
Case Study Paper

THE CRISALIDE PROJECT:

When innovative planning processes re-balance urban development and create new quality of life using the opportunities provided by the rise of the digital city.

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Abstract

CRISALIDE (City Replicable and Integrated Smart Actions Leading Innovation to Develop Urban Economies) is one of the very few projects financed between EU and Russian Federation through the ERA NET RUS PLUS (ENRP) programme. It is the only financed project in ENRP dealing with topics related to urban planning in this current EU programming period (2013-2020). Societal transformation happens in the cities. Cities are the natural habitat for developing innovation. Innovation inherently requires change. Great cities, especially in their golden ages, have been considered as “innovative milieus” or “cradles of civilization” (Hall, P., 1998). The change, as the catalyser of innovation, is embedded in urban life. The change covers different fields, for instance, the demography (e.g. ageing, in-im-emigrations), the citizens’ behaviours (e.g. higher mobility, digital literacy, social media addiction), the working patterns (e.g. continuous learning, higher commuting, virtual offices), the use and extension of both public space and sphere (e.g. location-based services, public/private urban spaces as hyper-location, re-use and temporary uses of buildings and brownfields) the modes/means of production (e.g. just in time products, global trade and distribution, effective governance schemes adoption and tools for Public-Private-People Partnerships - PPPP) and so on. Nonetheless, we are in an age of rapid urbanization. In Russia, a polarization of population around major urban areas is evident. This trend led, a few years ago, to the design of a policy facing planning issues related to Russian Urban Agglomerations. Urbanization is a great opportunity for supporting innovative choices and urban solutions. Strategic, smart and integrated urban management is a key tool to promote stable growth and effective processes of innovation. New efforts to modernize the Russian economy and face global issues as well (e.g. climate change, migration, sustainability), have taken on an even greater significance since the implementation of Western sanctions. Cities can be the natural catalyser for promoting innovation, as they contain all strategic elements (e.g. available spaces and infrastructures both public and private, research centres, universities, science parks, creative communities, large industry, SMEs), at a scale of proximity. CRISALIDE is experimenting in Rostov-on-Don, through a collaborative approach involving EU and Russian researchers, the creation of a digital innovative platform aimed at facilitating the renewal and regeneration of brownfields. The platform is abstracting, digitalising and finally creating a replicable and user-friendly tool based on an enlarged participatory planning process grounded on PPPP (Public Private People Partnership) principle. The platform is harmonising the contribution of stakeholders in diverse planning domains and formalize them through KPIs (Key Performance Indicators) providing values at disposal to decision makers linked to

grade of smartness and comprehensive quality of life generated by the triggered regenerative planning process.

Keywords

smart cities, strategic planning, urban policy, urban regeneration, brownfields

1. Linking innovation to the Russian planning context explaining the need for a platform

1.1. The idea of CRISALIDE

The opportunity of designing the project CRISALIDE (City Replicable and Integrated Smart Actions Leading Innovation to Develop Urban Economies) has been given by the opening of the second call of the EU/Russian Federation Programme called ERA.Net RUS Plus. The major objective of ERA.Net RUS Plus is to deepen the transnational collaboration between EU MS/AC and Russia and to reduce the fragmentation of research programmes along national funding lines. Other principal goals of ERA.Net RUS Plus are to further develop the instrumental setting for joint funding activities and thus to provide a solid basis for a cooperative programmatic approach to be pursued in the near future. This programmatic approach will assure the desired and necessary sustainability of the cooperation between EU Member States and Russia and a lasting impact.

The project's name is already a synthesis of the project attitude towards the application of innovative methodologies in the urban realm. The chrysalis (CRISALIDE is the Italian version of the word chrysalis) is a butterfly at the stage of development when it is covered by a hard case, before it becomes an adult insect. It is a metaphor of the translation towards a new state of play characterized by the application of innovative solutions, as innovation is the result of a process that transforms the state of things bringing them to a completely new situation: the chrysalis becoming a butterfly. CRISALIDE through its methodology and participatory activities is developing a stable, engaged stakeholder group, which will assist in the establishment of the innovative development schemes (IDS) tackling aspects related to housing, mobility and infrastructure, public space and services/ facilities, environment, landscape and heritage, as well as urban management and governance. The results and the impacts are organized in three innovation areas:

- organizational innovation (such as new niches for local, city-based private sector to boost R&D and innovation activities, policy impact to reinforce local and national related policies regarding collaboration in the field of R&D and innovation),
- technological innovation and
- social innovation (enhanced Local Identity to improve social capital, increased climate and environmental awareness to favour community's preparedness, increased ICT development awareness to enhance local economics).

