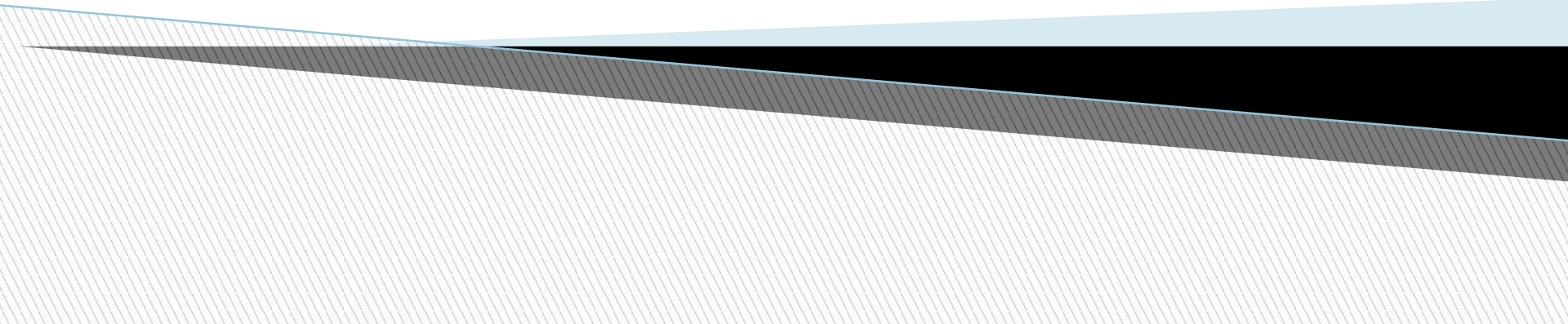


# **Anti Road Flooding Innovation**

Automation for pedestrian and car  
protection from floods

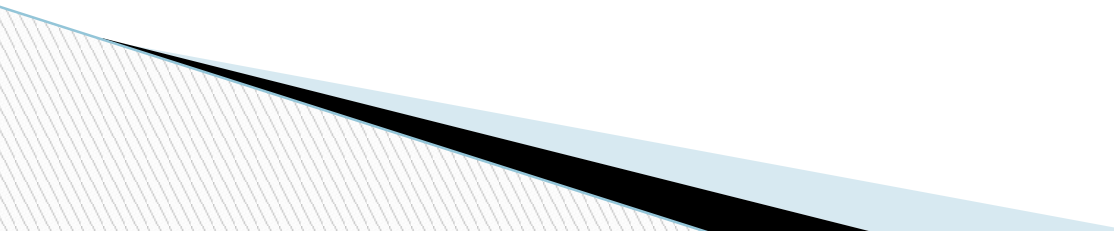


# Automations for pedestrians and cars protection from floods

## Overall:

- An Arduino was used
- Flooded Road Simulations were made

## The Arduino was connected with:

- ❑ Water Level Sensors
  - ❑ I2C LCD Screens
  - ❑ Servo Motors
  - ❑ LED Traffic Light
  - ❑ Water Pump
- 

