Soja, E. W. (2009). The city and spatial justice. [La ville et la justice spatiale], justice spatiale [spatial justice] 1, September. http://www.jssj.org

Subirats, J. (2016). Urban policies: towards new scenarios of innovation and governance. In Nello, O. and Mele, R. (eds.) Cities in the 21st Century. London and New York: Routledge.

Swyngedouw, E., Moulaert, F., Rodriguez, A. (2002). Neoliberal Urbanization in Europe: Large-Scale Urban Development Projects and the New Urban Policy, Antipode, 34(3), 542-577.

Tedesco C. (2005), Una politica europea per la città? L'implementazione di Urban a Bari, Bristol, Londra e Roma, Milano: FrancoAngeli.

Tedesco, C. (2009) Innovation and 'resistance to change' in urban regeneration practices: A new area-based programme in southern Italy, Journal of Urban Regeneration & Renewal, 3(2), 128-140.

Turok, I. (1992) Property-led urban regeneration: panacea or placebo? Environment and Planning A, 24(3), 361¬379.

Uitermark, J., & Loopmans, M. (2013). Urban renewal without displacement?. Journal of Housing and the Built Environment, 28, 157-166.

Verbong, G., & Geels, F. (2007). The ongoing energy transition: lessons from a socio-technical, multi-level analysis of the Dutch electricity system (1960–2004). Energy policy, 35(2), 1025-1037.

Vigar, G., Healey, P., Hull, A., & Davoudi, S. (2000). Planning, Governance and Spatial Strategy in Britain. London: Macmillan. Weick K.E. (1995). Sensemaking in Organizations, Thousand Oaks, CA: Sage Publications.

ID 1567 | INNOVATION MANAGEMENT TECHNOLOGY STANDARDS AS A TOOL FOR PARTICIPATORY STRATEGIES IN URBAN REGENERATION OF PREFABRICATED HOUSING ESTATES

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1 INTRODUCTION

The central goal of the project is to investigate the living environment of low quality in residential areas in the cities, which mutually need improvement and regeneration in the scope of future sustainable urban development. The most problematic questions are being raised during the last decades about the marginal and post-socialist prefabricated housing estates built during the 1950-80s in EU. However, the inhabitants as core users of these housing areas are not fully participating in the development initiatives for revitalization on one hand, and have not been given due attention by the city to express their needs and expectations on the other hand. The main documents which contextualize the research are EU Urban Agenda and, especially, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III), which give value to the citizens; recognize the importance and prioritize their participation in the city development, urban regeneration. The research is focused on the development of interoperable connections between urban environment of low liveability and the inhabitant through participation strategies, understanding the role of innovation (regenerative and participative) for efficient public participation. It is considered to narrow this focus to Poland as the case study country because Poland is one of the countries in Central Europe, which received post-socialist prefabricated large housing estates built between 1960 and 1990 with population of over 8 million people, flats in large housing estates are estimated as 35% of the overall number of dwellings in Poland.

In the context of the above documents by European Commission and Habitat III the research objectives are summarized in the following layers of the research: (a) prefabricated housing Estates and social housing policies; (b) development of public participation in urban development (regeneration of residential areas) in the framework of European Standards. These correlated layers are directed to achieve the main

research hypothesis: (a) the retrieved matrix of indicators of living environment of prefabricated large housing estates and societal needs of inhabitants sets the core in regeneration program; (b) the interoperability of European Standard CEN/TS 16555-1:2013 (Innovation Management) and participatory strategies in urban sustainable development envisages an innovative linkage element between urban regeneration project management and participatory process. This becomes especially important at the time, when R&D&I European Standards as national standards in Poland have not been adopted yet. The research comprises collaboration with Portugal (CIAUD, FA ULisboa) in the scope of participatory strategies for urban development as one of the countries which also has not implemented these standards by now. In the fall 2016 this research project was submitted to POLONEZ, that is the National Science Centre (Poland) fellowship program, co-funded from the EU H2020 Marie Skłodowska-Curie Actions.

The use of the transdisciplinary approach in correlated urban categories 'city – inhabitant – knowledge&innovation' expects impact on the mechanism for improvement of the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit, which are among the Europe 2020 targets and priorities.

2 CONTEXTUALIZATION OF THE RESEARCH

The main documents, which contextualize the research, are EU Urban Agenda, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III). These documents envisage the mutual role of the citizen as the participant in the city development and urban regeneration, defining a "participatory" (New Urban Agenda, 2016) city, which "achieve sustainable integrated urban development" (New Urban Agenda, 2016) by leveraging innovation.

The framework of Europe 2020 Strategy (European Commission, 2010) states mutually reinforcing priorities for smart, sustainable and inclusive growth. These three directions envisage developing of knowledge and innovation; resource efficient, greener environment; social and territorial cohesion as drivers for future economies throughout the Union. The mechanism of achieving the goals set by Europe 2020 requires the translation of these goals into national targets and trajectories. Smart growth receives a productivity gap due to a lower level of innovation, insufficient use of information technologies, and reluctance in some parts of our societies to embrace innovation. According to (European Commission, 2010) "smart growth means strengthening knowledge and innovation as drivers of our future growth".