1.2. Being innovative in Urban Planning in the EU

We are in an age of rapid urbanization. Nowadays globally, more people live in urban areas than in rural areas, with 55.3 % of the world's population residing in urban areas in 2018 (World Bank Data, 2019). In 1950, 30 % of the world's population was urban, and by 2050, 68% of the world's population is projected to be urban (UN, 2018). Innovation in urban planning covers different fields, for instance,

- the demography (e.g. ageing, in-im-emigrations),
- the citizens' behaviours (e.g. higher mobility, digital literacy, social media addiction),
- the working patterns (e.g. continuous learning, higher commuting, virtual office),
- the use and extension of both public space and sphere (e.g. location-based services, public/private urban spaces as hyper-location, re-use and temporary uses of buildings and brownfields)
- the modes/ means of production (e.g. just in time products, global trade and distribution, effective governance schemes adoption and tools for Public-Private-People Partnerships - PPPP) and so on.

In the European context, especially of urban policies promoted by the EU, in the last few years, the theme of urban innovation has become a mantra that supports various direct financing programs (mainstream funds) and indirect ones (specific initiatives and programs managed directly with the cities or metropolitan areas). The Innovation Union was launched in 2010 as a flagship initiative of the Europe 2020 strategy to build on Europe's strengths and address its weaknesses with respect to innovation and thereby make Europe more competitive in times of budgetary constraints, demographic change and increased global competition. The main achievements under this priority are the implementation of the European Research Area (ERA) and the launch of Horizon 2020, the new research and innovation framework programme, streamlining funding and encouraging cross border and transnational collaboration.

The flagship programme of the EU in this respect is the UIA (Urban Innovative Actions). Cities are going to be financed after proposing innovative ideas co-designed together with a local partnership constituted by key stakeholders, basically following the quadruple helix principle. Urban Innovative Actions test innovative ideas and support urban authorities in their efforts to ensure sustainable urban development. In 2015, urban stakeholders and Member States identified 12 topics which represent common challenges cities are facing: 1) Air quality, 2) Innovation and responsible public procurement, 3) Circular economy, 4) Integration of migrants and refugees, 5) Climate adaptation, 6) Jobs and skills in the local economy, 7) Digital transition, 8) Housing, 9) Energy Transition, 10) Sustainable use of land (nature-based solutions), 11) Urban mobility, 12) Urban Poverty (deprived neighbourhoods).

All over Europe, there are currently 54 projects experimenting urban innovative solutions for current issues faced by EU cities in the above listed challenges (<https://uia-initiative.eu/en/uia-cities-map>).

