

htw saar

Game Design and Development

Factor.io

Prototype 2



Agenda



- **Recap of Factorio**
- **Balancing**
- **Research Tree**
- **Graphics**
- **What we did not achieve**
- **Tools**
- **Process model**
- **Live-Demo-Video**



Recap of Factorio



Source: Factorio



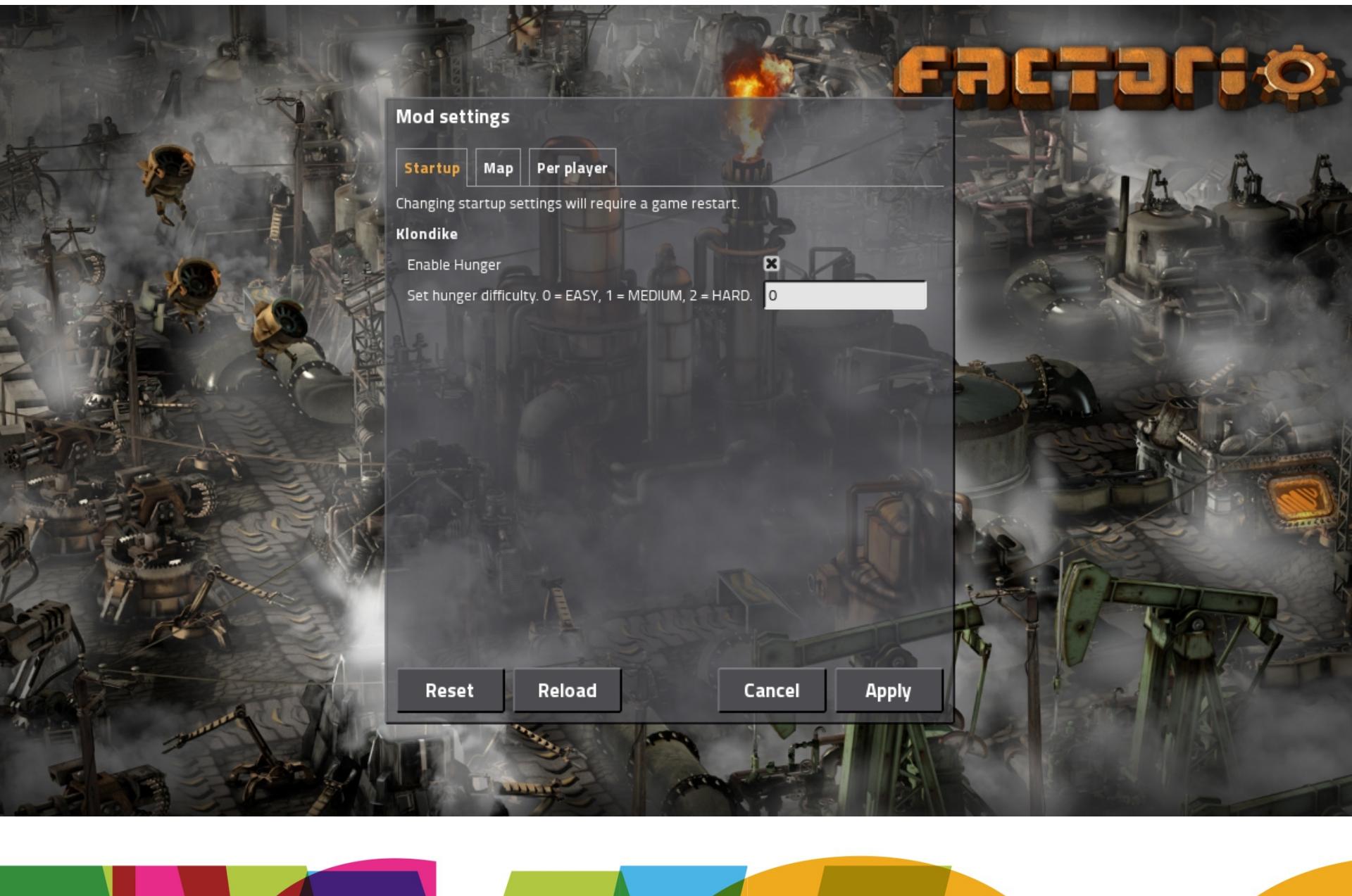
Source: Factorio