The Europe 2020 targets and priorities are interrelated on the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit. Almost three quarters (72.4 %) (Eurostat, 2016) of the EU-28's population lives in the urban environment. And the quality of urban life in cities, towns and suburbs demands its improvement.

In this context, the European Commission, expresses its concern for future cities in "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions the urban dimension of EU policies – Key features of an EU Urban Agenda" COM/2014/0490 final" (European Commission, 2014) and refers to the principles of the European sustainable urban development model synthesised by Cities of Tomorrow, which describe future cities as: places of advanced social progress; platforms for democracy, cultural dialogue and diversity; places of green, ecological or environmental regeneration.

It is acknowledged in the New Urban Agenda (New Urban Agenda, 2016) that in the sustainable development of cities and human settlements citizens "play an active and unique role in development initiatives". The Agenda underlines as one of the main feature, that it envisages in the cities and human settlements, that they: "are participatory; promote civic engagement; engender a sense of belonging and ownership among all their inhabitants; prioritize safe, inclusive, accessible, green and quality public spaces friendly for families; enhance social and intergenerational interactions; and foster social cohesion, inclusion" (New Urban Agenda, 2016, 13 b).

Among the main interlinked principles and commitments of New Urban Agenda (New Urban Agenda, 2016) are: (a) "leave no one behind <…> by enhancing liveability; by ensuring integration in the urban space; by ensuring public participation providing safe and equal access for all; by providing equal access for all to adequate and affordable housing"; (b) "ensure sustainable and inclusive urban economies, by

<…> leveraging high competitiveness and innovation"; (c) "ensure environmental sustainability, by promoting sustainable use of land and resources in urban development, by building urban resilience.

In the above context, future development of the cities correlates the categories of (a) knowledge and innovation, and (b) social cohesion translated to the goals on national level. EU Urban Agenda COM/2014/0490 final and, especially, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III) (New Urban Agenda, 2016) give value to the citizen; recognizes the importance and prioritize his participation in the city development, urban regeneration.

The above documents are contextualizing the research and are opening further contemporary questions and possibilities of research on participatory processes in urban regeneration: how to understand the innovation in participatory engagement for contemporary sustainable city; what is the nature of correlation between the categories 'city – inhabitant – knowledge&innovation', their interoperability in participation strategies. The definitions of 'participation', which are used during the last decades, consider its meaning as "a varied set of initiatives that are committed worldwide to dealing with scenarios in transformation" (Falanga, 2013). Participatory engagement of the citizens to the development of the settlement faces the challenges during the process: from the involving of the inhabitants until the conclusion stage. How do participants envisage and percept 'What city do they need?' What tools may influence of the effectiveness of public participation?

Therefore, we argue to understand the participatory process also as service and product during urban development and regeneration projects in the sustainable city development. This approach opens the possibility for the development of public participation in urban development in the framework of European Standards as European Standard CEN/TS 16555-1:2013 (Innovation Management). The wide use of this standard is not developed yet among the all countries in the EU, because not all the member states have not adopted it on their National levels. That is why it became important to identify the case countries, which still haven't implemented these R&D&I European Standards as national standards, and have not efficient results in public participation during urban development projects. The special interest is put on participation in urban regeneration of prefabricated housing estates as living environment of low quality in residential areas in the cities.

Concern on better measures of innovation in service sectors, non-technological innovation, innovation linkages and appropriate tools of analysis for policy makers is addressed in Oslo Manual (OECD and Eurostat, 2005). Manual used as a contextual framework for the understanding the role of innovation (regenerative and participative) in the research as innovation in service and non-technological product. Along with the Manual the use of Standards of Innovation Management will give the possibility to approach the conditions in the process of participatory strategies in urban development.

The structure of European Standard CEN/TS 16555-1:2013 Innovation Management foresees the parts: innovation management system (CEN, 2013); strategic intelligence management (CEN, 2014a); innovation thinking (CEN, 2014b); intellectual property management (CEN, 2014c); collaboration management (CEN, 2014d); creativity management (CEN, 2014e); innovation management assessment (CEN, 2015). According to CEN/TS 16555-1:2013 Innovation Management System (IMS) is defined as "set of interrelated or interacting elements of an organisation to establish innovation policies and objectives, and processes to achieve those objectives". The tasks to achieve the effectiveness of processes have been underlined in the Communication, "A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy to 2020" COM (2011) 311 final European Commission (2011).

The paper looks at the developed justification of the case countries and objectives of the research; defined case studies in the scope of the central goal of the research; the project working framework and methodology design; discusses expected societal impact of the Innovation management technology standards as a tool in participation process in urban regeneration of living environment in the cities.