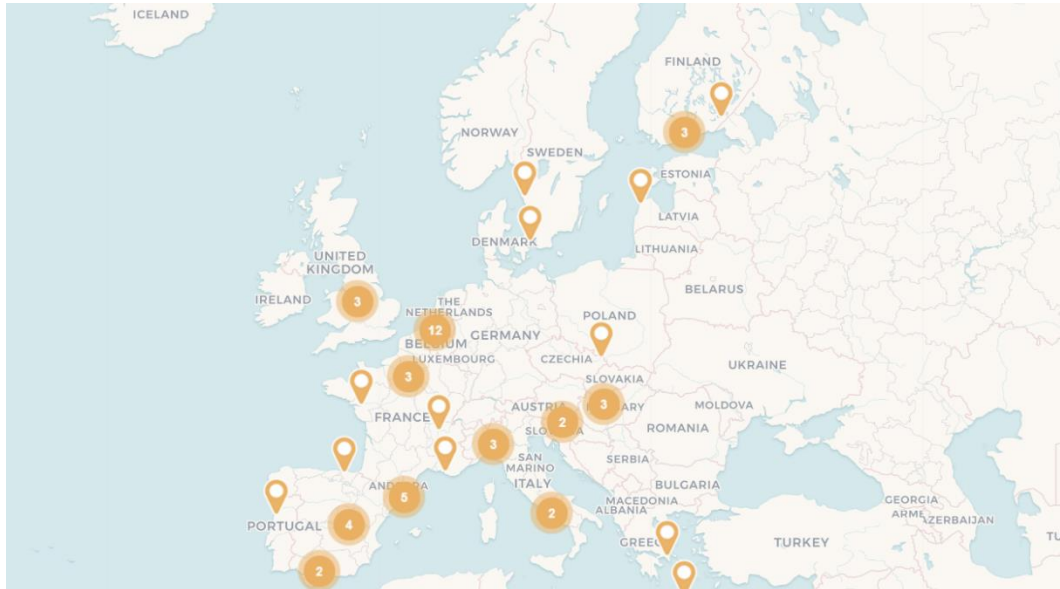


Figure 1 Innovative Actions currently financed all over EU

1.3. Being innovative in Urban Planning in the Russian context

Investing with proper methodologies in the urban realm means creating conditions for developing consumer orientated sustainable products and efficient/effective services. In fact, despite the big role of Russia's science and its potential, today the country seems to be lagging behind in cultivating high-tech technologies for innovating the economy of cities. Although it is one of the leaders in developing space, defence and nuclear technologies, Russia is drastically falling behind in producing consumer technologies (Koshkin, P. 2015). Innovations in the contemporary Russian urban planning system are mainly seen in the usage of the new technological tools, such as GIS, but the urban planning system is far from the introduction of organisational or social innovations. Despite the fact that the country's transition to the new socio-economic model is associated with the introduction of the unknown for the Soviet model conditions, such as private property and private actors, and the creation of the new urban planning system, this system in many aspects replicates the obsolete socialist model of planning. It is still top-down, centralised, comprehensive and does not consider public participation as an important element of decision-making.

CRISALIDE's approach is to build innovative solutions through a dialogue between stakeholders placed before the transformation of a given urban context. A remarkable asset of this project lies in the fact that it is necessary to arrive to the definition of a platform, based on specific urban and territorial indicators, which facilitates decision-making choices in urban transformation and regeneration processes. In this sense both the European and the Russian partners are bound by the concreteness of the real problems connected to the transformation of an urban area. CRISALIDE is currently being implemented, so it has not yet come to define this platform, but concrete hypotheses have been put forward on how to build it. From a strictly urbanistic point of view (there is also in CRISALIDE a translation of qualitative themes into ontologies useful to computer scientists to create the platform, but they are not the main object of this article) the themes (urban functions) on which to work, were identified. Each of these themes is being evaluated based on a set of KPIs (key performance indicators) based on the following functions:

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- The places of living (housing)
 - The spaces for production
 - The Public space
 - Mobility and accessibility
 - Governance and participation
 - Green infrastructure (NBS, Nature Based Solutions)
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2. Applying a participatory based methodology supported by evidence-based planning actions

2.1. Contextualisation of participatory based methodology in CRISALIDE

CRISALIDE project is experimenting a joint EU-Russian research and collaborative approach for the creation of a digital innovative platform, designed to facilitate the renewal and regeneration of abandoned areas and brownfields. As an outcome, the platform is envisioned to become a replicable, user-friendly tool, aligning and harmonising visions from a diverse ecosystem of stakeholders.

In order to achieve its final outcome, CRISALIDE project leverages on the principle of participatory planning, its methodology being guided by a simple vision: to establish a multi-stakeholder group to sustain the collaboration in the field of R&D and innovation through a set of participatory workshops with a two-fold objective: 1) lay the foundation for the platform design by mapping the existing knowledge and gather evidence-based information and 2) design the technical and locally-rooted requirements for the online collaborative platform, the Innovative Decision-Making Tool (IDMT). Based on a set of KPIs (Key Performance Indicators) debated and agreed with the multi-stakeholder group, the IDMT will provide values at disposal to decision makers linked to grade of smartness and comprehensive quality of life generated by the triggered regenerative planning process.

2.2. Participatory based methodology conceptualisation

The conceptualisation of the participatory based methodology is embedded into a theoretical background on participatory planning processes and design thinking methods, in order to design the most suitable workshop scenario for identifying local needs, problems, opportunities and brainstorming potential solutions to the most pressing challenges. One of the main expected outcomes of the participatory based methodology is to boost, strengthen and consolidate the collaboration between multiple stakeholders towards RDI in the city of Rostov-on-Don. By applying a participatory based methodology and approach, the idea of empowerment will provide stakeholders with the ability and capacity to become agents for change in the process of decision-making concerning their own lifestyles and environment (Benson, Roe, 2000). As a natural consequence, the IDMT (Innovative Decision-Making Tool) will be defined in a participative environment and setting, following the core principles of stakeholders' empowerment.

