

**BROCHURE
ECO – BIO - GREEN**

SYNERGIC GREEN DESIGN

**BIO – ECOLOGICAL &
HOLISTIC ARCHITECTURE**

INTEGRATE SOUL TO IDEAS





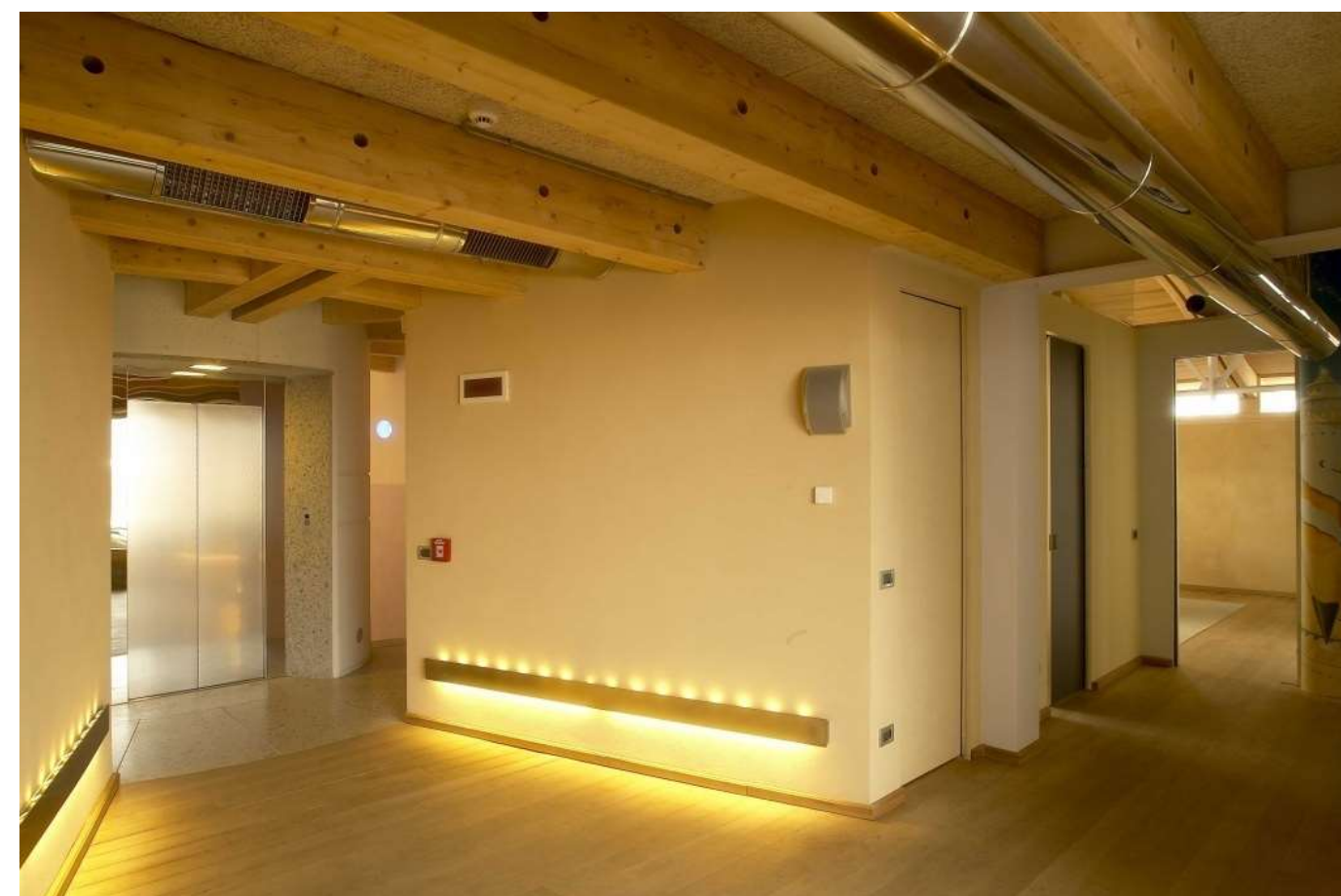
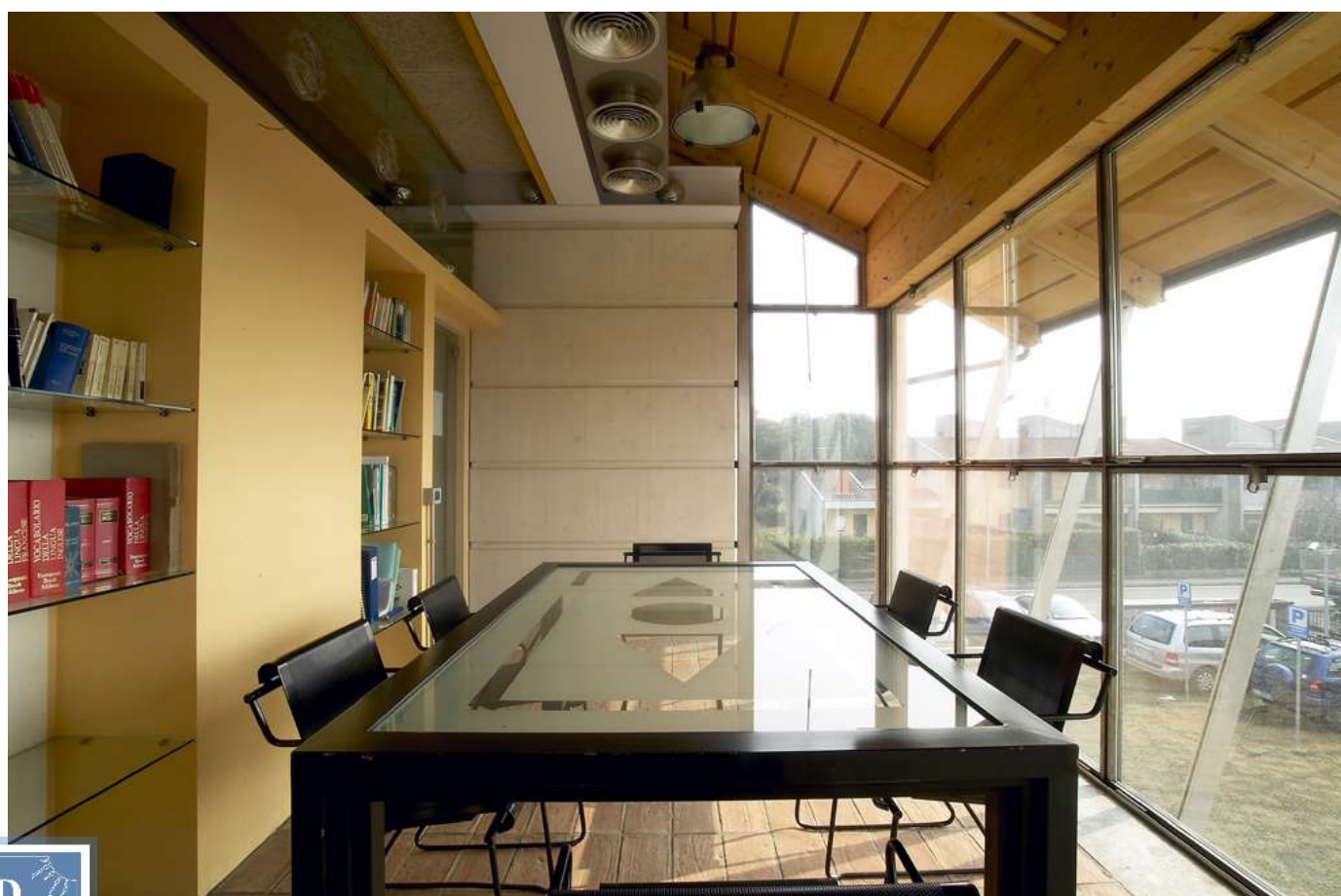
BIOECOLOGICAL ARCHITECTURE

2

BIOECOLOGICAL ARCHITECTURE **DESIGNS AND REALIZATIONS**

1. **TECNOMA S.R.L. HEADQUARTER BREMBATE BG**
Architectural working plan, art direction and interior design for new service-sector facilities (1,000 square metres).
2. **NEW LIBRARY AND CIVIC CENTER - CITY of ARESE**
design and construction of civil engineering works, project and realization electrical and mechanical systems, technical spaces and distribution layout, architectural design and practices with authorities, interior design, supply and construction furnishings and interior finishes.
3. **SWIMMING POOL - SPA - GYM - CITY OF LAINATE**
Executive design of new municipal swimming pool with spa and gym. Construction of civil engineering works, project and realization electrical and mechanical systems, technical spaces and distribution layout, architectural design and practices with authorities, interior design, supply and construction furnishings and interior finishes.
4. **MUNICIPAL MULTI-PURPOSE GYM PROJECT - TREVIGLIO (BG) ITALY**
architectural design and general supervisor
5. **ECO-BIO- VILLA – SUISIO – BG BIO ECOLOGICAL PRECAST SYSTEM -**
design and construction of civil engineering works for villa. Project with wooden structure and realization electrical and mechanical systems, technical spaces and distribution layout, architectural design and practices with authorities, interior design, interior finishes. Realization in record time 3 months from the start of the works to the use of the customers
6. **ECO-BIO- VILLA – COMO**
design and construction of civil engineering works for villa. Project with wooden structure and realization electrical and mechanical systems, technical spaces and distribution layout, architectural design and practices with authorities, interior design, interior finishes.
Master Plan review of frond N and architectural project of super luxury villas (2000-5000 sq m)
7. **RESIDENTIAL COMPLEX VERDEBIO – VERDERIO MB**
residential neighborhood WITH one and two-family villas designed according to bio architecture. Use of natural materials, attention to the orientation and end user comfort, energy-efficiency.
8. **MADRE PROJECT MALDIVES - MALDIVES**
Concept, master plan and feasibility study for a new accommodation model based on energy self-sufficiency and zero km food production with low environmental impact
9. **CLINIC FOR THE ELDERLY AND RESIDENTIAL DISTRICT “SENIOR VILLAGE”**
DESENZANO BS
Master plan and executive architectural design

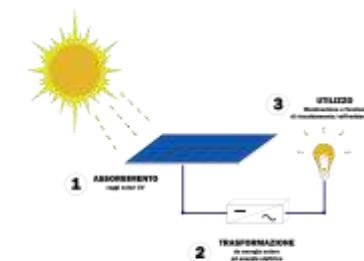








SCHEMA SISTEMA FOTOVOLTAICO



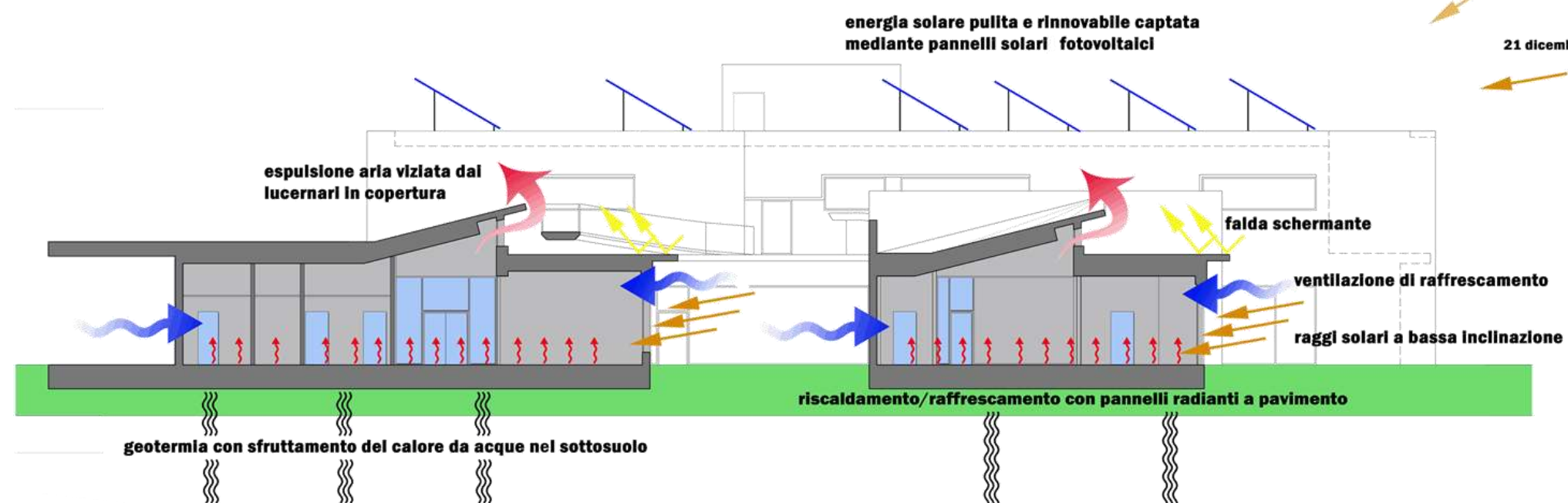
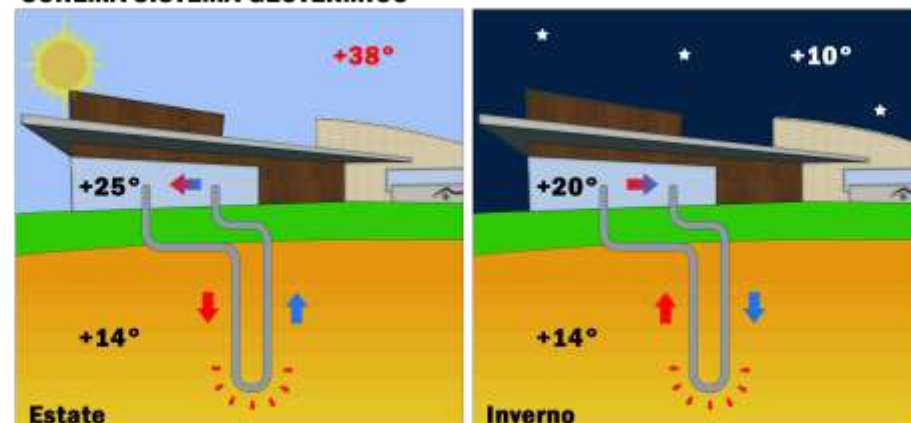
SCHEMA CAMINO SOLARE

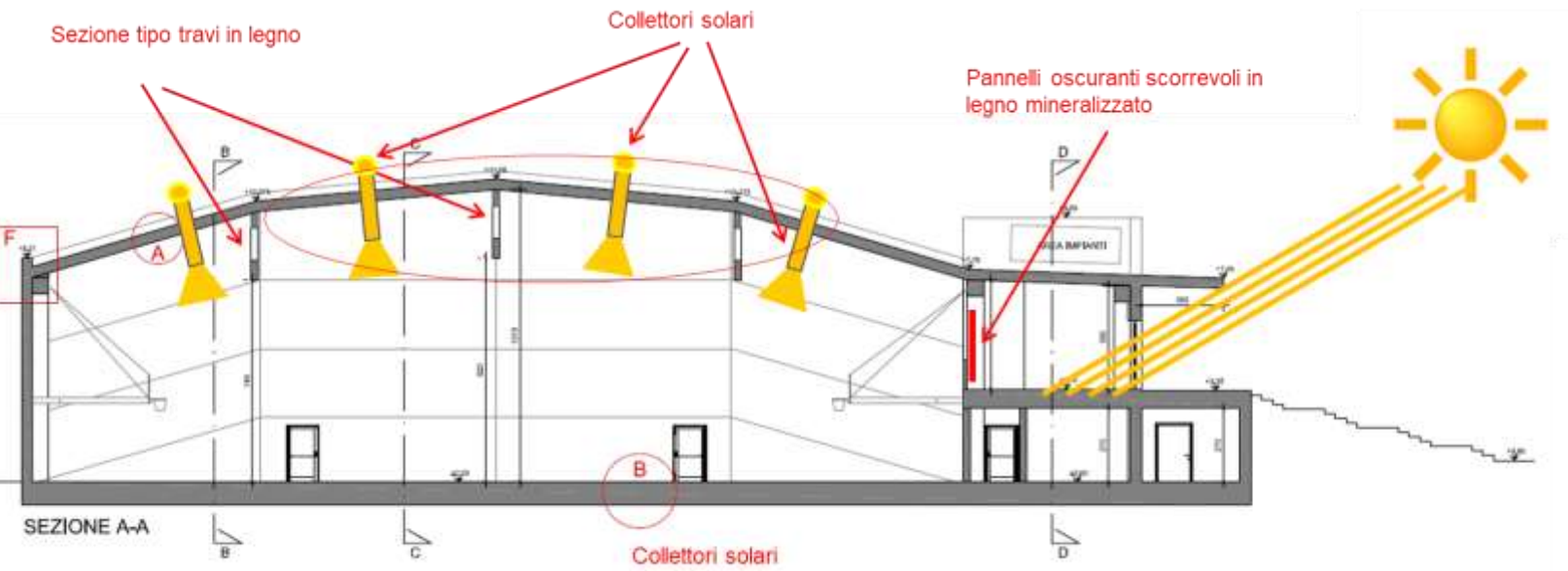
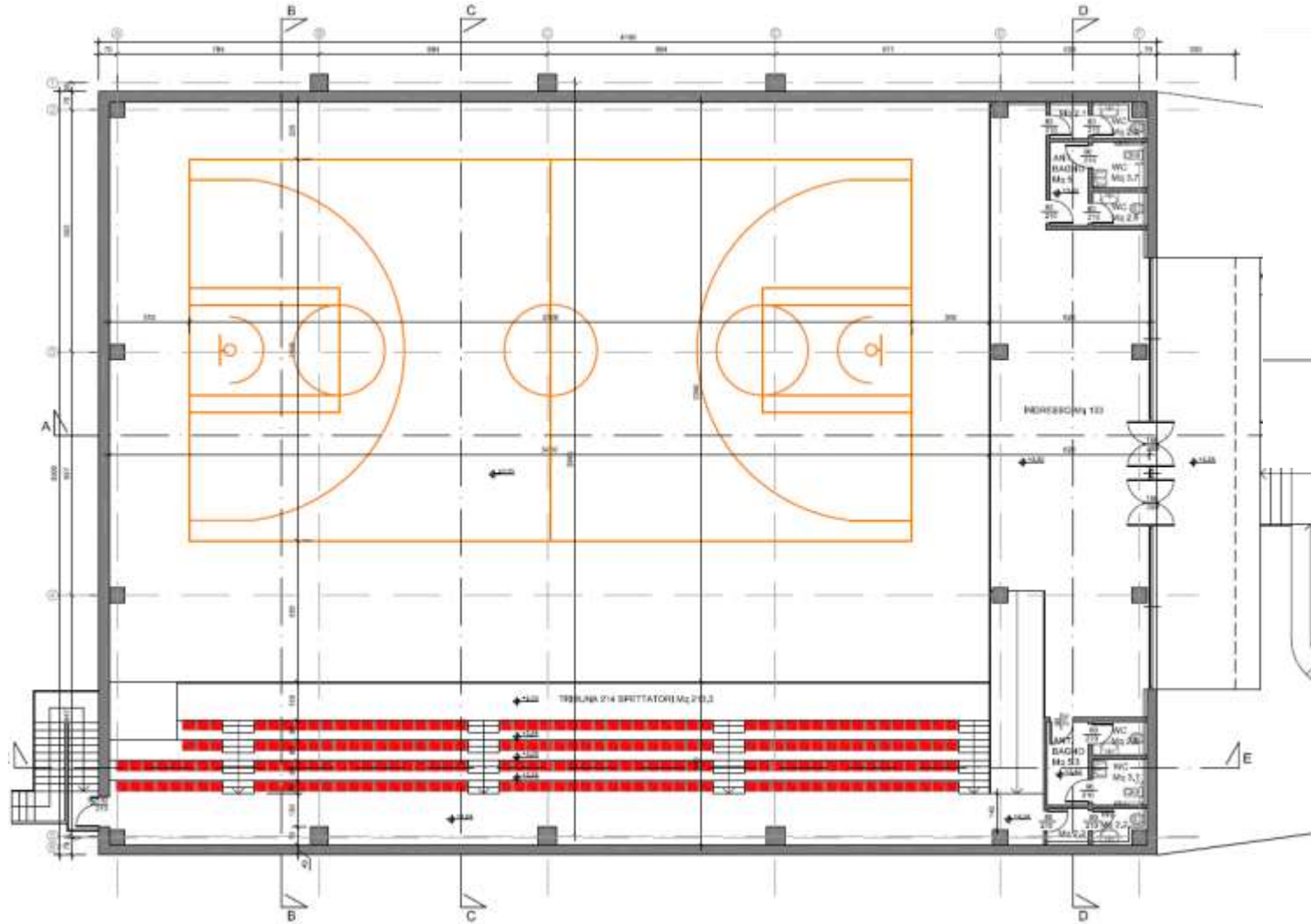


