

Energy efficiency & decarbonization

an holistic approach for our cities and our communities

Antonello Magliozzi
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Our Global Sustainability statement



“Our company’s story began back in 1888 in the Netherlands. We started out developing unusable land into places for people to live and establish communities. Our name comes from the ancient Greek ‘Arcadia’, a mythical utopia in which people live in harmony with nature. And our logo’s icon is the fire salamander, an animal that thrives only in a well-balanced ecosystem.

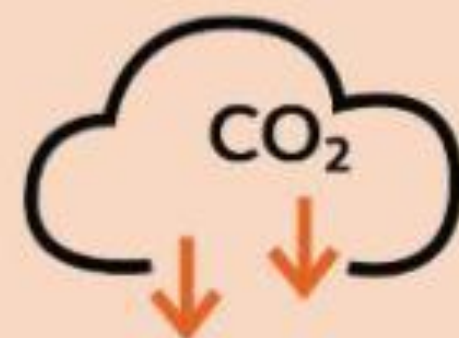
Given our origins and the fact that **improving quality of life** has always been at the heart of what we do, it is only natural that we would evolve into a company driven by our commitment to **maximize our impact in creating a more sustainable world.**”

We’re committed to...



By 2021

Carbon neutral target in our operations



2030

Approximately 50%* reduction
in our carbon emissions from our
2019 benchmark

*aligned with a Science Based Target of 1.5C

#1

Continue to lead
ESG risk rankings in our industry



Sustainable Development Goals
(SDGs)

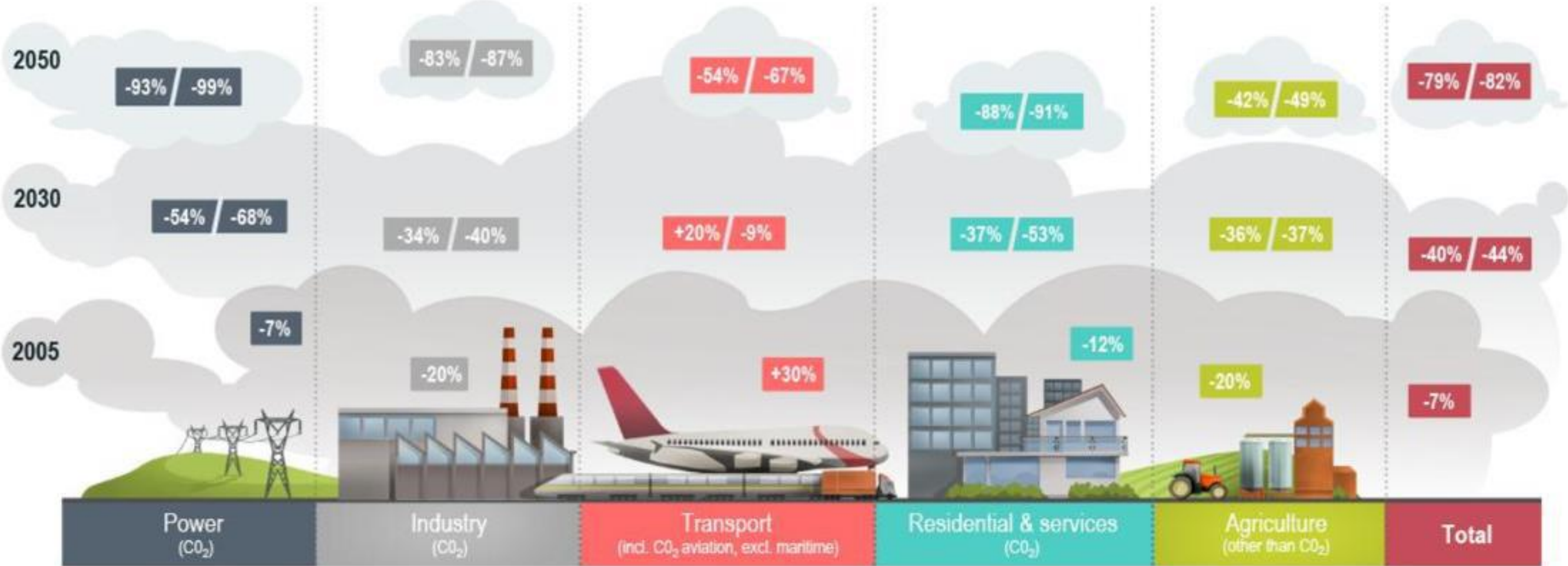
No engagement in projects that
have a net, long-term negative
impact on the advancement of the
SDGs | Measurable sustainable
outcomes on all projects

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Our overall pathway to reduce GHG: Race to Zero



- Reduction of **scope 1 & 2** global greenhouse gas (GHG) emissions by **45%** by 2025, from a 2019 base year
- Reduction of **scope 3** (GHG) business travel related emissions by **35%** by 2025, from a 2019 base year



