

## **MARKET POTENTIAL FOR COLLECTIVE SELF-ORGANIZED HOUSING INTERVENTIONS IN EUROPE**

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### **ABSTRACT**

Collective Self-Organized (CSO) Housing (referring to both renovation of existing stock and construction of new dwellings, with the definitive influence of the residents) has become the center of attention of public authorities and private businesses alike, the main reason being that it is often considered a good solution to open up new market segments in the post-crisis housing market for all stakeholders involved. Many of these CSO Housing projects seem to strengthen the commitment of residents to their own built environment. They furthermore contribute to the development of precisely the kind of housing that meets the requirements of the involved clients. This way, the emerging tendency of collective participation of end users in their future built environment contributes to a more accepted, sustainable, green and social environment for many residents to live. The applicability of CSO Housing solutions is strongly dependent on many factors. First and foremost, new CSO Housing constructions and CSO Housing retrofitting differ substantially everywhere, occupying a different market segment and having a different market potential. Similarly, the institutional and legislative background of different European Member states, as well as the residential values and economic possibilities, the availability of land and its price, up to the attitude

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of public authorities strongly influence the market potential of CSO Housing development. Based on a set of key determinants the following paper plans to map out and show the market potential of different CSO Housing projects in some European countries. The paper furthermore identifies opportunities for new business to be developed, and strategies for market players to come up with new and smart CSO Housing solutions.

Key words: CSO Housing, Market Potential, Europe

### Introduction: Housing Market

This paper was developed on the basis of the results of a Market Study on CSO housing in Europe for 'Proficient', a project funded by the European Commission in FP 7 ([www.proficient-project.eu](http://www.proficient-project.eu)). The Housing Market Study focused on the recent changes and short-term predictions with regard to the development of the European housing and energy markets. While doing so the study employed the central concepts of Proficient: CSO (Collective Self-Organized) housing, district level intervention and the inclusion of ESCO companies. The study aimed at understanding the dynamism of the post-crisis European housing market with the goal of understanding under what circumstances households opted for energy efficient and green alternatives during the refurbishment of their existing homes or the implementation of these values in newly built homes.

Locality emerged as a key concept in the study. In the post-crisis era we cannot talk generally about the European housing and energy market. Rather, the outlook depends on a set of locally and nationally determined circumstances, which can drastically change both within a close distance and also within a short amount of time. Tradition/culture was also a bold theme throughout the study. For instance, it was found that CSO construction and the importance of green values are currently the most important in the Nordic and the German speaking countries of Europe and growth towards this trend throughout Europe is slow moving [1]. However, even in these countries the construction of CSO housing or the complete refurbishment of a building according to the most recent energy efficient and green principles remains a niche market.

Being that the European housing market consists of many different regions it can be difficult to report on it universally, but it can be stated that the market is a predominately owner occupied one. After the privatization process of the 1990's the share of owner occupation exceeded 90% in most Central-Eastern European countries and it was traditionally over 70-80% in the Mediterranean countries, it also reached 53-84% by 2011 in Western and Northern Europe, which was also a result of the decreasing share of new rental constructions [2]. Although owner occupation is still on the rise, the public opinion about it has evolved. Currently there is much more talk about the importance

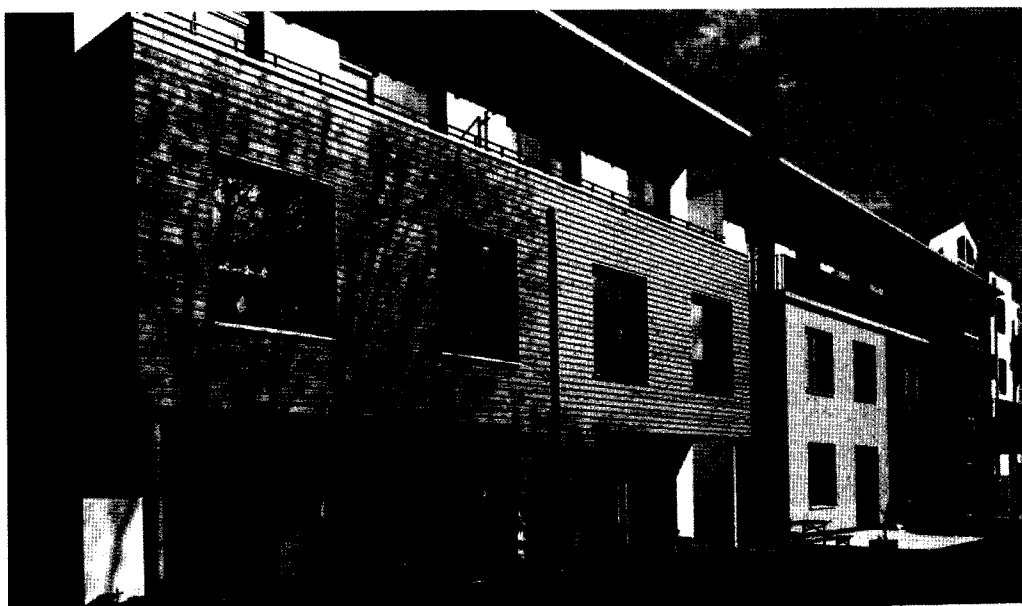
of a strong rental market, especially in countries that were hit harder by the real estate crisis. Ever since this housing market crash the recovery has been slow and sporadic. While certain countries, like Germany, Austria or Norway, have been doing particularly well, many seem to be lagging behind, like the Mediterranean and some Central European member states. Metropolitan regions seem to follow a pattern of their own, increasing even in areas with no national growth, like Paris, and remaining untouched by their national turmoil, like London.

