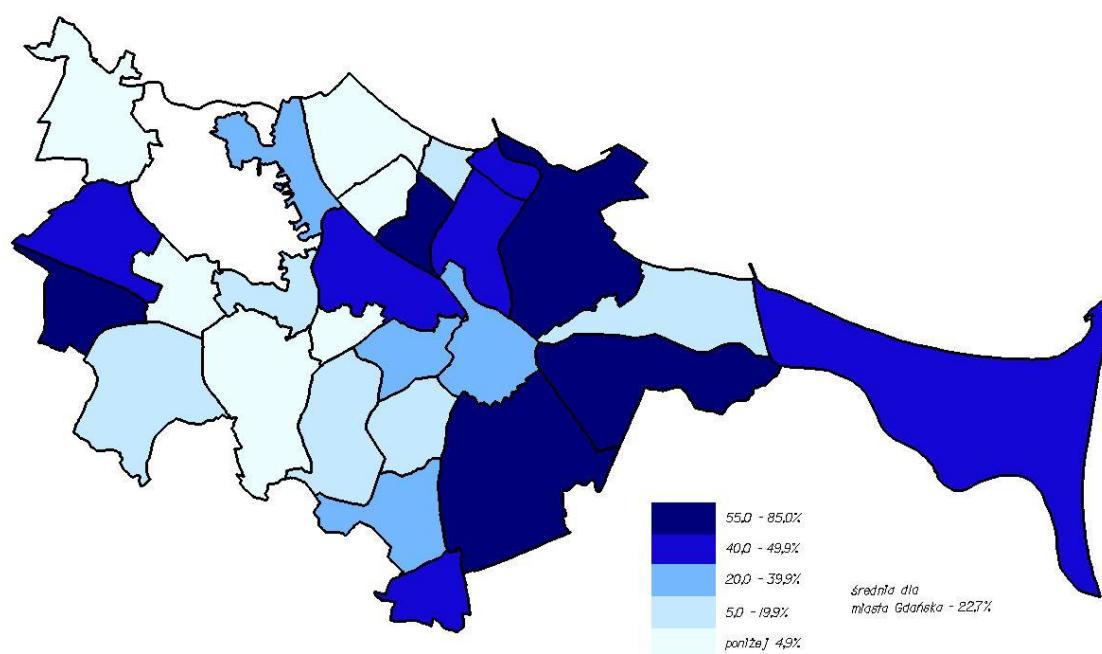


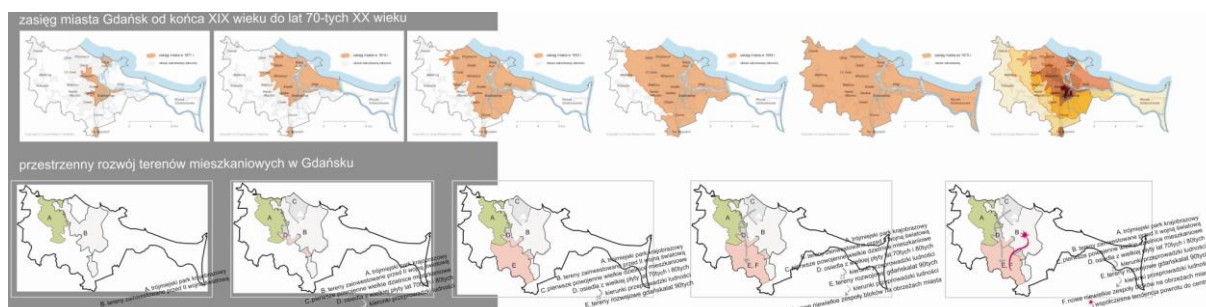
## Delivering high environmental quality, affordable housing in Poland

In 1990's Poland's previous communist and centrally planned economy changed to liberal democracy and a market based system. These changes have transformed all aspects of the Polish society. Polish cities began a phase of dynamic economic, social and spatial restructuring made possible by an opening of market economy, growing global competitive pressures and the increased freedom to locate new activities.

