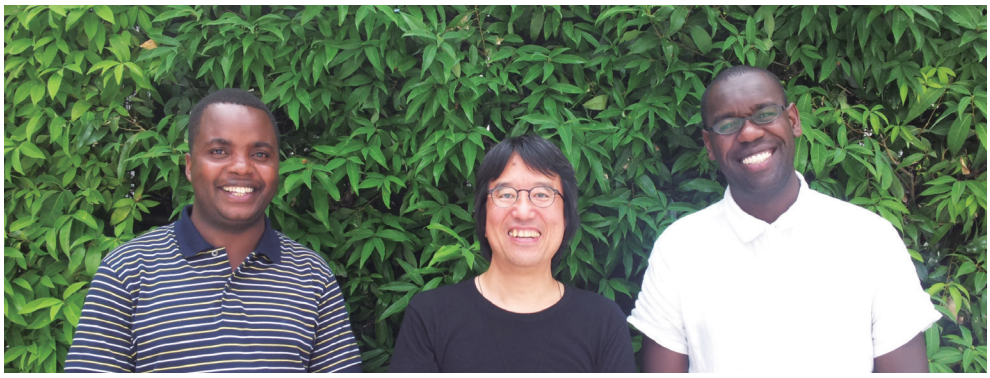
# OSA
# SOCIAL DESIGN GROUP

## Seeds from JAPAN to be realized in KENYA

### Promotion of technology and innovation creation, sharing and management for sustainable community development

As a social design group, OSA ensures that initiatives undertaken are about people, bringing together the government, industry, academia and community collaboration to explore and promote technologies and projects that are eco-friendly, sustainability sensitive, and user-friendly in support of sustainable community development.




**Emmanuel Mutisya**
Director | OSA Kenya

Holds Master of Arts in Public Administration from International Christian University in Japan and a PhD in Sustainability Science from the University of Tokyo. After working as a Programme Coordinator at the United Nations University in Japan, is now a Senior Economist at the African Development Bank and a Visiting Professor at the University of Nairobi. He has also worked as a project/programme leader with international organizations including UN-HABITAT, UNEP, UNDP in the areas of sustainable development, green growth, water and sanitation, climate change, renewable energy, etc. He is Council Chairman of KENYA ADVANCED INSTITUTE OF SCIENCE & TECHNOLOGY and Advisor of OSA Japan.

**SAKATA Izumi**
President | OSA Japan

Holds Master of Engineering in Architecture from Kyoto University Graduate School of Technology. As an architect, Sakata has an extensive 30 years' experience working under Mayekawa Kunio, one of the most prominent modern architects in Japan. He has also worked as a JICA Expert in Jomo Kenyatta University of Agriculture & Technology in Kenya where he taught architectural design and theory. In 2011, Sakata established OSA Japan as President to link Japan and Kenya through sharing and exchange of technologies based on his experience and networks to promote community development. He is a member of International Relations Committee of Japan Institute of Architects (JIA), 'Social Habitat Work Programme' of International Union of Architect (UIA), a visiting lecturer of Hosei University Graduate School of Design Technology, Researcher of the Africa Society of Japan and Advisor of OSA Kenya.

**Dick Olango**
Director | OSA Kenya

Holds Bachelor of Engineering from the Department of Architecture of Tokyo Metropolitan University. He gained professional experience working for various firms in Japan, including the Pritzker laureate Shigeru Ban Architects. He established AOAD (ATELIER OLANGO ARCHITECTURE DESIGN), an architectural firm based in Nairobi and Tokyo, and co-founded AAP (Africa Architecture Project), a platform that focuses on improving housing in Kibera slums, Nairobi Kenya. Two of the proposals have been exhibited at Architecture Biennale in Sweden 'Architecture for Necessity' and also nominee for UN Habitat 'Mass housing Competition' . He is a member of CBRE CM SOLUTIONS K.K. and Advisor of OSA Japan.

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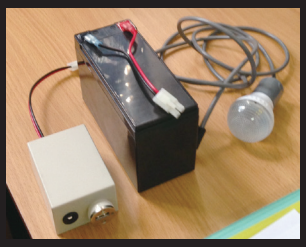
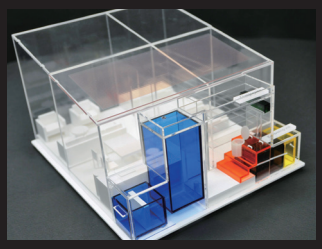


### R-Battery Project

Partner: Environment & Life Technology Inc.

Adopted by JICA BOP Business Feasibility Study Proposal in 2012

Feasibility Study in Kenya to provide electricity to the un-electrified area in Kenya by using "R-Battery", a used battery revived by an electronic renewable technology, as a low-cost container of electricity together with a simple energy unit of LED lamp and Phone Charger developed and produced in Kenya



### Zero-Unit Project

Partner: LIXIL Corporation

"Zero-Unit" is Independent Equipment Unit for living in the area without Infrastructure. Three functions of "Composting", "Water Purifying" and "Electricity Charging" are combined in one unit which can be set independently from houses. "Zero-Unit" is a proposal for Decentralized Independent System of Infrastructure to supersede conventional Network System of Infrastructure.

