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Games for Enhancing Stakeholder Participation in Spatial Planning – The Cases of Riga and Tallinn

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Declaration:
Hereby I declare that this doctoral thesis, my original investigation and achievement, submitted for the doctoral degree at Tallinn University of Technology, has not been previously submitted for doctoral or equivalent academic degree.

Viktorija Prilenska

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signature

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List of Publications

The list of author's publications, on the basis of which the thesis has been prepared:

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IV. Prilenska, V. (2019a). Current research trends in games for public participation in planning. *Architecture and Urban Planning*, 15, 113–121. ETIS Classification 1.2.

V. Prilenska, V. (2019b). Participation Game: Reflections on the Iterative Design Process. *PlaNext – next Generation Planning*, 9, 97–122. ETIS Classification 1.2.

Other relevant publications:

VI. Prilenska V., Paadam, K., Liias R. (2018). City as a product, planning as a service. In Krstić-Furundžić A., Vukmirović M., Vaništa Lazarević E. & Đukić A. (Eds.) *Conference Proceedings: Places and Technologies 2018, 5th International Academic Conference on Places and Technologies* (pp. 262−268). University of Belgrade. ETIS Classification 3.4.

VII. Prilenska V. (2018). Neighbourhood guide (Apkaimju Gids)—Riga. In Bogle A. & Popova E. (Eds.), *Methodological guidelines for teachers* (pp. 90–94). HafenCity University Hamburg. ETIS Classification 3.2.

VIII. Prilenska, V. & Feofilovs M. (2018). Game design as an interdisciplinary teaching tool in built environment studies. In Bogle A., Kasting F., Popova E. & von Seggern M. J. M. (Eds.), *think the link City elements—Infrastructure and networks in shaping harbour areas* (pp. 31–43). HafenCity University Hamburg. ETIS Classification 3.2.

IX. Prilenska V. (2020) Serious game for modelling neighbourhood energy supply scenarios. *IOP Conference Seies.: Earth and Environmental Science*, 410, 012091. ETIS Classification 3.1.

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Author's Contribution to the Publications

Contribution to the papers in this thesis are:

I. The idea, structure and the methodology were developed by Viktorija Prilenska in consultation with Prof. Roode Liias. Viktorija Prilenska conducted the research and wrote the first draft. Prof. Roode Liias suggested some conceptual and language revisions.

II. The idea, structure and the methodology were developed by Viktorija Prilenska in consultation with Prof. Katrin Paadam. Viktorija Prilenska conducted the research and wrote the first draft. Prof. Katrin Paadam and Prof. Roode Liias suggested some conceptual revisions.

III. The article, game and research were fully authored by Viktorija Prilenska.

IV. The article and research were fully authored by Viktorija Prilenska.

V. The idea, structure and the methodology were developed by Viktorija Prilenska in consultation with Prof. Katrin Paadam. Viktorija Prilenska conducted the research and wrote the first draft. Prof. Katrin Paadam, suggested some conceptual and structural revisions, wrote part of the manuscript and substantially edited the rest of the manuscript. Prof. Roode Liias suggested some conceptual revisions.

Introduction

Problem statement

The spatial planning systems in Latvia and Estonia have been gradually transforming since 1991 as a consequence of political and socio-economic changes (Hiob & Nutt, 2016; Treija, 2009). In the mid-1990s Latvia and Estonia ratified construction and planning laws[1], which regulated urban development in the emerging liberal system with minor intervention from the state. The early regulations introduced the requirement for civic engagement in planning- and construction-related decisions, and marked the transition from expert-led blueprint planning towards more inclusive and dynamic planning practices. Today, civic engagement in Latvia and Estonia is characterised by an elaborate legislative foundation, proliferating neighbourhood associations and a variety of top-down and bottom-up civic engagement initiatives, ranging from participatory budgeting (cf RD, 2019; City of Tartu, 2019) to lobby groups promoting utility cycling (cf Pilsēta cilvēkiem, n.d.; Tallinn Bicycle Week, n.d.).

Despite the established regulations and growing civic activity, there are still certain challenges associated with participatory practices and, specifically, with the limited impact of the public on planning and construction related decisions (P3: Prilenska et al., 2019; P2: Prilenska et al., 2020; Krenjova & Raudla, 2018). The identification of barriers hampering and conditions enabling civic engagement is essential for developing better participation practices, which involve the citizenry in a meaningful way and, at the same time, are viable in the contemporary Latvian and Estonian context. The participatory planning context in Latvia and Estonia differs from that of countries where participatory planning emerged. In Western developed economies the idea of participatory planning evolved naturally in the conditions of established property relations and policies in response to pressure from civic society (Lane, 2005). In Latvia and Estonia the idea of participation was imported and applied in the conditions of radically transformed property relations and urban development paradigm, as well as in the context of transitioning property policies, civic society and planning culture (Raagmaa & Stead, 2014).

The emergent nature of participatory planning requires the development of relevant knowledge and skills among the stakeholders involved in planning, namely, planners, landowners, developers and residents (Dimitrowska-Andrews, 2005). With the increasing gamification of society, games provide the space for acquiring the necessary competences, as well as for experimenting with various participation formats (Deterding, 2011; Raphael et al., 2010). Games are contextually situated problem-centred learning environments for acquiring practice relevant knowledge and skills (Winn, 2009; Gordon et al., 2017). Due to their structured goal oriented nature games may be applied as participatory methods at various planning phases, for example, for sourcing and sharing planning related information, for consensus building through deliberation, as well as for shaping actor networks at neighbourhood level (Ampatzidou et al., 2018; Thiel et al., 2017; Johnson et al., 2017; Tan, 2014). Furthermore, games, as arenas for simulation and experimentation, enable exploring, questioning and reshaping existing planning concepts and power relationships, thus, creating conditions for civic action aimed at changing established practices (Lerner, 2014; Gordon and Baldwin-Philippi, 2014).

[1] Latvia ratified "Construction Law" in 1995 and "Spatial Planning Law" in 2002. Estonia ratified "Planning and Building Act" in 1995. As of today the aforementioned laws are replaced by new laws and regulations, which are more contextually relevant.

Thematic scope. The thematic scope of the research is limited to contextually situated participatory planning practices and associated challenges, as well as to the potential of gamified responses to participation challenges in a context where the ideas of public participation have been imported. Although the phenomena of participatory planning and participatory games are well established in planning practice, for Latvia and Estonia these are novel approaches (Horelli, 2002). The study of an established phenomenon in a radically different context is an appropriate choice for PhD research for several reasons. On the one hand, it takes advantage of the abundant theoretical and empirical evidence. On the other hand, it reveals additional facets of the phenomenon illuminated by its specific spatiotemporal and cultural conditions, thus, contributing to the existing body of knowledge.

Spatial scope. The spatial scope of the study is limited to capital and primal cities Riga in Latvia and Tallinn in Estonia, and, specifically, to waterfront urban areas Mežaparks in Riga and Kalarand in Tallinn. Although capital cities function in the same planning frameworks as non-capital cities, the implementation of these frameworks is often complicated by the presence of the national government, as well as the central political, economic and cultural position of the city within the country (Campbell, 2003). This centrality manifests itself in better connectivity to other cities and states, employment and income opportunities, provision of public amenities, as well as spill-over effects on private activities, resulting in higher real estate values (Zimmermann, 2010). Therefore, the planning and participatory activities in capital cities are more complex than in non-capital cities due to the presence of overarching national and corporate interests. Although the cases of Mežaparks and Kalarand are influenced by the context of their respective capital cities, the nature of the issues in focus is related to the local controversies between private and public interests regarding the future development of the area, as well as to the divergence between the anticipated and actual opportunities for participation (P3: Prilenska et al., 2019; P2: Prilenska et al., 2020).

Temporal scope. The temporal scope of the study is limited to the period of roughly 25 years, since the mid-1990s until 2020, i.e. today. In Latvia and Estonia and, specifically, in Riga and Tallinn, before the mid-1990s urban development unfolded in the rational-comprehensive planning paradigm, under state control, in the conditions of irrelevant land values and property relationship, as well as with no input from the general public (Paadam, 2009; Hess & Tammaru, 2019). The period from the mid-1990s until 2018 is, arguably, the transition of the planning system from a rational-comprehensive approach to a participatory one, which is characterised by the abolishment of state-led urban development, transformation of land value and the property landscape, as well as legalisation of civic engagement practices (ibid.). The transition culminated with the institutionalisation of civic engagement, marked by the formation of city-wide neighbourhood association unions, Apkaimju Alianse in Riga in 2018 and Tallinna Asumiseltside Liit in Tallinn in 2017.

Research aim and research questions

Upon the commencement of the research in 2014, participatory planning in the Baltics was an emerging topic, which was characterised by the limited competences of the actors involved, as well as the lack of contextually sensitive theories and empirical inquiries into participatory planning practices. The emergent nature of the topic and the shortage of relevant knowledge demanded an inductive qualitative inquiry and a flexible definition of the research aim, which would accommodate the revision of research

questions as new aspects of the multifaceted issue became revealed (Mason, 2002; Creswell, 2007). The research aim was confined to the study of participatory games and their potential contribution to enhancing participation in spatial planning in Riga and Tallinn. The big, complex and multifaceted issue outlined in the research aim was disassembled into smaller, simpler and clearer issues, addressed through a set of four research questions, as well as corresponding research phases and strategies (chapter 2). The research questions reflected the sequence of the inquiry, advancing from general to specific issues and vice versa - from specific to general, as a result of iterative data analysis and conceptual work. Each research question drew upon the insights discovered through responses to the previous research questions and, in turn, shaped the foundation for answering the next research question. The outcomes of research phases were reassembled and synthesised to meet the research aim.

Research aim: To explore and elucidate how participatory games could potentially contribute to enhancing participation in spatial planning in Riga and Tallinn.

Research question 1: How does the planning framework influence participatory planning initiatives in Riga and Tallinn?

Research question 2: How do the actors involved in planning perceive participatory planning practice in Riga and Tallinn?

Research question 3: How do participatory games address the challenges posed by participatory planning practices?

Research question 4: How do role-play games and co-design contribute into better deliberation of urban issues?

Research questions illuminated specific aspects of the research aim, which is related to, on the one hand, the spatiotemporal and cultural context of inquiry, and, on the other hand, to the methods of participation. In the course of the inquiry, the research scope was narrowed down from cities Riga and Tallinn to the urban areas Mežaparks and Kalarand, as well as from participatory games to a certain type of participatory game - role-playing games. The cases of Riga and Tallinn, as well as Mežaparks and Kalarand, exposed the context-sensitive challenges of participatory approaches in use, which may be addressed by introducing participatory games, and, specifically, role-playing games, into the repertoire of participatory methods. The joint analysis of real-life cases and participatory games revealed niches for applying games in participatory planning practice.

Methodological approach

Participatory planning is a socially constructed institution, which is contingent upon social actors and their mutual relationship and, at the same time, is manifested through shaping the living environment of social actors (Healey, 2013; Lefebvre, 1991). Thus, on the one hand, participatory planning is an arrangement between the stakeholders, which draws upon their interests, experiences and aspirations, and, on the other hand, a practical domain, aimed at solving specific real-life problems, such as congestion, pollution, resource shortage, etc., and contributing to creating a sustainable and liveable city (Lane, 2005; Fainstein, 2019). The nature of participatory planning - the phenomenon in focus of the inquiry, influenced the study and its design in the mixed interpretivist-pragmatist worldview, which aimed, on the one hand, at understanding

and interpreting the phenomenon, while, also, at producing actionable practice oriented outcomes (Saunders et al., 2016).

The spatiotemporal and cultural setting of the inquiry, as well as the emergent nature of the research aim and research questions, demanded a qualitative approach, which draws upon an array of data collection and analysis methods and yields rich and detailed explanations (Mason, 2002; Creswell, 2007). The inquiry unfolded in four sequential phases, each phase answering a certain research question, while also building upon the concepts constructed in the previous phase. The individual research phases were structured around specific research strategies, which, arguably, were the most appropriate for answering the posed research questions.

The first and second research phases explored the contextual specificities of participatory planning through the case studies of planning in Riga and Tallinn. Case studies drew upon several data sources, including unstructured and semi-structured interviews, documentary analysis and observations. The findings revealed the contingency of participation barriers upon the imported nature of participatory ideas, resulting in deficient participatory methodologies (P3: Prilenska et al., 2019; P2: Prilenska et al., 2020). Participation-enabling conditions, in turn, seemed to be contingent upon the embedded social capital, accessible through appropriate participatory approaches (ibid.). The latter urged for exploring alternative participatory means, focusing on participatory games.

The third research phase identified patterns within the emerging field of participatory games by means of the grounded theory approach (Corbin & Strauss, 1990), which was applied as a method for a rigorous and systematic review of published information about the development and application of participatory games, which built on and extended existing theory (Wolfswinkel et al., 2011). The review yielded a typology of participatory games, as well as expanded the potential application of participatory games in planning (P4: Prilenska, 2019a).