2.1 JUSTIFICATION OF THE CASE STUDY COUNTRIES AND OBJECTIVES OF THE RESEARCH

The project aims to investigate the living environment of the low quality in the contemporary city with the process of participatory strategy. The large housing estates of prefabricated dwellings are described as the typology of housing with: “negative phenomena leading to the social and physical degradation of these areas, referred to as the large housing estate syndrome” (Szafrańska, 2013); monotonous, often not safe environment (Wrana, 2014); lack of safety feeling of security (Szafrańska, 2015); bad image; need of technical rehabilitation; “the challenge to secure neighbourly relations is <…> increasing” (Droste and Knorr-Siedow, 2005). Thus, the living environment of large housing estates of prefabricated construction is recognised as living environment of low quality. The number of flats built between the 1960–1990s in large housing estates in the socialist countries of Central Europe (Knorr-Siedow, 1996): Bulgaria – 55%, CSFR – 66%, GDR – 48%, Poland – 61%, Romania – 49%, Hungary – 52%. Poland is among the countries with the highest quantity of dwellings (61%) in prefabricated housing estates built during the 1960-90s. The special interest in the project is put on Poland as case study country that received post-socialist prefabricated large housing estates, which challenge in regeneration of these residential areas and involvement of inhabitants to participatory process in urban regeneration of prefabricated housing estates as living environment of low quality in residential areas in the cities.

The participatory process in EU cities receives two main strategies as: participation in the process of projects for urban development; participatory budget. In Poland both of these ways of participation obtained strong and weak sides during the procedures (Feltynowski, 2015). Therefore, the importance of future implementation of interoperable mechanism between knowledge and the city, innovation and consumer, smart city development and participatory engagement, contributes to the harmonization of procedures leading to development of smart sustainable city for the societal benefit.

The structure of the research is set in two main layers, which build the context for the research objectives. These layers are: (a) prefabricated housing Estates and social housing policies; (b) public participation in urban development (regeneration of residential areas) in the framework of European Standards (Innovation Management).

The outlined context of the case study country of Poland according to these interrelated two layers of the research is as follows:

a. Poland is one of the countries in Central Europe, which received post-socialist large housing estates built between 1960 and 1990 with population of over 8 million people (Węcławowicz, 2007), flats in large housing estates are estimated as 35% of the overall number of dwellings in Poland (Szafrańska, 2013);
b. participatory strategies of two types are used in Poland: participation in the process of projects for urban development (Law Dz.U. 2003 nr 80 poz. 717 for spatial planning and development) (Ustawa, 2003); participatory budget started in 2011 in Poland. Poland is among the Member States that has not adopted the European Standard CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) on the national level yet. This standard aims knowledge transfer and allows its implementation within the multidisciplinary scope.

The researches of the last decade explore the problematic features in prefabricated large housing estates in the scope of Poland (Szafrańska, 2013; Szpytma, 2014), local cities as Lodz, Lublin (Wrana and Skoczylas, 2014; Ostańska, 2009, 2011; Jarocka-Mikrut and Glen, 2014; Skoczylas, 2016) in particular. It is stated by Szafrańska (2013) that “twenty years of the socio-economic transformation in Poland show that so far no comprehensive strategies of transforming large-scale housing estates have been devised yet, and solving this problem has been postponed until an indefinite future.” The research by Szafrańska (2013) concludes that “modernization (humanization) of large housing estates requires the involvement” of local communities (inhabitants) and central and local authorities, “the correlated and integrated actions of these actors should take into consideration the needs of residents”.

The process of public participation in urban development in Poland is in the scientific debate (Kaczmarek and Wójcicki, 2016; Feltynowski, 2015; Gawroński et al., 2010). In case of Poznań it had been experimented the Internet tool “in the form of a geo-survey in GIS, the first of this kind to be conducted in Poland, successfully eliminated the problem of the insufficient representativeness of traditional consultations” (Kaczmarek and Wójcicki, 2016) and stated that “it is necessary to improve the decision

process in urban spatial planning by augmenting the traditional forms and instruments of public participation with new ones". They should offer the possibility of greater participation and a wider social representation than the traditional consultative meetings.

Justification for tackling specific scientific problems by the project. In Poland regeneration of prefabricated post-socialist housing estates has only recently been acknowledged as well as the suggestions of implementations of new schemes of public participation, while explorations of interoperability of European Standards for Innovation Management Systems in urban regeneration, as a whole and residential areas of low liveability in particular, in the cities and active types of participatory strategies are absent from the academic debate. There is a gap in existing research about public participation in urban regeneration of post-socialist housing estates in regional city of Lublin that verifies the importance of the planned research hypothesis as innovative interdisciplinary approach to the existing problem of quality of prefabricated living estates. Existing process of public participation in urban development receives more problems and questions, then positive results because it lacks an innovative linkage element which has to connect effectively the city inhabitant and administrative authorities, urban regeneration project management. It means that public participation as a tool for public consultation in spatial development of the city is not effective now and not enough to become a interoperation mechanism, thus need to be investigated for innovative changes. Meanwhile, "local governments often fail to tap into the experiences, ideas, and resources of civic actors when identifying and defining problems and challenges that call for innovative solutions" (Sørensen and Torfing, 2016).

