

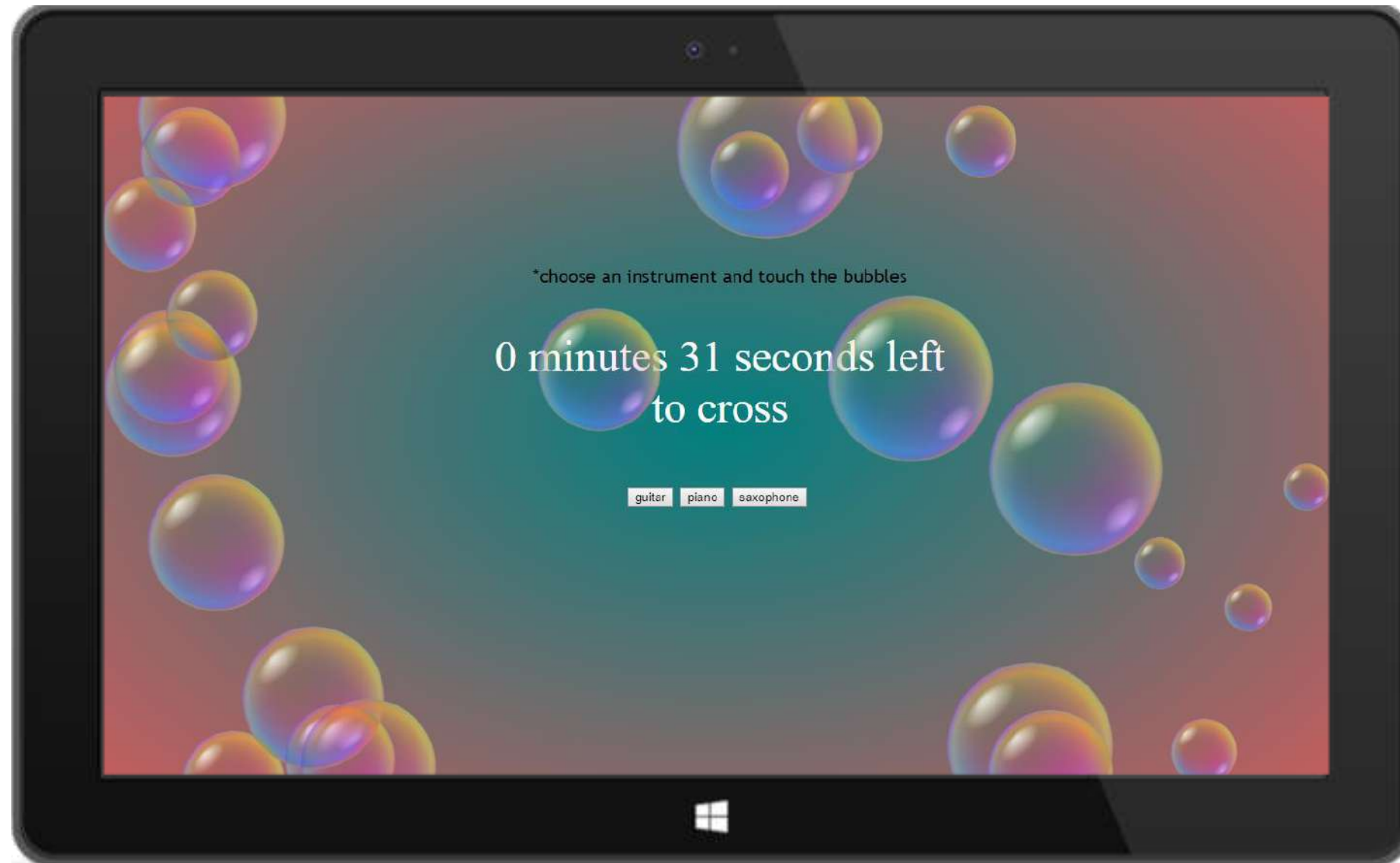
Music Bubbles

Anti-programming Programming Club



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Introduction



Music Bubbles

- A **decompression** game for pedestrians playing at **waiting area**.
- Also **remind** pedestrians the **last time** of red lights.
- Aim to **replace** the behaviour of playing phones by pedestrians.

