



LCA4Regions

Interreg Europe



European Union
European Regional
Development Fund

LEED protocol: hints for policies

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Why this good practice?

The LEED's pathway could propose a set of hints to steer policies in a direction of both energy efficiency and resource efficiency, where the LCA can play an important role.

LEED: Leadership in Energy and Environmental Design

Voluntary scheme-protocol to get a certification,
always more used worldwide

Born: USA

Father/Mother: Green Building Council

Objective: Development of Sustainable-high
performance building and areas, **supporting all the
process: Design, build, management**

Few words on the certification procedure

Start: Project promoter → agree on and accept: "LEED Project Registration Agreement" e "LEED Project Certification Agreement"

End: Green Business Certification Inc (GBCI) issues a Certification

Base
(40-49 punti)



Argento
(50-59 punti)



Oro
(60-79 punti)



Platino
(80 punti e oltre)



The LEED approach is holistic,
flexible and articulate

First: Different kind of entities and scales

LEED for New Construction: New construction and
major renovations

LEED for Existing Buildings








LEED for Commercial Interiors

LEED for Homes

LEED for Neighborhood
Development

LEED for Schools

Second: Several Environmental aspects

-  **SS Sustainable Sites**
Sostenibilità del sito
-  **WE Water Efficiency**
Gestione delle Acque
-  **EA Energy & Atmosphere**
Energia & Atmosfera
-  **MR Material & Resources**
Materiali & Risorse
-  **IEQ Indoor Environmental Quality**
Qualità ambiente interno
-  **ID Innovation Design**
Innovazione nella Progettazione
-  **RP Regional Priority**
Priorità regionali

Where can we find Resource efficiency?

Sustainable sites

- Soil remedtion and requalification of the site;
- Alternative fuels

Water efficiency

- Reduction of use of water
- Efficient managment irrigation water

Material and Resources

- Reuse of building
- Construction waste management
- Reuse of materials
- Contents of recycled materials
- Local production materials

Regional priority (RP)

Hints and themes with a local value (critical environmental local issues)

The promoter and public institution have freedom

Some parameter is compulsory

Others are optional

The choice can be steered towards specific
priorities

LEED and LCA

A weaker LEED in the past with respect to scientific base for assessment, now stronger thanks to the use of LCA for Materials and Resources category

Walaa Salah Eldeen Ismaeel «Developing a Systemic framework for Applying LEED System Managing Energy and Materials Credits»
DOTTORATO DI RICERCA TEPAC – PHD –
Politecnico di Milano – 2013

LEED and LCA

Into Material and resources

Not compulsory parameter: Building life-cycle impact reduction

LCA of the whole building is required and this gives higher scores

LCA in building sector

The GBC Italia Position Paper on LCA in building

May 2019

**state of the art of
LCA in Italy**

key messages

priority actions

Need of one DB

**Designers need user-
friendly LCA software**

**A clear framework of
shared rules for the
application of the LCA
assessment**

The National Agency for New technologies and sustainable development (ENEA – our SH) is participating at the Arcadia Project.

The aim's the Arcadia Project is to create a national database of LCA to develop studies based on specific data.

Local use of LEED

Milan municipality

November 2019 : Green Business Certification Inc. (GBCI) recognised Milan among the first 5 LEED city in Europe (n° of building);

80 buildings certified

130 ongoing project aiming at following LEED pathway (not just building but areas)

Milan municipality

The new Milan Master Plan (2019)

into the Environmental Report of the Strategic Environmental Assessment (2019)

identifies LEED as one GP to be taken into consideration; in particular:

- GBC Home®,
- GBC Neighbourhood®

Lessons learnt

1. The way LCA is used in LEED and the analysis reported on its use can provide:

- significant hints for the use of LCA;
- provide some elements to support policies and choices (for exsmple integrate into the analysis and the policies both energy and resource efficiency).

2. An Institution can steer on its territory the application of LEED:

- Using it as a tool (Milan Master Plan);
- Orienting its use towards the local priorities.



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Thank you!

Questions welcome

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