**It all started with a flood, and us wanting to do something about it...**

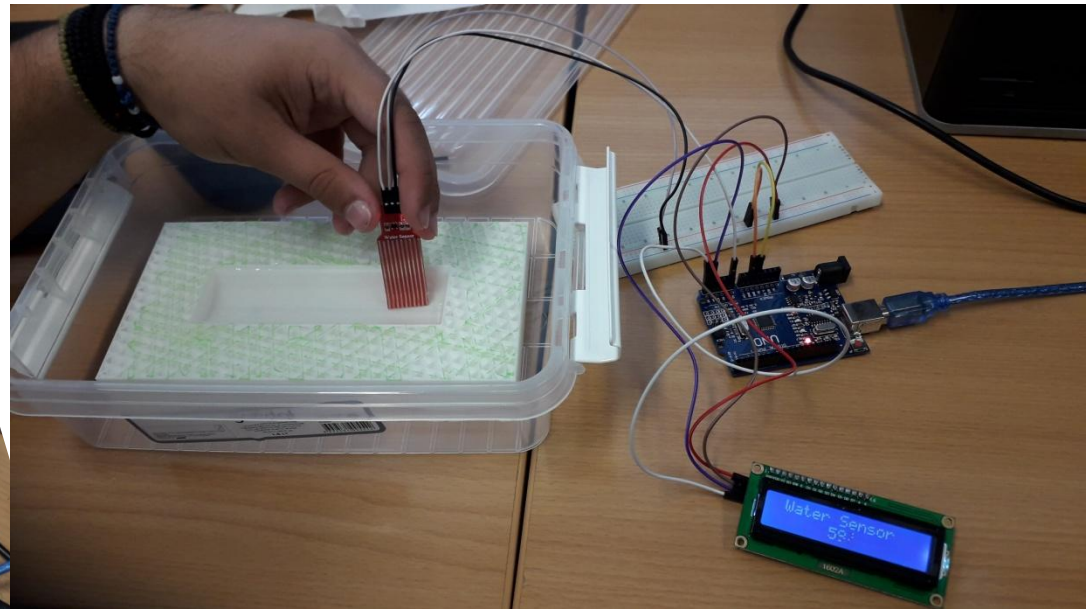
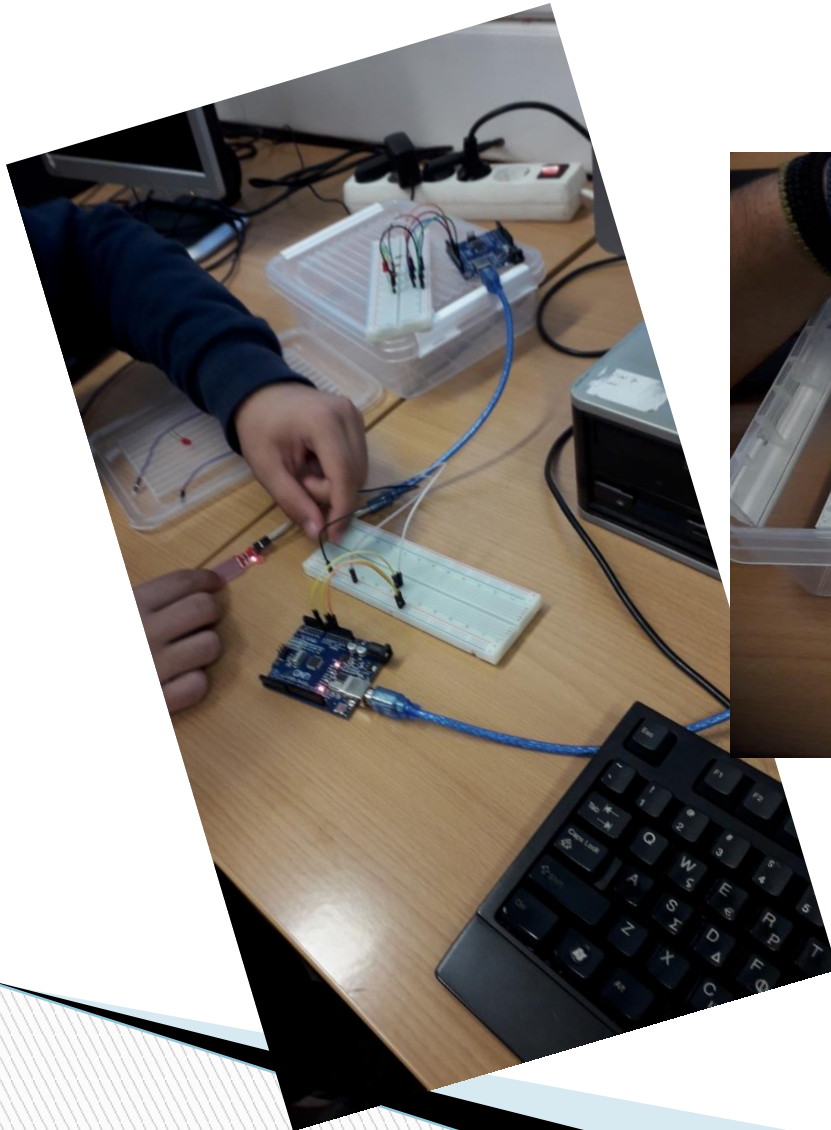