Despite the existence of some major common trends it makes sense to talk about a segmented European housing market, with very different forecasts for growth. The housing markets are embedded into their sub-national contexts, where demographic movements, the economic and political importance of a settlement in the regional/national/international context further influence, how they develop. Weak cities, global cities, charter cities, smaller settlements in developing industrial areas, holiday destinations and suburbs all have different development dynamics. Meaning that within a national context various settlements can perform in radically different ways. Settlements can outperform their countries and vice versa; additionally, even within these settlements there is mostly no homogeneous market.

Much attention has been focused on a special segment of the housing market, that of the CSO (collective self-organized) housing. It was established that the market segment of collective self-organized housing is radically different in the case of new construction and retrofitting. CSO housing in new construction mean that a group of people start a housing project in order to live according to their shared life-style vision. Thus, CSO housing in the new construction sector mostly mean co-housings, which have a common vision not only about the construction itself but the way of life they would like to share with each other.

The share of CSO housing in the new construction market is low. This share of CSO projects in the new construction sector can only be statistically measured in four countries of the EU (Denmark, Germany, Netherlands, Sweden), but even there it is less than 5% nevertheless the German market has vast experience for more than 90 years in the CSO housing sector and more than 1000 projects have been successfully realized [3].

There are also dozens of examples in other countries like Italy, France, Spain, Belgium and the UK [4]. These CSO projects in the new construction sector can be very important to the local context. In and around some European cities CSO communities have become a relevant part of the new construction industry on which it is worth to establish a business and public policy framework (E.g. in and around bigger German cities, The Hague).



**Figure 1 :** Lindenhof project, Rostock, Germany



**Figure 2 :** Kleehäuser project, Freiburg, Germany

The share of residential communities that we can consider CSO housing is substantially bigger in the already existing stock if we regard all dwellings CSO developments where the residents have full right to initiate and influence the retrofitting process. All those dwelling belong to this category where the residents (being mostly owners but sometimes tenants as well) have the right to express their wish directly or throughout an institutional framework (like general assemblies, committees of the owners, etc.) Multi-family housing are more likely to be tenant based in Western and Northern Europe (residential blocks owned by public or private bodies), while they are more likely to be owner occupied in Southern and Eastern Europe (in the later case 30-60% of the housing stock could be considered as a CSO) [2]. As a result one can observe that energy efficient retrofitting of the housing stock happens in the CSO sector rather in Southern and Eastern-Europe while it is more common concerning the tenement sector in Western and Northern-Europe.

CSO projects in the already existing stock do not necessarily carry those features that are very common in the new construction sector: strong community commitment, strong green values and sharing of infrastructure and facilities. Family housing (terraced or even detached) could also be considered as an interesting potential CSO housing type in the retrofitting process. In these cases, home owners could cooperate on a neighborhood level in terms of identifying the best energy saving measures fit for their particular architecture and building structures. Mutual dependency is less exclusive in this domain, but cooperation should be coming from the obvious economic benefits to act as a community in this type of trajectories.

