

## PROFILE

Studioazue is a consulting and design company established in 2011 by a team of architects, engineers, agronomists and sociologists with professional experience on International Cooperation sector. Main fields of expertise are waste management, sustainable agriculture, renewable energies, green-design and environment protection.

Projects are performed to be socially equitable, economically sustainable and environmentally balanced being implemented through an interdisciplinary approach, promoting participative process and full adaptability to cultural and geographic contexts.

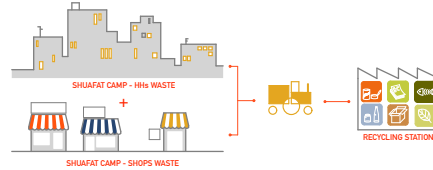
Our team is characterised by a strong commitment to research on informal innovation strategies and to develop “out-of-the-box” solutions for low income communities in urban and rural areas.

Between 2011 and 2015, studioazue has worked to different projects’ themes aiming to sustain transition processes to low carbon societies.

## RELEVANT PROJECTS

### IMPROVEMENT OF ENVIRONMENT AND HYGIENE CONDITIONS OF THE COMMUNITY OF SHUFAT REFUGEE CAMP, JERUSALEM 2016 (ongoing) client: Cesvi NGO

Solid Waste Management strategy and action plan for Shufat Refugee Camp implemented using the participatory approach and an adapted version of the ISWM methodology. The project belong to an EU grant. The planning process is involving the key stakeholders of the camp and UNRWA as the main service provider.



### RES.P.I.R.E - RESILIENCE AND PROTECTION IN A REFUGEE ENVIRONMENT, SHUFAT REFUGEE CAMP, JERUSALEM, 2016 (ongoing)

client: Overseas NGO

The NGO Overseas has commissioned to studioazue, the feasibility study and participatory development of 3 main activities: rehabilitation of the sewage and storm water network of Walaje neighbourhood, the rain harvesting system for the Boys School and the Universal access design for the 3 schools managed by UNRWA in Shufat refugee camp.



### STRENGTHENING THE NATIONAL EARLY RECOVERY AND RECONSTRUCTION OF GAZA: DETAILED DEVELOPMENT PLAN OF AL NADA NEIGHBOURHOOD, GAZA 2016 (ongoing) client: AICS Italian Agency for Development Cooperation

The Italian Agency for Development and Cooperation has commissioned to studioazue in partnership with DAAR ngo , the development of a Detailed Development Plan for the reconstruction of Al Nada Neighborhood. The overall objectives of the assignment is to assess the existing land, shelter,



urban services and economic situation in the area, and to integrate the analysis into a comprehensive Detailed Development Plan for Al Nada ensuring enhancement of environment, governance and equitably serving the vulnerable. The project is under the implementation phase. Will be presented at the Gaza Reconstruction Cities Exhibition in BZU museum 2015-2017.

#### FEASIBILITY STUDY AND PRELIMINARY DESIGN FOR A LOCALLY CONSTRUCTED BIO-GAS DIGESTER IN A REFUGEE ENVIRONMENT SETTING

LEBANON, 2015 (ongoing)

client: UNHCR

Feasibility study and preliminary design of a fermentation digester to treat household organic waste and wastewater sludge for refugees camps in the Beqaa Valley. The aim is to develop a valuable solution to contribute to reduce effluent pollution, get compost, get universal access to modern energy services and get rid of waste. The design will be done after identifying the most appropriate technology for the specific context and built using locally available materials. The feasibility include the potential treatment for the leachate coming from the digester to be use in agriculture as organic fertiliser.



#### JEZZINE CAFE' AL NABEH: REHABILITATION AND ENERGY RETROFIT

LEBANON, 2015

client: OXFAM

Development of an Integrated Conservation Plan of Café El Nabeh building, a XIXth century vernacular house located in the old center of Jezzine Village. The methodology proposed addresses the rehabilitation process on the basis of integrating traditional space into a wider territorial context. It aims at defining spaces which are flexible, due to the need for continual adaptation to changing realities. To this end, studioazue has proposed a mechanisms for the community's active participation in decision-making. A conservative rehabilitation of the building envelope has been proposed and improvements of energy performances have been envisaged through the reactivation of passive solutions.



