



MVP STEP

# SUOMI

IoT project

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# SUMMARY

## ➤ Circuit

STM32 Nucleo-F401RE and Pulse Sensor SEN-11574

## ➤ Prototyping

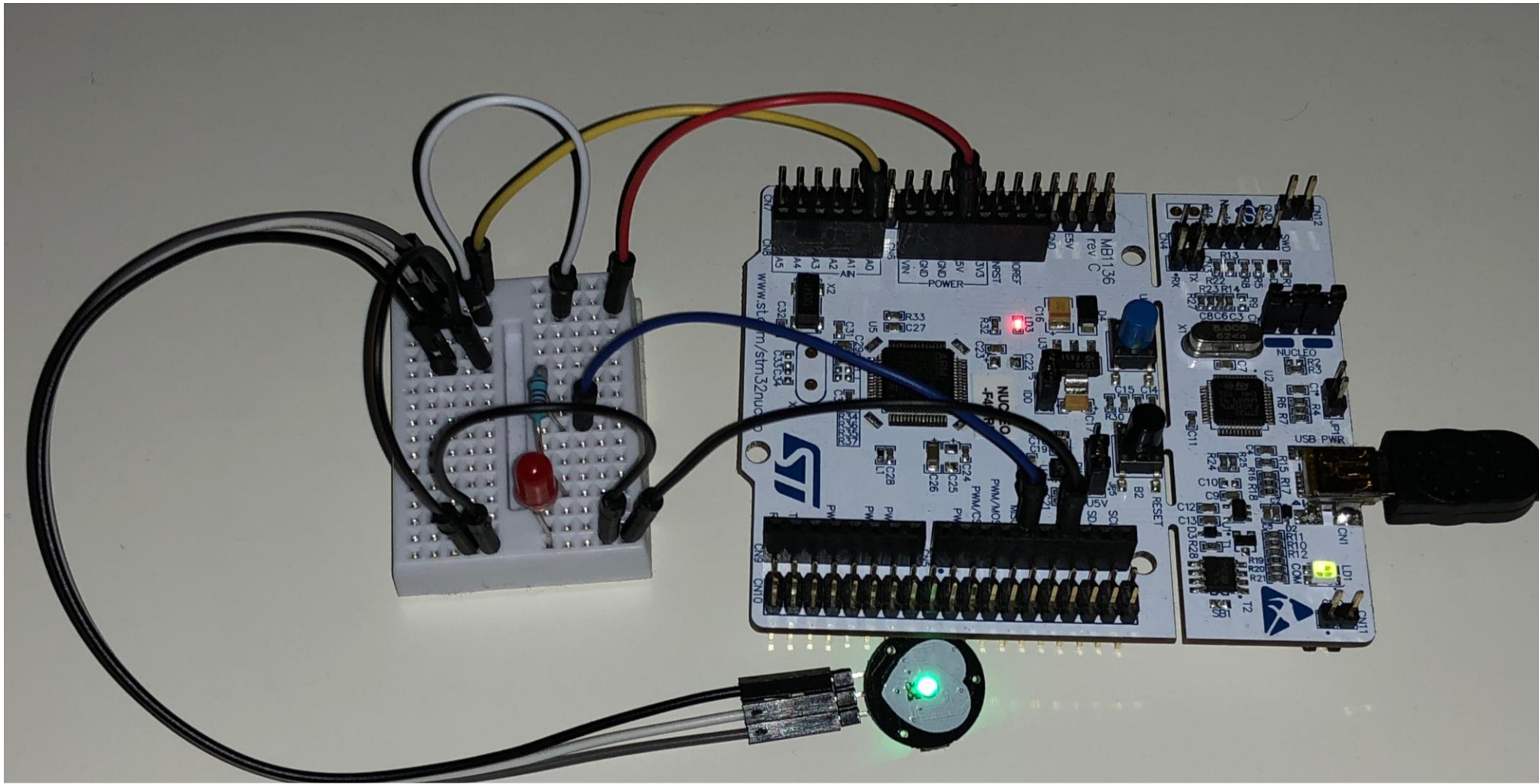
Mockups and prototypes making and evaluating

A blue-tinted photograph of a park scene. In the foreground, there is a grassy field. In the background, several trees are visible. On the right side, a wooden bench is partially visible. The overall mood is serene and quiet.