Introduction

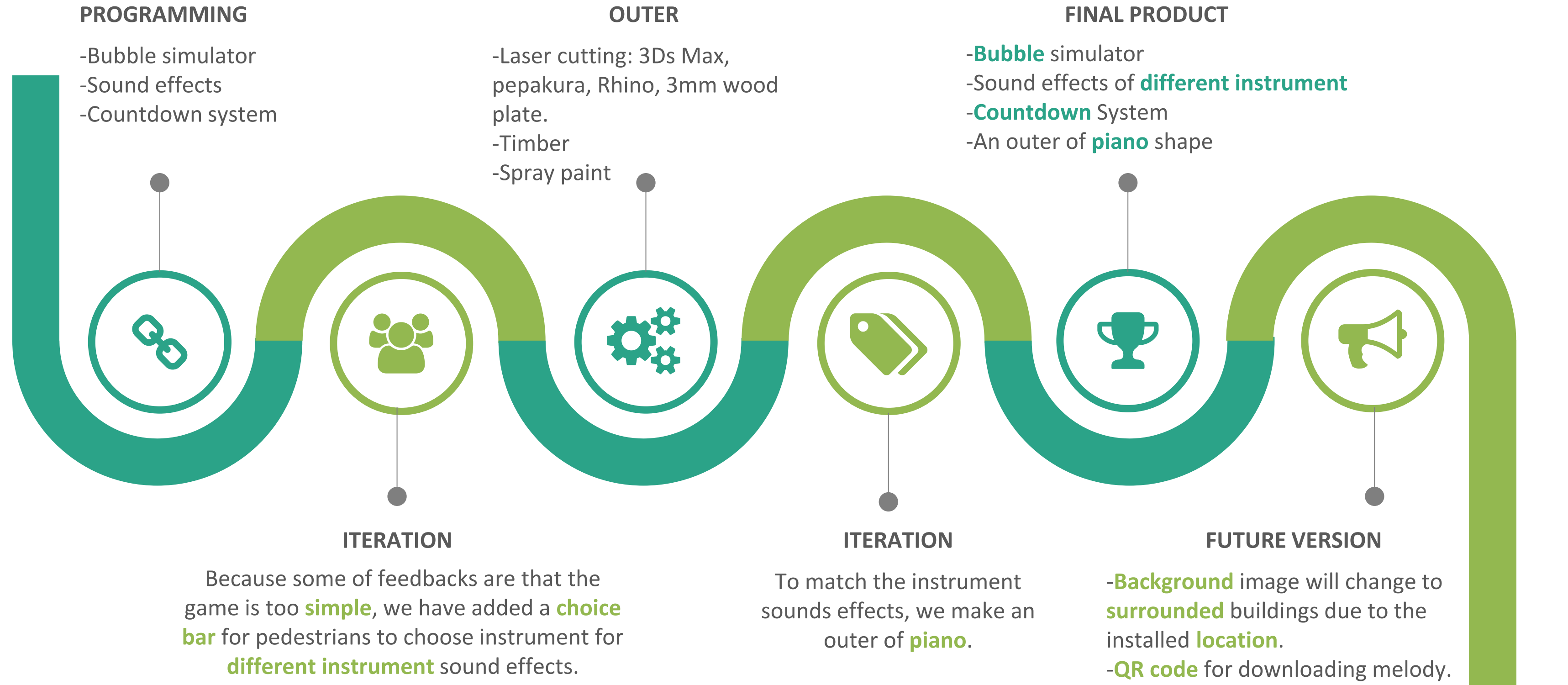


According to previous research, “**phone zombie**” has become a common phenomenon. Some pedestrians are still playing on their phones even they **walking on the street**. From our previous research, we found that eyes on the mobile phone might lead to a problem of **missing traffic signals** at traffic light pillar.

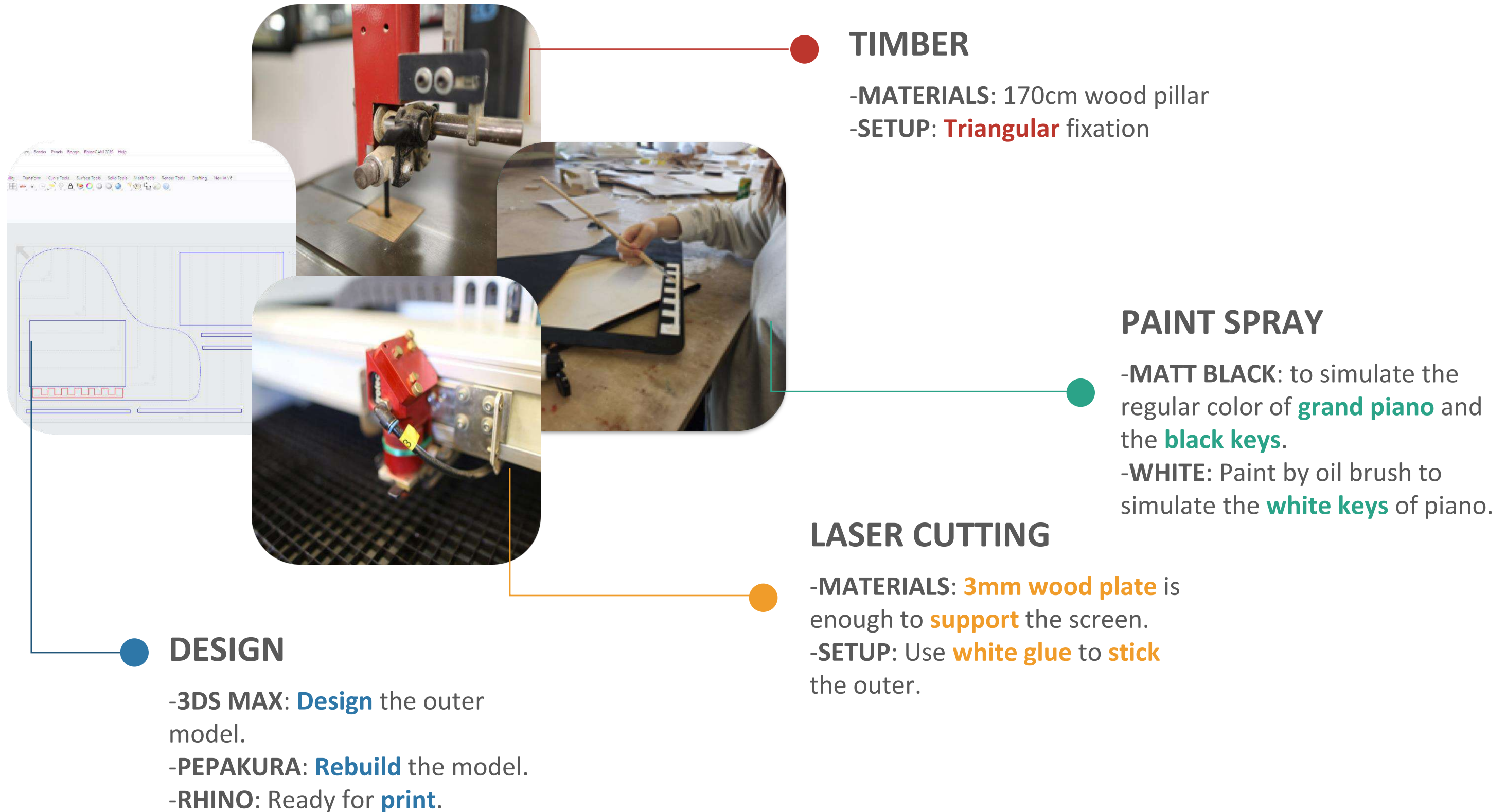
Pedestrians who focus on their mobile phones **cannot notice** the change of **traffic signals**, especially when they are waiting for the traffic lights alone.