#### TEMPORARY SOLID WASTE MANAGEMENT FACILITY

LEBANON, 2014

client: OXFAM

The project aims to construct a Sorting and Composting Facility to treat the waste produced by the ITSs in Ghazzeh which hosts more than 3000 people. It has been designed to reduce impact on soil and to be temporary and removable.

The processing space is accommodated in a structure designed assembling shipping ISO containers in order to be easily expandable, removable and reusable after decommissioning. Openings to ensure functional access, natural ventilation and lighting have been designed.

The structural steel frame of containers is preserved to reduce cost of works but the corten envelop has been

cut and readapted to form an interconnected space responding to the facility's operative functions. The basic module used is 1 TEU i.e. a 20 feet container ISO standards (20x8x8,5 ft) or 40 ft. which is the most widespread in international shipping and therefore it has been found at a relative cheap price in the market. The use of second hand containers on one side has reduced the cost of construction on the other has reduced the CO<sub>2</sub> emissions caused by construction operations.



## ECO SUSTAINABLE INTERVENTION TO ENHANCE AGRO-PASTORAL PRODUCTIVITY IN ARID AND SEMI ARID AREAS OF HEBRON DISTRICT

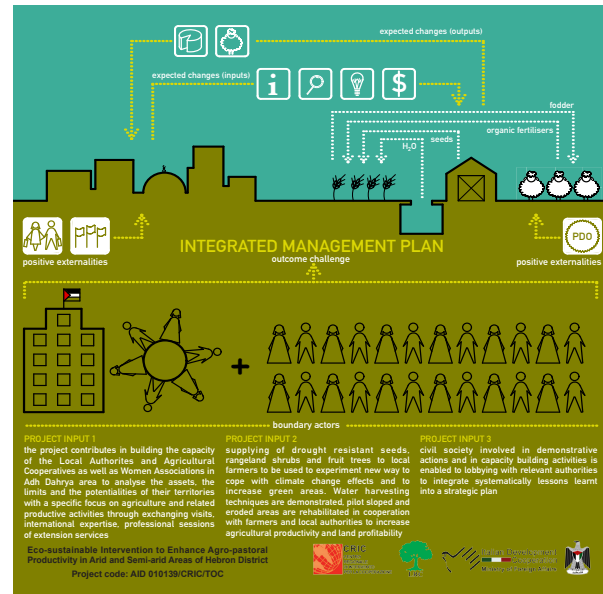
PALESTINE, 2014-2017

client: Land Research Center/CRIC

The project is expected to contribute to increase the resilience of local communities by building the capacities of the local authorities and the agricultural cooperatives as well as woman associations in Adh Dahiryia area to analyse the assets, the limits and the potentialities of their agricultural landscape with a specific focus on agriculture and related productive activities.

Within the project studioazue is elaborating a Landscape Character Assessment in cooperation with competent Public Authorities to identify innovative ways to cope with climate change effects, to preserve

bio- and agro-biodiversity and valorising the landscape as natural and social asset addressing a sustainable economic development of local rural communities. Among the actions planned, a composting collective unit has been piloted using agricultural and agro-industrial residues. During the process Olive Mill Waste Water will be used to moisture the compost.



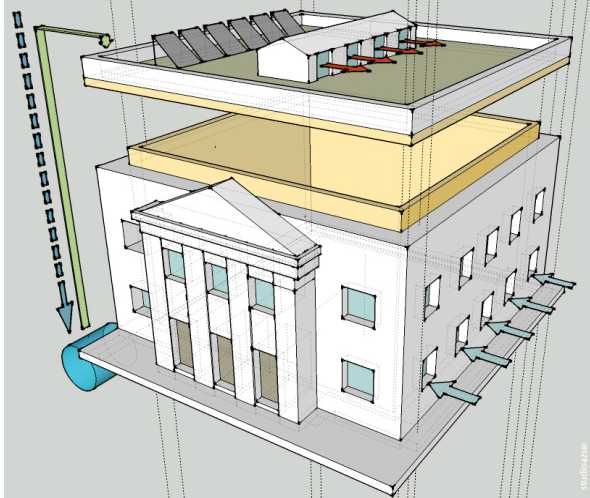
## BAALBEK SERAIL ENERGY RETROFIT

LEBANON, 2011-2014

client: COSV NGO

Baalbek Serail is classified by the Lebanese Ministry of Culture among historical heritage of the Country. Main objective of studioazue intervention has been the achievement of large energy savings through an integrated design approach intervening on passive and active systems.