The findings of the first, second and third research phases were synthesised in the fourth research phase, which adopted an action research strategy (Coghlan & Brannick, 2005). Action research framed an incremental co-design process, which yielded a participatory game (P5: Prilenska, 2019b). An initial two-dimensional barebones game prototype underwent a set of progressive modifications based on player feedback and finally evolved into a three-dimensional game for collective visioning through deliberation (ibid.).

Novelty of the research

Theoretical novelty. The research on participatory planning was novel for the Baltic states. Previous research was related to housing (Hess & Tammaru, 2019; Holt-Jensen & Pollock, 2009), social segregation (Tammaru et al., 2016), neighbourhood associations (Holvandus & Leetmaa, 2016), history of planning transition (Ruoppila, 2007; Hiob & Nutt, 2016), suburbanisation (Leetmaa et al., 2009; Tammaru et al., 2004). The present research explored the perspectives of various stakeholders participating in planning, which differed from previous research by simultaneously involving multiple actor groups and studying the participatory facet of planning.

The study identified the barriers to, and enabling conditions of, participatory planning in Riga and Tallinn. The barriers and enabling conditions were conceptualised through the discrepancies between planning legislation and its implementation mechanisms as a core category, introducing the notion of imported planning ideas (P3: Prilenska et al.,

2019; P2: Prilenska et al., 2020). The identified barriers and enabling conditions partially aligned with those outlined in the body of theoretical and empirical literature, e.g. the barriers were related to methodological deficiencies of participatory approaches (cf Connely, 2006; Irvin & Stansbury, 2004; Nienhuis et al., 2011), while enabling conditions were related to the embedded social capital (chapter 3).

The study created a comparative framework for participatory games and identified the essential characteristics, which had to be addressed when designing games for participatory planning purposes. The research indicated the nature of information flow, as well as the modes of data collection and analysis, as important characteristics of participatory methods, which had been overlooked in the existing body of literature on the topic (cf Rowe & Frewer, 2000; Rowe & Frewer, 2005; Brown & Chin, 2013). Based on the comparative characteristics of participatory games the typology of participatory games was developed (P4: Prilenska, 2019a). The typology provided an overview of participatory games based on the purpose of the participatory exercise, planning context and phase, the number and profile of stakeholders involved and anticipated level of stakeholder engagement (ibid.; chapter 4).

Practical novelty & verification of the outcomes. The research outcomes were synthesised in a Participation game, a role-playing board game, which facilitated collective visioning between the actors with diverging interests through deliberation (P5: Prilenska, 2019b). The game is potentially applicable in the Planning & Design phase of plan development as an Expressive and Organisational tool, which enables participation levels from Involvement to Empowerment (chapter 4). The game was tested in Riga, Tallinn, and Hamburg with architecture, planning and sociology students, as well as with high-school pupils in a series of five game sessions. Four out of five game sessions were integrated into the curricula of urban studies. The game received positive feedback from players, which reported a better understanding of issues related to participatory planning and urban design (chapter 4).

The thesis reports the results of an inquiry into participatory games and their potential for remedying context-specific challenges, associated with participatory planning practices in Riga and Tallinn. The joint analysis of games and real-life participation cases identifies insights provided by games regarding participation barriers and enabling conditions. The author argues that games are applicable throughout the planning cycle and for diverse participation purposes, starting from the identification of environmental values, through negotiation of planning decisions, to establishment of actor networks for the implementation of plans and policies. Thus, participatory games are viable and, in certain cases, better alternatives to traditional participation methods.

Terms

Planning	In the broader sense is used interchangeably with the term “spatial planning”; in the narrower sense refers to the phases of development of a spatial plan.
Context	In the broader sense refers to the spatiotemporal and cultural frame; in the narrower sense - to the spatial scale of the plan, such as neighbourhood or city.
Public participation	Hereafter is used interchangeably with the terms “civic / community” and “engagement / involvement”.
Participatory methods	Refers to an array of techniques which enable and facilitate participation of the representatives of the public.
Participatory games	Refers to serious games which were designed for enabling and facilitating participation of the representatives of the public in planning decisions.
Gameplay	The process of player interaction with a game, defined through the rules and the interface.

1. Theoretical Foundations

1.1. The origins of participatory planning

The origins of contemporary spatial planning date back to the second half of the 19th century and emerged as a reaction to the rapid urbanisation fuelled by industrialisation (Fainstein, 2019). Sprawling suburbs, overpopulated city centres, congestion, chaos and the threat of disease gave rise to initiatives concerned with the improvement of sanitation, provision of housing and amenities, transportation of goods and people (ibid.). Substantial improvements were introduced by the construction of water supply and sewage systems, electrification, minimal standards for housing construction, separation of vehicular and pedestrian traffic, as well as the construction of public playgrounds and parks (ibid.). Large infrastructural and housing interventions required the appropriate legislative frameworks, as well as supervisory and regulatory bodies, which led to the ratification of planning acts (cf British Housing, town planning, etc., act, 1909) and the establishment of planning departments in Europe and the USA in the first third of the 20th century (ibid.).

Until the 1960s, spatial planning followed the tradition of societal guidance, where the local authority exercised its capacity to implement large-scale redevelopment plans. Vivid examples of this approach are Haussmann's modernisation of Paris (1852-70) and Moses's reconstruction of parts of the New York metropolitan area (1920s-1960s), which resulted, on the one hand, in the demolition of antiquated urban fabric and the displacement of local residents, and, on the other hand, in the construction of efficient transportation networks, as well as housing and amenities conforming to the newly established standards (Jacobs, 2016; Friedmann, 2008). These spatial planning practices, referred to as blueprint or comprehensive planning, were concerned with the generation of complete plans, which, in turn, pursued certain ideals (e.g. Howard's Garden City; Le Corbusier's Ville Radieuse) or responded to specific problems or tasks (e.g. traffic congestion).

Blueprint planning practice was heavily criticised for being simplistic and parochial (Lane, 2005). Firstly, blueprint planners rely on the predictability of the future, based on comprehensive information about the area in focus, and simulation modelling (Lane, 2005; Hall, 1983; Webber, 1983). The critics argue that complete information is unattainable, models, based on the limited information, are inaccurate, and, therefore, long-term predictions are speculative (ibid.; Anderson, 2008). Secondly, the blueprint planners fail to acknowledge the variety of social groups and interests, the inconsistencies between these groups and interests, as well as the distributional nature of planning interventions, where "costs and benefits /…/ are disproportionately shared among all groups and classes of society" (Lane, 2005, p. 290; Kiernan, 1983).

The idea of civic engagement in spatial planning emerged as a response to the failures of blueprint planning practices. Civic engagement was pioneered by Jacobs (1961), who was one of the civic leaders protesting against the construction of the Lower Manhattan Expressway at the expense of parts of Greenwich Village neighbourhood. Jacobs (2016) argued that contemporary neighbourhoods, which evolved spontaneously[2] rather than according to a blueprint plan, feature examples of successful socio-economic and spatial

[2] The phrase "spontaneously" in the current context is the opposite of "in line with the blueprint plan". According to Kostof (2009) the development of the urban fabric in Western developed economies was rarely "spontaneous", as there were usually certain regulations or best practices, which guided development.

order, which emerged from co-creation, namely, from residents adapting the urban fabric to their lifestyle (for a contemporary example see, also, Valdez-Young, 2015). Therefore, spatial planning practices have to draw on empirical evidence, "how it is", rather than from utopian ideals, "how it ought to be" (ibid.; Klostermann, 1983). Following Jacobs's line of thought, local residents are recognised as local experts and clients, whose interests have to drive spatial plans and policies.

Jacobs's ideas were supported and developed by planning theorists, such as Davidoff (1965), Friedmann (1973), Healey (1996), Sanoff (2000, 2007), Forester (1987, 2006), Innes (1996) who coined the concepts of advocacy, transitive, communicative and participatory planning, as well as planning through mediation and consensus building. These approaches conceptualise spatial planning as an agreement between stakeholders with diverging interests, acknowledge power imbalances between stakeholders and the distributive nature of planning, and place participation at the centre of the decision-making process (Lane, 2005). The task of spatial planning, consequently, shifted from problem-solving towards balancing diverging interests, power relations, costs and benefits of planning interventions, as well as towards facilitation of collective decision-making (Marcuse, 2015; Forester, 1982; Klostermann 2015; Lane, 2005).

The focus of planning shifted from *space*, which determined the lifestyle of generic individuals, towards *individuals*, their lifestyles, beliefs and values, and how space accommodates the diversity of individual needs and preferences, from *space as an end* towards *space as a means.* The aforementioned shift is evident when comparing the works of modernist architects and planners, such as Le Corbusier (1987) and Russian constructivists (Chan-magomedov, 2001), with the works of contemporary architects and planners, such as Gehl (1987, 2010). The modernists imagined a "modern" individual, planned her daily routine and organised the space accordingly ("how it ought to be"). Gehl studies real individuals and the ways they use public spaces, identifies patterns and best practices ("how it is"), and suggests a set of spatial devices enabling the diversity of activities. The shift in the focus of planning was in line with the works of Berger & Luckmann (1966) on the social construction of reality and of Lefebvre on the social production of space (1974, English translation 1991), which were published for the first time in 1966 and 1974 respectively. Planning became recognised as a social contract (coined by Rousseau, 1923), rather than a form of artistic expression. On the one hand, spatial planning remained a technical discipline requiring certain expertise, specifically, in relation to infrastructure provision, but, on the other hand, spatial planning became a means for social transformation, which draws upon the perspectives of multiple actors and, also, changes these perspectives through deliberation, pursuing a consensual vision (Innes, 1996; Healey, 1995; Fung, 2006; Faehnle & Tyrvainen, 2013). The diversity of perspectives and the transformation of these perspectives through deliberation is addressed in the current research through the prism of participatory games and is synthesised in the Participation Game (sub-chapter 4.2; see, also, P5: Prilenska, 2019b).

1.2. Methodological aspects of participatory planning

Since the 1970s the idea of civic engagement in spatial planning has been increasingly propagated and recognised, and the requirements for public involvement in decision-making have gradually made their way into the legislation of many countries. Today the legislative framework for, and the institutional practice of, participatory planning differs across counties, depending on their political and planning culture, as well as economic and civic capacity (Horelli, 2002). The International Association for Public

Participation (2018) has developed a Spectrum of Public Participation (based on the Ladder of Public Participation developed by Arnstein in 1969) classifying participation exercises into categories depending on the share of public authority in planning decisions, starting from being informed about planning decisions ("inform") and culminating in taking planning decisions ("empowerment"). Notably, the spectrum classifies levels of public impact on planning decisions within the top-down urban transformation processes, which are implemented by the local government. It is worth mentioning that there are also bottom-up processes, which are implemented by communities. A large share of grassroots interventions is limited to small and, often, temporary spatial interventions in public space, therefore, it does not require action from the part of the local government (cf Lydon et al., 2012a; Lydon et al., 2012b).

Rowe & Frewer (2005) and Nabatchi (2012) supplement the Spectrum by adding the nature of communication between the public and the planning agency. Information flows are classified as one-way and two-way communication, as well as deliberative communication (ibid.). In one-way communication, the information flows in one direction from the sender to the receiver, either from the planning agency towards the public, e.g. web page or newsletter, or from the public to the planning agency, e.g. survey (Nabatchi, 2012). In two-way communication the information flows in two directions, the sender and receiver exchange information in the format of statements, which is characteristic of public hearings (ibid.). Contrary to two-way communication, deliberative communication is characterised by collectively framing problems and developing solutions (ibid.). The requirement for deliberative communication usually increases as the share of public authority over decisions grows (ibid.). **Table 1.1** summarises the relationships between the share of public authority in planning decisions and the nature of communication (IAP2, 2018; Nabatchi, 2012).

Table 1.1. *Spectrum of Public Participation.*

	Inform	Consult	Involve	Collaborate	Empower
Public participation goal	One-way communication		Two-way communication		
			Deliberative communication		
	To provide the public with balanced and objective information assisting them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To work together with the public in each aspect of the decision-making including the development of alternatives and identification of the preferred solution.	To place the final decision in the hands of the public.
	Increasing public authority over decisions →				

Source: adapted from IAP (2018) and Nabatchi (2012).

In developing countries there are successful examples of collaboration between planners and communities, and community empowerment, in redeveloping large patches of urban fabric, and even drawing a master plan for the city (cf Aravena, 2014; Lerner, 2013; Block by Block, n.d.). The necessity for higher levels of civic engagement stems from the lack of public funding for large redevelopment projects, as well as the strong resistance of the local community to projects, which have not been fully understood and agreed upon (Aravena, 2014; Lerner, 2013). In Western developed economies, which advanced participation theory, higher levels of civic engagement, especially in large projects, are rarely achieved due to the rigidity and complexity of planning systems and agencies, and because of the reluctance of the representatives of the public to take part in participatory initiatives (Horelli, 2002; Nienhuis at al., 2011; Krek, 2005).