# We got to learn about Arduino

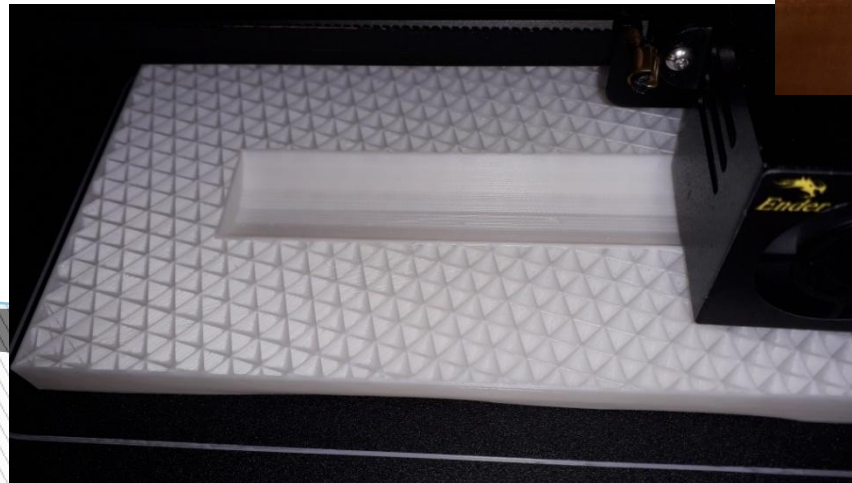
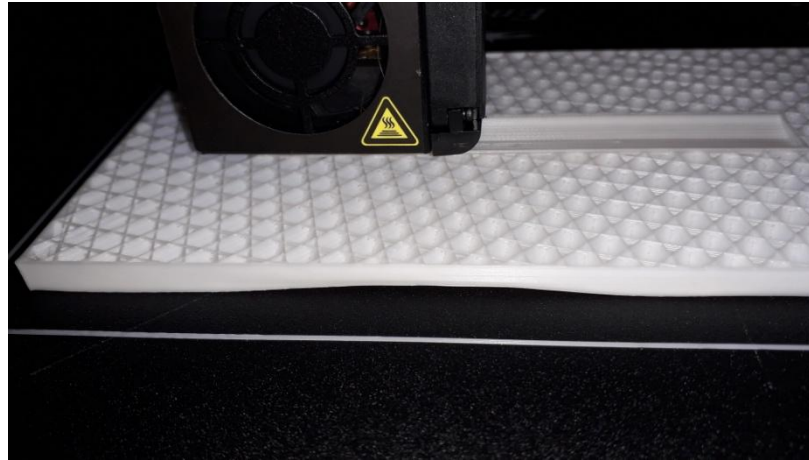
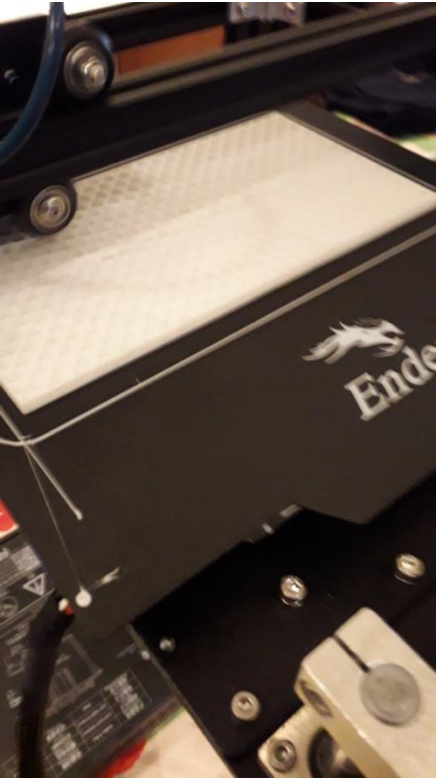