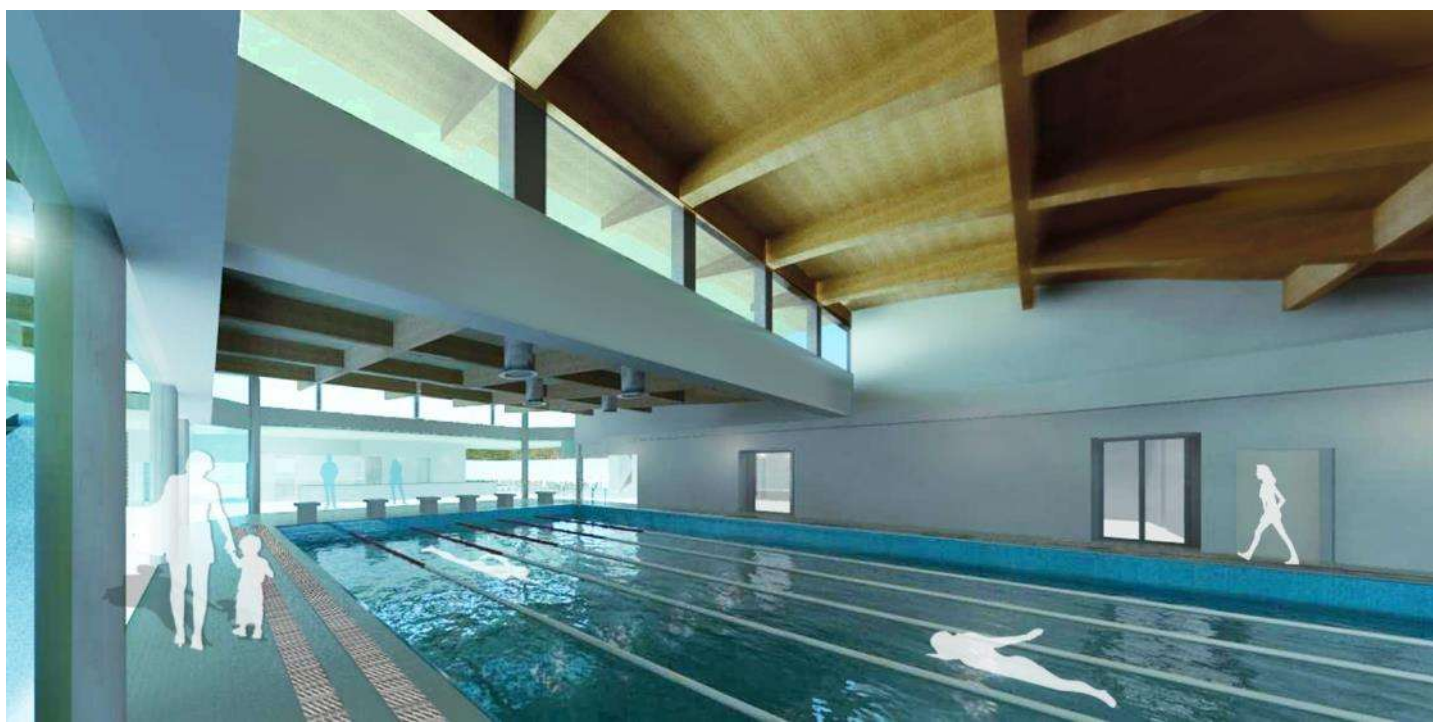
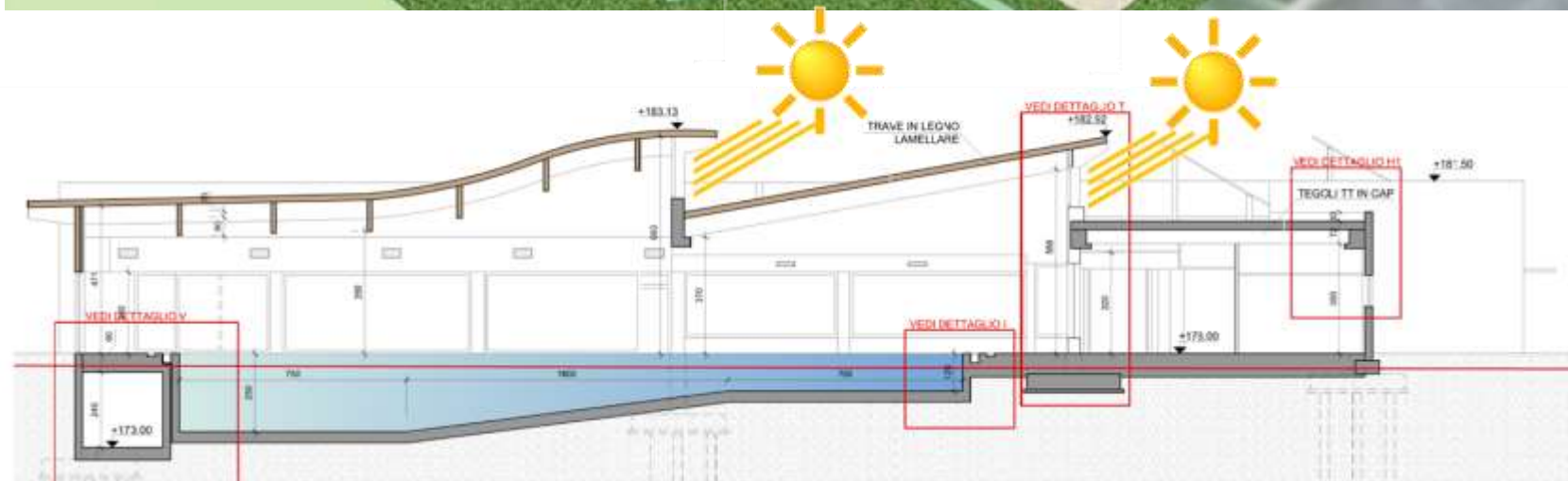
SCHEMA RECUPERO ACQUE PIOVANE



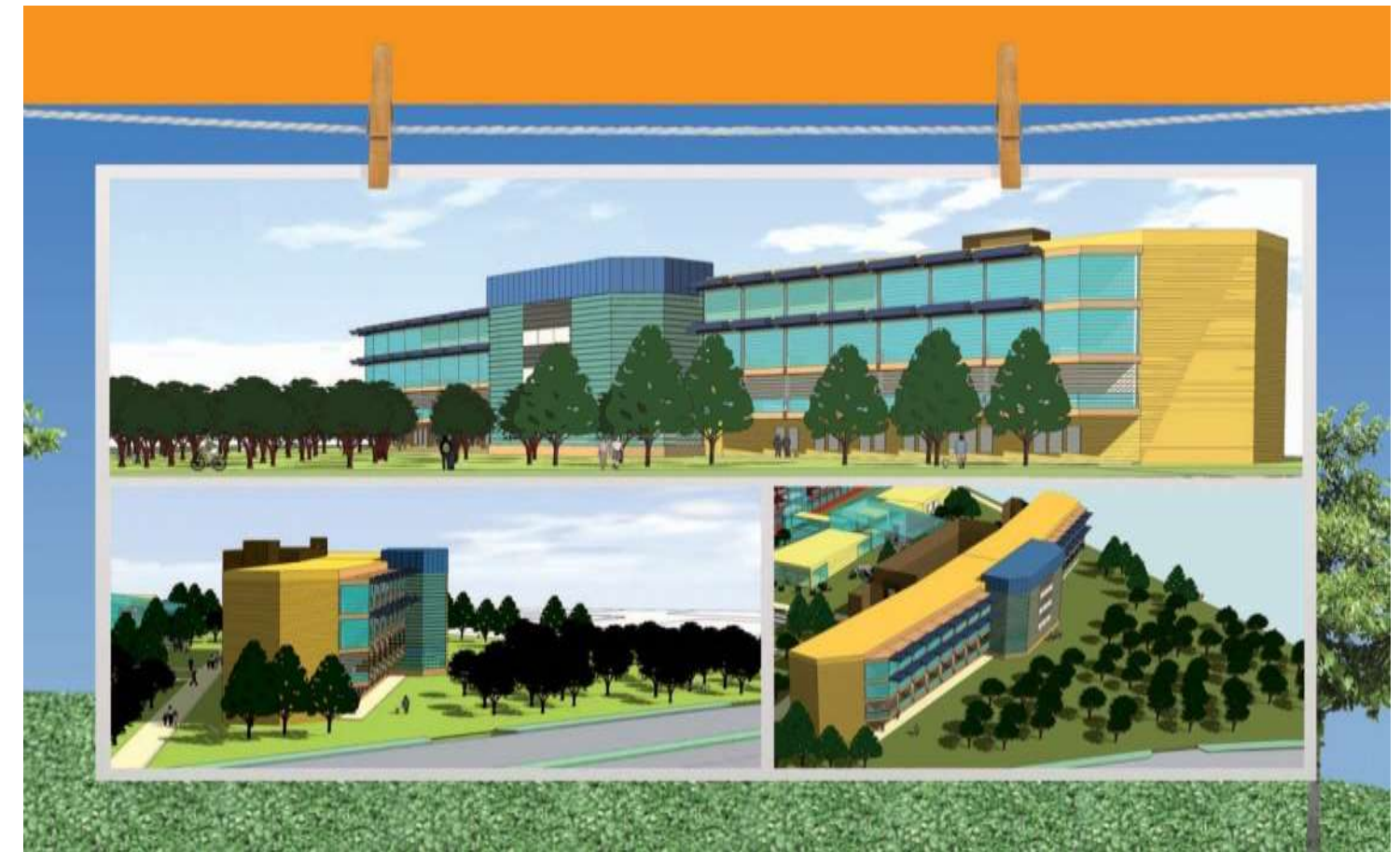
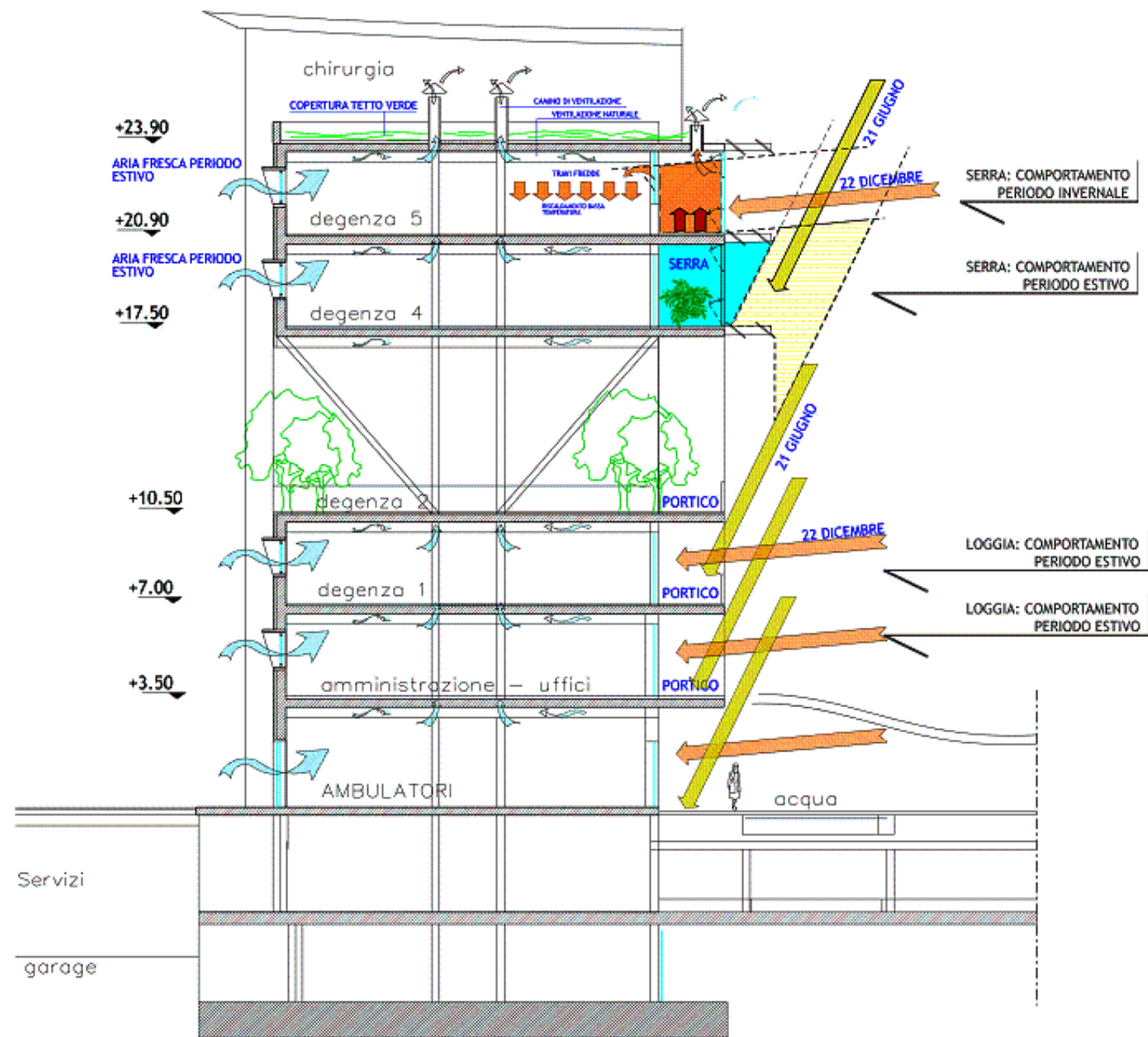
SCHEMA SISTEMA GEOTERMICO