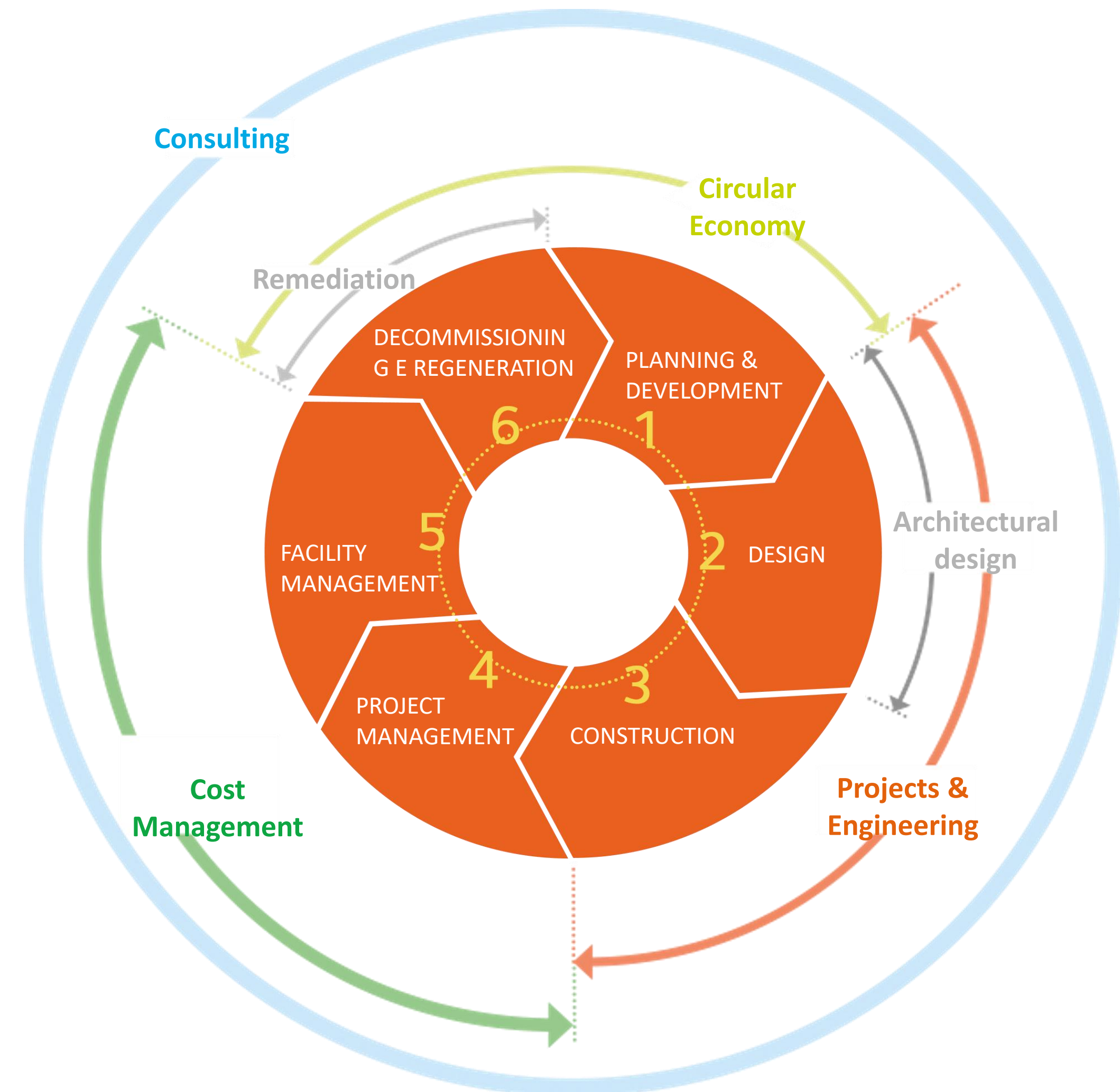
Source: European Commission



ESG driven approach for all projects

While sustainability speaks to caring for the environment, we look at it more holistically through sustainable and inclusive solutions with an **ESG approach**.

Our sustainability efforts are aligned with the United Nations **Sustainable Development Goals** (SDGs). These goals are designed to ensure development that meets people's needs without compromising the lives of future generations..

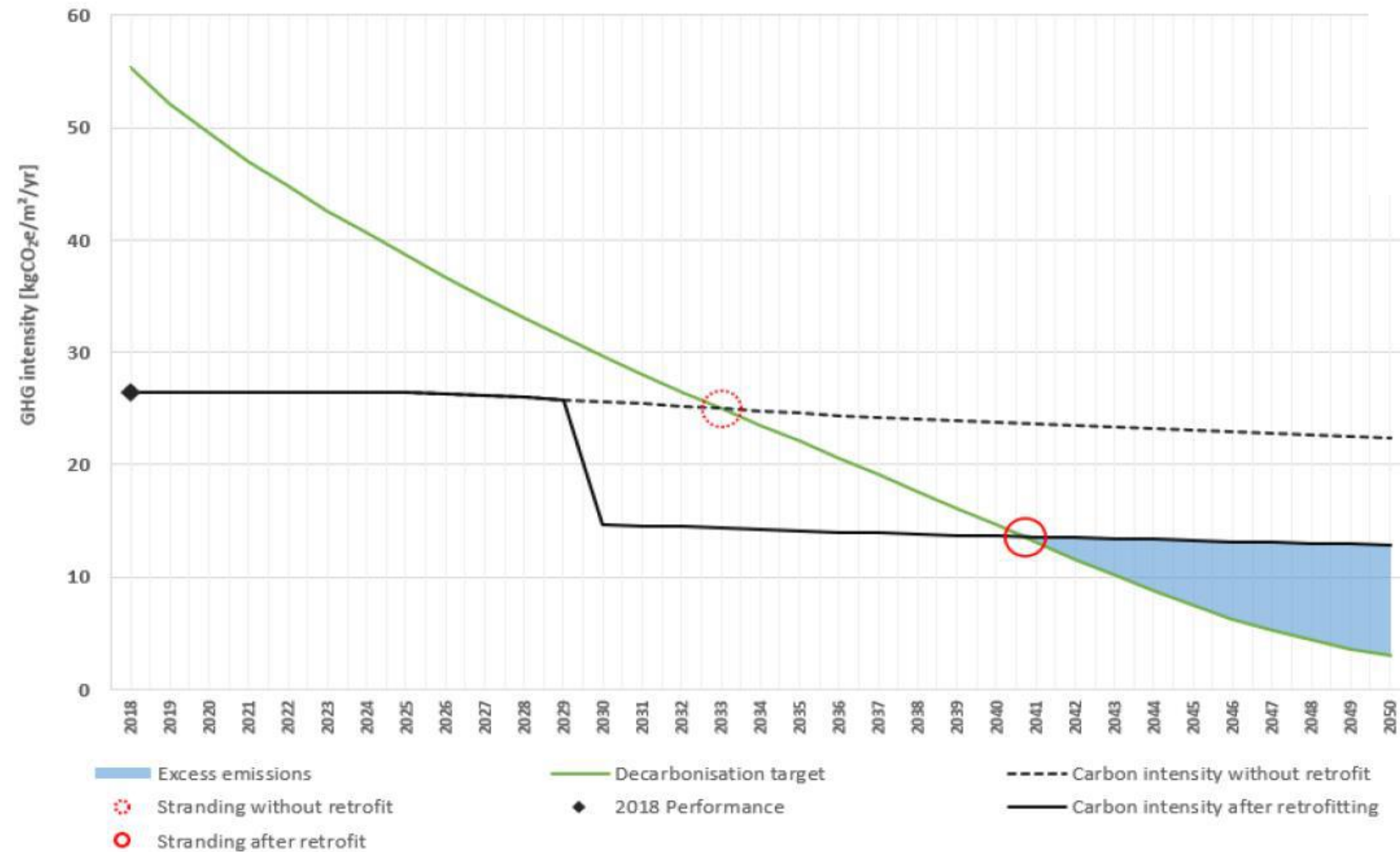
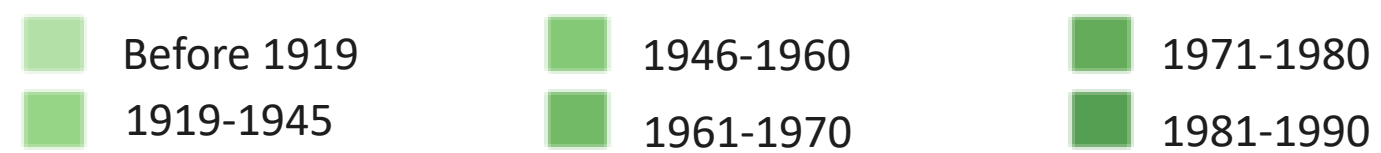


Energy matter the whole lifecycle

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Energy efficiency regards the most the existing buildings

- Italy has got one of the **biggest heritage** in the world, with the most buildings built till the past century
- In the real estate market, it is therefore essential to **measure** energy performance, both for **reporting and analytics**, in order to predict the behavior of buildings performances with respect to the decarbonization target.