The energy demand of the building has been reduced by insulating the building envelope and additional clean energy has been provided by installing semi-transparent integrated photovoltaic modules on top-roof skylight (BIPV) and a rain water harvesting system. An optimum level of thermal comfort to the users has been ensured and natural lighting and ventilation needs have been met by proposing innovative solution for windowing and screening systems.

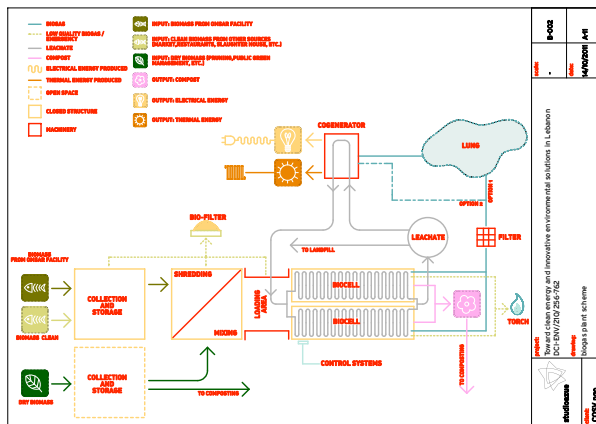


## BAALBEK BIOGAS FACILITY

LEBANON, 2011-2015

client: COSV NGO

Baalbek Biogas Facility is a pilot project funded by EU within ENPI-Med program to widespread clean and innovative environmental technologies in Middle East region.



The facility has been designed to be able to process around 8000 ton per year of municipal bio-waste and produce electricity and heat. The produced electricity is used to run the entire Baalbek Solid Waste Management Compound which include, beside the Biogas Plant, a Sorting and Composting Facility and a Sanitary Landfill, thus allowing the compound to be completely self-sufficient in terms of energy production/consumption.

The digested was conceived to be moisture with the leachate in a innovative treatment system enhancing

the biogas production. After the process digestate will be composted enhancing the benefit of the final fertiliser.



## FERTILIZER COMPOST BASED SUSTAINABLE FACILITY DESIGN, SESA S.P.A WASTE MANAGEMENT PLANT ITALY, 2013 (ongoing)

client: SESA S.p.A.

SESA S.p.A is the main compost producer in Italy with more than 300.000 ton/y of organic waste.

Studioazue is making the design for a new pilot facility for organic fertiliser compost based production for Italy and Middle East Market. The plant will be able to produce 20.000 ton/y of fertiliser.

The production is going to be studied to fit the Middle East Market, the fertiliser will be in pellets, and enriched up the NPK ratio suitable for the main crops in the area. The compost has been studied to be moisture with leachate produced by the Biodigester as a treatment. Leachate from Sanitary Landfill analysis and treatment feasibility has been also conducted.

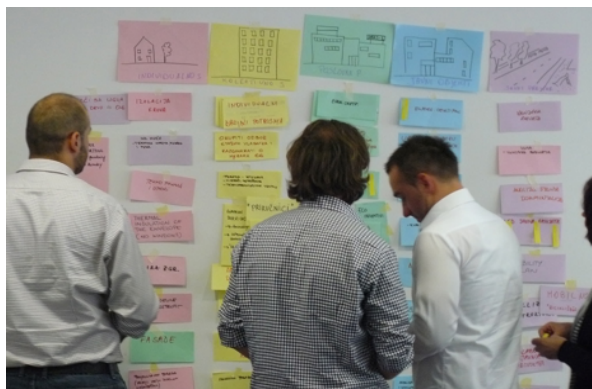


## BiH BOSNIAN INTELLIGENT HOUSING BOSNIA HERZEGOVINA, 2013

**client:** Kallipolis

Studioazue participates to the conference “Improvement of energy efficiency in buildings: exchange of best practices” organised by Associazione Kallipolis in partnership with Gorizia Province, lead partner of Bosnian intelligent Housing project, co funded by Friuli Venezia Giulia Region.

The two days conference consisted on a participative discussion on technical and normative strategies to improve energy efficiency in buildings and on exchanging best practices.