### Energy Market

In order to understand how households might consider investments into energy efficiency in the future, the study also focused on understanding how the energy market functions. Findings show that the trends concerning the energy prices are very uncertain and hard to estimate for the next 10-15 years. In general there was a constant growth of prices during the last decades, which is likely to continue in the near future in spite of the large scale shale gas/oil resources, the growing energy efficiency and the decreasing cost of renewable energies – that are still mostly more expensive than fossils. The reason for this is that it is expected that the demand for energy will heavily increase as a result of economic development in Asia, which increases the prices worldwide and thus has a serious impact on the heavily import dependent European market. The share of renewable energies in the energy mix is increasing in Europe and the EU2020 goal on the 20% of renewable by 2020 seems to be realistic. On the other hand further increase could be questionable because of its cost implications and the long term contracts and investments (like nuclear power plants) in some countries. Also, the influence of the nation states on the retail energy prices is increasing (the wholesale prices are liberalized in Europe), which makes them less predictable in the future causing uncertainties for households in deciding about the interventions.

Based on this, the study found a few trends about energy efficiency in the new construction and retrofitting sector. One being, that despite the growth of energy efficiency and the increasing importance of energy efficient investments in the residential sector, the per capita energy consumption had been increasing in Europe (except for the period of the economic crisis). This is a trend that will most likely continue in the next 10- 15 years as well as a result of growing consumption in general and rebound effects on energy efficiency measures specifically [5]. On the other hand, the proportionate energy need for producing GDP is constantly decreasing. Also, the technical standards of new construction are growing as well. According to European regulations all new construction must be of 'nearly zero-energy' (the phrase should be defined by the member states) by 2021. In several regions of Europe passive house design is already the standard for new construction. Partly as a result, the energy used for heating per m<sup>2</sup> is constantly decreasing in nearly all member states. This is in part because of new construction (the decrease is explained by new construction in 50% in Germany and Slovakia, 35% for France and Netherlands, 27% for Sweden, while around 10% in Ireland) [2]. However, most of the energy saving comes from the retrofitting process. Currently it is more cost effective to 'produce' one MWh by retrofitting measures than by creating new capacities of fossil and moreover renewable resources [ibid]. Thus the Europe 2020 environmental goals could be achieved most easily by retrofitting. Additionally, there are several support schemes in all member states for subsidizing energy efficient new construction and mostly retrofitting measures. These schemes may include tax deductions, interest rate subsidies and grants. The housing market seems to be very sensitive to these subsidies: large scale interventions are hardly initiated without making use of any kind of subsidy [6].

Among energy efficient interventions, district level interventions seem to be more and more common, but they are still mostly in a pilot level phase. As it was mentioned above achieving a base for common interests and a common governance structure on district level by aggregating privately owned housing units is an extra difficult task compared to a simple construction or retrofitting process. It is more likely to happen in case of new construction than in case of retrofitting. In the latter case mostly the local governments or their agencies, while sometimes private actors like housing cooperatives are the bodies that play the role of the integrator that is why district level organization as a result of a bottom-up approach is hard to find.

In connection with the role of ESCO companies, it was discovered that they typically have a very low share in energy efficient retrofitting interventions and in constructions regarding the housing sector, as this sector has high transaction costs which reduce the profit expectations. The rental housing sector could operate with less transaction costs than the owner occupied one (because of the centralized ownership and management), but this sector does not belong to CSOs, thus is not in the focus of Proficient. Despite these statements, there are some trends that may promote the slight increase of ESCO participation in the housing sector: higher technical standards in new constructions and retrofitting, support schemes tied to the measured result of the interventions, recovering



bank sector that can provide more loans under better conditions, and assistance of the European Union with special EIB schemes [2].

With all of these various factors playing a role, the question now arises “how large or small is the market segment for ‘energy-efficient CSO residential neighborhoods’ in the EU?” The market segment for energy efficient interventions is quite relevant and its share is growing as the technical standards grow and subsidy schemes are created to support these activities. The share of CSO activities is substantial in the retrofitting sector, while below 5% in case of new construction even in those countries where could be discovered at all. ESCO and district level interventions are only in a piloting phase and rarely happen (rather in case of new construction). So the adequate answer to this research question is that according to the current market processes this market segment (where all the above mentioned characteristics are present at the same time) is nearly non-existent.

The question is whether the current processes can be extrapolated directly to the future or not. Whether there are any phenomena that can change the current trends. The slight increase of CSO housing in the new construction sector can be expected (however the previous favorable predictions have yet to be realized) as a result of several subjects.

One being community and social values; for instance, the growing need for looking after the elderly. Secondly, the positive outcomes emerging from the economical operation of infrastructure by means of sharing economy/collective consumption along with the growing need for commonly operated facilities, such as cars, sports, recreational and child care facilities, etc. and lastly, the growing environmental consciousness [7].

On the other hand, district level interventions such as the use of ESCO solutions can be more frequent in the future than currently as they can provide real economic advantages. Nevertheless, it is probably unrealistic to expect that district level CSO energy efficient interventions (even without ESCO solutions) will ever be part of the mainstream market. Innovative business models can help to increase their market share.

