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 Tools : Arduino / AutoCAD
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 (Master MediaArchitecture)

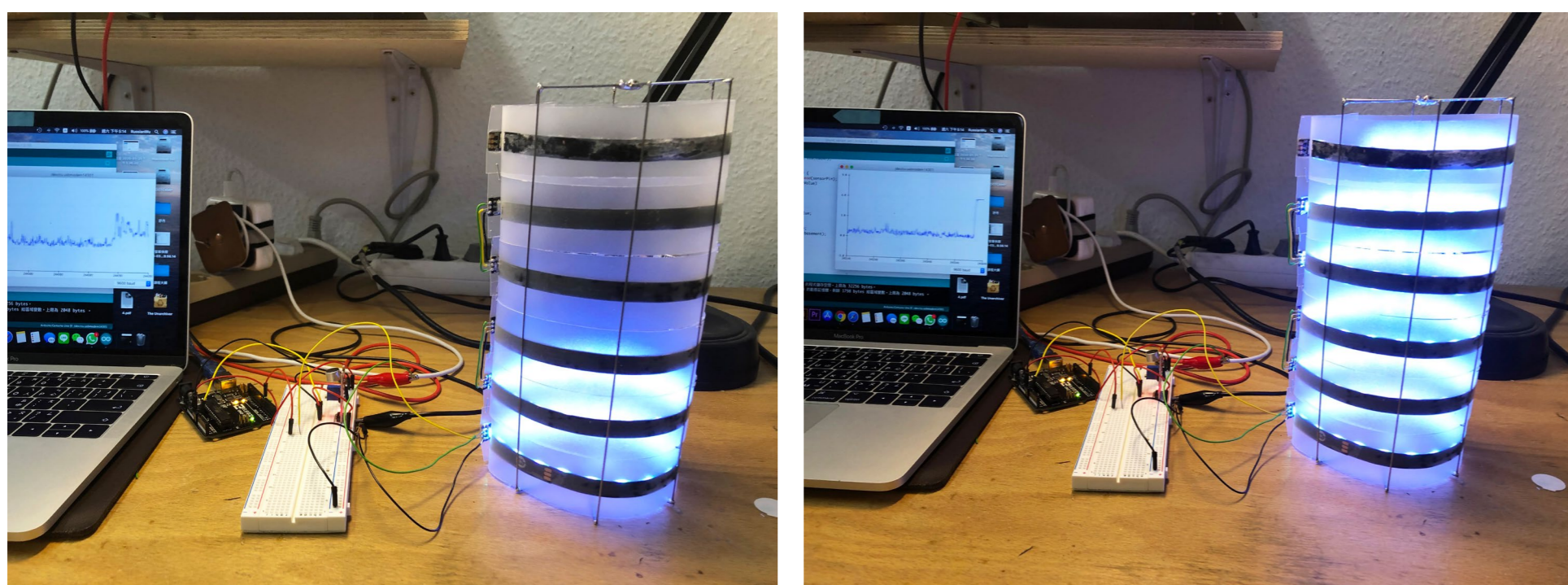
Sound Sculpture

Project Description

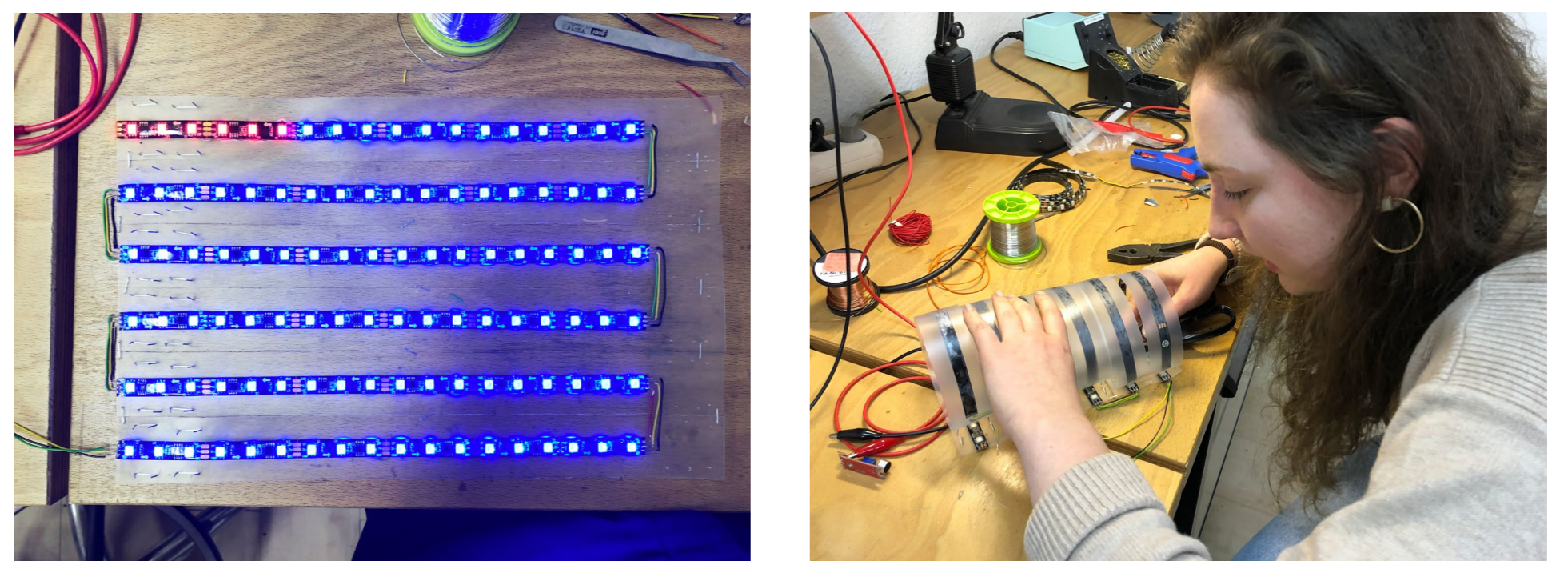
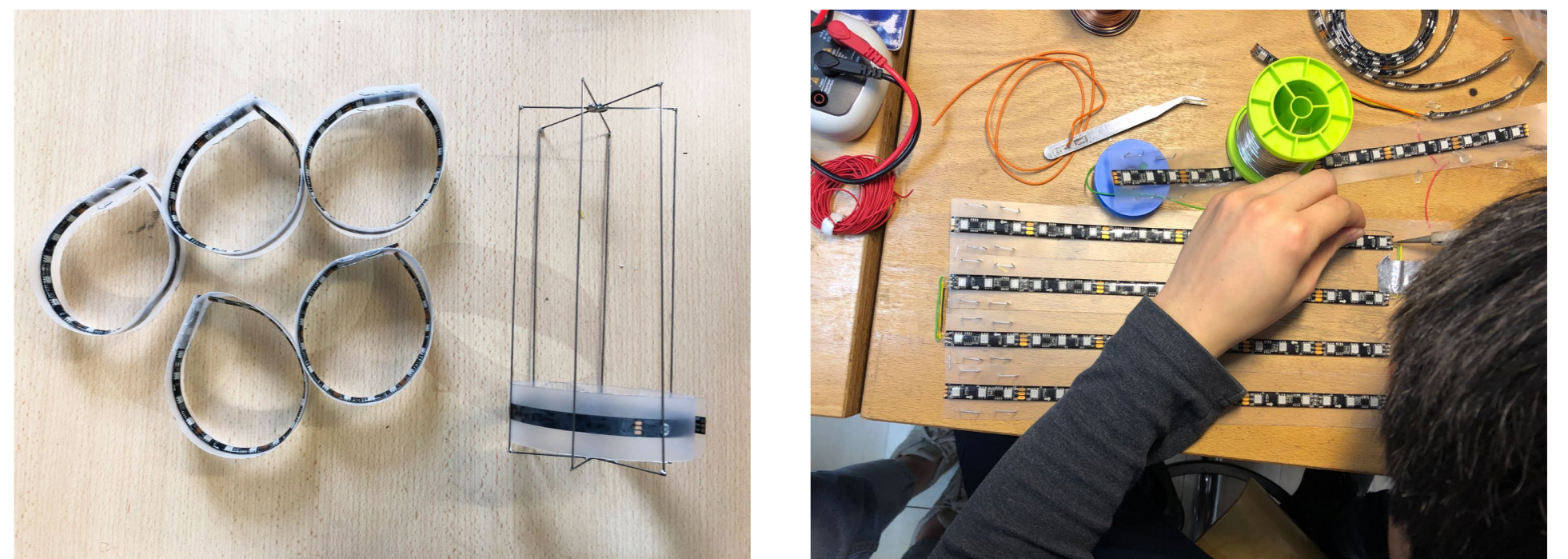
Modern city life does not deliver completely sustainable and healthy conditions anymore. One of the factors that can affect our life quality is constant ambient noise. Noise pollution impacts our physical and mental health without notice. It is related to an increase in high blood pressure, heart attacks, and strokes. Noise also evokes emotional responses, such as stress, irritation, and dissatisfaction.

We decided to create an installation, which could visualize the noise pollution to the city residents. For this purpose, we designed light columns, which can be installed in urban space. The devices have sound sensors and LED light stripes inside. LED stripes are distributed in rings from up to down. Each ring is assigned to a certain level of sound. Depends on the decibel (dB) the sensors receive, the devices transform it immediately into a different level of the light display.