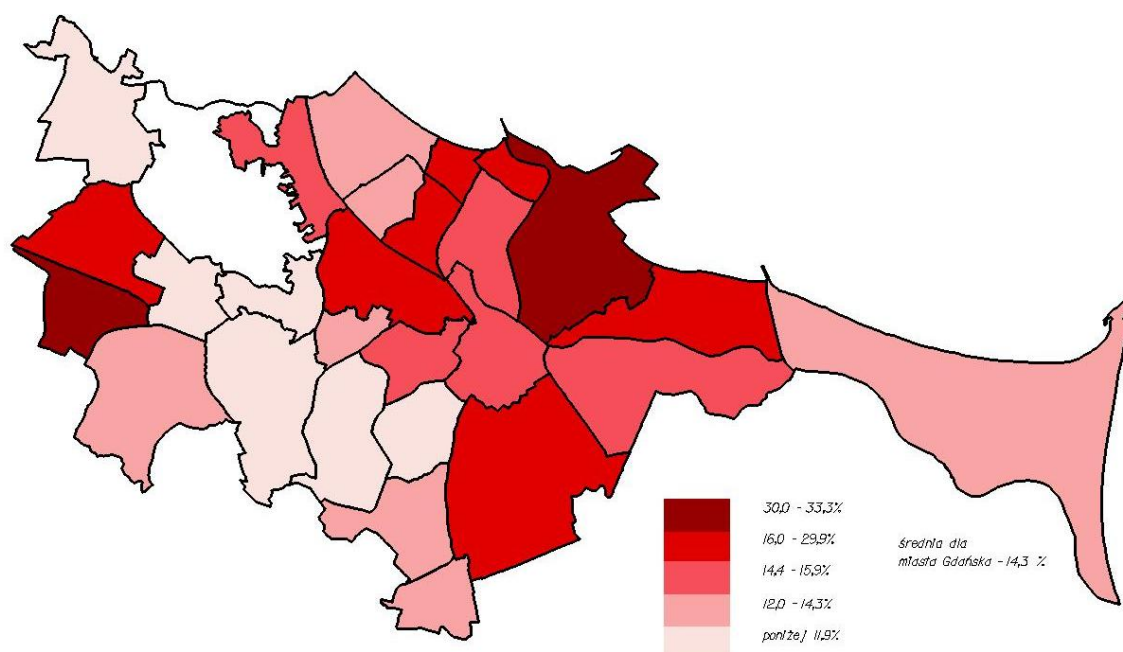
In June 2009 Poland has celebrated the 20th anniversary of free parliamentary elections to first post-socialistic Polish parliament (1989) - turning point in political and economical changes. During all decade of 80ties one of the most important issue were requirements concerning improvements of life conditions - more new flats, more healthy and traditional shaped urban environments, more individuality in housing. In that time, of real deep economical crises and state almost monopole in housing sector, shortages have rise in Poland the numbers of lacking flats into over 3 millions. The waiting time to get state's assignment for independent flat grows longer, even into 20 years. New flats in multi-family houses were built in prefabricated technologies (slabs, panels) of very poor quality. Modernistic mono structural housing districts, large-scale estates, very soon became symbols of socialistic cities – socialistic “no hope” life's style. Moving out from disliked areas and turning down the “panel buildings” became a common wish majority of society truly has believed in. As well as they have deeply believed that maximal liberalization of housing market and planning procedures will result in rapid increase of quantity in housing, higher urban quality of new districts and growing economy (freedom meant - administrative barrier free activity for private sector). From day to day flat has changed officially its status – from object of state distribution to the commercial good.



**Figure 1 – Housing stock built before 1945 in Gdansk**  
**Source: Gdansk Development Agency 2006**



**Figure 2 – Urban development and development of residential areas in Gdansk**  
**Source: Barbara Marchwicka 2008**



**Figure 3 – Percentage of dwellings occupied by 2 and more households in Gdansk**  
**Source: Gdansk Development Agency 2006**

After 20 years, in the middle of actual global economical crises, we could observe how fundamental system changes has influenced housing environment of polish cities and how far people expectations became fulfilled. Data shows radical quantitative change: Poland has ca. 13 Mio (2007) housing units and ca. 14,3 Mio households (with ca. 2,6 family members), it means that still min. 1,3 Mio families need independent flat. In last 3 years increase in construction of new housing units was very high 415 000 (in the same time the number households increased by 300 000), mainly due to commercial tender (individuals and developers). In first 6 month of 2009 commercial developers in Poland have build 37 768 housing units (47,1% of all housing production in the country and 23,3% more than in 2008). In the same time results of individual private investors were 34 285 units and only 2 757 units of social (communal) housing and other public supported forms of housing. 12.359 new flats were build in Gdansk in 6 month of 2008/2009 (shortly before global crises) there for: 451 units by cooperatives, 5411 units individual private investors for own use, 6211 units commercial developers and only 286 units of social (communal) housing and other public supported forms of housing. The volume of prices in Gdansk for sq m of new average quality