We aim to improve pedestrians' **waiting experience**, let pedestrians use our product to replace the behaviors of playing mobile phones in the traffic light waiting area and **remind them of the change of traffic lights**.

Design Process



Outer



Iteration

PROGRAMMING

PREVIOUS: Broken sound effects for touching bubbles.
AFTER: Sound effects of different instrument for touching bubbles, such as piano, guitar and saxophone.

MELODY

PREVIOUS: There is no melody to be generated.
AFTER: QR code for pedestrians to scan to download the mp3 file for the melody which they create before.

Final

1

2

Future

3

4

OUTER

PREVIOUS: Normal wood box.
AFTER: Change the top of the box to piano shape.

BACKGROUND IMAGE

PREVIOUS: Pure color.
AFTER: The background image will change to the picture of surrounded buildings due to the location.

Core Functionality

Countdown Number

As **big** as users could see, to tell people when will the traffic lights **change to green**.

02

Sound Mode

Different instrument sound for pedestrians to **choose**.

03

04

Hint

To **remind** people come to join the game and see the **countdown numbers**.

01

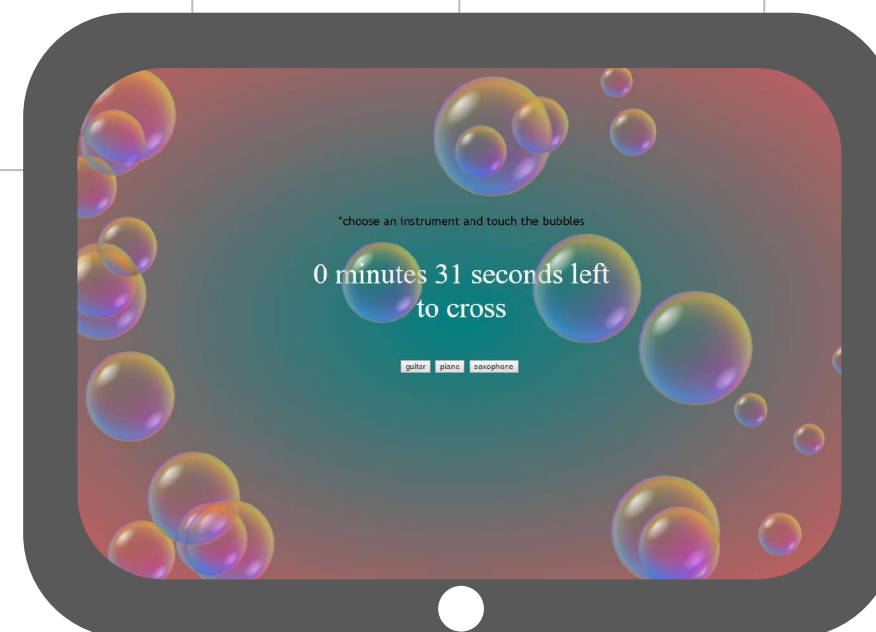
Bubble Simulator

The bubble will be **broken** with a **instrument** sound effect after **touching** by pedestrians.