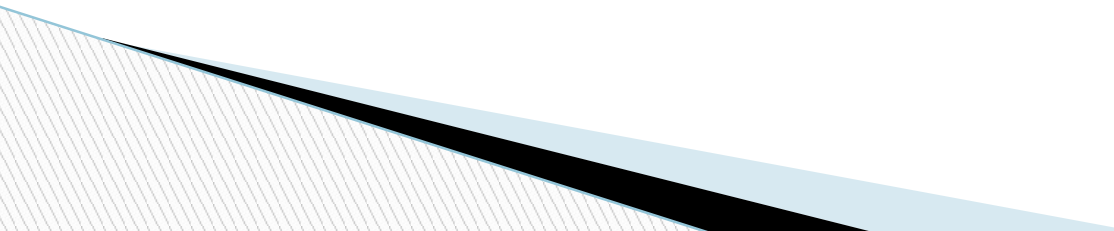
# Got to calibrate the Water Level Sensor and make it work alongside the LCD Screen



# Got 3d-printing in use to create some of the roads parts



# Functionality

- Traffic Lights are used in both sides of the street, providing simultaneous updating.
  - The LCD Screens provide people/cars passing the the corresponding messages depending on the water level.
  - If the water level is too high and the traffic needs to be stopped, the road is closed using servo motors, and the water pump starts cleaning the road.
  - Our future plans include the automatic notification of the police/fire department to prevent accidents.
- 

