Scrap Invasion

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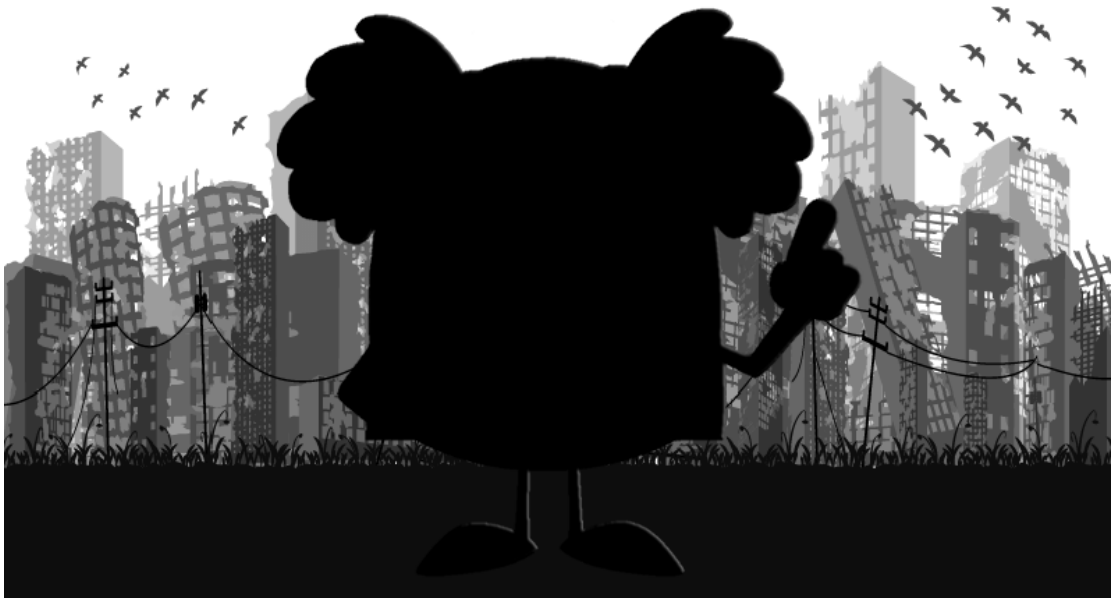
Explain your “Concept Idea” / “Narrative” -If you have

Scrap nation takes place in a comical futuristic world, where players impersonate a mad scientist determined to conquer the world by building a robot army out of scrap and metal parts.



Player Type

1. WHO IS YOUR PLAYER? (IT CAN BE THE COMBINATION OF DIFFERENT PLAYER TYPES.)

Players are meant to conquer circles to progress in the game. Each captured circle will allow the player to move troops to the next ones. In this sense, players are achievers who try to pass through all the circles and reach the final destination before the time runs out (300 steps in machinations). They are also explorers who are trying to find and venture out to different paths for the objective.

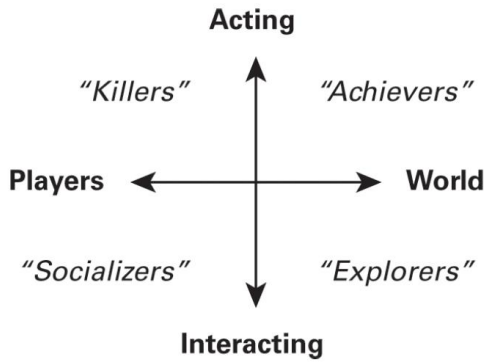


Figure 2.2
Bartle’s (1996) diagram of the four character types

2. PLEASE EXPLAIN THE CHARACTERISTICS OF YOUR PLAYER TYPE:

- Fast thinking is an essential requirement for the player to reach the final circle before the time runs out.
- Players should also have good mathematical thinking as well to achieve their goals.
- A good memory will also help players remember the location of their troops to organize their approach better.