05

Broken Bubbles

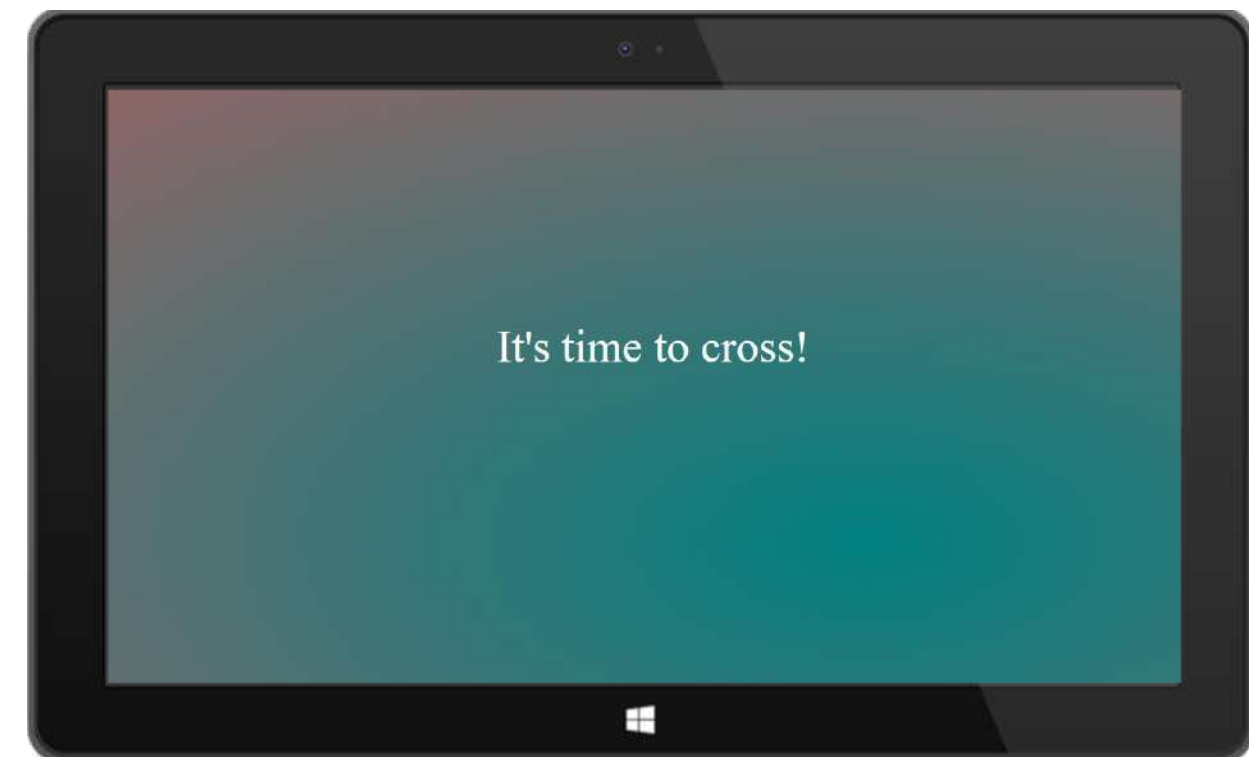
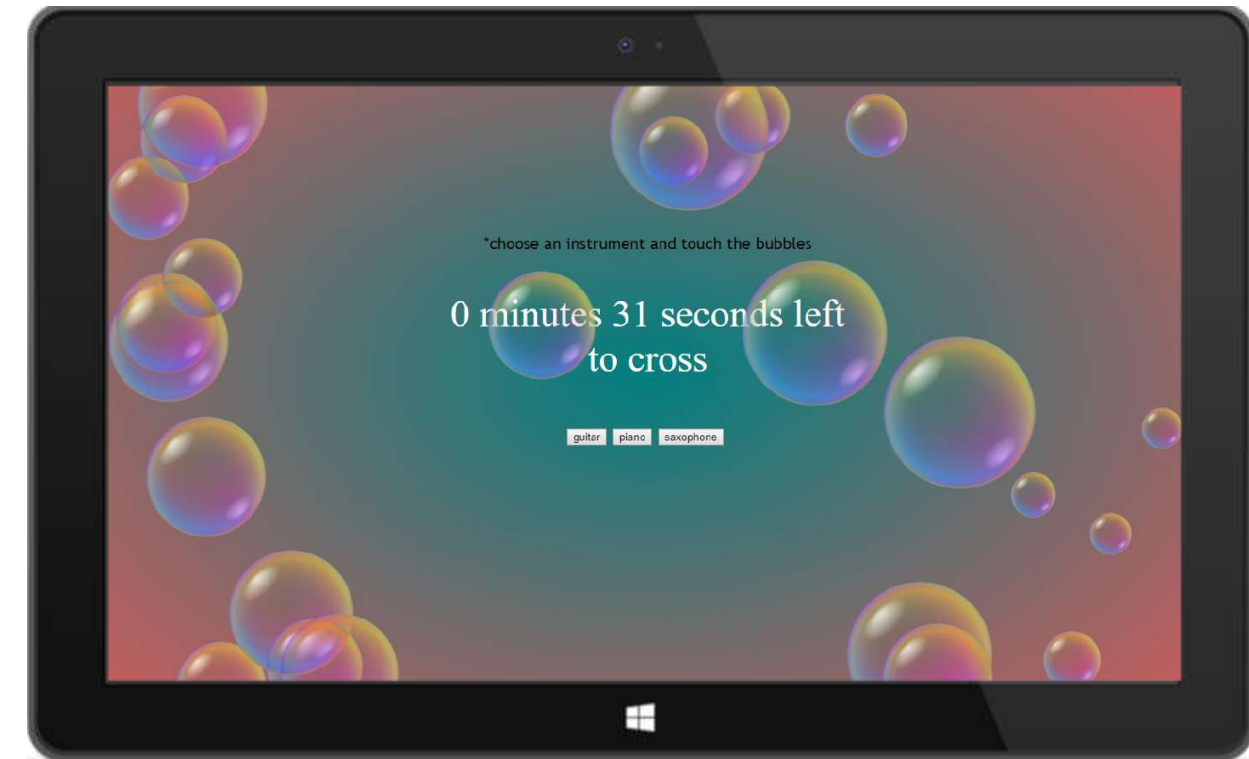
The bubble will be broken with a **broken animation** after touching by pedestrians.



Core Functionality

DESCRIPTION

- The screen will be **activated** when the traffic button was being **pushed**.
- The bubbles will move with a **normal speed** to attract people join the game.
- The system starts to **countdown** and shows the countdown number on the **middle** of the screen with a **big size font**.
- Text **Hint** “Choose an instrument and touch the bubbles!”
- A few choices of **instruments** for pedestrians to **choose**.
- When people **touch** the bubble, the bubble will be **broken** and show an **exploded** animation effects.
- The broken bubble will explode with a **basic key sound** as soon as it being touched by users **randomly**.
- After the countdown number change to **zero**, all bubbles will **disappear**.
- The screen will show a **hint**, “It’s time to cross!” with **clapping hands** audio, to **remind** pedestrians cross the road.