Traditional civic engagement methods, such as public hearings, are criticised for failing to achieve satisfactory levels of shared authority in planning decisions and, therefore, discourage the public from getting involved (Rowe & Frewer, 2005; Innes & Booher, 2005; Baker et al., 2005; Fung, 2006). The ineffectiveness of civic engagement endeavours and low participation numbers in Western developed economies gave rise to multiple experiments with alternative participation methods, which arguably have the potential to raise participation numbers and involve usually underrepresented groups, improve the quality of participants' contributions and invest in social capital by enabling dialogue and learning within the community (cf Kahila-Tani et al, 2016; Gordon & Baldwin-Philippi, 2014; Johnson et al., 2017). The constellation of new participation methods include, but is not limited to, involvement through web pages, smartphone applications and social networks, pervasive and board games, community projects targeted at certain groups, participatory budgeting and various facilitated design sessions (cf Kleinhans et al., 2015; Ampatzidou et al., 2018; Poplin et al., 2017; Schneider & Busse, 2019; van Dijk & Ubels, 2016).

Horelli (2002) argues that the choice of participatory methods and tools (how?) depends on the context where participation takes place, the planning phase (when?), the participants (who?) involved and the anticipated level of shared authority in making decisions. Rowe & Frewer (2000) bring forward the purpose of participatory exercise (why?) as another essential aspect of methodological choice.

The context is broadly defined in terms of institutional culture, as well as the spatial scale and nature of the plan in question (Horelli, 2002). The definition of the context in the Thesis is twofold. Examining participatory practices in relation to the context, the latter is defined in terms of space, time and institutional culture (chapter 3). When discussing the applicability of participatory methods, the definition of context is narrowed down to the spatial scale, such as neighbourhood, city or region (chapter 4).

Drawing upon classifications developed by Hamdi and Goethert (1997), Moore (1987) and Wates (2000), Horelli (2002) distinguishes five phases of spatial planning, namely, (1) initiation, (2) planning & design[3], (3) implementation, (4) evaluation & research, (5) maintenance. Hamdi and Goethert (1997) differentiate between planning and design phases. In the planning phase an action plan for preparing the spatial plan is negotiated and in the design phase certain spatial planning solutions are developed. In the planning

[3] The term “planning” is used interchangeably with “spatial planning”, except for cases when the phases of planning are discussed. “Planning phase” refers to the process of deciding how the forthcoming plan is developed and who is involved in developing the plan. “Design phase”, in turn, refers to the process of developing specific planning solutions.

phase the representatives of the public decide upon further engagement formats, therefore it is brought forward as the crucial phase of participation strategies (ibid.).

Fung (2006) and Nabatchi (2012) distinguish between stakeholder and public selection of participants. Contrary to public selection, which involves all residents of a certain spatial community, stakeholder selection is limited to those having an active and legitimate interest in the topic due to their professional capacity or membership in a formal resident group (ibid.). Nabatchi (2012) argues that public selection is preferred over stakeholder selection, as it gives a more accurate representation of an array of public interests. Furthermore, moderate to high levels of shared authority upon making decision are preferred over low levels, as they give better representation of values and interests in relation to the forthcoming plan (ibid.).

In discussing methodological choice, Ampatzidou et al. (2018; based on Horelli, 1997, 2002) classifies participatory methods as expressive, diagnostic, organisational and political, depending on their purpose. Expressive tools boost creativity and facilitate communication of ideas through an array of audiovisual techniques, such as drawing, modelling, role-play, etc., diagnostic tools "evaluate personal, environmental, and situational variables", organisational tools support the implementation of outcomes of participatory exercises in real-life, while political tools shape agendas and set priorities (Horelli, 1997, pp. 110-112). The aforementioned aspects of participatory planning practices in Riga and Tallinn are examined through the case studies of planning Mežaparks and Kalarand and elaborated in chapter 3 (see, also, P3: Prilenska et al., 2019; P2: Prilenska et al., 2020).

1.3. Games in planning and participation

Games entered urban planning and the policy domain in the 1960s. Early urban games, e.g. CLUG and Metropolis, were developed to aid planning students and the employees of local government in understanding land-use and city budgeting issues (Duke, 2011; Feldt, 2014). These games, also known as "simulation games", focus on modelling urban dynamics, reproducing the interrelationship between land-uses, infrastructure, ecology and policies (ibid.). The participatory turn in planning theory in the 1970s gave rise to urban games, referred to as "participatory games", which focus on communication, collaboration, group decision-making and problem-solving (Duke, 2011; Sanoff, 2000, 2010). In the past decade, participatory games, as methods for better civic engagement, are attracting increasing interest from the planning community (cf Devisch, 2008; Tan, 2014; Ampatzidou et al., 2019).

Participatory games vary in mode and medium, from single- to multi-player and from board to digital, depending on the purpose. Single-player digital games are often used for information sourcing, while multi-player board games foster collective empathy building through dialogue and collective action (P4: Prilenska, 2019a; P5: Prilenska, 2019b). Apart from the core activity, participatory games are believed to foster various types of learning, namely, active learning or "learning by doing", individual and collective learning, single-, double- and triple-loop learning (Gordon & Baldwin-Philippi, 2014; Gugerell & Zuidema, 2017; Winn, 2009). Participatory games allow playing out real-life situations without real-life (often, undesirable) consequences, thus preparing individuals and communities for solving real-life challenges (single-loop), as well as questioning (double-loop) and reframing (triple-loop) the underlying concepts and models (Gordon et al., 2017; Devisch et al., 2017). The characteristics of games in relation to participation

are examined by means of literature review and elaborated in sub-chapter 4.1 (see, also, P4: Prilenska, 2019a; P5: Prilenska, 2019b).

A substantial share of research in participatory games focuses on role-playing and deliberation (cf Tan, 2014; Johnson et al., 2017; Valdez-Young, 2015). Innes and Booher (1999) conceptualise group deliberation as role-playing, where each stakeholder brings a set of certain roles to the table. The set includes professional (e.g. a representative of a governmental agency) and personal (e.g. a parent) roles, as well as the roles reflecting their deliberative behaviour (e.g. a naysayer; ibid.). Dialogue aiming for consensus building requires the suspension of the usual roles associated with beliefs and values, and welcoming other perspectives (ibid.; Gordon et al., 2017; Johnson et al., 2017). Role-playing games enable players to take on unusual roles, to reason and act from an alternative perspective, encouraging empathy towards positions diverging from (or even conflicting with) their own (ibid.; P5: Prilenska, 2019b). The deliberative potential of role-playing games is explored through action research, unfolding around the Participation Game, as reported in sub-chapter 4.2 (see, also, P5: Prilenska, 2019b).

Discussing the potential application of games in planning practices Horelli (2002) and Ampatzidou et al. (2018) classify them as expressive participatory methods applicable in early planning phases and catering to all levels of engagement. Games are positioned accordingly in the two-dimensional matrices of planning phases and participation levels (Horelli, 2002), and planning phases and participation methods (Ampatzidou et al., 2018). For the purposes of the current research the aforementioned two-dimensional matrices are synthesised into a three-dimensional matrix (**Figure 1.1**).

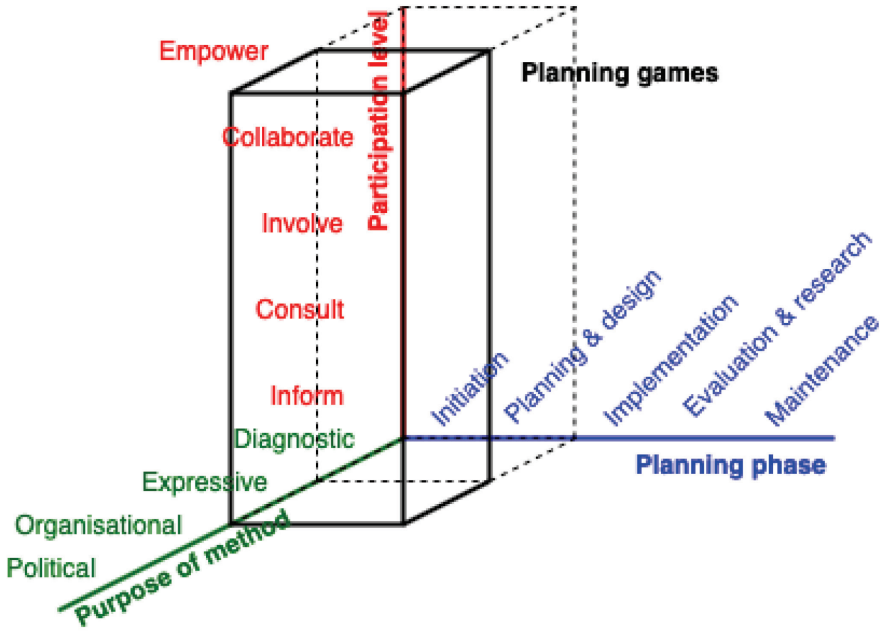

Figure 1.1. *Three-dimensional matrix of planning phases, participation levels and methodological purposes, where the niche of participatory games is delineated by the box.*
Source: Prilenska (2020), synthesysed from the two-dimensional matrices of Horelli (2002) and Ampatzidou et al. (2018).

The colours in the matrix are employed for clarity and do not carry any additional meaning. The planning phases from Initiation to Maintenance are positioned along the blue axis, participation levels from Information to Empowerment are positioned along the red axis, whereas the methodological purposes of participatory exercises are positioned along the green axis. The box delineates the position of games within the matrix. Games are classified as methods employed in Initiation and Planning & Design phases of planning along the blue axis, as methods catering to Information, Consultation, Involvement, Collaboration and Empowerment levels of participation along the red axis, and as methods serving Expressive purposes along the green axis. A discussion of the challenges posed by participatory planning practices in Riga and Tallinn, as well as the potential gamified responses to these challenges, and the position of games within the matrix is renegotiated and expanded (chapter 4).

1.4. Design aspects of games

Participatory games either adapt existing games for participatory purposes or are developed from scratch. Some legendary games, which were initially designed for entertainment, were successfully applied in teaching (SimCity, Ingress), community engagement (Minecraft) and activation of public spaces (Pokémon Go) (Gaber, 2007; Davis, 2017; Block by Block, n.d.; Potts et al., 2017; Graells-Garrido et al., 2017). Games, which are designed for purposes beyond entertainment, are referred to as "serious games" (Ampatzidou et al., 2018; Dörner & Spierling, 2014; Winn, 2009). Serious games have to combine entertainment with serious outcomes, which makes game design a challenging task (Winn, 2009).

The design team has to master the domains of game design for engaging gameplay, of pedagogy for efficient learning, and the subject of the game, e.g. spatial planning (ibid.). Thus, serious games call for game design models which link game design with pedagogy (Devisch et al., 2017; Ahmad et al., 2014). The DPE (Design, Play, Experience) model relies upon incremental (co-)design (Winn, 2009); the four-dimensional framework emphasises the importance of context (de Freitas & Oliver, 2006); the game object model (GOM) conceptualises serious games as compounds of multiple game spaces communicated through interfaces (Amory, 2007); the experiential gaming model consists of ideation and experiential loops powered by challenges, and aims at creating a state of flow (Kiili, 2004); the SDGA (Serious Game Design Assessment) framework structures game elements around the overall purpose (Mitgutsch & Alvarado, 2012). The DPE framework seems to be especially relevant for participatory games, as it brings forward co-design with potential players (Gugerell & Zuidema, 2017; Constantinescu et al., 2017).

In line with the framework for serious games developed by Devish et al. (2017) game design (or, more specifically, game mechanics) should follow the context, objectives and anticipated outcomes of the game (see also Winn, 2009; de Freitas & Oliver, 2006). The definition of context includes the number and profile of perspective players, as well as the cultural and institutional context (ibid.). The framework suggested by Devish et al. (2017), and the framework adopted for the purposes of the current research are based on the MDA (Mechanics, Dynamics, Aesthetics) framework, and its expanded version, the DPE (Design, Play, Experience) framework (Winn, 2009; Constantinescu, 2017). Both frameworks reflect the collaborative nature of the relationship between the designer and the player, which is an essential constituent of action research (Winn, 2009, Fonseca, 2013; Reason & Bradbury, 2008).

The MDA framework highlights three aspects of game design, namely, mechanics, dynamics and aesthetics, where mechanics describes game components, such as the rules and interface, dynamics describes the interaction of players with game components or, in short, player actions, and aesthetics reflects the emotional responses of players towards interaction with game components or, in short, player emotions (Constantinescu, 2017). The DPA framework reframes the aspects of the MDA framework as design, play and experience, where "the designer designs the game, the player plays the game, which results in the player's experience" (Winn, 2009, p. 1014). In both frameworks the designer directly shapes only the mechanics (design) aspect in an attempt to achieve certain aesthetics (experience) though anticipated dynamics (play) (Winn, 2009; Constantinescu et al., 2017; Gugerell & Zuidema, 2017). The dynamics (play) and resulting aesthetics (experience) are heavily dependent on the cultural background, profile and idiosyncrasies of the player (ibid.). Therefore, the DPE framework emphasises the significance of play-testing with potential players, which allows to incrementally adjust game design to fit the anticipated goals based on player feedback (stated experiences) and observation of player behaviour (revealed experiences) (ibid.; see, also, Cord et al., 2015).