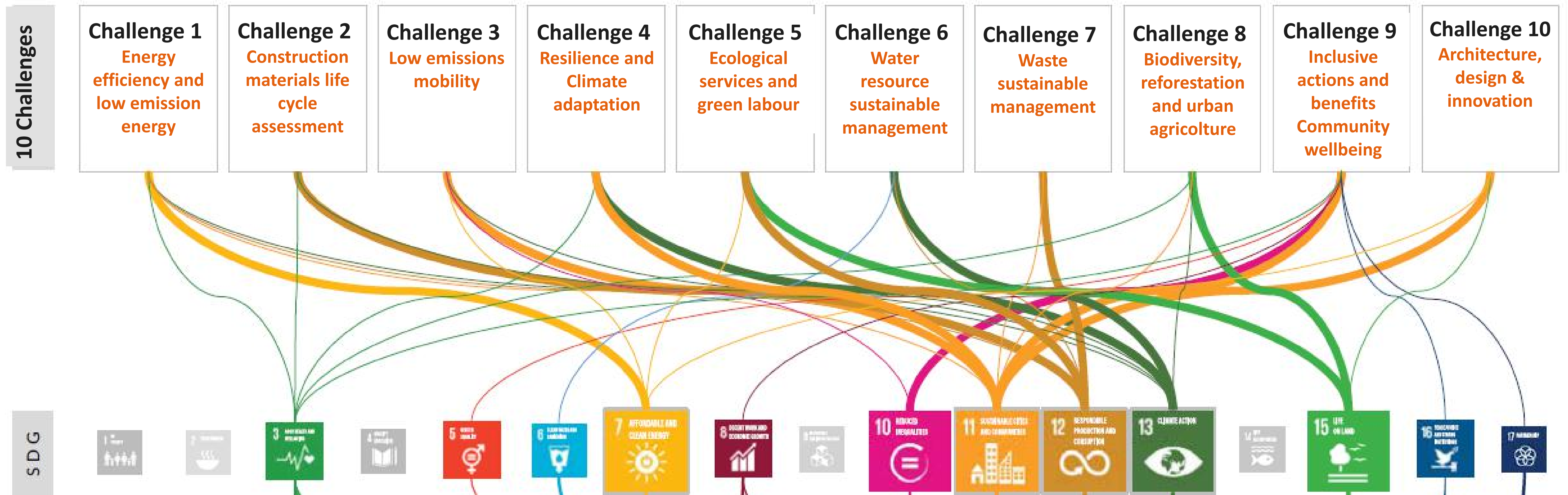
Measuring is essential to act in time

Maximizing our impact with a larger scale of interventions

A holistic approach for urban regenerations



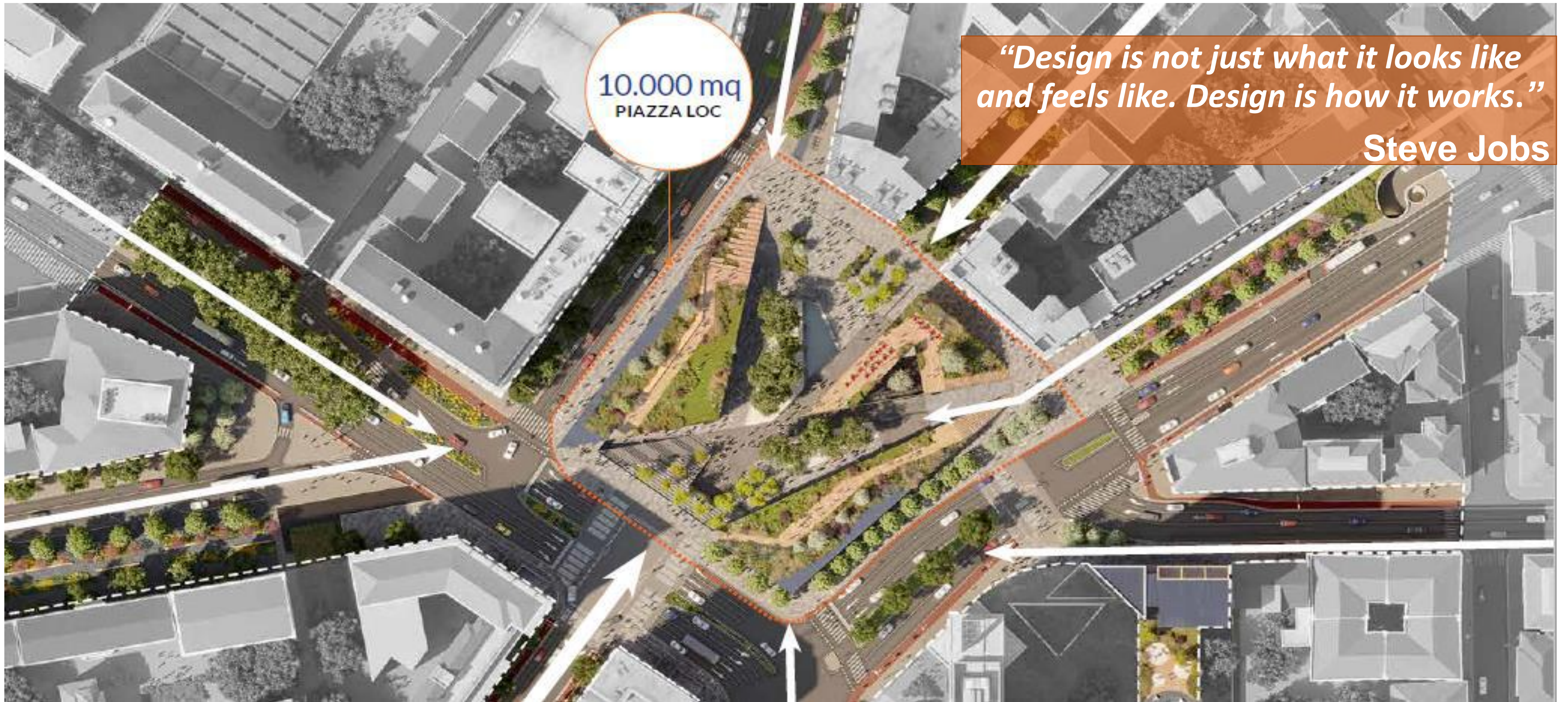
- To deal with the Paris commitments for the decarbonization path is essential a **multidimensional approach**.
- To **maximize our impact** the best the energy & sustainability strategies needs to be **scaled at the neighborhood / city level**
- The C40 **Reinventing Cities** give pathways to deal with 10 challenges an effective **holistic approach**