Hardware & Software Requirements



System

Windows 7 SP1+ Processor: 1.2 Ghz Memory: 512 MB RAM
Graphics: Graphics card with DX10 support
DirectX: Version 9.0 Storage: 71 MB available space

01

Frame

Using 3Ds Max & Using illustrator
Laser Cutting
Wood & Paint

02

Programming

HTML & JAVASCRIPT
Using Github to find open source code
Using Sketch to get visual code

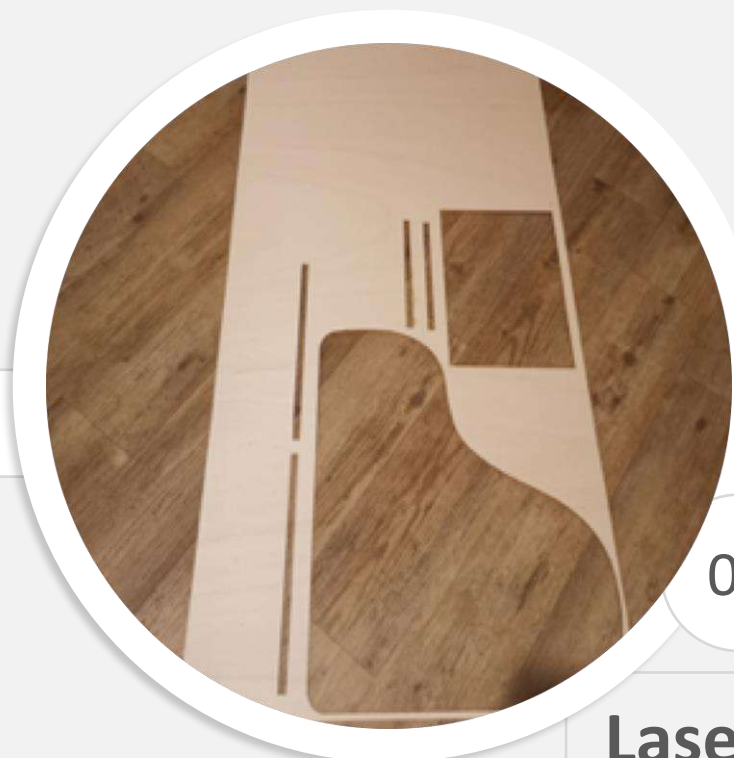
03

Microsoft Surface

microsoft surface pro6
Windows 10, Intel® Core™ i5, 256GB, 8 GB
292.1mm * 201.42mm * 8.45mm

04

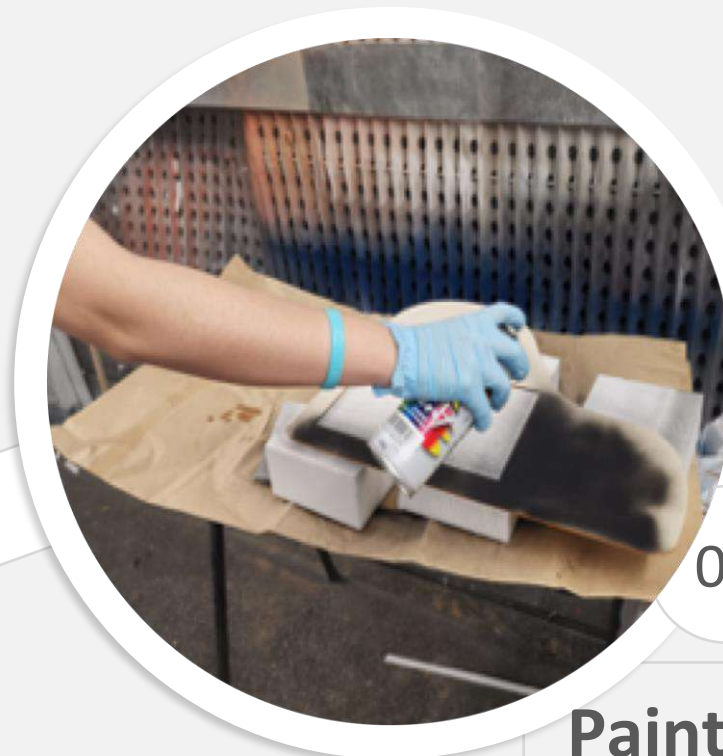
Illustrated Setup Instructions



01

Laser cutting

- 3mm **wood** plate
- Piano** shape of **top** and **box** shape of **outer**.



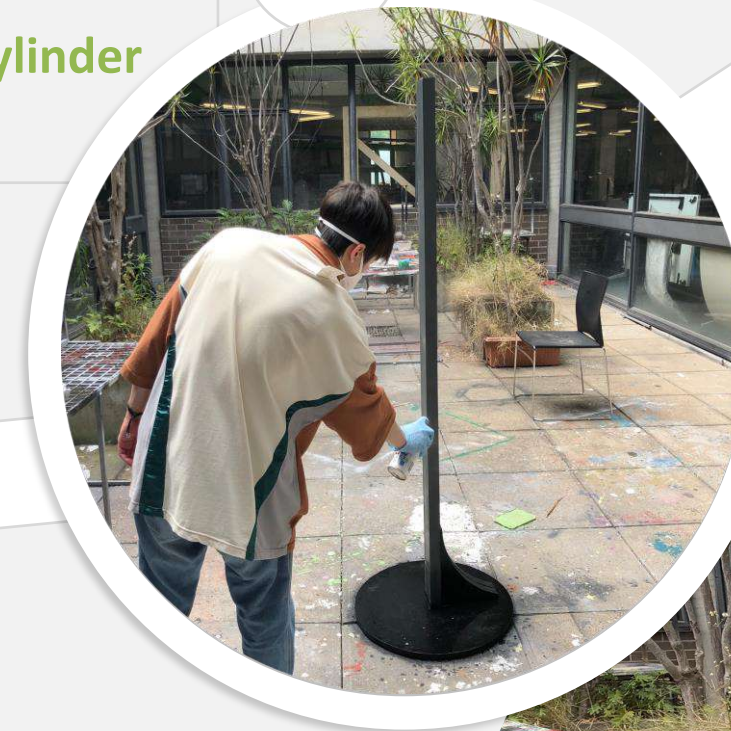
02

Paint spray

- Matt **black** color for shape of grand piano and **black keys**.

