



Green
Building
Council
Italia

21 marzo 2024

SEMINARIO TEMATICO

ESG e rigenerazione urbana

Edoardo Croci

LA MISURA DEI CRITERI ESG ALLA SCALA URBANA

Con il supporto di:



In collaborazione con:

PROSPECTA
FORMAZIONE
Alta formazione Architetti Ingegneri Geometri

www.gbcitalia.org

ESG E RIGENERAZIONE URBANA

LA MISURA DEI CRITERI ESG ALLA SCALA URBANA

SEMINARIO TEMATICO GBC

Edoardo Croci
Direttore SUR Lab, Università Bocconi

La tassonomia europea

- La Tassonomia è stata sviluppata con l'obiettivo di fornire uno strumento in grado di classificare in modo univoco le attività economiche al fine di aiutare investitori ed aziende nelle scelte su investimenti in attività sostenibili.
- La tassonomia è **innanzitutto uno strumento per le imprese destinato ad agevolare il loro accesso ai finanziamenti per la transizione verde**, e per il settore finanziario, a sostenere la creazione di portafogli di finanza sostenibile e a misurare il grado di sostenibilità degli investimenti.

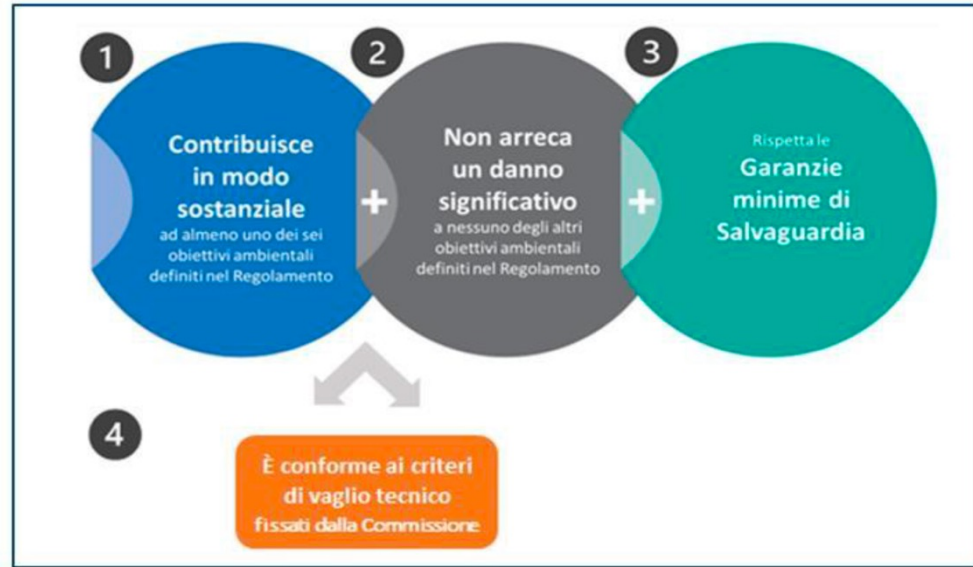
La tassonomia europea

Un'attività economica può essere considerata eco-sostenibile se:

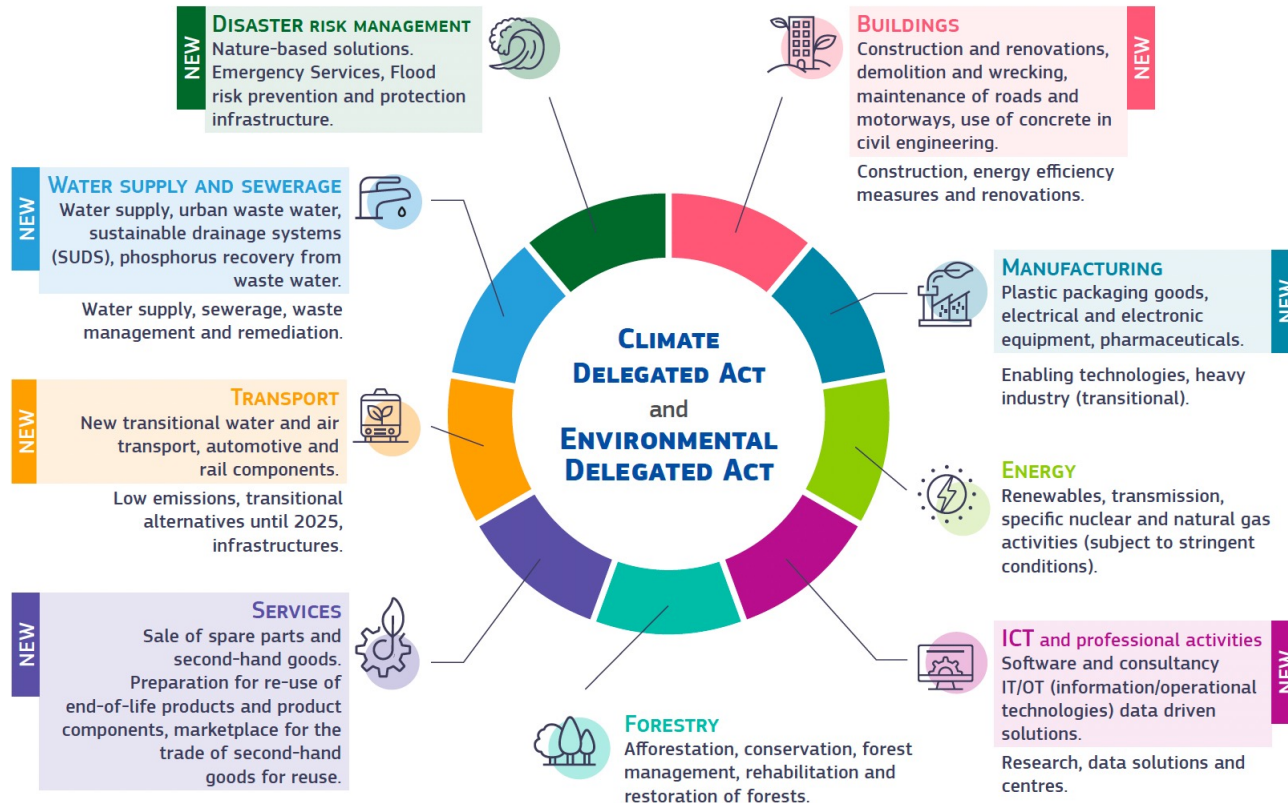
- fornisce un contributo al raggiungimento di uno, o più, dei 6 obiettivi ambientali
- non arreca un danno significativo (DNSH - Do No Significant Harm) agli altri obiettivi ambientali
- rispetta le garanzie minime di salvaguardia in materia di diritti umani
- rispetta le soglie prestazionali dei "criteri di vaglio tecnico"

