



# Under One Roof: Solving Society's Most Pressing Challenges through Housing

Mitchell Reardon, Johannes Lidmo, Ryan Weber



Low-carbon  
economy



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## Students marching in the streets to demand climate action. Vulnerable citizens facing energy poverty, gentrification and unstable housing situations. A loneliness epidemic.

**C**limate change, inequality & social isolation are among the biggest challenges of our time, and they have more in common than may first meet the eye. Each is a global challenge. Each requires local action as part of the solution. And with all three issues, society's most vulnerable residents risk facing the most negative impacts.

High-quality, resource-efficient housing—and the planning policy that enables it—can help address all three.

For the past three years, *Interreg Social Green* partners—based in Spain, Portugal, Croatia, Estonia, Sweden and Romania—have developed an understanding of the relationships between these challenges, and have been collaborating on solutions by building and renovating resource-efficient social housing.

One example is a neighbourhood in Portugal's Region Norte. As the *Social Green* good practice describes, the Rainha D. Leonor neighbourhood was a 60-year-old neighbourhood in "desperate need" of renovation—so much so that it risked being demolished completely. Because homes and buildings lacked

heating and cooling systems, residents relied on highly inefficient remedies such as portable fans and electric heaters. A series of upgrades between 2009 and 2014 boosted livability and residents pride of place, while also including efficiency interventions—such as rebuilding and retrofitting homes with insulation, double glazed windows, and efficient HVAC systems. The project succeeded in reducing the neighbourhood's environmental footprint and also in "returning the dignity and identity to the neighbourhood by reducing the social housing stigma."

This is only one good practice identified through the *Social Green* projects, which entails working closely with residents, developers and local housing providers for appropriate responses and solutions. The *Social Green* partners' work goes beyond specific interventions themselves, to highlighting good practices in building and policy and developing strategies for the sustained development of energy-efficient social housing in their regions. Their work providing green, affordable and comfortable housing for all residents is the very definition of thinking globally and acting locally.

## Barriers to progress

Realizing these ambitions isn't easy. There are numerous barriers that need to be navigated. By visiting each partner region to inquire about issues and good practices, the *Social Green* team heard a common pattern of challenges from participants.

Partners often don't know how to access available funding. In the face of complex bureaucracies—and the need to meet evaluation criteria that seemingly change from one programme to the next—pathways to funds are murky and unclear.

From a European policy perspective, a key barrier here is the fragmented nature of the funding landscape, and the many smaller-scale investments that are required for demand-side projects such as retrofitting individual apartment buildings.

A related issue is the inflexible nature of public funds allocated for social housing retrofits, which limits the uses to which they can be put.

Many partners felt that this inflexibility limited the benefits—both real and perceived—for residents,

particularly in terms of the quality of construction and design of units and buildings.

A lack of common areas and comfortable spaces diminishes opportunities for social connection. For some residents, this contributed to a sense of loneliness, and for others, it reduced their willingness to explore opportunities for energy-efficient building renovations. '

At a broader scale, all partners agreed that a lack of comparable data and the absence of an EU-wide definition for social housing—obscured the ability to develop European or regional understandings of the state of social housing. A number of partners lamented the limited attention given to resource-efficient social housing in rural areas. Given that more than half of Europe's population lives in rural regions and small or medium-sized towns, the potential for improvements is significant. The emergence of the *gilets jaunes* from rural and small towns in France adds important equity and political considerations to this complex series of issues.

Undoubtedly, many challenges exist. But so do solutions.

## Overcoming fragmented funding: KredEx in Estonia

The fact that the EU values energy-efficient housing is underscored by the array of funds available for retrofits and new builds. However, the piecemeal approach that many local authorities must use to cobble together investment for seemingly simple projects like individual building retrofits remains a critical barrier. Numerous *Social Green* partners highlighted this issue; one partner had a solution.

The Tartu Regional Energy Agency (TREA) highlighted the KredEx Fund, an innovative renovation grant offered to resident associations in buildings across Estonia. Through the KredEx Fund, resident associations receive funding that covers 15% to 40% of renovation costs. The remaining funds are available through preferential loans offered by national banks.

These loans, which are offered directly to the resident associations, are paid back through the energy cost savings achieved through the renovations. To secure a grant, resident associations must commit to improve building energy performance to EPC level "C", which in Estonia tends to result in 50% to 70% energy savings for most multi-unit buildings.