The expanded version of the DPE framework slices each of the three main components (design, play and experience), into four layers: learning, storytelling, gameplay and user experience (Winn, 2009, pp. 1014-1018). The learning layer accommodates the "serious" content of the game, the way the player learns (teaching), knowledge, and the skills or attitudes she acquires (learning). The storytelling layer consists of (i) the designer's story, which is reflected in the setting of the game, its characters and narrative, and (ii) the player's story, which emerges from the blend of the designer's story and the player's in-game experiences. The gameplay layer reflects the player's in-game actions and emotions, or "affects". The actions and emotions result from in-game challenges, the choices the player makes in response to these challenges and the ramifications of these choices, which, in turn, are determined by the rules of the game. The game interface is referred to as the user experience layer, which enables interaction between the player and other game layers, and, therefore, has to be easily understandable and playable. **Table 1.2** summarises the expanded DPE framework (Winn, 2009, p. 1015).

Table 1.2. *The expanded DPE framework.*

	Design	Play	Experience	
Learning	Content	Teaching	Learning	What a player learns (knowledge, skills, attitude)? (see, also, Bloom 1956)
Storytelling	Designer's story (setting, characters, narrative)	Storytelling (co-creation)	Player's story	How a player deals with game-play challenges?
Gameplay	Mechanics (rules)	Dynamics (actions)	Affects (emotions)	What a player does and feels?
User experience	User interface	Interactivity	Engagement	How intuitive is the interface?
	← iterate			

Source: adapted from Winn (2009), with additions.

The layers are interdependent, meaning that changes at higher levels influence the lower levels and vice versa (Winn, 2009). Furthermore, some design features may be complementary or conflicting across layers (ibid.). While designing serious games Winn (2009) suggests starting with the learning layer, which is the least flexible, and work down across layers to the user experience layer, which is the most flexible. The interdependency and the flexibility of the different layers is reflected in **Figure 1.2** (P8: Prilenska & Feofilovs, 2017).

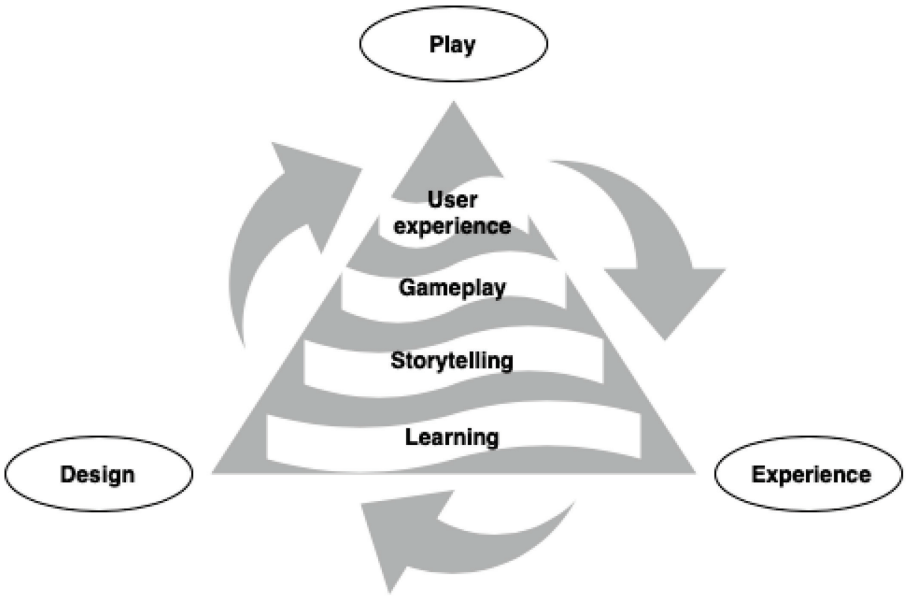

Figure 1.2. *Layered incremental DPE (Design-Play-Experience) approach to serious game design.* Source: Prilenska & Feofilovs (2018), based on Winn (2009).

The design process of the Participatory Game, elaborated in sub-chapter 4.2, employs the expanded and revised DPE framework, as well as reflects the evolution of game layers based on player feedback (see, also, P5: Prilenska, 2019b).

To conclude the section on theoretical considerations, contemporary spatial planning is a multifaceted domain, which, on the one hand, requires certain professional knowledge and skills, and, on the other hand, is a subject of negotiation between the diverse actors/stakeholders involved. The actors' perspectives and capacities in the context of the participatory urban development paradigm call for methods which bring divergent positions together and enables to frame and solve pressing urban issues collectively. The aforementioned challenges may be addressed by games which are developed for spatial planning and participation purposes. On the one hand, games function as "learning machines", fostering the acquisition of the essential knowledge and skills. On the other hand, games establish favourable conditions for deliberation, requiring clearly defined outcomes, a structured and transparent process, as well as equality and mutual respect between the players, irrespective of their roles outside the game.

However, "serious" game design calls for multifaceted expertise from the part of game designers. Therefore, it often unfolds in collaboration with perspective players, who, in turn, bring their experiences and competences into the game. Thus, co-designed games

create the frameworks for co-design activities and, at the same time, invite players to shape these frameworks. The latter is in line with participatory planning ideals, which urge involving stakeholders in the shaping if participation formats. The issues of participation, participatory methods and co-design of these methods are addressed in the current research through the case of the Participatory Game, which reflects and renegotiates participatory approaches in the context of the transitioning urban development model in Riga and Tallinn.

2. Research Design

2.1.Philosophy

Spatial planning (hereinafter referred to as planning) in its contemporary guise is the allocation of land uses and building codes attached to the land uses as a result of negotiations between stakeholders (Davy, 2014; Barnett & Beasley, 2015). It is a multifaceted discipline, whose theoretical and methodological foundations are based on a mixture of other disciplines, namely, social (e.g. sociology, economics) and applied (e.g. engineering) sciences, as well as design and philosophy (Fainstein, 2019; Friedmann, 2008). In the process of development from the early 20th century onwards, the spatial planning paradigm shifted from positivism towards constructionism (or interpretivism) in theory, and pragmatism in practice (Healey, 2013; Friedmann, 1998; Wang & Hoch, 2013; Forester, 2012).

Ontologically, the rational planning model conceptualises socio-spatial systems as unitary entities, which in their (material) development aim to create better living conditions for humans (Healey, 2013). Epistemologically, the rational planning model privileges scientific and expert knowledge over experiential and practical knowledge (ibid.). In criticising the rational planning model, Friedmann & Hudson (1974) and Friedmann (2008) point out that planning decisions are made under conditions of limited and, often, distorted knowledge, and that assessment and prediction models inevitably simplify reality and prioritise some variables at the expense of others. Thus, planning is inherently subjective and value-laden (ibid.). Contemporary planning theory embraces the relational and constructionist approach, where multiple socio-spatial systems are "overlapping and conflicting", and through which place and territory are "materially and mentally /…/ constructed and recognised" (Healey, 2013, p. 1514). Knowledge, in turn, is "developed through experience and social interaction", it is not a reflection of external reality, but is merely a construct (ibid.). The constructionist worldview underpins the first half of the research, which aims to explore, describe and evaluate participatory planning practices in Latvia and Estonia (P1: Prilenska & Liias 2015; P3: Prilenska et al., 2019; P2: Prilenska et al., 2020).

Planning agencies are perceived as actors who balance the demands of local communities with those of global sustainability discourses using the tools available under their institutional constraints (Wang & Hoch, 2013; Holman et al., 2014). Wand & Hoch (2013) emphasise the pragmatic convergence of planning practices, which face economic realities, despite diverging planning paradigms. It appears that practitioners often adapt the pragmatic - "what works" - approach with a touch of critical realism, which focuses on the production of practical outcomes, and where concepts are merely instruments for enabling successful action (Forester, 2012; Friedmann, 2008; Saunders et al., 2016; Creswell, 2007). The pragmatic worldview shapes the framework in the second half of the study, which aims to reveal the viability of games as methods for enhancing participation in planning and raising the quality of planning education (P4: Prilenska, 2019a; P5: Prilenska, 2019b).

2.2. Methodology

Quantitative and qualitative methodologies are characterised by the nature of the generated or collected research data, such as text, images, etc. In social studies quantitative data is often informed by qualitative input, and vice versa (Saunders et al., 2016). Thus, quantitative and qualitative data and the attendant methodologies are two poles of the same continuum, which are often mixed, mutually complementing each other (ibid.). Mason (2002, p. 4) argues against the quantitative-qualitative divide, suggesting that "neither 'quantitative' nor 'qualitative' are the unified bodies of philosophy, method and technique", as they are sometimes represented. Mason (2006) extends her argument asserting that an essentially qualitative inquiry benefits from mixing methods, enabling an improved framing of questions and shape understanding and explanations across scales, dimensions and contexts. Therefore, the current research draws upon an array of strategies and methods, which mainly employ qualitative data collection and analysis techniques, complemented by quantitative data from a small-scale survey conducted in the fourth research phase for game evaluation purposes (P5: Prilenska, 2019b).

Rather than providing a definition, Mason (2002) proposes the following characteristics of qualitative research. Qualitative research is grounded in interpretivism and is concerned with the experience, interpretation and production of a complex social world. The inquiry is emergent and responsive to the research subject and its context (see, also, Creswell, 2007). Rich, detailed and nuanced data is analysed holistically, producing complete and contextual explanations. The researcher is reflexive and recognises how her values, thoughts and actions shape the research questions, research design and the interpretation of outcomes.

The current research focuses on the phenomenon of public participation in planning, barriers to it and enabling conditions, as well as on the methodological responses to the challenges posed by participation. As indicated earlier, the institution of planning, as well as associated theories, legislation, agencies, practices, etc., are produced by the society and, like other institutions, are essentially agreements between the stakeholders (Berger & Luckmann, 1966). To grasp and explain the challenges associated with the phenomenon, it is necessary to explore how the stakeholders perceive, construe, interpret and practice it, which calls for an interpretivist approach.

The research design aims at flexibility and responsiveness towards the emerging and often unforeseen issues. The employed strategies and methods, as well as the relationships between them, are continuously revised as the layers of data are revealed and change the researcher's understanding of the research subject and its context. The research design includes four sequential phases, each of which is organised around a certain research question and research strategy, and yields certain outcomes reported in the scientific publications. The research phases and associated research questions iteratively converge from broad explorative and descriptive queries to narrow evaluative and explanatory ones. Each phase and the associated question illuminate the array of themes related to the overall research aim and inform the subsequent research phases and questions. The synthesis of outcomes emerging from research phases and questions delivers a complete and multifaceted response to the research aim. Organising the study in phases supports the anticipated flexibility and responsiveness of the inductive inquiry and reflects the unfolding research process of digging through the layers of data. **Figure 2.1** reflects the phases of the research, as well as the nexuses between the phases.

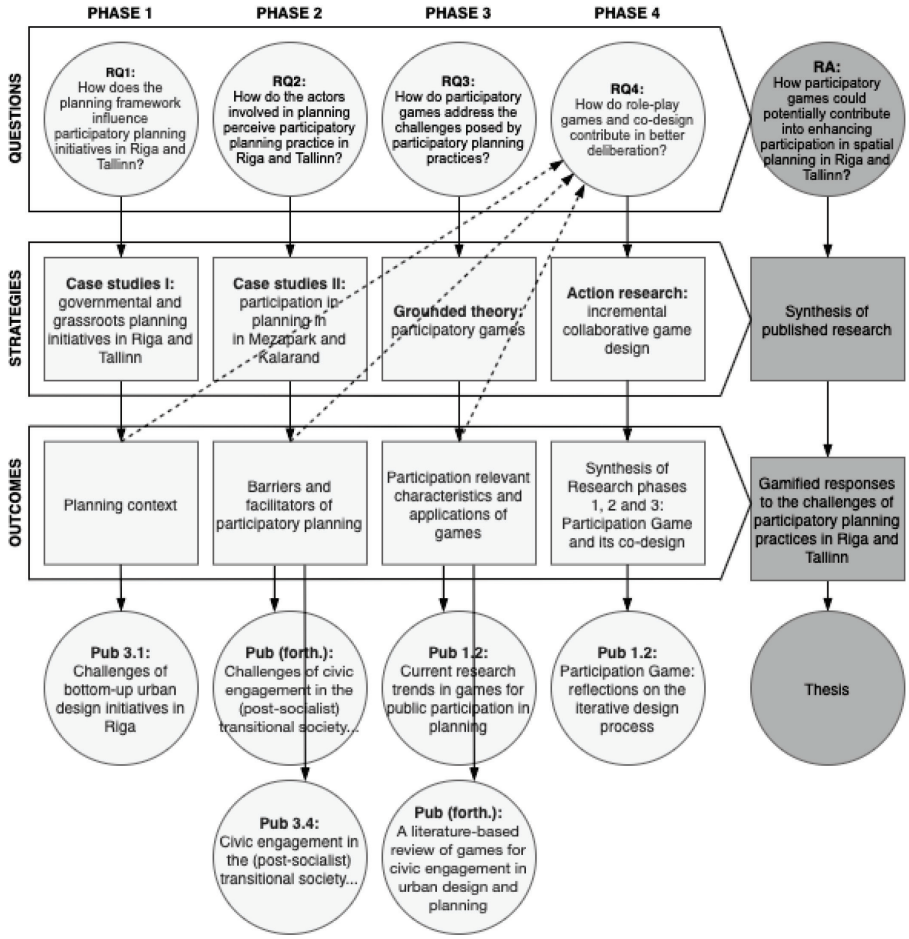

Figure 2.1. *Research design.*
Source: Prilenska 2020.