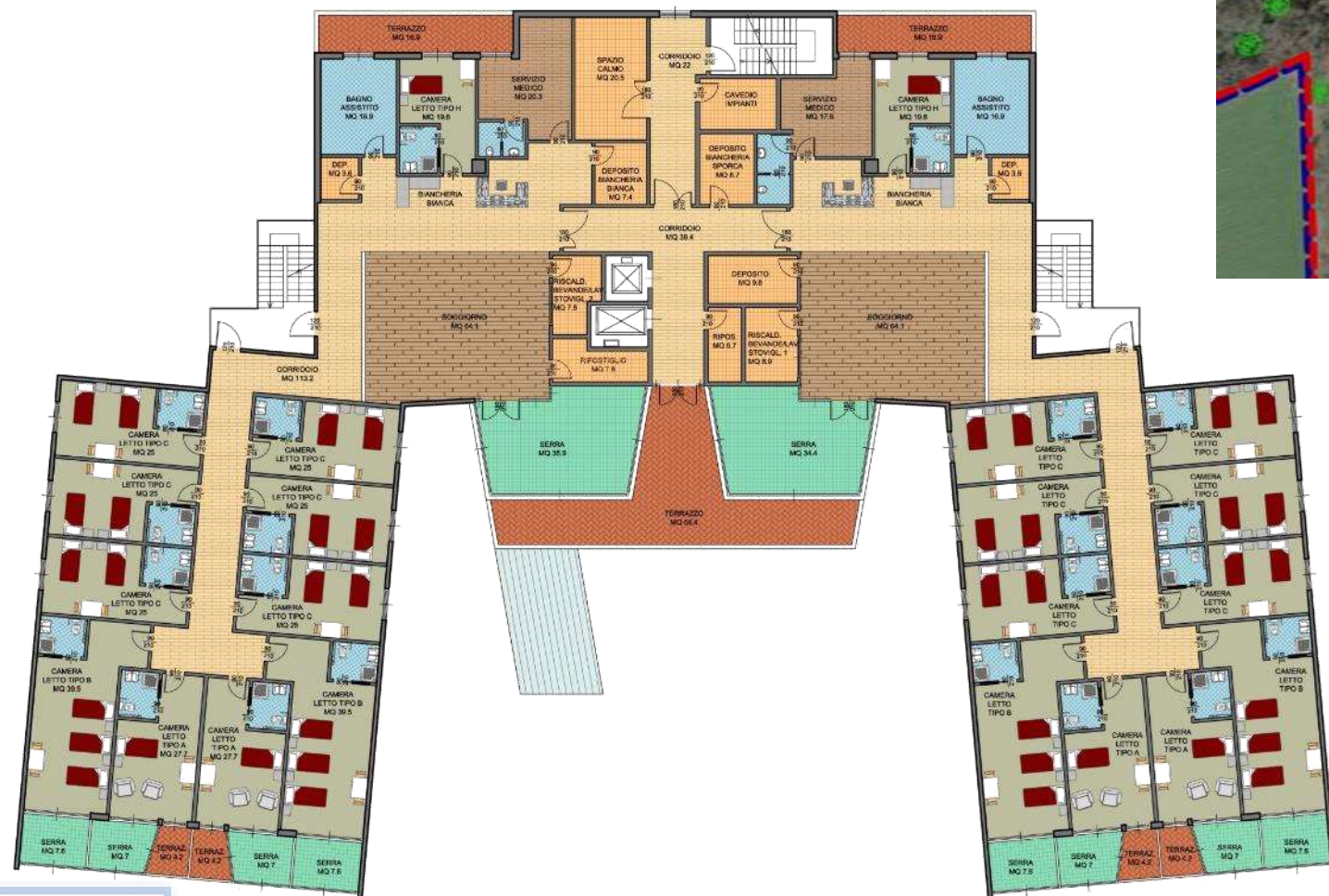








PERSPECTIVE VIEWS















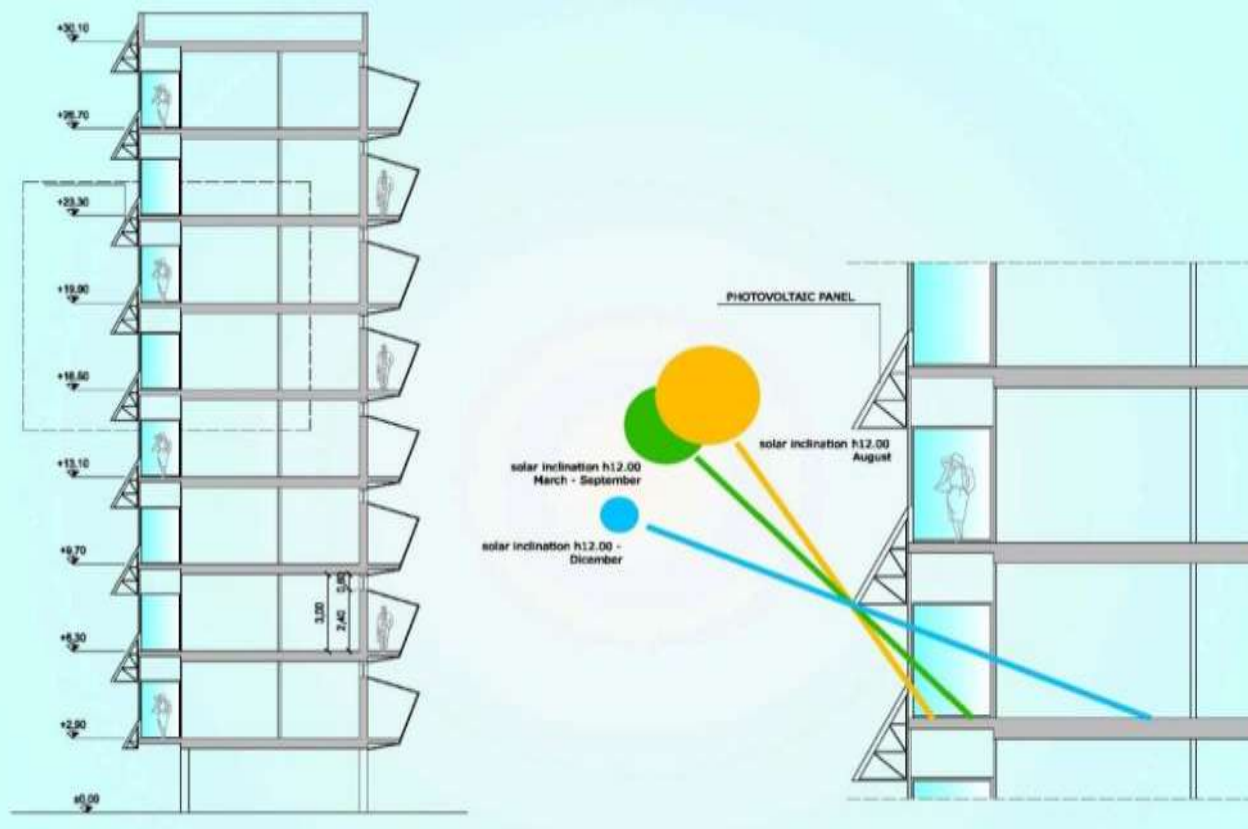
SOUTH - WEST VIEW

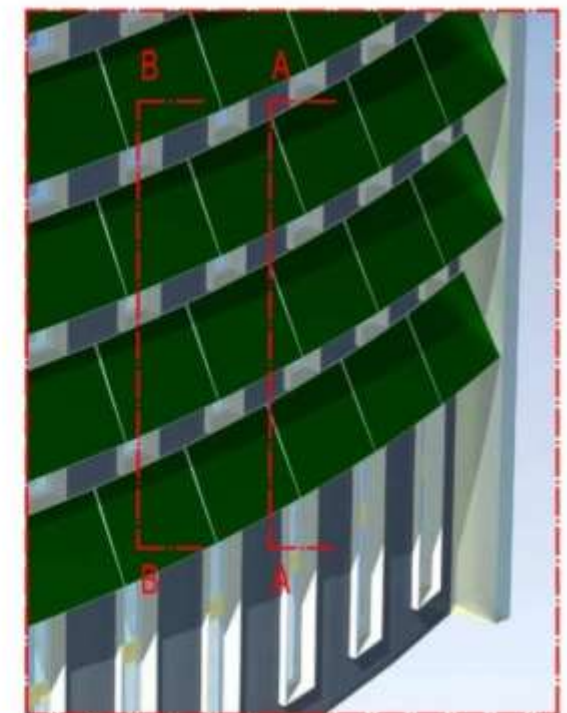
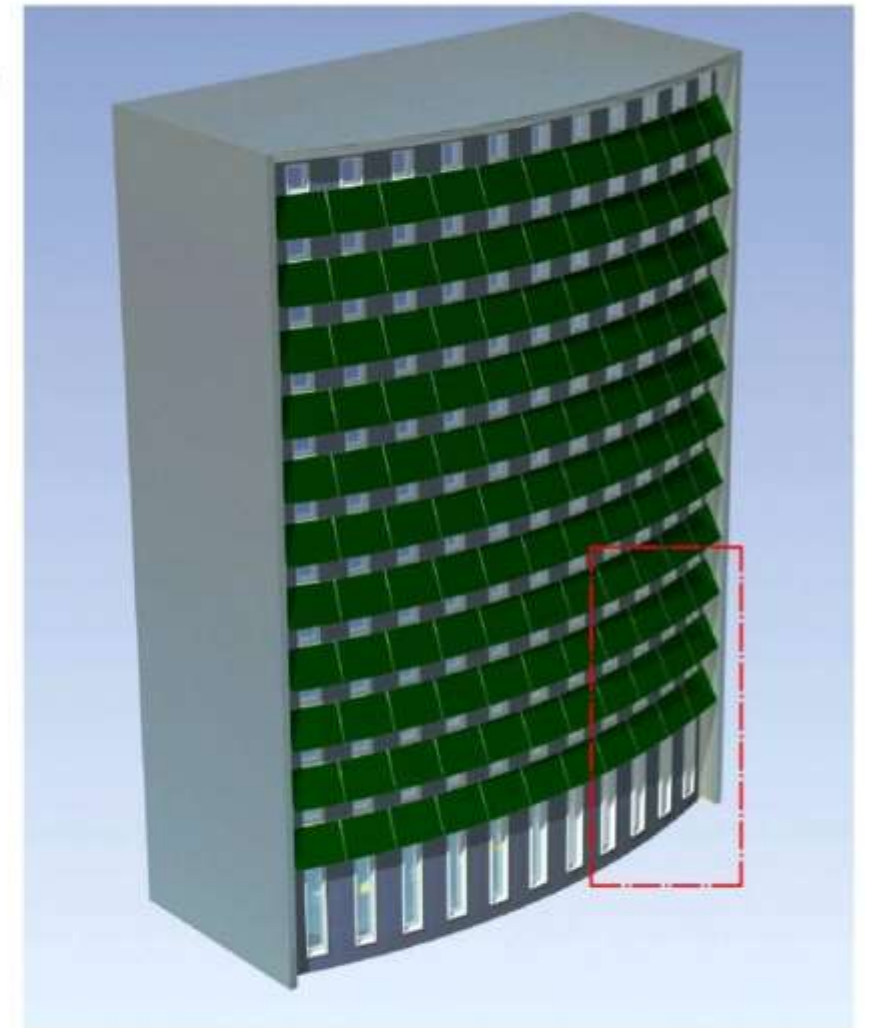
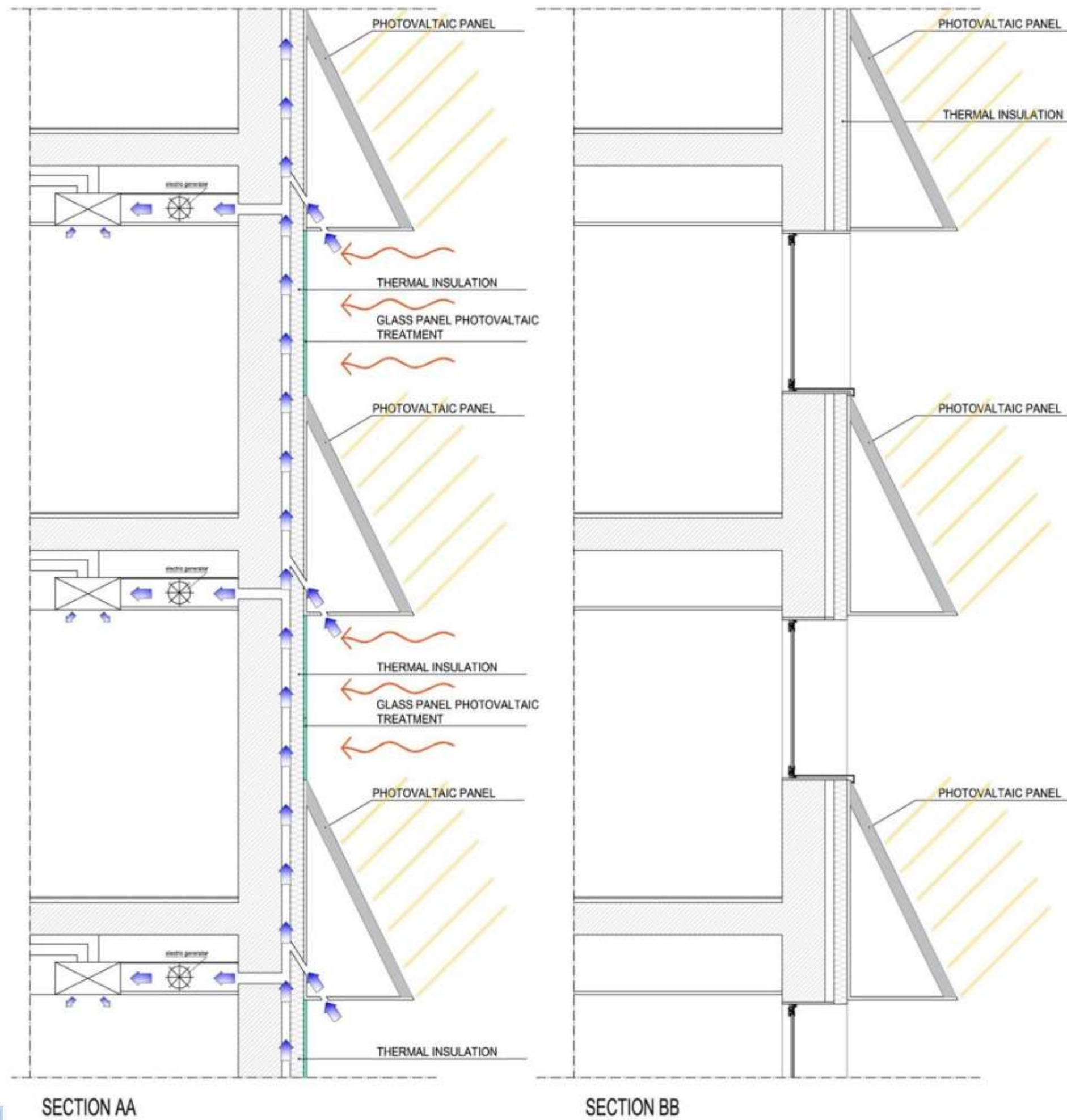


NORTH - EAST VIEW



WEST VIEW



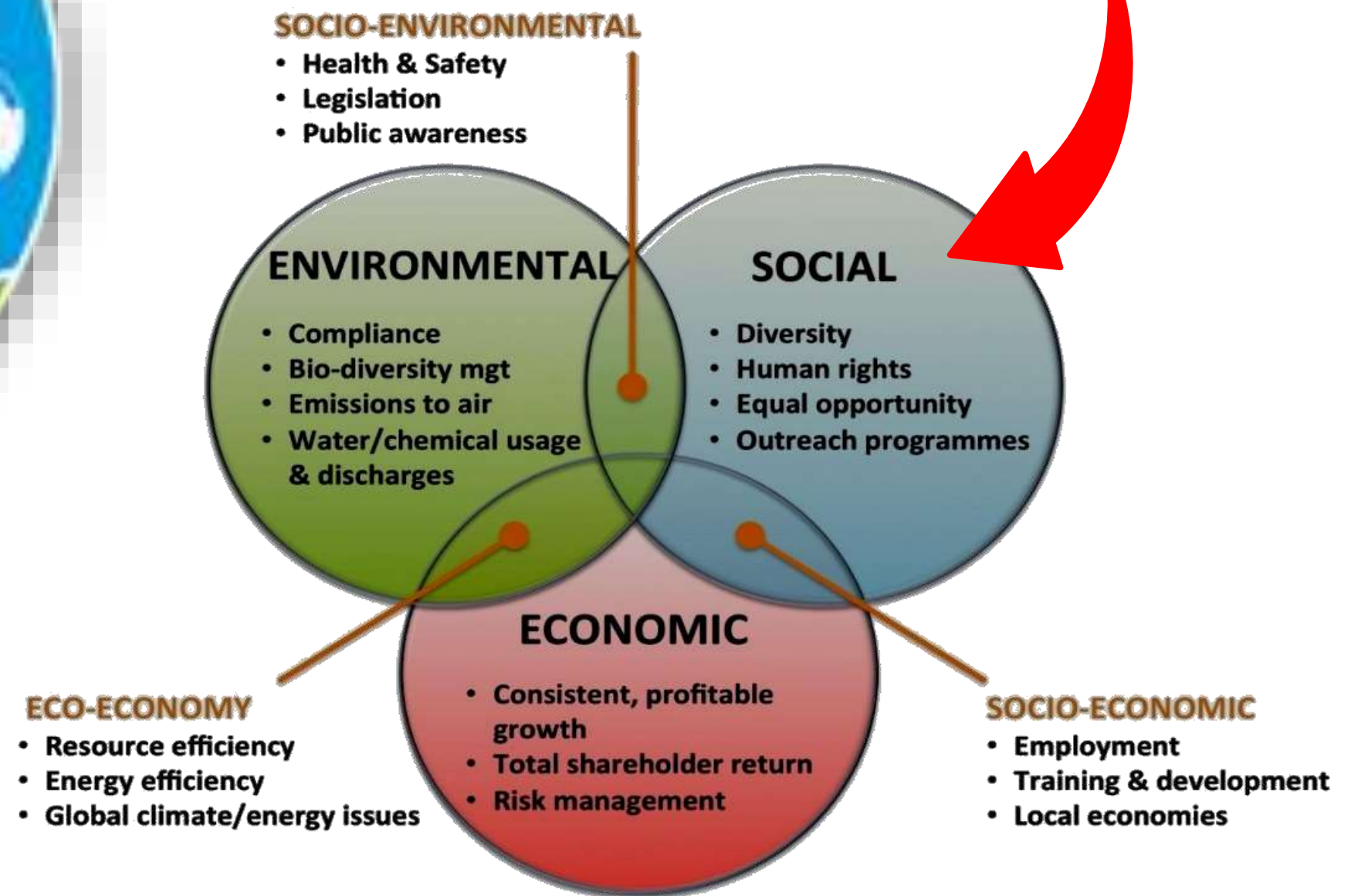
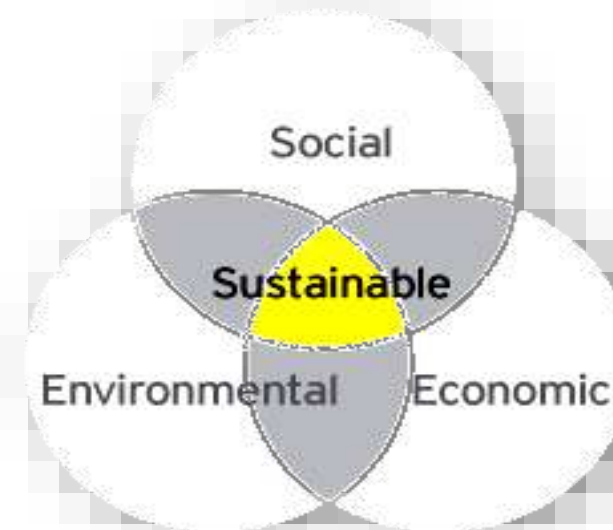




ROTATING BED

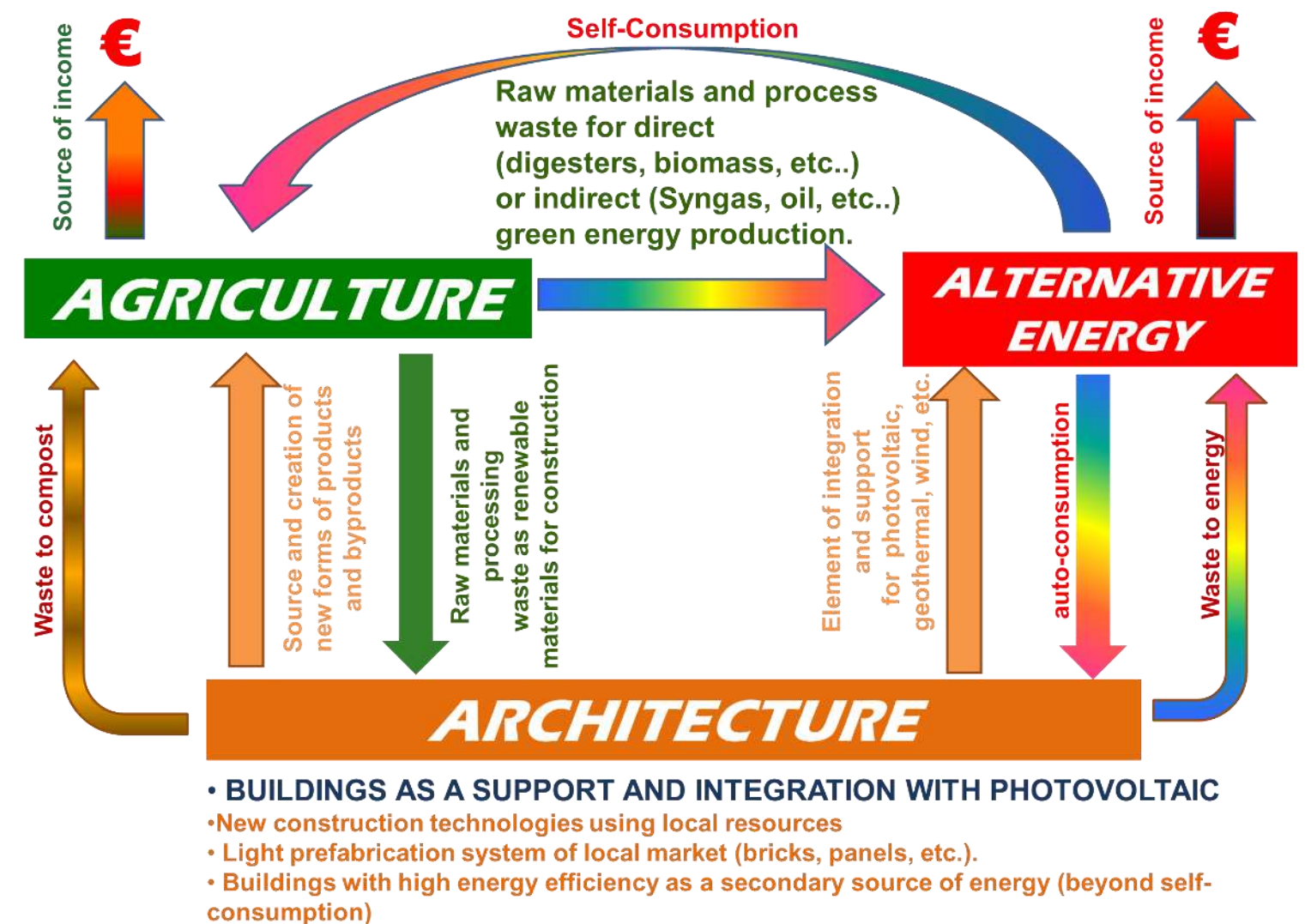
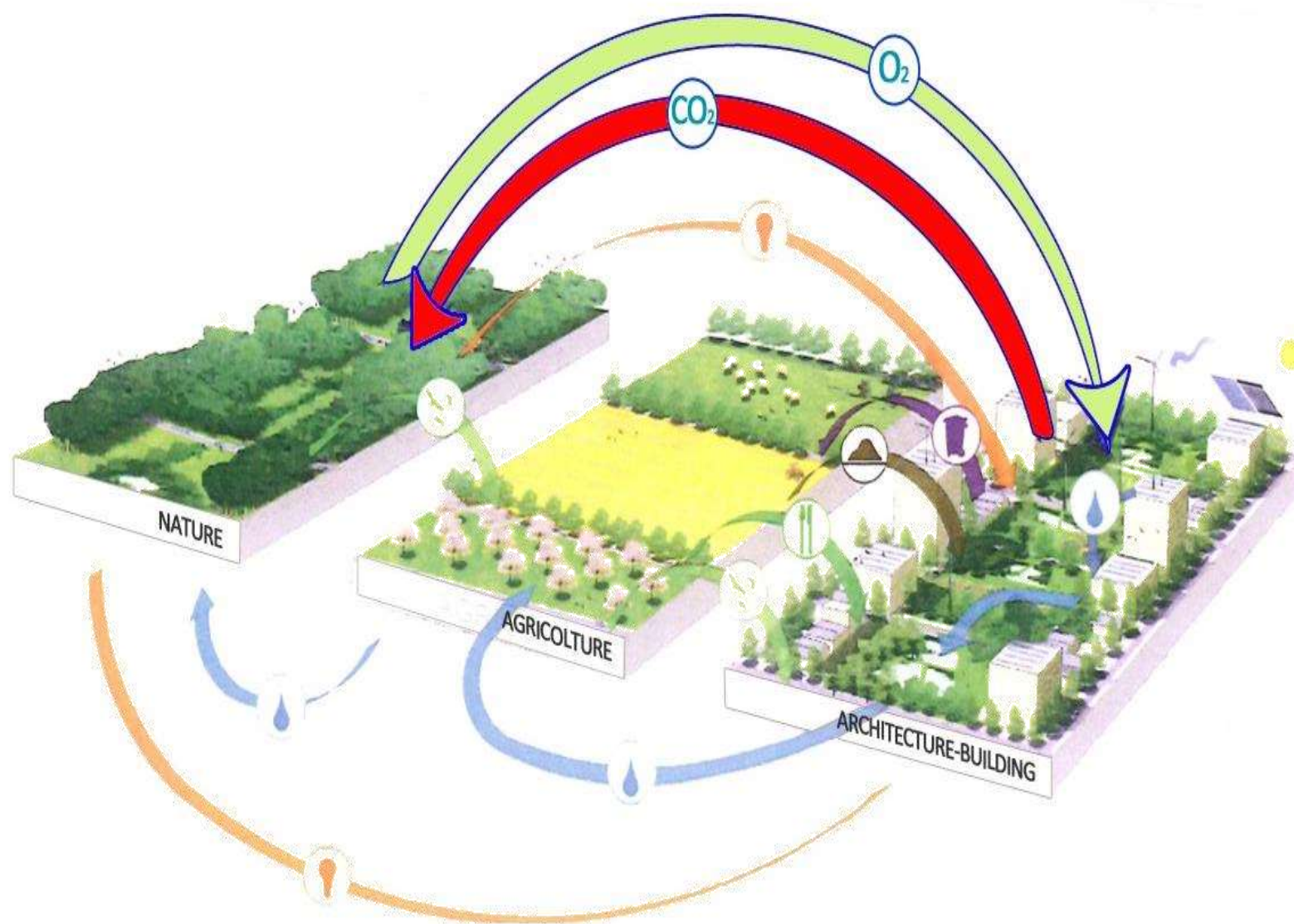