A new business model can make an impact in connection to both segments of CSO housing, the new construction market and the retrofitting market.

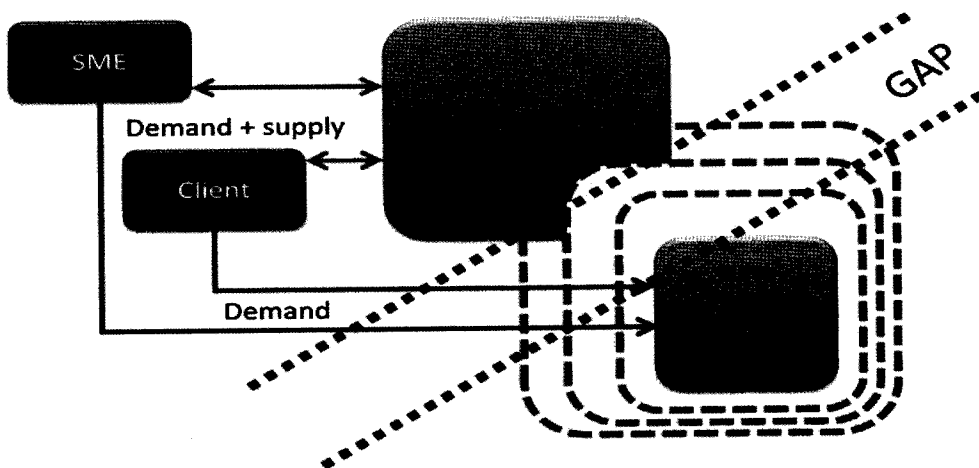
### Business Perspectives

CSO new construction market is by definition a niche market as the share of it is currently marginal, which means that innovative business models can find their way opposed to in a mainstream market. On the other hand what the housing market study has discovered, this market is rather driven by the intention of the owners to accomplish their visions as inexpensively as possible. This means that individual flexible solutions characterise the market and the end-users take over several roles of a business actor in

order to control the processes and keep the costs low. (Finally the costs can be high and the solutions inefficient but it is not always foreseen in the beginning.)

All of this means that this market segment is a business opportunity for small enterprises (mainly for small architectural companies) that can help organizing the process and elaborate the technical plans. This is not a large scale, profitable business opportunity and is already operating. If this segment will grow then this is not a matter of a business model, rather the intention of the inhabitants if they would like to join such a way of life or not.

To find a more businesslike approach it could be very interesting to pay attention to crucial points of the CSO process. In other words, trying to find that equilibrium where the CSO values (community values, social values, individuality, cost sensitivity) can be saved while the process is more business compatible (the process is faster, the technical solutions are more modularized, the technical solutions are build more on the economy of scale, the risks are standardized) [8]. This equilibrium can vary in different micro segments, but a general model can indicate the borders of it and all SMEs should find their place in their dedicated circumstances.



**Figure 3 :** Scheme for the development of EeB oriented business cases

In terms of the retrofitting market, there are several possible goals for the creation of large business opportunities. The energy efficient retrofitting market in the CSO housing sector in South Eastern-Europe can be considered a mainstream market as privately owned multi-family buildings are in the process of rehabilitation every day. If this is not the case than there are main structural problems, such as pricing of energy, lack of subsidies, low financial capacity of the residents, more urgent needs for not energy efficient interventions, technical constrains of old buildings, etc. [2] In order to create larger business opportunities several market segments should be focused. One



contribution being working out business models that can handle the structural deficits of the market in those countries where energy efficient retrofitting measures hardly happen in the CSO sector rather in the publicly or privately owned tenement sector secondly, concentrating on retrofitting activities that not only result in energy efficient interventions but new community activities (facilities) which change the social life of the inhabitants additionally, concentrating on district level interventions with the involvement of different CSO (and sometimes not only CSO) communities resulting in more economic and sustainable energy efficient solutions and finally, through concentrating on models with the involvement of ESCO companies as guarantees of quality.

### Conclusion

The Market Study proves that there is an interesting market opportunity for SMEs that focus on the urgent needs of CSO housing societies. It is absolutely necessary to understand the basic demand of the consumer starting with the organization and ending with the realization of district related projects especially in the field of EeB. As the development of CSO housing is still ongoing in terms of different business models, the approaches will vary in different countries. All local companies involved profit from the development of new business models in the CSO sector as the results are disseminated and there is an ongoing dialogue with possible exploitations in the near future.

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