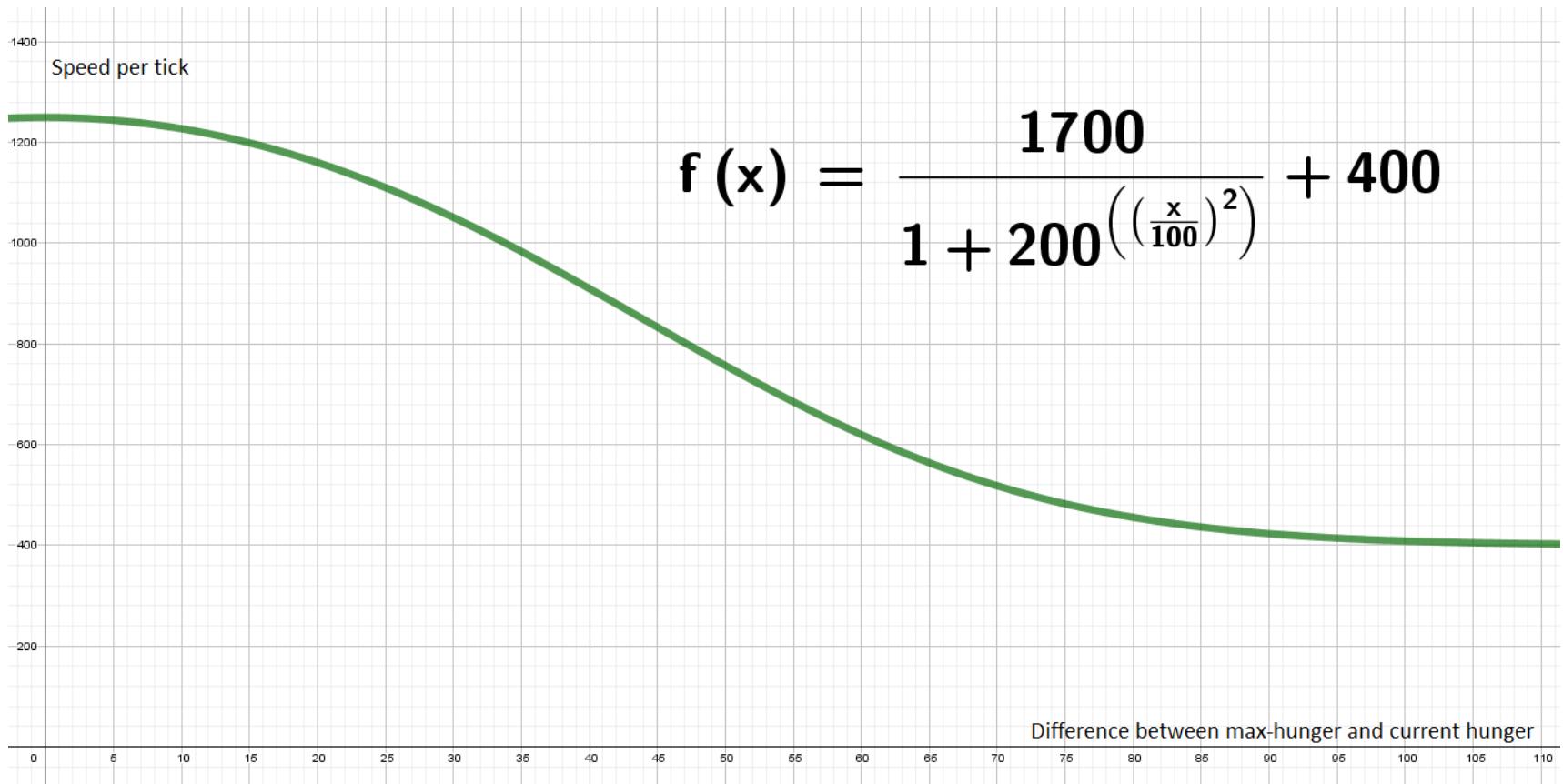
Source: factorio.com



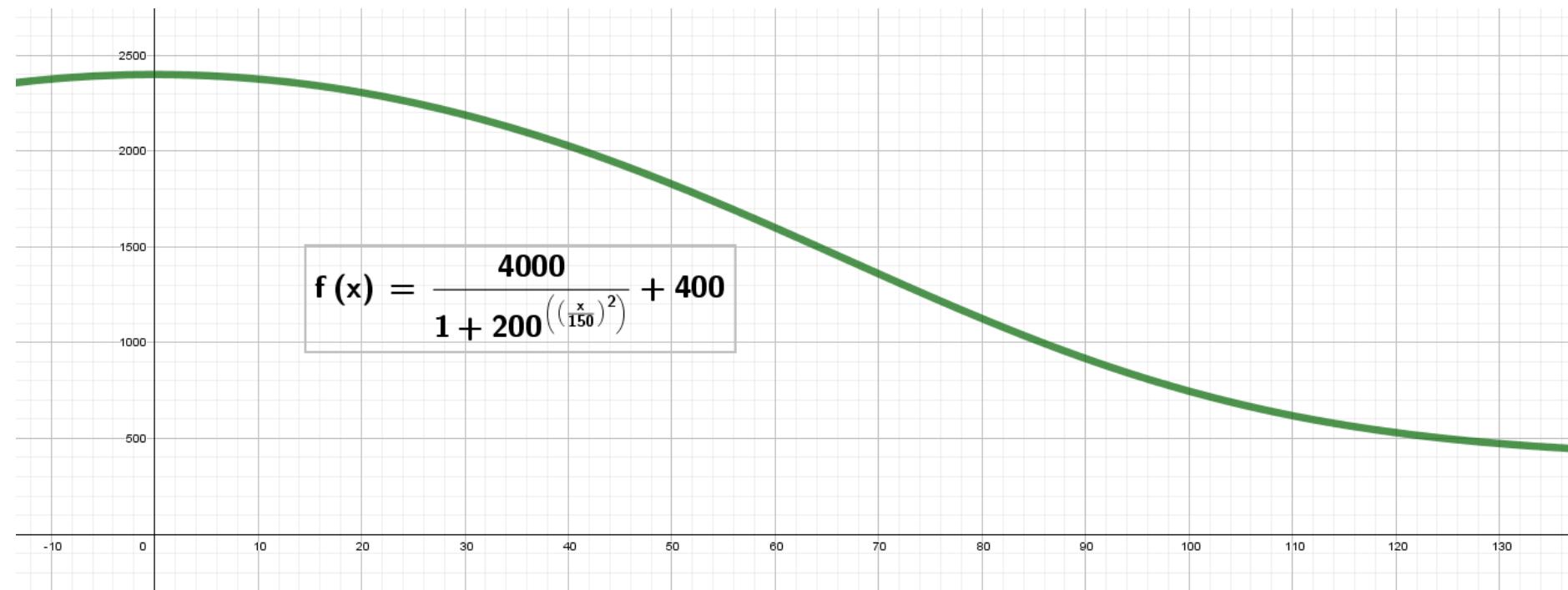
Balancing



Hunger Algorithm (Old)



Hunger Algorithm (New)