I 6 obiettivi ambientali sono:

1. **Mitigazione del cambiamento climatico**
2. **Adattamento al cambiamento climatico**
3. **Uso sostenibile e tutela dell'acqua e delle risorse marine**
4. **Transizione verso un'economia circolare**
5. **Prevenzione e controllo dell'inquinamento**
6. **Tutela e ripristino della biodiversità e degli ecosistemi**



Settori e attività economiche della tassonomia



Attività ammissibili e allineate

ATTIVITA' AMMISSIBILE (eligible) :

Un'attività economica si definisce "ammissibile alla Tassonomia" quando risulta semplicemente inclusa nell'elenco delle attività economiche ecosostenibili contenuto negli atti delegati della Tassonomia.

ATTIVITA' ALLINEATA (aligned):

Un'attività economica si definisce "allineata alla Tassonomia" quando non solo risulta inclusa nell'elenco delle attività economiche ecosostenibili ma rispetta anche i criteri tecnici fissati dagli atti delegati della Tassonomia.

Tassonomia europea – Settore “Edilizia e immobiliare”

Il settore “Edilizia e immobiliare” si divide in diverse attività:

1. Costruzione di nuovi edifici
2. Ristrutturazione di edifici esistenti
3. Installazione, manutenzione e riparazione di apparecchiature per l'efficienza energetica
4. Installazione, manutenzione e riparazione di stazioni di ricarica per veicoli elettrici negli edifici
5. Installazione, manutenzione e riparazione di strumenti e dispositivi per la misurazione, la regolazione e il controllo delle prestazioni energetiche degli edifici
6. Installazione, manutenzione e riparazione di tecnologie di energia rinnovabile
7. Acquisto e proprietà di immobili

Nuovi edifici- criteri

Contributing to climate mitigation ^

Description v

Substantial contribution criteria ^

Constructions of new buildings for which:

1. The Primary Energy Demand (PED)⁽³⁴³⁾, defining the energy performance of the building resulting from the construction, is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council⁽³⁴⁴⁾. The energy performance is certified using an as built Energy Performance Certificate (EPC).
2. For buildings larger than 5000 m² ⁽³⁴⁵⁾, upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity⁽³⁴⁶⁾, and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative; where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing.
3. For buildings larger than 5000 m² ⁽³⁴⁷⁾, the life-cycle Global Warming Potential (GWP)⁽³⁴⁸⁾ of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.

Contributing to climate adaptation ^

Description v

Substantial contribution criteria ^

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.
2. The physical climate risks that are material to the activity have been identified from those listed in [Appendix A](#) to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:
 - a. screening of the activity to identify which physical climate risks from the list in [Appendix A](#) to this Annex may affect the performance of the economic activity during its expected lifetime;
 - b. where the activity is assessed to be at risk from one or more of the physical climate risks listed in [Appendix A](#) to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
 - c. an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- a. for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
 - b. for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios⁽⁶¹¹⁾ consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.
3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports⁽⁶¹²⁾, scientific peer-reviewed publications and open source⁽⁶¹³⁾ or paying models.
 4. The adaptation solutions implemented:
 - a. do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;
 - b. favour nature-based solutions⁽⁶¹⁴⁾ or rely on blue or green infrastructure⁽⁶¹⁵⁾ to the extent possible;
 - c. are consistent with local, sectoral, regional or national adaptation plans and strategies;
 - d. are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;
 - e. where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

Nuovi edifici- criteri 2/2

Contributing to circular economy ^

Description v

Substantial contribution criteria ^

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and with the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems and pre-demolition audits⁽⁷³⁾. The preparing for re-use⁽⁷⁴⁾ or recycling⁽⁷⁵⁾ of the non-hazardous construction and demolition waste generated on the construction site is at least 90% (by mass in kilogrammes), excluding backfilling⁽⁷⁶⁾. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2⁽⁷⁷⁾ using the Level 2 reporting format for different waste streams.

2. The life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand⁽⁷⁸⁾.

3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively. Compliance with this requirement is demonstrated by reporting on the Level(s) indicators 2.3⁽⁷⁹⁾ and 2.4⁽⁸⁰⁾ at Level 2.

