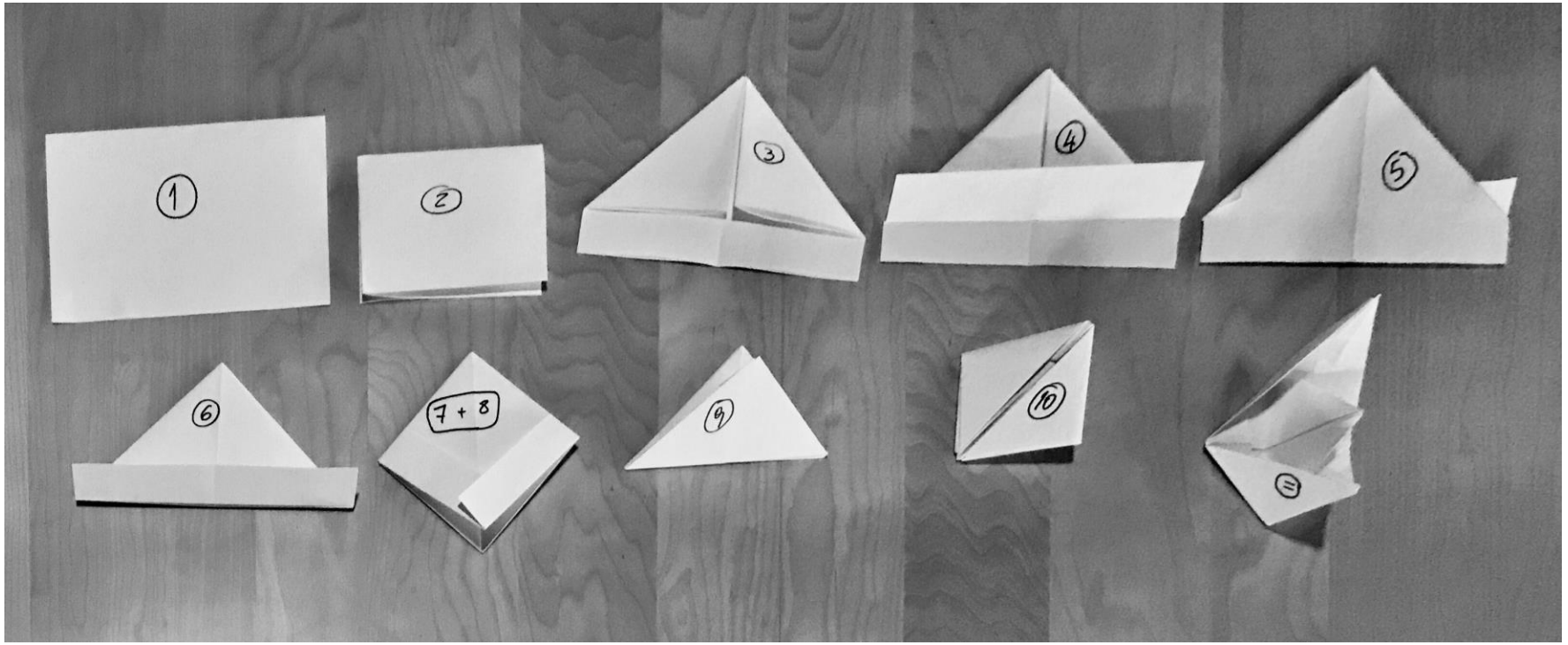
ROUND 1 - PUSH

Make boats as fast as you can by folding as fast as you can in each of your stations and then passing it to the next station as soon as its done.

Time Keepers: Make sure you note the ARRIVAL TIME for each completed boat on the TRACKING SHEET.

Stop working as soon as the timer hits 2 minutes!



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STOP!

Count the total amount of uncompleted boats and record this number in the "**WIP at 2 Minutes**" field in the Round 1 section of the Analysis Sheet.