The correlated layers of the research are directed to achieve the main research hypothesis: (a) the retrieved matrix of indicators of living environment of prefabricated large housing estates and societal needs of inhabitants sets the core in regeneration program; (b) the interoperability of European Standard CEN/TS 16555-1:2013 (Innovation Management) and participatory strategies in urban sustainable development envisages an innovative linkage element between urban regeneration project management and participatory process. This becomes especially important at the time, when R&D&I European Standards as national standards in Poland have not been adopted yet. The aim of this hypothesis is in innovation and knowledge transfer for efficient practices and results.

Thus the research objectives of the project are summarized in two layers and set as following:

a. prefabricated housing Estates and social housing policies: (a.1) identifying the representative case studies for complex analysis of the prefabricated housing estates in Poland (Lublin: LSM, Stanislaw Moniuszko quarter; Krakow; Warsaw); (a.2) identifying interconnection between prefabricated large housing estates and challenges in social housing policies in Poland; (a.3) development of matrix of bottom-up and top-down indicators of prefabricated housing estates and societal needs of inhabitants as the core in regeneration program;
b. development of public participation in urban development (regeneration of residential areas) in the framework of European Standards: (b.1) identifying the initiatives, realised projects and projects in progress on urban regeneration of residential areas with involvement of inhabitants in Poland and abroad; (b.2) analyzing the interconnection of the authorities, construction enterprises, research institutions and participatory process in the context of the European Standards CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) and Parts 2-7 (CEN, 2014a-2015); (b.3) analyzing participatory process (case studies) in the framework of Innovation Management Technology Standards and Oslo Manual as service and product in urban development and regeneration projects in the sustainable city development: challenges and potential; (b.4) determining and providing recommendations on linkage element between urban regeneration project and participatory processes for innovation in urban sustainable regeneration.

In the development of the Strategic Plans for Urban Rehabilitation, which in Portugal focus on territorial units with enormous influence on the life of the citizens, it is possible to verify the weak affluence to the public participation in the contexts of the planning of the city and its development. This weak affluence on the destiny of the city is worrisome when analysed from a qualitative perspective. It is also necessary to analyse the different contexts where these phenomena occur and to frame them in the respective social, administrative or methodological frameworks.

The presence of Portuguese case studies is also related to the need to promote a broad comparative framework that allows the involvement of different administrative, social and methodological matrices, and not only with the absence of the CEN standard, which allows for clarification more sustained from good and bad practices in public participation associated with urban development. It is planned to analyse and verify approach to CEN/TS 16555 (Parts 1-7) in the scope of participatory strategies in Portugal as the case study country. It is observed that the public participation in spatial development in Portugal receives similar to Poland weak sides of the process: low involvement of active citizens; lack of toolkits to improve public participation and its strategies; “contradictions and delays in the evolution of urban policy in public participation” in Portugal case (Tulumello, 2016).

Scientific interest of the cooperation in the project (Research Centre for Architecture, Urbanism and Design (CIAUD), Faculty of Architecture, University of Lisbon Portugal) in the scope of participatory strategies is based on documents New Urban Agenda (New Urban Agenda, 2016) and Communication on strategic vision for European standards (European Commission, 2011) which contextualize the interests around innovation, necessary standardization procedures and importance of future implementation of R&D&I European Standards as national standards in the countries as Poland and Portugal, since none of the listed countries adopted the European Standard CEN/TS 16555-1:2013. This fact establishes cooperation in WP3 and WP5. The cooperation aims also on (a) identification of public participation within Lisbon Metropolitan Area (MA); (b) regulations on public participation in public policies in Portugal; (c) qualitative and quantitative analysis of public participation in Lisbon MA.

2.2 JUSTIFICATION OF THE CASE STUDIES CONTEXT

2.2.1 PREFABRICATED HOUSING ESTATES AND SOCIAL HOUSING POLICIES IN POLAND

Contemporary Poland received more then 70% of prefabricated housing blocks, which include 50% of panel housing built between 1946 and 1992 (Ostańska, 2009). 21% of population lives in post-socialist large housing estates in Poland. Among the Polish cities Lublin with the population of 325049 (BIP, 2015), received accordingly flats in prefabricated post-socialist large housing estates. The attractiveness of the city for the people who would like to live here is the responsibility of the authorities. And Lublin has to develop its advantages to become attractive and health urban place. Lublin-city of Inspiration – this is the brand marking approach of the City Council for smart, sustainable and inclusive growth. But there are still difficulties with the strategic view for the development of the city. Among the actual questions is the quality of living environment of post socialist housing estates in Lublin (Wrana and Skoczylas, 2014; Ostańska, 2009, 2011; Jarocka-Mikrut and Glen, 2014; Skoczylas, 2016):

- processes of strong and multifaceted social, physical, and economic degradation;
- the low quality of technical exploitation of the prefabricated living blocks, for instance: heat losses in the structure of the multi-family housing block;
- limited activation of engagement of inhabitants to bottom-up upgrading processes.

