



## HORIZON-CL4-2021-RESILIENCE-01-32: Social and affordable housing district demonstrator (IA) - DRAFT

Specific conditions	
<i>Expected EU contribution per project</i>	The EU estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Demonstrate renovation pilots in the sense of “*lighthouse districts*” as announced by the *Affordable Housing Initiative in the Renovation Wave communication*<sup>1</sup> following a smart neighbourhood approach and providing blueprints for replication, setting liveability and latest technological and social innovations at the forefront;
- Mobilise cross-sectoral industrial<sup>2</sup> and Public Private Partnerships (PPP’s) at local level to develop, adapt, design new processes, methods and technologies (e.g. energy efficiency, circular, modular building, smart living, eco-design,...). Special attention should be paid to the needs of residents in social using, through social innovation and using a human centred approach;
- Following a multi-actor approach, as defined in WP/ Annex X, engaging both, different sectors and fields of operation related to construction such as renewable energy, water treatment, and electronics as well as residents, social and public housing associations and civil society actors will be key to boost tailor-made and fit for purpose innovation;
- Demonstrate through such partnerships *lighthouse districts* that allow integrated renovation approaches. Besides technological innovation, specific focus on social innovation is crucial as it can provide social engagement models to empower and engage residents, foster the co-design, co-development and co-implementation, offer spatial organisation allowing socio-economic activities and services, improve the wellbeing of citizens, and promote intergenerational and mixed forms of housing and accessible architecture open for cultural and creative innovation. Social innovation may also form a key aspect in developing business models for these types of lighthouse districts;

<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1603122220757&uri=CELEX:52020DC0662>

<sup>2</sup> Refers to the 14 Industrial Ecosystems for Recovery



- Develop new bottom-up human-centred business models in housing area that facilitate engagement of residents in renovation – for example by co-investing, setting up energy communities, housing cooperatives and resident owned social services and (creative, green, ... ) commons;
- Identify "ready to go projects" for the *lighthouse districts* as well as “low hanging”<sup>3</sup> fruit in terms of social housing renovation and worst performing buildings to test new methods, practices and technologies. The selected districts/ use cases, the diverse climatic and biogeographic conditions and settlement types in urban, sub-urban and rural areas across the EU are to be well reflected;
- Support businesses and the private sector in developing demonstration projects that go the extra mile (environmental - social – cultural ambition) and allow innovations and new technologies putting inclusion and social progress at the forefront;
- Pilot circular construction methods taking into account the different industrial perspectives and value chains relevant for the renovation of the districts;
- Apply and pilot innovative smart housing applications (at individual dwelling level) and general smart grid or district-level energy, waste, water, storage and other systems using newest technology at scale as well as technology that improves the social housing service provision itself;
- Plan actions for overcoming relevant barriers for renovation at district level with a majority of social housing dwellings (e.g. regulatory limits, lack of trust amongst different stakeholders, lack of private investors and awareness of the integrated approach potential);
- Effectively disseminate major innovation outcomes established in districts to support the implementation of industrial-urban symbiosis, connection to the European Community of Practice (ECoP) and development of flexible learning resources;
- Act as a catalyst for relevant EU projects and policies and channel this intelligence towards local projects and stakeholders, e.g. active aging, smart communities, including smart cities and smart villages, energy communities, skills, etc.;
- The final objective is to obtain a set of lighthouse districts that each have followed a different approach, focussing on different innovative solutions addressing the local reality and needs and to have demonstrated replication potential towards other districts by providing blueprints for replication and adaptation and by setting up a network amongst social housing providers.

Relevant indicators and metrics, with baseline values, should be stated clearly in the proposal.

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<sup>3</sup> Many housing blocks in Eastern Europe are at the stretch of their “expiration date” and in need of a deep renovation. They are often located in proximity of each other which makes a district approach more beneficial. Many of the flats are owned by their residents, usually with no financial resources to renovate themselves. Therefore inclusive financial programs should be developed.



Scope: To support a wide implementation of these district renovations, industrial urban symbiosis needs to be fostered amongst most relevant partners engaged in construction and renovation of social housing facilities. The local and regional dimension is important since local energy and utility networks, adjacent industrial infrastructures and available by-products and services in such districts would have to be considered in a holistic and integrated approach. In the same way, logistics should be optimised wherever possible and should be an advantage from the sustainable and competitiveness perspective.

Technology based innovations should prove the potential for novel symbiotic renovation projects acting as demonstrators involving multiple industrial sectors (combining non-exhaustively energy, construction, renewables, circular, electronics and creative industries, social housing associations and public authorities) in pilot multi-stakeholder partnerships focussing on a district approach and social needs related to social housing. Projects are expected to address:

- The development of a broader integrated methodology towards renovation of social housing districts starting from a cross-sectoral approach (e.g. INNOSUP) and engagement models of residents to develop the application of technologies that make social housing more energy efficient, accessible and liveable;
- Research how technologies for housing and renovation can be adapted in a way that serves the needs of residents in social housing at affordable cost as well as how development at scale (e.g. district level of multi-apartment building) might bring cost optimisation and improve the affordability;
- The adaptation of technology in way it addresses the basic and essential needs of residents rather than to showcase the most advanced application from a technical perspective (human centred, fit for purpose and tailor made);
- Research on how renovation of social housing districts can deliver a more balanced population in terms of income, age and socio-economic profile as well as to avoid formation of *ghetto*'s on the one hand and *gentrification* on the other hand;
- Aspects of environmental friendly traffic and internet connectivity to facilitate inclusion are to be considered;
- Energy poverty issues that must be avoided as a result of the renovation. Social innovation and financial planning must ensure that the cost of living will not increase significantly for tenants and residents;
- Integration of ICT and digital tools, including smart grids, smart living applications, advanced modelling for eco-design and modular construction, to design and establish novel symbiotic interactions, data sharing and preservation of data confidentiality, as a non-exhaustive list;



- Assessment methodologies and KPIs to measure the performance of symbiosis, including environmental, economic and social impacts. Life cycle assessment and life cycle cost analysis should take into account existing sustainability standards (e.g. ISO 14000) and existing best practices;
- New skills acquisition in construction sector by piloting new technologies and processes in the renovation at district level focussing on needs in social housing;
- Development of common reporting methodologies for the assessment of industrial symbiosis activities and exchanges;
- Tools to support companies in redefining their products process and systems from the point of view of design, production, logistic and business models;
- Research on how realised lighthouse models can be duplicated and adapted to other social housing contexts, for example, where no strong social housing sectors are present or where participation models are less developed, such as energy communities and cooperatives;
- This topic supports the Bauhaus Initiative as lighthouse districts could display the application of the New European Bauhaus practices focussing on the aesthetic and co-creative aspects of renovation and building of social housing districts.

Clustering and cooperation with other selected projects under this cross-cutting call and other relevant projects as well as building on existing projects is essential, as many existing EU projects can contribute to very specific applications or process in such a district renovation.