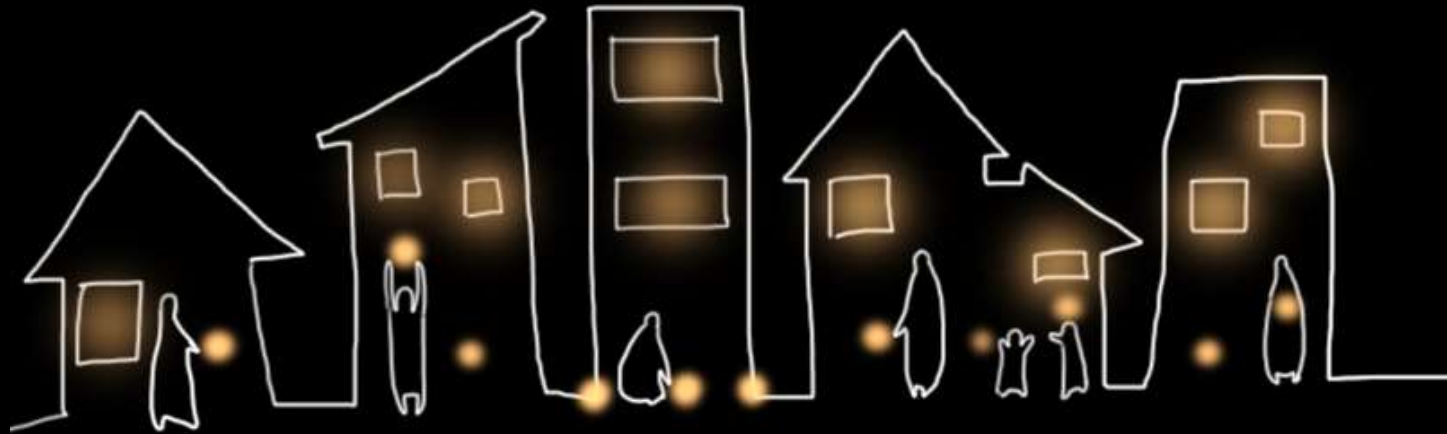
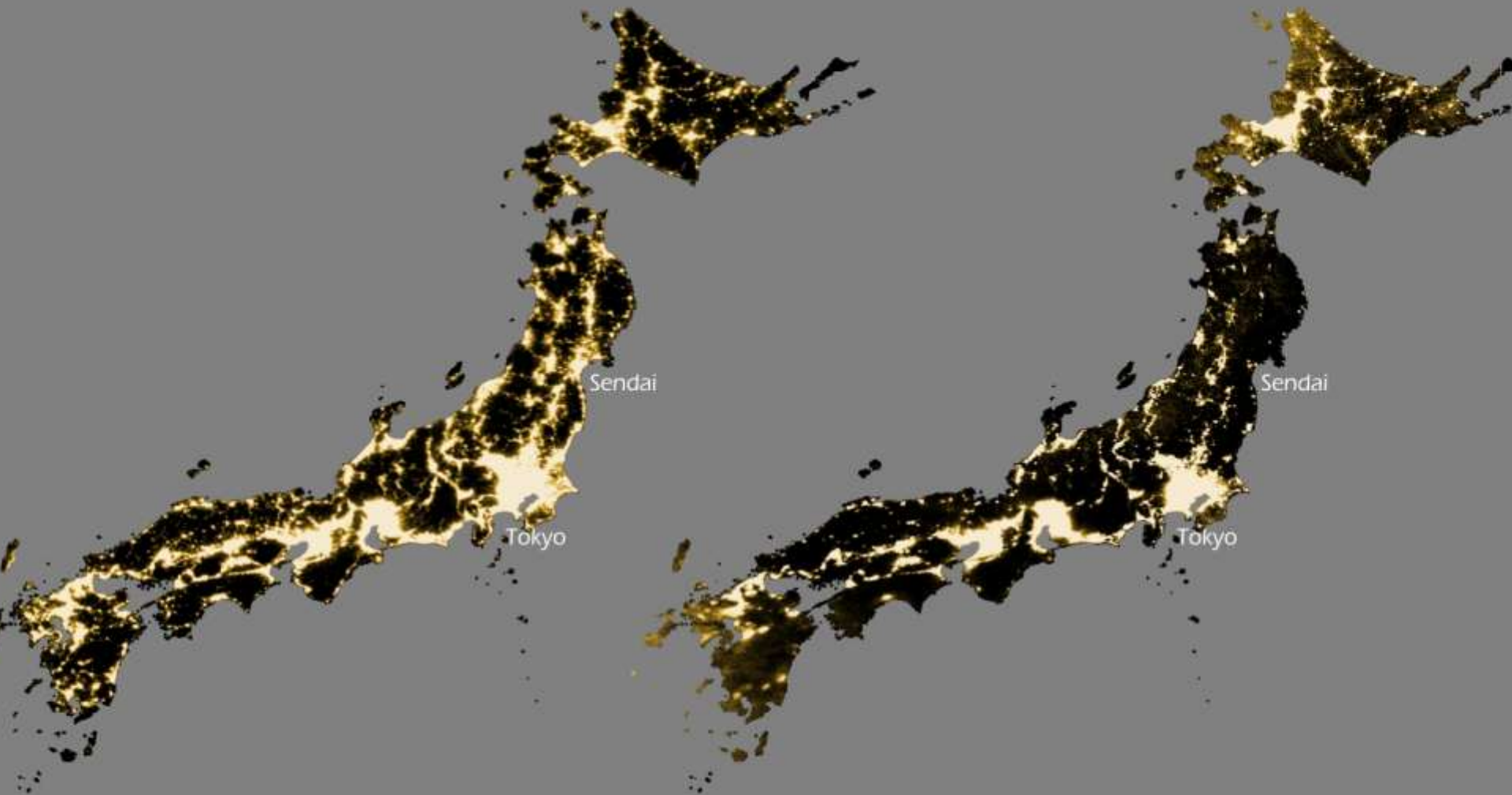


Sustainable Street Lights Created by Residents



Shigeo KOBAYASHI
Prof., Tokyo City University

The Night the Lights Went Out Over Japan



Average Nighttime Lights

Nighttime Lights on March 12, 2011

**The night view of
Shibuya before March
11, 2011**



**After March 11, 2011
to September**



After March 11, 2011

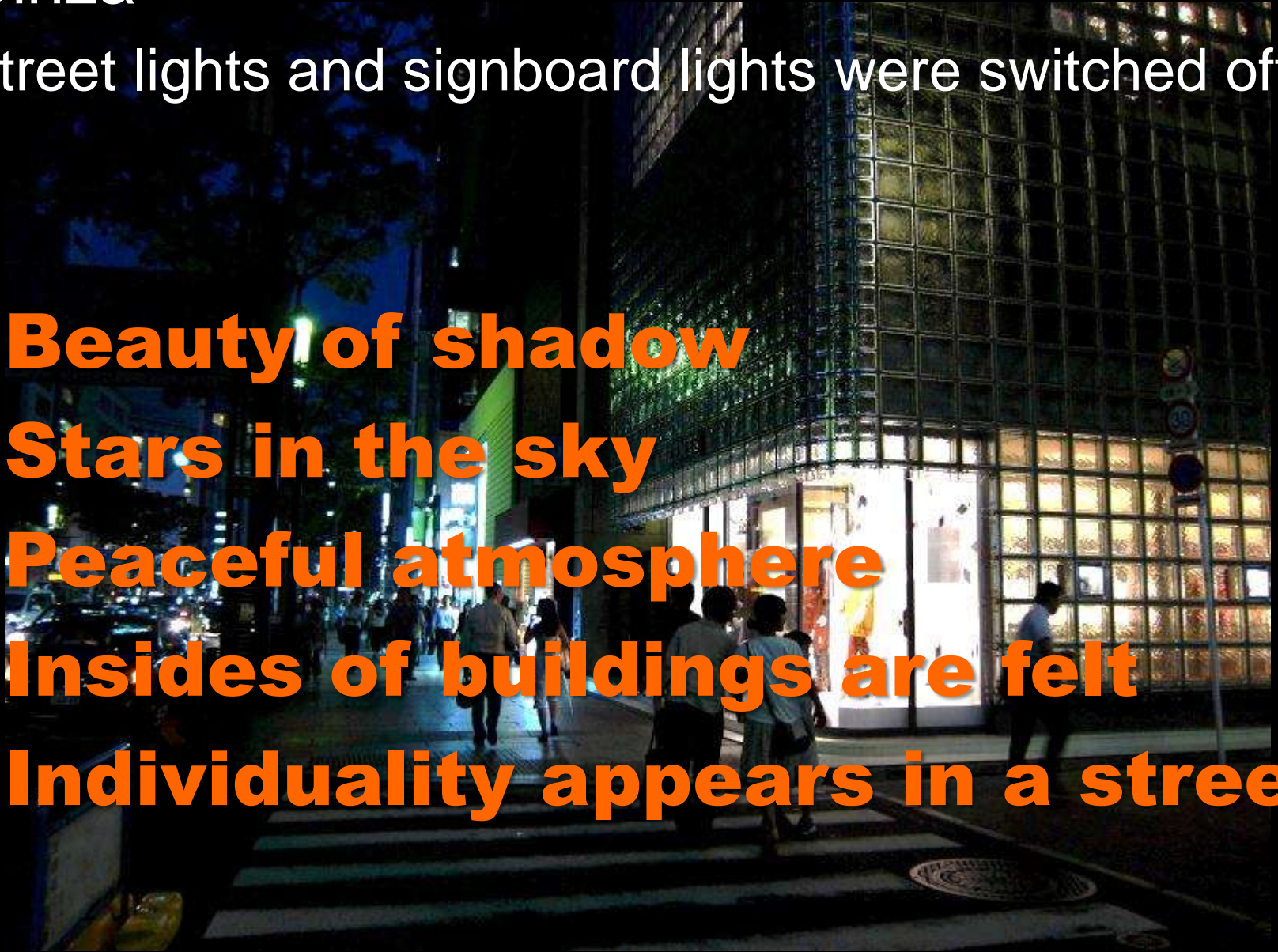
Dark Night Problem

- Difficulty of Walking and Driving
 - Danger of Accidents
- Uneasiness by Invisibility
- Lack in Prosperity of Landscape
- Depressed Feelings

Ginza

Street lights and signboard lights were switched off.