4. The use of primary raw material in the construction of the building is minimised through the use of secondary raw materials⁽⁸¹⁾. The operator of the activity ensures that the three heaviest material categories used to construct the building, measured by mass in kilogrammes, comply with the following maximum total amounts of primary raw material used:

- a. for the combined total of concrete⁽⁸²⁾, natural or agglomerated stone, a maximum of 70% of the material come from primary raw material;
- b. for the combined total of brick, tile, ceramic, a maximum of 70% of the material come from primary raw material;
- c. for bio-based materials⁽⁸³⁾, a maximum of 80% of the total material come from primary raw material;
- d. for the combined total of glass, mineral insulation, a maximum of 70% of the total material come from primary raw material;
- e. for non-biobased plastic, a maximum of 50% of the total material come from primary raw material;
- f. for metals, a maximum of 30% of the total material come from primary raw material;
- g. for gypsum, a maximum of 65% of the material come from primary raw material.

The thresholds are calculated by subtracting the secondary raw material from the total amount of each material category used in the works measured by mass in kilogrammes. Where the information on the recycled content of a construction product is not available, it is to be counted as comprising 100% primary raw material. In order to respect the Waste Hierarchy and thereby favour re-use over recycling, re-used construction products, including those containing non-waste materials reprocessed on site, are to be counted as comprising zero primary raw material. Compliance with this criterion is demonstrated by reporting in accordance with the Level(s) indicator 2.1⁽⁸⁴⁾.

5. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future maintenance, recovery, and reuse, for example using EN ISO 22057:2022 to provide Environmental Product Declarations⁽⁸⁵⁾. The information is stored in a digital format and is made available to investors and clients on demand. In addition, the operator ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

Ristrutturazione di edifici esistenti - criteri

Contributing to climate mitigation ^

Substantial contribution criteria ^

The building renovation complies with the applicable requirements for major renovations⁽³⁶⁵⁾.

Alternatively, it leads to a reduction of primary energy demand (PED) of at least 30 %⁽³⁶⁶⁾.

Contributing to circular economy ^

Substantial contribution criteria ^

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems and pre-demolition audits⁽⁹⁷⁾. The preparing for re-use⁽⁸⁹⁾ or recycling⁽⁹⁹⁾ of the non-hazardous construction and demolition waste generated on the construction site is at least 70% (by mass in kilogrammes), excluding backfilling⁽¹⁰⁰⁾. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 70% threshold by reporting on the Level(s) indicator 2.2⁽¹⁰¹⁾ using the Level 2 reporting format for different waste streams.

2. The life cycle Global Warming Potential (GWP)⁽¹⁰²⁾ of the building's renovation works has been calculated for each stage in the life cycle, from the point of renovation, and is disclosed to investors and clients on demand.

3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively. The operator of the activity demonstrates compliance with this requirement by reporting on the Level(s) indicators 2.3⁽¹⁰³⁾ and 2.4⁽¹⁰⁴⁾ at Level 2.

4. At least 50% of the original building is retained. This is to be calculated based on the gross external floor area retained from the original building using the applicable national or regional measurement methodology, alternatively using the definition of 'IPMS 1' contained in the International Property Measurement Standards⁽¹⁰⁵⁾.

5. The use of primary raw material in the renovation of the building is minimised through the use of secondary raw materials⁽¹⁰⁶⁾. The operator of the activity ensures that the three heaviest material categories that have been newly added to the building in the renovation of the building, measured by mass in kilogrammes, comply with the following thresholds regarding the maximum amount of primary raw material used:

Contributing to climate adaptation ^

Substantial contribution criteria ^

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.
2. The physical climate risks that are material to the activity have been identified from those listed in [Appendix A](#) to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:
 - a. screening of the activity to identify which physical climate risks from the list in [Appendix A](#) to this Annex may affect the performance of the economic activity during its expected lifetime;
 - b. where the activity is assessed to be at risk from one or more of the physical climate risks listed in [Appendix A](#) to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
 - c. an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- a. for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
 - b. for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios⁽⁶³³⁾ consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.
3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports⁽⁶³⁴⁾, scientific peer-reviewed publications and open source⁽⁶³⁵⁾ or paying models.
 4. The adaptation solutions implemented:
 - a. do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;
 - b. favour nature-based solutions⁽⁶³⁶⁾ or rely on blue or green infrastructure⁽⁶³⁷⁾ to the extent possible;
 - c. are consistent with local, sectoral, regional or national adaptation plans and strategies;
 - d. are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;
 - e. where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

Il principio DNSH

Il principio del **“non arrecare un danno significativo” (DNSH - “Do No Significant Harm”)** nasce per coniugare crescita economica e tutela degli ecosistemi, garantendo che gli investimenti nell’Unione Europea siano realizzati senza pregiudicare le risorse ambientali e contribuiscano al raggiungimento degli obiettivi del Green Deal.

Il principio DNSH è stato introdotto dal **Regolamento UE 2020/852** sulla **Tassonomia UE delle attività sostenibili**, i cui Atti delegati contengono i criteri di vaglio tecnico da considerare per valutare se un’attività arrechi un danno significativo all’ambiente, considerando i **sei obiettivi ambientali** definiti nella Tassonomia.



Criteria DNSH per le nuove costruzioni

Climate mitigation ^

The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels.

The Primary Energy Demand (PED)⁽⁶¹⁶⁾ setting out the energy performance of the building resulting from the construction does not exceed the threshold set for the nearly zero-energy building (NZEB) requirements in national regulation implementing Directive 2010/31/EU. The energy performance is certified using an as built Energy Performance Certificate (EPC).

Water ^

Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in [Appendix E](#) to this Annex:

- wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min;
- showers have a maximum water flow of 8 litres/min;
- WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres;
- urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.

To avoid impact from the construction site, the activity complies with the criteria set out in [Appendix B](#) to this Annex.

Biodiversity ^

The activity complies with the criteria set out in [Appendix D](#) to this Annex.