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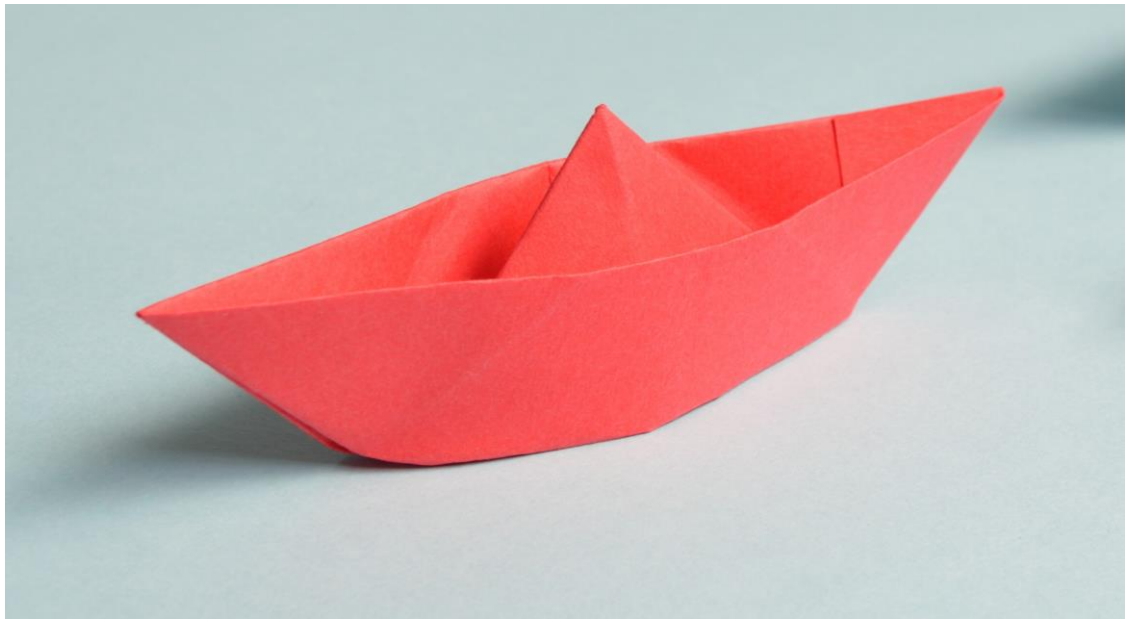
THE RED BOAT

Your most important client has asked you to build a red boat.

Place a red sheet at the top of your blank-paper backlog.

Keep building boats in the same order as work arrives.



Stop working as soon as the red boat is completed and raise your hands!

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STOP!

In the Analysis Sheet calculate the following for Round 1:

- Average Throughput
- Red Boat Lead Time
- Total Boats Delivered

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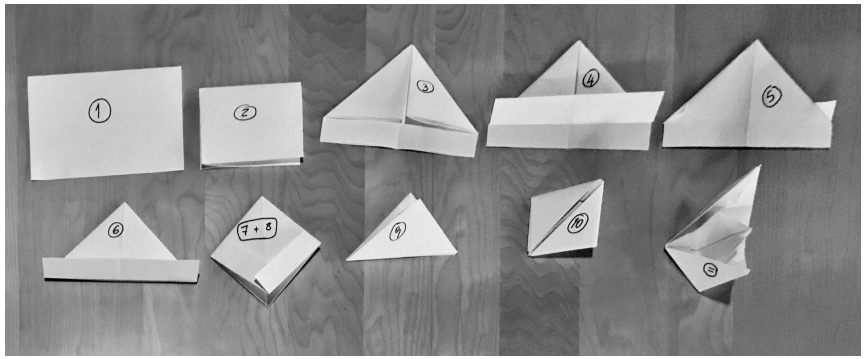
ROUND 2 - PULL



Throw away all completed and partially constructed boats.

Change in process:

- At each station, when you have completed your fold, raise your hands and leave your boat where it is.
- Keep your hands raised until someone has taken your boat.
- If the boat at your station has been taken and the previous station has their hands up, pull a new boat.

Make boats as fast as you can by folding as fast as you can in each of your stations one at a time.

Time Keepers: Make sure you note the ARRIVAL TIME for each completed boat on the TRACKING SHEET.

Stop working as soon as the timer hits 2 minutes!

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LETS PRACTISE!

- At each station, when you have completed your fold, raise your hands and leave your boat where it is.
- Do not give your boat to the next person!
- Keep your hands raised until someone has taken your boat.
- If the boat at your station has been taken and the previous station has their hands up, pull a new boat.

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STOP!

Count the total amount of uncompleted boats and record this number in the "**WIP at 2 Minutes**" field in the Round 2 section of the Analysis Sheet.