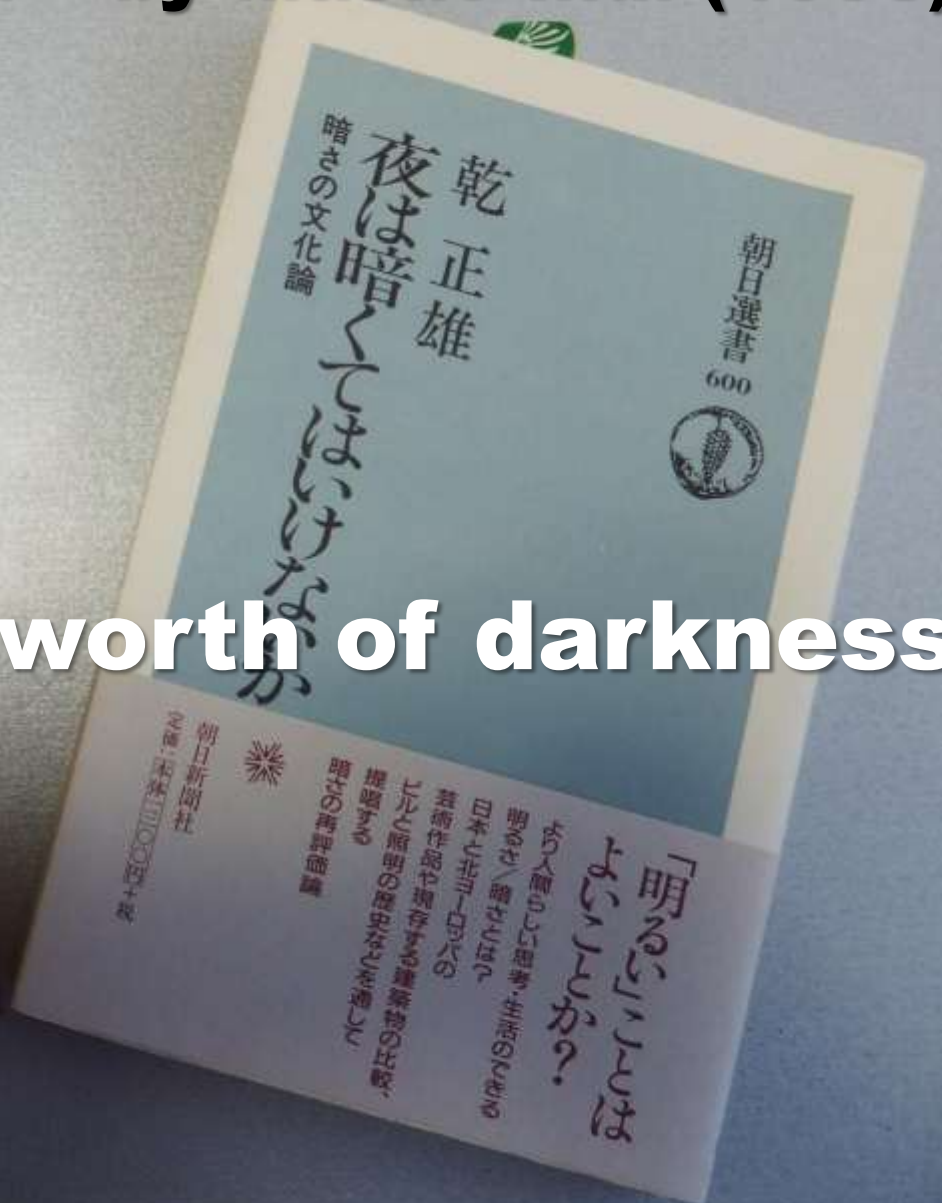
- **Beauty of shadow**
- **Stars in the sky**
- **Peaceful atmosphere**
- **Insides of buildings are felt**
- **Individuality appears in a street**



In Praise of Shadows by Junichiro Tanizaki (1977)

Dark Night is Wrong? by Masao Inui (1998)

Reconsidered worth of darkness



IN PRAISE OF SHADOWS



Jun'ichirō Tanizaki

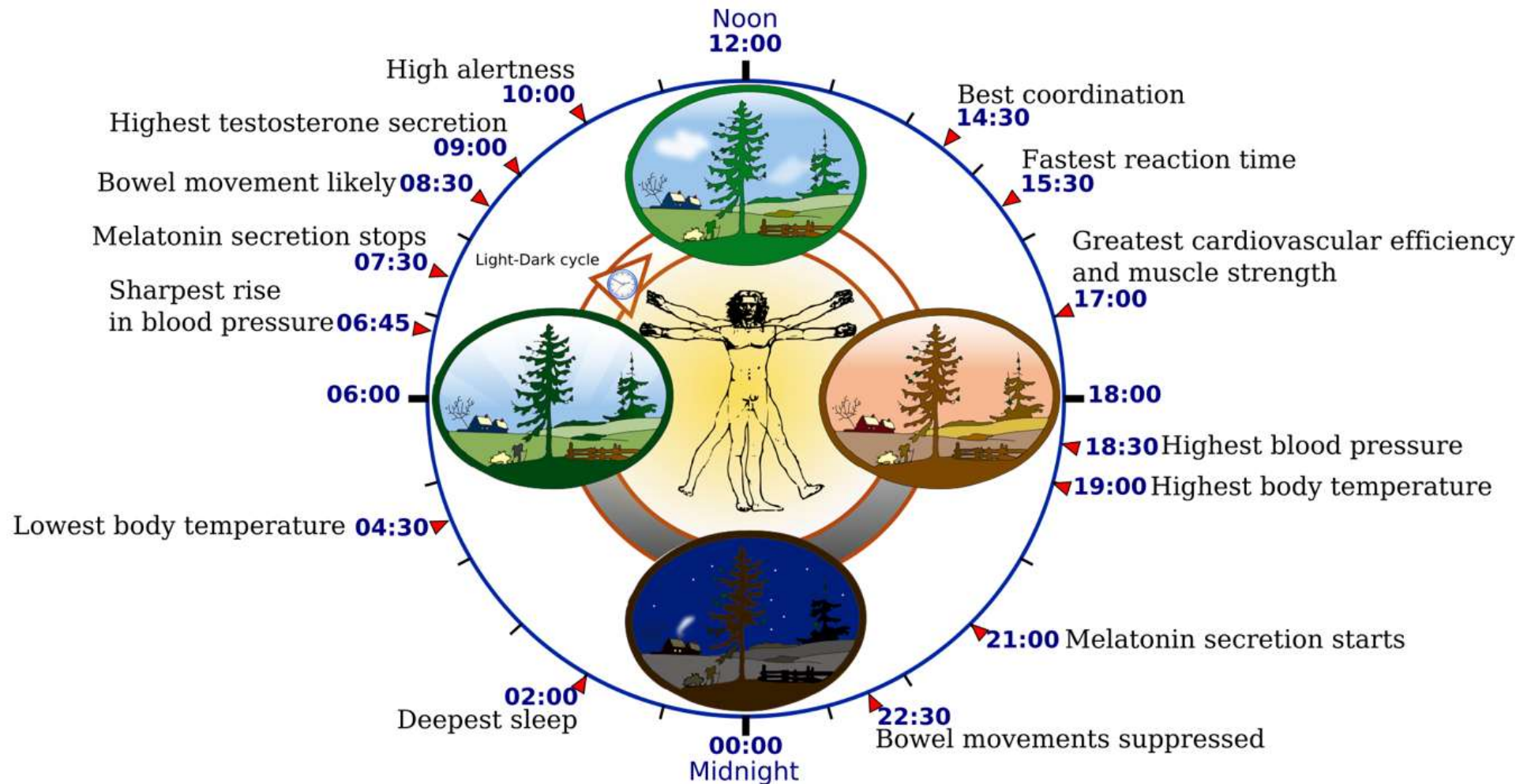
In Praise of Shadows, published in 1933 by novelist Jun'ichiro Tanizaki, captures moments when time, culture and design intersect in an essay on Japanese architecture and design. He speaks fondly of the beauty, depth and resonance of shadows, specifically **how Japanese designers work with darkness to create objects that reflect limited light**. He talks of bright light garishly subjugating the delicate subtlety of Japanese design - the lacquer bowl, miso soup, paper paneled shoji. He suggests **light robs us of the beauty of shadows, the mysterious depths and heavy patterns, the ageless unknown**. Drawing comfort and familiarity of being one with a shadow, nestling into it, he laments his fellow citizens eager adoption of westernised technologies that leapfrogged Japanese design process.

Publisher: Leetes Island Books (January 1, 1980)

ISBN: 0918172020

Light works in setting our circadian rhythm.

The combination of poor sleep and exposure to artificial light exposure may contribute to a number of health problems.