Importantly, improvements are intended to go beyond

an energy focus and support resident comfort as well. To engage and educate potential beneficiaries, KredEx offers free consultation to resident associations. After slow initial uptake, the program has flourished. Nearly 500 applications for the combined grant and loan have been submitted, with more than 200 renovation projects, totaling 27,000 units now complete across Estonia.

The nature of the program's success is evident when visiting an improved building. At Sõpruse 202 in Tallinn, Estonia, residents secured combined financing to reduce energy consumption in the building from 150 kWh/m<sup>2</sup> to 62 kWh/m<sup>2</sup> at a cost increase of only 0.03€ per square metre. Once the loan is repaid, residents' heating costs are expected to drop by about 60%.

Through smart financing and sustained engagement, KredEx demonstrates how residents and local authorities can access straightforward funding that improves quality of life without imposing a heavy cost burden on residents. Estonia's example demonstrates a way to achieve a triple win for society— combatting climate change, addressing inequality and building collaboration and trust among residents.

### Sõpruse 202

#### Tallinn, Estonia

An ambitious deep renovation of an Eastern Bloc apartment complex, coupled with Kred Ex, an innovative national financing policy demonstrates that major energy efficiency improvements can be achieved without burdening residents with significant rent increases.

**Site size:** 10,000 m<sup>2</sup>

**Number of units:** 162

**Unit size:** 1-5 rooms

**Energy use:** 62 kWh/m<sup>2</sup>

**Total Cost:** 2 052 000 €

**Transferrable renovation strategy**

**KredEx:** Innovative grant & soft loan model



## Flexible funding success: Vila D'Este

Closely connected to the challenges of accessing investment is limited flexibility in how funds are used. The comprehensive infrastructure and capacity required to finance projects costing millions of Euro may be prohibitive for some authorities. In such cases, local governments and housing providers can look to Portugal's Region Norte.

Residents of Region Norte—low-income residents in particular—tend to face an array of social challenges and lack of community amenities, which are often viewed as more pressing needs than improved energy efficiency. Consequently, there are limited incentives for social housing residents or authorities to pursue renovation funds that focus exclusively on energy efficiency.

To address this, while developing their Regional Operational Programme (ROP) 2020, Region Norte included the objective of conducting renovation projects for social benefit alongside other measures, such as energy efficiency upgrades. This simple adjustment allowed housing providers to secure additional funding that makes renovations more appealing to residents.

The potential impacts of combining social and resource efficiency upgrades were well illustrated in the Vila D'Este project. Built in the 1980s, a series of social issues had emerged in this development, while building quality had begun to deteriorate. This created an opportunity to secure funding for renovations to improve energy efficiency; however, solely focusing on energy would have generated community opposition. Instead, along with greater efficiency, the project promised improved public spaces, a community swimming pool and a new kindergarten. By combining social and climatic goals, the local authority was able to boost energy efficiency in 2,000-plus units by an average of 40%.

More importantly from residents' viewpoint, these amenities create safe and comfortable spaces for social interaction, which builds community connections and helps address loneliness. By making space for multiple funding streams that achieve both climatic and social objectives, Region Norte shows how local authorities can boost equity, reduce climate impacts and combat loneliness within the scope of a single project.

## Vila d'Este

### Porto, Portugal

The rehabilitation of a densely populated district, which has been host to a concentration of social issues, demonstrates how built form interventions with a focus on social cohesion, community amenities and resource efficiency can improve quality of life and neighbourhood perceptions on a large scale.



**Site size:** 9 km<sup>2</sup>

**Number of units:** 2 085

**Unit size:** 1-6 rooms

**Energy use:** 75 kWh/m<sup>2</sup>

**Total Cost:** 12 000 000 €

- 12 year investment return
- Strong social component to project

## Paying attention to rural areas: Sparna hiza

While most efforts to build and renovate green social housing have focused on big cities, towns and rural areas face challenges as well. Facing trends of depopulation in many already sparsely populated regions, investing in green retrofits can appear risky to national and even regional governments uncertain about future housing demand. However, without investment in green social housing, many of these areas risk further depopulation as residents seek better conditions in urban areas.

This is a challenging issue and given the unique urban-rural relationships in countries across Europe, certainly not the place for a one-size-fits-all solution. However, the recent frustrations seen in the *gilets jaunes* protests in France and elsewhere highlight the need to find solutions for rural areas.

Several *Social Green* partners are grappling with this dilemma, and have begun to identify regional solutions. In Northern Croatia, the Regional Energy Agency North (REA) has worked to reverse population decline by supporting the creation of attractive new green dwellings—such as the

passive house project *Sparna hiza* in Koprivnica—that are appealing to young people and families.