Please create onion diagrams of your Game Loops as in the examples:

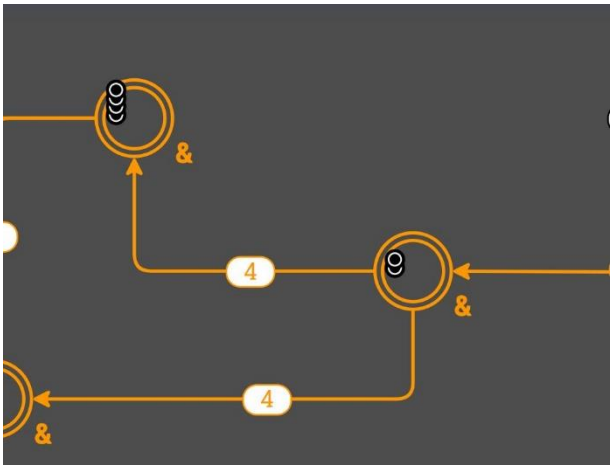
Please answer the "Seven Deadly Questions"

1. WHAT IS THE URGENCY IN THE GAME? (IN OTHER WORDS, WHAT IS THE STRUGGLE OR THE CHALLENGE THAT THE PLAYER CONFRONTS IN THE GAME IN TERMS OF GAMEPLAY AS WELL AS IN TERMS OF THE FICTION? A GAME NEEDS TO HAVE SOME URGENCY, SOMETHING GRIPPING THE PLAYER'S ATTENTION AND IMAGINATION TO KEEP THE PLAYER INTERESTED. IN A GAME LIKE TETRIS, THE URGENCY COMES FROM BLOCKS FALLING FROM THE SKY RELENTLESSLY AND FASTER THAN THE PLAYER CAN DEAL WITH THEM.)

The player has to move twenty troops to the final zone before their time runs out. While doing so, they should also manage their production rate.

2. WHAT IS THE PLAYER'S JOB? (AGAIN, NOT THE PLAYER'S CHARACTER'S JOB IN THE STORY, NOT THE NARRATIVE JOB. RATHER, HOW CAN WE SUCCINCTLY DESCRIBE WHAT THE PLAYER DOES WHEN THEY PLAY THE GAME, FOR EXAMPLE, IN ONE WORD OR A SHORT PHRASE? IN TETRIS, THE PLAYER'S JOB IS "SORTER OF PUZZLE PIECES.")

The player is tasked with reaching the final circle which, requires all the other circles to be captured first. This represents the idea of conquering.



3. WHAT ARE THE PLAYER'S INPUTS?

Troops can be moved by clicking the desired zone then the area will automatically fetch the troops from the previous locations if there are enough troops. There are no combos or additional controls in the game however, fast thinking and good memory will help the players manage their production and advancement simultaneously.

- Which buttons/inputs are best for which actions and why?

Since players will be mostly pointing and clicking, I believe mouse buttons are an effective controller for the game.

- Do we use digital buttons that can only be on or off, or analog joysticks that give us a continuous measurement? Why?

There are digital buttons in the game screen which control the economic part of the gameplay. Also, the areas where the player will fetch their troops are activated my mouse clicks as if digital buttons.

- Should we use chords? Why? (e.g., A + down for a low kick, A + up for high kick)

There is no need for the use of chords for this game.

- Should we use combos? Why? (e.g., A–B–A buttons in sequence for a triple kick)

There is no need for combos for this game as mouse buttons do cover up the required controlling inputs.

- Should we use timed actions? Why? (e.g., press and hold the A button to "wind up" a forceful kick)

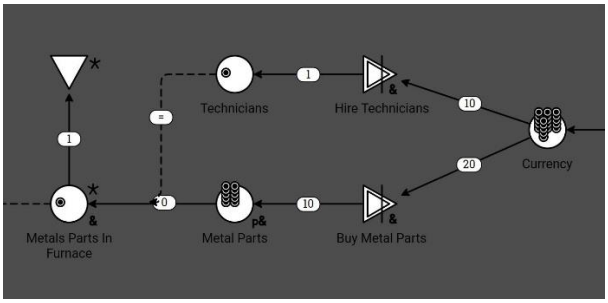
There are no timed actions in the game however, since players will be doing a task in a certain amount of time, they will have to consider time as an element while making their moves.

4. ARE PLAYER ACTIVITIES EXTENSIBLE? (THIS TOUCHES ON CORE MECHANICS. WHAT ARE THEY, AND DO THEY CHANGE OVER TIME? CAN THEY BE UPGRADED OR MODIFIED OR COMBINED WITH EACH OTHER TO PRODUCE MORE COMPLEX BEHAVIORS? FOR EXAMPLE, IN A WAR GAME THE BASIC ACTIONS INVOLVE MOVING TROOPS, ATTACKING, OR DEFENDING—BUT IF UNITS CAN BE UPGRADED OR THEIR STATS CAN UNLOCK NEW TYPES OF ATTACKING OR DEFENDING, IT WILL LEAD TO DESIRABLY COMPLEX GAMEPLAY. OR IN FIGHTING GAME, DIFFERENT KINDS OF ATTACKS MAY COMBINE WITH EACH OTHER INTO COMBOS WITH NEW AND INTERESTING CHARACTERISTICS. ACTIVITIES THAT CAN BE MODIFIED AND EXTENDED ARE BETTER THAN ONES THAT REMAIN STATIC OVER THE DURATION OF THE GAME.)