**The goal of my research
is to produce**

**Dark,
Beautiful,
and Active Street
at Night**

Outdoor public space

Consists of bright public lights



**Consists of dark individual
private lights**

**Decrease light quantity
by combining street lights
and lights from buildings**

Jiyugaoka, Tokyo



During shop opening

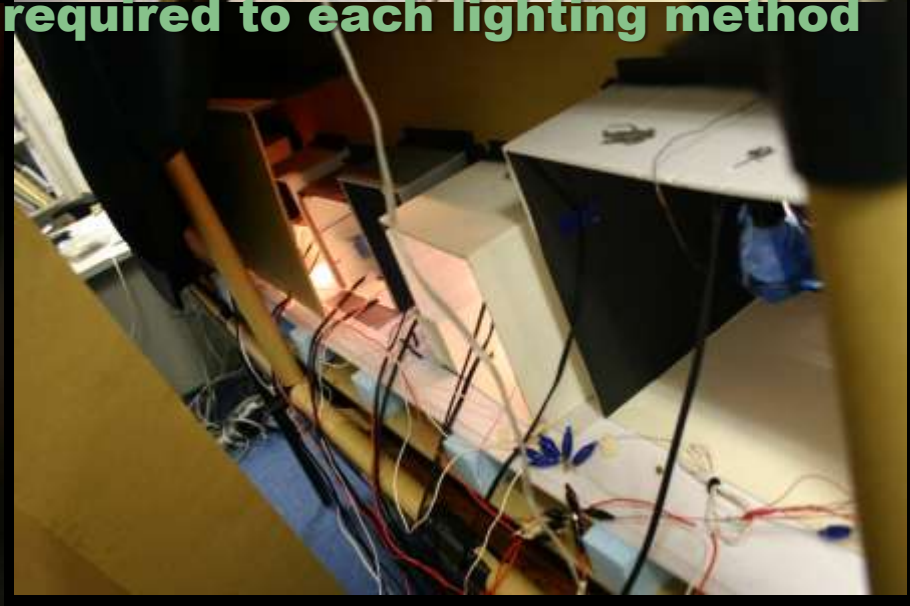


After shop closed

Scale model for analyzing the adequate lighting methods



Estimate how much electricity is required to each lighting method



Adjust each light and set to the minimum brightness

Window light



Floodlight



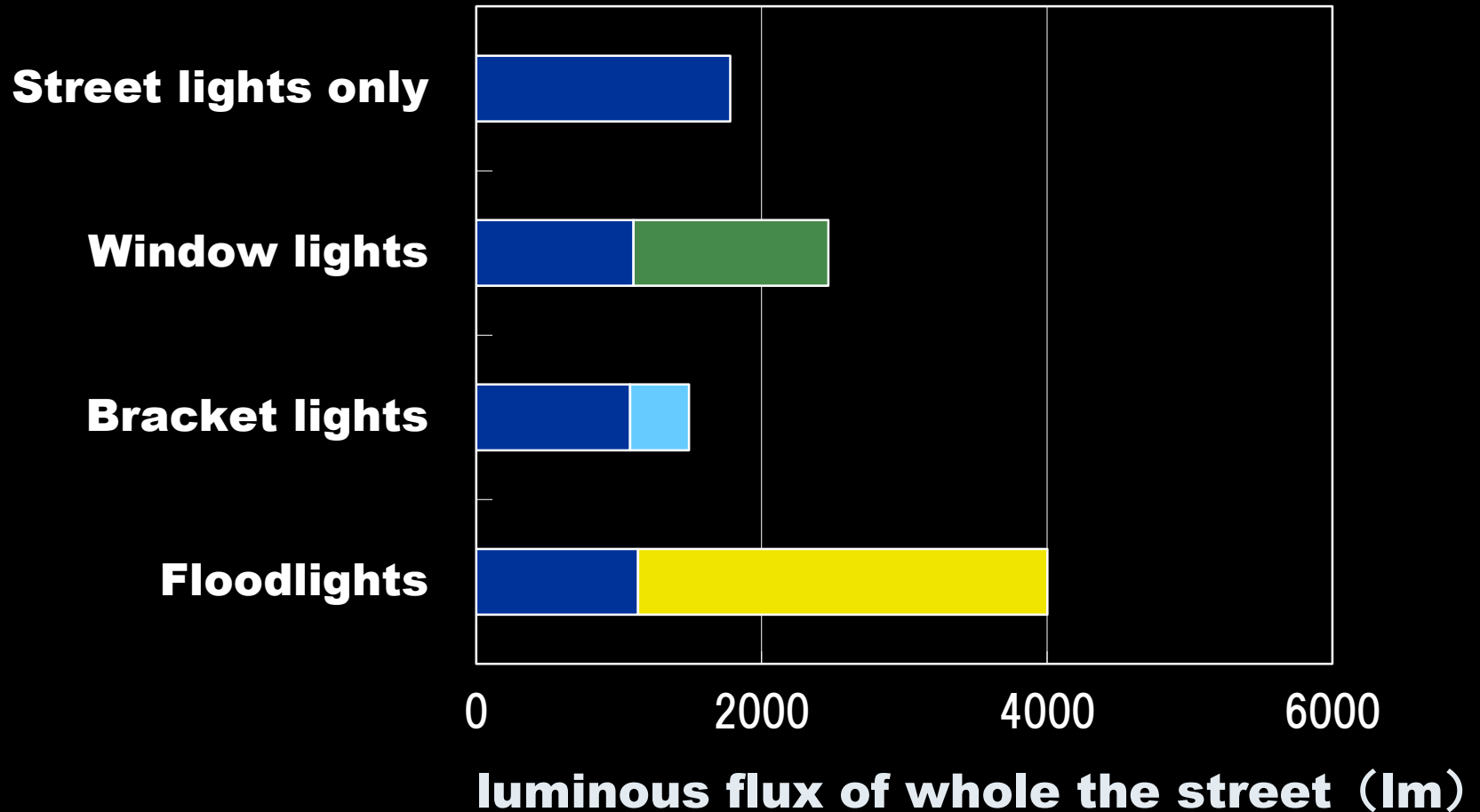
Bracket light



Street light (pole light)



The minimum brightness that can walk in comfort





Combined with lights from buildings



Street lights only

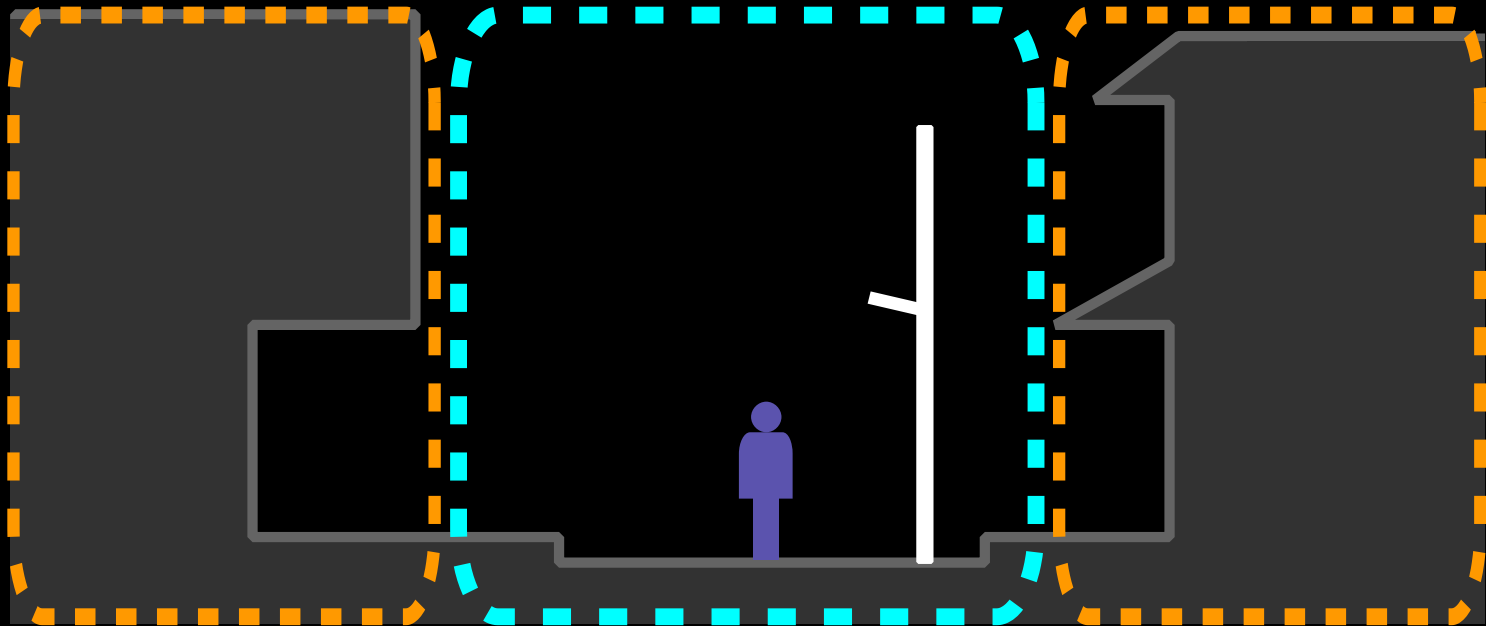


A Separate Design

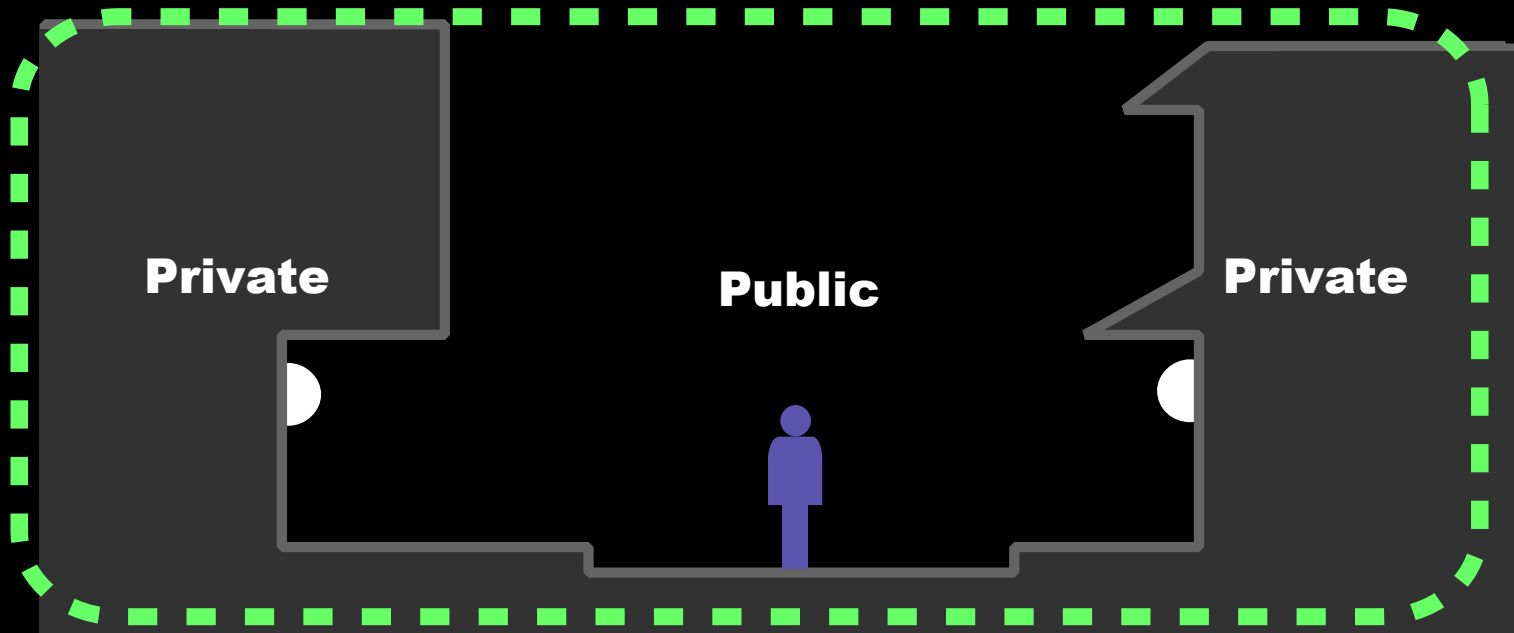
Private

Public

Private



Corporative Design



Who made?