The new construction is not built on one of the following:

- arable land and crop land with a moderate to high level of soil fertility and below ground biodiversity as referred to in the EU LUCAS survey⁽⁶²⁹⁾;
- greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List⁽⁶³⁰⁾ or the IUCN Red List⁽⁶³¹⁾;
- land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, is in accordance with the FAO definition of forest⁽⁶³²⁾.

Climate adaptation ^

The activity complies with the criteria set out in [Appendix A](#) to this Annex.

Circular economy ^

At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol⁽⁶¹⁷⁾. Operators limit waste generation in processes related to construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste.

Building designs and construction techniques support circularity and in particular demonstrate, with reference to ISO 20887⁽⁶¹⁸⁾ or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling.

Pollution prevention ^

Building components and materials used in the construction comply with the criteria set out in [Appendix C](#) to this Annex.

Building components and materials used in the construction that may come into contact with occupiers⁽⁶¹⁹⁾ emit less than 0,06 mg of formaldehyde per m³ of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of test chamber air, upon testing in accordance with CEN/EN 16516⁽⁶²⁰⁾ or ISO 16000-3⁽⁶²¹⁾ or other equivalent standardised test conditions and determination methods⁽⁶²²⁾.

Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example using standard ISO 18400⁽⁶²³⁾.

Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.

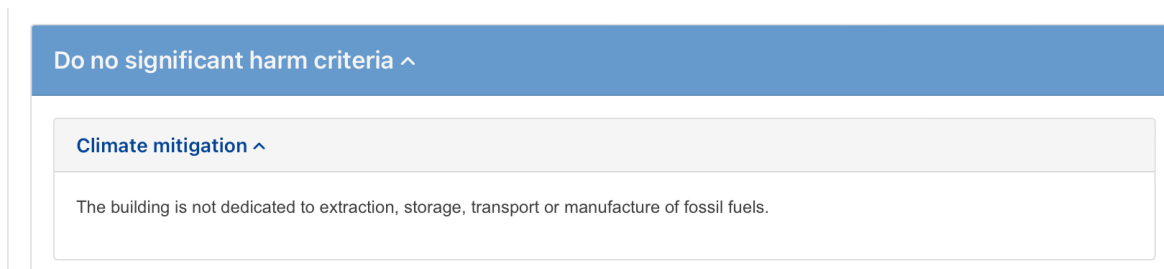
Criteri DNSH ristrutturazione edifici esistenti

I criteri DSNH per la «Ristrutturazione di edifici esistenti» ricalcano quelli definiti per la «Nuove costruzioni» per i settori:

- *Adattamento al cambiamento climatico*
- *Circular economy*
- *Acque*
- *Prevenzione dell'inquinamento*

Per il settore *Biodiversità* i criteri non sono ancora stata definiti

Per il settore *Mitigazione al cambiamento climatico* sono i seguenti:



The image shows a screenshot of a web interface. At the top, there is a blue header bar with the text "Do no significant harm criteria ^". Below this, there is a light gray box containing the text "Climate mitigation ^". Underneath the gray box, there is a white box with a thin border containing the text "The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels."

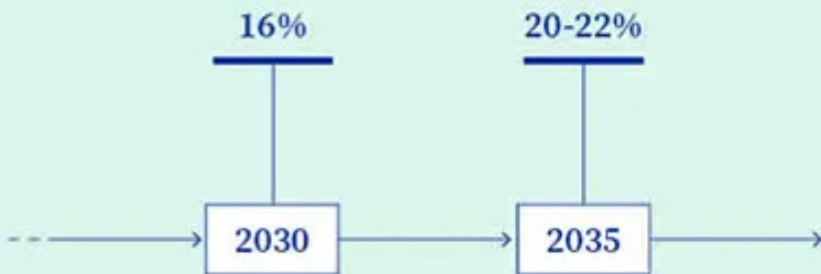
Aggiornamento EPBD – case green – edifici nuovi



Aggiornamento EPBD – case green – edifici esistenti

→ Edifici residenziali

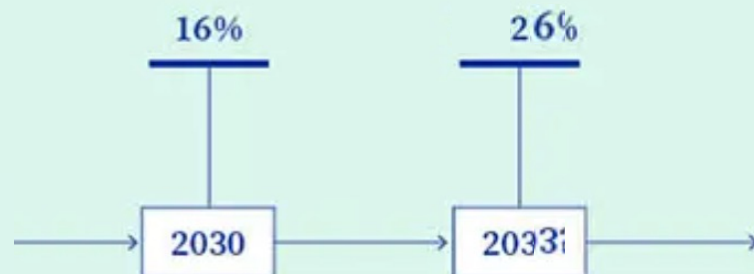
Il consumo medio di energia primaria di tutti gli edifici residenziali dovrebbe diminuire almeno del:



Dal 2050, il parco immobiliare nazionale dovrebbe diventare a emissioni zero.

→ Edifici non residenziali

Il consumo medio di energia primaria di tutti gli edifici non residenziali dovrebbe diminuire almeno del:



Dal 2050, il parco immobiliare nazionale dovrebbe diventare a emissioni zero.

ESG framework



Environmental

- Renewable fuels
- Greenhouse gas (GHG) emissions
- Energy efficiency
- Climate risk
- Water management
- Recycling processes
- Emergency preparedness



Social

- Health and safety
- Working conditions
- Employee benefits
- Diversity and inclusion
- Human rights
- Impact on local communities



Governance

- Ethical standards
- Board diversity and governance
- Stakeholder engagement
- Shareholder rights
- Pay for performance

Il concetto di investimento responsabile comprende i dei fattori ambientali, sociali e di governance (ESG) nei processi di investimento e nel processo decisionale. I fattori ESG coprono un ampio spettro di questioni che tradizionalmente non rientrano nell'analisi finanziaria.