The core of the game is managing a network of resources and reaching the final destination below a certain time limit. This does not change, yet players can produce more troops or produce troops at a faster rate by having upgrades. Also, there are different zones in the game. Each will require different mathematical thinking to overcome.

5. ARE THERE THREE (OR MORE) RESOURCE TYPES? WHAT ARE THEY? HOW ARE THEY AFFECTING THE GAMEPLAY?

The most essential resource for the player is money. Money is used to buy materials for the scrap army and hire technicians who could increase the production rate.



6. IS THERE A DEFINING RULE? (ALTHOUGH GAMES HAVE A VARIETY OF RULES AND MECHANICS, MANY SUCCESSFUL GAMES HAVE ONE OR MORE DEFINING RULES WHICH ARE UNIQUE TO THIS GAME OR THE GENRE AND WITHOUT WHICH THE GAME JUST WOULD NOT BE WHAT IT IS. THESE ARE OFTEN UNIQUE CONSTRAINTS OR TRADEOFFS. IN CHESS, THE DEFINING RULE IS THE CHECK RULE AND THE RESULTING VULNERABILITY OF THE KING.)

The most important rule for the game is to reach the final destination before the time runs out. But while doing so, the player is constrained by the numerals in each connection. They can not move more or fewer troops to a certain circle at once. Some areas will also require pulling troops from different zones at the same time.

7. WHAT ARE YOU TESTING? (GAMES CHALLENGE THE PLAYER IN MULTIPLE WAYS, BUT THERE SHOULD BE ONE OR A FEW DOMINANT GAMEPLAY CHALLENGES THAT ARE CORE TO THE GAME, AND THESE CHALLENGES SHOULD BE CONCRETE AND ACTIONABLE. FOR EXAMPLE, TETRIS TESTS THE PLAYER'S ABILITY TO SORT SHAPES UNDER TIME PRESSURE, FIGHTING GAMES LIKE TEKKEN TEST THE ABILITY TO EXECUTE COMPLEX MOVES AND ATTACKS WITH PERFECT TIMING, AND CITY BUILDERS LIKE SIMCITY TEST THE ABILITY TO MANAGE RESOURCES AND SPACE ALLOCATION.)

Players need to have good coordination and strategical thinking to complete the given task. They will have to manage two systems at once (manufacturing and moving) but also calculate their moves to create a road map. They will need to distinguish which areas in which order will be the quickest route. In a way, players will be tested in mathematical thinking, memory, and coordination.

Please explain how you include the method and concept of emegency in your game? ("A MODEST NUMBER OF RULES APPLIED AGAIN AND AGAIN TO A LIMITED COLLECTION OF OBJECTS LEADS TO VARIETY, NOVELTY, AND SURPRISE. ONE CAN DESCRIBE ALL THE RULES, BUT NOT NECESSARILY ALL THE PRODUCTS OF THE RULES NOT THE SET OF ALL WHOLE NUMBERS, NOT EVERY SENTENCE IN A LANGUAGE, NOT ALL THE ORGANISMS WHICH MAY ARISE FROM EVOLUTION."JEREMY CAMPBELL, GRAMMATICAL MAN