## HABITAT RESOURCE CENTER HUNGARY, 2013

**client:** Habitat for Humanity

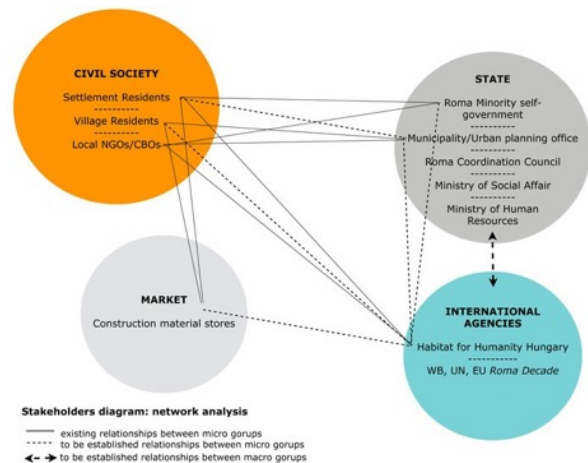
Preliminary survey and community participative planning of Bag Gypsy settlement to identify site specific assets and needs prepared for Habitat for Humanity Hungary

The document has been used by Habitat for Humanity Hungary to develop, in a latter phase, a Local Development Plan designed through a participative exercise/game to stimulate community building and planning and to adjust the Habitat Resource Center project to site specific needs and assets.

The preliminary survey has been prepared through the elaboration of data collected from primary and secondary sources, an analysis of stakeholders and their power and the identification of the settlement assets.

Identifying key stakeholders is crucial in understanding the urban development process, to determine interests, conflicts, relations between actors as well as determining the appropriate forms necessary for stakeholder participation. Meetings have been

conducted with different actors involved in issues concerning Bag Roma settlement. The objective of the meetings was to not only understand the role of some of the actors but also to understand the context of the situation from the different view points of the actors. Stakeholders have been then mapped in a chart of relative level of interests and relative level of influence, to easily identify who stands to lose or gain significantly from the project and whose actions could potentially affect the project's outcome.



A digital base map has been prepared as first step to proceed to secure the land tenure status of the local community. Final recommendations have been formulated on the base of findings and best practices: a) suggestions on appropriate steps to secure the land tenure; b) an overview on effective community participation tools to stimulate project ownership by the Community; c) identification of basic infrastructure to be rehabilitated; d) elaboration of an housing micro-finance scheme to enable the householders to reach adequate and sustainable housing standards.

## COMMUNITY COMPOSTING FACILITIES WITH ECO DESIGN (GAZA STRIP AND VIETNAM) 2011/12 and 2013

**clients:** Gaza/CRIC ngo, Vietnam/GVC ngo

An important component in practicing sustainable agriculture and promoting agro-biodiversity it's the exploitation of good quality organic fertilisers produced by duly processing agricultural, agro industrial, zootechnical residues and municipal solid waste.



Studioazue has designed and constructed few facilities to produce and commercialise organic fertilisers compost based. The main idea is to produce not only a soil conditioner but a proper organic fertiliser featured to supply the nutrients demand.

Each project has been planned and execute to fit with the peculiar environmental context using the appropriate technologies, to serve local crops varieties and make use of available residuals. The structures hosting the facility have been designed using local construction materials emphasising and reinterpreting informal technologies and strategies already in use in the areas.



Each project has been implemented through a participatory approach based on stakeholders and actors network analysis.

In the Gaza Strip a simple green roofing system has been executed using a double layered structure with steel profiles recycled by existing greenhouses dismantled. The green roof has increased the level of comfort of workers. The collection of raw material for the facility has been operated through a system of donkey carts managed by marginal and vulnerable people selected and duly trained within project activities.



In Vietnam a composting facility processing around 800 t/y of palletised compost based organic fertiliser has been implemented. A bamboo hangar has been designed and constructed developing a particular technological detail to maximise the span of the trusses using relatively short bamboo canes. In the framework of the project 150 biogas fix dome have been delivered.



#### **GREEN UP (WORLDWIDE) 2011**

Green up is an outdoor wooden modular system for greening rooftop terraces. The model has been design to be versatile thus allowing the design of hanging gardens suitable to match different environmental and climatic conditions. It can be composed to respond to multiple functions: depending on the requirements, the overlapping modules become planting units, paving elements, energy supplying PV panels , lighting spots and sitting areas.