Realization



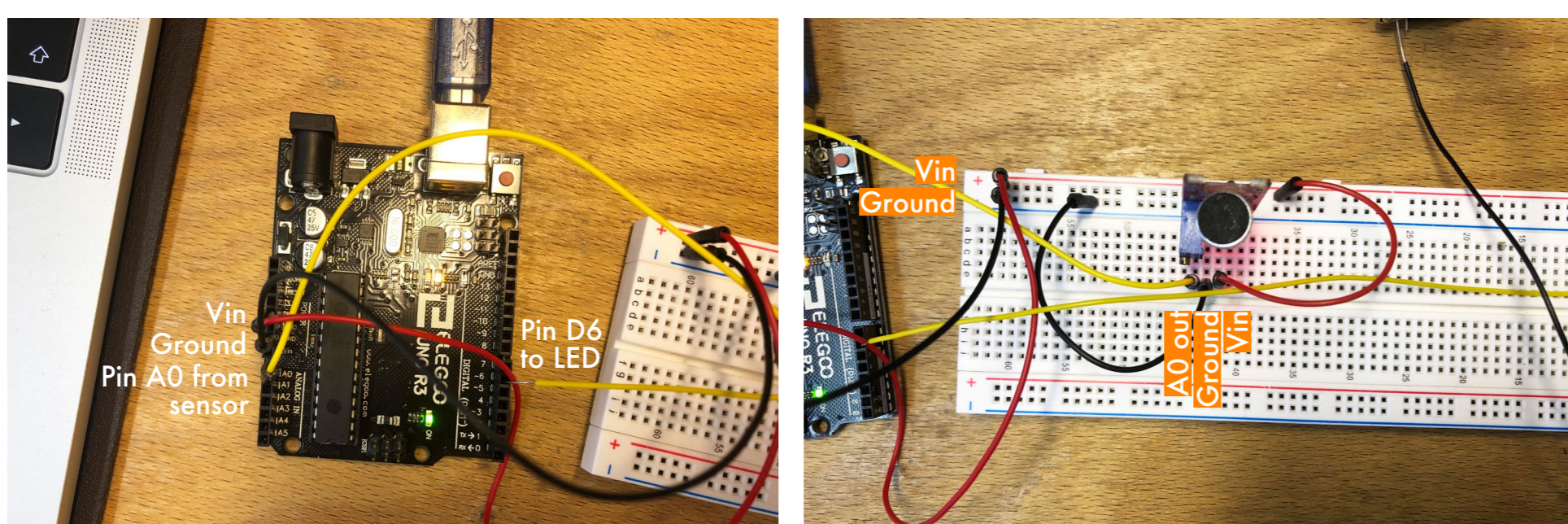
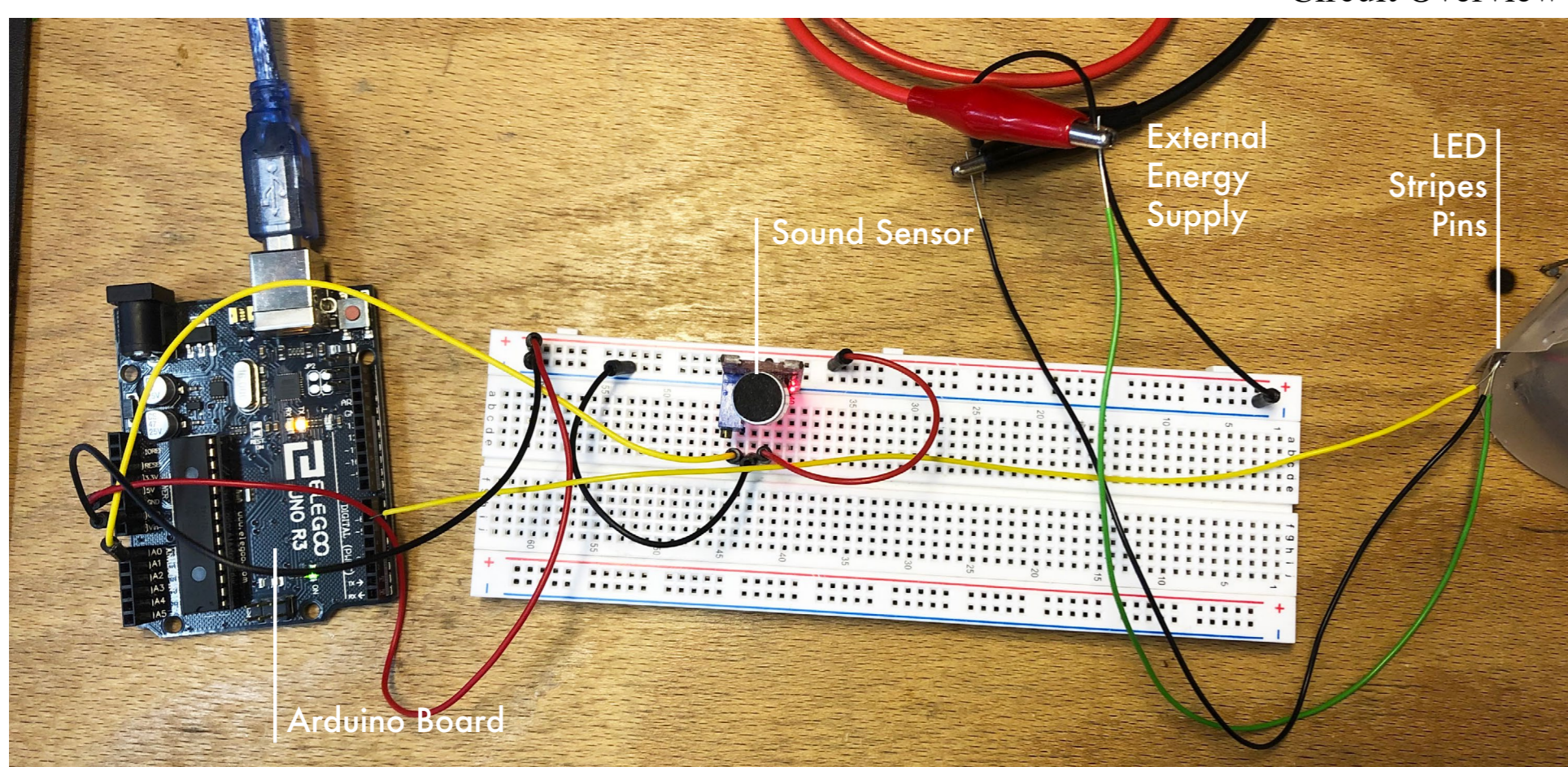
Prototype Construction