# CIRCUIT

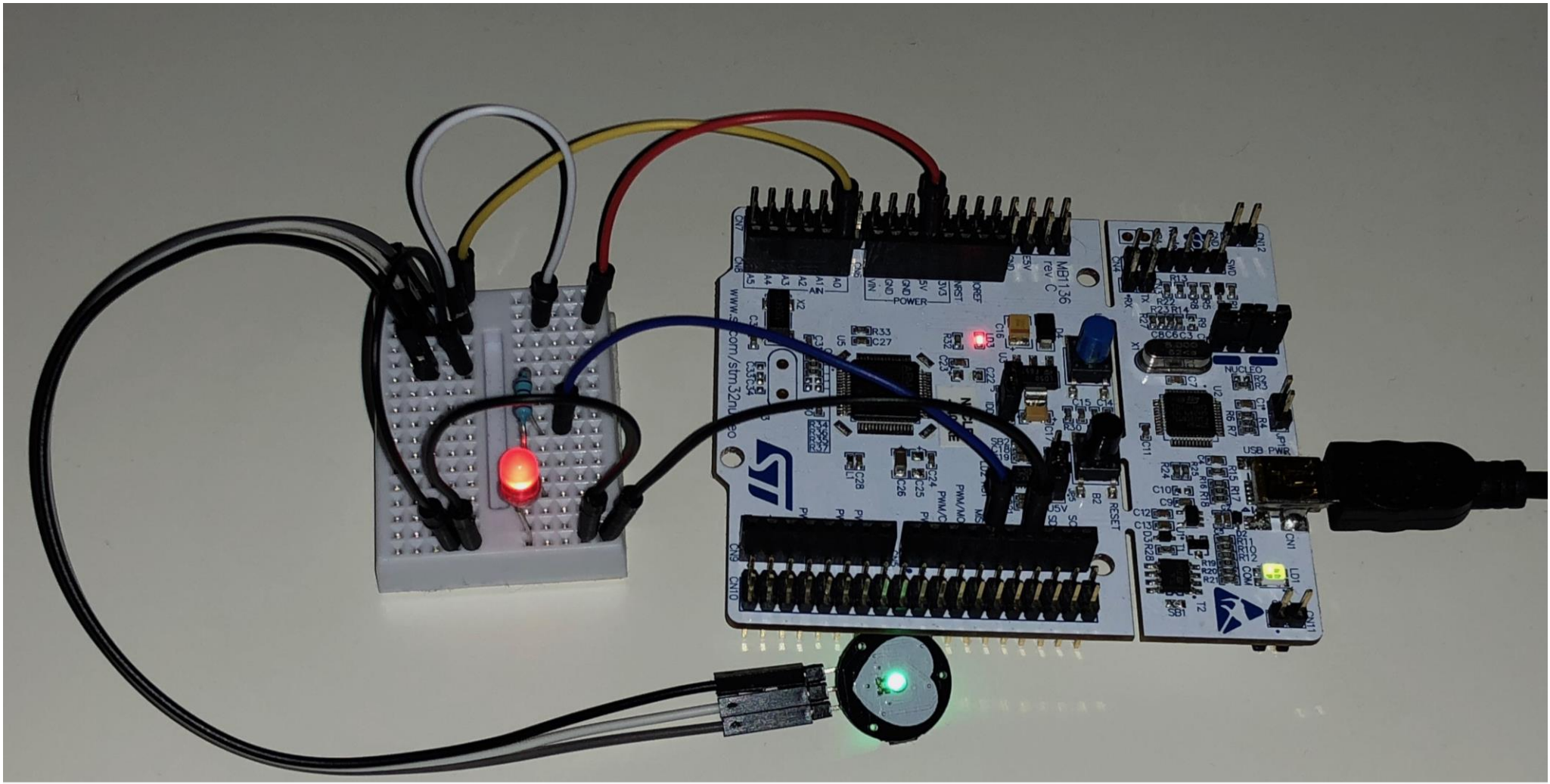
STM32 Nucleo-F401RE and Pulse Sensor SEN-11574