The author herself is an advocate of participatory planning and is critical of the way participatory planning is practised in the Baltic context, Latvia and Estonia in particular. Upon the initiation of the research, the author was interested in alternative methods to the prevailing participatory procedures (P2: Prilenska et al., 2020). The position of the author determined the research aim and research questions. Although throughout the research process the researcher distinguishes between facts, opinions and values, her own values are present in the interpretation of the data and the conclusions drawn from these interpretations.

2.3. Research strategies

Research strategies refer to a plan of actions aimed at addressing the research aim and questions (Saunders et al., 2016). Research strategies are usually associated with a particular set of data collection and analysis techniques, as well as with the way results are reported (ibid.). As outlined in the introduction, the complexity of the research aim requires responding to a set of research questions. Mason (2006) argues, that the choice of research strategies and associated data collection and analysis techniques should be

driven by research questions. Thus, the current research is designed as a combination of research strategies, where each research question is addressed by means of a certain, and, arguably, the most appropriate, strategy or qualitative methodological approach (as in Creswell, 2013).

The definitions of qualitative research strategies or methodological approaches, such as case study, ethnography, phenomenology, grounded theory, narrative and action research, as well as archival and documentary research (Saunders et al., 2016; Creswell, 2007, 2013), however, are described differently by different authors. For example, Saunders et al. (2016) recognise action research as a "strategy", Creswell (2007) views it as a "paradigm or worldview", Reason & Bradbury (2008, p. 1) as an "orientation to inquiry", while for Coghlan & Brannick (2005, p. 12) it represents a "live case study". Another example is grounded theory, which is interpreted as a research strategy, an approach to theory building, and a data collection and analysis technique (Charmaz, 2006; Saunders et al., 2016; Corbin & Strauss, 1990).

While employing generic methods of data collection and analysis, these "strategies" have different purposes and foci, and hence, the types of collected data and approaches to data analysis and reporting the outcomes (Creswell, 2007; Saunders et al., 2016). Rather than using the "strategies" as a recipe for the research, the author views them as guidelines, which illuminate research design. The strategies contributing to the current research are (i) case study, (ii) grounded theory and (ii) action research.

2.3.1. Case study

The case study is an inquiry into "a contemporary phenomenon within its real-life context, especially, when the boundaries between phenomenon and context are not clearly evident" (Yin, 2003, p. 13). Yin (2003) emphasises the modernity of the phenomenon and the contingency of the phenomenon upon its spatio-temporal and cultural setting as features which distinguish case studies from other research strategies, such as history or an experiment, which investigate either past events or a phenomenon in a laboratory environment. Yin continuously (2009, 2018) points at the richness of a case study, as the study conducted in a contemporary context allows for an in-depth inquiry of a phenomenon by applying multiple methods and ways of generating data. Comparing different strategies, Creswell (2007) asserts that case study approach is applied when the phenomenon is believed to be dependent upon the context in which it is embedded. The phenomenon (the "case") refers to the unit of study, which may be a person, an organisation, an event, etc. (Saunders et al., 2016). Flyvbjerg (2011, p. 301) argues, that the decisive feature of a case study is "the setting of its boundaries, or 'casing'", which depends on the selection criteria addressing different research purposes and thus yield different data. In this view, a case study is a choice of a unit of study, rather than methodology (Flyvbjerg, 2006). Creswell, while in line with Yin (2009) on the phenomenon-context boundedness, views case studies as a methodological approach, "a type of design in qualitative research that may be an object of study, as well as a product of the inquiry" (2013, p. 97).

The case study approach is employed in the first and second research phases, and investigates the phenomenon of participation in planning in Latvia and Estonia, which is both contemporary and context-sensitive (P1: Prilenska & Liias, 2015; P3: Prilenska et al. 2019; P2: Prilenska et al., 2020). Due to political circumstances, the notion of participation in planning gained recognition in the Baltic countries considerably later than in other Western developed economies and has been unfolding in the context of a transitional society. The author believes that the specific contextual conditions of participation in

planning in the Latvia and Estonia have substantially influenced the way it is construed and practised by the stakeholders (P3: Prilenska et al. 2019; P2: Prilenska et al., 2020).

In this research, the case study is considered to be one of the strategies (Saunders et al., 2016) or methodological approaches (Creswell, 2013) and includes the investigation of cases in the first and second research phases (P1: Prilenska & Liias 2015; P3: Prilenska et al. 2019; P2: Prilenska et al., 2020). Prilenska and Liias (2015) draw upon three cases of collaborative public space transformations, while Prilenska et al. (2019, 2020) is an in-depth inquiry into two cases of participation in planning urban areas. In line with Yin (2003, 2009, 2018) and Creswell (2013), both reports are grounded in the rich data collected through an array of methods, such as interviews, observations and documentary analysis, which mutually complement each other, and shed light upon the aspects, which distinguish participatory practices in the Baltics from mature Western democracies.

2.3.2.Grounded theory

To distinguish between strategy and technique, the former is referred to as "Grounded Theory" and the latter - as "Grounded Theory Method" (Saunders et al., 2016). Grounded Theory is a research strategy which develops ("grounds") theory inductively from a body of qualitative data (Creswell, 2007). In contrast to other qualitative approaches, Grounded Theory moves beyond description and aims to generate (or discover) a theory explaining a process (Creswell, 2013). The data is simultaneously collected and analysed through several rounds of coding (ibid.). The codes - labels, summarising data units, emerge from the data and shape the categories, indicating relationships between data units, which, in turn, shape a theory (Charmaz, 2006). The rounds of data collection and analysis are repeated until categories, and the relationships between the categories, are well developed, and the theory is sufficiently elaborate to provide conceptual understanding of the phenomenon in question (Saunders et al., 2016; Charmaz, 2006). Charmaz (2006) advocates for a constructivist approach to Grounded Theory, which differs from the approaches of Glaeser & Strauss (1967) and Strauss & Corbin (1990, 1998) originating in positivist philosophy (Charmaz, 2006). Strauss & Corbin (1990, 1998) argue for rigid coding procedures culminating in a conditional matrix, which allows to identify micro and macro conditions shaping the phenomenon in question (Creswell, 2013). Charmaz (2006), in turn, advocates for a more flexible approach, which reveals the multiplicity and diversity of realities (ibid.; Charmaz, 2008).

Grounded Theory Method is a set of data collection and analysis techniques, which applies iterative sampling, comparison, and a variety of coding procedures (Saunders et al., 2016). Approaches to coding vary in the literature (ibid.). Corbin and Strauss (1990, p. 13) suggest open, axial and selective coding, where axial coding refers to relationships between categories "through the 'coding paradigm' of conditions, context, strategies /…/ and consequences", and selective coding refers to the integration of categories around a "core" category. Charmaz (2006, p. 57) suggests initial and focused coding, where focused coding refers to "more directed, selective and conceptual" codes. Thus Grounded Theory and Grounded Theory Method shape a holistic approach to the inquiry from its inception, though the procedures of data generation and analysis, until completion (Saunders et al., 2016).

Grounded theory typically builds on the accounts of participants derived through interviews (Charmaz, 2006; Corbin & Strauss, 1990). Literature review is separated from the core inquiry to avoid contaminating the emergent theory by the existing one (Berthelsen & Frederiksen, 2018). Wolfswinkel et al. (2011) propose applying a grounded theory approach to literature review pursuing a systematic and transparent inquiry,

which builds on and extends existing theory (for examples, see, also, Thistoll et al., 2016; Schlagenhaufer & Amberg, 2015). The aforementioned approach was applied in the third research phase for reviewing scientific publications reporting the cases of participatory planning games (P4: Prilenska 2019a). Rigorous coding procedures and the continuous comparison between the data and the emerging categories rendered the conceptual map of the state of the art in the field (ibid.).

2.3.3.Action research

Action research is an emergent inquiry, which aims to address practical, often urgent, issues and contribute to scientific knowledge through collaborative action and change (Coghlan & Brannick, 2005; Reason & Bradbury, 2008). Saunders et al. (2016) identify five characteristics of action research, namely, (i) resolution of real-life problems, (ii) generation of 'actionable knowledge', which emerges from practice and informs practice, (iii) cyclic iterative process, (iv) participatory nature and (v) broad implications. The scope of action research varies from organisation development to emancipatory issues concerning power imbalances and social exclusion (Coghlan & Brannick, 2005). The latter is emphasised in the approach of Reason & Bradbury (2008) who advocate for liberation of the human body, mind and spirit in pursuit of a better world as the primary purpose of action research.

Coghlan & Coghlan (2002) assert, that action research is appropriate to study the actions unfolding in social systems, understanding how the systems may be improved through change in actions, as well as understanding and learning from change. Thus, action research represents iterative cycles of action and reflection, contributing simultaneously to better practice and theory (Reason & Bradbury, 2008). Following the more structured approach of Coghlan & Brannick (2005) action research unfolds in a spiral which consists of four steps, namely, (i) diagnosing, (ii) planning action, (iii) taking action and (iv) evaluating action, where all steps are performed in collaboration with the stakeholders (Coghlan & Brannick, 2005; Saunders et al., 2016). Referred to as a "live" case study, action research draws upon a mix of qualitative and quantitative methods, and depends upon the profile of the participants (Coghlan & Coghlan, 2002; Coghlan & Brannick, 2005).

The fourth research phase applies a moderate variation of action research to the design of a participatory planning game (P5: Prilenska 2019b). Rather than adopting an ideological dimension of action research, the fourth research phase builds on the formal elements of action research, namely, the iterative cycles of inquiry, collaboration of the researcher and research participants, as well as methodological flexibility (ibid.). The strategy of action research aligns well with the nature of games, which draw upon the iterative cycles of action and reflection, enabling learning though acting (Winn, 2009; Wu, 2017). Similar to action inquiry, which employ the notions of first-, second- and third-person research, games enable both introspection and collective learning for problem-solving and change (Reason & Bradbury, 2008; Gordon et al., 2017). Furthermore, while not labelled explicitly as action research, some game design models, such as DPE (design-play-experience), rely heavily on elements of action research (Winn, 2009; Fonseca, 2013).

2.4. Data collection and analysis methods

Data collection and analysis techniques refer to particular actions in the action plan, or strategy (Saunders et al., 2016). The current research draws upon an array of data collection techniques, namely, unstructured and semi-structured interviews, questionnaires, observation and the study of secondary sources, such as scientific publications, publications in the media, as well as laws, regulations and reports produced by governmental agencies. The use of multiple data sources produces rich data, required by qualitative research and increases the validity of the research by means of triangulation (ibid.). Additionally, the current research introduces games as an engine for data generation, which produce rich output in the form of video recordings, photographs, sketches and scale models (P5: Prilenska, 2019b).

The data was analysed though thematic, template and content analysis, as well as by means of the grounded theory method. Template analysis is a variation of thematic analysis, which establishes a list of codes and themes (coding template) prior to fully conducting the analysis (Saunders et al., 2016). Grounded theory method, in turn, is a holistic methodological approach, which incorporates thematic analysis (ibid.). Content analysis, used in the game evaluation survey in the fourth phase of the research, draws upon quantitative analysis of qualitative data, which measures the frequency of occurrence of certain categories (ibid.). The data analysis methods were as required by the nature of research question, as well as on the overall design of the research phase.

2.4.1. Planning in cities Riga and Tallinn. Case studies I

The objective of the first research phase was to identify bottom-up and top-down participatory initiatives in Riga and Tallinn, related to urban design and planning, and to determine the direction for further research. In 2014, when the study took place, participation in planning in the Baltic context was only beginning, therefore, context-sensitive literature on the topic, including scientific and non-scientific publications, as well as the expertise of urban professionals, was limited (see, also, Hiob & Nutt, 2016). The limitations of the relevant literature and expertise demanded a cross-sectional exploratory study.

The first data set was collected via unstructured in-depth interviews with urban professionals in the author's social network. The interviews unfolded around the topic of public participation in planning in Riga and Tallinn. The interviewees provided examples of participatory initiatives, gave their assessment and suggested other potential informants. The data from the first set was used for mapping participatory projects and establishing contacts with urban professionals, representatives of neighbourhood associations and other interest groups.

The first data set revealed several bottom-up urban design projects in Riga, where professionals, in collaboration with residents, transformed neglected public spaces, namely, Pagalmu Renesanse (Courtyard Renaissance), Labas Vietas Talka (Nice Place Clean-up) and Free Riga. Contrary to other participatory initiatives, these projects resulted in articulate spatial interventions, which made these cases atypical. According to Flyvbjerg (2011) atypical cases are often more information-rich than the typical ones, and, thus, may reveal causal links between the problem and its consequences. Despite producing similar results, namely, the transformation of the public space, the aforementioned cases were different in their purpose, organisation and funding. Therefore, cross-case comparison was believed to reveal essential information about participatory practices in Riga and allow for some generalisation.