With a sound sensor and LED strips, we create a prototype that runs by Arduino. The sculpture itself was built up with soldering metal frames and PC transparent plastic strips.

Arduino Circuit

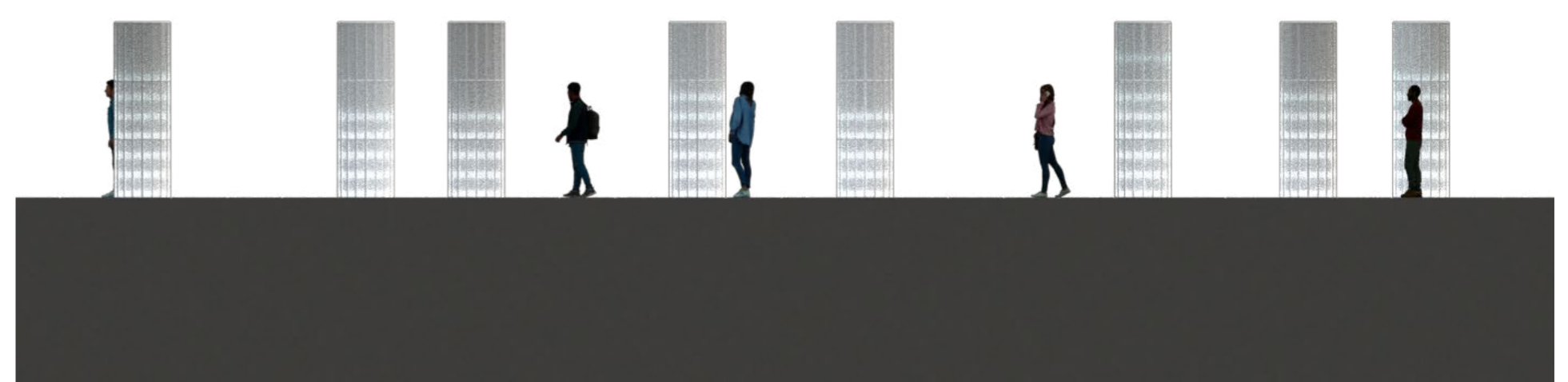
Circuit Overview



Installation Construction

All the parts are 100% recyclable and modularized. The shape is based on a recycled-steel skeleton, covered by polycarbonate panels. Each tower is made of 3 round modules with 90cm diameter and 90cm height. The size is fitted to a human and urban scale. Polycarbonate is half-transparent, so there is no direct light and the effect is very bright. From the top, the installation is covered by OPV solar panels. This solution meets the aim of energy save and low material use. Inside the skeleton, all the electrical parts are hidden.

Side View



Top View