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Our case study at the urban level: LOC

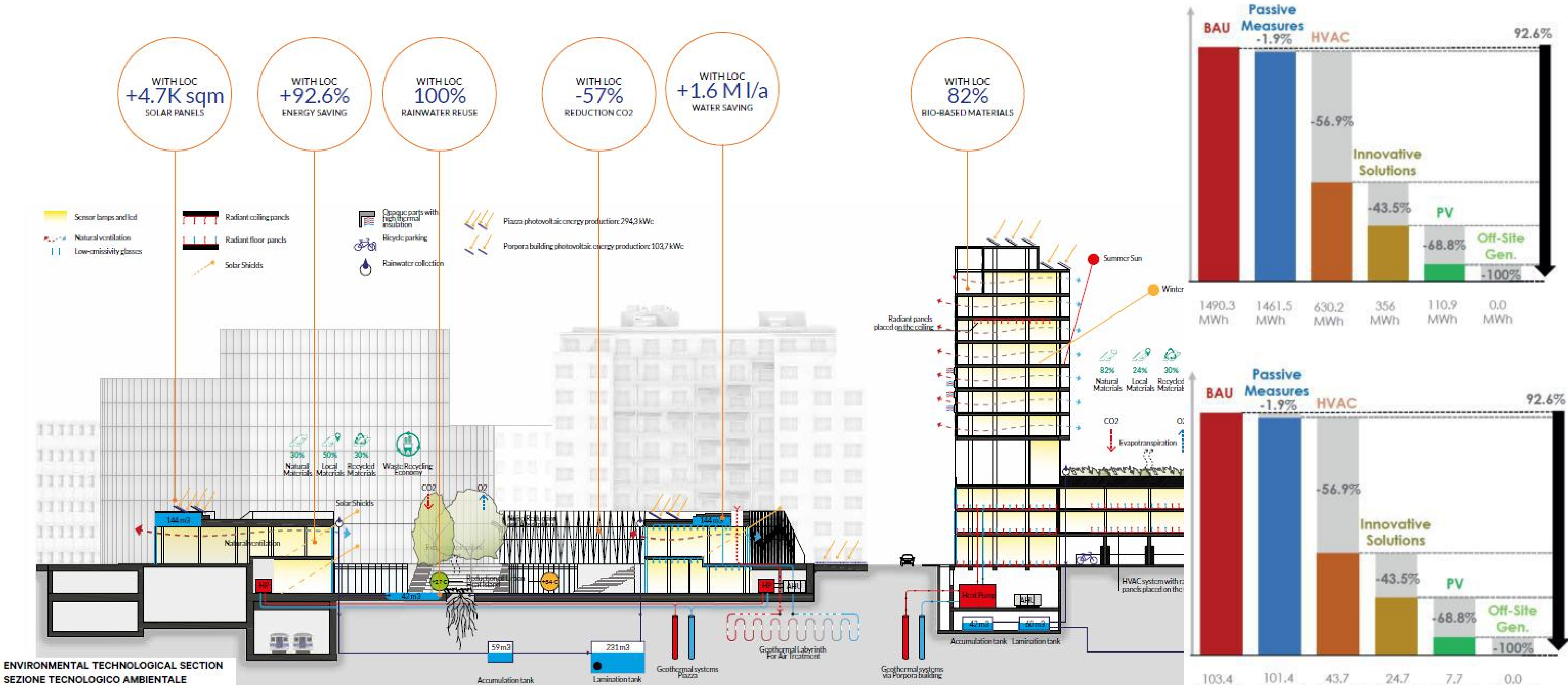
Reinventing Cities – Piazzale Loreto : design as a process



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Our case study at the urban level: LOC

Energy challenge: carbon footprint reduction with zero energy strategies (smart district)



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Our case study at the urban level: LOC

Resilience challenge: global warming & heat island effect at the center of the choices



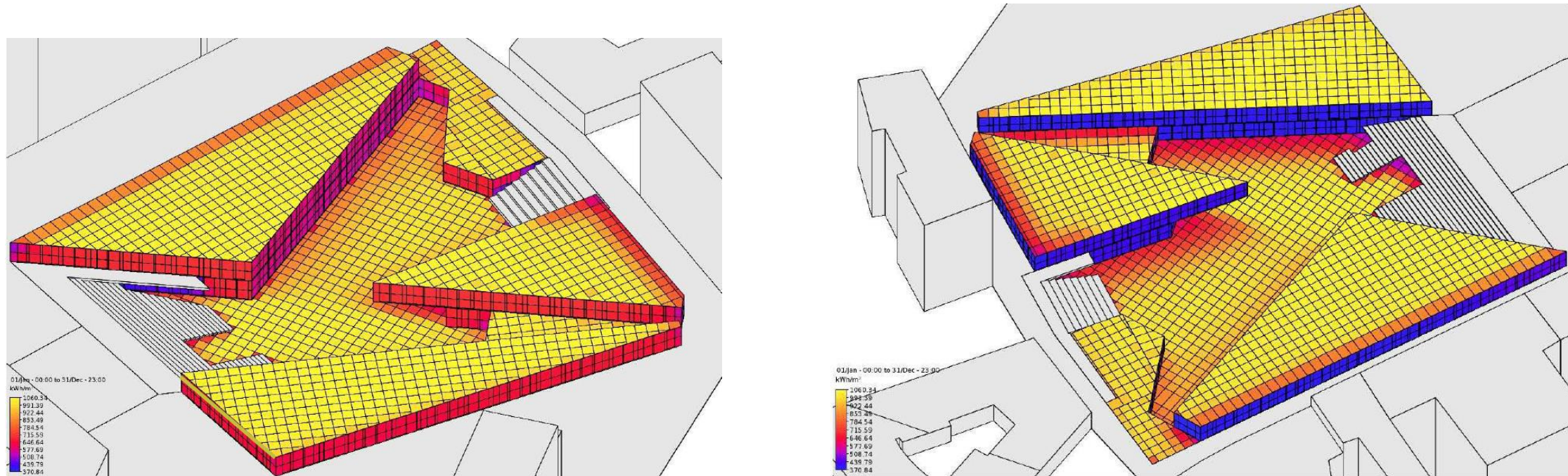
- STEP 1  develop **awareness** of urban heat
- STEP 2  plan and design to **reduce** urban heat
- STEP 3  plan and design so people can **adapt** to a hotter climate
- STEP 4  be prepared to **respond** in extreme events



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Our case study at the urban level: LOC

Resilience challenge: global warming & heat island effect at the center of the choices