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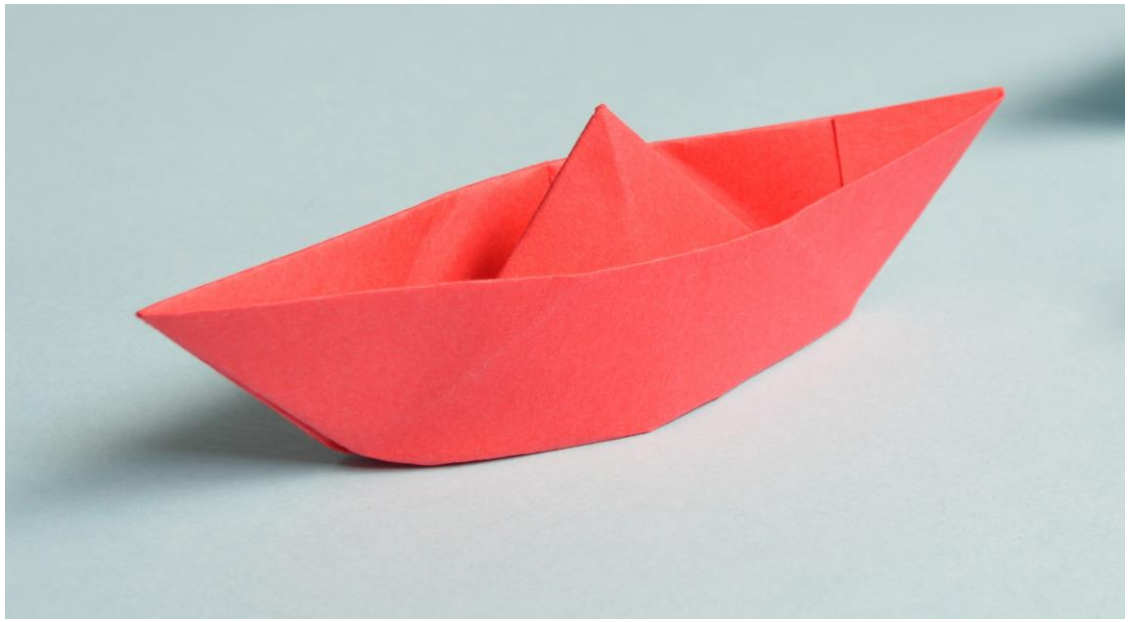
THE RED BOAT

Your most important client has asked you to build a red boat.

Place a red sheet at the top of your blank-paper backlog.

Keep building boats in the same order as work arrives.



Stop working as soon as the red boat is completed and raise your hands!

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STOP!

In the Analysis Sheet calculate the following for Round 2:

- Average Throughput
- Red Boat Lead Time
- Total Boats Delivered

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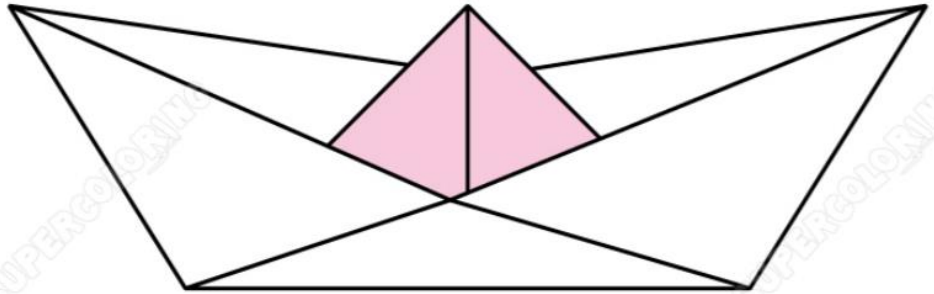
DEBRIEF



How would you describe the pressure on workers between the two rounds?

Which round was more sustainable?

Kanban Concept: Sustainability Agenda

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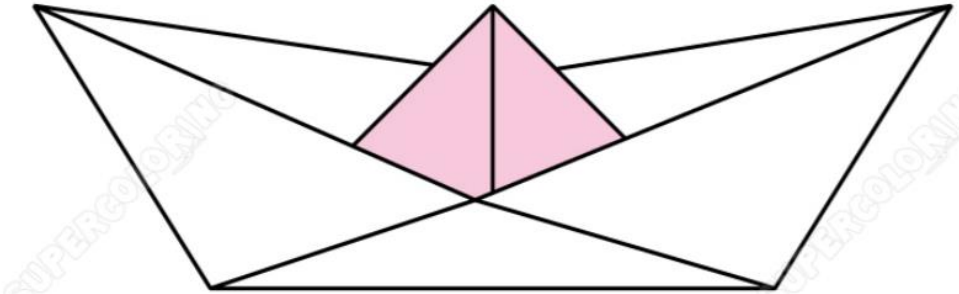
DEBRIEF



In which round was the Red Boat customer happier?