Thanks to its modular concept the system can be adapted to fit any specific buildings structural condition and clients' request. Green up is an effective way to reduce the energy demand of buildings, to improve air quality and biodiversity in urban context

## MONITORING AND EVALUATION

### WASTE WATER TREATMENT AND WATER REUSE FOR IRRIGATION

PALESTINE, 2015

client: GVC ngo

Final evaluation on the EU 3 years funded project about 2 Waste Water Treatment plant using Constructed Wetland in 2 villages of North West Bank. The treated water has been used for irrigation purposes.

Main objective of the evaluation has been to assess the extend to which the project succeeded to influence behavioural changes and perception toward the use of treated water for agricultural purposes.

### INTEGRATED WASTE MANAGEMENT ECUADOR, 2012

client: COSV ngo

Final evaluation on the EU funded project for the waste sorting at source collection system with the construction of a sanitary landfill and sorting and composting facility in Marcabeli district, serving the municipality of Marcabeli and Balsas. The plant is treating 400 ton/year of MSW, with a rate of source sorting of 90%.

## PRIZES AND AWARDS



### INCREdIBOL! AWARD 2013

**Incredibol!** -(Bologna's Creative Innovation) is a project promoted by the Municipality of Bologna and the Emilia-Romagna Region, in order to support the creative and innovative professions in the cultural field, in particular during their start-up phase.

**Incredibol!** has been selected to represent Italy for the 2013 edition of the European Enterprises Promotion Awards in the "Improving the business environment" category. The European Enterprise Promotion Awards aim to recognise innovation and reward the success of public bodies and public-private partnerships in promoting enterprise and entrepreneurship at a national, regional and local level.



### CLIMATE KIC AWARD EUROPEAN NETWORK OF INNOVATORS - 2013/2014 and 2015/2016

Tackling climate change is a tough task, there is no magic bullet. It requires action from a broad range of actors to implement the social and technological changes needed to meet Europe's emission reduction targets. Addressing these challenges requires pioneers who are multi-skilled, able to combine technical specialisms with social understanding and entrepreneurial spirit. Studioazue is participating as host organisation to Pioneers into Practice 2013 and 2014 coordinated by ASTER Emilia Romagna. The focus of the placement of 2014 session has been about participative planning in a rural development project in Palestine.

## SERVICES

Our design approach is characterised by a strong commitment on developing catalysing ideas and "out-

of-the-box” solutions looking at the extraordinary resourcefulness of informality as key creative solution to critical conditions: the capacity to absorb, recycle, supply essential services, build solidarity networks, increase the resilience level of vulnerable people and finally to convert a need into an opportunity. Our sectors of expertise are urbanism, architecture, energy, waste and agroecology. The services offered cover the whole Project Cycle Management: assessment, writing design/management, monitoring and evaluation

## CLIENTS

Cesvi  
UNHCR  
OXFAM  
LRC Land and Housing Research Center  
CRIC  
Ars Progetti spa  
COSV  
GVC  
SESA spa  
Habitat for Humanity  
Kallipolis  
CIC - Italian Composting Association  
DAAR  
AICS - Italian Agency for Development Cooperation  
CODE<sup>3</sup> Bologna University  
Overseas

## STUDIOAZUE TEAM

### Valentina Resente - President - Urban planning unit

Master degree on Architecture and Urban Planning at University of Architecture of Venice (IUAV, 2003) and post-grad Master degree on Urban Development and Reconstruction (IUAV, 2005). In the last 10 year I've worked in post-emergency humanitarian response and development programs, as technical advisor and project coordinator. Since 2008 I'm practising on the topic of urban development and post-emergency reconstruction in the Middle East Region (Lebanon 2008-2014, Jordan 2010, Kurdistan 2013-2014, Palestine 2014-2015). Proven knowledge on community planning methodologies, on practical

application of participative methodologies to design and planning processes.