Paint spray

- Steel **grey** color for the simulated **traffic lights pillar**.
- Matt **Black** color for the **cylinder** of the **bottom**.

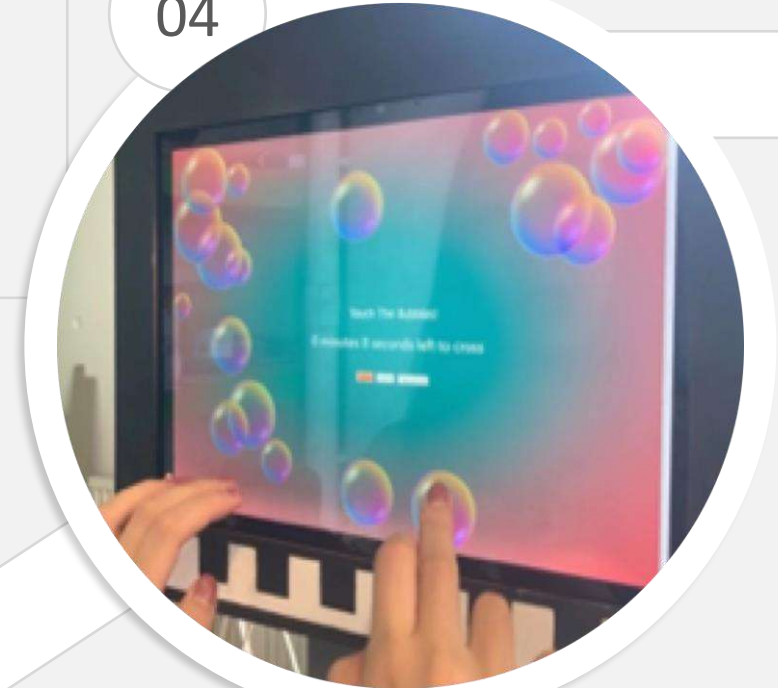


03

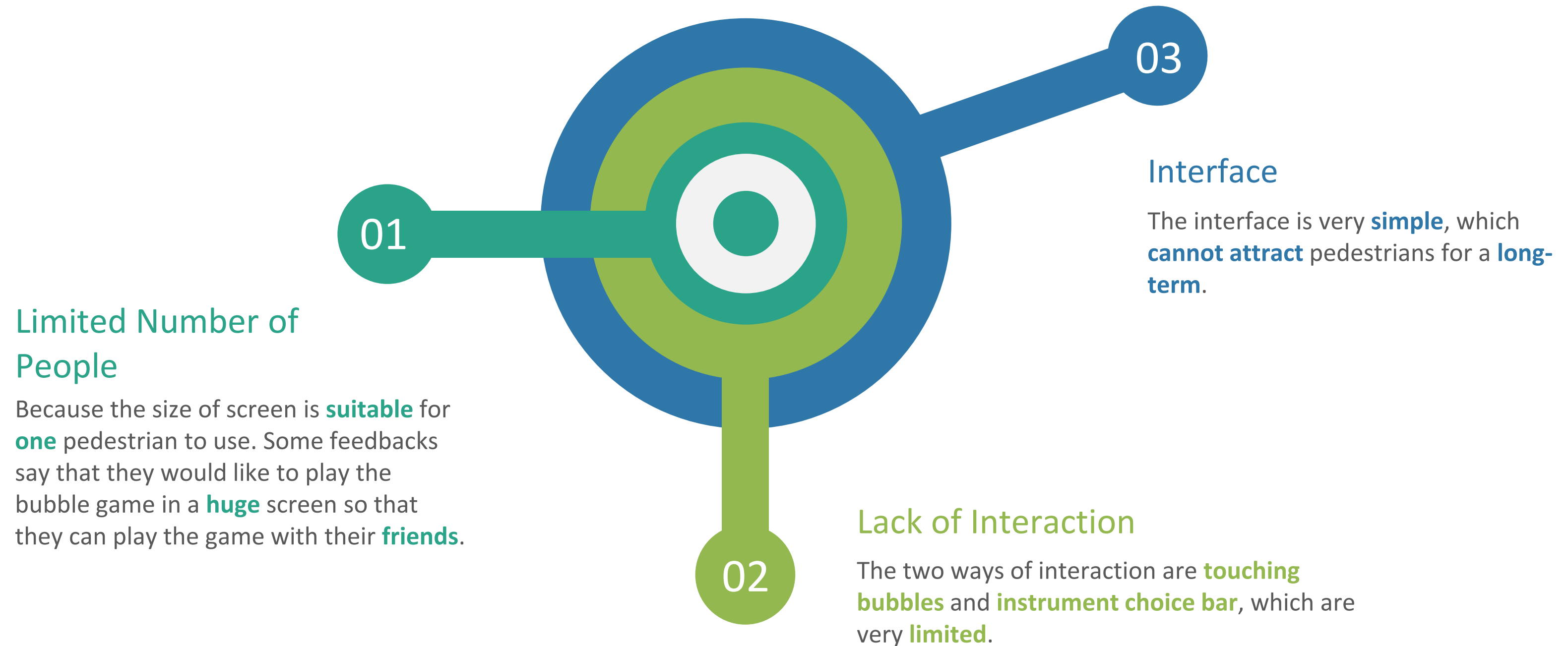
Final product

- Use **screw** to fix the outer box on the **wood pillar**.
- Setup

04



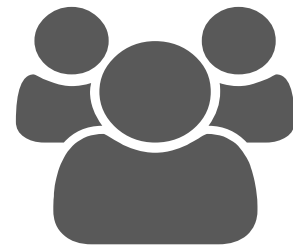
Known Issues





Interface

The interface is **pure color**.
No interface **changes**.
Entertainment **mode** only has bubbles.
No other **clickable** types.



Limited Number of People

There are always **lots of** pedestrians waiting for traffic lights at **waiting area**.
But our products are **available for 1-2** pedestrians.

