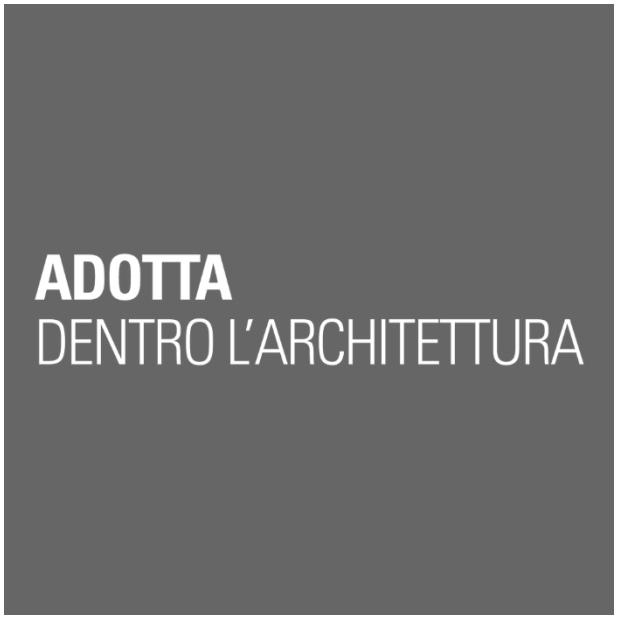
OPERATING PROCEDURES ACCORDING TO SUSTAINABILITY PROTOCOLS



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SUMMARY

1. PREMISE

The work presented was born out of the will of Adotta Italia Srl

The aim is to carry out a preliminary bibliographic qualitative framework[1] for the products under study with respect to the building sustainability protocols.

The considerations [2]were developed on the basis of the information made available by the company regarding the products under study.

This document is a support document in the Life Cycle context Assessments .

2. THE CONTEXT

The construction and maintenance of buildings can involve environmental risks, with possible repercussions for the abiotic and biotic components. The growing interest in these issues has prompted decision makers to reconsider construction.

At an international level, building rating systems and labels have been developed and disseminated containing sustainability criteria from the planning stages to the decommissioning or redevelopment stages.

These guidelines make it possible to control and improve the energy-environmental performance of buildings, through the analysis of predefined indicators.

LCA (Life Cycle Assessment) is a management and control tool with which it is possible to measure the environmental, economic and social sustainability of systems by adopting a life cycle perspective. LCA is an approved tool in the field of environmental management, green procurement and communication.

Its application is effective within specific methodologies related to the area under investigation:

A. **Assessment :** Evaluate environmental performance;
B. **Costing :** Evaluate economic performance;
C. **Social:** Evaluate social benefits.

[1] *The manufacturer is responsible for what is reported in the supporting documentation. The considerations were elaborated on the basis of the information provided by him. It will be the responsibility of the company to regularly review and revise the materials should any changes relating to the nature of the products or additional information to support them emerge*

[2] *It is specified that worldwide only accredited organizations can:*

1. *Approve the documentation submitted in support of what is required by the protocol by a designer, manufacturer, or company in the supply chain involved in the design of the system;*
2. *approve the scores;*
3. *Issue a certificate.*

In the principles of the building rating system, the building system is enhanced thanks to the solutions adopted in the design phase. Having acknowledged the objectives envisaged by the protocol to be applied, the possession of documentation certifying the properties and consequent contributions to the result that can be achieved also thanks to the products that can be used in the system must be demonstrated. Green building tools can be applied to different types of buildings, promoting a proactive and integrated system that studies their life cycle and intervenes in the construction and maintenance phases, allowing decision makers to favor rewarding choices to the detriment of standard solutions proposed by the supply chain. Those who intend to demonstrate their contribution to green building must first identify the context of intervention and the type of use of the system. Overall, the standards are structured into specific thematic areas. These may include:

- Pre -attributes functional to the context of intervention;
- Functional attributes for the use of the system;
- A score or range of scores inherent to (and to which a product may compete directly or indirectly);
- The type of building to apply the pre -attributes and attributes to;
- The purpose of the pre -attribute or attribute and how to implement it.

The products proposed in a project can contribute to the achievement of services in specific thematic areas if they respond to what is required for the foreseen applications .

3. RATING FRAMEWORK

The framework described in this report had the primary objective of identifying the thematic areas attributable to the products under study

Table 1

THEME AREA	SCOPE
INTEGRATIVE PROCESS	Promote opportunities for integrated and cost-effective adoption of design solutions through initial analysis of the interrelationships between systems
LOCATION AND TRANSPORT	Promote sustainable and accessible transport systems for accessing the building
SITE SUSTAINABILITY	Promote choices to protect the site and limit the impact generated by construction and maintenance activities
EFFICIENT WATER MANAGEMENT	Promote the monitoring of water consumption and the application of water-saving tools and technologies
ENERGY-ATMOSPHERE	Promote the monitoring of system efficiency focused on energy saving through the use of energy from renewable sources
MATERIALS-RESOURCES	Promote the purchase of sustainable goods and measures that allow the recycling of waste produced by the building
INDOOR ENVIRONMENTAL QUALITY	Promote healthiness, comfort of indoor environments
INNOVATION	Promote innovative management systems or policies
REGIONAL PRIORITIES	Promote attention to the unique and distinctive characteristics of the localities where the project is located

The in-depth study that followed had the aim of assessing the company's ability to guarantee traceability and transparency regarding the contribution that can be pursued in the identified thematic areas.