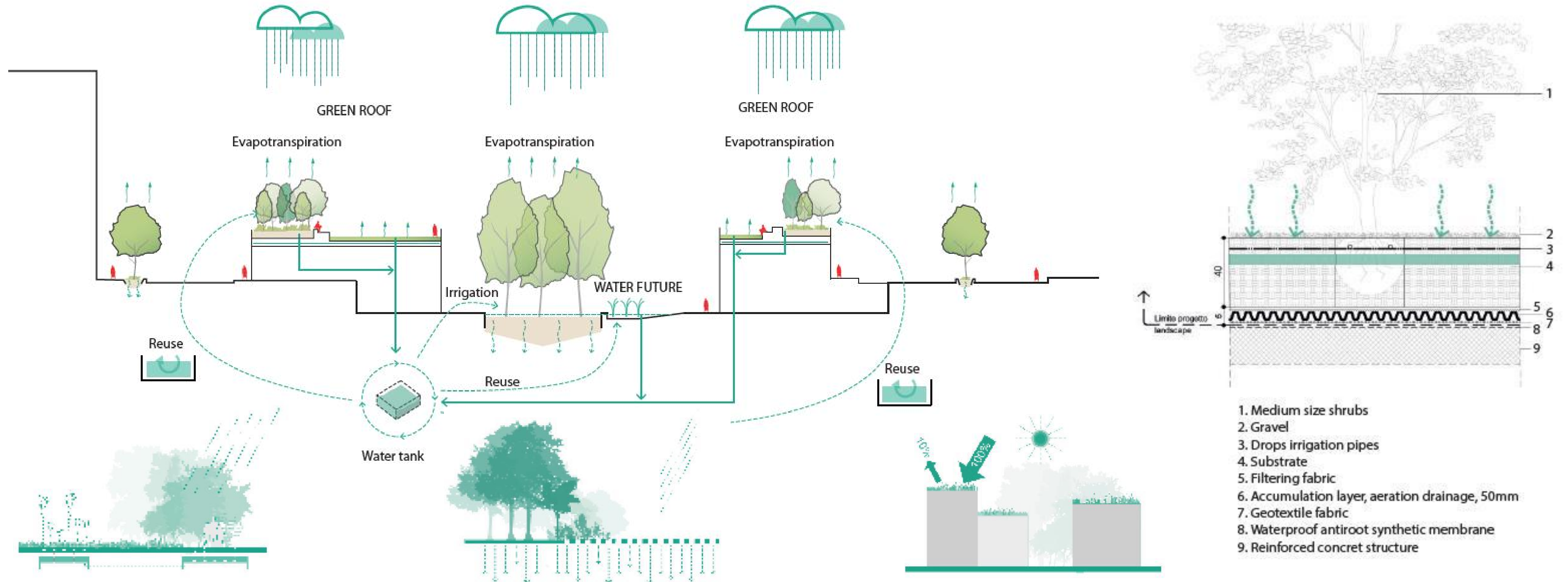


Reduce, Adapt, Respond



Our case study at the urban level: LOC

Resilience challenge: water as urban resource



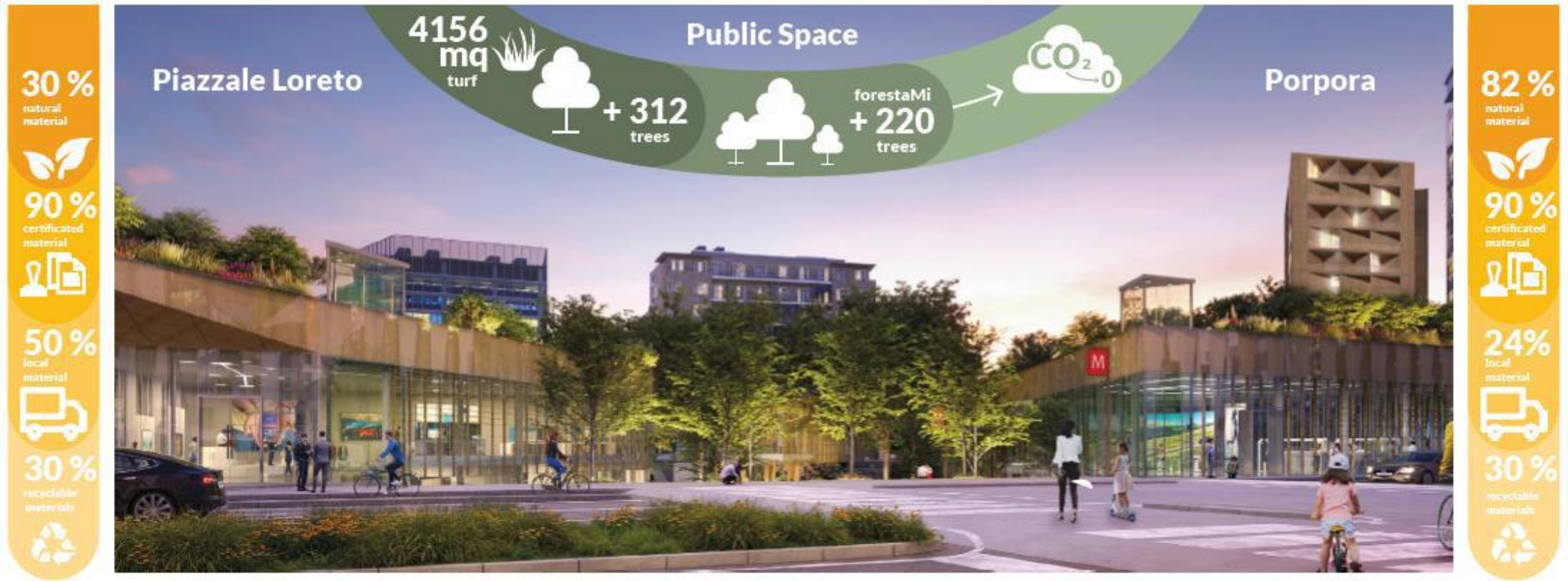
Riuso dell'acqua piovana per irrigazione

Pavimentazioni: permeabili e drenanti

Tetti verdi/materiali di copertura con alto livello di SRI

Our case study at the urban level: LOC

Materials challenge: Carbon footprint reduction (LCA approach)