A differenza dell'SRI, che si basa su criteri etici e morali e utilizza criteri per lo più negativi, come non investire in alcol, tabacco o armi da fuoco, gli investimenti ESG si basano sul presupposto che i fattori ESG abbiano rilevanza finanziaria.

Nel 2005 UNEP-FI ha prodotto il cosiddetto "Freshfield Report" che ha dimostrato che le questioni ESG sono rilevanti per la valutazione finanziaria. Sulla base di ciò, i Principles for Responsible Investment (PRI) sono stati lanciati alla Borsa di New York nel 2006.

Driver dell'adozione di un approccio ESG alla rigenerazione urbana



Conformità normativa



Sostenibilità supply chain



Competitività sul mercato



Responsabilità sociale



Gestione del rischio



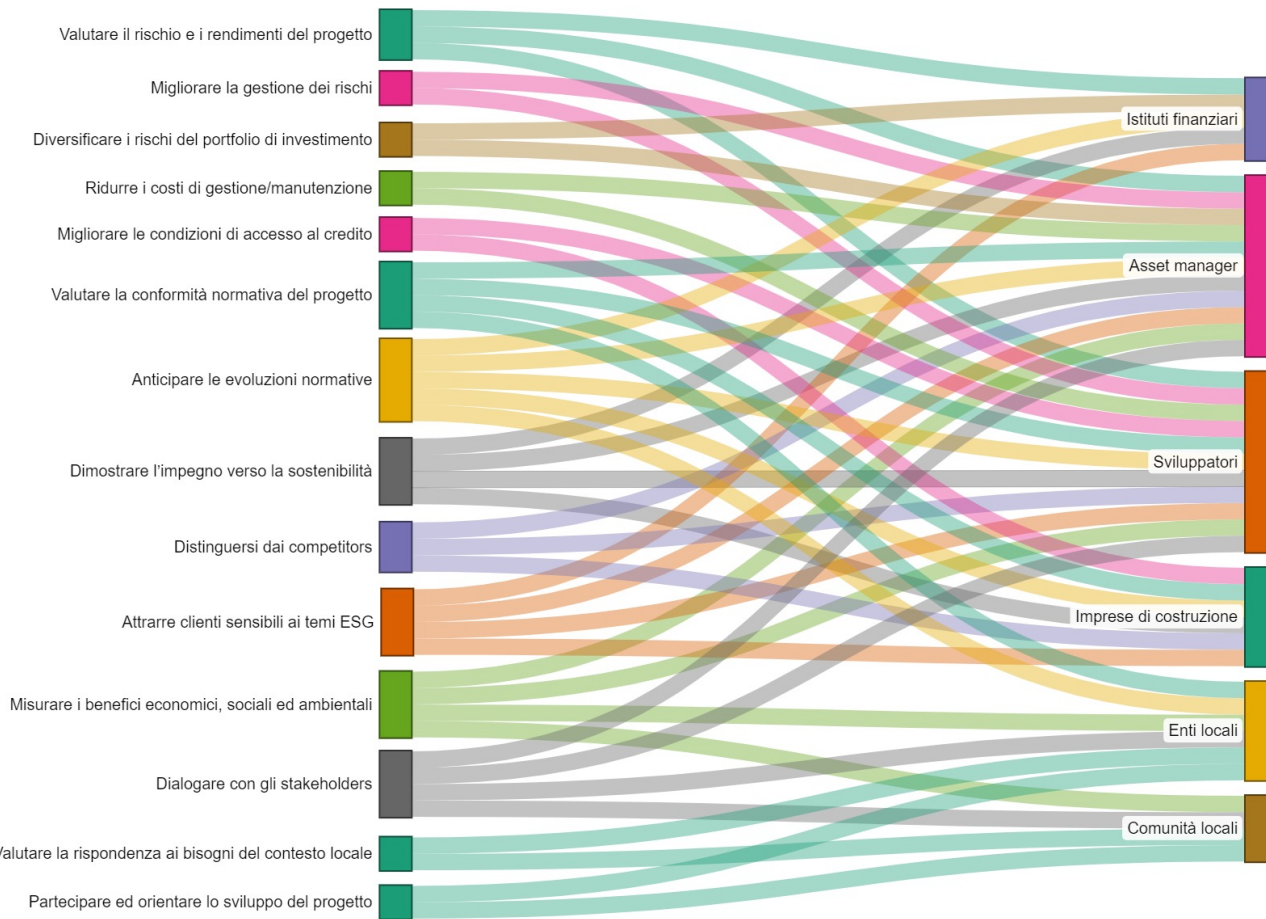
Relazione con gli stakeholder



Università
Bocconi

SUR Lab
Sustainable Urban
Regeneration Lab

Benefici di un approccio ESG per gli attori della rigenerazione urbana



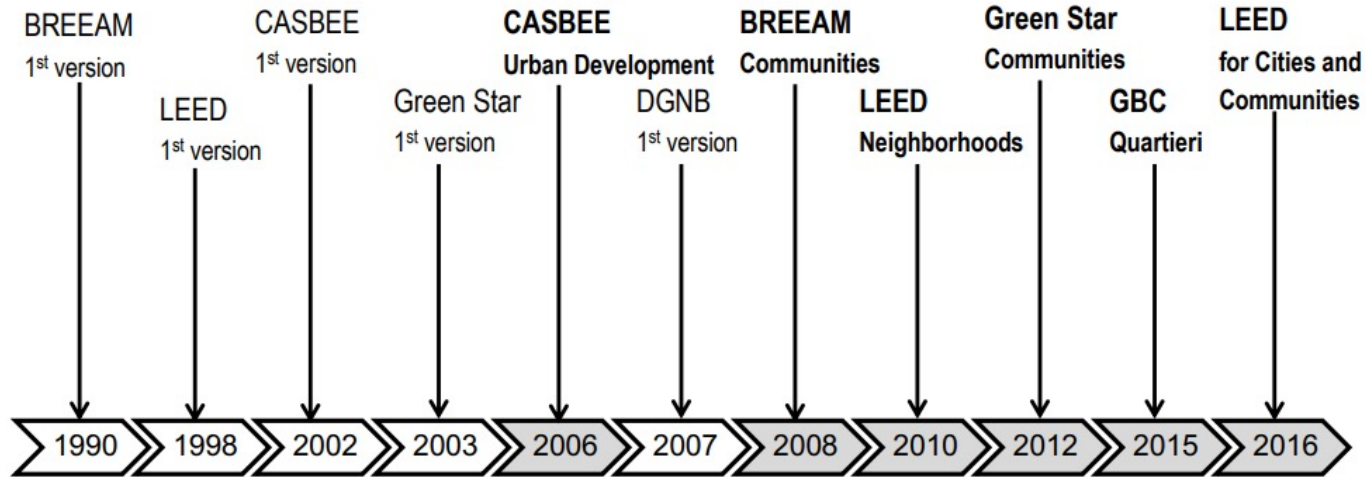
Università Bocconi

SUR Lab
Sustainable Urban Regeneration Lab

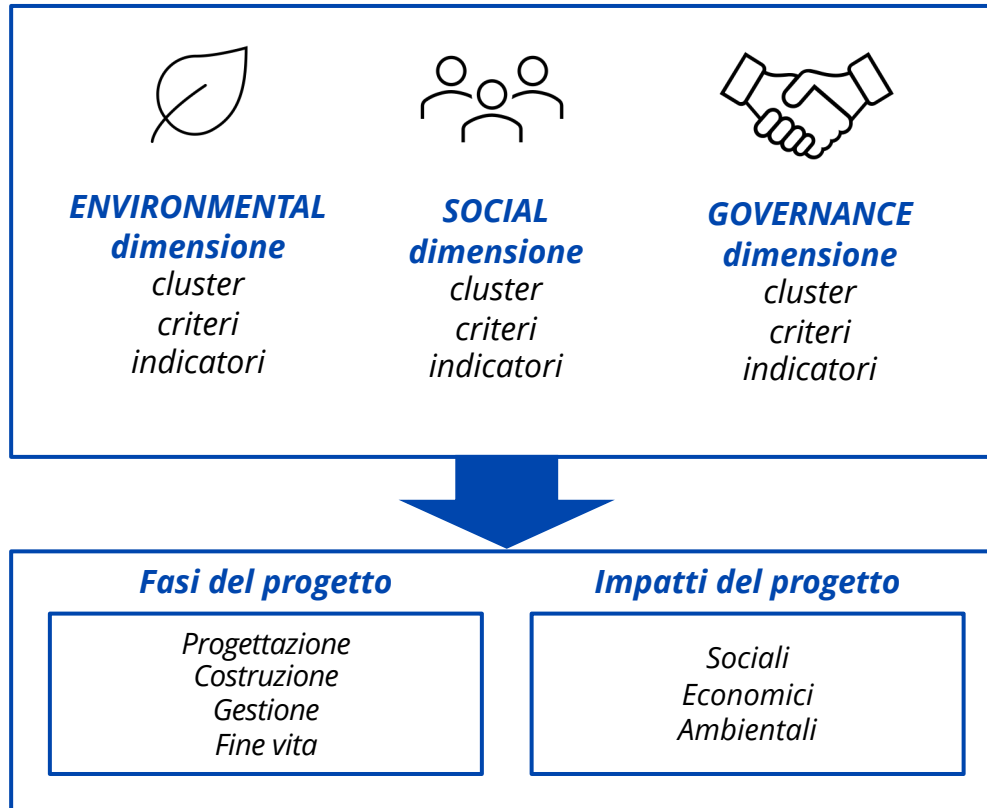
Varietà di strumenti per la valutazione di progetti infrastrutturali

| Tipologia | Scopo dello strumento | Esempi |
|---|--|--|
| Principi | sostenere l'integrazione della sostenibilità a livello istituzionale o strategico | International Good Practice Principles for Sustainable Infrastructure (UNEP) |