Table 2

THEME AREA	PRE-ATTRIBUTE/ATTRIBUTE	SCORE*	SCOPE
SITE SUSTAINABILITY (SS)	SS Rating – design and construction guidelines for tenants	1	Sensitize tenants to the inclusion of sustainable features in the design and implementation of their improvement interventions
MATERIALS AND RESOURCES (MR)	Pre -attribute MR - construction and demolition waste management planning	Not expected	Reduce construction and demolition waste sent to landfills and incinerators, through the recovery, reuse and recycling of materials
	MR rating - reduction of the life cycle impact of the building	From 2 to 6	Foster adaptive reuse and optimize the environmental performance of products and materials
	MR rating - declaration and optimization of construction products – EPD declarations	From 1 to 2	Promote the use of products and materials for which life cycle information is available and which have environmentally, economically and socially preferable impacts. Reward project groups for choosing manufacturers whose products have proven better environmental impacts throughout their life cycle
	MR rating - declaration and optimization of construction products - origin of raw materials	From 1 to 2	Promote the use of products and related materials for which life cycle information is available and which have a low economic, environmental and social impact. Reward teams that select products that are verified and have been responsibly sourced or sourced
	MR rating - declaration and optimization of construction products – components	2	Promote the use of products and materials for which life cycle information is available and which have environmentally, economically and socially preferable impacts. Reward project teams for selecting products whose chemical components are cataloged according to an accepted methodology and which are proven to have minimal use and generation of harmful substances. Reward raw material producers who have made proven improvements to the life cycle impacts of their products
	biopersistent toxic substances – lead, cadmium and copper	2	Reduce the release of persistent bioaccumulative and toxic chemicals (PBTs) associated with the lifecycle of building materials
	MR rating - construction and demolition waste management	2	Reduce construction and demolition waste sent to landfills and incinerators, through the recovery, reuse and recycling of materials

*For further details, see the attachments to the report. *Refers to the Rating within which the products can contribute to the achievement of the required purpose*

THEME AREA	PRE-ATTRIBUTE/ATTRIBUTE	SCORE*	SCOPE

INDOOR ENVIRONMENTAL QUALITY (EQ)	EQ rating - low-emitting materials	From 1 to 3	Reduce the concentration of chemical contaminants that can harm air quality, human health, productivity and the environment
	EQ rating - indoor air quality management plan under construction	1	Promote the well-being of construction workers and building occupants by minimizing air quality problems associated with the construction and renovation processes
INNOVATION (IN)	Rating IN - innovation	From 1 to 5	Encourage exemplary or innovative performance for projects

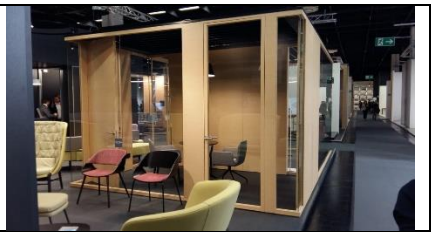
*For further details, see the attachments to the report. *Refers to the Rating within which the products can contribute to the achievement of the required purpose*

4. PRODUCT FRAMEWORK

The product under evaluation is:

WALLEN	Glass partition wall for offices with aluminum and wood structure

ANNEX A:

WALLEN	

PRE-ATTRIBUTE/ATTRIBUTE	CONDITIONS	RATING CONTRIBUTIONS
SS Rating – design and construction guidelines for tenants	Recommendations, accompanied by examples, for the sustainability of strategies, products, materials and services	The company applies an analysis methodology with a life cycle approach for environmental parameters
Pre -attribute MR - construction and demolition waste management planning	Provide a final report detailing the major waste streams generated, including landfill/incineration and separate waste rates	The company carries out a waste inventory
MR rating - reduction of the life cycle impact of the building	1) Reuse or recover the materials used or 2) Analysis of the life cycle of the building	The company is able to provide information about the controlled parameters and the end of life through an LCA analysis
MR rating - declaration and optimization of construction products – epd declarations	1) Environmental product declaration according to the established standards; 2) Other environmental product declaration schemes approved by accredited organisations 3) Use of products sourced (extracted, processed and purchased) within 160 km (100 miles) of the project site	The company applies an analysis methodology with a life cycle approach for environmental parameters
MR rating - declaration and optimization of construction products - origin of raw materials	Provide a report of raw material suppliers	The company knows and catalogs its direct suppliers

rating - declaration and optimization of construction products – components	1) Provide an approved material ingredient report from accredited organizations, or 2) Optimize ingredients, through an international compliance program or pathway approved by accredited organizations	The company can catalog any ingredients used by its suppliers
biopersistent toxic substances – lead, cadmium and copper	1) Prescribe not to use interior or exterior paints containing lead 2) Prescribe not to use interior or exterior paints containing intentionally added cadmium	The company is able to provide technical data sheets
MR rating - construction and demolition waste management	1) Diverting the waste stream to the landfill, or 2) Reduce the overall waste produced	The company is able to trace the end of life of its products
EQ rating - low-emitting materials	Satisfy the emission and content requirements according to the test methodologies established by the applicable legislation	If required, it will carry out the tests in the foreseen applications with reference to the compliance threshold limits for emissions
EQ rating - indoor air quality management plan under construction	Help minimize exposure of absorbent materials to VOC emissions	If required, it will carry out the tests in the foreseen applications with reference to the compliance threshold limits for emissions
Rating IN - innovation	Demonstrate exceeding of rating criteria leading to exemplary performance	The company can apply its knowledge to product development and control