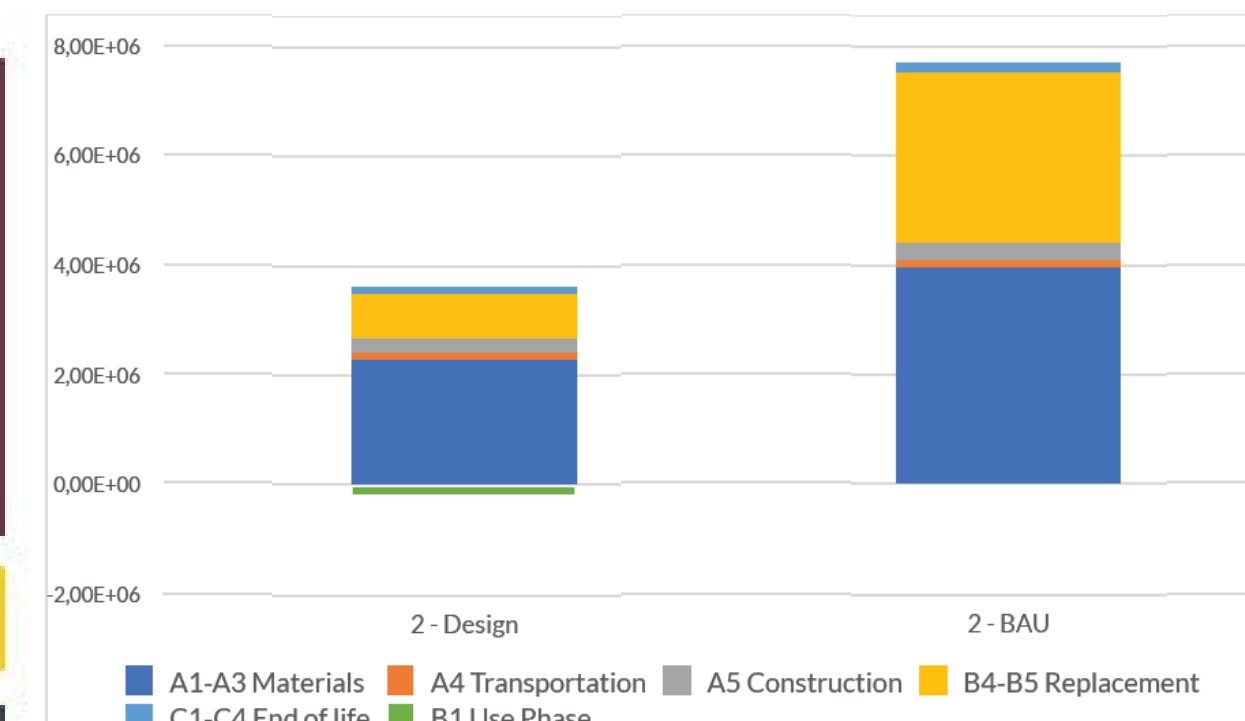
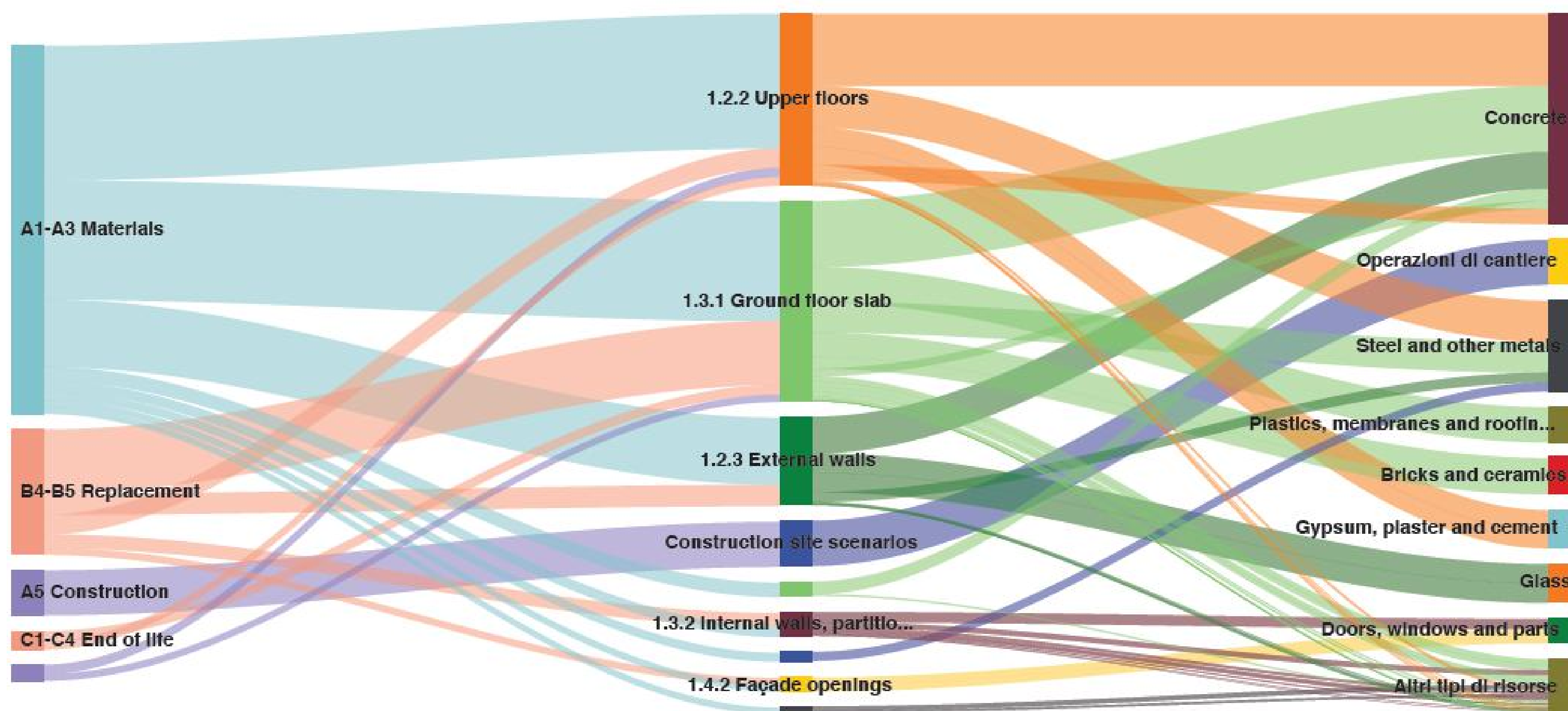


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Our case study at the urban level: LOC

Materials challenge: Carbon footprint reduction (LCA approach)