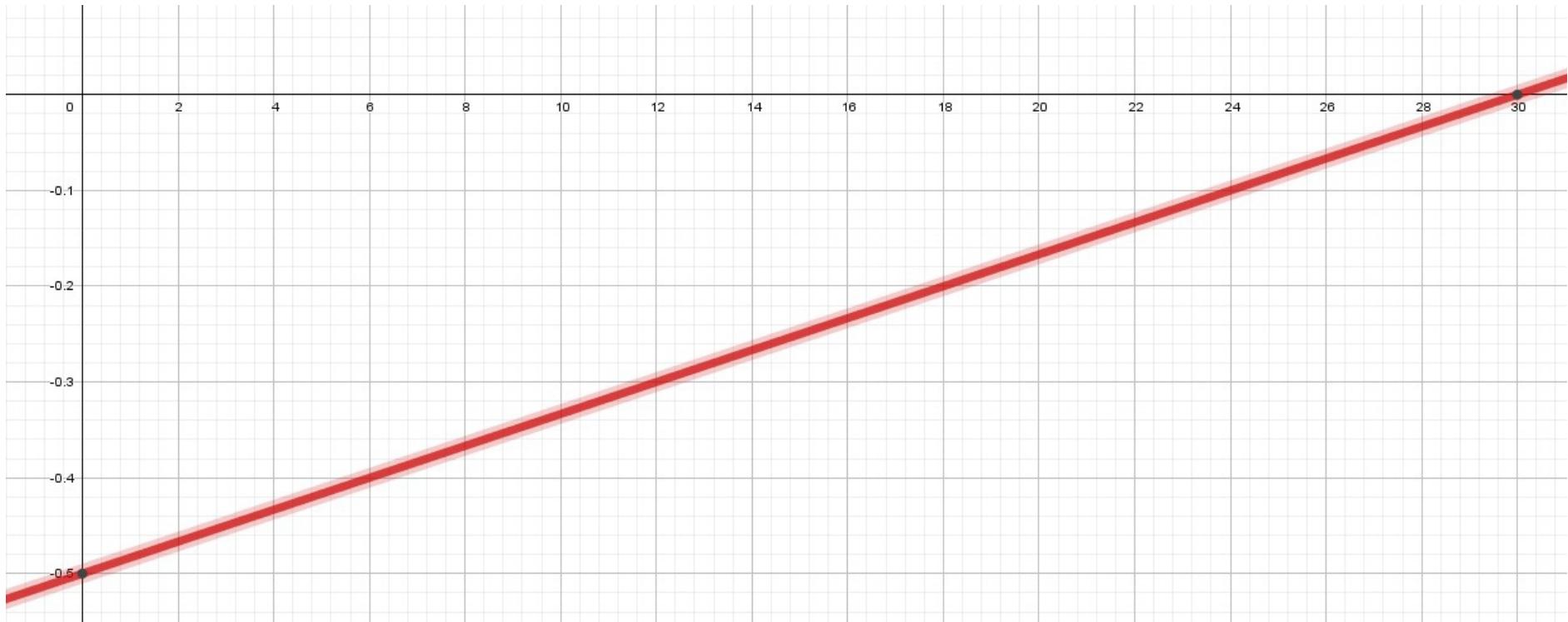




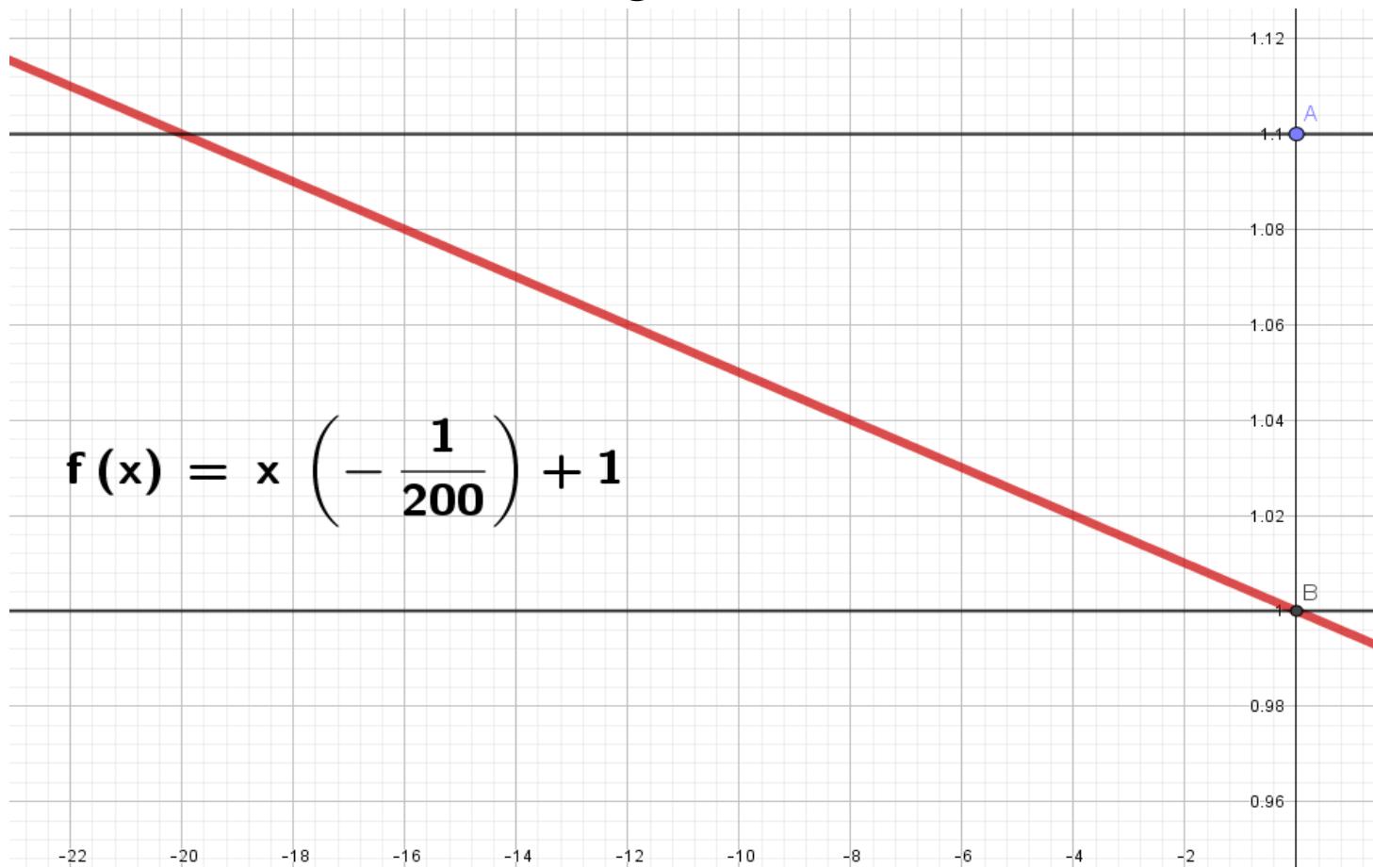




Consequences of Starving



Benefits of Overeating





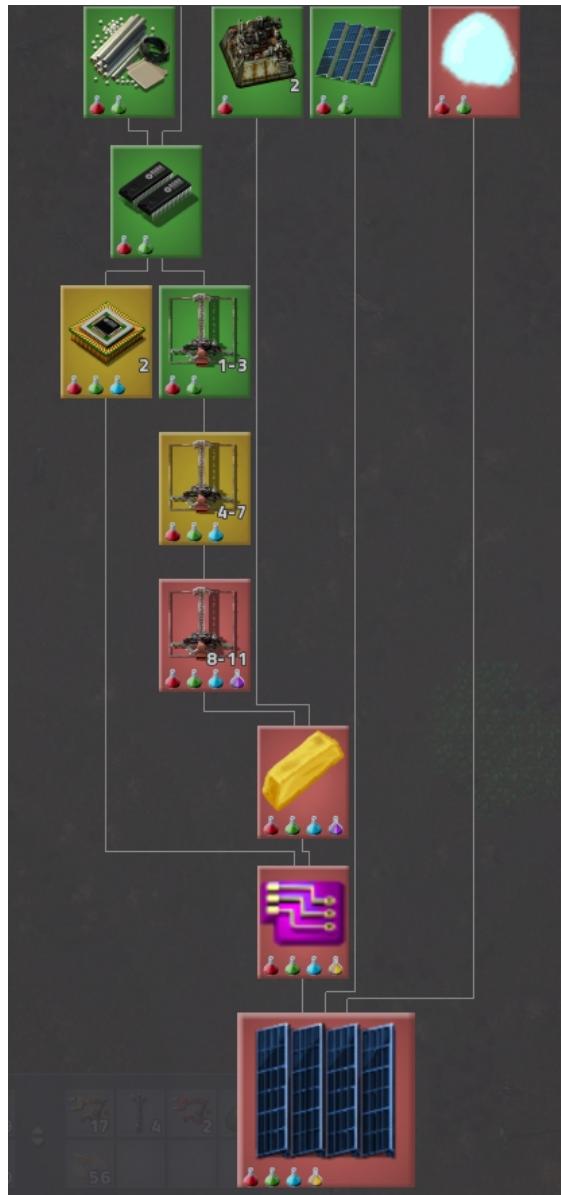
Speedmodification code

```
function player_fatigue(index, v)

if (DEATH == 0) then
    if v < 30 then
        game.players[index].character_running_speed_modifier = v*(1/60)-0.5
    elseif v > MAXIMUM_HUNGER then
        game.players[index].character_running_speed_modifier = (MAXIMUM_HUNGER-v)*(-1/200)+1
    else
        game.players[index].character_running_speed_modifier = 0
    end
end
end
```