Illuminations by Residents



Oyamadai shopping street, Tokyo

1/25 white street model



150 0.06-W LED lamps in five colours



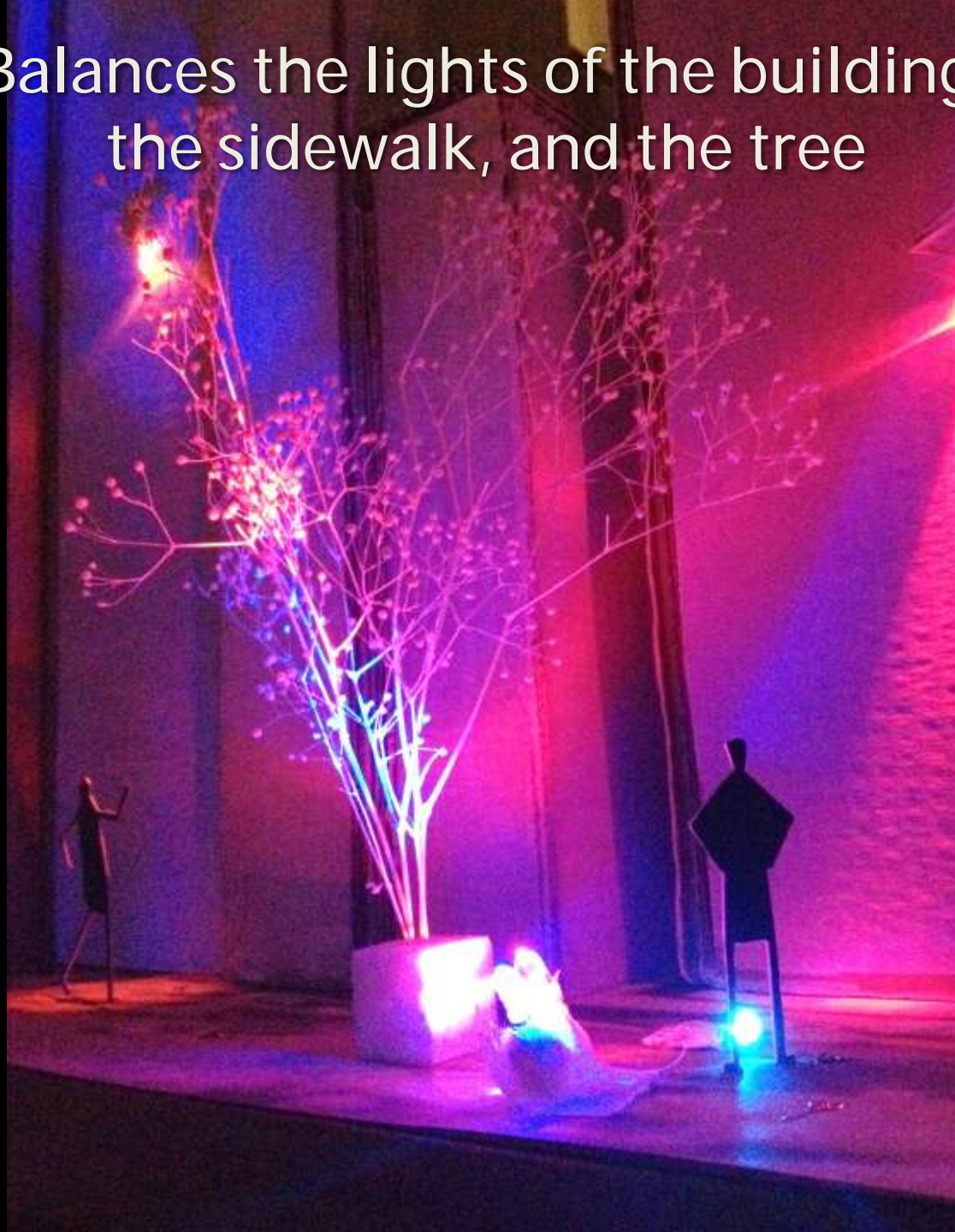
Change the street light



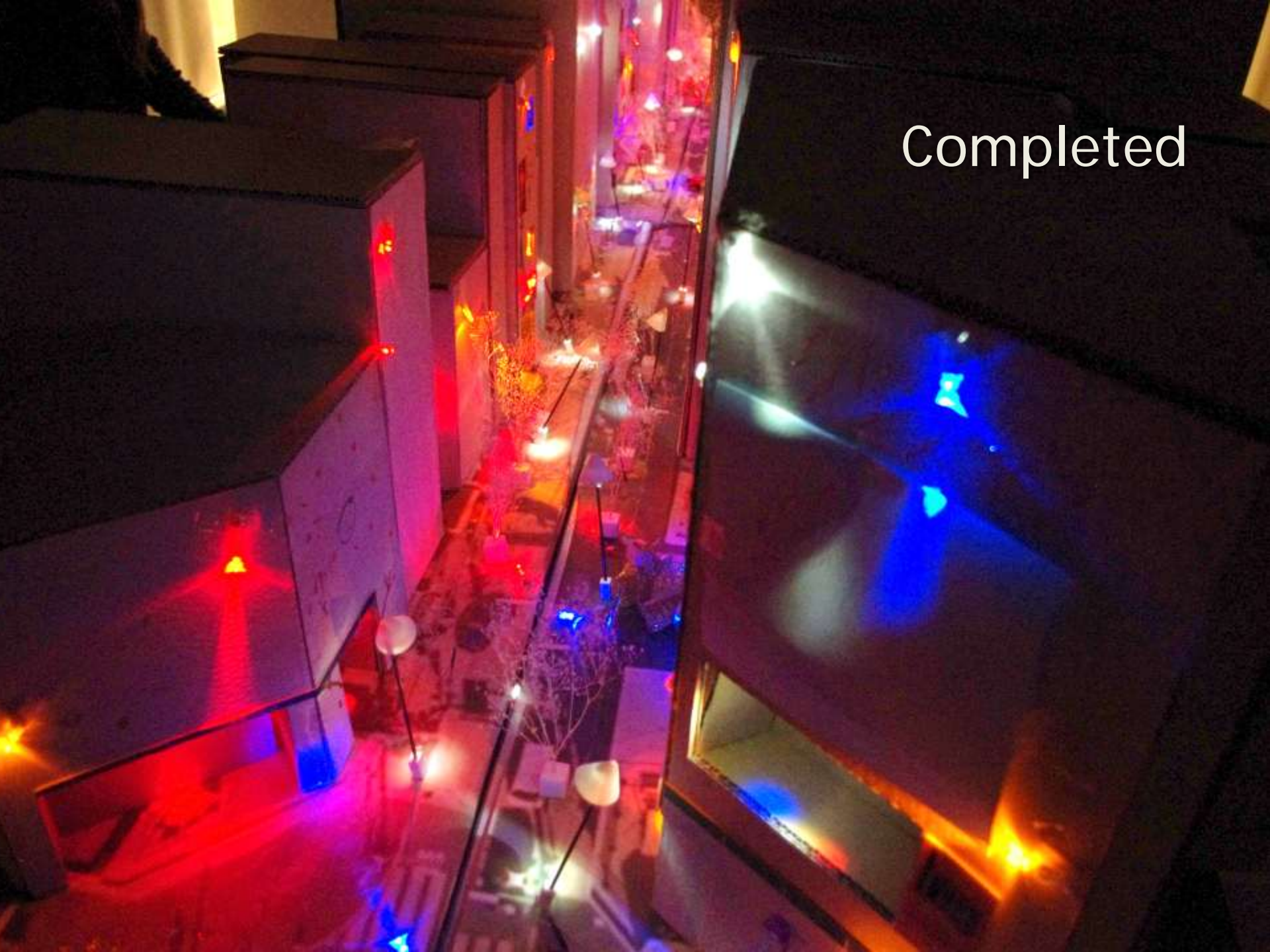
A close-up photograph of a lit matchstick on the left and a glowing yellow LED light bulb on the right, both resting on a dark, reflective surface. The background is dark and out of focus, with a warm, yellowish glow from the light sources. The text "Interactive with pedestrian" is overlaid in white on the right side of the image.

Interactive with pedestrian

Balances the lights of the building,
the sidewalk, and the tree



Completed

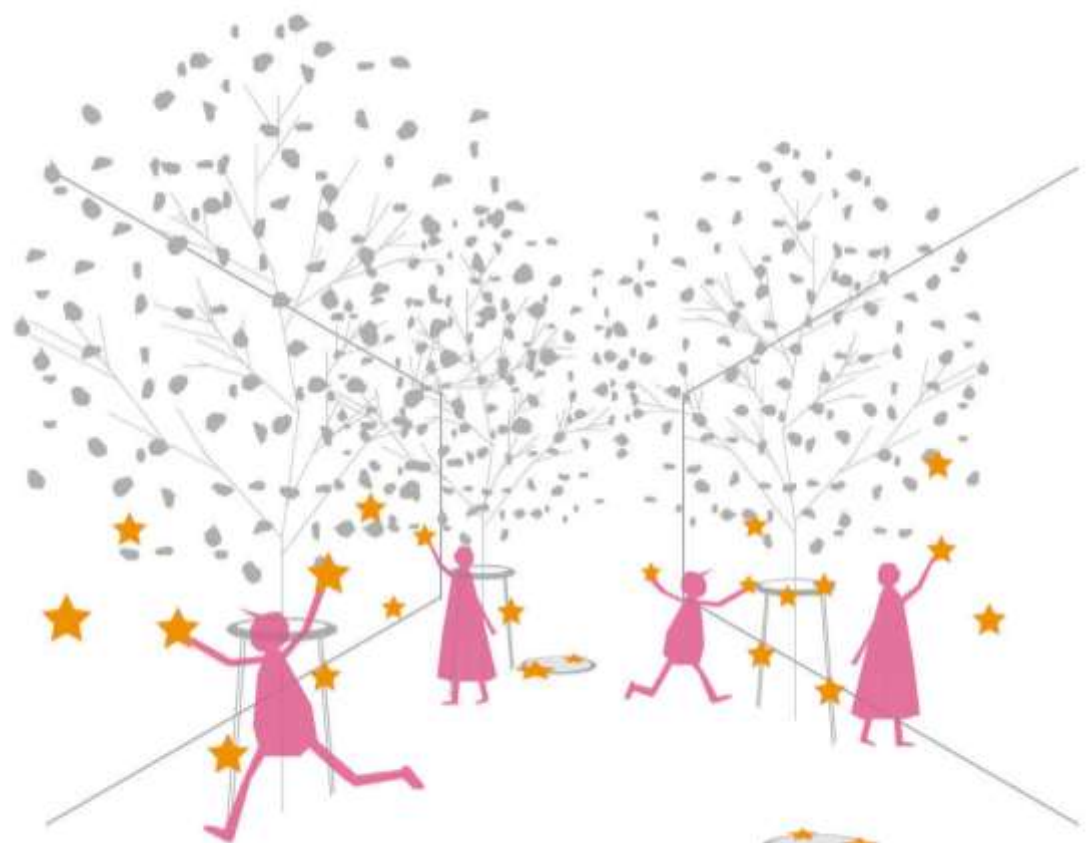
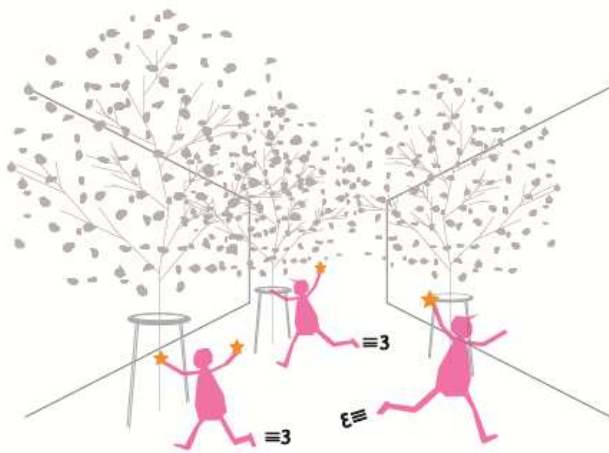


Interview to residents

Question	Answer	Number
About children creating illuminations in the actual street	Agree	9
	Disagree	0
	No answer	3
Like to live in such a street?	Agree	12
	Disagree	0
What is required to realize?	Cooperation activities	8
	Increase of electric lights	2
	Other answers	2
What is likely to happen in this street?	Favorable action	10
	Unfavorable action	2

Movie

**Actually stick lights
on the street**



Install lights in the facade of the street.