The second data set was collected through semi-structured interviews with project initiators, who were asked about the projects' aims, processes and outcomes, sources of funding, participants and methodologies of participation. The interviews were followed by the study of projects' documentation and media coverage (if available), and supplemented with data collected by taking photos of transformed public spaces. The data from the second set was analysed according to a coding template, which included a set of codes reflecting the thematic structure of interviews and observations. A substantial share of codes referred to participation strategies and limitations they impose on the format and the content of residents' contributions. The data from the second set shaped the input for Publication No. 1 (**Table 2.2: 1**).

The first research phase indicated that participatory initiatives, including bottom-up initiatives, are funded by governmental agencies and, therefore, unfold in line with the rules established by these agencies. Thus, the focus of research had to shift towards top-down national and municipal participatory frameworks.

2.4.2. Participation in planning urban areas Mežaparks and Kalarand. Case studies II

The objective of the second research phase was to discover the barriers hampering and factors encouraging planning related participatory initiatives in Riga and Tallinn. Again, the limitations of the relevant literature and expertise demanded a cross-sectional combined, exploratory, descriptive and evaluative study. The study was conducted in 2016, followed by the update in 2018 due to minor changes in planning legislation, structural reshuffling in planning agencies, as well as due to the substantial increase in the activity and institutionalisation of residents into neighbourhood associations.

The first data set was collected through semi-structured interviews with the representatives of planning departments from Riga and Tallinn who were approached through the author's and her supervisors' social networks. The informants converged on two cases, namely, detailed plans for waterfront urban areas Mežaparks in Riga (2010-2013) and Kalarand in Tallinn (2003-2016), with "revelatory" potential in Yin's terms (2003, p. 42). On the one hand, the cases followed standard civic engagement procedures, which were in force at the time of the study in 2016 and are in force today, and this made these cases typical. On the other hand, the representatives of the public actively participated and contributed to them, in contrast to the majority of cases when the representatives of the public choose not to get involved. Furthermore, the representatives of the public ignited controversy protesting against planning decisions and criticising participatory processes and outcomes. Public concerns were voiced through legally designated participatory channels, such as public hearings and written proposals addressed to the planning departments, as well as through mass media. The breadth and depth of the controversy made the cases "extreme" or "deviant" in Flyvbjerg's terms (2011, p. 307). The combination of typical participatory procedures causing an atypical civic response was decisive in choosing the aforementioned cases for in-depth inquiry. A research design involving two case studies allowed making comparisons across cases, as the cases were believed to be similar, and, consequently, increased the robustness of conclusions.

The second and third data sets were collected through semi-structured interviews with the stakeholders involved in the controversy over plans for Mežaparks and Kalarand. The interviewees included the representatives of neighbourhood associations, planners and developers, who were active participants of the planning processes, and planning experts from NGOs, who were passive observers of the processes.

The interviewees were suggested by representatives of planning departments, and were approached by phone or email. The interviewees gave consent to the use of the information they provided for research purposes, including, publishing the anonymised interview excerpts. The awareness of the research topic did, however, result in cautious responses to sensitive questions in some cases.

Interviews were conducted between March 2016 and November 2016, and in December 2018. Interviews lasted from 30 to 120 minutes, were audio recorded and transcribed verbatim. In total 18 interviews were conducted, 9 in Riga and 9 in Tallinn. Interviews unfolded around the interpretation of existing planning frameworks, perceptions of the actual planning process and its outcomes in relation to Mežaparks and Kalarand, and expectations related to participatory planning. Stakeholder accounts were complemented by document analysis, which included planning laws and regulations for Latvia and Estonia, and detailed plans for Mezaparks and Kalarand, which were accessible online or provided by the designers and developers. The data from the interviews and documents was analysed thematically using in vivo codes, which revealed contextually conditioned participation barriers and enabling conditions. The research design, results and conclusions are elaborated in Publications No. 2 (**Table 2.2: 2**) and No. 3 (**Table 2.2: 3**).

The main participation barriers revealed in the first research phase were related to participatory methods, which are explored further in the third research phase. The causes of conflict over the planning decisions in Mežaparks and Kalarand shaped the input for the fourth research phase.

2.4.3. Games as methods for fostering participation. Grounded theory

The objective of the third research phase was to discover the types and characteristics of emerging civic engagement methods, shaping a knowledge base for designing a method in the next research phase. The interviews conducted in the first and second research phases indicated that the palette of civic engagement methods in Riga and Tallinn is limited to mainly traditional methods, such as public display, surveys, focus groups and thematic seminars. The informants reported having no experience of applying alternative civic engagement methods, such as smartphone applications, games or facilitated design sessions. Therefore, the research had to rely on foreign experience, sourced through publications, elaborating on the alternative methods. Following the trend towards the gamification of society (Deterding et al., 2011), the focus was limited to approaches with game elements.

Scopus search results with the terms “games”, “participation” and “planning” indicate the substantial growth in the number of publications exploring the potential of games for civic engagement in planning from 2011 onwards. The publications either build on the spatial consequences and applications of a few well-known commercial games (e.g., SimCity, Minecraft and Pokémon Go), or report the findings of experiments with non-commercial games specifically developed for participatory and planning purposes. Since one of the objectives of the third research phase was to shape the knowledge base for designing an indie game, the research focused on the non-commercial games developed in an educational context.

The process of reviewing, analysing and reporting the literature was guided by the method proposed by Wolfswinkel et al. (2011), which, in turn, draws upon the coding procedures of the Grounded Theory of Corbin & Strauss (1990). In line with the constructionist worldview in current research, the method of Wolfswinkel et al. (2011) was modified, adapting the approach in line with the Grounded Theory of Charmaz

(2006). The cross-sectional study was conducted in 2017 with an update in 2019. The publications were sourced from the Scopus database using search terms “game”, “civic”, “engagement”, “urban”, “planning” and their synonyms (P4: Prilenska, 2019a). The range of publications was limited to those reporting the cases of developing and applying non-commercial games. Scientific publications were complemented by non-scientific publications, such as official web pages, newspaper and magazine articles, which contained additional information about the cases. The final sample included 20 cases, varying from individual to collective games, as well as from digital to board and pervasive games.

The analysis of publications revealed the typology of participatory games (P4: Prilenska, 2019a). The data from the texts shaped the input for the database with detailed descriptions of each game according to a template. The comparative characteristics of participatory games were compared with the characteristics established for traditional civic engagement methods (Rowe and Frewer, 2000; Rowe and Frewer, 2005; revisited by Brown & Chin, 2015). The research design, results and conclusions are elaborated in Publications No. 4 (**Table 2.2: 4**).

2.4.4. Participation Game. Action research

The objectives of the fourth research phase were to develop a method (a game), acceptable to perspective end users (players), as well as to verify the propositions developed in the second research phase and apply the knowledge generated in the third research phase. While participatory methods create a framework for co-creating consensual solutions, these methods *per se* are rarely a subject of co-creation (Khaled & Vasalou, 2014; Sotamaa et al., 2005; Isbister, 2010). Since the second research phase revealed the methodological deficiencies of participatory strategies, in the fourth research phase an attempt was made to co-design an alternative participation method in collaboration with perspective end users. There was no intention to engage real-life stakeholders in co-design for ethical considerations, as co-design was a research endeavour with uncertain real-life benefits. Therefore, the game was developed in an academic context involving university students and high-school pupils as perspective players and co-designers.

The game was developed incrementally in a series of five game sessions from May 2018 to February 2019. Four sessions took place on university campuses and one on the premises of Riga planning department. Players were recruited through the university and school outreach. In total 69 players were involved, of which 23 were high school pupils, 9 were sociology students, and 37 were students of planning related curricula. **Table 2.1** contains the dates and locations of game sessions, as well as the players involved. Apart from game session 3, other sessions were included into the study curricula.

Table 2.1. *Game sessions: date, location and players.*

	Date	Location	No. of players	Profile of players
Game session 1	8 May 2018	Riga, Riga Technical University	21 (two groups)	Master students in sociology and in architecture
Game session 2	12 August 2018	Hamburg, HafenCity University	10	Master students in architecture and urban design
Game session 3	23 November 2018	Tallinn, Tallinn University of Technology	7	Bachelor students in architecture and urban design
Game session 4	25 January 2019	Riga, Riga planning department	23 (two groups)	High school pupils
Game session 5	1 February 2019	Riga, Riga Technical University	8	Bachelor students in regional development and urban economy (8)

For co-design sessions Khaled & Vasalou (2014) advise to develop an initial playable prototype, which can be further modified by players, rather than start from scratch (see, also, Gugerell & Zuidema, 2017). Therefore, for each game session an initial prototype of the game was prepared, which was played and commented upon by the players. For the next game session the prototype was modified based on players' feedback and observed behaviour.

The game sessions lasted from two to four academic hours and included a brief introduction into the game and research topic, play test, debriefing and survey. The game sessions were video recorded. Players gave their consent to being video recorded and the use of the data generated during game sessions for research purposes. The video recordings captured player actions and emotional responses, whereas the survey included a set of closed and open-ended questions about various aspects of the game (P5: Prilenska, 2019b). The video recordings were analysed according to a template, whereas surveys underwent content analysis, which measured the frequency of codes associated with the certain features of the game (ibid.). The debriefing was conducted in an unstructured discussion of gaming process and outcomes, and merely complemented the information revealed through video recordings and the survey. The research design, results and conclusions are elaborated in Publication No. 6 (**Table 2.2: 6**).

The dual nature of contemporary spatial planning, which, on the one hand, adopts a constructionist outlook on theory building and, on the other hand, a pragmatist approach towards problem solving, calls primarily for qualitative inquiry, which is supplemented with quantitative data. In line with the constructionist-pragmatist approach, the choice of research strategies, as well as data collection and analysis techniques is contingent upon the research questions. The current enquiry is organised in four sequential phases, where each phase responds to a certain research question and, hence, employs, arguably, the best research strategy and associated techniques for the purpose. The inquiry builds on the research strategies of case studies, Grounded Theory and

action research, each of which, in turn, employs data capturing techniques, such as semi-structured interviews, purposeful sampling, video-recordings and survey, and data processing techniques of thematic and template coding, as well as Grounded Theory Method and content analysis.

The research phases draw upon the findings of the earlier research phases and, at the same time, contribute to subsequent research phases. This way of organising the research supports the flexibility of inductive enquiry, accommodating the modifications of research design as new insights are discovered. The outcomes of research phases are synthesised in the final research phase and embodied in the indie game - Participation Game, which is developed iteratively in collaboration with perspective players. The Participation Game reflects the context-sensitive participation challenges of Riga and Tallinn (chapter 3) and addresses them through role-play and "boundary objects" (chapter 4). Additionally, the Participation Game acts as a data generation method, which provides responses to the established research aim and questions, as well as poses new research questions indicating the direction for further inquiry.

Table 2.2. *Summary of publications, objectives, methodologies and contributions.*

No.	Publication	Objective	Methodology	Contribution
1	Challenges of bottom-up urban design initiatives in Riga	Identify bottom-up and top-down civic initiatives in Riga and Tallinn, related to urban design and planning, and identify further research vector	Multiple case study (exploratory): unstructured and semi-structured interviews, study of documents and media reports, observation, photo shoot; template analysis	The paper reviews three bottom-up urban design initiatives in Riga. The paper summarises and reports project aims, processes, outcomes, sources of funding and participation methodologies. The paper concludes with the evaluation of the level of civic engagement in design decisions
2	Challenges of civic engagement in the (post-socialist) transitional society: experiences from Kalarand and Mezapark	Discover the barriers hampering and conditions enabling planning related participatory initiatives in Riga and Tallinn	Multiple case study (evaluative): semi-structured interviews with multiple stakeholder groups, documentary research and observation; thematic analysis	The papers report the civic engagement process in planning urban areas of strategic significance Kalarand in Tallinn and Mežaparks in Riga. Participation barriers and enabling conditions are determined based on the accounts of various stakeholders. The paper concludes with the recommendations for enhancing civic engagement practices in Riga and Tallinn
3	Civic engagement in the (post-socialist) transitional society: two case studies	Same as in 2	Same as in 2.	

4	Current research vectors in games for public participation in planning	Discover the types and characteristics of emerging civic engagement methods, shape a knowledge base for designing a game in the next research phase	Grounded theory (exploratory, descriptive, evaluative): review of scientific and non-scientific publications; grounded theory analysis	The paper summarises and reports common research vectors in the field of participatory planning games, identifies common characteristics of these games and compares them accordingly. The paper concludes with the challenges and potentials for applying games as methods for better participation in planning practice
5	Participation game: reflections on the iterative design process	Develop a game acceptable for perspective players; test the propositions developed in the second research phase; apply the knowledge developed in the third research phase	Action research (evaluative): simulation game, debriefing, video recording of game sessions, game evaluation survey; content analysis	The paper reports the iterative participatory design process of a participatory planning game. The paper introduces the methodology for capturing and evaluating participant's feedback. The paper concludes with the benefits and drawbacks of participatory design

3. Findings: Challenges of participatory planning in Riga and Tallinn

The chapter responds to **research question 1:** How does the planning framework influence participatory planning initiatives in Riga and Tallinn?, and **research question 2:** How do the actors involved in planning perceive participatory planning practice in Riga and Tallinn? The chapter draws upon articles No. 1-3, which discuss participatory planning practices in Riga and Tallinn, and, specifically, civic engagement in drawing plans for urban areas Mežaparks and Kalarand. The discussion of Tallinn's grassroots planning initiatives does not feature in the articles and, therefore, was added to the body of the Thesis to counterbalance the discussion of Riga's grassroots planning initiatives.

