



Smart and Inclusive
Solutions for a Better
Life in Urban Districts

Smart City Toolbox

Replicable measure:

Lyon - Holistic refurbishment

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Holistic refurbishment

Presentation of the measure

In order to accelerate the eco-refurbishment in the Lyon-Confluence area different funding and support frameworks were combined:

- one targeting private groups of owners (with reinforced support by the SPL Lyon Confluence at the operational level and some additional subsidies thanks to SMARTER TOGETHER)
- one targeting social housing (with additional subsidies from SMARTER TOGETHER)
- no particular support from the municipality to eco-refurbish office spaces and public facilities. However, there was willingness of the SPL Lyon Confluence to conduct directly such projects in the neighbourhood, with the approval of the municipality, as this is considered as being a part of the Lyon-Confluence urban renewal project.

Integrated approach to design and support the eco-refurbishment projects in the Lyon-Confluence area within SMARTER TOGETHER:

- exchange with the local public authority in charge of heritage protection from the start & integration of their requirements in the design of the eco-refurbishment work programme
- Financial support provided to the owners (or groups of owners) who eco-refurbish their building with conditions to comply with a level of energy performance to reach, to connect to the district heating network and to sign a data sharing agreement with the city data platform
- Evaluation & monitoring after the eco-refurbishment works, thanks to the data sharing agreement, and restitution of the results to the owners of the building. The data collection must comply with guidelines set-up by the SPL Lyon Confluence, Hespul, Enertech and the city data platform.

Budget needed

On average the cost for eco-refurbishing a building in the Lyon Confluence area is between 10,000 to 30,000€ per housing.

Funding sources

- Private investment (from owners)

- Grants (local, national, European)
- Loans

On average, and for the confirmed eco-refurbishment projects so far in the Lyon-Confluence area:

- Private group owners get subsidies for half of the costs of the eco-refurbishment works. Furthermore, private groups of owners can subscribe to collective loans at an interest rate of less than 1%.
- Social housing operators get subsidies covering 15% to 25% of the eco-refurbishment works
- Office spaces generally do not get any subsidies; however, there are some exceptions thanks to the support of SMARTER TOGETHER

Implementation timeframe

At least 2 years are required, starting with the beginning of the feasibility study and the end of the eco-refurbishment works. However, this timeframe could be much longer, depending on each operation.

Partners required to implement the solution

Owner(s) of the buildings, tenants, construction companies, consultants, local public authorities, local organisation supporting the owner(s), district heating operator, city data platform, etc.

Preparation of the ground to create a fertile ecosystem for this measure to be set up

- Feasibility studies realised before the start of SMARTER TOGETHER
- Willingness of the SPL Lyon Confluence to implement projects contributing to the reduction of the energy consumption of the existing buildings
- Experience of the SPL Lyon Confluence in dealing with public authorities in charge of heritage protection (same administration as the one that gives authorisation for new constructions), which helps to reach an agreement and an acceptable balance between energy performance and preservation of the heritage
- Additional grants and subsidy schemes (on top of SMARTER TOGETHER)
- Human resources to spend time with owners of the buildings until the approval of the eco-refurbishment work programmes

Step by step approach

- 1) Inform target groups on the possibility to realise the eco-refurbishment projects and the support available for these works, increase acceptance of the project.
- 2) Undertake feasibility studies with a rough estimate of the main features of a work programme regarding the situation of the building, as well as a first estimation of the costs based on a site visit but only for a sample of few flats. This is preferably co-financed between the public authority in charge and the owners of the buildings.
- 3) Presentation of the results of the feasibility studies, including an estimate of the eco-refurbishment costs and the subsidies the owners can get for that.
- 4) Decision of the owners to pay a more detailed study for specifying in details all the features of the eco-refurbishment project (detailed visit of all the flats, and not just a sample), including upgrading of the buildings when necessary, tender to have a sound financial proposal of construction companies for all the works, concertation with the local authority in charge of heritage protection to pre-validate the work programme, prior to officially asking for their formal approval.
- 5) Selection of a consultancy/engineering company to prepare a detailed study (including tender with construction companies).
- 6) Decision of the owners to realise the eco-refurbishment works based on the conclusion of the detailed study and the final budget based on the results of the tender process.
- 7) Eco-refurbishment works.
- 8) After the works, monitoring of the energy performance and feedback given to the owners, including support for better managing their energy consumption.

Results/benefits available at this stage

- These eco-refurbishment projects are considered satisfying by the local authority in charge of heritage protection; therefore, start of the works was not blocked. This helps to build confidence on the long-run for future eco-refurbishment projects.
- Valuable help for owners and engineering/consultancy companies who are not used to deal with constraints of heritage protection.
- Cost reduction of the eco-refurbishment works for owners thanks to several types of subsidies and grants.
- Data-based monitoring on actual performance of the eco-refurbished buildings after works are carried out. Potential help for owners and tenants in the energy management of their building even when eco-refurbishment works are finished.

- A better coherence for the whole Lyon-Confluence urban project, that combines high energy efficiency for new buildings with several eco-refurbishment projects in the existing neighbourhood.

Is this measure a low hanging fruit?

This measure is not a low hanging fruit as it takes several years between the first contact and feasibility study and the end of an eco-refurbishment project.

Lessons learned: enablers, barriers, solutions found

Enablers: technical solutions with the right balance between cost of implementation, energy performance, and integration from a heritage protection point of view. This facilitates the approval by the authority for heritage protection.

Lessons learnt on the requirements to respect the heritage protection:

- For the change of windows, use of wood (not plastic windows)
- Not reducing the glass surface of the windows when we need to change it
- Try to find alternative solutions to outside insulation when designing an eco-refurbishment project. Thin outside insulation does not seem to be a relevant technical solution due to low energy performance and difficulties to implement.

Barriers:

- Most of the eco-refurbishment projects take place in occupied housing.
- Almost impossible to make inside insulation for housing as this is too expensive and it is difficult to convince people to reduce the surface of their housing.

Replicability

This is potentially replicable in any neighbourhood, however, without as much financial subsidies as the ones available now in Lyon-Confluence. Potential difficulty to replicate a solution without a proper business model.

Contact person

Etienne Vignali, SPL Lyon Confluence (evignali@lyon-confluence.fr)

Further information

Not yet available