housing surface balance in 2008/2009 around 2000 Euro. High prices in relation to the standards (low quality of public-space) are illustrating as well housing needs and narrow spectrum of choice on Polish “affordable housing” market. The increasing disproportions in housing standards are more and more visual in the city landscape what could turn today social mixed Polish cities into the social segregation model. Already every new housing complex offered on the market is forming kind of gated community – being surrounded by fence and 24h guarded.

In that context the important question appears what could we understand under qualification “affordable housing in Poland”? There are two options: flat located in unpleasant housing estate from 70ties with all urban social infrastructure plagued into the public transportation net or small wooden house built with lot of own work in far urban periphery with undeveloped technical infrastructure and no social and commercial service net.

After damages caused in cities by the II WW, nearly 70% of the population still lives in mono-structures from 70's. Panel building estates, huge post-socialistic cooperatives, like Gdansk-Przymorze (over 16 000 flats) are to certain degree already privatized. Flats were sold to its' inhabitants and are taking part in regular housing market exchange. Polish prefabricated large scale estates are still in 100% inhabited and to some degree refurbished. One cannot compare this situation with Eastern Germany where large scale housing estates became in last decade depopulated and one by one are knocked down. Today social acceptance for this kind of housing in Poland is still very good, what is illustrated in market values: 1 sq m in “slab building” costs in Gdansk approx. 1000 Euro. On the other hand examples of effective, compact urban regeneration of residential areas are rare in Poland. The programs are mostly limited to small historic inner-city urban tissue.



**Figure 4 – Large scale housing district Gdansk-Przymorze**  
*Source: Paweł Roman 2006*





**Figure 5 –Gdansk South –new housing district**  
**Source: Paweł Roman 2009**

There is only one question, how long the actual relatively good social condition of Polish modernistic housing districts will last without any radical refurbishments? All knowledge about revitalization processes in large-scale estates indicates that the key factor in that process is prophylaxis - transformation before housing area become devastated and socially degraded. How long public sector in Poland could avoid involvement of supporting radical changes in main affordable housing stock towards new standards fitting various life style expectations of new generations?

Polish public administration officially recognized these structures as private properties representing regular quality standards of housing, in stabile urban structures. That is why there are no efficient policies and instruments supporting rehabilitation programs of these areas neither on national nor regional levels. Popular in the 90's thermo-renovation financing support shouldn't be the substitute to such programs. This argument – private property – doesn't allow using any EU financing for refurbishments in modernistic large-scale housing estates. EU financial programs have been in last 20 years always the most important impulse to pick up problems which need any public financial support. Lack of implementation possibilities has stopped in Poland even theoretical research and study works on topics concerning urban transformation of large-scale housing estates.

Issue of large-scale housing estates could not be limited only to the socialistic heritage. Since 1989 new housing developments build on the city outskirts could be recognized as a new housing mono structure. In the beginning of 90ties, lack of strict urban regulations for rapid urbanization greenfields has started urban sprawl. The phenomena which did not occurred before in Poland. Once again like in 70ties defective city districts, this time total

amorphous structures, has appeared, which will need the revitalization programs even sooner as the modernistic housing estates.