At the same time, the region understands that residents continue to move big cities and elsewhere in Europe. Making long-term commitments in all areas may not always be best use of limited funding. To solve the issue of degraded housing, REA is also assessing container housing—which can be moved where needed quickly and cost-effectively—as a potential way to improve resident comfort and reduce energy consumption.

The examples detailed here, like the issues noted above, share the common aim of minimizing human impact on the climate while increasing equity through quality housing for all residents. Benefits also extend to human happiness and wellbeing; by tailoring projects like *Sparna hiza* to suit young people and families, REA is also creating opportunities for them to boost social interaction, create mutual support networks and fight loneliness.

### Šparna hiža

#### Koprivnica, Croatia

An environmentally sustainable housing project designed to entice young people to stay and encourage them to start families demonstrates how affordability, resource efficiency and family-friendly development can be achieved in a single project.



**Site size:** 1 600 m<sup>2</sup>  
**Number of units:** 24  
**Unit size:** 1 to 4 bedrooms  
**Energy use:** 15 kWh/m<sup>2</sup>  
**Total Cost:** 1 600 000 €  
**Affordable housing for families**  
**Located to support active mobility**

**C**limate change, inequality and loneliness are contributing to social and environmental turbulence around the world. Can well-designed, energy efficient social housing solve all of the challenges society faces today? That is highly unlikely. But it is equally unlikely that these issues can be solved without comprehensively addressing the social housing challenges in cities, towns and rural areas.

In the next phase of the *Social Green* project, partners will begin to carry out action plans inspired by the good practices they've seen across Europe and tailored to their local contexts. Through action and testing, they will assess and tweak the best ways to create social housing that is green, equitable and socially connected.

This is vital work. By engaging residents and promoting collaboration among an array of professions—architects, designers, decision-makers, urban planners, green builders and more—we have the opportunity to craft a new way forward: a way that harnesses the interdependencies between the global and the local, the urban and the rural, the social and the economic. *Social Green* partners are exploring these paths, and halfway through this innovative Interreg project, the results are promising.

Additional actors will have the opportunity to contribute to this endeavour and to strengthen the outcomes. In doing so, they can help to solve some of most pressing challenges the world faces today.

## The Social Green project in brief

### Social green – regional policies towards greening the social housing sector

Social Green is funded by INTERREG Europe and is scheduled to run between April 2016 and September 2020. It has received funding of 1.01m euros from the European Regional Development Fund (ERDF), which is distributed among eight partners in six countries: Tartu Regional Energy Agency (EE); Extremadura Energy Agency (ES); Regional Energy Agency North (HR); Regional Coordination and Development Commission of Norte (CCDR-N) (PT); Centre for Excellence and Innovation in the Automotive Industry (CEiiA) (PT); Alba Iulia Municipality (RO); South Muntenia Regional Development Agency (RO); and Nordregio – Nordic Centre for Spatial Development (SE). One advisory partner, Nordregio (Sweden), provides scientific and technical support to the consortium. The other partners, local authorities, energy agencies and managing authorities work jointly in the development of the main project's activities, namely preparation, implementation and monitoring.

Social Green promotes the greening of the social housing sector through mutual learning and the development of improved regional policies. It provides the opportunity to explore green building practices and significantly reduce greenhouse gas emissions through cost-effective means, while providing much needed

housing in a healthy and sustainable manner. Through interregional cooperation, Social Green stakeholder regions identify, share and transfer innovative methodologies, processes and good practices in developing and implementing greener social housing sector policies, targeting new constructions or retrofitting existing buildings. In this context the project's sub-objectives are:

- 1. To understand the role of green building intervention in the social housing sector and the link with fuel poverty**
- 2. To identify green measures for the social housing sector, specifically including energy efficiency and renewable energy development**
- 3. To identify, share and transfer experiences and good practices and to develop joint policy tools and instruments related to innovative solutions for greening the social housing sector in the areas of fuel poverty and energy efficiency**
- 4. To develop strategic guidelines and policy recommendations as an integrated toolkit for regional and local authorities**
- 5. To improve regional/local policies by introducing best practices into EU mainstream programmes in order to contribute towards fostering the competitiveness, sustainability and social cohesion of cities, regions and the EU as a whole.**

#### Project coordinator:

Ryan Weber • Mobile: +46 73 316 20 37 • [ryan.weber@nordregio.org](mailto:ryan.weber@nordregio.org)

[www.interregeurope.eu/socialgreen/](http://www.interregeurope.eu/socialgreen/)