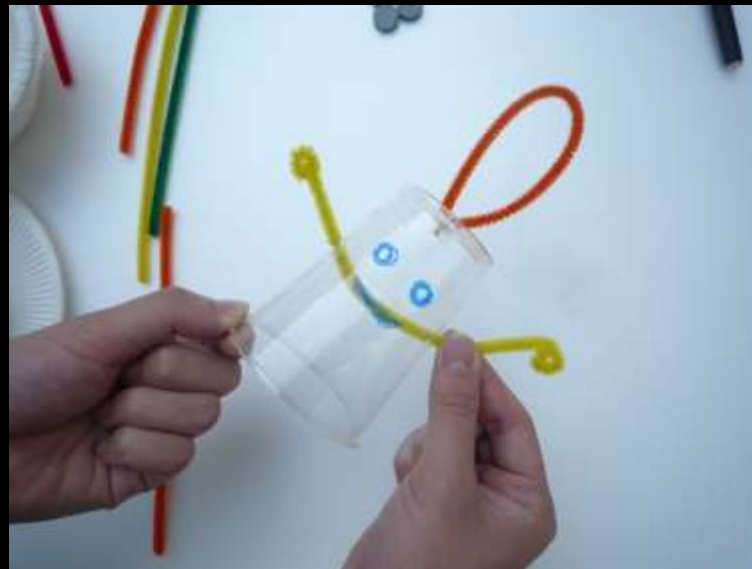
LED



Magnet



Light Material



Make a Face

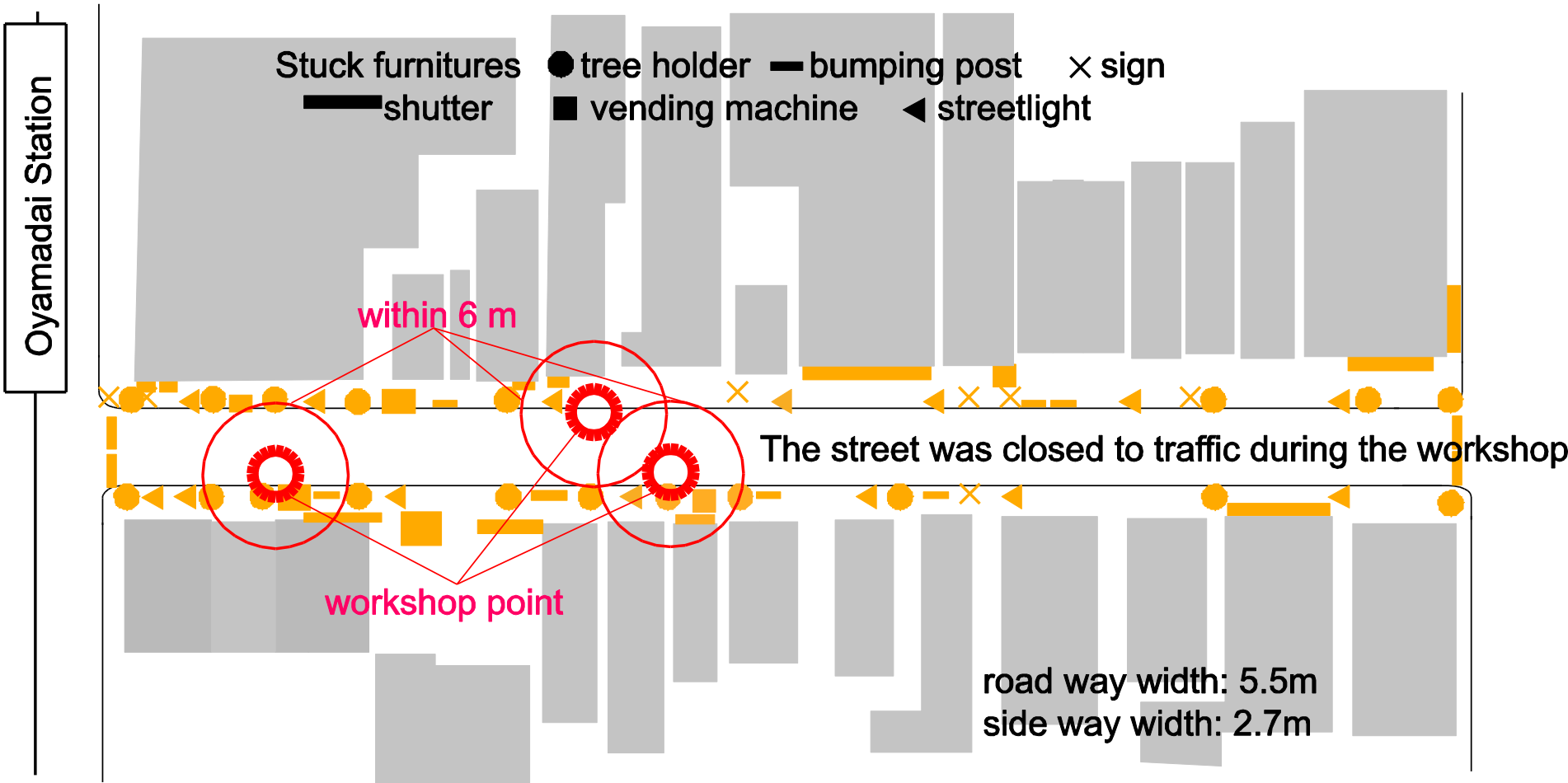


Create lights, and...



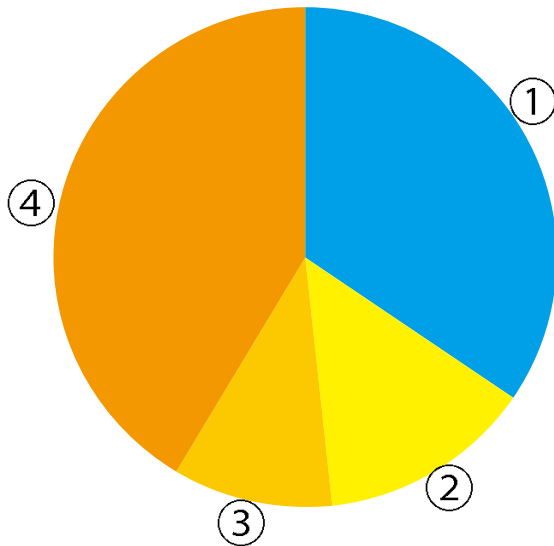
Install them in various points in the street

Stuck furniture in the street

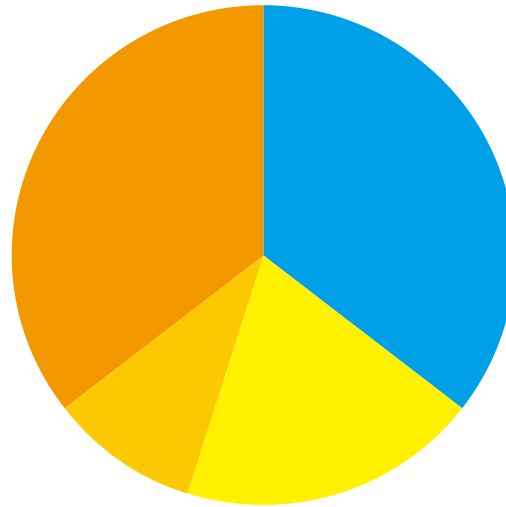


Installed locations according to time

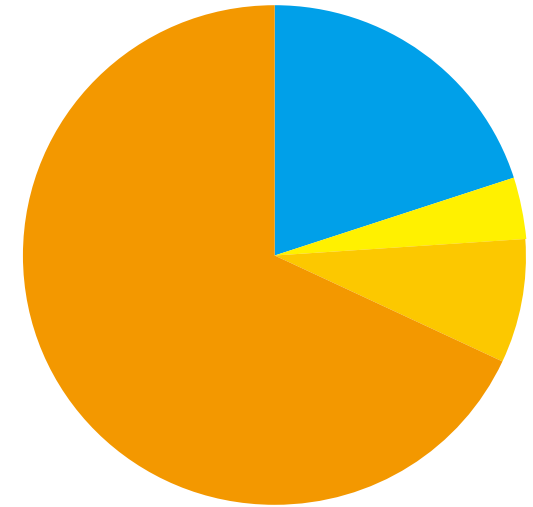
18:30-19:00



19:30-20:00



20:00-20:30



- ① The created lights were installed in within 6 m from the workshop spots.
- ② Lights were tried to be installed in within 6 m, but not succeed.
- ③ The lights which had been set within 6 m were removed.
- ④ Lights were installed in the more than 6 m outside.