Schema di Sankey, Global warming



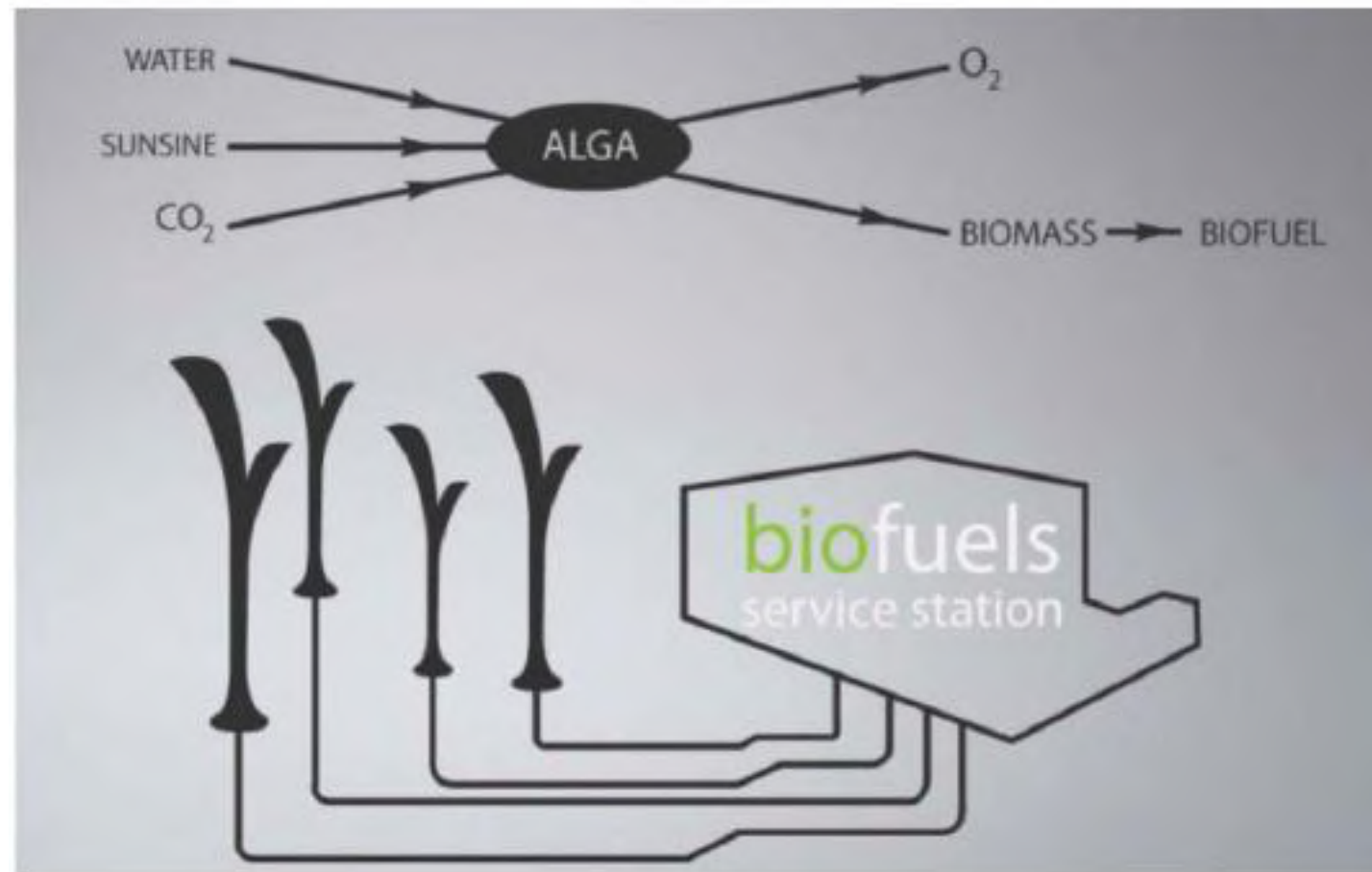
30.7 tCO2e/anno
Impronta di carbonio del progetto

82%
materiali scelti su base volume è bio-based ovvero di origine naturale.

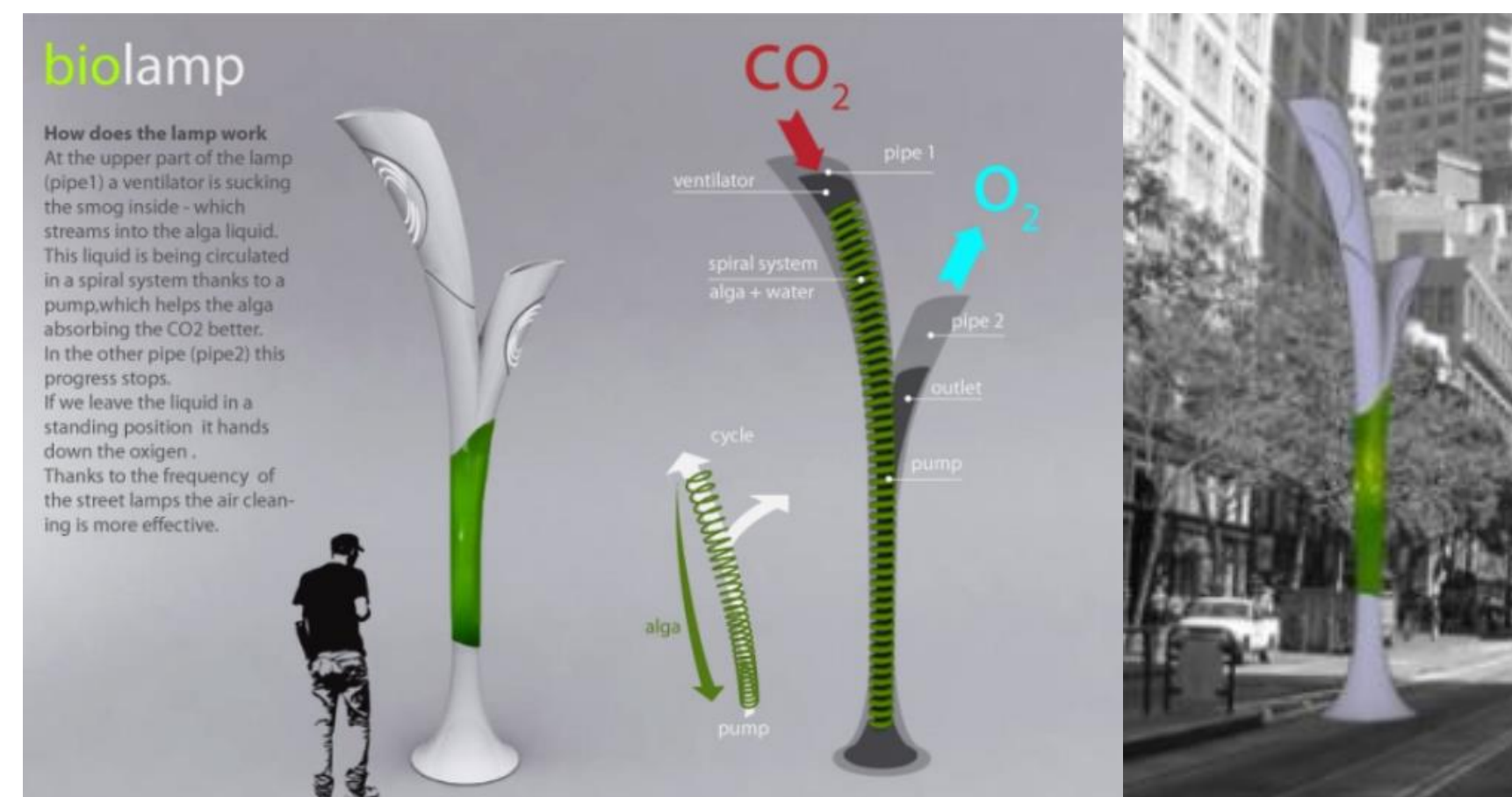
57%
Riduzione tonnellate di CO2e rispetto al BAU