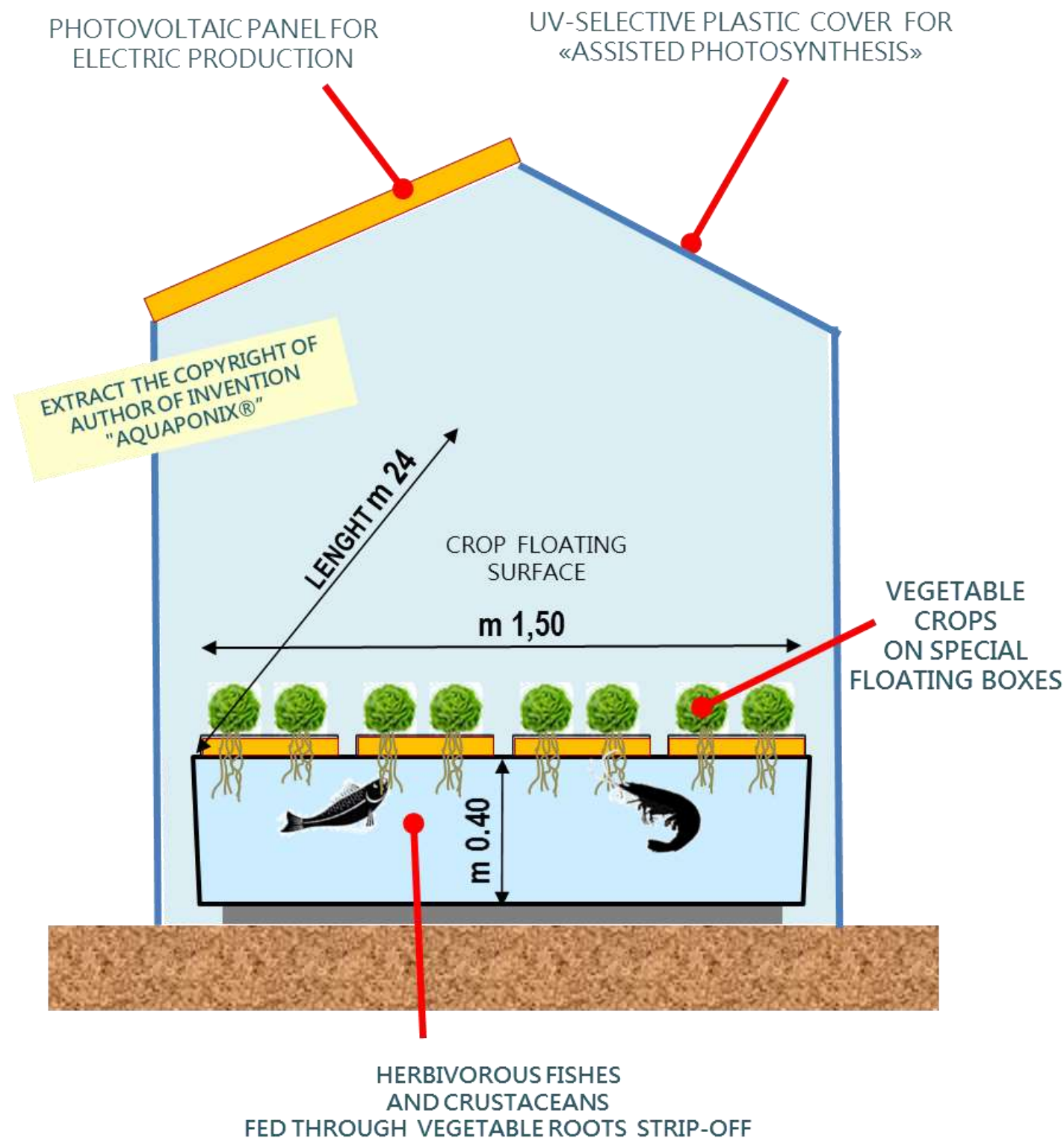




NEW MODELS OF INTEGRATED ECO-BIO- SUSTAINABLE DEVELOPMENT

AGRICULTURE ↔ ARCHITECTURE





The rooting system of healthy and tasty salad plants in «Aquaponix» soiless floating crops

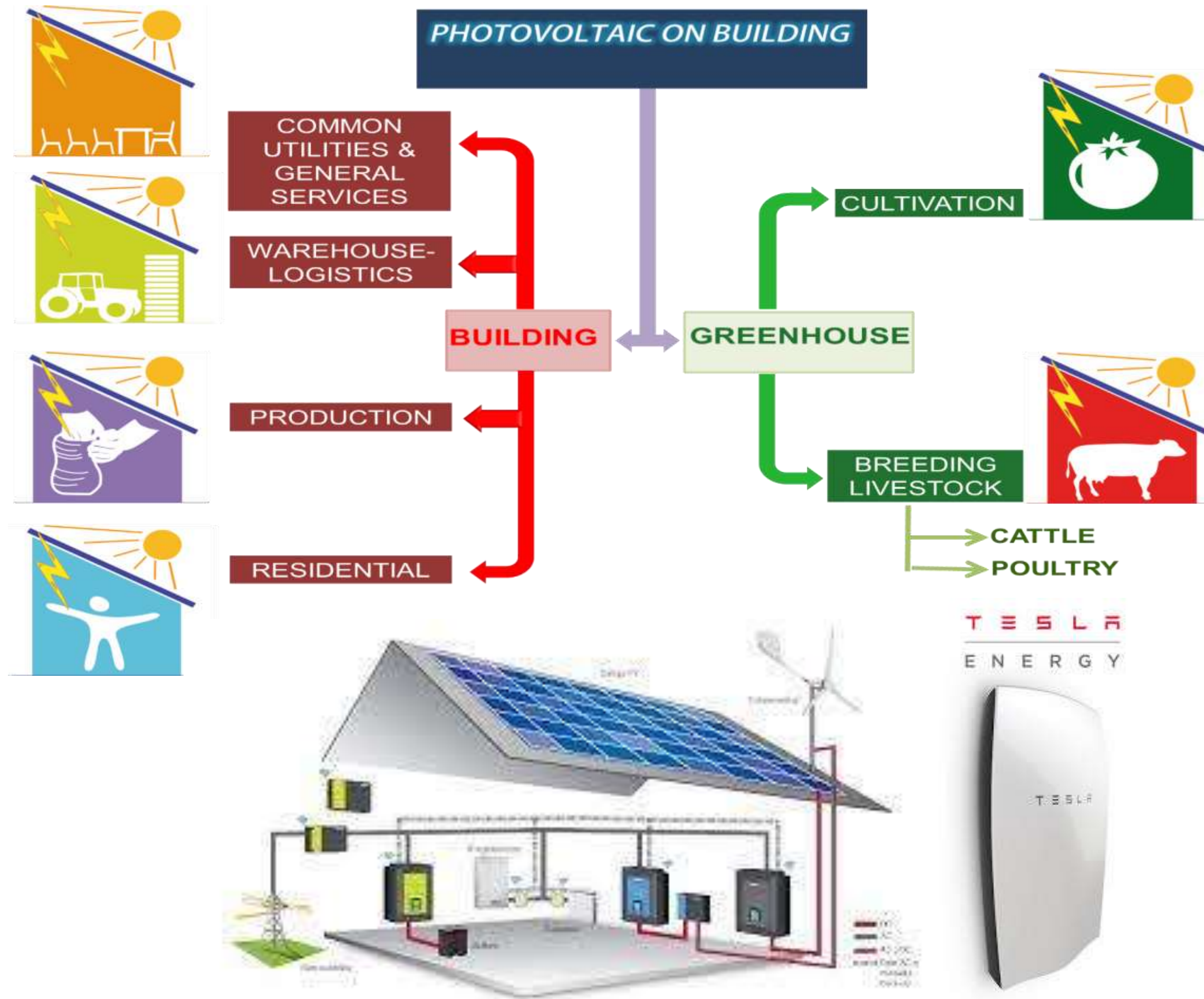


View of special boxes for salad production of «Aquaponix» soiless floating crops



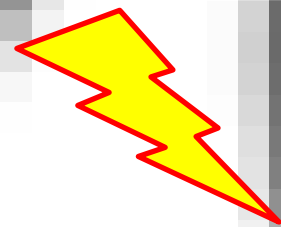
AQUAPONIX ®© SYSTEM
High quality vegetable food production without electronic equipment

BY PROF ARIOLI ALESSANDRO

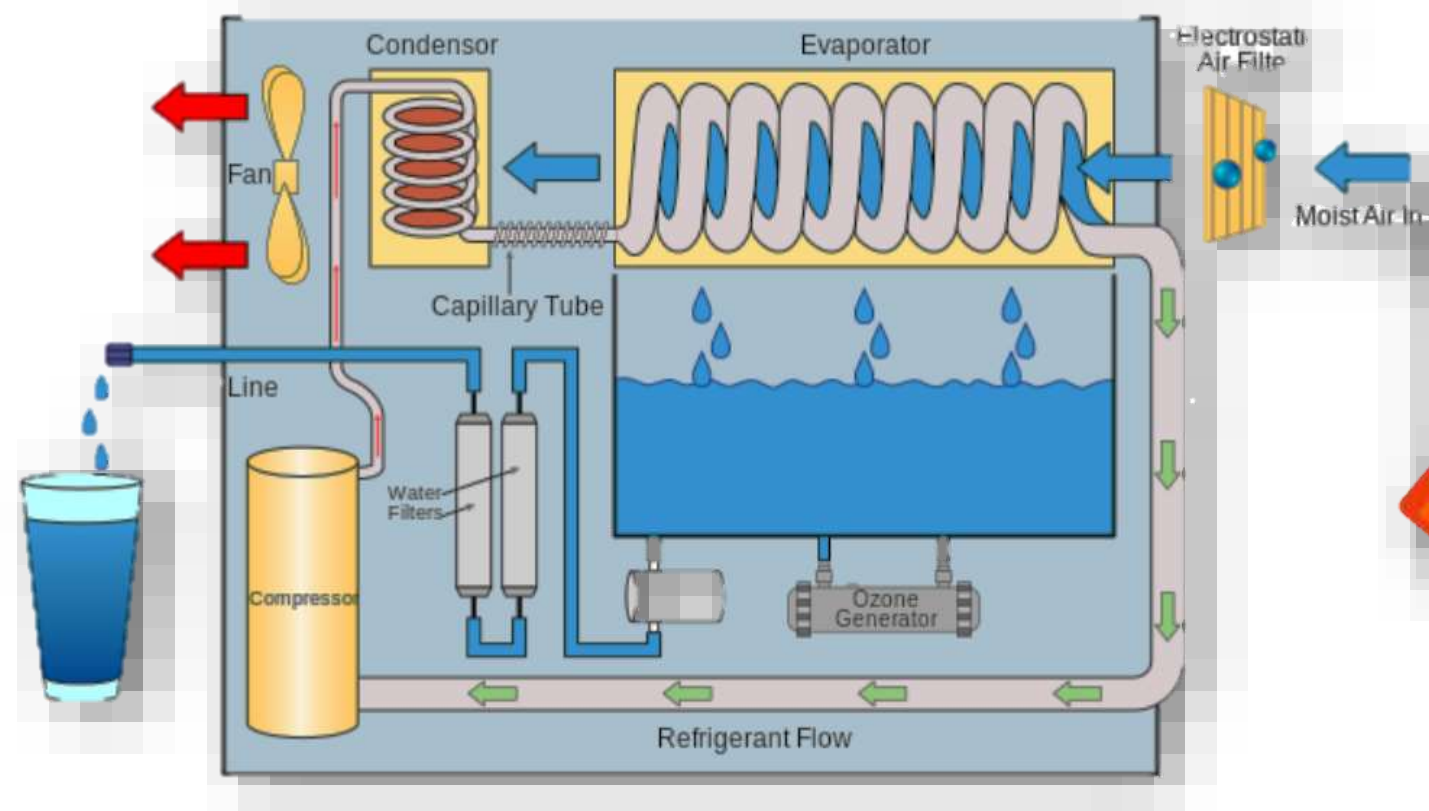




PHOTOVOLTAIC PANEL



COOLING
CONDENSATION
UNIT



Example of
cooling-condensation process



AUTOMATIC
VENDING
MACHINE

WATER PLANT
PRODUCTION





WATER:

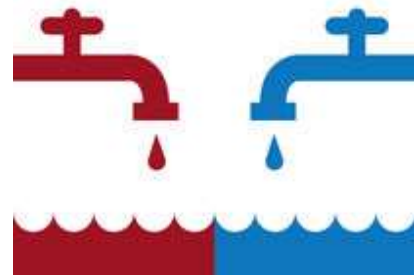
POTABLE = FROM THE SEA BY DESALT PLANT

- IONIC RESINS
 - COALESCENCE FILTERS
 - SANITIZATION WITH OZONE
- FROM AIR BY CONDENSATION**



DRAINS = FROM THE SEA BY DESALT PLANT

CHEMICAL, BIOLOGICAL AND MECHANICAL SEDIMENTATION
AND SANITIZATION WITH OZONE
FROM AIR BY CONDENSATION
REUSE DRAIN WATER FOR IRRIGATION



HOT WATER = SOLAR PANEL – ELECTRICAL HEAT PUMP

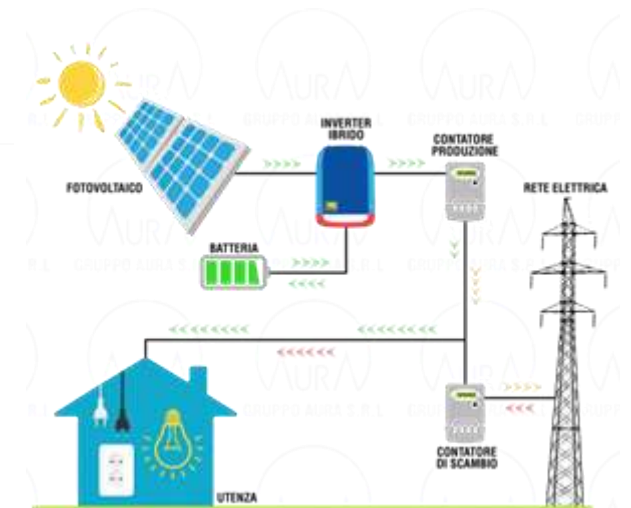
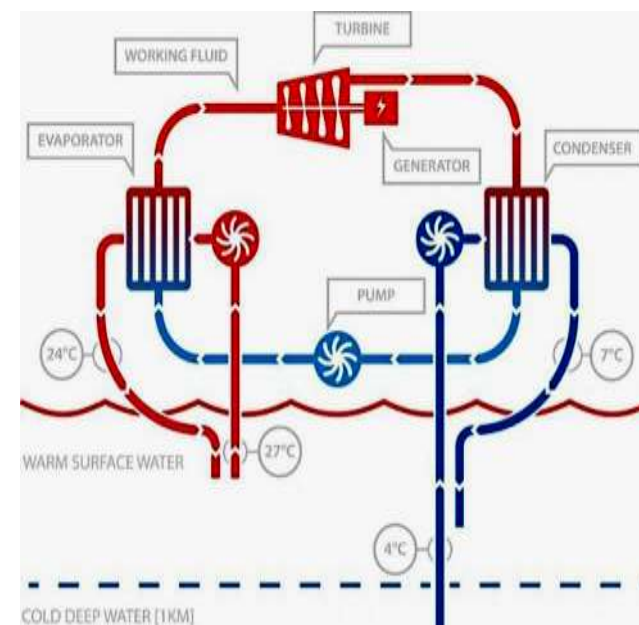
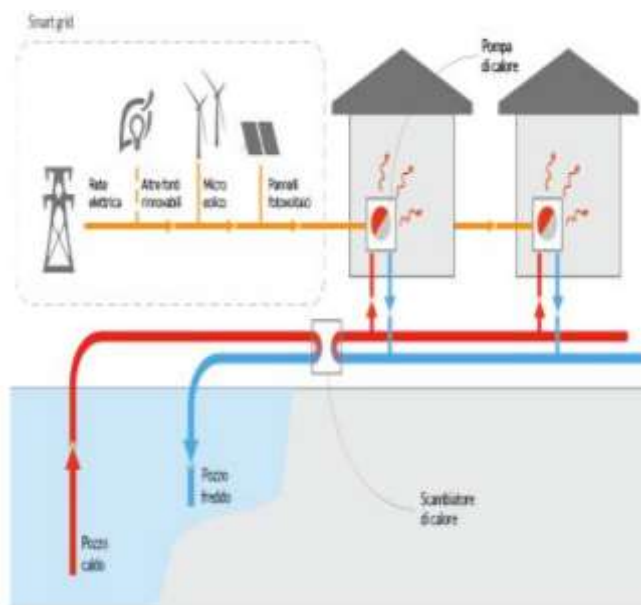
IDRO THERMAL ENERGY FROM THE SEA

AIR CONDITIONING

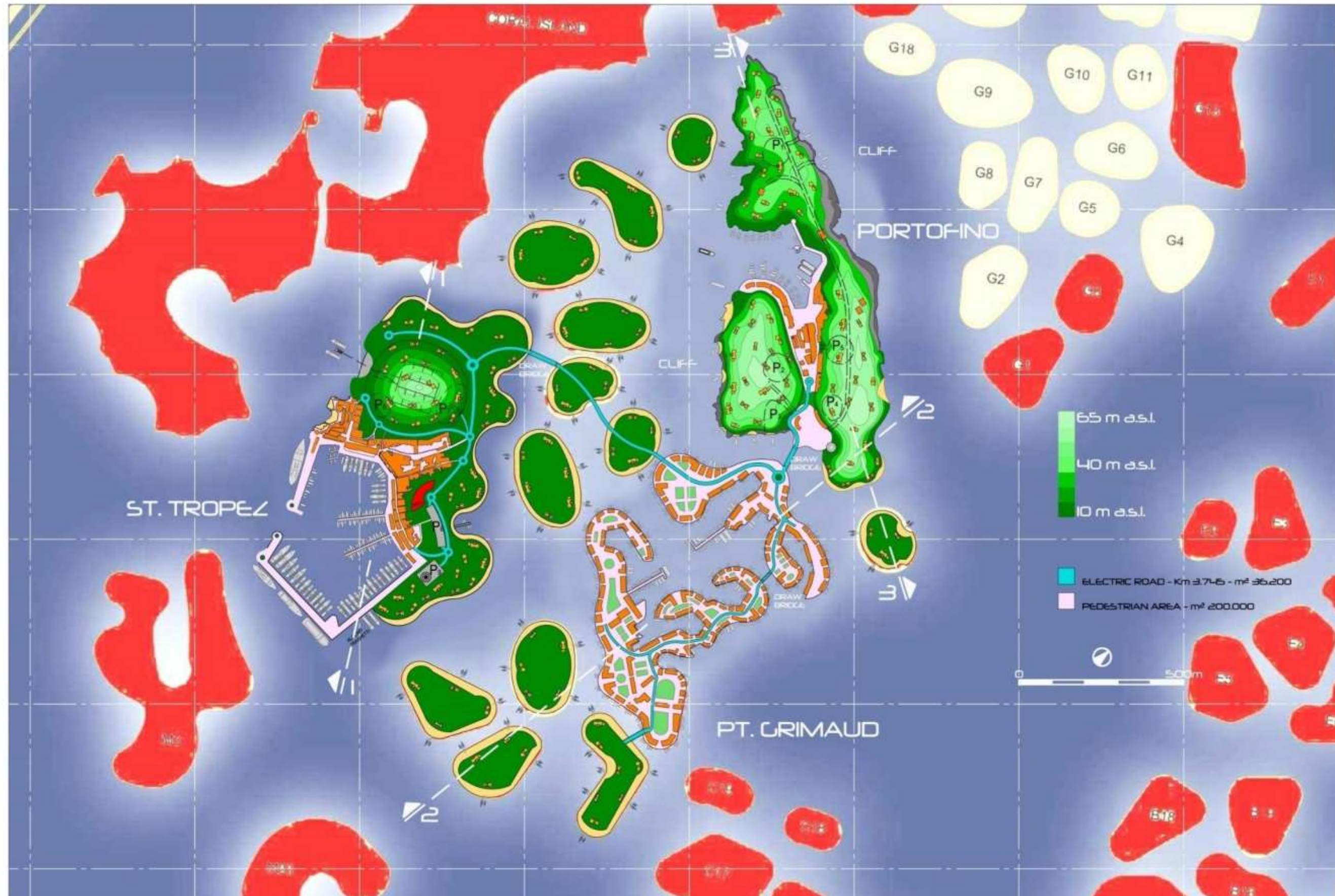
- IDROTHERMAL FROM THE SEA
- ELECTRICAL HEAT PUMP