EMERGENCE IS A CRUCIAL FACET OF UNDERSTANDING HOW THE SYSTEM OF A GAME BECOMES MEANINGFUL FOR PLAYERS. IN THE QUOTE ABOVE, JEREMY CAMPBELL DESCRIBES HOW EMERGENCE ARISES FROM COMPLEXITY. MOST GAMES SHARE THESE FEATURES. THE RULES OF PONG ARE RELATIVELY SIMPLE, BUT IF YOU IMAGINE ALL OF THE WAYS THAT A GAME CAN PLAY OUT, FROM A QUICK-WIN MATCH WHERE ONE PLAYER DOMINATES, TO AN EXTENDED, DRAMATIC FINISH, IT IS CLEAR THAT THE SYSTEM OF PONG DEMONSTRATES EMERGENCE. EVEN A GAME WITH A MUCH MORE COMPLICATED RULESET, SUCH AS WARCRAFT II, CONTAINS EMERGENCE. ALTHOUGH THE GAME SEEMS VERY COMPLEX COMPARED TO PONG, IN ESSENCE WARCRAFT II ONLY HAS A FEW DOZEN DIFFERENT KINDS OF ELEMENTS, AND THE WAYS THAT THEY CAN INTERACT ARE QUITE LIMITED. IF TWO ENEMY UNITS MEET, THEY WON'T STRIKE UP A CONVERSATION OR START TO DANCE TOGETHER THEY WILL EITHER FIGHT OR NOT FIGHT. DESPITE THE COMPLEXITY OF THE CODE, THERE IS STILL ARGUABLY A "MODEST NUMBER OF RULES" APPLIED TO A "LIMITED COLLECTION OF OBJECTS". THE SYSTEM OF THE GAME, WHEN IT PLAYS OUT, RESULTS IN UNPREDICTABLE PATTERNS OF EMERGENCE.)

Scrap Invasion is a fairly simple game. Control-wise, all that is required from the player is to press where they wish their troops to move to yet the gameplay can get quite complicated considering the numbers and connections between each area. All areas are connected in a way to make it harder for the player to follow up a direct route and

see all possible outcomes. In other words, the simple act of capturing, done by clicking desired locations, can require a mathematical approach.

Please explain the direct and indirect progression mechanics that you use in your game - how will the player know how well they are doing?

1. DIRECT PROGRESSION MECHANICS

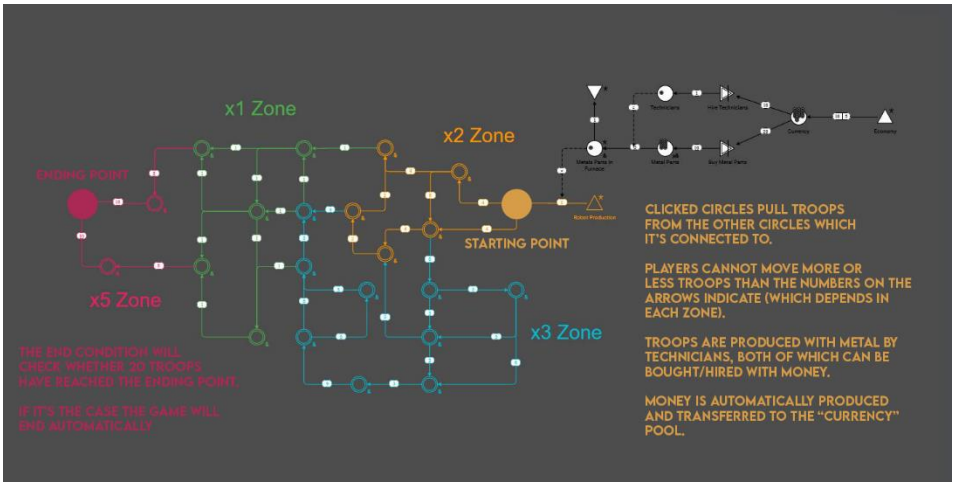
Players can easily identify their progress in the game simply by observing the areas they already occupy.

2. INDIRECT PROGRESSION MECHANICS

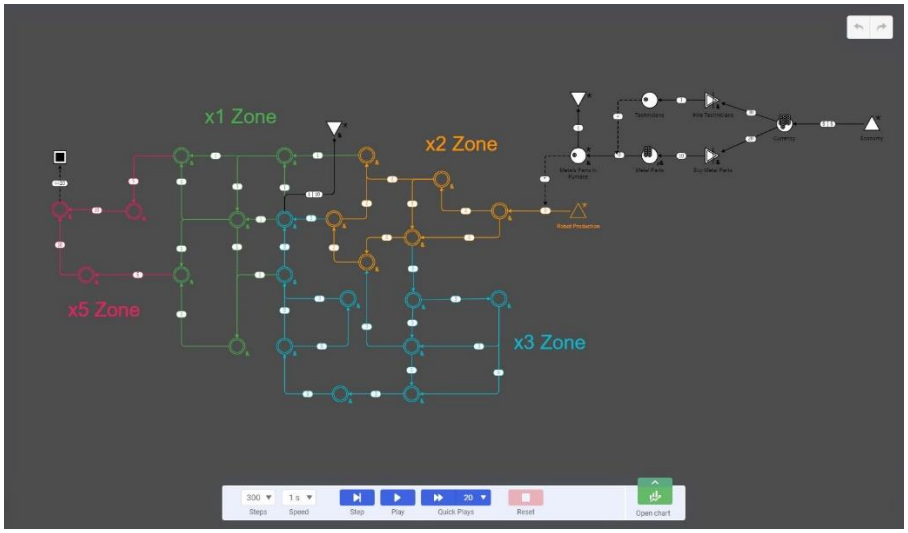
There are certain points in the game where the player will realize that they need to start working on a different zone in the game before they could progress forward. They will still have an advantage since all circles are connected they will be indirectly working on something that could help their progress further into the game.

