**Ideas for Implementing a Negative Feedback Loop**

Idea 1 – Bad Sushi:

The “bad sushi” idea has come from feedback given to the team, and after much thought I have tried to develop the idea further to better match a negative feedback loop in our game. If a player is losing then they are granted the opportunity to throw a piece of bad sushi onto their opponent’s conveyor belt. The opponent will not know the Shushi is bad until they have tapped it, once tapped the opponent will automatically lose customers/points. It does not matter if the opponent gets a perfect tap or not, they will still lose customers.

*Negative feedback loop:*

* Losing player is granted the “bad sushi” power up.
* Losing player taps bad sushi icon to send bad sushi onto winning players conveyor belt.
* The bad sushi replaces the normal sushi on winning players conveyor belt.
* Bad sushi travels along winning players conveyor belt on their next turn.
* Winning player taps bad sushi.
* Customers at winning players bar look disgusted.
* A certain number of customers move back over too losing players sushi bar.

Idea 2 – Mario Kart idea:

In this idea I have looked deeper into how the Mario Kart series uses a negative feedback loop, and how we could introduce this into our game. In Mario Kart, players can smash through crates and when they do a random power up is given to them. The leading player is always guaranteed to get the lesser powerful power ups, granting them less chance to gain a bigger lead ahead of their opponents. Players who are losing have a bigger chance at getting power ups that will provide them a better opportunity to get closer to leading player and potentially pull the lead back. This negative feedback loop ensures the most skilled players are always faced with a challenge and not just racing with no worries of losing. The lesser skilled players are constantly given the opportunity to pull the lead back, helping them feel there’s always a chance to win.

In our game we could introduce the same type of negative feedback loop by enabling the players the chance to pick up a variety of powerups. The power ups would consist of less powerful ones and more powerful ones, with the winning player always guaranteed a low tier power up and the losing player guaranteed a high tier power up. The players would be able to pick up the power ups at random throughout play, where they appear above customers or along the conveyor belts. The player would need to tap the power up to activate it.

Idea 3 – Adjusting Speed of Players Conveyor Belt:

With this idea I thought of a very simple way to introduce a negative feedback loop, by simply adjusting speed of each players conveyor belt. The winning player will always have their conveyor belt run at a faster pace, compared to the losing players conveyor belt which runs slower. With the winning plays belt running faster it’ll mean they have a bigger chance of missing their taps, which will equal losing more customers/points to their opponent. The losing players belt will run slower which will enable the player a better chance of getting perfect taps, which will equal a better chance of gaining the lead.