These features remain the perception of the prefabricated large housing estates as the ‘typical housing standard’.

2.2.2 INNOVATION MANAGEMENT TECHNOLOGY STANDARDS: RESIDENTIAL AREAS IN FUTURE CITY

The Innovation Union (IU) states the priority for R&D&I development. The EU flagship initiatives for innovative development, assumes the reinforcement of knowledge and innovation as drivers for future growth, promoting knowledge and innovation transfer throughout the Union. The mechanism of mutual interoperability of innovation in knowledge, research and development sets the crucial goal to achieve output of growth in societal benefits. The transfer process needs to use interoperable standards by the Members of the EU. In this context, the importance of future implementation of Innovation Management European Standards as national standards in Poland and Portugal becomes great priority, since they have not adopted the European Standard CEN/TS 16555-1:2013 Innovation Management - Part 1: Innovation Management System.

European Commission, expresses its concern for the required standards production that enable the effectiveness of processes, in the Communication, "A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy to 2020" COM(2011) 311 final (European Commission, 2011). This carries out the Regulation (EU) 1025/2012 and the European Council conclusions of March 2014, which recognize the importance of European and International standards. It becomes of mutual importance the understanding of the use of CEN/TS 16555-1:2013 in the scope of urban development of sustainable cities.

2.2.3 PARTICIPATORY STRATEGIES IN URBAN REGENERATION OF RESIDENTIAL AREAS

The value and necessity of participation in the regeneration of prefabricated housing in Poland is stated by Dmitruk (2014): ”The way of correct approach by the city authorities to the renovation of panel housing estates, along with the need to involve local residents to social discourse is crucial in the whole process”. Nevertheless, the obligatory process of public participation in urban development projects regulated by (Ustawa, 2003) is analysed in the example of project in Lodz by Feltynowski (2015) which raised the next weaknesses as: “Polish law allows participation in urban planning procedures, but not everyone wants to exercise this right”; citizens “do not participate in public discussion; this is the main problem of the Polish regulations”; “only 14% of remarks to the land-use plans are taken into account; some remarks are unfounded” and thus “not included into the land-use plans”. The case of Poznań (Kaczmarek and Wójcicki, 2016) underlines problems as: “public activity was found to be low, with poor attendance at consultative meetings”. And it was stressed by Kaczmarek and Wójcicki, 2016 “that it is necessary to improve the decision-making process in urban spatial planning by accommodating not only traditional but also new forms and instruments of public participation”.

These broader contexts raise the necessity of exploration of: indicators of living environment in prefabricated housing Estates in Poland and challenges in social housing policies; use of the CEN/TS 16555-1:2013 in the field of public participation in regeneration of residential areas towards a future sustainability; development of participatory innovative strategies in urban regeneration of residential areas.

In January 2017, Sintra City Council, a city that integrates the Lisbon Metropolitan Area, presented the Report (Relatório de Discussão Pública: ARU Queluz/Belas, 2017) on the weighting of the public participation it received as part of the presentation of the Queluz / Belas Strategic Urban Rehabilitation Program (Programa Estratégico de Reabilitação Urbana de Queluz-Belas, 2017). This public discussion, as well as the respective publicity of the Urban Rehabilitation Operation project, allows the development of a process of participation, through the involvement of local actors in the definition of land planning policies, in compliance with the provisions of article 17, paragraph 4 of the Legal Regime of Urban Rehabilitation, in conjunction with Article 89 of the legal regime of territorial management instruments (Legal Regime of

Territorial Management Instruments) approved by Decree-Law no. 80/2015 of May 14. Note, therefore, the tax nature (imposition), of a legal and administrative nature, for the development of processes of public participation.

The process of public participation takes place over a period of 20 (twenty) days. The publication of this period of public participation is carried out in the Diário da República, a national newspaper (Correio da Manhã), as well as on the Sintra City Council website and the Collaborative Territorial Management / Procedures In Progress Program (PCGT / PEC)) of the General Directorate of the Territory. Additionally, two public clarification sessions were held in the areas of influence of the Urban Rehabilitation Area, as well as versions available for consultation of the documents that comprised the Queluz / Belas Urban Rehabilitation Strategic Program: (a) at the Municipal Department of Environment, Planning And Land Management, D. Afonso Henriques Square, Sintra; and, (b) at the website of the Sintra City Council. From this period of public consultation, and publicity, resulted in 6 participations of different representativities: (a) one belonging to a political party; (b) one belonging to the citizens' movement; (c) a local company; and, (d) three citizens.