| Linee guida | rendere operativi i principi di sostenibilità ed applicarli ai progetti | Guidelines of Sustainable Infrastructure (Chinese International Contractors association) |
| Checklist | incorporare obiettivi di sostenibilità nei progetti | Gender Analysis Toolkit for Transport |
| Standard | fornire informazioni sulla conformità di progetti o asset a un determinato insieme di criteri di sostenibilità | SuRe, Envision, CEEQUAL, ISO |
| Sistemi di rating e certificazione | fornire una valutazione quantitativa della sostenibilità di un progetto/asset e/o certificarla | LEED, BREEAM, WELL |
| Valutazione d'impatto | valutare gli impatti di progetti o asset sull'ambiente e sulle comunità locali | Resource Manual for Strategic Environmental Assessments (UNECE) |
| Valutazione economico-finanziaria | analizzare il valore economico/finanziario e i rischi connessi ai progetti | SAVi, TREDIS, Autocase |
| Benchmark di sostenibilità | confrontare le performance di sostenibilità di asset o fondi | GRESB |
| Software per lo sviluppo di progetti | supportare la preparazione e la gestione di progetti sostenibili | SOURCE |
| Strumenti di modellizzazione | simulare sistemi economici, sociali e fisici per supportare le decisioni | National Infrastructure Systems Model |