# LCD Messages



**Green**



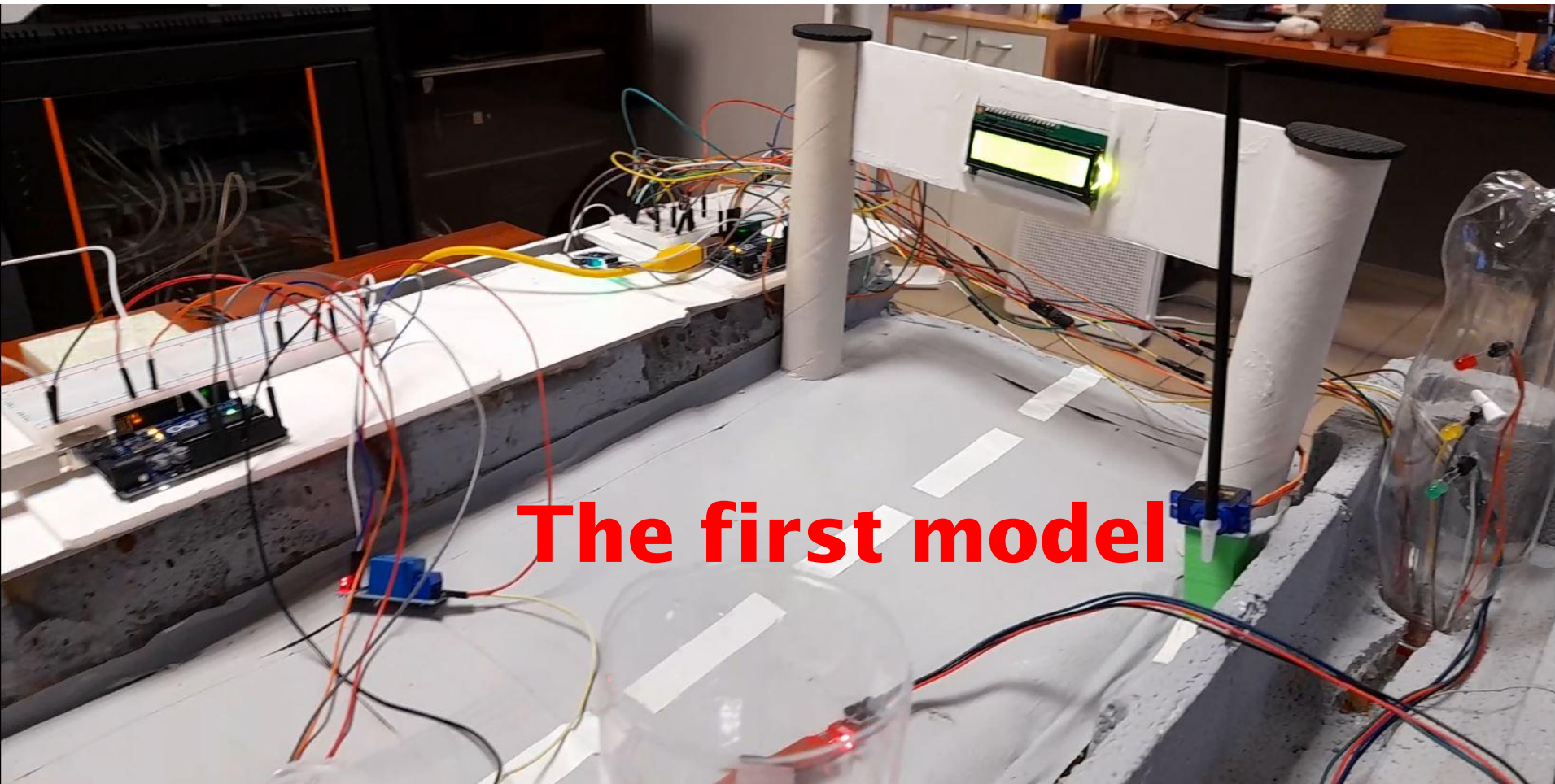
**Yellow**



**Red**



# The road with everything connected to it



**The first model**

# Creating a new model with an insulating material