The Queluz / Belas Strategic Urban Rehabilitation Program covers a territory with 518 ha, with a total of 59,662 individuals, and a population density estimated at 11,528 inhabitants / km2. It is therefore evident, despite efforts to the contrary, the lack of interest of a very significant part of the population (99.99%) in the

procedures associated with the development of the city of Queluz / Belas, making it pertinent to identify the motivations leading to the presented scenarios.

3 PROJECT WORKING FRAMEWORK

3.1 RESEARCH DESIGN AND METHODOLOGY

The paradigm of a New Urban Agenda in the main EU and UN documents, and EU Communication (COM (2011) 311 final) "A strategic vision for European standards" contextualise underlying scientific methodology. The methodology design is built for two layers of the research, and use the next methods accordingly:

(a.1) data collection for the case studies residential areas analysis includes (projects, urban plans, technical observation, sociological survey of inhabitants);
(a.2) content analysis of social housing policies documents;
(a.3) qualitative and quantitative analysis to build a matrix of bottom-up and top-down indicators of prefabricated housing estates and societal needs of inhabitants as the core in urban regeneration program;
(b.1) qualitative analysis of projects on urban regeneration of residential areas, which include the involvement of inhabitants; SWOT in participatory strategies;
(b.2) approach to CEN/TS 16555-1:2013 by analysis of structural elements of innovative management in technology standards Parts 1-7 (CEN, 2013-2015) in the scope of urban regeneration and participation process; identification of analysis criteria of participants of urban regeneration project, which are based on CEN/TS 16555-1:2013; analysis of interconnection of the authorities, construction enterprises, research institutions and participatory process in the context of the European Standards CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) and Parts 2-7 (CEN, 2014a-2015);
(b.3) identification of analysis criteria of public participation in urban regeneration, which are based on CEN/TS 16555-1:2013; analyzing participatory process (case studies) in the framework of Innovation Management Technology Standards and Oslo Manual as service and product in urban development and regeneration project;
(b.4) determining and providing recommendations on linkage element (autonomous mechanism, independent expertise, efficiency evaluation) between urban regeneration project and participatory processes for innovation in urban sustainable regeneration.

The methodology design comprises the next steps according to the above research layers and methods: data collection for the case studies in Poland of prefabricated residential areas (Lublin: LSM, Stanislaw Moniuszko quarter; Krakow; Warsaw) analysis (projects, urban plans, technical observation, sociological survey of inhabitants); content analysis of social housing policies documents; qualitative and quantitative analysis to build a matrix of bottom-up and top-down indicators of prefabricated housing estates and social needs of inhabitants as a tool to approach urban regeneration program. The results of this layer will identify the data of the quality and challenges of living environment in the case studies of prefabricated housing estates built during the 1960-80s in Poland.

As most of the regeneration of prefabricated housing built in the 1960-80s in Poland in the large housing estates was made providing only complex insulation of the blocks (Wrana, 2014), it becomes important to analyse the realised projects of urban regeneration of residential areas not only in Poland, especially those, which deal with prefabricated post-socialist dwellings and involve inhabitants to public participation. The realised examples of urban regeneration of prefabricated housing estates built in the 1960-80s (Germany, Halle, Leinefelde, etc.) with participatory approach allow analysing the achieved quality of 'new' living environment of the neighbourhoods and the types of all parties of the project. SWOT analysis of public participation in case study countries (Poland, Portugal) will give the qualitative evaluation of their results. Approach to European Standard CEN/TS 16555-1:2013 is the context analysis of the standard with the aim to identify the criteria, structural elements of innovative management from the standard for participatory process in urban regeneration project, as well as for other parties, which are connected in the project. The qualitative analysis of public participation in urban regeneration together with other parties as authorities, construction body, research institution, their interconnections, will give the wider view of the

contemporary challenges of the role of the inhabitant of the city in urban regeneration of their living environment. This step will allow to outline the points of interoperability of the participation process, in particular, and technology standards CEN/TS 16555-1:2013, identify the analysis criteria based on it. The aim of the analysis of participation process as service and product in the framework of Innovation Management Technology Standards and Oslo Manual is to identify and build the structure of linkage element between urban regeneration project and participatory processes. This linkage element will embrace the structural elements of the above Standards (strategic intelligence management; innovation thinking; intellectual property management; collaboration management; innovation management assessment, expertise, efficiency evaluation) for innovation management in urban sustainable regeneration of residential areas.