The analysis of local planning context reveals discrepancies between planning frameworks and practices caused by the imported nature of participatory planning in Latvia and Estonia. This divide is gradually converging due to the adaptation of the planning frameworks to local circumstances and the development of relevant knowledge and skills among the stakeholders. The planning context frames the detailed analysis of participation barriers and enabling conditions in Riga and Tallinn. The analysis of stakeholder accounts reveals controversial perspectives regarding existing participatory practices, caused by the differences in stakeholders' roles, decision-making capacities and experiences.

The divergent stakeholder positions and interests in relation to their living environment require the implementation of participatory methods, which encourage wider representation and an alignment of stakes. These demands drive the inquiry into emergent gamified participatory methods, discussed in the next chapter (chapter 4).

3.1. Planning frameworks

The 1960s saw a shift of planning thought from blueprint towards participatory planning arrived to Latvia and Estonia in the mid-1990s. Between the 1940s and 1990 both countries followed the socialist path and developed their territory in line with the modernist, t.i. rational, tradition, where land, its planning and development were governed by state agencies (Treija & Bratuškins, 2019; Ruoppila, 2007). In 1990-1991 Latvia and Estonia shifted to liberalism and, consequently, a market driven territorial development model, where land and development are managed by private entities within the state planning framework (ibid.). The ideological and governance changes required corresponding legislation, which in the fields of planning and construction was introduced in the mid-1990s. In the interviews, the representatives of planning departments confirmed that the early legislation was to a large extent inspired by the legislation of other European countries (P2: Prilenska et al., 2020; Ruoppila, 2007). The initial legislation was contested in the local institutional context, where the corresponding implementation mechanisms were underdeveloped (Dimitrowska-Andrews, 2005). It has been argued that in the transitional countries, such as Latvia and Estonia in the 1990s, overcoming the "institutional vacuum" by creating institutions was an essential part of societal development (Paadam, 2003, p. 13, on Stark, 1995). Actions did not take place within institutions but were about institutions (Paadam, 2003, p. 13, on Offe, 1995), which is also relevant for planning legislation.

Urban development was substantially influenced by the transformation of property relations. The realty was transferred from the state to private entities through restitution

and privatisation (Paadam, 2009a; Treija & Bratuškins, 2019). Restitution restored the pre-WWII patchwork of land property, ignoring the layer of urban fabric developed in the subsequent fifty years, which, in turn, creates a problem for managing urban areas where the modernist urban form is superimposed upon the highly fragmented land ownership landscape (see, also, Treija & Bratuškins, 2019; Tuvikene, 2019; Leetmaa & Hess, 2019). The liberalisation of property in the absence of adequate land policies and development steering strategies resulted in land speculation, allowing developers to "cherry-pick" attractive locations, and produced a number of "parasite" construction projects in the pursuit of profit (Dimitrowska-Andrews, 2005; Ruoppila, 2007; P10: Prilenska, forthcoming). For instance, apartment blocks built in the courtyards of modernist housing ensembles in the Purvciems neighbourhood in Riga take advantage of the existing public infrastructure and amenities, while being spatially disconnected from the environment and adding no value to it (P10: Prilenska, forthcoming), or a shopping mall built at the seaside in the centre of Tallinn, which obstructs the view of and access to the sea, as well as the potential of the planned waterfront promenade (Paadam & Ojamäe, 2012). As mentioned elsewhere, such actions are limiting the opportunities for the development of the waterfront into a prime recreational location (Ruoppila, 2007). The fragmentation and the complexity of the property landscape, as well as the decreasing number of municipally owned land plots, posed a challenge for the local government, which had to handle the multitude of private interests and pursue the public interest with limited legal and financial tools (Ruoppila, 2007; Hiob & Nutt, 2016). Despite these circumstances and its marginalised position, the municipality is continuously expected to conduct negotiations and seek for counterbalance between the interests of private and public stakeholders (Paadam & Ojamäe, 2012).

In contrast to the socialist urban development model, which pursued a single unified public interest, the liberal urban development model faces a plurality of diverging interests, and requires a mediating institution, often embodied in the procedure of public participation (Forester, 2006).

Early versions of planning related laws and regulations included certain requirements for civic engagement, e.g. "Construction Law" (1995) and "Regulations about Spatial Planning" (1998) in Latvia, as well as "Planning and Building Act" (1995) in Estonia. Later versions of planning related laws and regulations introduced further clarity into civic engagement procedures. Currently (January 2020), planning and participation procedures are determined in Latvia by "Spatial development planning law" (2002, revised in 2011) and in Estonia by "Planning Act" (2003, revised in 2015). Notably, Latvian planning laws are less detailed than Estonian ones, and are complemented by regulations issued by the Cabinet of Ministers (Regulations Nr. 711 issued in 2012, revised and reissued as Regulations Nr. 628 in 2015). The planning legislation is valid for all municipalities, from small settlements to big cities. In the interviews the representatives of planning departments contended that the legislation aims for flexible strategies responding to the diversity of local conditions, and, therefore, sets the minimum requirements for civic engagement (P2: Prilenska et al., 2020).

In their essence, planning legislation in Latvia and Estonia is similar. The municipality manages its own spatial development by means of *comprehensive* and *detailed* plans. *Comprehensive* plan applies to the whole area of the municipality, whereas the *detailed* plan is concerned with a certain land plot or a group of land plots. Both plan types are binding and consist of graphic (maps) and textual (building codes) parts. The plans have to undergo public *display* with subsequent public *hearings* before being submitted for

ratification to a municipal council. A public *display* is a time span of one month when any citizen can familiarise oneself with a plan and submit an opinion or a proposal about the plan. A public *hearing* is a meeting where the opinions and proposals of citizens are presented, evaluated, accepted or rejected. If an opinion or proposal is accepted, the plan is modified accordingly. If an opinion or a proposal is rejected, the legislation requires a rationale. In both countries the final decision on acceptance or rejection is taken by the municipal council. Comprehensive plans are developed by municipal planning departments, whereas detailed plans are usually outsourced to private planning offices. Detailed plans are usually initiated, developed and financed by a landowner, while the planning department merely supervises the compliance of detailed plans with comprehensive plans and other regulations, as well as curates pubic participation procedures.

3.2. Governmental planning initiatives

Riga comprehensive plan. Since 1991, the city of Riga has ratified two comprehensive plans, 1995-2005 and of 2006-2018, and is preparing the third comprehensive plan, 2018-2030. The development of the first comprehensive plan in 1993 was already marked by certain participatory activities (RD, 1995; Roze, 2005), which made their way into subsequent plans (RDPAD, 2009; RDPAD, 2017). The development of the third, forthcoming, comprehensive plan of 2018-2030 featured an elaborate civic engagement strategy, drawing upon diverse involvement methods, including the city wide survey (2012-2013), meetings with neighbourhood residents (2013), neighbourhood tours (2015), thematic discussions (2014, 2016) and media coverage throughout the process (RDPAD, 2017; P7: Prilenska 2018). As of today (January 2020), the third comprehensive plan has experienced two public displays, and, due to the large number of comments, was sent for revision (RDPAD, 2020).

Tallinn comprehensive plan. The city of Tallinn has practised public displays since 1993 (personal communication with the representatives of Tallinn planning department). In 2001, the city ratified a comprehensive plan. Shortly after that, the city started the development of district comprehensive plans, which update and expand on parts of the comprehensive plan (Ruoppila, 2007; personal communication with the representatives of Tallinn planning department). District comprehensive plans are aimed to cover the whole area of Tallinn and, upon their ratification, to override the city comprehensive plan (ibid.). As of today (January 2020) seven district comprehensive plans have been ratified (Mustamäe, Paljassaare and Russalka beach area, Pirita, Lasnamäe residential and industrial areas, Haabersti, Kristiine), three more are either in development (North Tallinn and Downtown) or pending ratification (Nõmme) (Tallinn, 2020).

Planning related information. In both cities the information on comprehensive plans is published online, in Riga - on the web page of the planning department, and in Tallinn - on the web page of the city (RDPAD, 2020; Tallinn, 2020). In addition to the complete comprehensive plans, the web pages share documentation reflecting the planning procedures, including the lists of proposals from the public and the responses from the planning departments (ibid.). Thus, it is possible to trace which proposals were accepted or rejected and why. Additionally, there are planning information platforms, aiding in the development and sharing of comprehensive and detailed plans. In Latvia, the platform was launched in 2013 and can be used by all municipalities in the country. The platform consists of the digital environment for developing plans - tapis.gov.lv, and is its public

counterpart for viewing and commenting plans - geolatvia.lv. In Tallinn the first version of the platform tpr.tallinn.ee was launched in 2005 (personal communication with the representatives of Tallinn planning department), and the platform is used specifically for the city of Tallinn.

Planning controversies. In the interviews the representatives of planning departments mentioned that plans developed after 1991 aim for continuity, which is contingent upon the newly established property relations. Due to the nexus between land values and the building rights attached to the land, the next plan cannot restrict building rights assigned by the previous plan. For example, land plots designated for commercial uses and high-rise buildings tend to have higher market value, then those with residential uses and low-rise buildings, due to the higher revenues that can be extracted by selling or leasing the buildings. The continuity, on the one hand, secures the rights of land owners, and, on the other hand, create difficulties for correcting situations permitted in the recent past, namely, when the ad hoc planning decisions of the first decades after 1991 contributed to urban sprawl (e.g., Dārziņi neighbourhood in Riga), or the emergence of projects downgrading the urban fabric. The continuity, however, is disrupted by a paradigm shift in 1991, as well as by the relatively low efficiency of initial civic engagement efforts. Firstly, the road construction plans developed between 1940 and 1990 are selectively continued, while the plans related to the completion of large housing estates have been aborted (see, also, Treija & Bratuškins, 2019; Leetmaa & Hess, 2019). Secondly, despite the emerging participation opportunities, in the first decade and a half the general public showed little interest in planning issues, meaning that the share of actual community input in planning decisions was limited.

3.3. Grassroots planning initiatives

Grassroots initiatives in Riga. According to apkaimes.lv (2019) and the Register of Enterprises of the Republic of Latvia (2019) there are 22 neighbourhood associations in Riga. The first neighbourhood association, "Mežaparka Attīstības Biedrība" (The neighbourhood association of Mežaparks), was established in 1997. In 2004-2008 four associations were established, in 2012 - another two, in 2015-2019 - another 14. In 2018, neighbourhood associations were united under the umbrella association "Apkaimju alianse" (Alliance of neighbourhood associations). Additionally, a few interest and action groups were established, namely, the association promoting utility cycling, walking and public transportation "Pilsēta cilvēkiem" (City for people; registered in 2017), the association revitalising disused buildings "Free Riga" (registered in 2014), the international planning event "Mad City" (launched in 2017), the local branches of international movements "Critical Mass" and "Park(ing) Day Latvia (launched in 2013).

The establishment of neighbourhood associations was, arguably, encouraged by the activities of governmental agencies. In 2009, Riga planning department established a web platform apkaimes.lv (which in English means "neighbourhoods"), which publishes news about planning and neighbourhood associations, as well as maintains a database of neighbourhood association contacts. From 2012 to 2016 the department conducted multiple engagement activities collecting the information for the forthcoming comprehensive plan. Within the framework of "Riga - European Capital of Culture 2014" urban practitioners - architects and landscape architects, in collaboration with residents, initiated a series of transformations of public spaces "Labas Vietas Talka" (Nice Place Clean-up; 2013-2014) and a series of courtyard transformations "Pagalmu Renesanse"

(Courtyard Renaissance; 2014) (P1: Prilenska & Liias 2015). In 2019, Riga planning department launched a participatory budgeting initiative, balso.riga.lv (which in English means "vote, Riga!"), with a budget of 500 thsd. euros, with up to 100 thsd. euro per project (RD, 2019). In total 34 projects applied for funding, from which 20 were classified as not complying with the competition requirements and 6 received the funding. In total, more than 10 thsd. people voted for the projects, and the winning projects received between 800 and 2 000 votes. Furthermore, the planning department in Riga has a public relationships unit, which is responsible for civic engagement activities.

Grassroots initiatives in Tallinn. According to a study of neighbourhood activism conducted by Holvandus & Leetmaa (2016) in Tallinn in May 2014 there were 22 neighbourhood associations out of which 15 were active and were located mostly in the housing districts built before the World War II. Two neighbourhood associations were established in 1992 and 1999, eight associations - in the time span from 2005 to 2010, and five - in the time span from 2011 to 2015. As in Riga, in 2017 neighbourhood associations were united under the umbrella association "Tallinna Asumiseltside Liit" (Union of Tallinn Neighbourhood Associations), which started its activities by organising a neighbourhoods association' visioning conference and inviting colleagues from Riga and Helsinki.