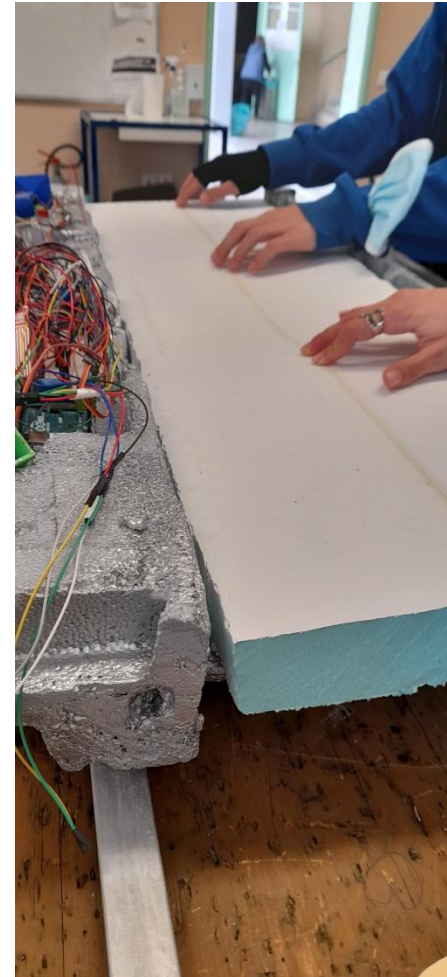




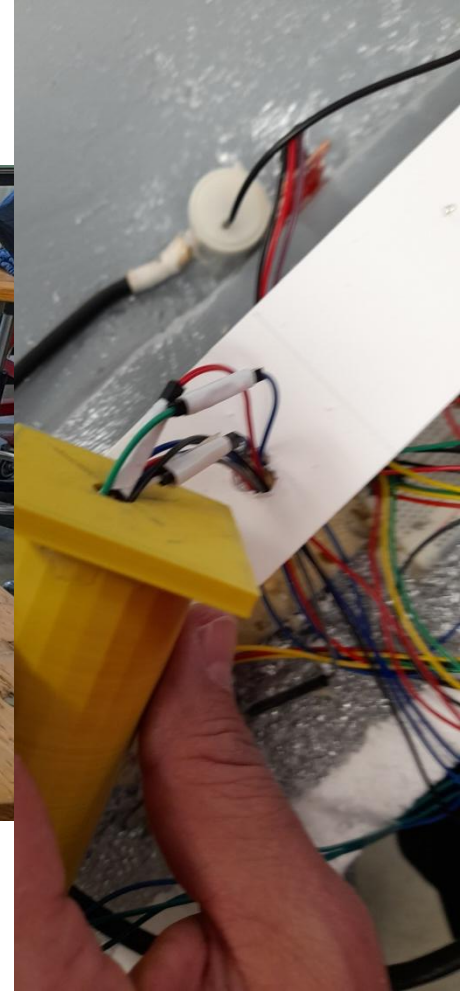
# Adapting the materials



## Using Dow

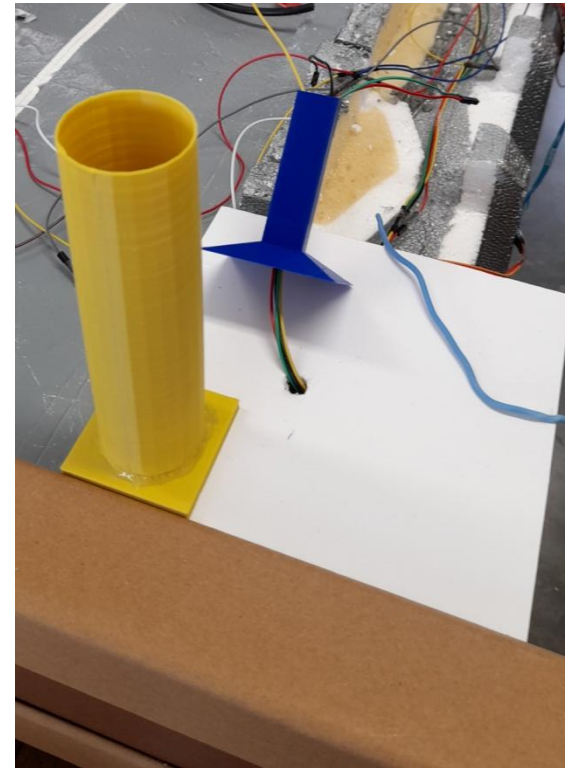
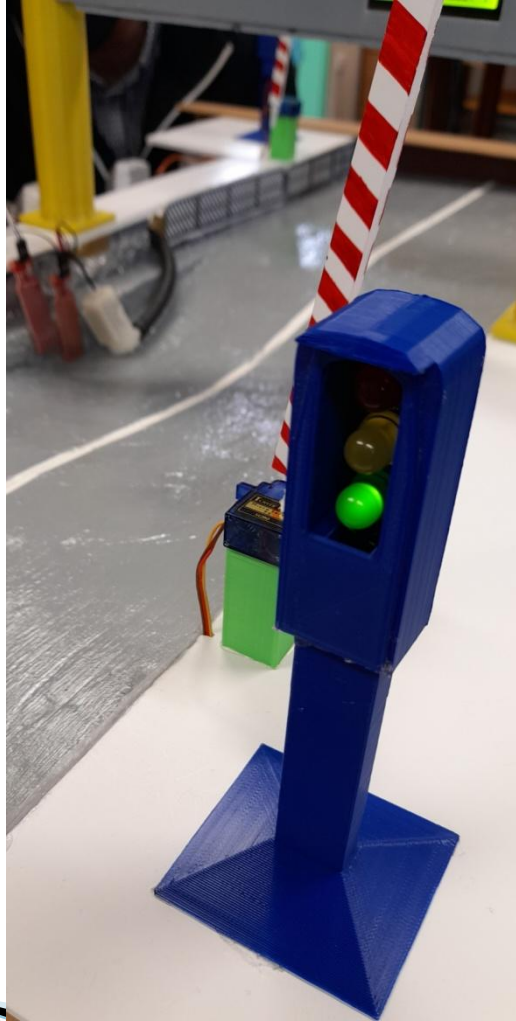