Participatory processes are widely known practices in city planning and development projects. Several methods and practices can achieve certain levels of citizen/ stakeholder

involvement. Research on participatory processes is categorising and classifying practices between four impact levels of participation: information, consultation, collaboration and empowerment (Stelzle, Noennig, 2017). In this context, CRISALIDE project focuses mainly on consultation and collaboration methods, in order to achieve long-term collaboration in the field of RDI among researchers, businesses and companies (technology providers) and the public sector. The engagement and active participation of different local actors is crucial for reaching a successful design and conception of the IDMT. The challenge lies mostly in the process of discovering the diversity of interest and viewpoints and managing to conduct a work of matchmaking until reaching the point of interest alignment and harmonization, without overvaluing certain opinions or excluding too many interests (Healey, 1997).

2.3. Need for evidence-based decision-making

Going beyond the narrative of participatory approaches and stakeholders' empowerment in the process of planning and decision-making, another key challenge lies in the gap between the ideology-based policy making and the more pragmatic evidence-grounded decision-making process (Davoudi, 2006). According to Davies' understanding, the evidence-based policy and decision making represent an approach that „helps people make well informed decisions about policies, programmes and projects by putting the best available evidence from research at the heart of policy development and implementation“. Therefore, it is evident that the IDMT should be founded on sound reasoning processes and backed by reliable and actual information and data, leveraging on the evidence-based planning as a rigour and systematic approach to achieve replicable and scalable results (Elisei et al., 2018).

The design and conceptualisation of the IDMT will surely benefit from an evidence-based planning and policy-making approach, considering the following key points: a) better understand the locally rooted needs and challenges from multiple viewpoint; b) demonstrate and amplify the connection between strategic planning and policy-making and political decision-making; c) agree and share a common objective language among the multi-dimensional ecosystem of stakeholders and design a convergent transformation vision; d) open up a transparent communication channel through an open and accessible platform and last, but not least, e) strengthen and consolidate the cooperation between local stakeholders to reach agreements for proceeding towards joint RDI.

2.4. Participatory approach and methodology

The participatory approach and methodology for CRISALIDE project aims at creating the proper framework for developing a shared vision between local authority representatives, researchers/ professionals, businesses, other local stakeholders, civil society and public audience, which enables early stage planning, in order to 'ignite' the collaborative process. In order to select the most suitable tools for participatory approach, we take into account the following five elements: objectives (reasons for stakeholder involvement and expectations/outcome), topic/ planning domain (scope of the issue/ challenge), participants (who is the provider/ beneficiary/ end user), time resource (amount of available time) and financial resource (available budget or funding opportunities).

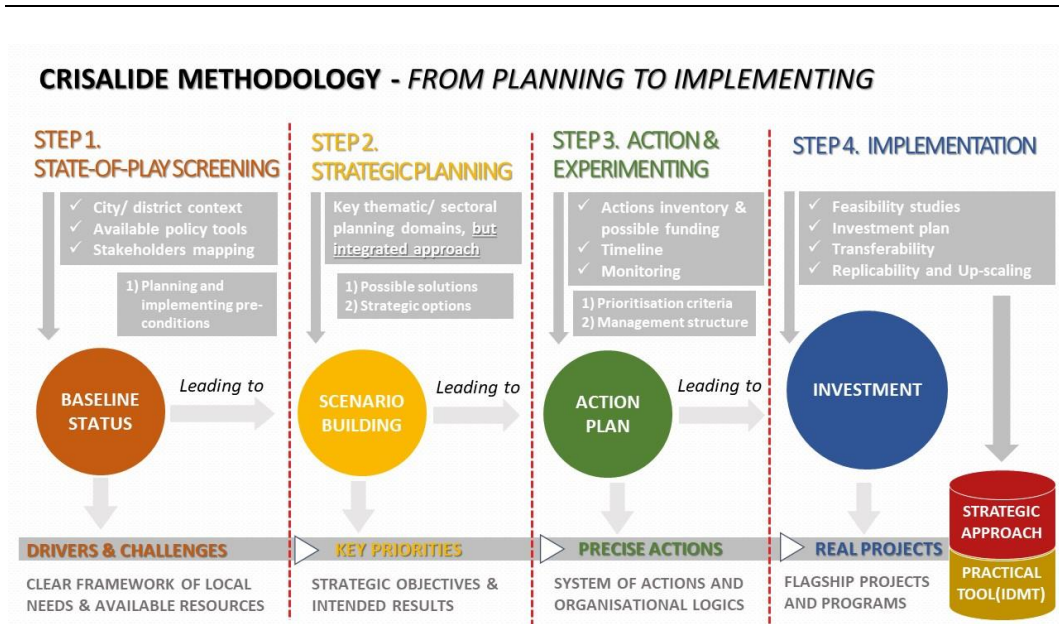


Figure 2 CRISALIDE Methodological approach

The participatory approach and methodology is clearly linked with the participatory planning cycle, addressing the following steps:

1. Step 1. State-of-play screening, resulting in a set of planning pre-conditions, divided into two main categories: drivers and challenges in respect to the local specificities and the available resources. The first step will take into consideration the following components: defining (local) issues, challenges and needs in relation to (global) challenges; mapping relevant stakeholders (in accordance with the priority planning domains), gathering evidence (collecting relevant data) and mapping resources (opportunities and threats) and assessing the available policy tools.
2. Step 2. Strategic planning, resulting in a set of key priorities, materialised through strategic objectives and intended results for a specific timeframe (short/ medium/ long horizon), which will set the basis for the scenario building and strategic options/ alternative solutions. The second step will have as outcome the selection of the most suitable scenario, taking into consideration the urgencies of the pilot area.
3. Step 3. Action and experimenting, resulting in a list of actions, following a certain prioritisation criterion and allowing for collective brainstorming on the most suitable management structures and organisational logistics for the experimentation. Therefore, the third step will propose a correlation between the actions' repository, the funding opportunities, the implementation timeframe and the monitoring plan. Experimentation should be an intermediary step between action planning and large-scale implementation and it should temporarily test potential solutions (such as the IDMT, to provide room for improvement and preparation for the market uptake).
4. Step 4. Implementation, resulting in the physical implementation of flagship projects and programs, as well as feasibility studies and concrete investment plans. Within this final step, transferability, replicability and up-scaling aspects will be considered.

Within CRISALIDE, the set of participatory workshops is one of the stepping stones for the participatory approach, its objectives being threefold: 1) gathering local stakeholders from

different planning domains and sectors and brokering between diverse interests (main sectors identified so far as being of high interest for the context of Rostov-on-Don: housing; mobility and infrastructure, public space, environment, landscape and heritage, as well as urban management and governance); 2) brainstorming on the IDMT concept and identifying major local issues/ challenges, as well as tool technical requirements and functionalities; 3) debating and discussing further needs, opportunities and possibilities for collaboration.

The methodology for conducting participatory workshops comprises of a toolkit of methods, formats, as well as possible instruments, tools and techniques to be applied within interactive sessions. The following set of recommendations is taken into consideration: a) clear definition of workshop objective (aims and intended outputs/ achievements), b) suitable setting and scene (ice breaking session), c) participants skills and capabilities acknowledgement, d) proper selection of tools and instruments for creative problem/ solution exploration, based on collective intelligence of the entire group for idea generation, e) outputs co-creation (make outputs visual and avoid too-long texts), f) collection of feedback and suggestions/ recommendations and g) evidence and time keeping.

3. The area-based approach and the selected area for experimentation in Rostov-on-Don

3.1. A need for solutions from the bottom

Brownfield redevelopment in Russia is a quite new and challenging issue of urban planning. As such, planners' attention to it has just started to arise, which is being explained by several factors and determinants. Firstly, compared to the highly urbanized territories of the European countries, where the issue has become one of the EU policy's priorities (Science for Environment Policy: Brownfield Regeneration, 2013), Russia has vast greenfield areas near the cities, whose development requires significantly less efforts in terms of economy and legislation. Similar situation is observed in the US, where the interest to brownfield redevelopment is also much lower than in the EU (Meyer, 1998). Secondly, the traditional socialist way of extensive urban growth was not limited by any economic factors and there were not any incentives to recycle land (Bertaud & Renaud, 1997). The following post-socialist construction boom provoked even higher land consumption and urban sprawl due to the high housing demand and interest from both public and private parties to satisfy the population's needs (Stanilov, 2007). However, after three post-socialist decades, the unsustainability of such approach is becoming evident especially in large capital cities, which have been attractive poles for both population migration and investments into housing construction. Traffic, air pollution, lack of social facilities, services and technical infrastructure make new peripheral areas of the large cities less attractive and problematic for the city management. These problems provoked several attempts to reorient urban development inside the existing city territory and consider brownfields as an important development resource, given its intention of appearance in the national policies (Batunova & Trukhachev, 2019).