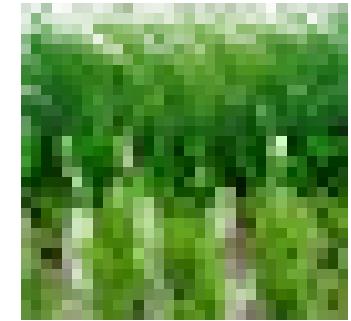
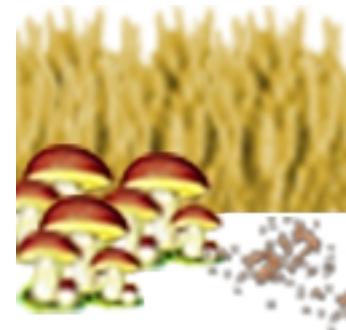
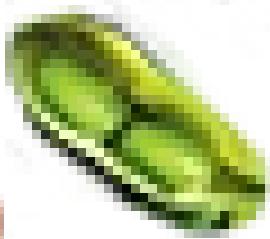
Research Tree





Graphics

Graphics





What we did not achieve



source: "<http://clubpenguin.wikia.com>"



source: "<http://www.sushiexpress.lt>"



source: "Factorio"



Tools



Source: "www.sublimetext.com"



Source: "www.gimp.org"



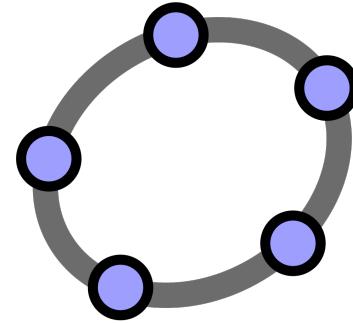
Source: "www.factorio.com"



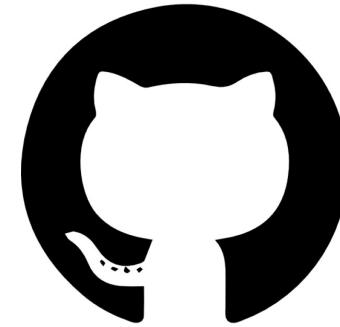
Source: "www.whatsapp.com"



Source: "www.skype.com"



Source: "www.geogebra.com"



Source: "www.github.com"

C:\Users\overmeierg\Documents\GitHub\ZU1\WS_1\team1\klondike\Klondike_0.1.0\control.lua (Klondike_0.1.0) - Sublime Text 2 (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

▼ Klondike_0.1.0

▶ achievements

▼ events

▶ food

▼ hunger

- on_built_entity.lua
- on_player_built_tile.lua
- on_player_crafted_item.lua
- on_player_created.lua
- on_player_joined_game.lua
- on_player_mined_entity.lua
- on_player_mined_item.lua
- on_player_mined_tile.lua
- on_player_respawned.lua
- on_pre_player_died.lua
- on_robot_mined_entity.lua
- on_tick.lua
- on_trigger_created_entity.lua