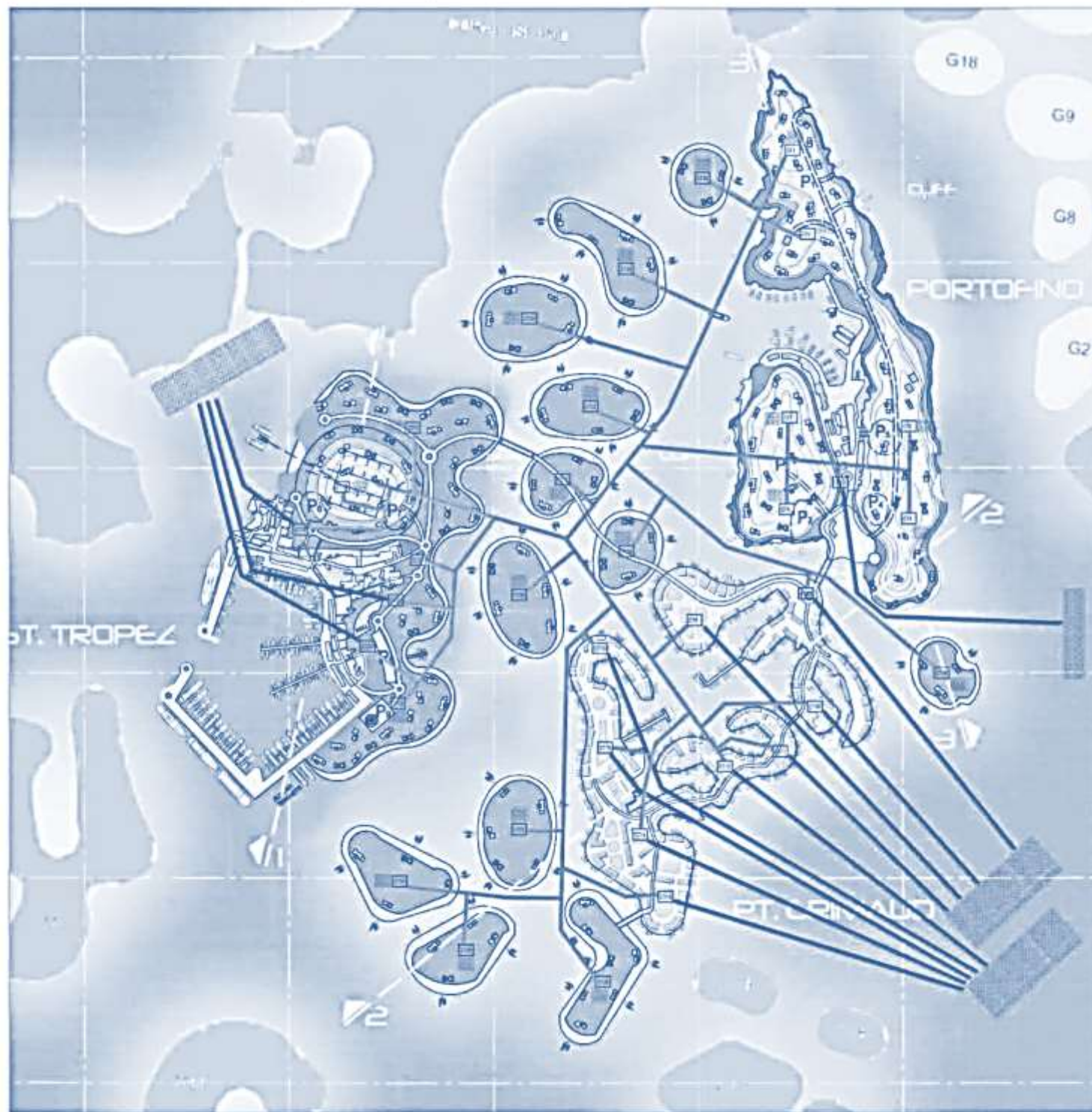
ELECTRICITY :

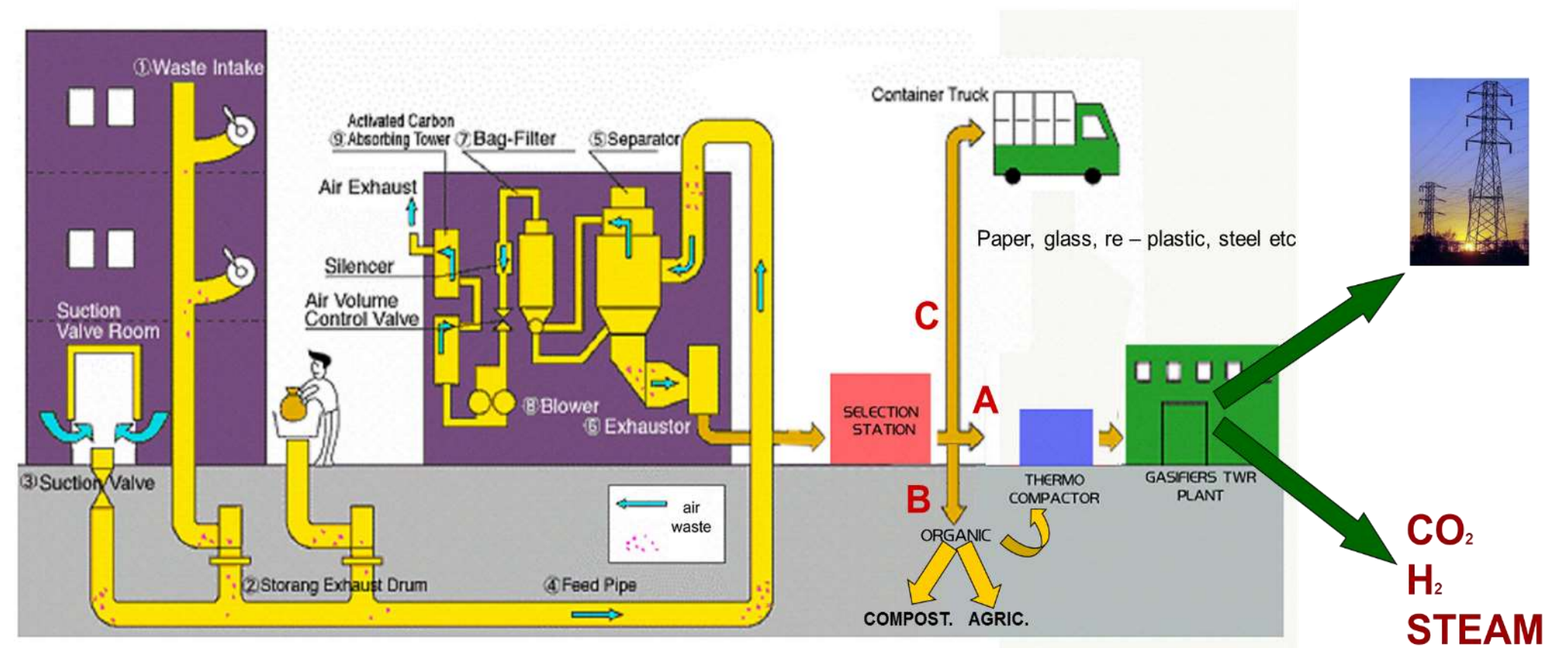
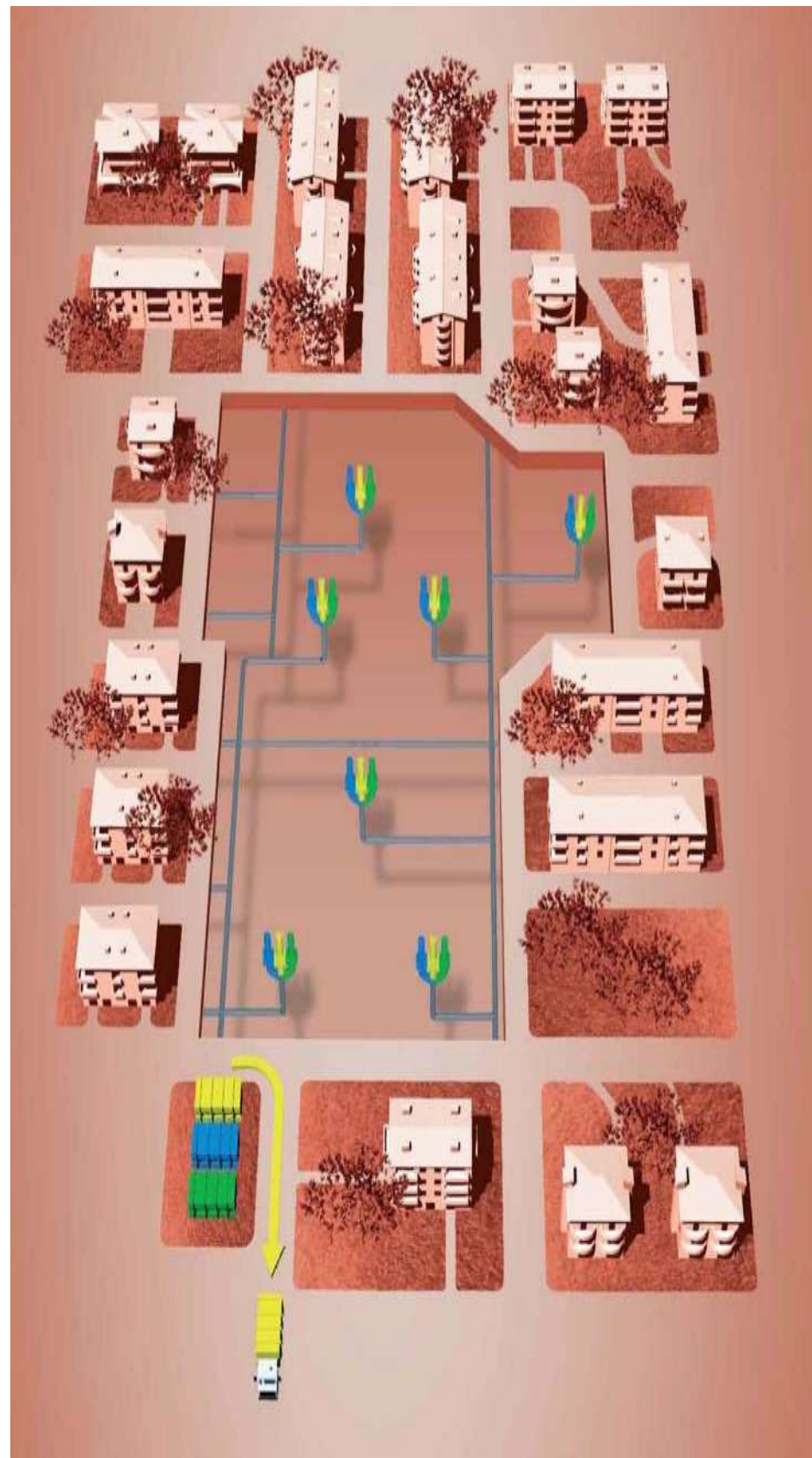
- PHOTOVOLTAIC SOLAR PANEL
- TIDES ENERGY
- WASTE MANAGEMENT
- WIND

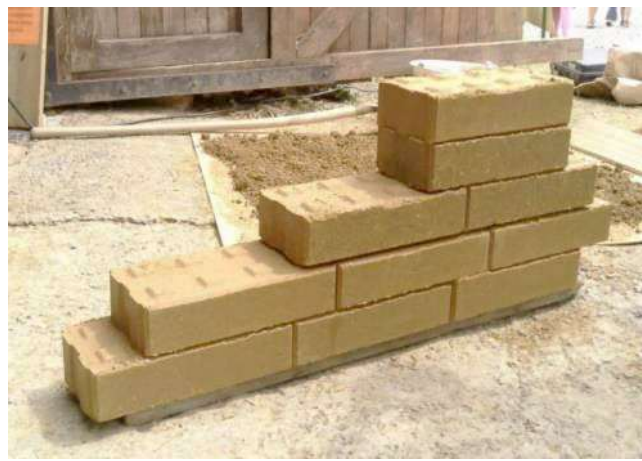


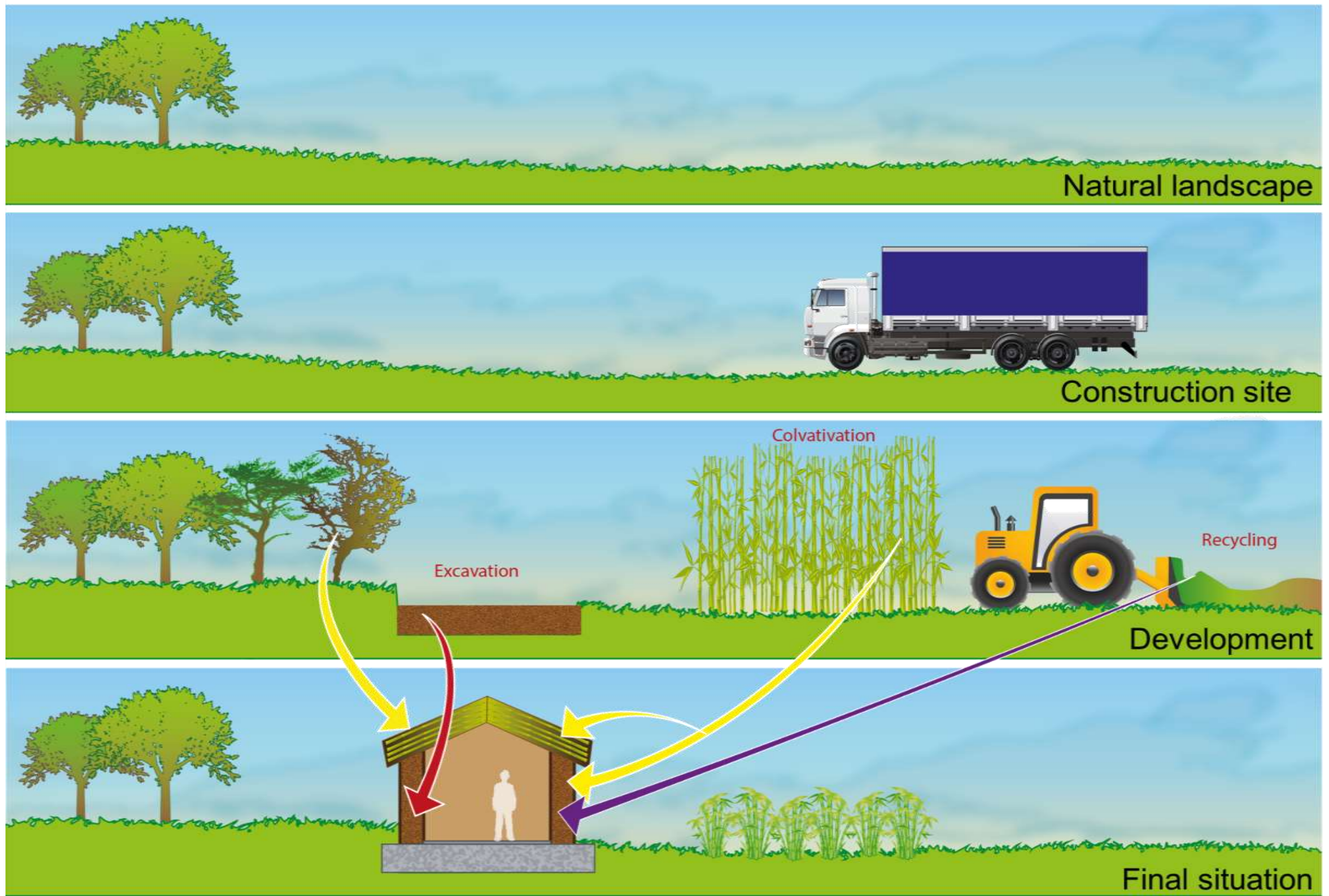












WASTE TO ENERGY

36



WASTE TO ENERGY

In cooperation with Foster Wheeler, Merloni Progetti, Italprogetti Impianti some international tender for new SUW (Solid Urban Wastes) **INCINERATOR TECHNOLOGY PLANT** for:

1. **TONAR (MOSCOW)**
2. **A2A BRESCIA**
3. **AEM MILAN**
4. **UDINE**
5. **LA SPEZIA**
6. **LOMELLINA PAVIA**

In cooperation with Polimi - University of Milan waste management through transport and storing systems applied to SUW (Solid Urban Wastes) with **PYROGASIFICATION TECHNOLOGY PLANT** for:

7. **HMM – DUBAI – FALCON BAY PROJECT.**
8. **BEN TREE PROVINCE – VIETNAM**
9. **NOVI SAD – SERBIA.**
10. **DOBRICH – BULGARIA**