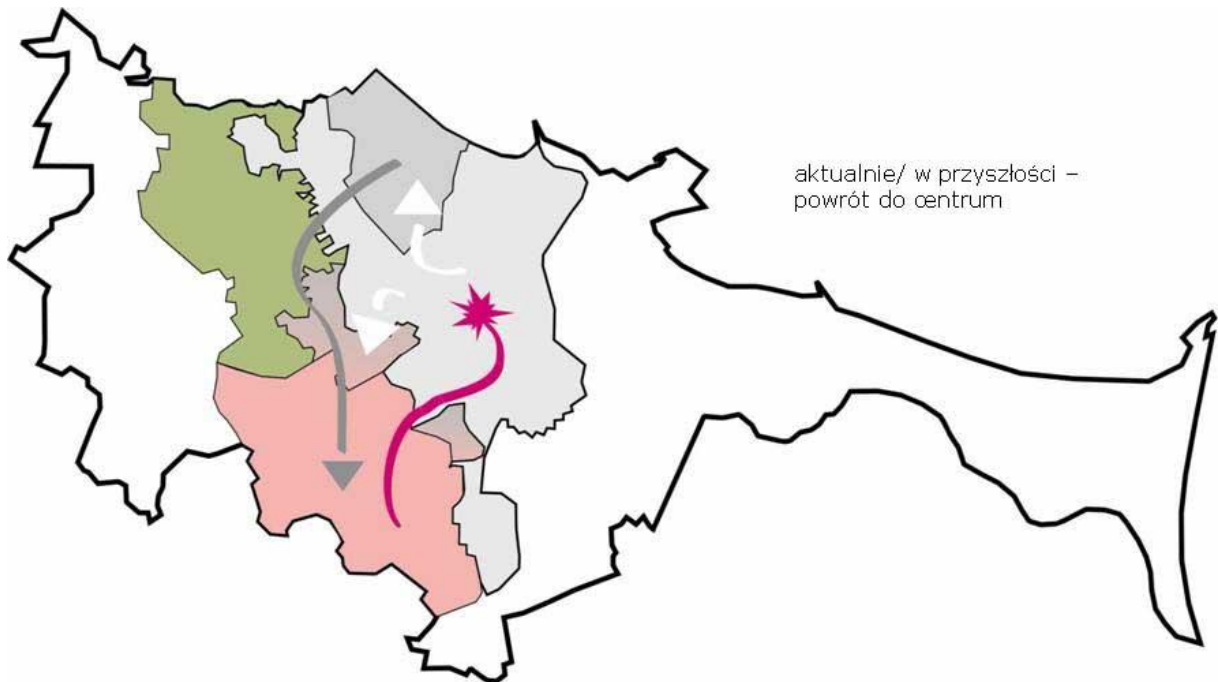
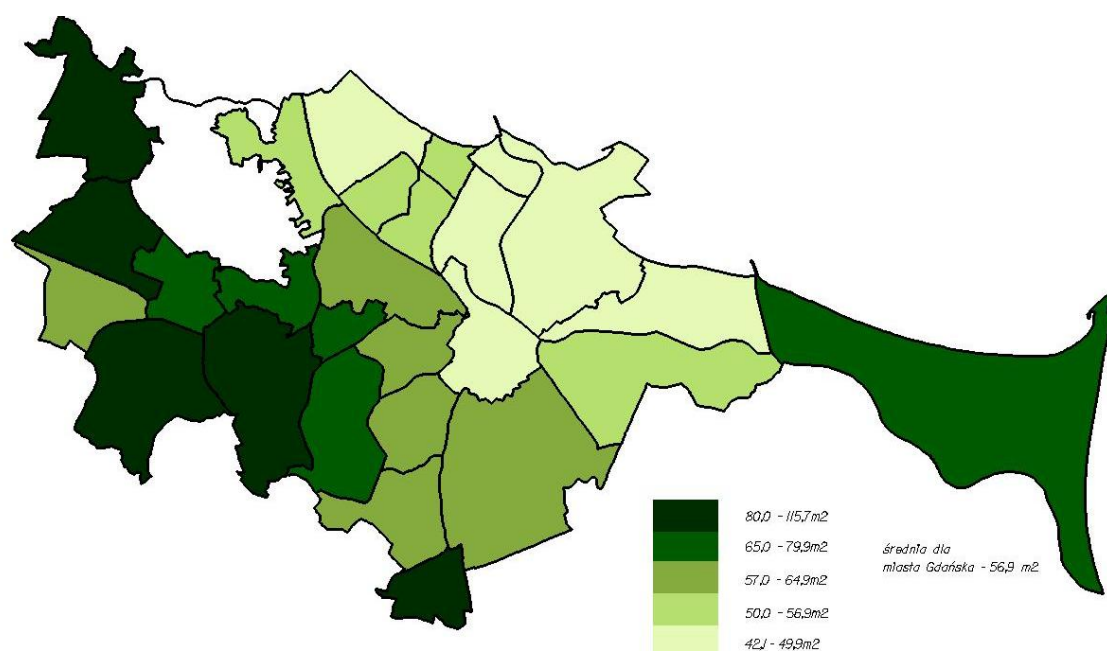