Movie

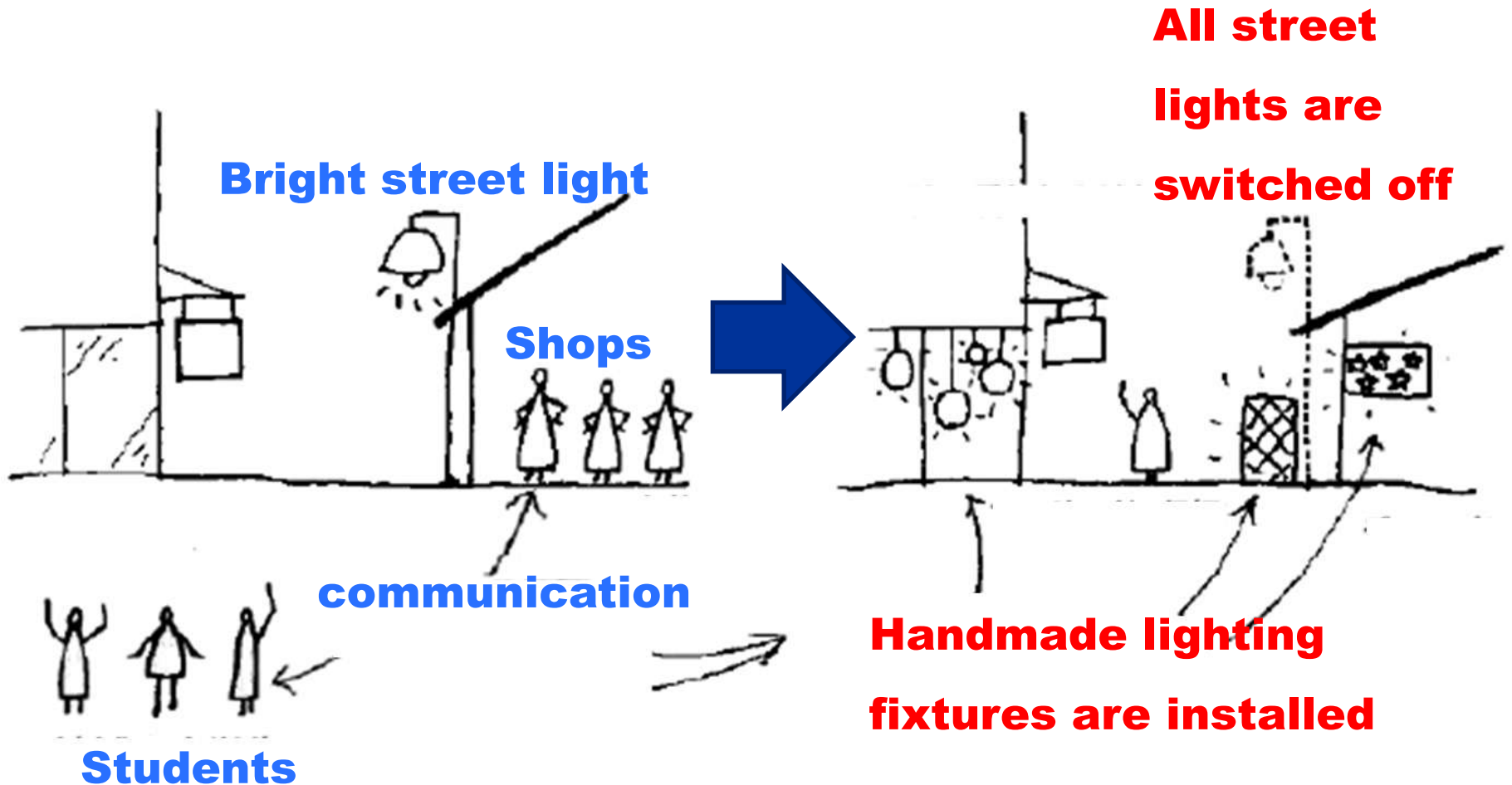
Interview to shop owners

Question	Positive	Negative	Neither
About installing handmade lights in the street (your shops)	17	1	6
About the landscape of children's woks	16	0	8
Like to participate next?	21	0	3

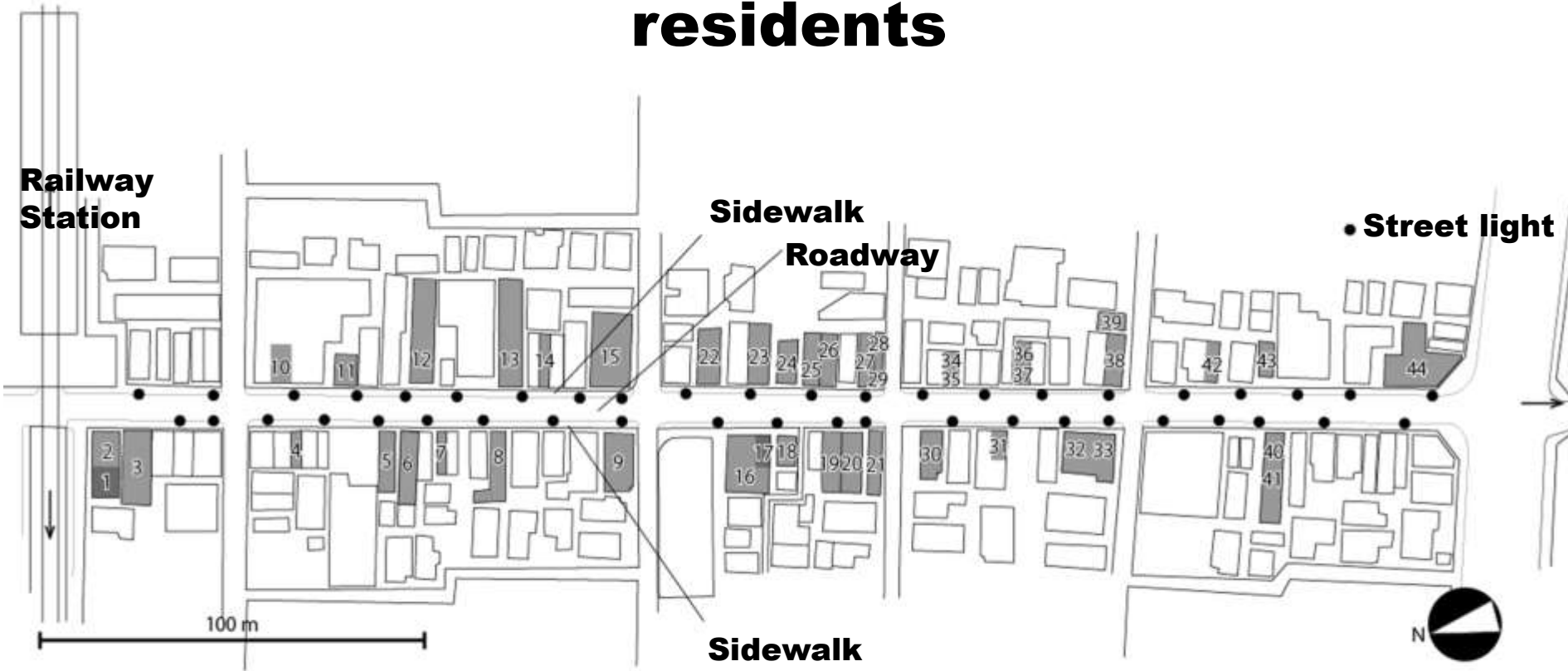
Residential Responses

- The street looks **cheerful and pleasant**.
- We residents will have **more attachment to the place**.
- **Crimes will decrease** and people's **communication** will get **active**.
- It will be **safety to walk**.

The Lighting Environment of a Shopping Street Consists of Handmade Lights



Lights around the 44 shops in the map were created by students and residents



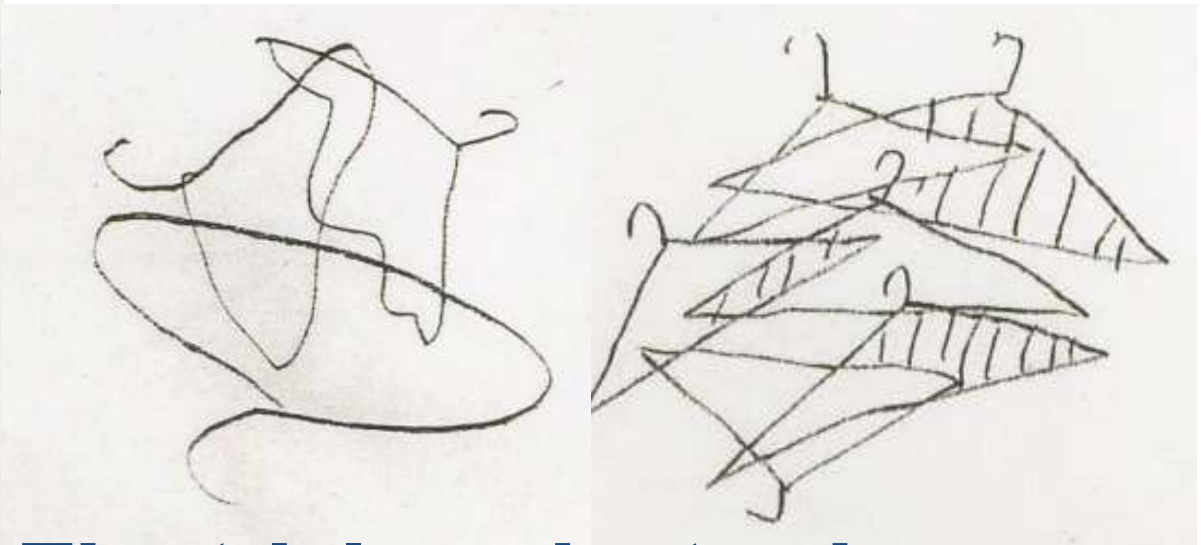
Oyamada Shopping Street
365 m length

Ebisu Laundry

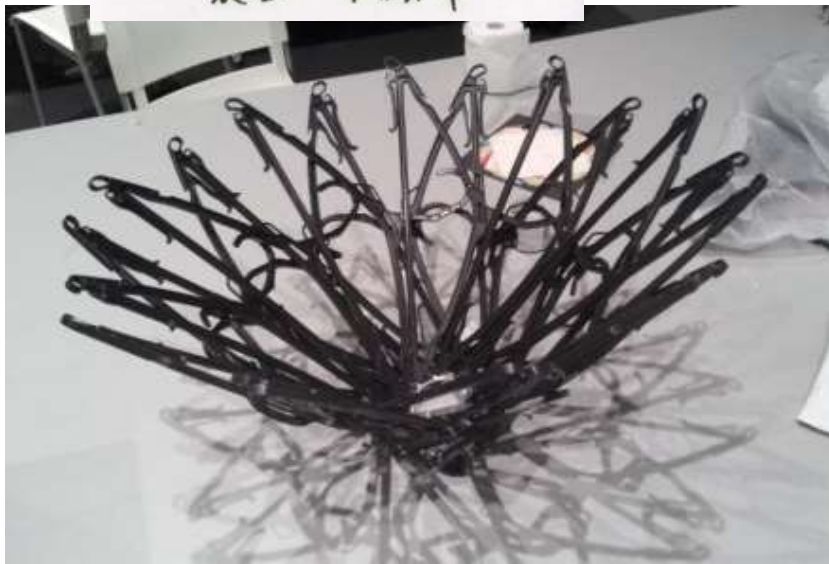


Scene of interview

- **Foundation 51 years**
- **Polite correspondence**
- **A large number of hanger racks**