3.2 WORKING PACKAGES

The main tasks for the research are comprised in the next Working Packages (WP) (Tab.1) and list of actions:

WP	Description	Tasks
WP1	Prefabricated housing Estates	Selection of prefabricated residential areas for the case studies in Poland (Lublin: LSM, Stanisław Moniuszko quarter; Krakow; Warsaw); Application for the site plans; Analysis of selected case studies (projects, urban plans, technical observation)
WP2	Social housing policies in Poland	Social housing statistics and policies in Poland (stat databases, regulation documents)
WP3	European Standards CEN/TS 16555	European Standards CEN/TS 16555 (Parts 1-7); Analysis of urban regeneration projects, which include participation of inhabitants; Approach to CEN/TS 16555 (Parts 1-7) in the scope of participatory strategies and other bodies of urban regeneration projects;
WP4	Case studies	Prefabricated housing estates and regeneration practices: qualitative analysis, SWOT (Poland)
		Public participation strategies in the urban development projects (Portugal)
WP5	Participatory strategies	Regulations for participation in urban regeneration;
		Participatory process in EU member state (Portugal)
		Sociological survey in case studies (program, pilot survey, survey, interpretation of results)
WP6	Public dissemination	Urban Lab (summer school) Workshop: "My city – my dwelling"
		Exhibition of the results of the workshop (school, community centre)
		Publications of articles in the general press
WP7	Conclusions	Interoperability of CEN/TS 16555 and participation in urban regeneration; Recommendations on linkage element 'urban regeneration project - participatory process'

Table 1 - Working packages during the research project

4 CONCLUSSIONS: EXPECTED SOCIETAL AND INNOVATIVE IMPACT OF THE PROJECT RESULTS

The project explores the actual problems in the development of cities, especially in the urban regeneration of low quality of living environment in panel prefabricated large housing estates on the example of Poland, and underlying to the main EU and UN documents, which state the concern and mutually reinforcing priorities for smart, sustainable and inclusive growth. The exploration of the tool for development of interoperable connections between the urban environment of low liveability and inhabitants' sustainable participation is suggested in the context of technology standard CEN / TS 16555-1: 2013, which is not implemented in Poland on the national level. The use of the transdisciplinary approach in correlated urban categories "city-inhabitant-knowledge and innovation" expects impact on the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit and effective public participation.

Innovation management technology standards are put to the research to explore their application as a tool for participatory strategies in urban regeneration. This approach is suggested as the one that envisages the use of official documents of CEN / TS 16555-1: 2013, which are on the stage of adoption on members' national levels, as well as Urban Agendas by EU and UN, Oslo Manual and European Communications by EC as: COM(2010) 2020 final; COM/2014/0490 final; 2020 COM(2011) 311 final. Here the importance of the exploration of the opportunities of the applied use of Standards and Manual in the interdisciplinary scope gives the framework for their application in the main goal of the project as regeneration of the living environment for the inhabitant. Thus the project will explore the structural parts of the Standard (Innovative Management) on the example of participatory strategies in urban regeneration project. A new linkage element (entity, organisation, third body, other) between participation process and urban project management, with the aim to receive effective public participation, will embrace explored structural parts as: strategic intelligence management; innovation thinking; intellectual property management; collaboration management; innovation management assessment, together with added expertise and efficiency evaluation.

The implementation of European Standard for Innovation Management requires an transdisciplinary approach and therefore the use of different disciplines and environments: from urban and landscape design and architecture to construction, from SME and R&D Centers to Public stakeholders methodological approaches. The use of CEN / TS 16555-1: 2013, which is applied for R&D&I management in Europe, and European Urban Agenda, are key factors for the development of case studies.

BIBLIOGRAPHIC REFERENCES

BIP (2015). Dane demograficzne (stan na dzień 31.10.2016 r.). Biuletyn Informacji Publicznej Samorząd Miasta Lublin. Retrieved November 16, 2001, from http://bip.lublin.eu/bip/um/ index.php?t=200&id =202632

Dmitruk M. (2014) Wielka płyta - światowy problem, Teka Kom. Arch. Urb. Stud. Krajobr. – OL PAN, 2014, X/2, 13-24.

Droste, C., Knorr-Siedow, T. (2005). Large housing estates in Germany. Berlin: opinions of residents on recent deve1opments, Utrecht: Urban and Regional research centre Utrecht, Faculty of Geosciences, Utrecht University.

European Commission (2010). EUROPE 2020 A strategy for smart, sustainable and inclusive growth. COM(2010) 2020 final. Brussels.

European Commission (2014). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions the urban dimension of EU policies – Key features of an EU Urban Agenda COM/2014/0490 final. Brussels.

European Commission (2011). A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020 COM(2011) 311 final. Brussels.

CEN. (2013). Innovation Management - Part 1: Innovation Management System (CEN/TS 16555-1:2013)

CEN. (2014, a). Innovation management - Part 2: Strategic intelligence management (CEN/TS 16555-2:2014).

CEN. (2014, b). Innovation management - Part 3: Innovation thinking (CEN/TS 16555-3:2014).

CEN. (2014, c). Innovation management - Part 4: Intellectual property management (CEN/TS 16555-4:2014).