### Federico De Nardo - Head of the Environmental protection and Waste management unit

Tropical and Subtropical Agricultural Engineer graduated from Florence University (2003 Italy). I have worked in Italy in several composting and waste treatment facilities and abroad. I did my thesis on sustainable agriculture in Somalia and in Niger following the Monitoring and Evaluation of P.I.K., a 20 year integrate project. Then I have followed several projects on waste management in small and medium scale sorting and composting facilities in Ecuador, Lebanon, Palestine and Vietnam. In Lebanon I'm currently following a project on the first pilot application of the Anaerobic Digestion using Dry technology in Batch. PhD in Environmental Engineering at Brescia University focused on appropriate methodologies and techniques in international development cooperation projects

### Marta Domini - Waste Water treatment unit

MSc Environmental engineer graduated from Politecnico of Turin. I'm doing my PhD in "Appropriate methods and techniques for international development cooperation", at the CeTamb LAB research laboratory, department of Civil Engineering, Architecture, Environment and Mathematics. The PhD research is in collaboration with the WASH project of the NGO ACRA CCS, in Iringa, Tanzania, for the development of an improved sanitation system in peri-urban areas of the city: assessment of current situation, technical support in developing an improved sanitation system, latrine and treatment plant design, environmental monitoring, with missions in place. I have experience on working in Africa in Madagascar and Egypt in the WASH sector since 2006 with NGOs. I have following several courses in EPFL (École Polytechnique Fédérale, Lausanne), Switzerland on drinking water and sanitation.

### Sara Bellavita - Structure and civil works unit

Civil Engineer graduated from Bologna University (Italy). A second level Master Degree in urban structure rehabilitation and urban regeneration at Bologna University. I have worked in Togo on the design of a sanitary Landfill and I'm currently working in Lebanon implementing a pilot Waste Management

facility in standard ISO containers for ITSs Syrian Refugees

**Tommaso Ferrari - Environmental protection and Waste management unit**

MSc in Environmental engineering at Padova University. Qualified for waste management, and biogas production. I gain my experience in Italy as Landfill monitoring and quality control. In Guinea Bissau were I designed a biogas pilot production facility and in Nicaragua designing a sorting and composting facility and a system of MSW source sorting collection at household level, on a project funded by the EU. I'm the Academic tutor with University of Padova in the program "Engineering from Africa".

**Marco Grazia - Monitoring and Evaluation Unit**

Bachelor in Philosophy, Master in "International Cooperation in Education" at University of Bologna. Qualified in participatory monitoring and evaluation of complex initiatives using traditional (Logical Frame Approach, Results Based Management) and new methodologies (Outcome Mapping, Outcome Harvesting, Most Significant Changes, Theory of Change), expert on Children Rights (primary education, education in emergencies, ECCD, Non Formal and alternative education, inclusive education), social inclusion (community mobilisation, CSOs networking), Emergency preparedness and Response. I developed my professional experience as education and participatory approach specialist, working 8 years in Middle East (long term in Palestinian Territories, field visits to Lebanon, Jordan, Morocco, Saudi Arabia, Egypt), and 2 years in Africa.

**Claudia Prestia - Sustainable buildings unit**

Civil Engineer specialist in structure and sustainable buildings, I have worked on design bio climatic houses in tropical and mediterranean environment. I was working for 3 months in studio4S in structure design rendering and sustainable buildings in Bologna. I'm currently working for the pilot Waste Management facility built on standard ISO containers in Lebanon for ITSs Syrian Refugees

**Cecilia Tinonin - Data analysis unit**

PhD in Statistical Sciences, master degree in Political Sciences at Bologna Alma Mater Studiorum

University. Qualified experience on coordinating, monitoring, managing and supervising Baseline Survey and CAPI primary data collection.

Experience in researching on multidimensional poverty measurement both at the theoretical and empirical level. Professional practice on tutoring in Microeconomics as well as in International Development Economics .

**Hassan Muamer - Head of the Palestinian branch Environmental protection and Waste management unit**

Degree in Civil Engineering from October 6 University in Cairo, Egypt graduated in 2009. I gained knowledge and experience in working on landscape conservation and management plan in Palestine and also through intensive MSc courses on environmental studies and GIS, I have worked with UNESCO on landscape research and preparing dossiers for world heritage committees. In the past three years I have been working on leading environmental advocates and Solid Waste Management in West Bank and following up several related projects, including leachate treatment studies.

legal office: **studioazue**  
informal urbanism and bioecology  
via vinazzetti, 9 40126  
bologna - italy  
local office: Youth Centre, Shufat Refugee Camp, -  
Jerusalem, occupied Palestinian territories  
e-mail: [mail@studioazue.eu](mailto:mail@studioazue.eu);  
web: [www.studioazue.eu](http://www.studioazue.eu)