These first attempts to introduce new approaches in urban development have not yet triggered significant changes, although there are several successful examples in different cities and the request for such changes is rapidly increasing. Recently, a framework for such strategies' implementation has been introduced at the national level programs, however it

is mandatory to be supported from the bottom. At the same time, numerous information systems in Russia that serve to support decision-making processes when creating urban strategic and territorial plans, formulating urban policies, promoting e-government, managing urban infrastructure and housing stock or land use in cities, are often designed and created separately and their integration may be even more difficult than in pre-digital period. In such conditions, participatory and area-based strategies are necessary for better problems' identification and solutions' delivery (Dakin, Burgess & Adamson, 2012). Addressing brownfields redevelopment issue requires a more comprehensive approach that allows understanding the root-causes of the existing problems (Harfst, 2006). The focus on local conditions will also allow to test the CRISALIDE IDMT during the entire process of development and implementation, to put into practice the results of theoretical studies, to receive feedback from users and, in return, to enrich the theoretical work (often desk-based research) with empirical experience (evidence-based system). In addition to technological innovations, the introduction of organizational and social innovations in the spatial planning of the selected city, which will contribute to the reconfiguration of the urban planning process at the local level, will further enhance the set of positive practices of Russian cities.

3.2. Criteria for the city selection

When choosing a city for the implementation of a decision support system, the most important aspect was the presence of a case's characteristics that would allow up-scaling the R&D results and their application in other Russian cities. At the same time, the local peculiarities had to form a set of conditions on the basis of which a wide range of strategic options and planning tasks could be formulated, in search for the solutions of which the CRISALIDE project could be tested. Accordingly, for the city selection we defined nine criteria presented in the table below (tab.1).

Criteria	Relevance and Importance
Administrative status: urban okrug ¹ , capital of the subject of the federation	A status of regional capital and urban okrug provides expanded power of city authorities, an expanded structure of local governments, active interaction of local and regional authorities, the implementation of interests of multiple governmental levels within a city, better representation in statistical databases, in the regional and federal strategic and program documents. Municipal planning is characterized by the presence of approved strategies, territorial planning documents, as well as detailed municipal programs, which makes it possible to get a solid vision of the future urban development

¹ According to the Federal Law #131-FZ of October 6, 2003 On General Principles of the Organization of Local Self-Government in the Russian Federation, as amended by the Federal Law #243-FZ of September 28, 2010

Criteria	Relevance and Importance
Population: more than 500 thousand inhabitants	High concentration of population and economic activities, high population density, buildings and infrastructure, the presence of important educational, scientific, social and administrative institutions, which allows to effectively develop horizontal links between local participants and introduce innovations. Possibility to expand the interaction at the inter-municipal level and to increase the efficiency of the implementation and dissemination of innovative solutions.
Diversified economy with a tendency of growth of the tertiary sector	Request for the transformations of urban areas and presence of potential stakeholders interested in such transformations. Interaction between enterprises of various industries and the activation of the synergic effect of their interaction.
Scientific potential	Involvement of local scientific experts at various stages of the project development and implementation leading to improvement of the quality of decisions made and an opportunity to receive expert assessment.
Positive dynamics of the construction industry	An active construction sector with high competition creates conditions for a variety of products and solutions in urban development. Companies representing the construction sector are among the key participants in the decision-making process for managing the urban environment.
Limited territorial resources for expansive development and internal transformation processes	The limitation in external territorial resources stimulates the search for solutions on the intensive use of urban areas, which is a key component of sustainable development. The presence of implemented redevelopment projects in the city provides the accumulated positive and negative experiences, as well as various management and interaction schemes, the rethinking of which will become the basis for innovative decision-making schemes of the proposed hardware-software complex.
Availability of internal territorial resources that can potentially be used for development	The city planning documentation should identify promising areas for redevelopment. The presence of such decisions in the documentation means the readiness of the local authorities to implement the concept of a "compact city", as well as the existence of grounds for implementing policies in this direction.
Experience in the development of information systems to support urban management and planning	Experience in the development and implementation of projects, as well as the experience of cooperation of private development companies with government authorities and management allows involvement of representatives of government and business into the project development and implementation, which will further ensure the sustainability of the project.
Participation in federal programs related to priority projects in the field of urban development.	State investments nowadays play an important role in urban development in Russia, therefore, the active participation of the city in state development programs is a prerequisite for the successful implementation of the project, as well as its distribution in the future.