CEN. (2014, d). Innovation management - Part 5: Collaboration management (CEN/TS 16555-5:2014).

CEN. (2014, e). Innovation management - Part 6: Creativity management (CEN/TS 16555-6:2014).

CEN. (2015). Innovation management - Part 7: Innovation Management Assessment (CEN/TS 16555-7:2015).

Eurostat (2016). Retrieved on 14 Nov 2016 http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_European_cities

Falanga, R. (2013). Developing change : a psychosociological action research with civil servants engaged in participatory processes. Coimbra : [s.n.]. Tese de doutoramento. Retrieved on 08 May 2017: http://hdl.handle.net/10316/24148

Feltynowski, M. (2015). Public participation in spatial planning in Poland as an element of evidence based urban planning – case study of Lodz. Economy of European Countries, Vol. 14 (№ 3). Sep 2015.

Gawroński K., Kristof Van Assche, Hernik J. (2010) Spatial planning in the United States of Americaand Poland. Infrastructure and ecology of rural ereas. Nr 11/2010, Commission of Technical Rural Infrastructure, Polish Academy of Sciences, Cracow Branch, s. 53–69.

Jarocka-Mikrut A., Glen P. (2014). Koncepcja osiedla A, B i C dzielnicy "Felin" w Lublinie, a jego realizacja. Problemy budownictwa wielkopłytowego. Budownictwo i Architektura 13(3) (2014) 309-316.

Kaczmarek T., Wójcicki M., 2016. Participation in social consultations on physical planning documents. The case of Poznań City. Quaestiones Geographicae 35(2), Bogucki Wydawnictwo Naukowe, Poznań, 71–81, 7 figs.

Knorr-Siedow, T. (1996). Present and future outlook for large housing estates. European Academy of the Urban Environment and Institute for Regional Development and Structural Planning.

New Urban Agenda (2016). Draft outcome document of the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), Quito, 17–20 October 2016. A/CONF.226/4

OECD and Eurostat. (2005). Oslo Manual, Guidelines for collecting and interpreting innovation data, 3rd Edition, OECD Publishing.

Ostańska A. (2011). Ocena możliwości poprawy jakości życia w budynkach prefabrykowanych w opinii ich mieszkańców. Budownictwo i inżenieria środowiska, 2 (2011), 361-368.

Ostańska, A. (2009). Problemy rewitalizacji zespołów prefabrykowanej zabudowy mieszkaniowej na przykładzie osiedla im. Stanisława Moniuszki w Lublinie. Budownictwo i Architektura 4 (2009) 85-104.

Programa Estratégico de Reabilitação Urbana de Queluz-Belas. (2017). Retrieved on 05 March 2017: http://www.cm-sintra.pt/index.php?option=com_phocadownload&view=category&download=2435: programa-estrategico-de-reabilitacao-urbana-de-queluz-belas&id=203:aru-queluz-belas

Relatório de Discussão Pública: ARU Queluz/Belas. (2017). Retrieved on 05 March 2017: http://www.cm-sintra.pt/index.php?option=com_phocadownload&view=category&download=2434: relatorio-de-discussao-publica&id=203:aru-queluz-belas

Skoczylas O. (2016). Przeobrażanie się przestrzeni miasta i osiedli związane ze zmianami stylu życia mieszkańców. Budow nictwo i Architektura 15(1), 143-148.

Szpytma M. (2014) Rewitalizacja osiedli z wielkiej płyty. Implementacja rozwiązań europejskich do warunków polskich. Budownictwo i Architektura 13(3) (2014) 341-348.

Sørensen, E., & Torfing, J. (2016). Co-initiation of collaborative innovation in urban spaces. Urban Affairs Review, 1078087416651936.

Szafrańska, E. (2013). Large housing estates in post-socialist Poland as a housing policy challenge. European Spatial Research and Policy, Vol. 20, 1.

Szafrańska, E. (2015). Transformations of large housing estates in Central and Eastern Europe after the collapse of communism. Geographia Polonica, Volume 88, Issue 4, pp. 621-648.

Tulumello, S. (2016). Reconsidering neoliberal urban planning in times of crisis: Urban regeneration policy in a “dense” space in Lisbon. Urban Geography, 37(1), 117-140.

Ustawa (2003). Dz.U. 2003 nr 80 poz. 717, Ustawa z dnia 27 marca 2003 r. o planowaniu i zagospodarowaniu przestr.

Wrana, J. (2014). Rola i znaczenie architektury w procesie scalania struktury przestrzennej miasta na przykladzie Lublina. Politechnika Lubelska.

Wrana, J., Skoczylas, O. (2014). Rewitalizacja osiedla z wielkiej płyty w mieście Lipsko – uzupełnienie funkcji o budynek wielofunkcyjny. Budownictwo i Architektura 13(3) (2014) 349-354.

Węcławowicz, G. (2007), Geografia społeczna miast, Warszawa: WN PWN.