INTEGRATIVE PROJECTS FOR SUSTAINABLE ARCHITECTURE
1. profile

**OFFICINE GREEN BUILDING** is an architecture & engineering consulting group who fosters sustainable constructions and high performance buildings. All involved professionals offer specific and coordinated skills in environmental issues which can be applied to architecture and urban spaces. They are directly linked to the Green Building Council Italia, a no-profit association that promotes sustainable architecture, its positive effects on the quality of everyday life, networking on new technologies for green building and energy and environmental certification processes.

**Sustainable design**

**LEED/GBC rating systems**
- Consultancy services for LEED/GBC certification
- Management and coordination of the process
- Commissioning and Energy Modeling
- Compliance of materials/products to LEED/GBC credits requirements
- Consultancy services for material/products qualification in order to match protocols requirements

**Partnership**

**ITALY**

**OFFICINE GREEN BUILDING**
Rome, Latina.

**ARSARC** studio associato
Rome

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profile  approach  why green  process  marketing & visibility
Traditional project delivery

Everyone involved in a building project work independently only as needed with individual risk and individual compensation.

Integrated Project Delivery

Officine Green Building’s design approach promotes the INTEGRATED PROJECT DELIVERY, crossing through architecture and engineering. The project’s integrated process (IP) contributes to reach the sustainability goals established by the project team.

1. Every aspect of building design is considered cohesively, beginning in the pre-design phase to the end of the building’s life cycle.

2. Fully integrated process is only possible with an integrated team.

3. Everyone involved in a building project has to be of like mind and work together to achieve the goals of IP. This includes not only designers, but also contractors, clients, owners and final users.

True sustainability has three key aspects that make up the Triple Bottom Line

- **Economic**: produce a long-term positive economic impact;
- **Environment**: Sustainable environmental practices;
- **Social responsibility**: Improving the lives of those with whom the buildings interacts.
Nature inspires us when designing green buildings.

Our holistic approach to design considers architecture as an organism, not an isolated structure, related to environment in many different ways and levels: real sustainability is reached when all components belong to an integrated system as organs do to a organism.

2.2. metodological approach
3. why green

TYPICAL GREEN BUILDING GUIDELINE ISSUES

INVESTOR\CONTRACTOR:

- Higher sale price
- Quicker sales
- Ability to secure finance
- Rapid return on investment
- Reduced refurbishment costs
- Reduced vacancies
- Anticipation of the 2020 goals, Directive 2010/31/EU and local standards
- Increased market value

BUYER\TENANT:

- Health and well-being spaces
- Lower operating costs
- Lower maintenance costs
- No short-term costs for adaptation to environmental standards
- Asset prestige in respect of the 2020 goals
- Compliance to sustainability legislation and over standard performances

Energy efficiency and renewable energy
- Building orientation to take advantage of solar access, shading, and natural lighting
- Thermal efficiency of building envelope, fenestration, heating, ventilating, and air-conditioning (HVAC) system
- Alternative energy sources

Direct and indirect environmental impact
- Integrity of site and vegetation during construction, indigenous building materials
- Minimization of disturbance to the watershed and additional non-point-source pollution

Resource conservation and recycling
- Use of recyclable products and those with recycled material content
- Minimization of construction waste, sanitary waste
- Water saving device, rain water for irrigation

Indoor environmental quality
- Adequate fresh air supply
- Adequate acoustic control
- Minimization of business-machine and occupant pollution

Community issues
- Access to site by mass transit and pedestrian or bicycle paths
- Attention to culture and history of community
- Climatic influences and regional environmental products

in line with the EU 2020 goals:
- 20% of greenhouse gas emission
- 20% of energy used
- 20% of energy from renewable resources
4. process

**Project Management**
- Integrated project delivery
- Works management
- LEED certification process

**Design Review**
- Concept
- Integrated sustainable design (preliminary and for bidding)
- Authorization procedure
- Detailed design
- Building registration on LEED Online
- LEED/GBC certification procedure start up

**Construction Review**
- Works management
- Safety and health management (design, work site)
- Checks on LEED/GBC requirements during construction

**Certification**
- Energy performance certification compliant with Italian standards
- Client satisfaction interviews
- LEED/GBC certification document
- Water and energy consumption data

**Start**
- Owner’s requirements
- Knowledge of the asset
- Feasibility study
- Contract drafting

**Profile**
- Approach
- Why green
- Process
- Marketing & visibility
Every certified green building is channeled in a multimedia communication program that aims at promoting the efforts of owners and sponsors in energy and environmental sustainability.

Visibility concerns the following green issues:

- OGB diffusion channels (website, FB, G+, Twitter, Conferences and workshops, on site signage)
- USGBC diffusion channels (provided for by contract)
- Press review
- Taylored workshops
- Taylored website
- Project certification trademark

GREEN INFORMATION CAMPAIGN
LEED

Leadership in Energy and Environmental Design

Each different version of LEED protocol depends on the project type and is based on 7 major areas (see below) organized in credits and prerequisites. Prerequisites are mandatory. Each area has a group of credits that define a particular sustainability goal.

Integrative design

LEED is a leading-edge system for certifying high-performance buildings and sustainable neighborhoods, created through volunteer committees and implemented in more than 110 countries. LEED was developed in United States by USGBC starting from 1993, and the LEED Green Building Rating System is the primary vehicle for promoting sustainable design and construction. LEED is a complex rating system that defines high-performance green building and environmental impact in these major areas: energy efficiency, sustainable site, water efficiency, material and resources, waste management and indoor environmental quality.

Consultancy services for LEED certification
Management and coordination of the process
Commissioning and Energy Modeling

Compliance of materials/products to LEED credits requirements
Consultancy services for material/products qualification in order to match protocols requirements

Certification Levels

The ‘greenness’ of a LEED project is based on a 100 point scale with an additional 10 bonus points.

There are four levels of LEED certification:

- **Gold – da 60 a 79**
- **Silver – da 50 a 59**
- **Certified – da 40 a 49**
- **Platinum – da 80 a 110**

Leed rating systems

BUILDING DESIGN & CONSTRUCTION
HOMES
INTERIOR DESIGN & CONSTRUCTION
NEIGHBORHOOD DEVELOPMENT
BUILDING OPERATIONS AND MAINTENANCE

The Directive 2010/31/EU (D.L. n. 63/2013, Italian legislation) foresees compulsory nearly Zero-energy buildings construction for all public owners (starting from 2018) and private owners (starting from 2020). We design buildings that self-produce all the energy they need.
A. GREEN SERVICES: domestic garden

Urban gardens
They allow municipalities to increase green public areas thus fostering the environmental quality standards and reducing pollution. Urban green areas give new value to downgraded territories and slowdown land consumption. Urban gardens give added value to the landscape making cities healthier: trees, shrubs and lawn can better climate and quality life style reducing widely CO2 imprint.

Domestic gardens
Gardens’ house allow more healthy and calm life to people giving at the same time to children direct contact with nature. Native plants use less environmental resources (e.g. water), grow more prosperously producing more and most of all give shadow to the ground preserving its moisture (saving water). A sustainable garden design involves natural techniques, non-invasive activities and organic methods.

Compost
Compost is a key start-point for all sustainable agricultural techniques. It is a very effective method for managing the house food waste. The compost bin should be placed in a sunny area of the garden and tall, in order to facilitate the oxygenation and the heat conservation during winter.

Black water
Phytodepuration allows to save water by using it twice: first one to wash, second one to irrigate after depuration by plants. This means an immediate water waste reduction of 50% against a very low cost!
credits

Sustainable and LEED Consulting

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