Evoluzione dei sustainability rating system



Modello logico interpretativo



Università
Bocconi

SUR Lab
Sustainable Urban
Regeneration Lab

Framework ESG per la rigenerazione urbana: Cluster rilevanti

Environmental



- Land remediation
- Land use and transformation
- Energy management
- Water and wastewater management
- Waste management
- Materials and products sustainability
- Climate mitigation
- Climate adaptation
- Sustainable mobility
- Air quality
- Light/water/noise/other pollution
- Indoor light comfort
- Indoor thermal comfort
- Nature Based Solutions
- Local food sourcing

Social



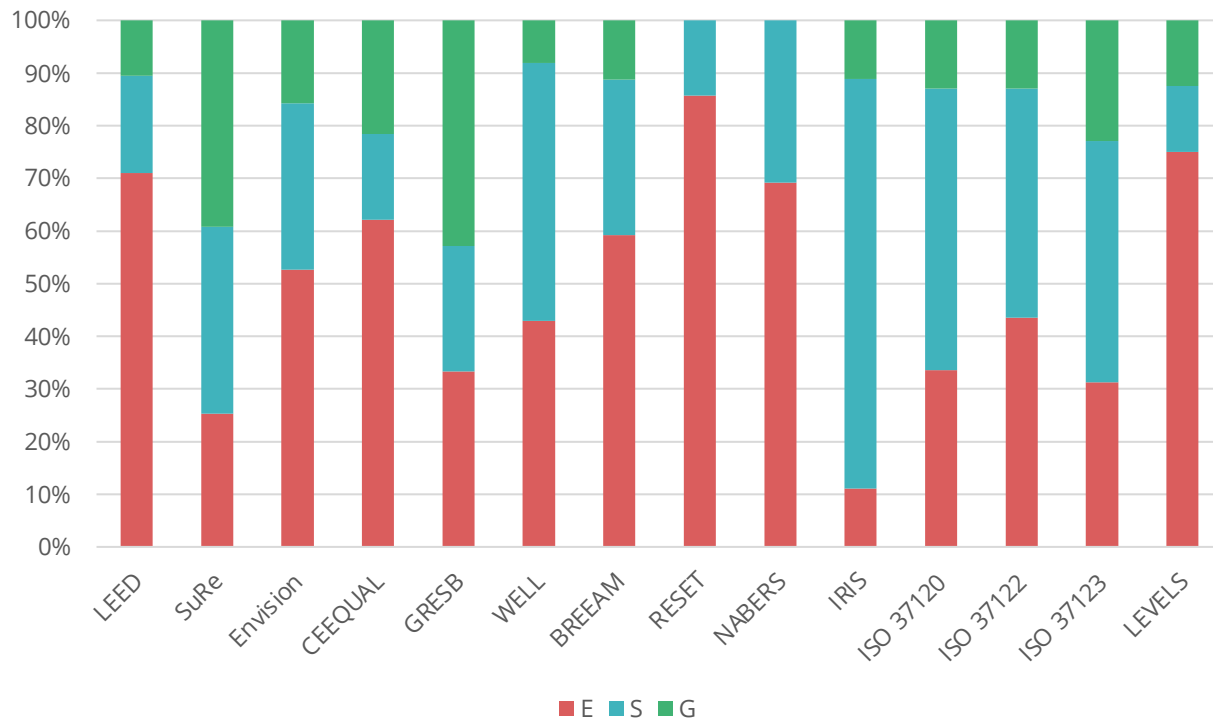
- Inclusiveness
- Climate vulnerability
- Community engagement
- Customer satisfaction
- Digitalization
- Economic development
- Education
- Functional and social mix
- Health protection
- Public safety
- Services accessibility
- Social housing
- Social justice
- Social value

Governance



- Financial sustainability
- Partnerships
- Urban planning policy and regulation
- Responsible management
- Responsible labor practices
- Processes and reporting
- Emergency and Disaster Risk Management