Figure 6 – Trends of innercity migrations in Gdansk (grey – present, purple and white in future)  
Source: Barbara Marchwicka 2008



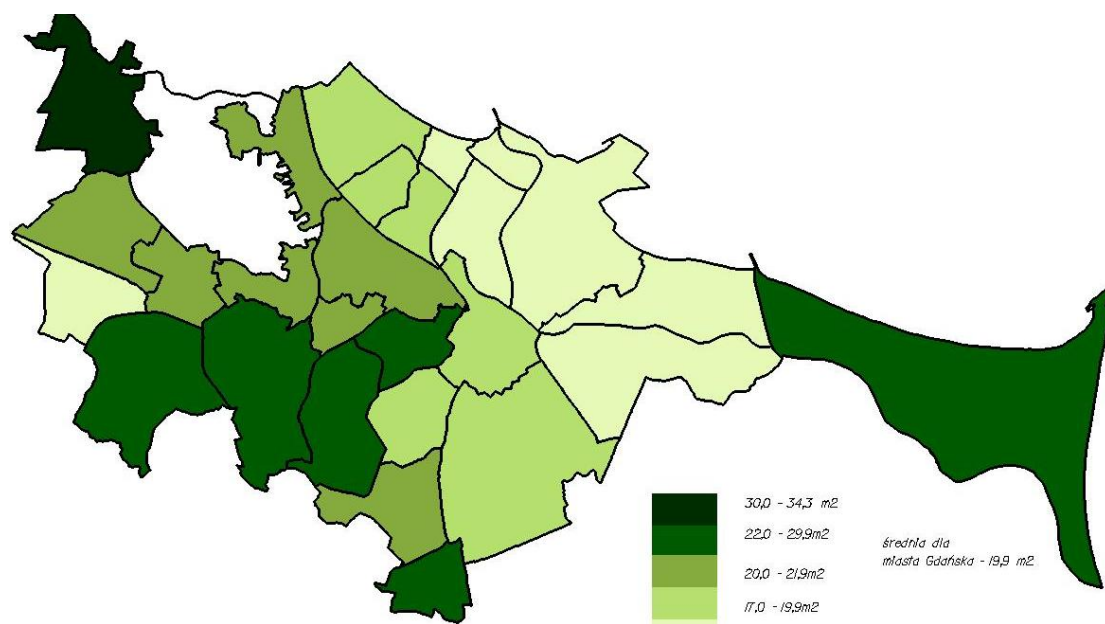
Figure 7 – Thermo-renovated facades in Gdansk-Zaspa  
Source: Gabriela Rembarz 2006

In the mid 90's the average 11 m<sup>2</sup> living area per person in Gdansk was one of the lowest in Poland (In 2006 it increased up to 19,9 m<sup>2</sup>), so the suburbanization was natural and necessary process of city development. Nowadays delivering new housing is justifiable, although the shrinking process is to be observed. The demographic data in Polish big cities are not such pessimistic as in other European countries. Nevertheless the negative birth rate reinforced by a decreasing number of inhabitants in the majority of the polish cities and high level of migration to the metropolitan areas are observed. Spatial development of the major cities goes on due to the aspiration on higher living standards as a consequence of cultural-economic changes (European phenomenon – Warszawa, Polish capital city). New social housing aspirations are rising from very basic stage. There is still a long way to go between Polish reality: just buying any flat and expectations of living in the best quality new urban district. Rising up quality of life environment in the Polish cities meets huge mental barrier – no model examples showing nowadays possibilities and affordable solutions.



**Figure 8 – Average floor surface of dwelling in Gdansk**  
**Source: Gdansk Development Agency 2006**





**Figure 9 – Average living area per person in Gdansk**  
**Source: Gdansk Development Agency 2006**

In last 20 years with lots of private investments Poland have reached significant increase of quantity and diversity in housing but unfortunately we haven't gained any of European high standards in urban planning and spatial harmony. Social needs for affordable housing are still very high so the energy efficiency is thought to be of lesser importance. Implantation of actual know-how concerning energy-efficiency is still very expensive as recognized as luxury and not popular. That is why the question about quality of new housing, even during the global crises in this sector, should be understood as a key problem of urban development.