### Green Toilet System Project

Partner: LIXIL Corporation

Adopted by JICA Proposal for Collaboration Program with the Private Sector for Disseminating Japanese Technology in 2013

The Promotion Project of Ecological Sanitation System (Green Toilet System - GTS- ) for watershed management and improvement hygienic environment in Non-urban areas in Kenya. Beneficiary of GTS; For Governments are cost saving for construction and maintenance cost of water and sewage treatment facilities and For Users are improvement of hygienic situation, cost saving for water rates and increasing income by selling fertilizer.

### Micro Flush Toilet System Project

Partner: LIXIL Corporation

Adopted by JICA Proposal for Collaboration Program with the Private Sector for Disseminating Japanese Technology in 2014

Promotion Project on Micro Flush Toilet System for Watershed Management and Improvement of Water Environment in Urban Areas in Kenya. Development impacts expected through this system are Effective use of water resource, Reduction of sewage treatment cost, Improvement of urban environment and Creation of employment.

# RECENT PROJECTS

## Solar-Sharing Project

Partner: Looop Inc.

**Collaboration with Jomo Kenyatta University of Agriculture & Technology under MOU signed in May 2015**

An experimental project with Looop Inc. and Jomo Kenyatta University of Agriculture & Technology (JKUAT) about "Solar-Sharing", a unique technology to share the solar energy with agriculture activities and the generation of electricity by setting solar panels above the agricultural land. Sunshade made by panels above the agriculture land is to give good effects to some kinds of crops (Tea, Coffee, Potato, Strawberry etc) in the land and the electricity generated is to be used in the land, for example, for water irrigation system or for the electricity supply to the un-electrified area around the land.

## Gettou Project

Partner: Angel World Ltd.

**Collaboration with Meru Herbs under LOI signed in July 2015**

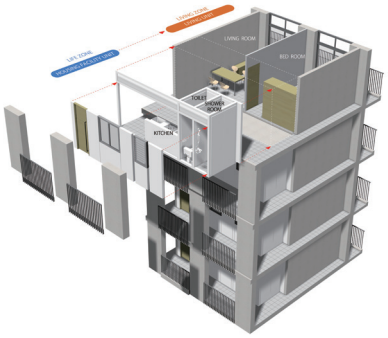
"Gettou" is an aromatic plant that has been actively utilized in Okinawa, the southern island in Japan, for a long time for daily use and in these days for cosmetics and healthy supplements too. Gettou is popular in Kenya as a garden plant but its valuable functions have not been known in the country. "Gettou Project" is aiming to develop Healthy Food/Supplement Products from Gettou in Kenya together with our partner Meru Herbs, a producer, processor and provider of a range of certified organic products.

## L&L House Project

Partner: BRAIN WORKS co., ltd

**Adopted by JICA "Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project"**
**Collaboration with National Construction Authority under MOU signed in September 2017**

"L&L House" consists of "Life" Unit and "Living" Unit. The "Life Unit" is a highly engineered/pre-fabricated system that provides residents with Water/Energy (Electricity and Heating)/Sanitation/Health Care as a vital link to Life. On the other hand, the "Living Unit" consists of a typical/standard space for Living i.e. Dining/Sleeping/Studying/Working etc. "L&L House" as a whole provides the residents with a sustainable/suitable base for Life and Living through the renewable energy system, the water saving system and the most recent ICT and IoT technology etc. This project seeks to develop/design the "L&L House" and also the required Human Resources for construction/dissemination of "L&L House" concept.



## 'Mobile PCR Testing System' Project

Partner company: TSP TAIYO INC.

**Proposal adopted by the United Nations Industrial Development Organization (UNIDO) in 2020**
**Counterpart: Ministry of Health and related medical facilities, Machakos County**

Design and manufacture a trailer-type 'Mobile PCR Testing System' that can be operated in non-electrified areas and is easily transportable, equipped with a photovoltaic module, and conduct demonstration and technology transfer for the prevention of COVID-19 infection remotely in COVID-19 Pandemic in collaboration with the local counterpart (from August 2020 to May 2021).


## Kenya Housing Architecture Project

Partner company: FUJITA Corporation (2019-2022),
OSA sole project (2023-)

**Adopted by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and collaborated with Jomo Kenyatta University of Agriculture and Technology under MOU signed in March 2024**

A project adopted by MLIT consecutively since 2019, which aims to establish a business by 'Design', 'Development', 'Construction Method' and 'Supervision' to realise high value-added housing, based on 'Thick Wall and Floor Structure' with excellent 'Workability', 'Durability' and 'Safety', 'Use of Building Materials' by Recycled Local Waste Soil (Black Cotton Soil) and 'Industry-Academic Collaboration' with Jomo Kenyatta University of Agriculture and Technology.


## 'Solar Farm' Project

Partner: Sustainergy Company

**Collaboration with Jomo Kenyatta University of Agriculture and Technology under MOU signed in September 2023**

A joint demonstration project started in July 2023 with JKUA, which aims to create a 'Solar Farm' encompassing 'Living, Energy and Food' by introducing 'Locally Produced and Llocally Consumed Housing', 'Solar Power Generation Equipment' and 'De-Carbonisation/Carbon-Fixation Farming Methods'. In parallel with the demonstration project with JKUAT, pilot projects of 'Solar Farm' combining 'Solar Power Generation Equipment' and 'Drip Irrigation Equipment' are being promoted to local farmers.