The trial product using a hanger and a nonwoven fabric



Created lighting fixtures together

Laundry

Students

Shopkeeper





2 十花十色 Florist

店舗名：フローリストのだ

“花を贈るときの『おめでとう』という気持ち”

「十花十色」この言葉は十人十色が由来となっています。

花は様々な場面で使われ、贈る人の気持ちが込められます。花を贈るときに添えられる「ありがとう」「おめでとう」「おつかれさま」「さようなら」という気持ちをを形で表現しました。

使用材料

・和紙 ・黒画用紙 ・ビニールテープ ・塩ビ版



Laundry

店舗名：スタークリーニング

”クリーニング石鹸のシャボン”

店主夫妻と話していると優しく、親しみが持てるお人柄が伝わってきます。そんなお二人の雰囲気
を石鹸のシャボンのイメージと合わせて円形で表
現しました。

また、お店のイメージカラーである青を基調とし
た作品になっています。

使用材料

・和紙 ・木材 ・お借りしたアイロン ・頂いたハンガー



Students

Pet dogs, Shopkeeper and his wife



2. 「光を届ける豆腐」 Tofu Store

店舗名：星とうふ店

“お店全体が美術館”

この店舗は、数か月後に閉店してしまうため、お店全体を使って美術館を作り出し、長年のお店の歴史を飾りました。

行灯は豆腐の原料である大豆の花をモチーフにしています。額縁にはお店の方からのメッセージが書かれた豆腐の写真を飾り、それをお客様に光で照らして読んでもらい感謝の気持ちを伝えました。

使用材料

・スチレンペーパー ・段ボール ・画用紙



Students and Shopkeeper



The lighting environment of the usual shopping street

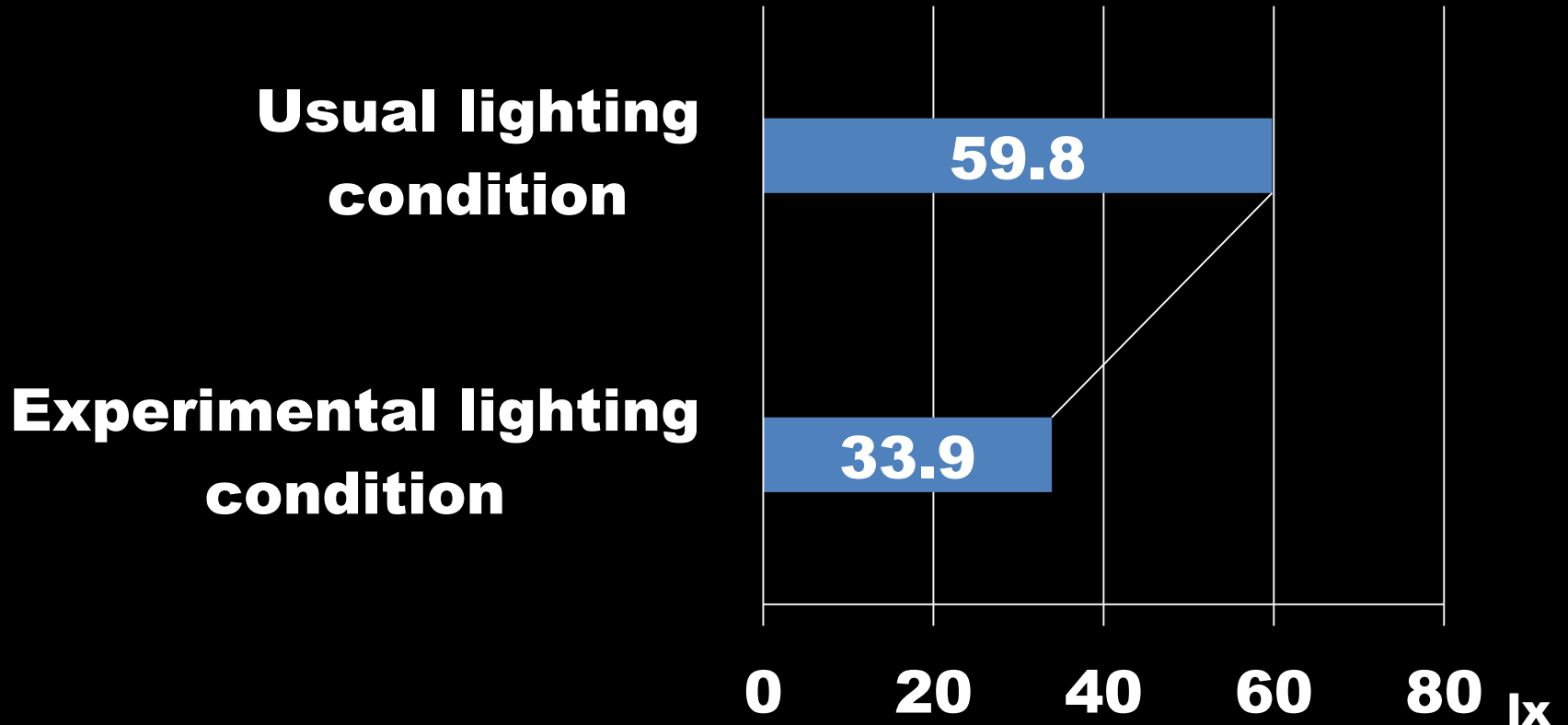
A night street scene in an urban area. The street is paved with bricks and lined with trees and buildings. People are walking on the sidewalks, and several bicycles are parked. The scene is dimly lit, with only a few small lights visible, such as a signboard on the right and a car's taillights in the distance. The overall atmosphere is quiet and somewhat somber.

+

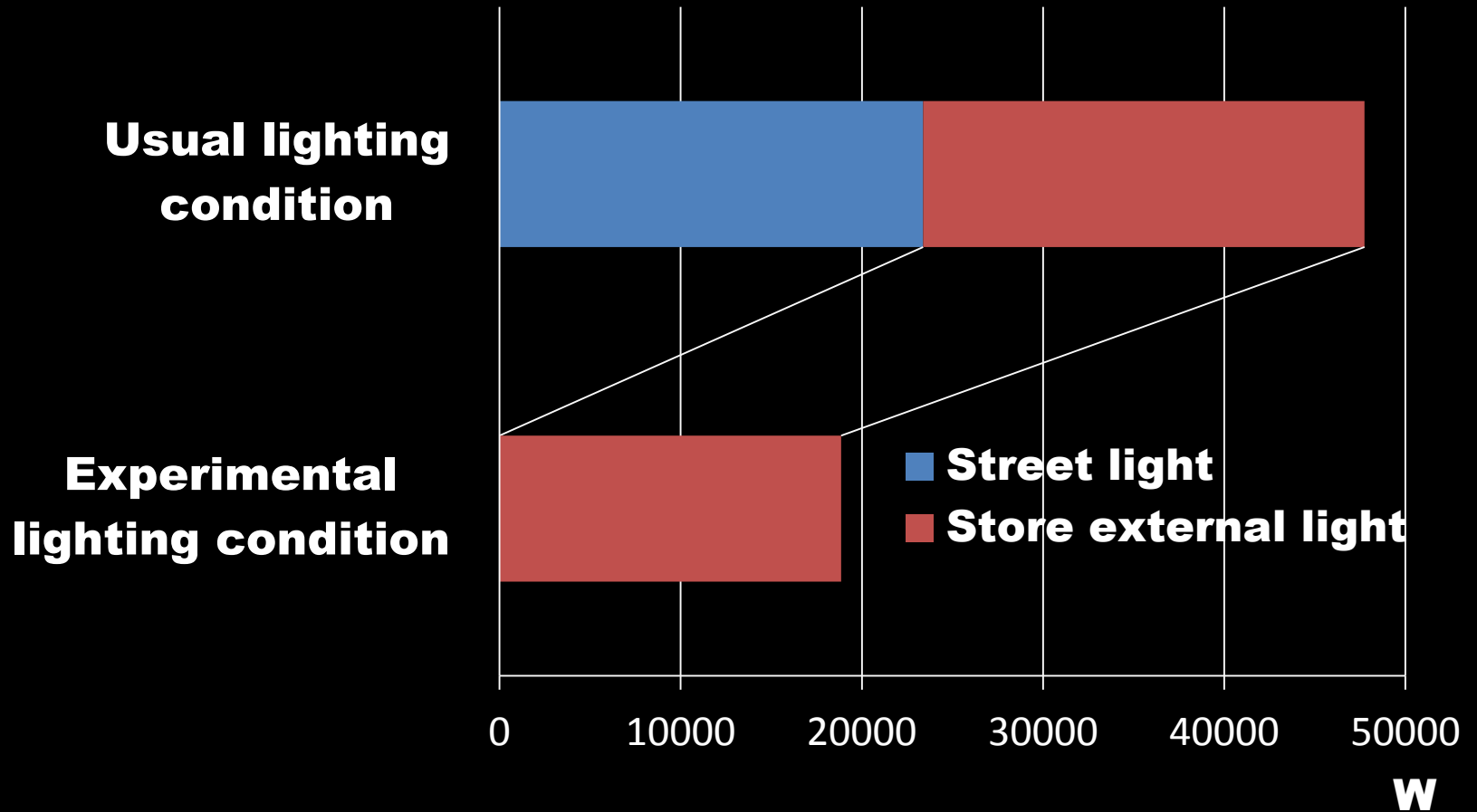
Invisible individuality is lit with small lights.