In cooperation with Italian and international partners

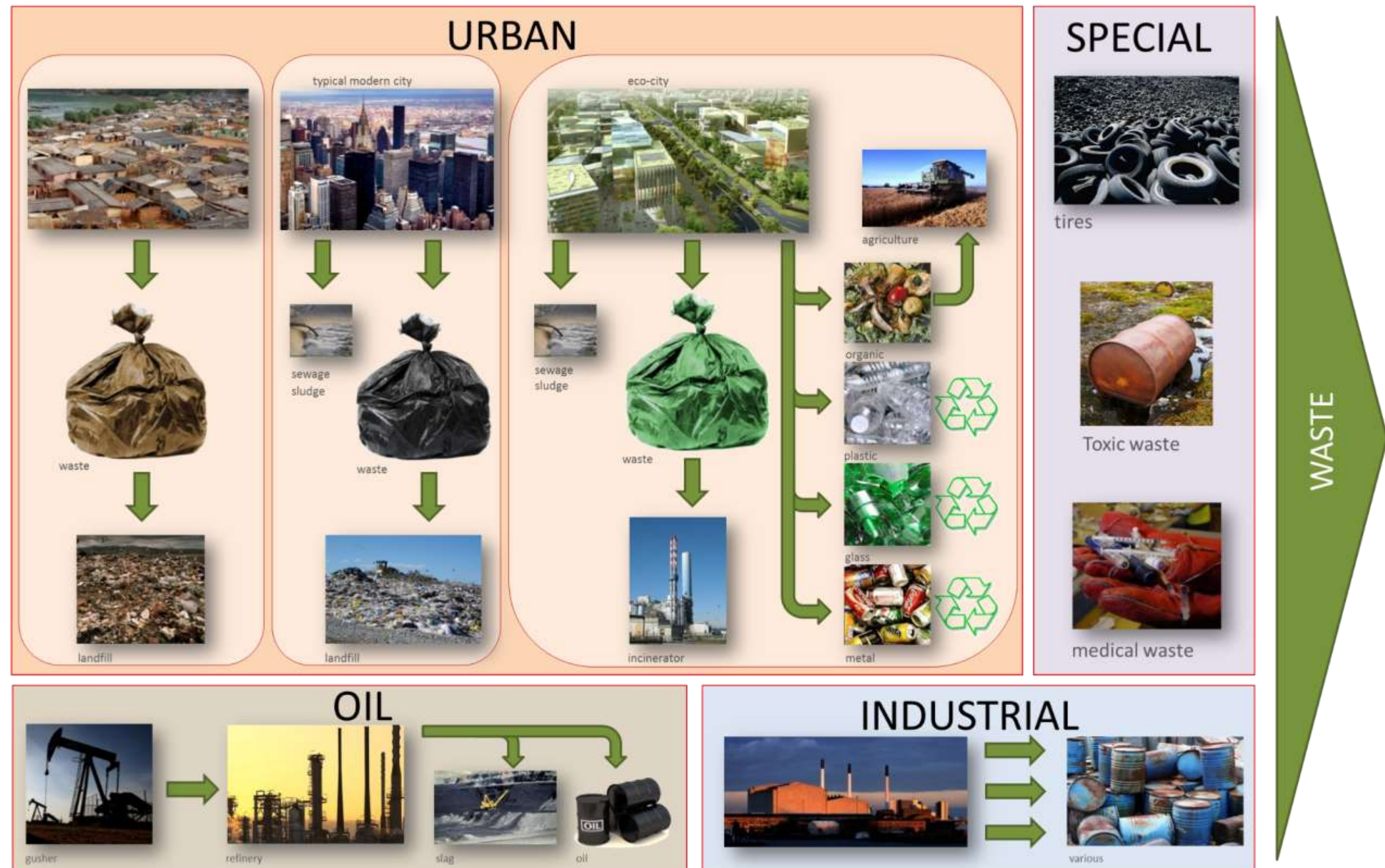
11. **IRAN – various locations for the redevelopment of waste disposal with PYROGASIFICATION TECHNOLOGY PLANT**

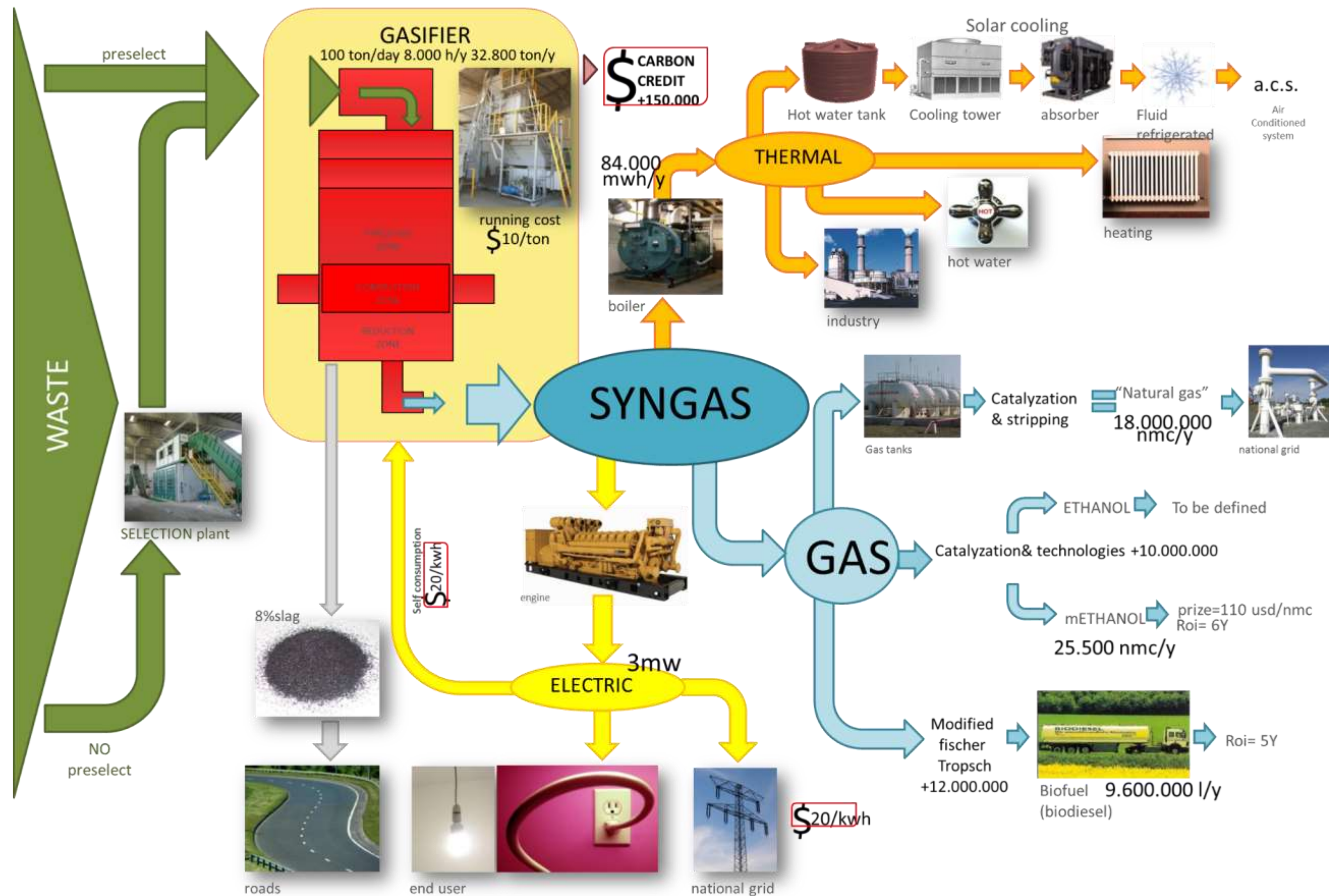
GREEN CITY and SOCIAL HOUSING

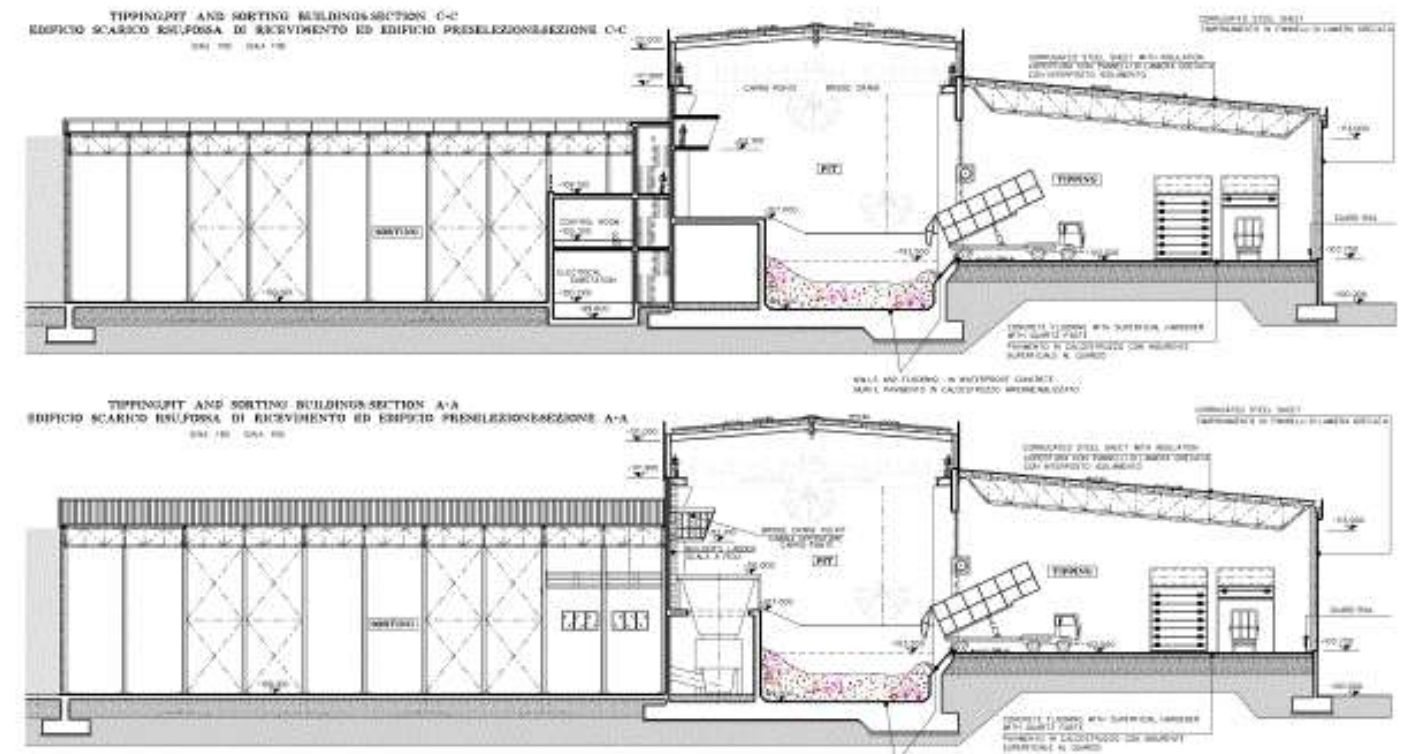
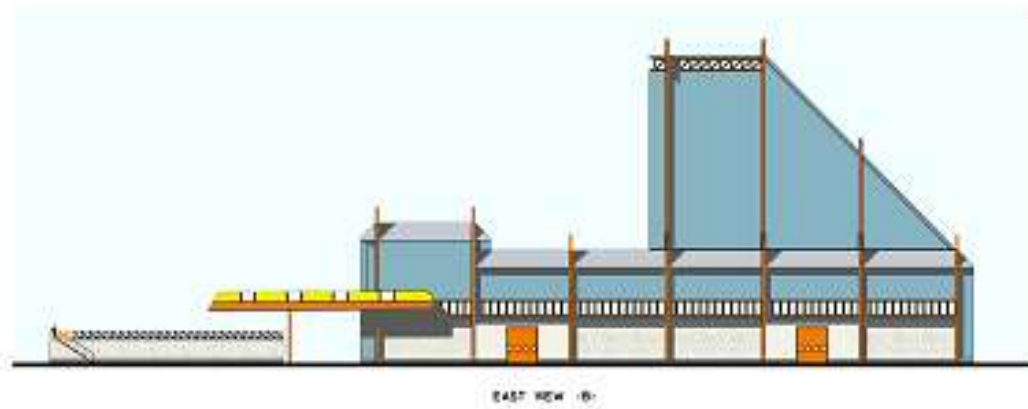
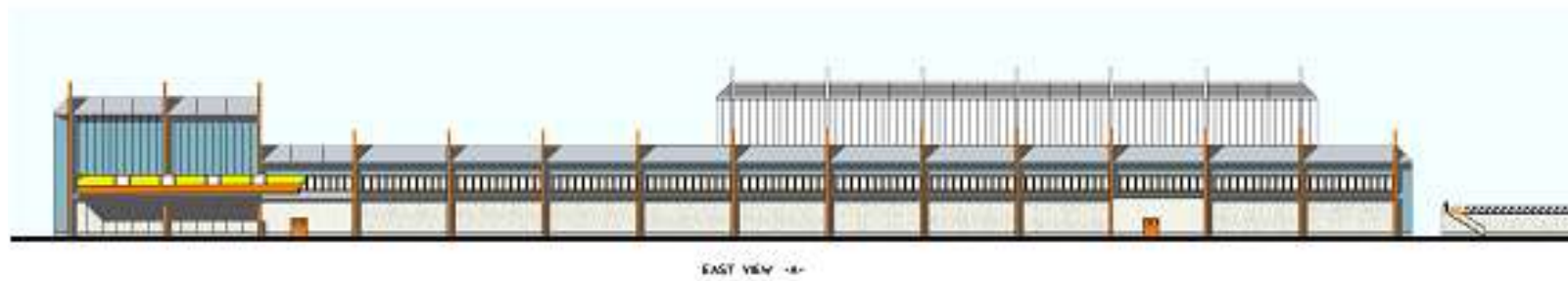
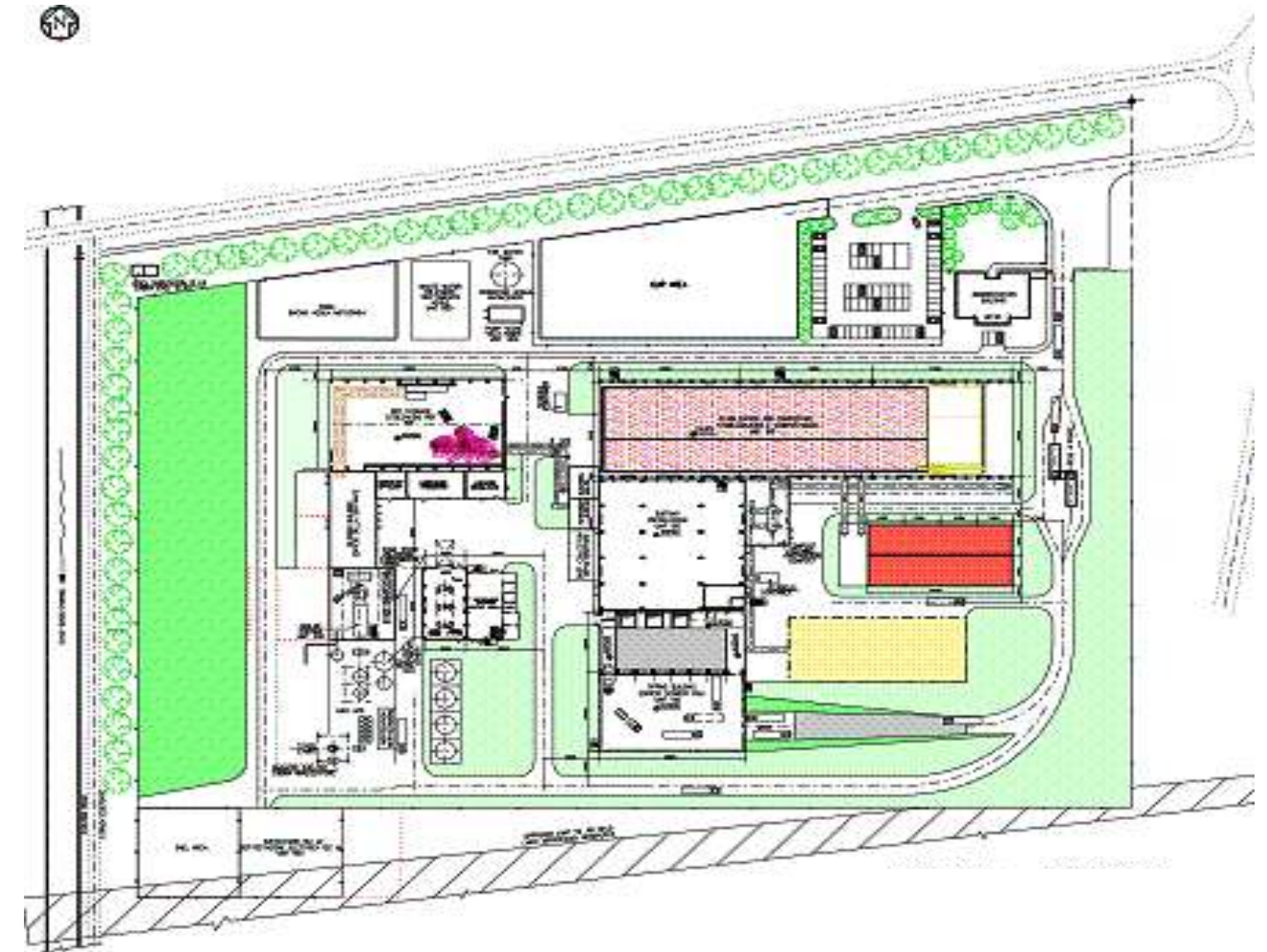
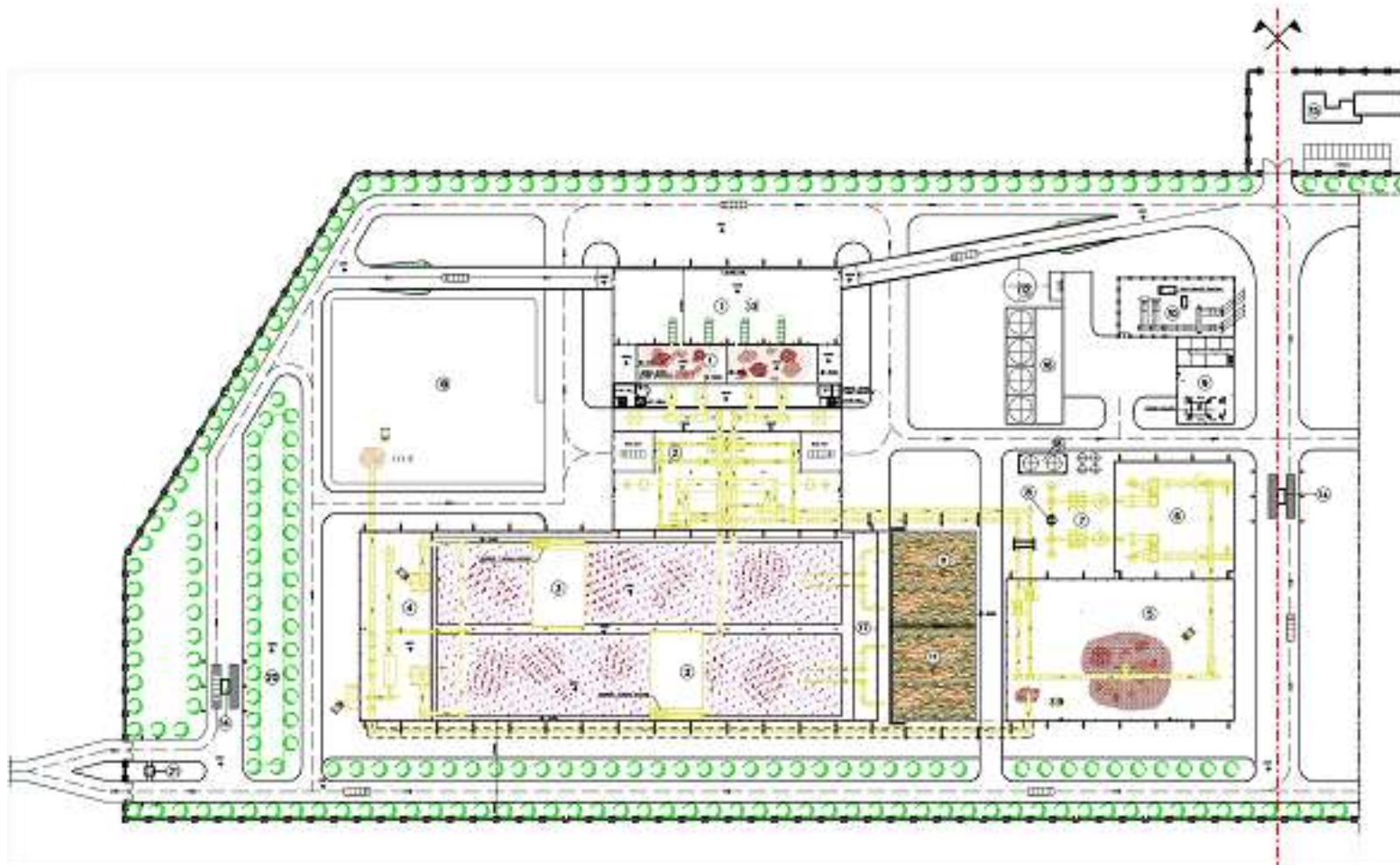
1. **HMM – Dubai – Falcon Bay Project – new city of 100.000 inhabitants, energy self-sufficient**
2. **FUTURE OF AFRICA PROJECT - Burkina Faso - Ouagadougou - social housing neighborhood**
3. **social housing neighborhood energy self-sufficient TANZANIA**
4. **eco-village and tourist complex - energy self-sufficient - DAHLAK ISLANDS - - ERITREA**
5. **new city energy self-sufficient - AL NOOR – SIRIA -**
6. **social housing neighborhood -KHAOLAK - SENEGAL**
7. **social housing district -SOMALIA – MOGADISCIO -**