Our case study at the urban level: LOC

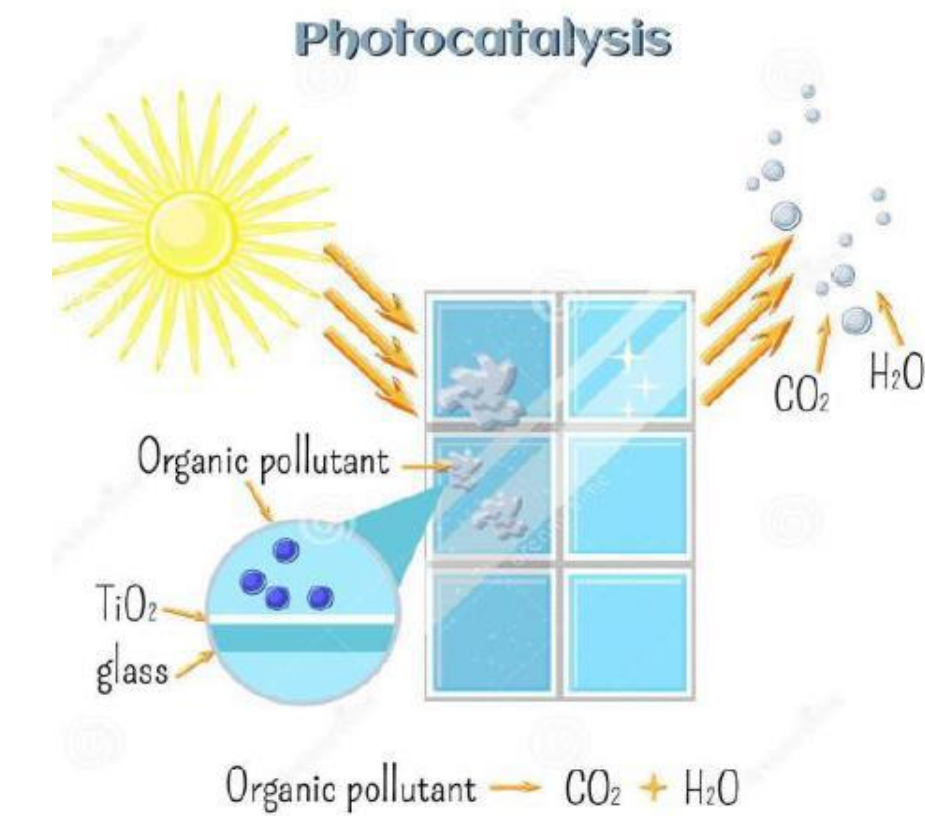
Materials challenge: Innovation strategies for energy, carbon & pollution reduction



Bio-fuels



Biolamp: Co2-O2 converter



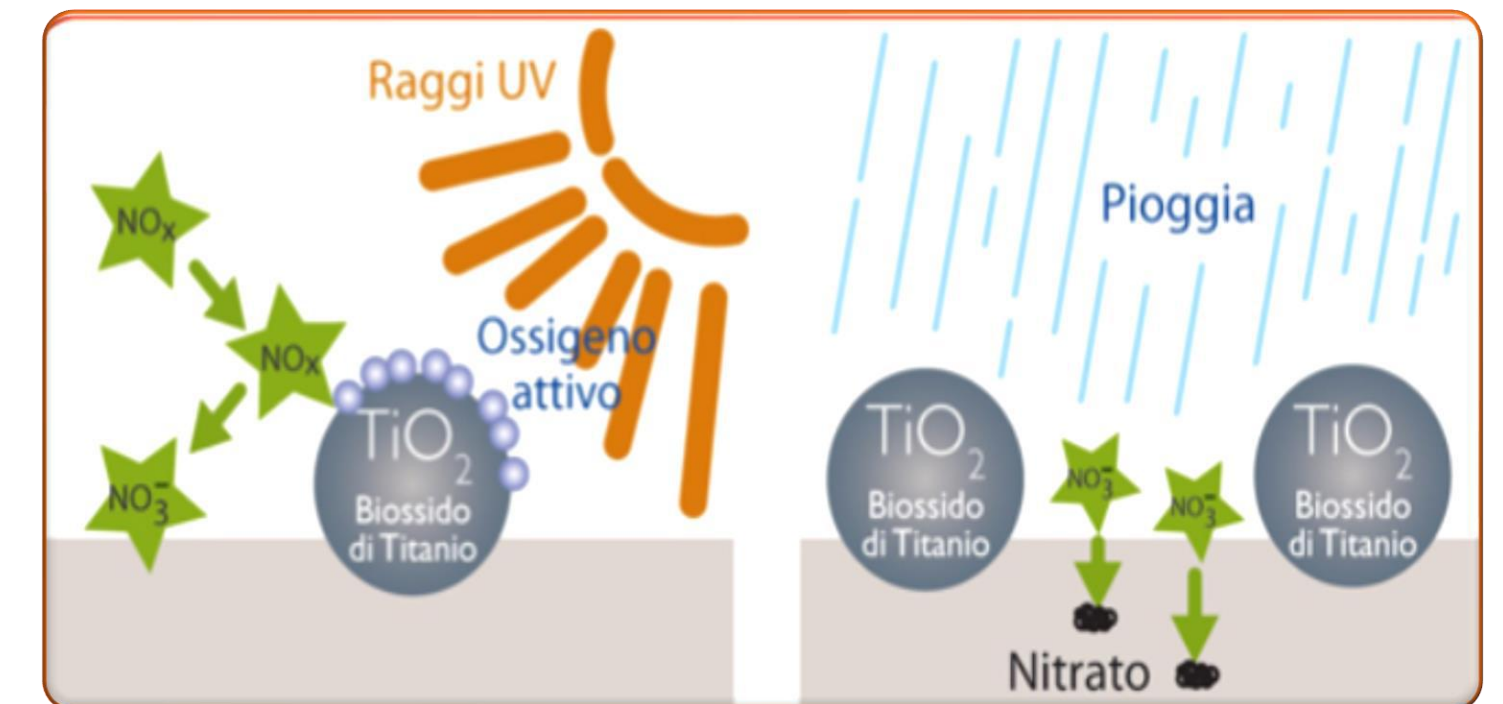
Glass active surfaces



Mosaico digitale



Smart walls



Floor active surfaces

Our case study at the urban level: LOC

Project challenge: the numbers measure



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Arcadis.

Improving quality of life.

Thank you!

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