CIRCUIT: STM32 NUCLEO-F401RE AND PULSE SENSOR SEN-11574

Nucleo-F401RE gathers heart beat information via SEN-11574



CIRCUIT: STM32 NUCLEO-F401RE AND PULSE SENSOR SEN-11574

Red led is switched on: measurement is completed

# HEART BEAT MEASUREMENT

```
COM3 - PuTTY
Start to initialize the process...
B -> 78
B -> 71
B -> 69
B -> 70
B -> 71
B -> 74
B -> 72
B -> 74
B -> 51
B -> 52
B -> 57
B -> 109
B -> 95
B -> 89
B -> 81
B -> 77
B -> 77
B -> 72
B -> 70
B -> 70
Your average BPM are: 73
Press the reset button to restart the measurement
```

STM32 Nucleo-F401RE  
gather heart beat  
information via Pulse Sensor  
SEN-11574 and make a  
calculation on the average  
BPM

Later, BPM will be used by  
SUOMI to give a spa journey  
to users to avoid bad  
practices and maximize the  
experience



A blue-tinted photograph of a park scene. In the foreground, there is a grassy field. In the background, several trees are visible, some in focus and some blurred. On the right side of the image, there is a dark, curved bench. The overall mood is calm and serene.

# PROTOTYPING

Mockups and prototypes making and evaluating

# MOCKUPS

A mockup provides part of the functionality of a system and enables testing of a design

Here's shown how to login, insert your data, book for a service and enjoy the spa





**Insert your data:**

**Gender**

Male

**Age**

23

**Height (in meters)**

1.80

**Weight (in Kg)**

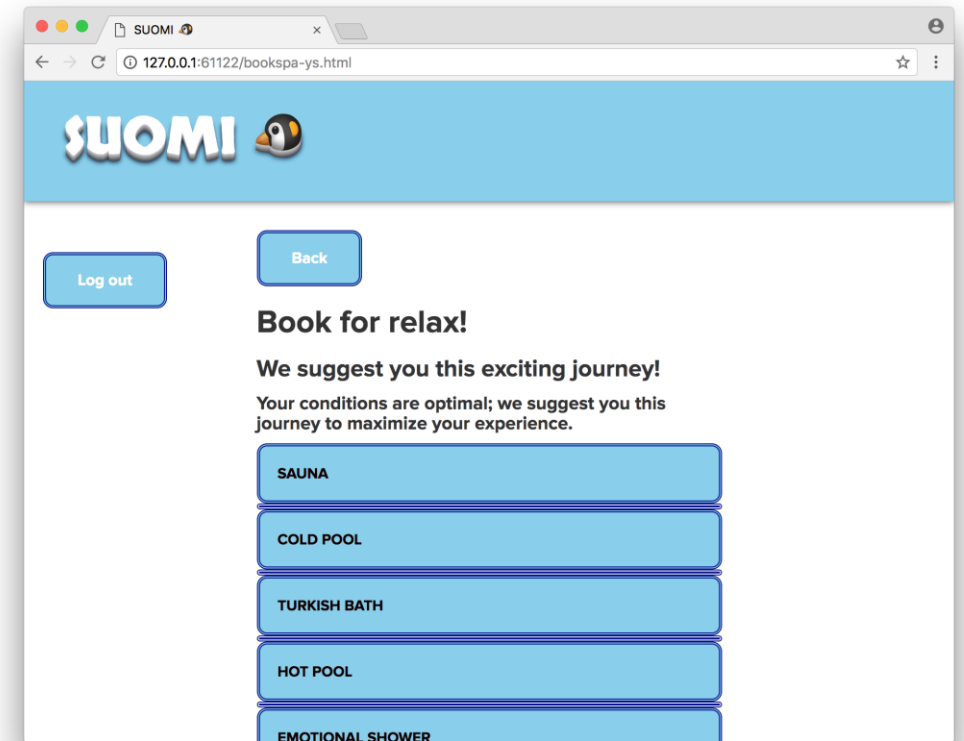
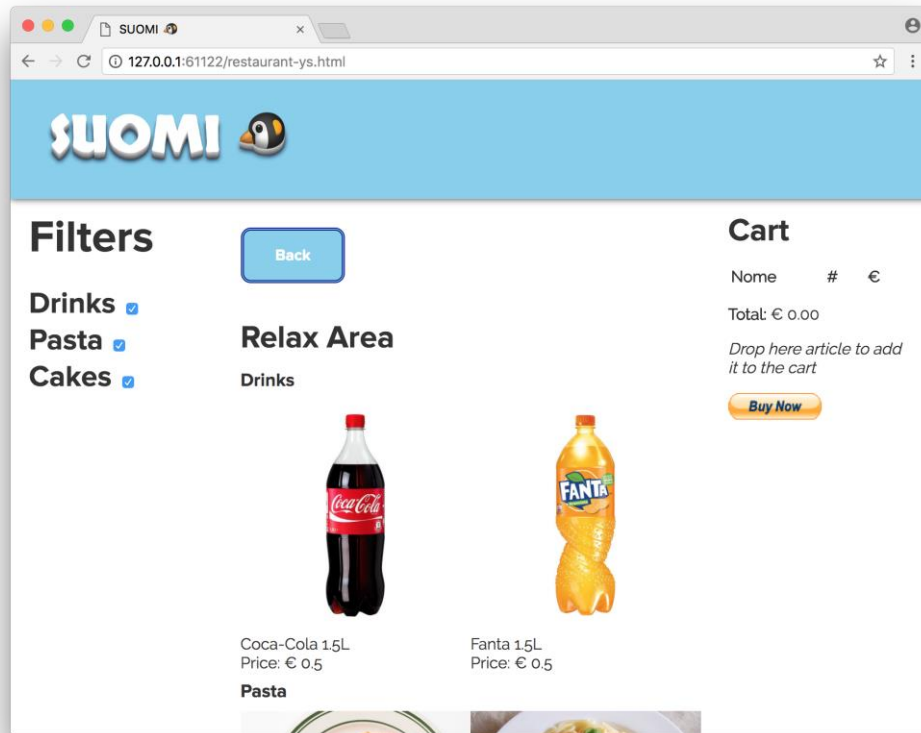
120