▶ graphics

▶ input

▶ locale

▶ logic

▶ prototypes

▶ sound

control.lua

data.lua

hunger_constants.lua

info.json

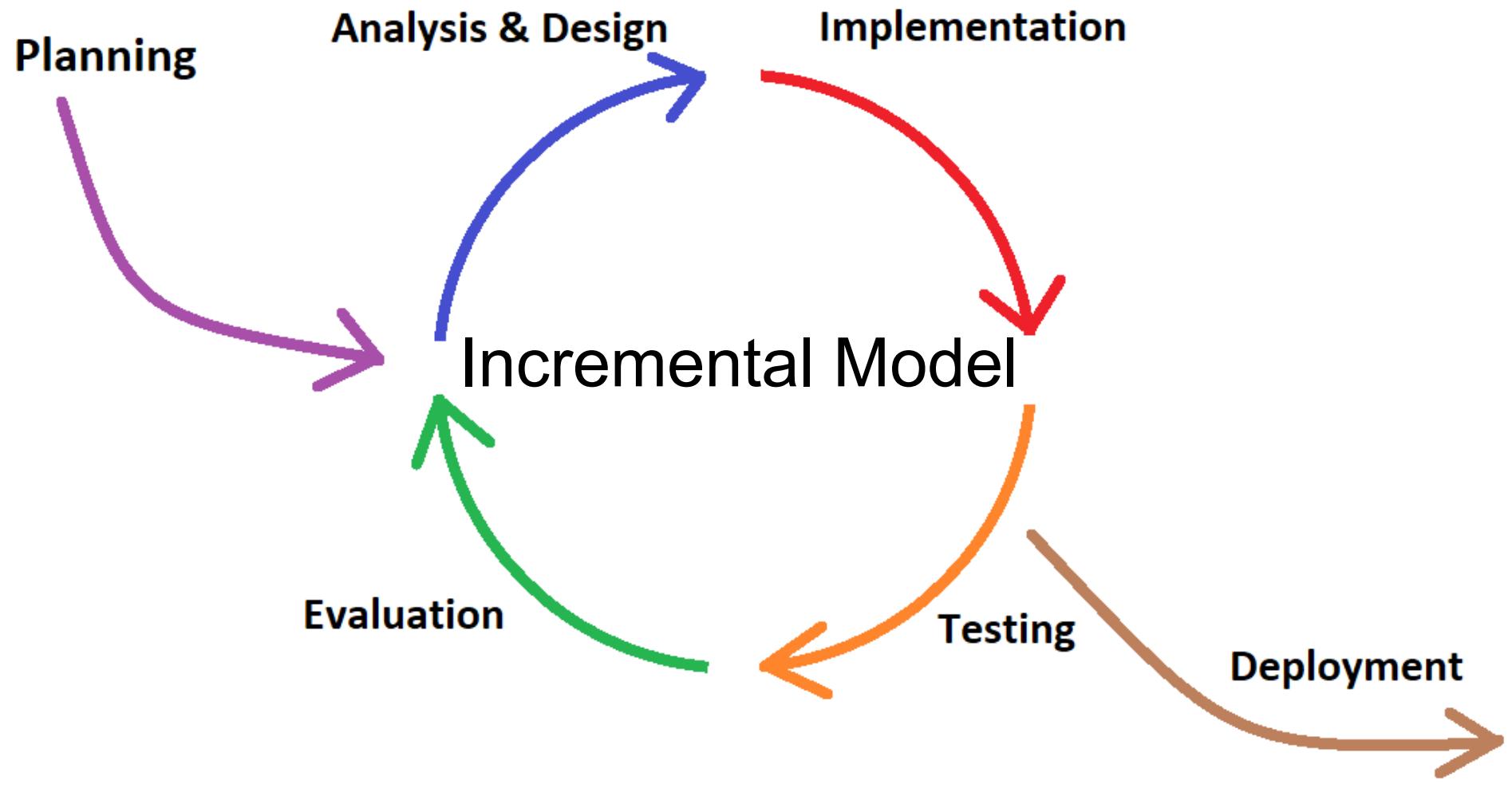
settings.lua

control.lua × hunger speed sigmoid function.lua × on_tick.lua × on_player_respawned.lua ×

```
7  require("logic.hungerspeed_sigmoid_function")
8
9  --events
10 require("events.hunger.on_pre_player_died")
11 require("events.hunger.on_player_created")
12 require("events.hunger.on_player_respawned")
13 require("events.hunger.on_player_mined_tile")
14 require("events.hunger.on_player_mined_item")
15 require("events.hunger.on_player_mined_entity")
16 require("events.hunger.on_player_joined_game")
17 require("events.hunger.on_player_crafted_item")
18 require("events.hunger.on_player_built_tile")
19 require("events.hunger.on_built_entity")
20 require("events.hunger.on_trigger_created_entity")
21 require("events.hunger.on_tick")
22 require("events.food.getMeatEvent")
23 require("events.hunger.on_robot_mined_entity")
24
25 function initialize()
26     if global.klondike == nil then
27         global.klondike = {}
28         global.klondike.player = {}
29         global.klondike.tick = {}
30     end
31 end
32
33 function create_player_data(index)
34     if global.klondike.player[index] == nil then
35         global.klondike.tick[index] = SCHEITELPUNKT/2 + SCHIEBER
36         --HUNGER_PERIODIC_TICK = SCHEITELPUNKT/2 + SCHIEBER
37         player_property_update("fix", index, "hunger_value", MAXIMUM_HUNGER)
38         player_property_update("fix", index, "ticks", 0) --tickrate
39     end
40 end
41
42 function player_property_update(mode, index, name, v)
```



Process Model





Live-Demo