Kanban Concept: Business Agility

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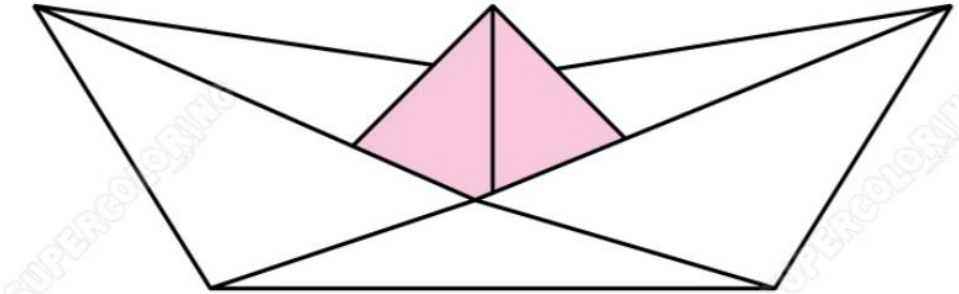
DEBRIEF



How did the throughput compare between Round 1 and Round 2?

Kanban Concept: Little's Law. Setting WIP Limits

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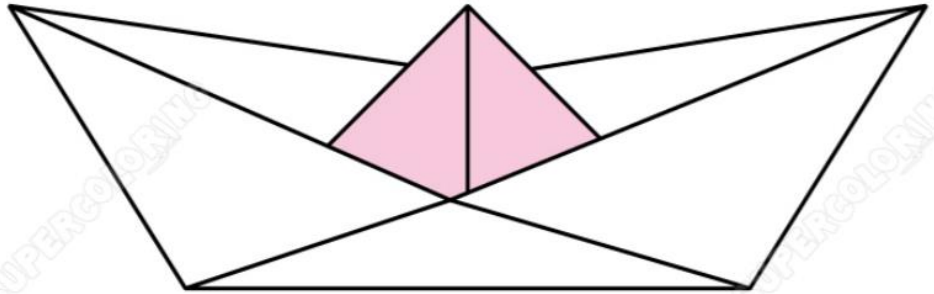

What if you gave the Red Boat highest priority?

What would happen if you had 10 red boats to deliver and all were treated as top priority?

Kanban Concept: Class of Service

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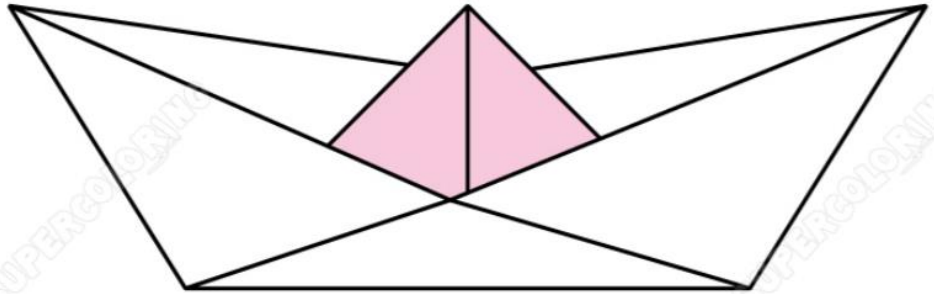

What are the implications of Round 1 vs 2, if we were to shift our business strategy and decided we were now in the Green Boat business?

Kanban Concept: Waste. Deferred Commitment

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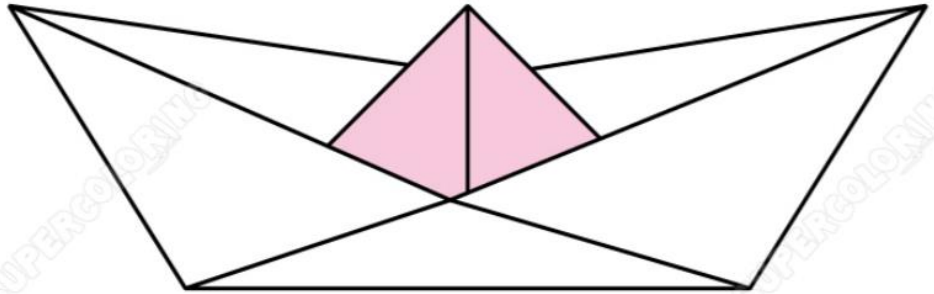

Is there a difference if each station in this game represented a whole team?

Kanban Concept: Service Orientation

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