Table 1. Case Study Selection Criteria

In correspondence with the previously described criteria for the CRISALIDE project implementation, the city of Rostov-on-Don has been selected. The city is located in the south of the European part of Russia, being the capital of Rostov region, one of 85 Russian regions. With its population of 1,130,305 people², Rostov-on-Don is the 10th city out of 1,113 cities of the Russian Federation. Being an attractive growing pole, the city is characterized by the diversified economic structure with the current prevalence of the industrial production and dynamic development of the tertiary sector. There are 38 institutions of higher education and 40 scientific organizations including the Federal Research Center of the Southern Scientific Center of the Russian Academy of Sciences (FIC SSC RAS), where 400 researchers work (Investment Passport, 2018). The city continues its demographic growth and its housing construction sector expansion, represented by numerous competing companies that together build about 1,100 thousand sqm annually (Investment Passport, 2018). At the same time, Rostov-on-Don is limited in extensive development by its administrative borders and it's forced to seek internal resources for development, which are represented by numerous brownfield sites as a legacy of post-socialist transition and post-industrial development. Those sites are defined as priority areas for redevelopment and housing construction by the Rostov-on-Don General plan (2015) and its Strategy of socioeconomic development (2018), the main long-term municipal planning documents. Several projects of the former industrial areas' redevelopment have been already realized: e.g. the former tobacco factory transformed into the business center 'Tabachka' or a part of the helicopter plant's industrial site Rostvertol, transformed into a business and exhibition center. Rostov actively participates in all national programs and projects. In 2018, the city became one of 36 pilot cities, in the priority project "Smart City". The need for the implementation of intellectual (IQ) solutions in the housing sector of the city of Rostov-on-Don is also stated by the Strategy of the City's Socio-Economic Development (2018), as a measure to reduce the cost of utility resources, improve the safety and quality of housing and communal services, and also to optimize the process of controlling and monitoring the consumption of resources through Internet services.

3.3. A site for experimentation

The site for implementation was selected together with the local administration among several former industrial areas in Rostov-on-Don. It is recommended for redevelopment by the Strategy of Socioeconomic development and attracts high investors' interests. The choice was due to the value of such a significant territorial resource for the development of the city, great prospects for the application of innovative methods and technologies in planning the development of this territory and its development, the potential for creating a high-quality urban environment, creating opportunities for innovative economic development, forming a positive image of the city and attracting investments. Moreover, the large area of the site (about 350 ha) involves a long-term phased implementation of the project.

² Federal State Statistic Service (Rosstat), 01.01.2019. <http://www.gks.ru/>

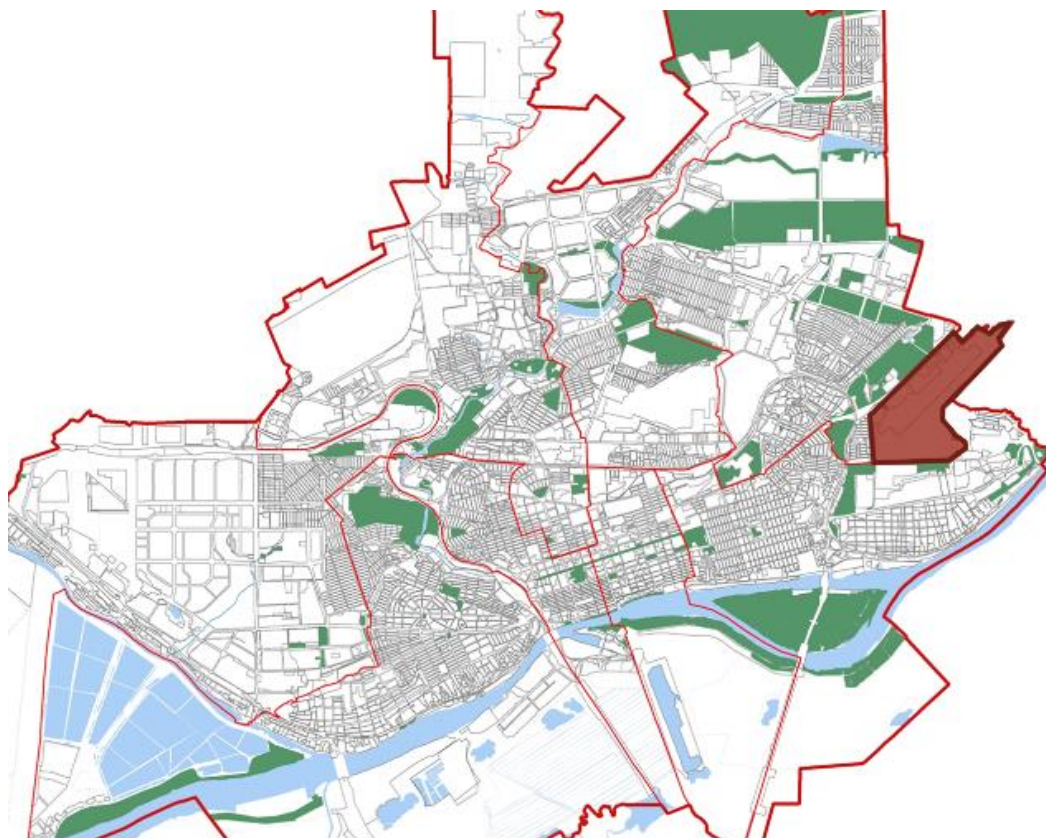


Figure 3 Location of the old airport area and intervention area (old airport) in Rostov on Don