Due to liberal tendencies in politics concerning the urban planning effectiveness of the tools controlling suburban sprawl in Poland is very limited. The national and regional policies are indicative and don't have the impact on actual residential urban development. The cities have some means and power of controlling it at their disposal, but investors exert pressure with each big development project. The situation is even more difficult in smaller communities situated on the edge of big agglomerations. Even if on general level there are many declarations concerning sustainable development in fact there are no general policies on regional and national levels which could have real importance in realization phase. Still the local authorities are not conscious enough to think of the long-term cost of uncontrolled, unplanned and unsustainable development, such as costs of extension and maintenance transport and infrastructure systems. Results and reasons of so "perforated cities syndrome", caused mainly by negative rate in migrations from cities into the suburban region are not yet recognized as enough real development danger. Liberal tendency in legislation process concerning the urban and regional planning is observed on the central politics' stages. In the same time local and regional planning authorities as well as urban planners professionals' bodies for years have been warning and proposing without positive results some suitable and necessary legislation reforms. This kind of "bottom up" activity is not finding access directly to the Polish politicians. In many discussions among professionals there is a lot of hope in European Community policy, which could discipline the national legislations. The good step in this direction was the Leipzig Charta also ratified by Polish government. Energy efficiency

is one of the fundamental issues of the European economy. Cities are nowadays the biggest consumers of primary energy. How much could this factor influence EU member-countries' legislation and increase common level of urban planning culture?

The EU directive 2002/91/EC from 2002 was implemented into the Polish legislation firstly in 2009. Energy certification for new buildings introduced into Polish reality by this act is not very efficient tool but it is one of the few important institutional steps which were made to elevate the standards in all kinds of new housing as well luxury as low budget (affordable) housing.

Thinking about general energy balance of new housing, one should take in consideration not only single building but all housing complex and even whole city districts. Energy means all expenses of rising and running up the structure in future covered from the private and public budget. Balance of energy means cost of running certain part of the city now and in future answering the question how long this type of housing will be socially accepted, so it won't need as long as possible any major revitalization activities? How far urban design could guarantee long term social acceptance (economy and identity) by solving both problems: delivering urban beauty and rising energy effectiveness? How could we introduce issues of energy effectiveness into the urban design? How could urban design regarding energy efficiency be implemented as a local law?

Housing Praxis for Urban Sustainability (HOPUS) is the URBACT II project. The key question asked by partners of the project is: if we cannot stop suburbanization how to press developers to build new housing structures in better construction and high energy efficiency standards? Participants from convergences regions like Poland (Gdansk University of Technology), Portugal (University of Minho) and South Italy ("Mediterranea" University of Reggio Calabria, City of Reggio Calabria) share the same problems: rapid speed of development, liberal legislation, low planning and building culture, expensive energy saving infrastructure (technical solution) - so not in common use, low market requirements because of low awareness ect. Thanks the cooperation with partners from competitiveness regions Holland (OTB Delft University of Technology), Great Britain (City of Sheffield) and Northern Italy (CITERA Sapienza University of Rome) it is possible to exchange experience of urban tools which could be implemented to speed on implementation of energy efficient technical solution in countries of lower stage of development in this field.

Most of the European projects focus on the regeneration of existing urban structures, while HOPUS deals with planning and realization of not only individual buildings but whole new districts situated in the suburbs. Studies on the urban tools for coordination of development process firstly concern strictly potentials of design codes. Spectrum of discussion was than more widen to incorporate other kind of governance tools.

The aim of the project HOPUS, in which Gdansk University of Technology is one of partners, is to study and disseminate the ways through which the development of sustainable housing stock in European cities using modern governance tools such as design codes and other forms of "smart" project guidance can be achieved. It focuses on facilitating the implementation of construction technologies necessary to respond to current energy-saving regulations. Promotion of energy efficiency in urban structure and education, both for public authorities and private stakeholders, is a continuous challenge in Poland.



Design codes are widely adopted in practice especially in the United Kingdom and Ireland, but also in Italy (Rome). Recently discussed changes in planning law in Poland, propose introducing new types of urban policy bearing functional resemblance to design codes. Design codes as the sets of guidelines and standards ranging from urban design to building construction, for both private operators and local administrations, if correctly used, they can guarantee a high level of integration of sustainability strategies with particular reference to developments carried out by private investors.

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