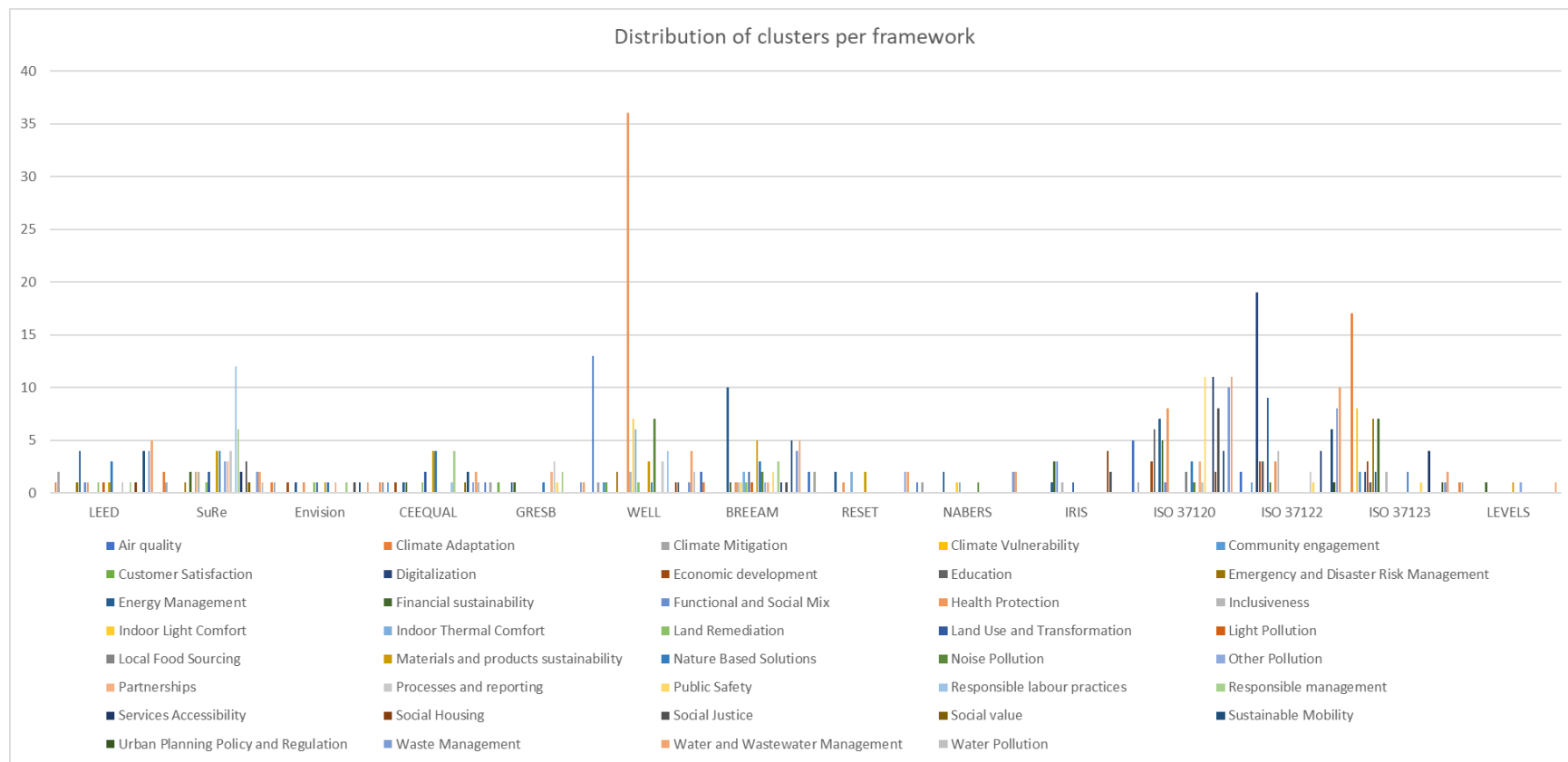
Analisi degli strumenti esistenti: dimensioni



Università
Bocconi

SUR Lab
Sustainable Urban
Regeneration Lab

Analisi degli strumenti esistenti: cluster



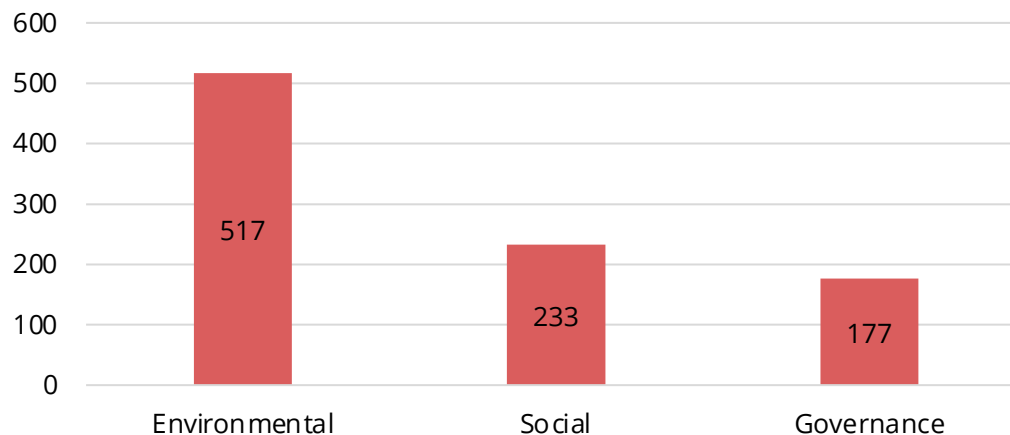
KPI per la valutazione in un framework ESG

La scelta dei KPI si fonda sulla loro capacità di fornire un riferimento oggettivo e comparabile di valori che influiscono in modo determinante nella **generazione di valore**.

Criteri di selezione dei KPI:

- i) **valutare l'adeguatezza degli indicatori** in termini di congruenza con il framework ESG;
- ii) **valutare la significatività degli indicatori rispetto agli obiettivi;**
- iii) **verificare la popolabilità.**

Indicatori presenti nei framework analizzati



Paper download

Bocconi

SUR LAB SUSTAINABLE URBAN REGENERATION LAB

ABOUT

TEAM

RESEARCH

SUR ATLAS

EDUCATION

PUBLICATIONS

NEWS & EVENTS

TALKING ABOUT US



Università
Bocconi

SUR Lab
Sustainable Urban
Regeneration Lab

<https://surlab.unibocconi.eu/publications/sur-lab-position-paper-series>

Attività formative del SUR Lab

Corso elective MSc - Sustainable urban regeneration

MOOC – Sustainable Urban Regeneration



Università
Bocconi

SUR Lab
Sustainable Urban
Regeneration Lab

edoardo.croci@unibocconi.it

Università Commerciale Luigi Bocconi

Via Röntgen 1 | 20136 Milano – Italia |
surlab@unibocconi.it | www.surlab.unibocconi.eu



Università
**Università
Bocconi**

SUR Lab
Sustainable Urban
Regeneration Lab