**Heart Rate**

110

Send

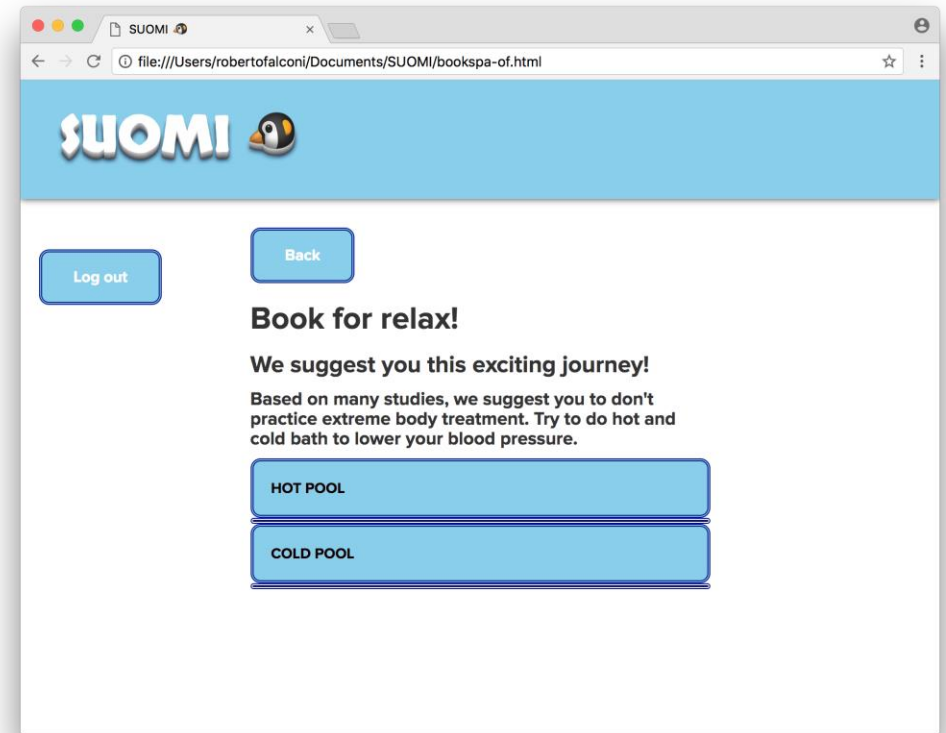
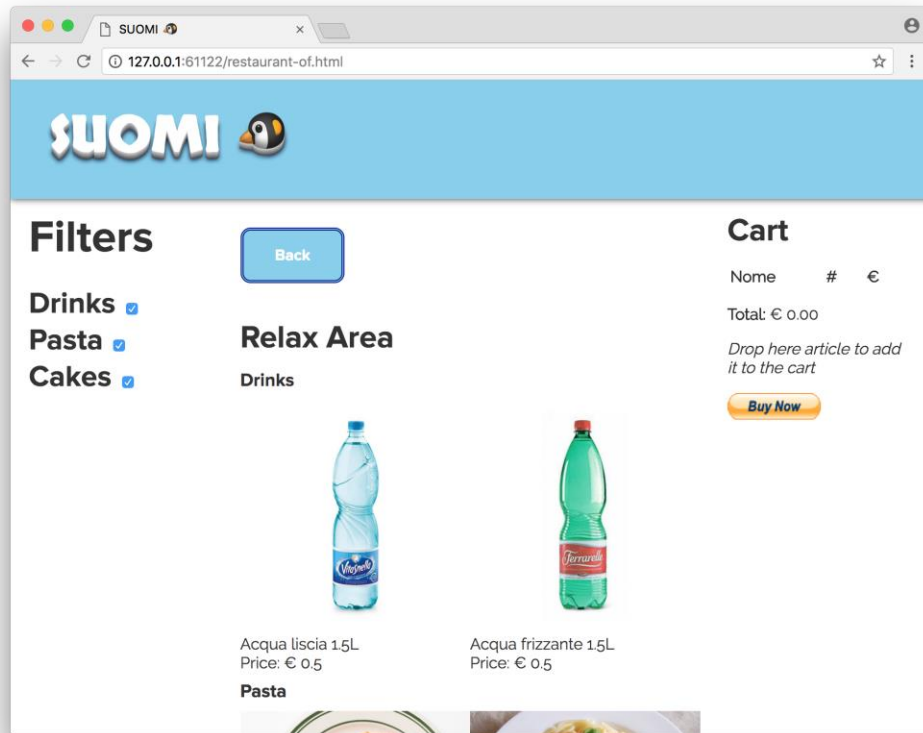
PROTOTYPE: USER DATA



# PROTOTYPE: NO TACHYCARDIA AND NORMAL WEIGHT

In normal conditions, SUOMI will let the user to book for all services





# PROTOTYPE: TACHYCARDIA AND OVERWEIGHT

A large indoor swimming pool with a central circular hot tub. The hot tub has four jets spraying water upwards. The pool is surrounded by a dark, textured wall with arched doorways. The ceiling is a large, circular glass dome with a metal frame, and several bright lights are visible on the ceiling. The water in the pool is a deep blue color.

# SUOMI

We are working hard to make the  
world feeling less blue



# THANK YOU!

## Useful links



Check for more amazing projects and ideas by  
**Roberto Falconi, Federico Guidi and Salvatore Licitra**

- **LinkedIn:**  
<https://www.linkedin.com/in/roberto-falconi/>  
<https://www.linkedin.com/in/federico-guidi/>  
<https://www.linkedin.com/in/salvatorelicitra/>
- **SlideShare:**  
<https://www.slideshare.net/RobertoFalconi4/>  
<https://www.slideshare.net/FedericoGuidi5/>  
<https://www.slideshare.net/SalvatoreLicitra2/>
- **GitHub:**  
<https://github.com/RobertoFalconi/SUOMI/>