Please place screenshots of your Machinations Diagram of your game.

1. YOU MUST HAVE LABELS AND EXPLANATIONS ON YOUR DIAGRAM
2. YOU MUST INCLUDE YOUR INPUT MAPPING AS LABELS
3. PLEASE INCLUDE SCREENSHOTS FROM YOUR MACHINATIONS DIAGRAMS WHILE YOU ARE ANSWERING THE PREVIOUS QUESTIONS. IT IS EASIER TO EXPLAIN WITH THE DIAGRAMS.
4. PLEASE PROVIDE THE LINK FOR MACHINATIONS
5. IF YOU HAVE SOME MECHANICS THAT YOU CANNOT EXPLAIN THROUGH MACHINATIONS PLEASE PROVIDE A “MIND MAP”.



The area covered in black is where the economic structure of the game takes place, there we can hire technicians, buy metal parts and produce our troops using our money as a resource. There are four zones for the players to overcome which are named by the numerals they will come across most often. For example, the orange colored zone (2x) allows the player to move their troops only as in two, four or eight in numbers while the blue zone (3x) allows only three, six or nine soldiers to be moved at once. Once the players reach the final circle, the end condition connected to the final circle will finish the game.



Final Version

Playtests

(YOU'LL BE DOING 3 PLAYTESTS DURING THE PROCESS. EACH PLAY TEST SHOULD HAVE THREE STAGES. OBSERVATION: You'll be observing and taking notes while the other person is playing. EVALUATION: You'll analyze your observations. IMPLEMENTATION: You'll be explaining how the playtest affect/change/transform your mechanics. Please use diagrams, charts, questionaries etc.)

1. PLAYTEST (5 PEOPLE)

- Observation

During my first playtest, I observed that the machinations interface required initial familiarizing before the players could turn their attentions to the game itself. At this phase testers who were more familiar with video games were faster at learning the interface and beginning to play. During their play, they all had different approaches. My father who is a math teacher started by evaluating the numbers and tried to find the quickest route. My cousin has tried to use straight paths to the objective and lost a lot of time trying to understand the map of the game. The last three participants used a similar approached, they first gazed through the map after listening to my

explanation and then marched directly by following the connections between the circles.

- Evaluation

During the first playtest my diagram showed up to involve unnecessary and avoidable circles which did not affect the gameplay. I also seemed to miss calculated the numbers in most connections which resulted in the game being too hard, to the point of being unbeatable for the given time limit.

- Implementation

I have reorganized some of the connections between the circles and re-calculated the numbers in a way to make the game beatable by a fair struggle.

2. PLAYTEST (5 PEOPLE)

- Observation

With the new diagram, all testers seemed to progress more easily, I think the fact that they knew the layout before was a big advantage for them all. One of my friends showed a notable difference. He spammed a lot of troops early in the game by focusing more on the economy and never looked back to that part again during the game. Another significant observation was that my cousins struggle in following up the arrows and routes.

- Evaluation

Manufacturing speed was too high and having a lot of troops have made the game easier to beat in the new simplified diagram. I figured creating a system that would force players to lose more troops, such as picking a strategic area to be under constant enemy fire, would improve the gameplay even more by forcing the players to keep moving their forces and not standing still.