CONCEPT

1. **AAA VILLAGE** Agriculture – Architecture – Alternative energy = New construction technologies for buildings with high energy efficiency, using local resources, renewable products, light prefabrication system and reuse agriculture process waste
2. **MADRE PROJECT MALDIVES**
Concept, master plan and feasibility study for a new accommodation model based on energy self-sufficiency and zero km food production with low environmental impact
3. **HMM SHEIK MANA BIN HASHER GROUP OF COMPANY**
HAFIC HOLISTIC AGRI FOOD INTEGRATED COMPLEX DUBAI
Concept, master plan and feasibility study for a new zero km food production model in arid areas with minimal environmental impact







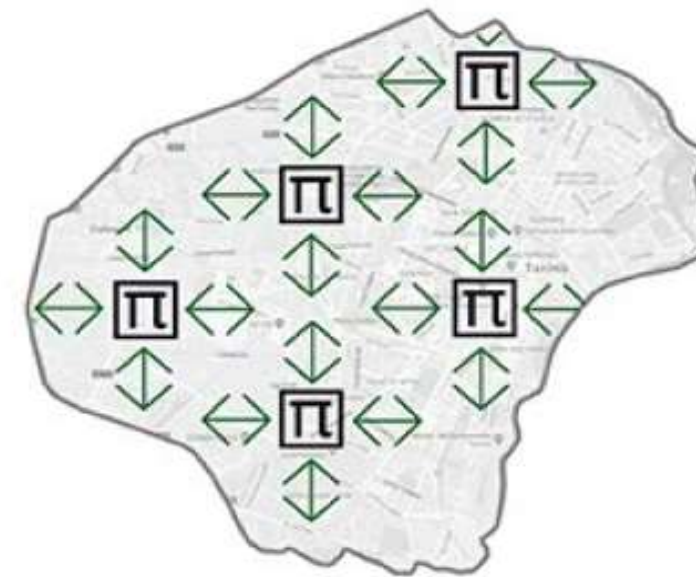
The system philosophy is based on distributed small plant concept in which the refuse is treated close to the production area, to avoid :

- health hazard
- bad smell
- transportation pollution and costs

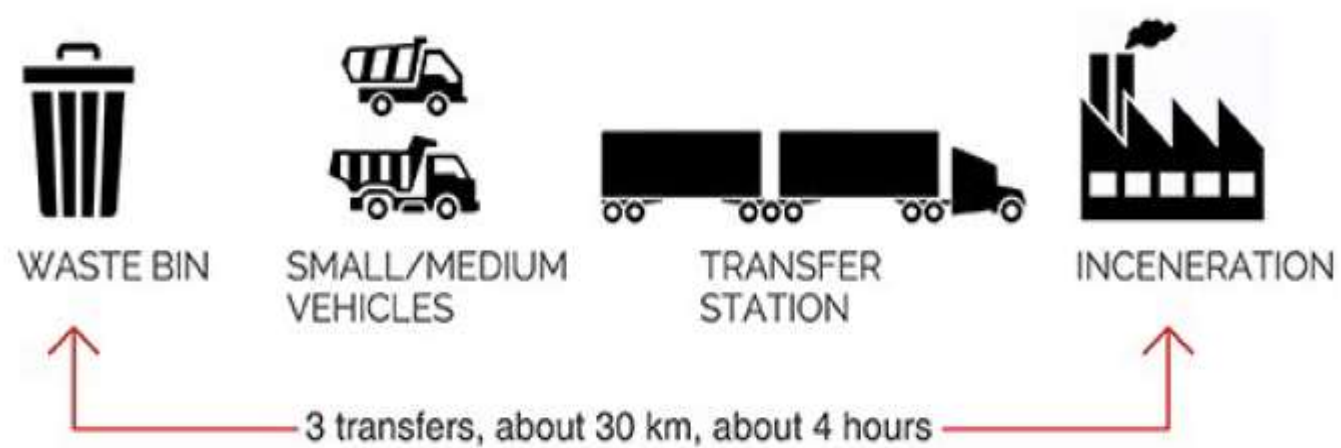
CONCENTRATED STRATEGY



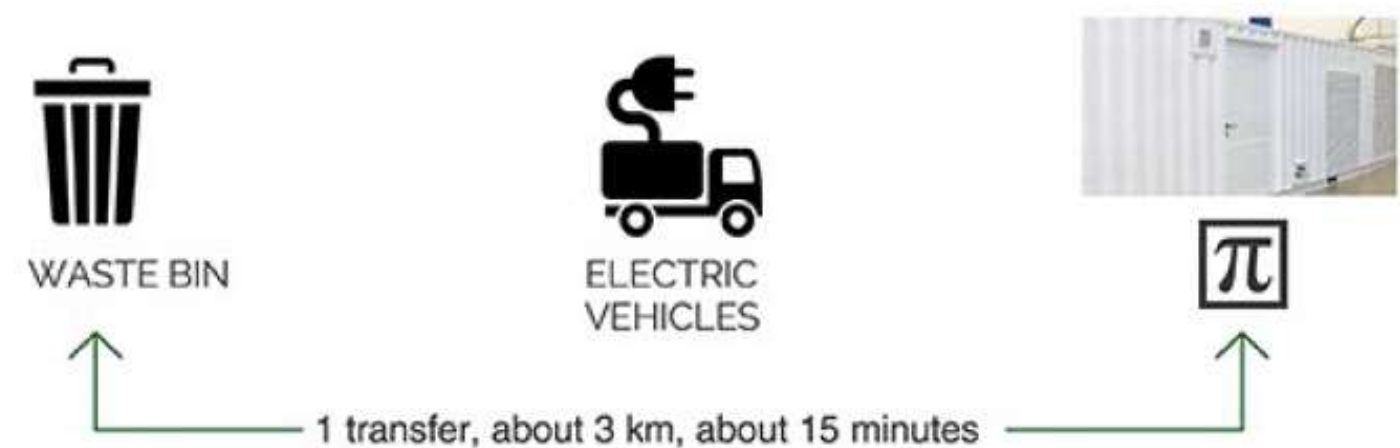
DISTRIBUTED STRATEGY



CONCENTRATED PLANT - LOGISTIC



DISTRIBUTED PLANT - LOGISTIC





Global eletrical efficiency (yield) : 20-25%*



Feeding



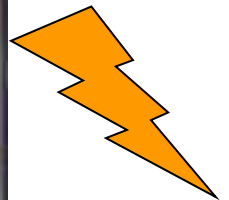
Gasifying



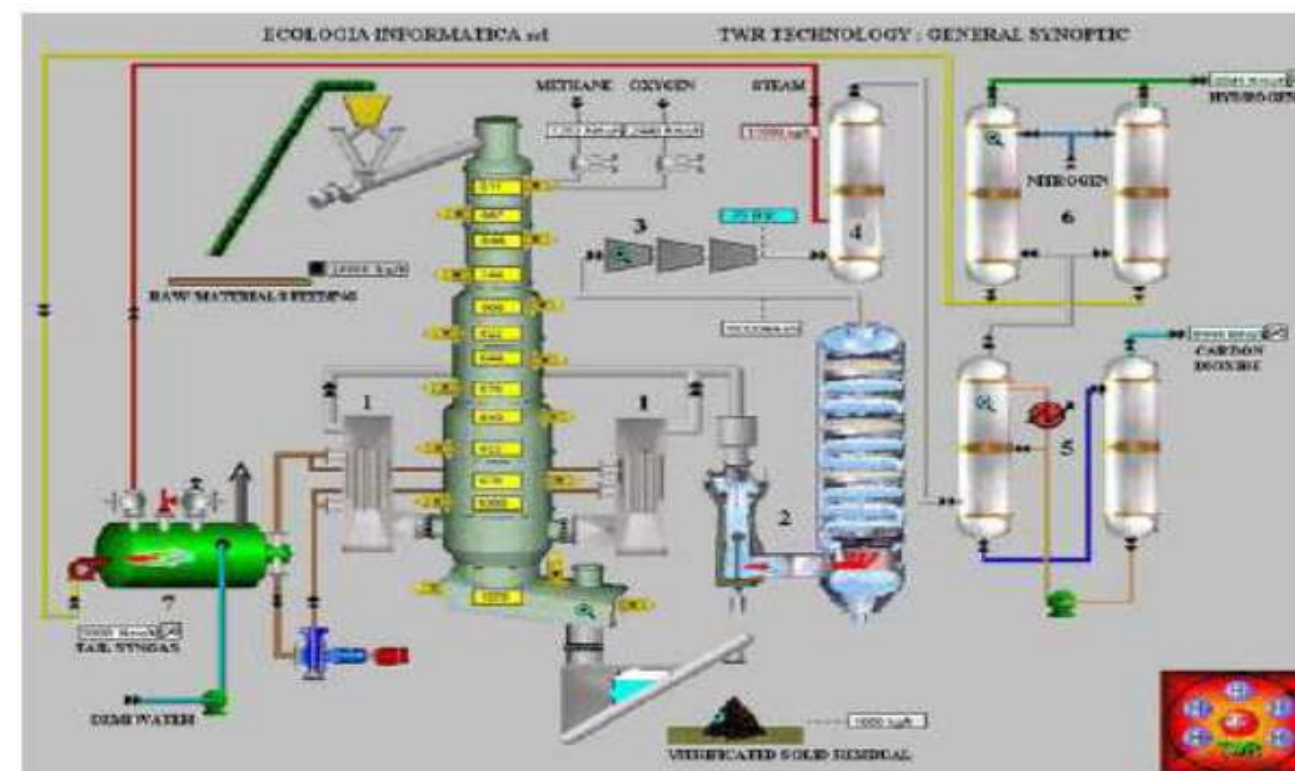
Gas cleaning

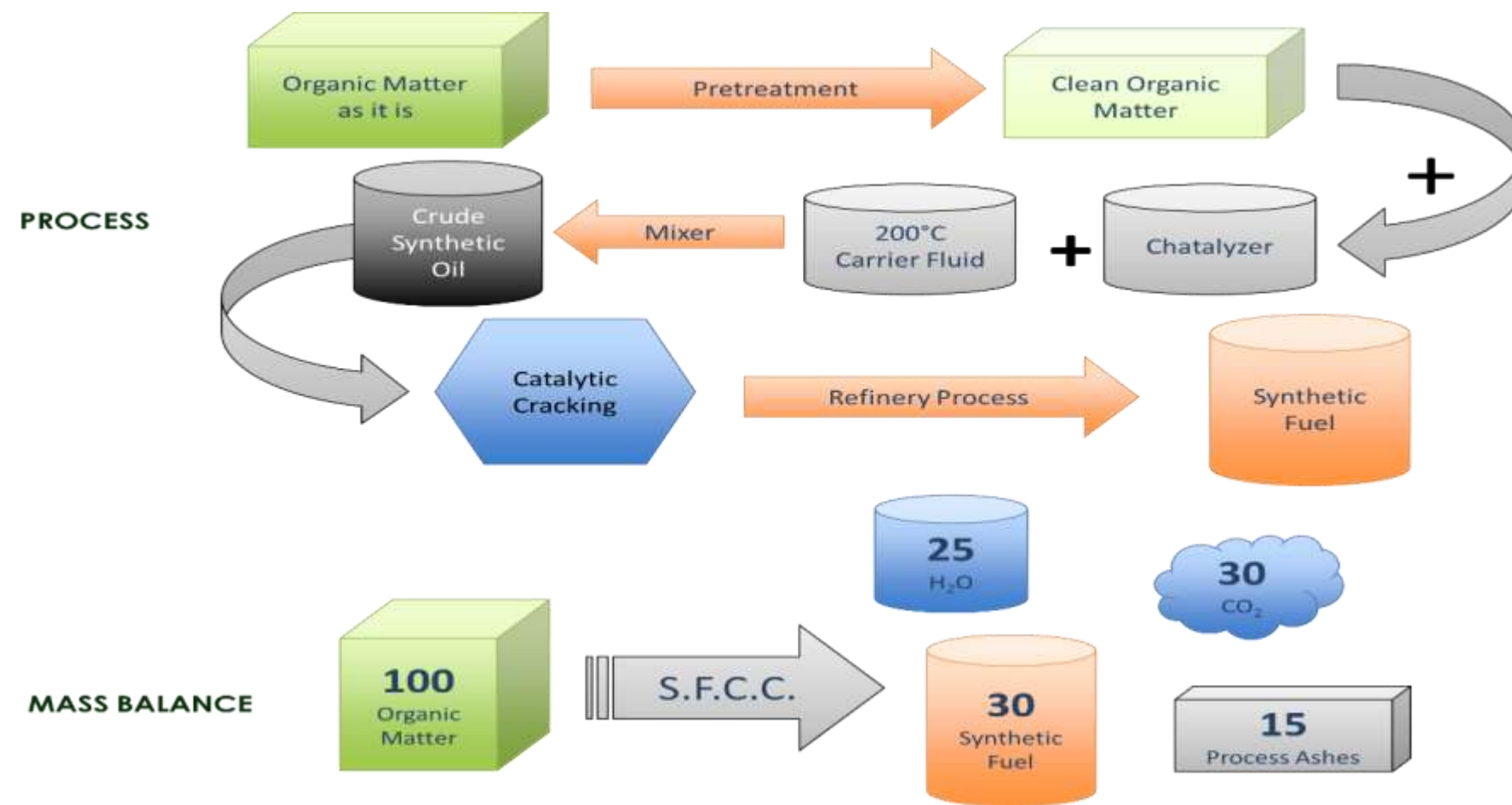


Power generation



Biomass (Residue)	Syngas	Eletricity
100 T/day * 2800 Kcal/kg	System efficiency 75% (cold gas)	Electrical yield (engine genset) 30%
~13 Mwth	~10 Mwth	~3 Mwelec + thermal





PRIMARY MIXER



CRACKING AREA



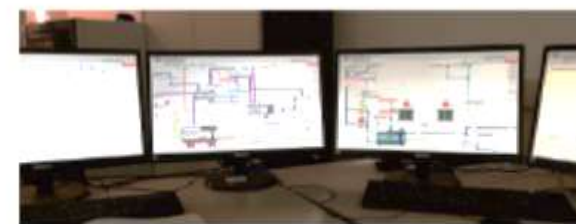
DISTILLATION COLUMN



EMERGENCY TANK



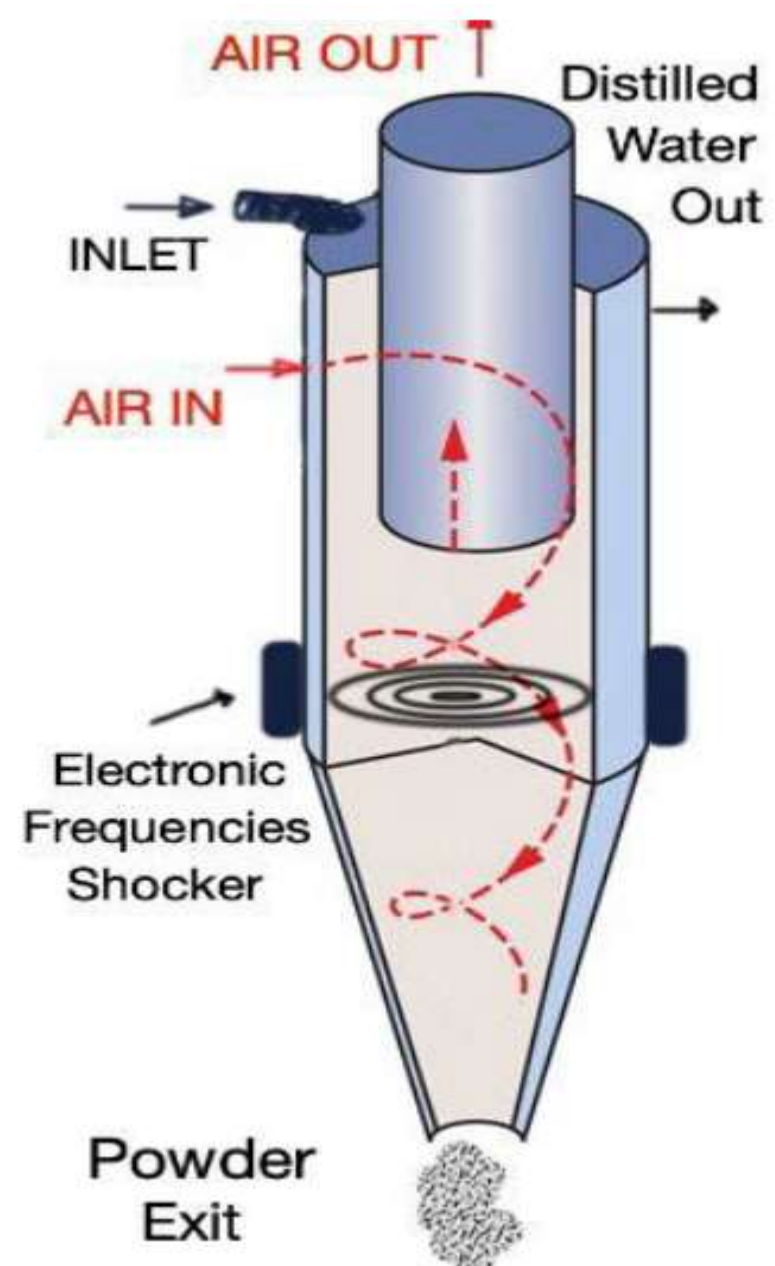
SWITCHBOARD ROOM

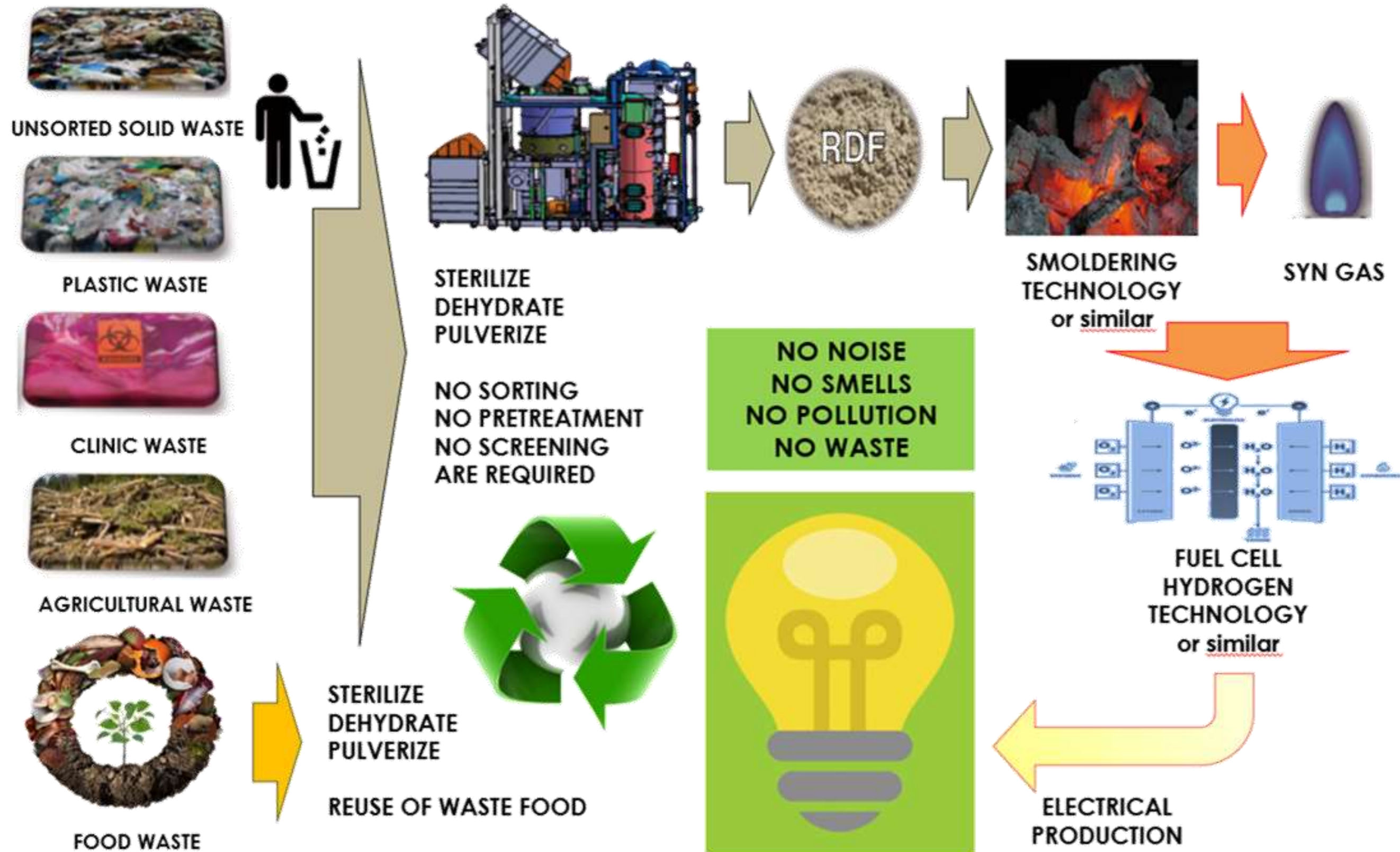


CONTROL ROOM

Advanced BioFuel
Technology
THE S.F.C.C.
TECHNOLOGY
SYNTHETIC FUEL
CATALYTIC CRACKING

OMPECO





ENERGY EFFICIENCY - SYENERGY



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ENERGY EFFICIENCY

MANY DESIGNS for shopping center, multifunction complex and residential condominium.