# It started taking shape...

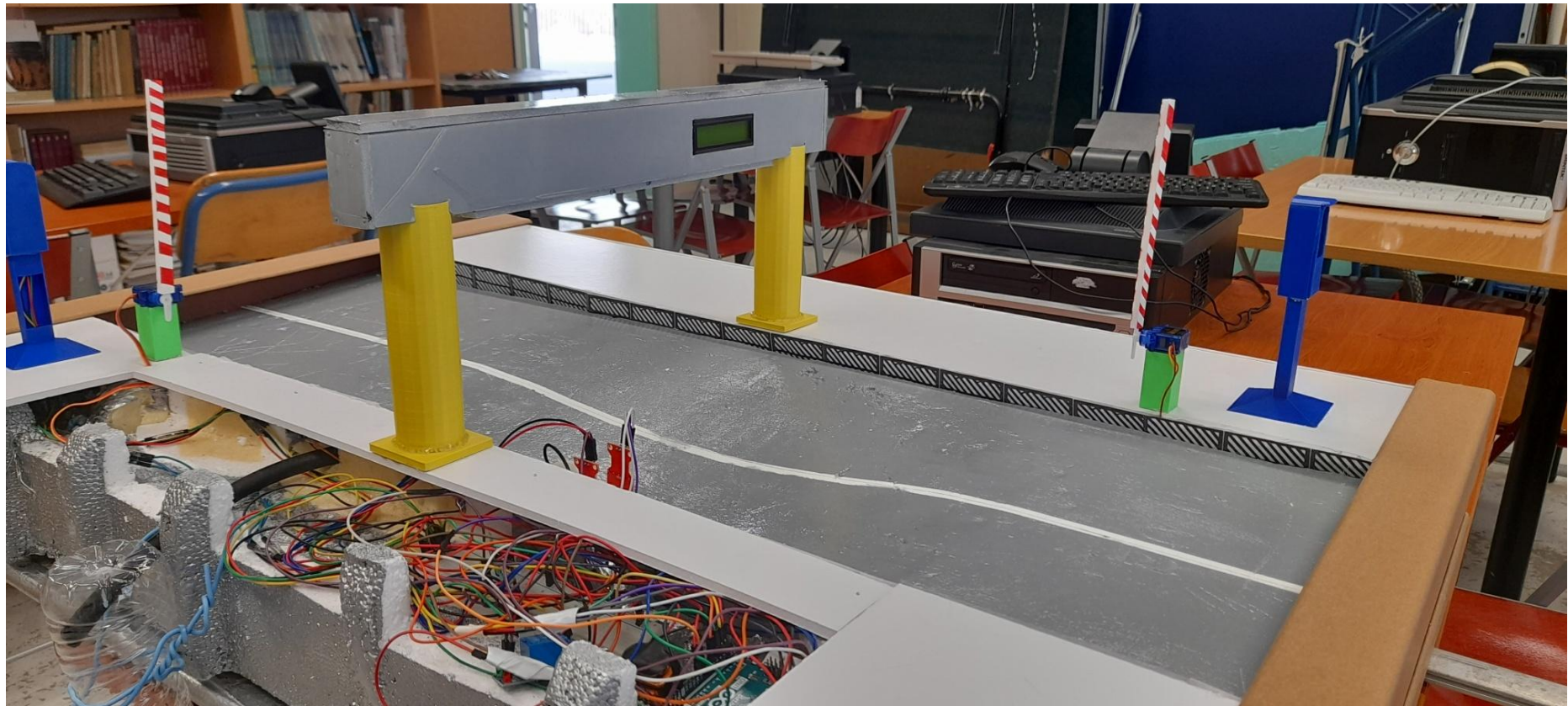




# 3D printing of parts

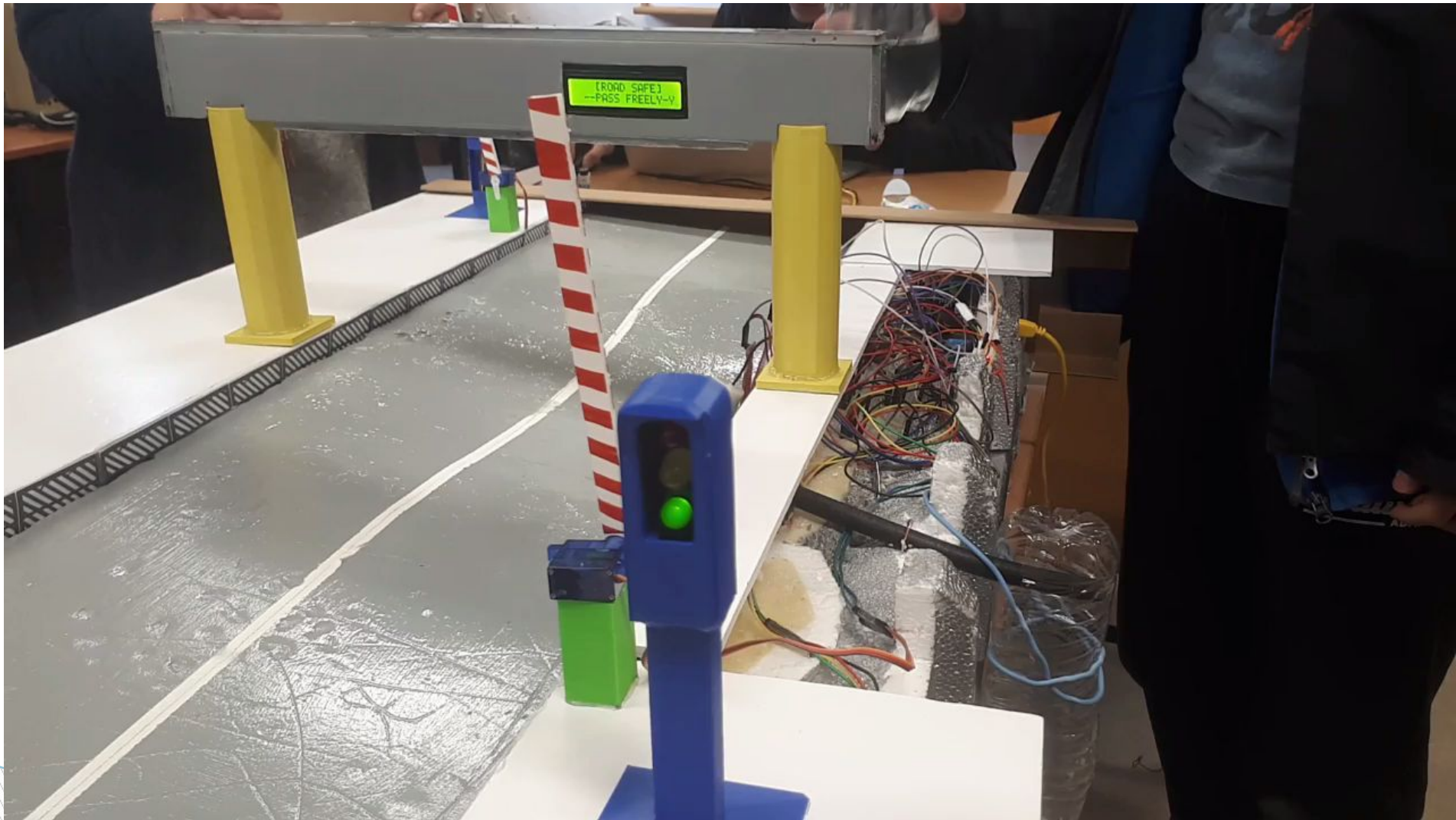


# Final model of road





# Video showcasing the project



**After the project's release, a sign was placed by the municipality to warn citizens.**





**Thank you!**

A decorative graphic element in the bottom-left corner of the slide. It consists of several overlapping geometric shapes: a light blue triangle, a black triangle, and a white triangle with a fine grey diagonal line pattern.