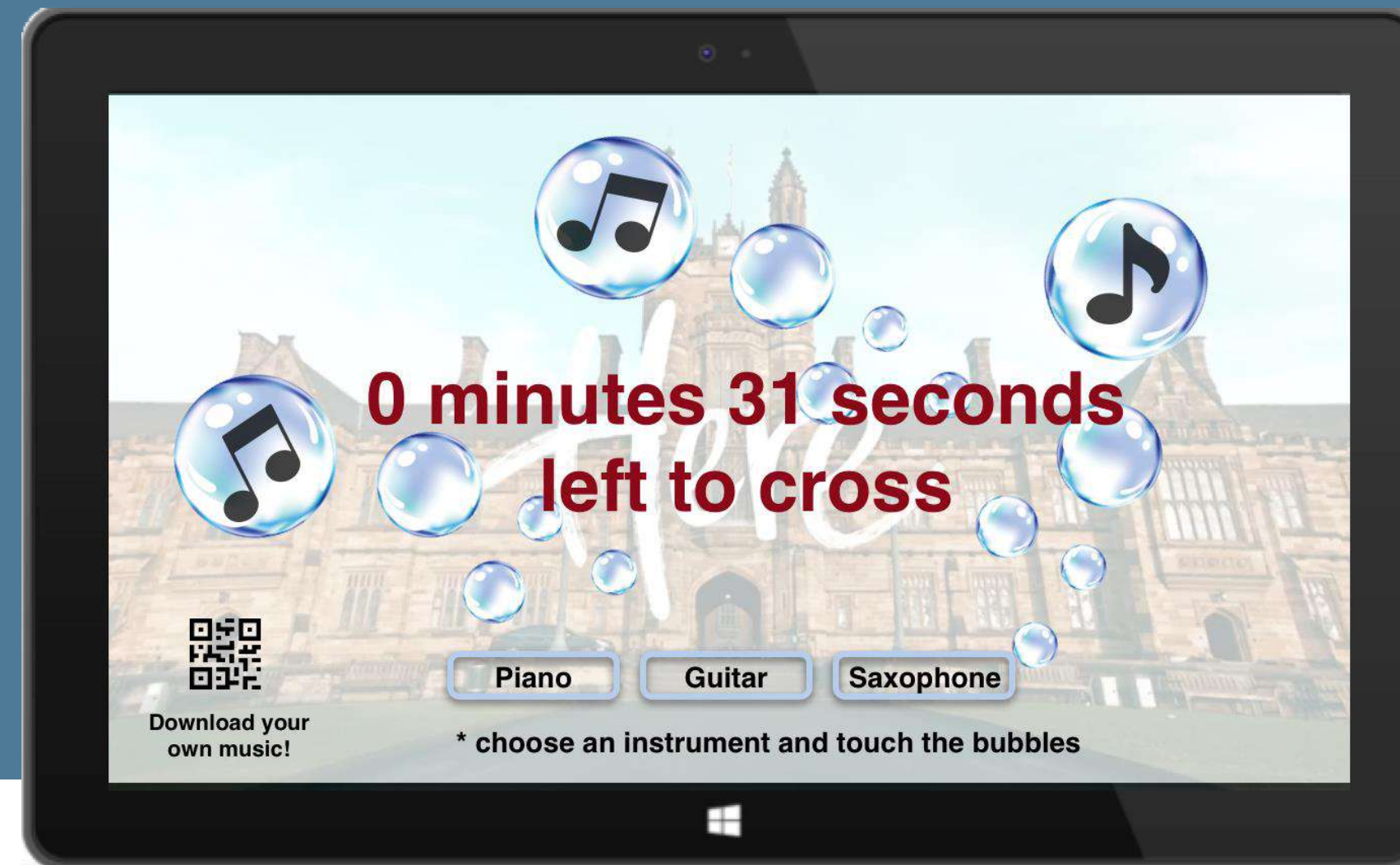


Lack of Interaction

Users can only interact with **screen**, they cannot interact **with other** pedestrians.
After the game is **over**, all the **game history** is **gone**.



Future Version



01

Recording



The pedestrian can **record** in the bubbles, and the **next pedestrian** could **hear** the audio by touching the **recorded bubble**.

02

Interface



The **background image** will change to the **surrounded buildings** due to the **location**.

03

Download



The pedestrians can scan the **QR code** to **download** the mp3 file of the **melody** which they just **played**.

Future Version



Recording

No **record** function for interaction **between pedestrians**.