1. LEROY MERLIN

Analysis, evaluation of processes and DESIGNS for the energy efficiency of stores

2. FERRERO GROUP POZZUOLO MARTESANA PLANT (MI)

Analysis, Evaluation of processes for the energy efficiency of energy-intensive systems

3. RESIDENTIAL CONDOMINIUM in cooperation with General Contractor

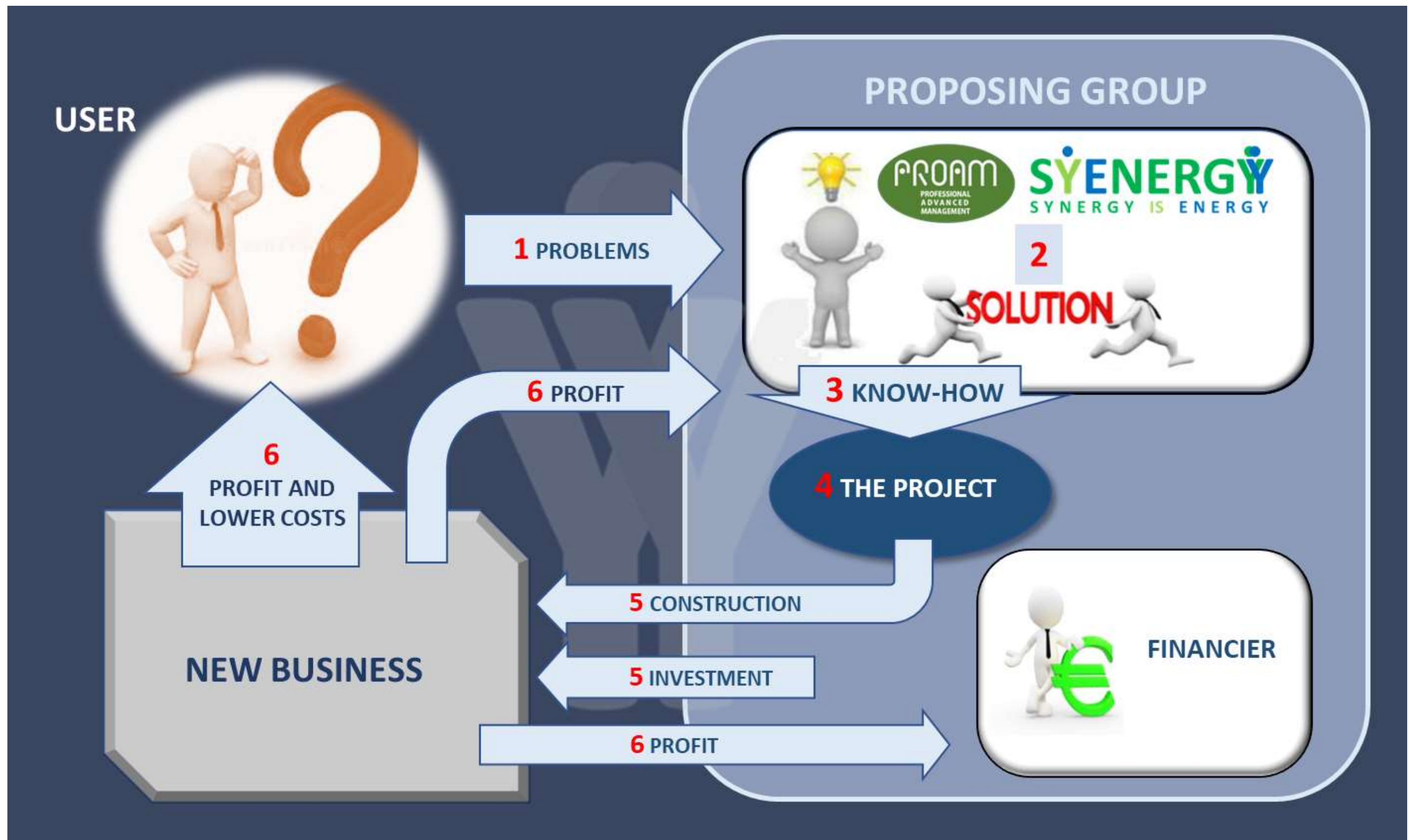
EUROPAM Spa, GEI HOLDING Spa, ROGER GROUP Spa, E-COSTRUZIONI Srl

- Analyses
- Surveys
- elaboration of architectural, plant and energy design
- pre and post intervention evaluation
- relations with the technical and resolution assemblies
- calculation of quantities and cost estimates
- verification of legislative requirements
- construction management
- technical certifications

- VIA MENABREA 33 MILAN
- VIA CUZZI 8 MILAN
- VIA WITTGENS 3 MILAN
- VIA CALDERA 132 – BC- DE – AH MILAN
- VIA CINISELLI 20 SETTIMO M.SE MI
- VIA CAVALLETTI 5 SETTIMO M.SE MI
- VIA PITAGORA 3 MONZA
- VIA PIATTOLI 6 MILAN
- VIA MURAT 75 MILAN
- VIA BAGAROTTI 34 MILAN
- VIA PADOVA 27 MILAN
- VIA CRESPI CAPRIATE SAN GERVASIO BG
- VIA GIOLLI 9-25, 20-22 MILAN

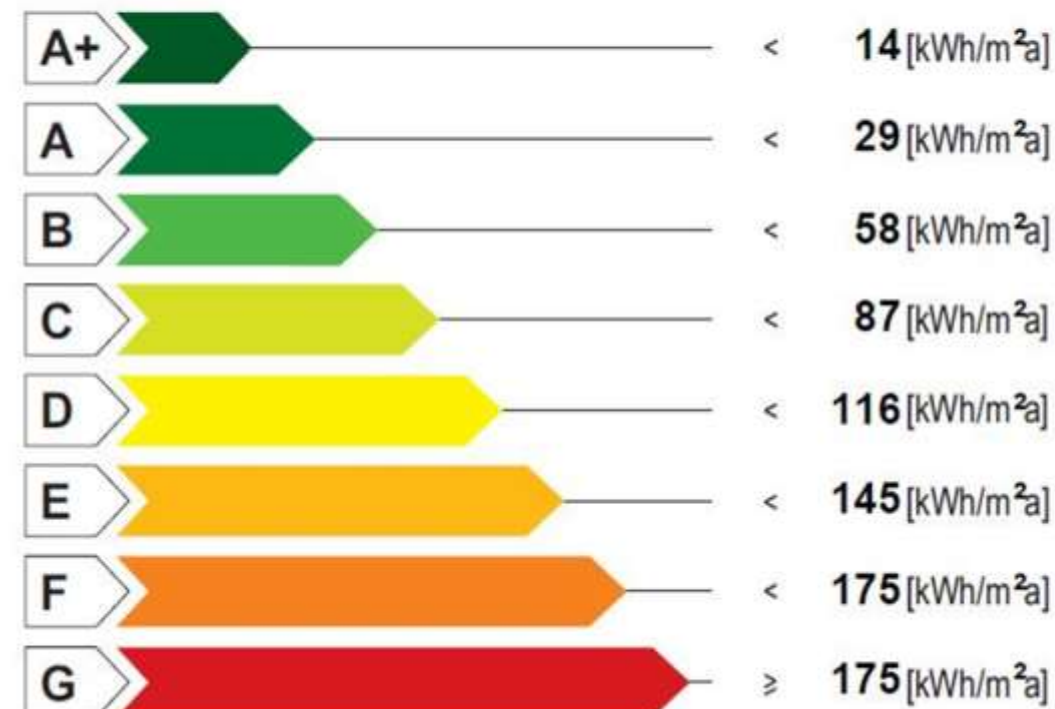
- VIA SUZZANI 274-280 MILAN
- VIA LUCCA – VIA VITERBO MILAN
- MELLACE CASSINA DE PECCHI MI
- ZAPPA ROBBIATE LC
- VIA MATTEUCCI 1 MILAN
- VIA DON MINZONI LEGNANO
- VIALE CORSICA 91 MILAN
- VIALE PROCIDA 16 MILAN
- VIA BOTTICELLI 20 MILAN
- VIA REDORTA BG
- PIAZZA ASPROMONTE 5 MILAN
- VIALE ROMAGNA 39 MILAN
- VIA GROSSICH 15 MILAN
- VIA BUSCHI 10-12 MILAN
- PIAZZA CAVOUR TRESORE BG
- VIA ROMA 63 SIZIANO MI
- VIA PIONIERI DELLA CROCE ROSSA SIZIANO MI
- VIA TRENTO SAN GIULIANO M.SE MI
- VIA VIA DE GASPERI 1-3-5 ROZZANO
- VIA MAZZUCOTELLI MILANO
- VIA ROMA 63 SIZIANO
- PIONIERI 3-5-7, 6-8-10 SIZIANO
- VIA XXV APRILE 32 SIZIANO
- VIA TRENTO 4 SAN DONATO
- VIA FRUA MILAN
- TORRE ROMANA VIA SABOTINO 19 MILAN





Classe energetica - EP_H Zona climatica E

Basso fabbisogno



Alto fabbisogno

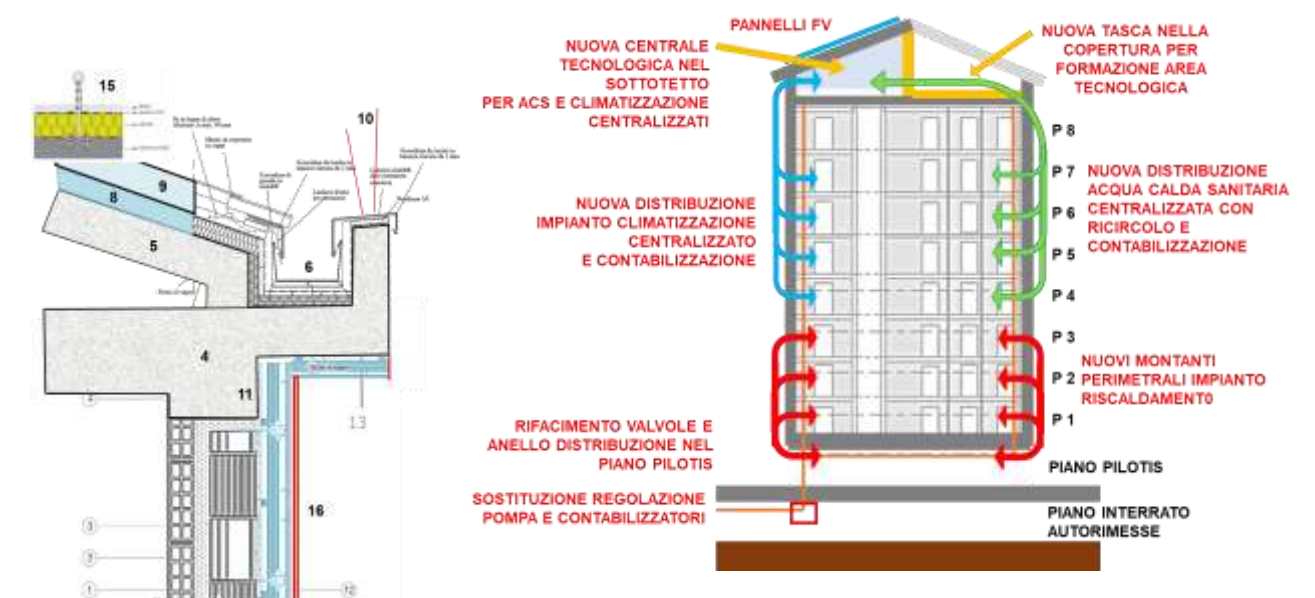
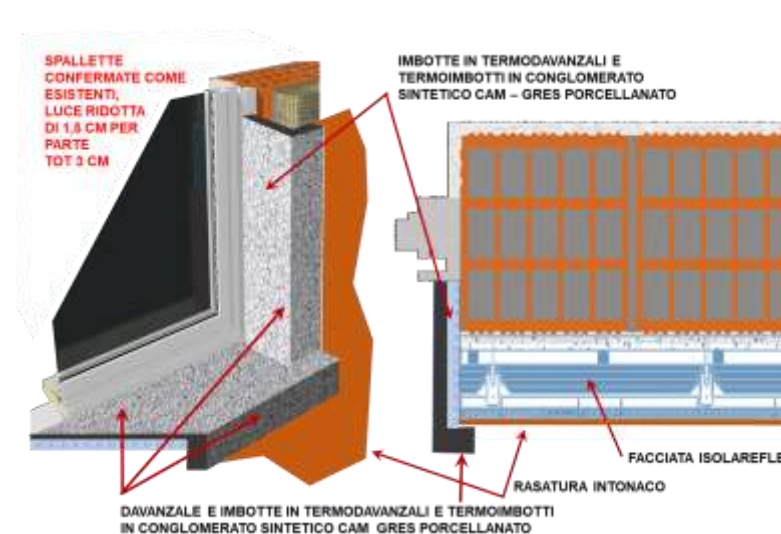
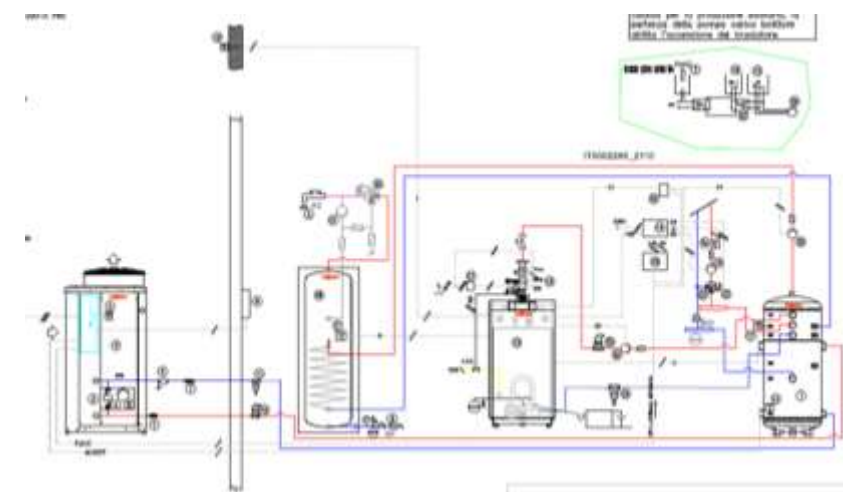
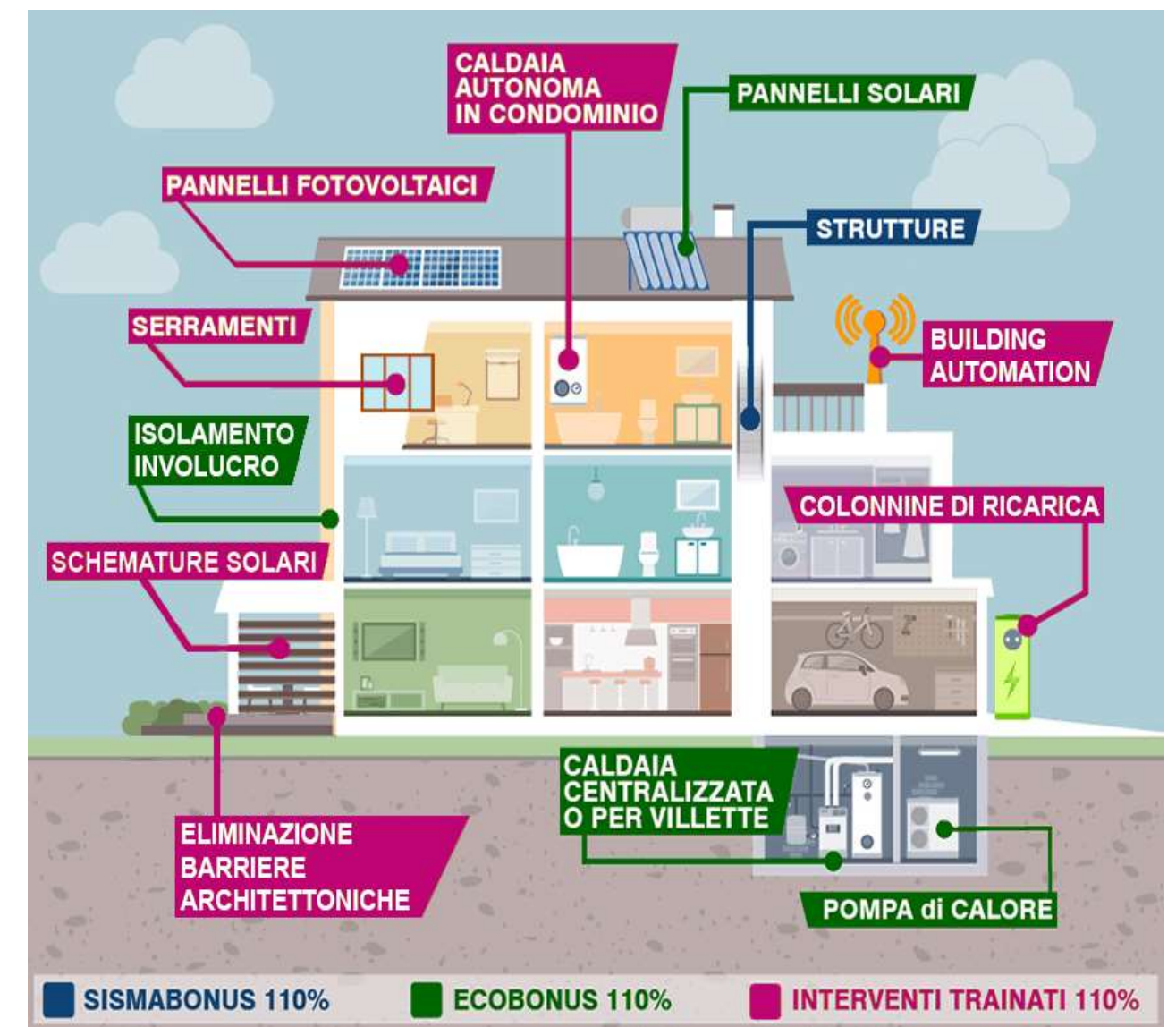
+ EFFICIENZA
+ RISPARMI
+ CONFORT
+ VALORE

APE POST
INTERVENTO

SALTO DI CLASSE
(REQUISITO MINIMO
2 SALTI)

APE ANTE
INTERVENTO

- EFFICIENZA
- RISPARMI
- CONFORT
- VALORE



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CASOLARE CHIGNOLETTI

Via Chignoletti, 9 Palazzago (BG) 24030 ITALY

Phone +39 02 39197 890 mobile + 39 331 3129298

archmauriliocitterio@gmail.com

info@archmauriliocitterio.com

PEC citterio.maurilio@archiworldpec.it

www.archmauriliocitterio.com



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