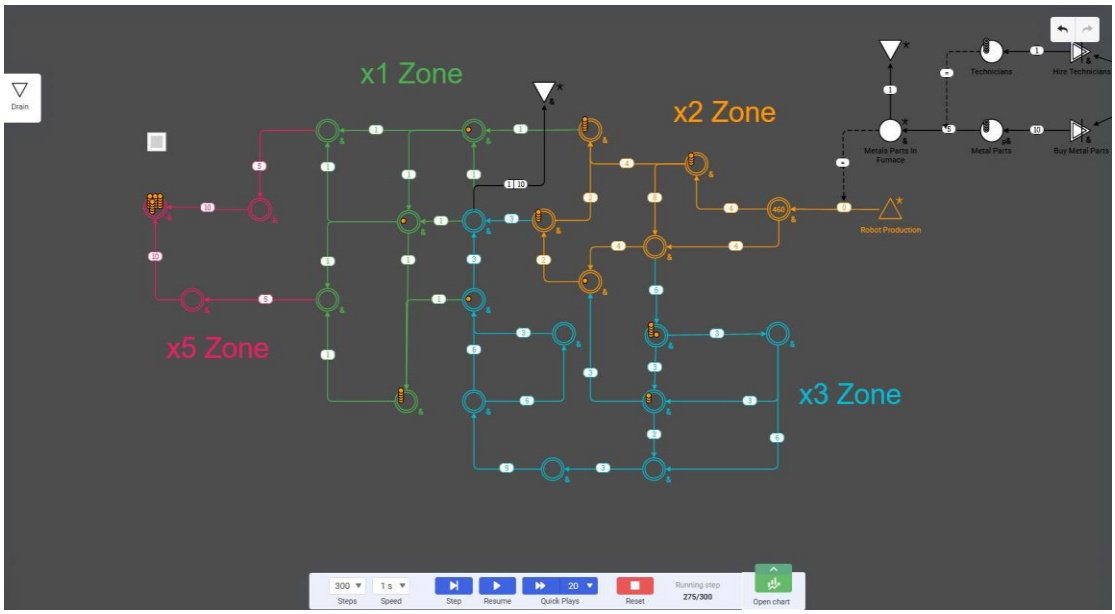
- Implementation

I decided to lower the speed of the economy so that the players won't able to spam troops early on in the game. I couldn't fix the interface completely as I had no control over the machinations interface, but I colored different zones and put labels to explain the map better. I have picked the connecting circle between all the zones and made it so that each ten seconds a unit there would be lost.

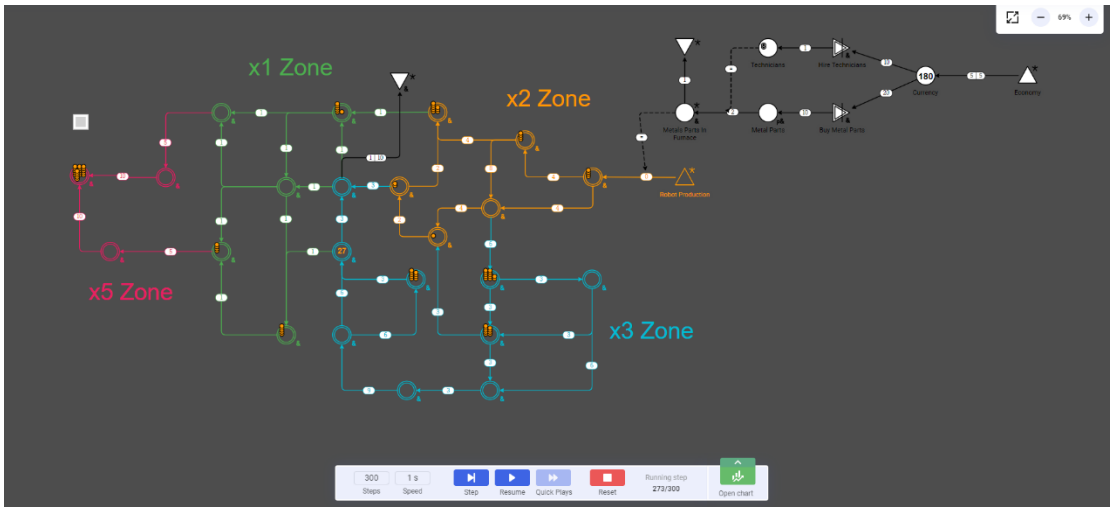
3. PLAYTEST (5 PEOPLE)

- Observation

Each tester had stumbled with the new manufacturing speed. My father's performance was the most affected because he had to adapt his working strategy by re-calculating his route. One of my friends believed the game to be too hard with this manufacturing phase but others have managed to finish the game. I also noticed that finishing times were very close for each player (Around the 270th step).



My Timing



Friend's Timing

- Evaluation

Dropping the speed of manufacturing made troops more valuable and forced players to divide their attention making it harder to calculate their time and offering a better challenge.

- Implementation

I didn't implement any new features after the third playtest.