The area of the former airport 'Rostov-on-Don' is located in the eastern part of the city in nine kilometres from the city center, in the Pervomaysky administrative district. The airport stopped its operation in December 2017, when the new international airport was opened - Platov International Airport. In the local planning documents, the old airport's territory was considered as an internal spatial resource for development years before the actual realization. Thus, the city General plan approved in 2015 proposed the construction of 1,596 thousand square meters of housing within the plot of 267 ha until 2035. After the new airport construction, the local authority started to promote the area for redevelopment and several projects have been done, one of which was presented at the Russian Investment Forum in Sochi in 2018. The site is located in the peripheral part of the city, but at the same time in the centre of Rostov-on-Don metropolitan area (named 'Big Rostov') that consists of eight cities and a number of rural settlements and whose population number is estimated at about 2.2 million people. The site is surrounded by the important areas of commercial activities of regional significance: the regional markets and shopping malls with such actors as IKEA or Auchan are operating here. The transport axis on which the site is located, links the city center with the new airport and the very important federal road M4 Don, which connects the national capital Moscow with the Black Sea coast and countries of the Caucasian region.

Conclusions

The CRISALIDE project heralds a way of working on the cities that is very distant from the ordinary practices operated in Russia. The CRISALIDE methodology builds the solutions from

the bottom, works with the stakeholders in identifying the problems to be faced and defines the figure of the planner as that of a mediator and facilitator of complex processes. A methodology that has no a priori solutions, which does not have the innovation package ready to be sold and applied top down.

The CRISALIDE project being oriented to the development of a digital innovative platform, creates an opportunity to introduce social and organizational innovations in urban planning through participatory bottom up approach. The digital dimension is an arrival point of a real participatory planning process. The platform, as a tool that facilitates balanced planning and as a tool that facilitates sustainable decision-making, is born of an advanced dialogic context (IDMS, Innovative Decision Making Scheme). Reducing the complexity of a complex process to an IT tool means losing many nuances, but the advantage of the digital tool (IDMT) is to focus on the essential elements of the planning process, in terms of urban functions and related indicators.

The first results gained from the series of public discussions and CRISALIDE events demonstrated agreement between most local experts on necessity to transform outdated approaches to planning and construction in contemporary Russia. The public opinion demonstrated the need to have an experimental platform for the introduction of new planning methods and practices, advanced construction technologies, organization and management of the urban environment, taking into account such modern challenges as climate change, environmental pollution, demographic problems, socio-economic stratification of society and the rapid development of new technologies. Avoiding the construction of commercial housing, the formation of high-comfort public spaces, the introduction of new forms of mobility and environmentally friendly technologies, the creation of conditions for maintaining the health of the population, the realization of its creative and intellectual potential, the activation of innovative forms of economies. To achieve this, CRISALIDE defined the urban functions listed above in chapter 1.3 as the starting point. For this reason the experimentation underway in Rostov-on-Don, in the area of the old airport, is defining interesting ideas, but also opening up conflicts on the different ways of approaching the problem, on the scale of transformations, on the different way of relating to the use of environmental resources or conceiving innovation in design and use of public space and services. However, in this way, the development of a prototype IDMT in the field of urban planning, based on a real case, is not only the possibility of creating an innovative software and hardware complex for Rostov on Don that meets the principles of the Smart City Concept, but also a real chance to launch socio-cultural and organizational innovations in planning that could be upscaled both in EU member states and in Russian Federation. Finally and definitely, the involvement of pro-active human capital (people, researchers, private actors, administrators...) and scientific potential of the city (university and enterprises...) in the innovation process and experimental activity will contribute to the formation of new products and businesses in the 'smart city' sphere, which will strengthen the economic position of Rostov-on-Don and create conditions for the development of new niches of economic activity, especially related to creation of a local new economy building upon the connection Economy of Knowledge <-> Quality of Life <-> Start-ups creation facilitation <-> Sustainable use of Resources.

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