**All the streetlight and some signboard lights
are switched off.**

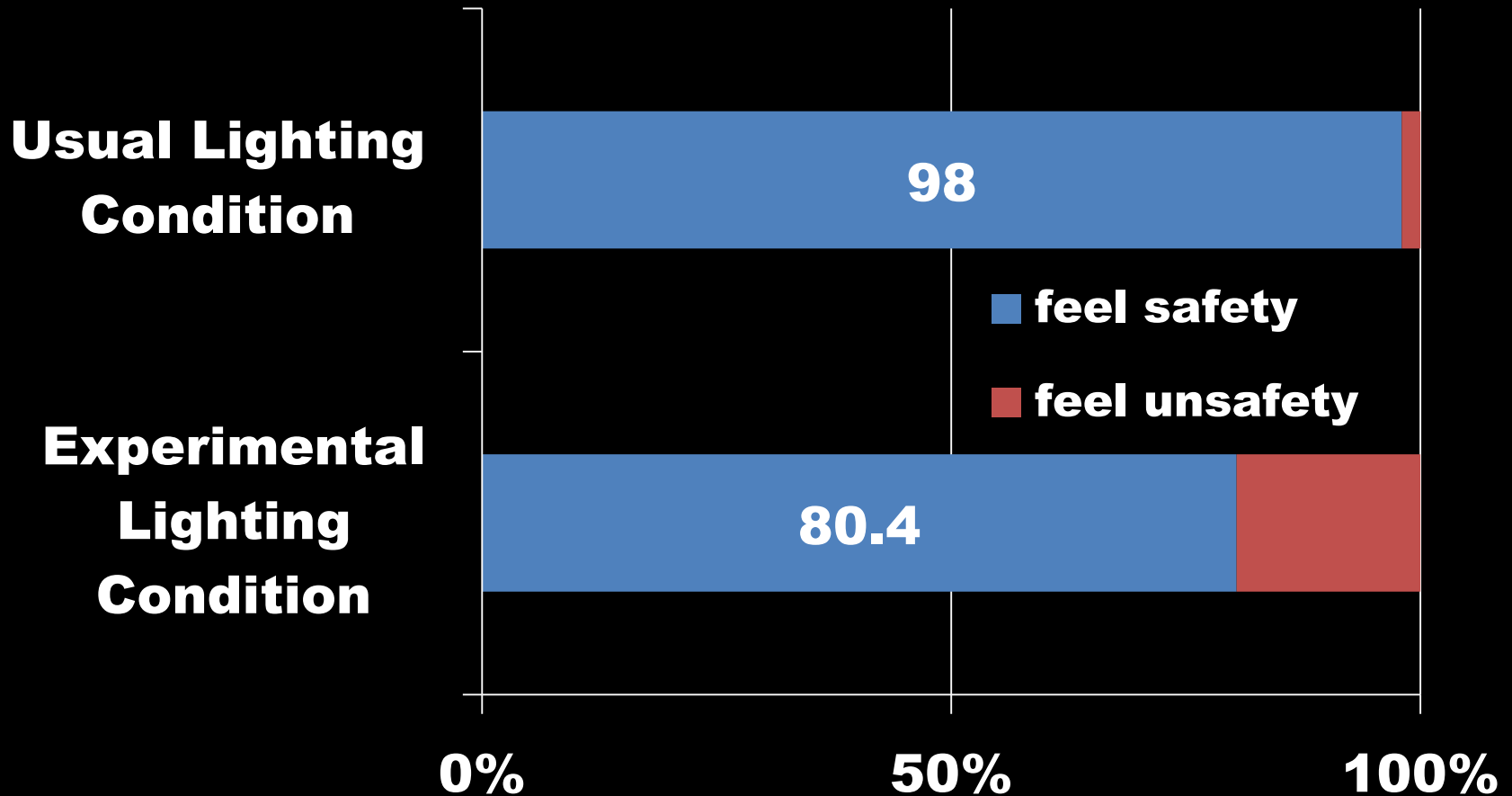
Road Surface Illuminance (lx)



Consumption Electric Power (W)



The questionnaire to 51 pedestrians



Movie



Light

Safety

Streetscape

Visibility

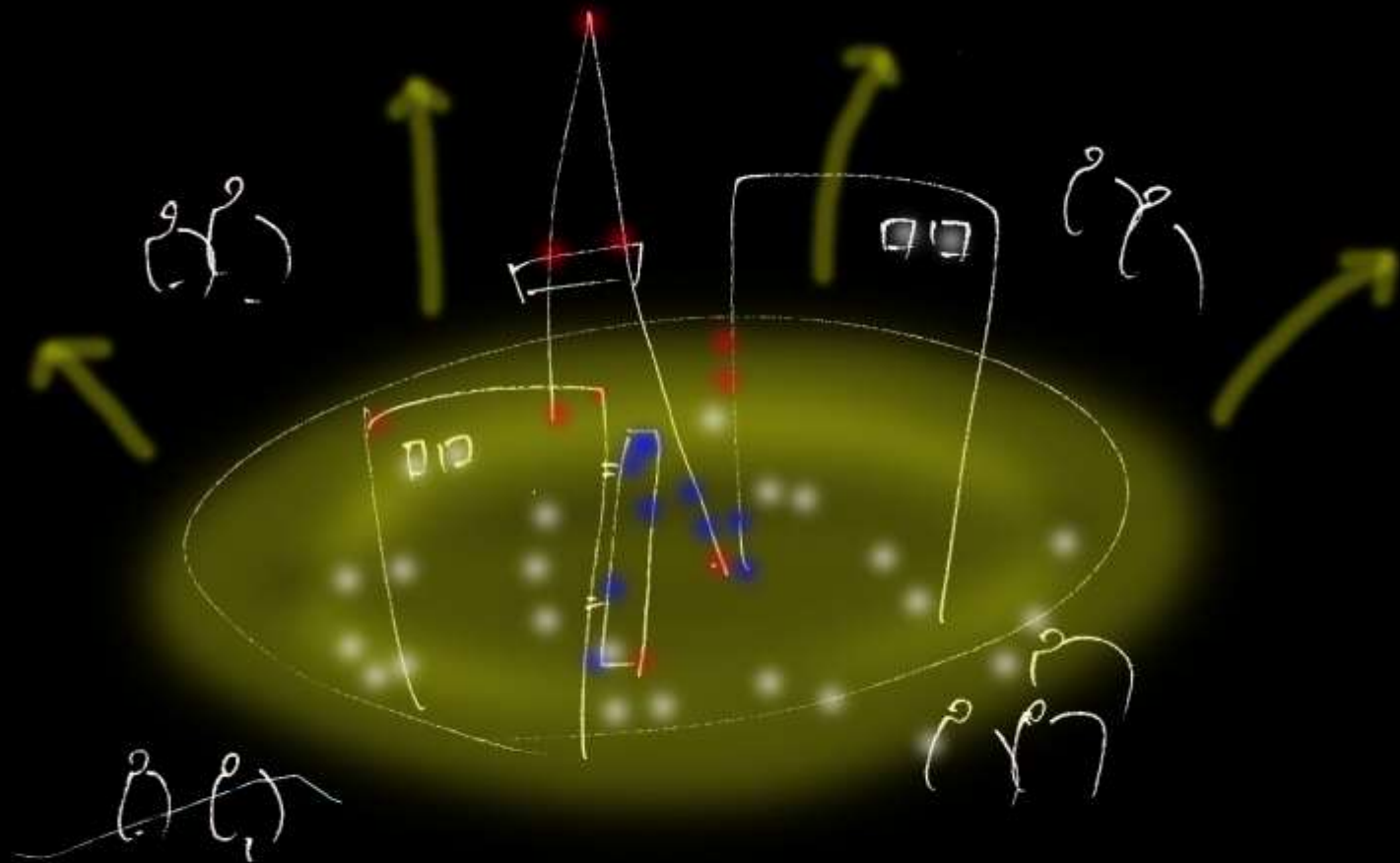
Energy Efficient and avoid Light Pollution

Place Attachment

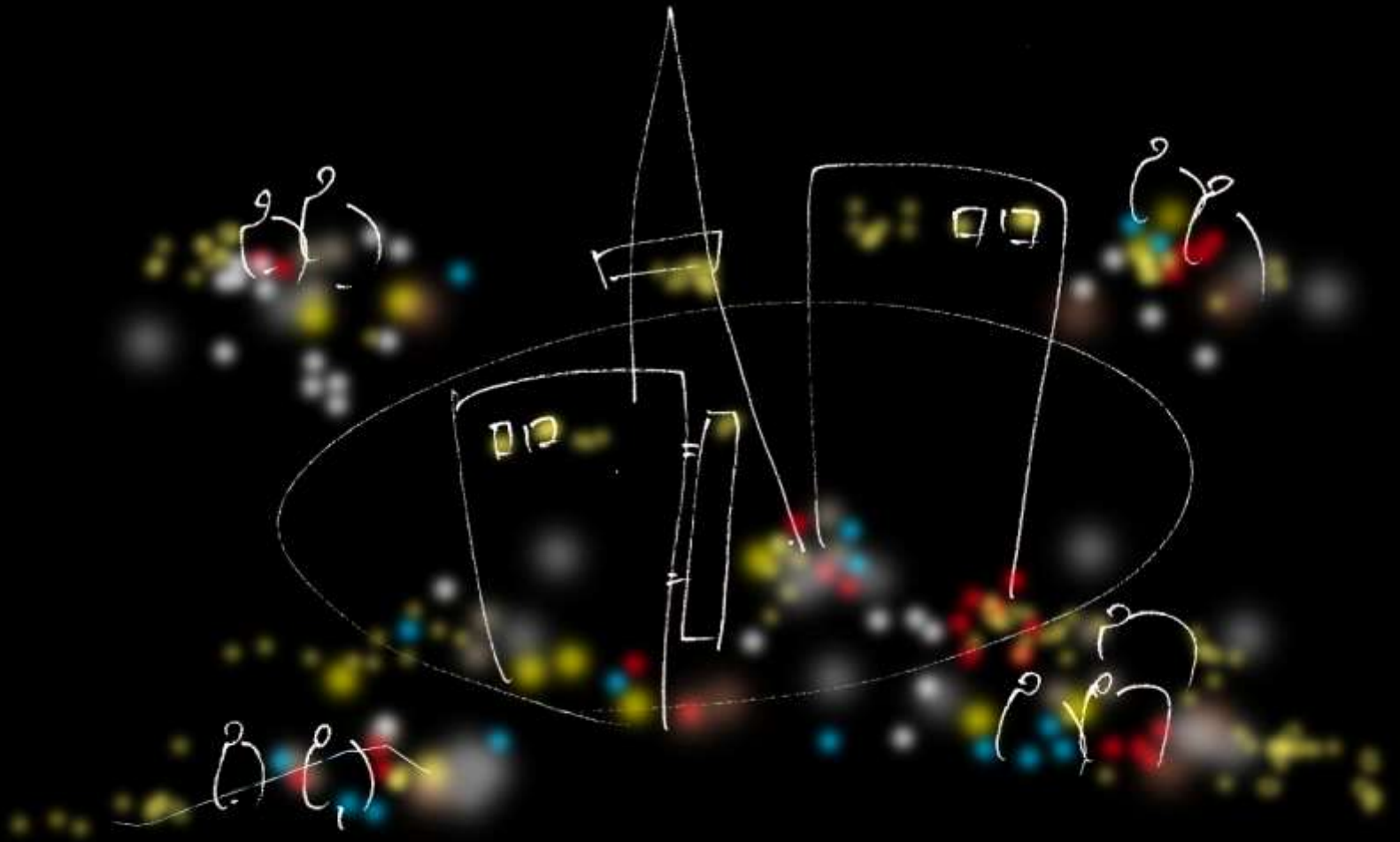
Education

Communication

Regional Activation



Flood of lights which are not directly connected with people



Sustainable lights created with the small lights by people

These project won the
Design Award for Light and Lighting 2012
The Illuminating Engineering Institute of Japan