The pedestrians can **record** their **voices** to the bubble, so next pedestrians can **hear** it if they touch the **recorded bubbles**.



Interface

Only **one** background color

• Previous

• After

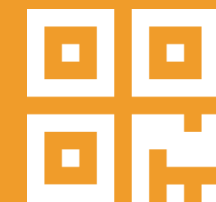
Apply **different scenes** according to **different streets**. For example, the traffic lights in Sydney Uni will change the background image to scenes of Sydney Uni.



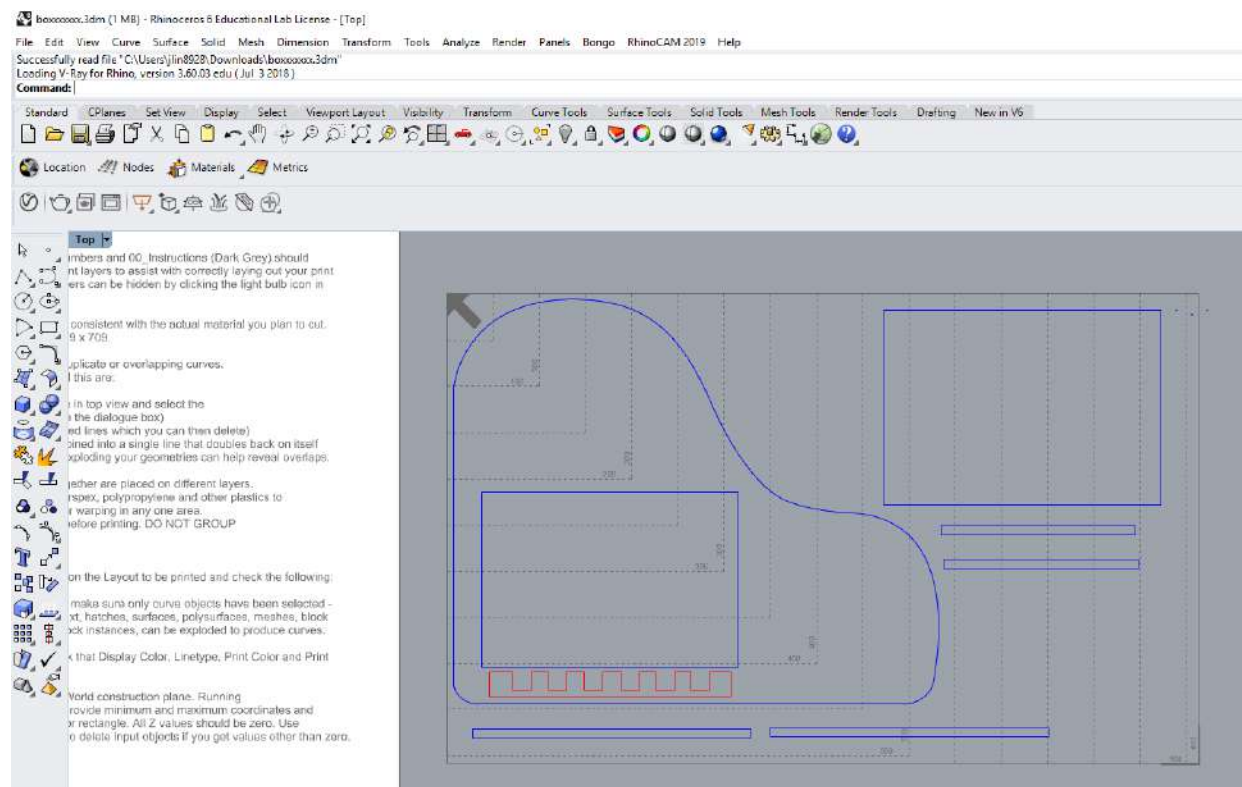
Download

There is **no record** of **game history**

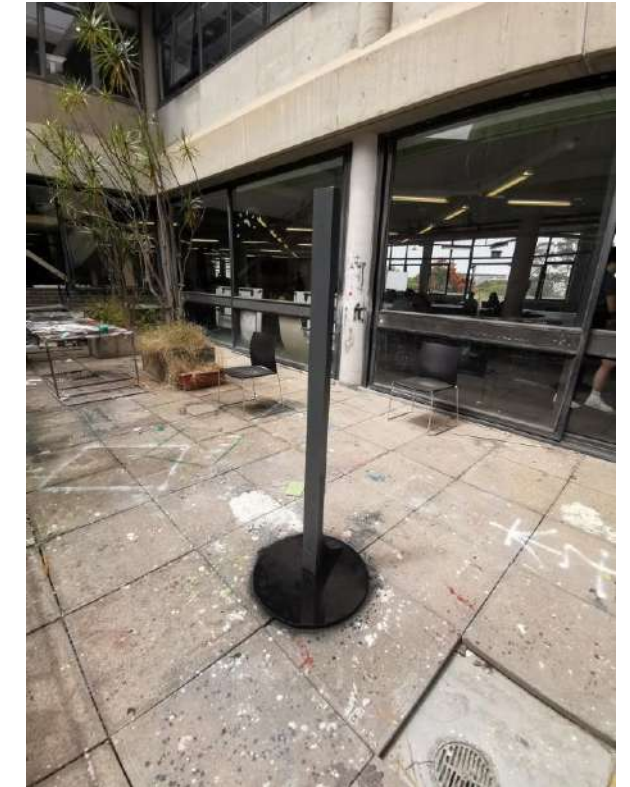
Users can choose their favorite musical instrument and scan the **QR code** to **download** the record what they **just played**.



Appendix



Appendix



Appendix