Neighbourhood associations had been actively engaging in urban design and planning activities. In 2011-2012, representatives of neighbourhood associations were invited to contribute to the study of the prospects for Tallinn waterfront development, commissioned by city's planning department and conducted by sociologists at Tallinn University of Technology (Paadam & Ojamäe, 2012). In 2013, Telliskivi neighbourhood association contributed to the redevelopment of Soo street in Kalamaja neighbourhood into a pedestrian and cyclist friendly street with vehicular traffic limited to 30 kilometres per hour. In 2016, the Estonian Centre of Architecture in collaboration with Tallinn planning department launched a Main Street project, which aimed to redesign 1.5 km of Pärnu and Narva roads in the city centre, as well as a part of the seaside area, into pedestrian and cyclist friendly streets. Residents were invited to comment on the project through an online platform Stickyworld. Tallinn City Government used to have a position of public involvement advisor, which was abolished shortly after its establishment (personal communication with the representatives of Tallinn planning department).

Contrary to Latvia, in Estonia the early legislation (Apartment Associations Act, 1992) actively encouraged the creation of flat owners' associations (FOA) in apartment blocks (Paadam, 2009b). In apartment blocks where FOA had not been established by 2001 the communities of flat owners were established (CFO, Apartment Owners Act, 2000; ibid.). While FOA's activities assume responsibility for, and lead bottom-up initiatives on behalf of, the residents, CFO actions are top-down initiatives of the local district government (ibid.). By 2005 FOAs were established in three quarters of apartment blocks (ibid.). FOAs exhibit a substantial capacity for taking and implementing decisions, which was revealed in the study of Tuvikene (2019) on how FOAs tackle the "parking problem" in large housing estates.

3.4. Experiences from cases Mežapark and Kalarand

Barriers and enabling conditions of participatory planning are examined through the critical cases of planning urban areas Mežaparks and Kalarand. Both areas are of strategic value to their respective cities due to their location at the waterfront and recreational opportunities. However, the areas differ in size, property status, the stage of existing development and opportunities for future development (**Figure 3.1**). Both areas underwent comparable detailed planning procedures, including consultations with the representatives of the public, which exposed fierce resistance from individual residents and neighbourhood associations towards the initially proposed detailed plans. After intense negotiations between planners, developers and residents, the detailed plans underwent revisions of varying degrees. However, the number of the representatives of the public involved in negotiations, as well as the developers' interests and the level of competence among planners varied dramatically across cases. Thus, the observed cases reflect the "maximum variations" in Flyvbjerg's (2011, p. 307) terms, which enable drawing conclusions about the importance of varying process- and outcome-related circumstances.

Themes, associated with participation barriers and enabling conditions, were constructed from informant interviews with the active participants of the negotiations, representing planning departments of Riga and Tallinn, private planning offices, developers (or clients, who commissioned detailed plans), and neighbourhood associations, as well as with passive observers, representing non-profit architectural institutions. Actor accounts yield conflicting opinions on the planning process, its outcomes and the causes of controversy over detailed plans, which emerge from stakeholders' roles and capacities to influence planning decisions, as well as the interests and positions in relation to the planned areas. The constructed themes imply that controversies over detailed plans stem, on the one hand, from the methodological deficiencies of present civic involvement procedures, and, on the other hand, from stakeholders' past experiences of urban development in the context of a transitioning planning system.

Figure 3.1. *Top left: location of Mezapark in Riga; right: location of Kalarand in Tallinn Middle left: map of Mezapark; right: map of Kalarand. Bottom left: Mezapark waterfront; right: Kalarand waterfront.*
Source: Prilenska, 2020; Open Street Map, 2017.

Urban area Mezaparks (Riga). Mezaparks is a ~420 ha culture and recreational urban forest located approximately 8km from the city centre by the lake Kišezers. It is the homer of the city zoo, Song and Dance Festival open air theatre, BMX track, obstacle park for children and adults, playgrounds for children, a beach, a small boat harbour, and multiple cafes. It is municipal property and is managed by the governmental agency, which commissioned a detailed plan of the area to a private planning office with

substantial competence in the detailed planning domain in 2010, pursuing further development of the area. The detailed plan was ratified in 2013 after two public displays in 2012 and 2013. The main points of controversy during the public displays were (1) the construction of an amusement park; (2) forest transformation for creating public amenities; (3) the construction of a solid public waterfront suitable for motor vehicle traffic. As a result of the criticism from the public, the construction of an amusement park was removed from the plan, whereas the design of the waterfront was assigned to the forthcoming architectural competition.

Urban area Kalarand (Tallinn). Kalarand is an approximately 7 ha brownfield area located in the city centre by the sea, housing the yacht harbour, a fish market and an informal pop-up beach. The area is a private property and is managed by a development company, which gains revenues from area development, building construction and subsequent sales, and who initiated a detailed plan in 2003. The detailed plan was ratified in 2015 after four public displays in 2008, 2012, 2014 and 2015, and several mediation meetings between stakeholders. The main points of controversy during the public displays were: (1) the design of the apartment blocks; (2) access to the seaside; (3) the elimination of the pop-up sandy beach with a swimming area informally established by the local community. The neighbourhood association managed to secure the construction of a public 20 m wide traffic-free seaside promenade and a beach with a swimming area. The design of the buildings was assigned to the architectural competition, which was organised shortly after the approval of the plan.

Perceptions of the other. Negotiations of planning decisions were hindered by participants' biased perceptions of other stakeholders' positions, as well as the underlying interests in relation to the planned area. The biased outlook on other stakeholders made participants take defensive positions, substantially hampering deliberation and the achievement of consensus.

Residents were perceived by planning agencies and developers as a counter-development lobby, pursuing the conservation of the status quo and resisting change embodied in the new development plans and construction projects. In response to the aforementioned implication, the representatives of neighbourhood associations argued that they support the development of the area and merely oppose certain planning decisions, which were developed without their participation. In Kalarand, the pro-development argument was strengthened by the establishment of an informal public space in the area, demarcated by self-made furniture.

Despite the difference in status and stakes, both developers were perceived by the residents as pursuing profit at the expense of the local environment. Private planning offices, which were drafting the plans, were perceived by the residents as entities complying to developer interests. In Mežaparks, the private planning office with a high level of expertise in the detailed planning field was perceived as masking the true intentions of developers with ambiguous wording and building codes. Responding to these claims, the private developer company in Kalarand acknowledged the dubious practices of the 1990s and early 2000s, which have substantially changed since then. The developer referred to the causal relationship between the quality of the urban environment and the value of the embedded construction projects, urging the developers to contribute to the improvement of the former. Governmental development agency in Mežaparks referred to the diversity of public interests and the difficulty to satisfy conflicting claims.

Planning agencies were perceived by the residents and developers alike as complex, hierarchical, fragmented and fluid entities, which were struggling with internal communication and coordination issues. Additionally, the residents were concerned about the transparency of decisions taken by planning agencies, as well as the inability of planning agencies to exercise their legal rights in mediating diverging interests and balancing unequal power relations between the stakeholders. The representatives of planning agencies perceived themselves as the guardians of the "public" interest and pointed to the limitations in legal and financial resources, which undermine the capacity of governmental agencies to drive urban development in the context of a fragmented property landscape and divergent private interests.

Method of engagement. Civic engagement was limited to the legally required minimum - the public display, which included public hearings as a part of the process. According to Latvian and Estonian planning legislation, public display requests public opinion about completed plans, t.i. in the end of the design phase, which are already negotiated between developers, planners and governmental agencies. In Mežaparks, during the design phase there was a working group open to the representatives of the public of a certain profile (i.e. having restricted public access), which participated in developing planning solutions. In Kalarand, after the plan was rejected in the first public display, there were mediation meetings between the stakeholders to reach a consensus about planning solutions. Reflecting upon the method of the public display, residents and experts referred to the limited participation opportunities stemming from the nature of the communicated information and time of engagement, whereas planners and developers were concerned about the absence of meaningful deliberation, rooted in the nature of communication. Both topics are elaborated upon in the following sections.

Nature of communicated information. Public displays require a proactive position from the residents, who have to continuously follow planning news to be informed about the forthcoming plans. Planning documentation, elicited by planning departments and private planning offices in the format of land-use plans and building codes, is perceived by the residents as complex. Visual representations of planning documentation (e.g. infographics) are perceived by some residents as intentionally deceptive, as they omit essential details. Given the relatively short time for public display, the interpretation of complex and ample planning documentation and the preparation of sound contributions poses a challenge for the residents. The abundance and complexity of information elicited by planners and expected from the residents requires either a reduction and simplification of information output and input, or the presence of mediators between the planners and residents, who translate the information into formats acceptable to both parties.

Timing of engagement. Residents and experts argue that civic engagement in the final design phase through public display is "too late", as it restricts public input to either passive acceptance or active rejection of proposed planning solutions. The latter perpetuates the biased outlook on the residents from the part of planners and developers as a counter-development lobby. Residents and experts advocate for civic engagement in the pre-design phases though mapping the values of the urban environment, as perceived by the users. The preference for the early engagement in Mežaparks was supported by the neighbourhood association, which made a survey about the values of the area, and which grounded their arguments against certain planning decisions in the findings of the survey.

Nature of communication. The negotiations about plans for the urban areas in question were characterised by planners and developers as a discussion which did not evolve into dialogue. Innes and Booher (1999, p.13) define discussion as a "ping pong", where participants exchange arguments, seeking for their ideas to be accepted by other participants. Through dialogue participants suspend their positions, develop a common understanding of the problem and seek for consensual solutions (ibid.). In the Latvian and Estonian context, public displays are limited to one-way information flow (from planners to residents) in the form of planning documentation, and vice versa (from residents to planners) in the form of contributions (Spectrum of Public Participation, chapter 1). Public hearings enable two-way information flow, which confines participants to voicing their opinions regarding the plan. Thus, neither methods enable a deliberative mode of communication.

Representativeness. In Mežaparks, the citizenry was represented by the neighbourhood association and by the residents of Pavu street, which submitted contributions on behalf of 51 residents. In Kalarand, the citizenry (in the early stages) was represented by individual residents and (in later stages) by the neighbourhood association Telliskivi Selts, which managed to mobilise the support of ca. 2 400 local residents.

In Mežaparks, both the developer and planner claimed that neither resident organisations represented the perspective beneficiaries of the plan. Following the arguments from the developer and the planner, the planned area is a city-scale recreational destination which is actively used by the residents from other neighbourhoods. Therefore, the interests of resident groups substantially diverge. The members of resident organisations, the minority, who live in detached housing bordering the park, would benefit from maintaining the low-key profile of the area. The non-institutionalised and non-represented residents, "the silent majority", who live in apartment blocks nearby, would benefit from the newly planned services and events in the area. Neither the developer, nor the planner, supported their arguments with the documented opinions of the non-represented group sourced by means of a survey, group interviews, or any other civic engagement method.

In Kalarand, the views of the local neighbourhood association, advocating for maintaining public access to, and services in, the area, proved to be representative of Tallinn citizenry. The views of Tallinn citizenry were sourced through research, which was commissioned by the Tallinn Planning department and featured interviews with diverse groups (Paadam & Ojamäe, 2012).

Notably, the neighbourhood associations do not claim to represent the citizenry. On the contrary, the representatives of neighbourhood associations acknowledge that neighbourhood associations transcend the spatial boundaries of the neighbourhoods and represent only some of the many interests in relation to urban development (Pehk & Ait, 2014). Furthermore, neighbourhood associations and other interest groups involve a marginal share of the urban population, whereas the major share of the urban population remains uninvolved (P2: Prilenska et al., 2020; Holvandus & Leetmaa, 2016).

Embedded social capital. Planners and developers were sceptical about the ability of residents to contribute meaningfully to planning documents, stating that the critique from the part of residents is either "superficial", or pursues a "selfish" agenda. The analysis of planning documents and interviews revealed that, contrary to the aforementioned bias, residents did contribute meaningfully to planning documents, providing well-argued criticism and constructive proposals, identifying mistakes and inaccuracies in the detailed

plans, as well as discrepancies between the detailed plans and higher level planning regulations. Furthermore, residents do not claim to represent "public" interests and recognise the rights of different actor groups to pursue their agendas to the extent that they do not violate the rights of other actor groups. The high quality of residents' feedback is grounded in the social composition of the active cores of neighbourhood associations, consisting of highly educated individuals with the relevant knowledge in urbanism-related fields, e.g. architects, spatial planners, lawyers (P3: Prilenska et al. 2019; P2: Prilenska et al., 2020; Holvandus & Leetmaa, 2016).

The activity and institutionalisation of neighbourhood associations and, also, individual residents, shows their willingness and capacity to take part in the planning process, despite the aforementioned institutional barriers. Institutionalised neighbourhood associations are capable and willing to take on a mediating role between residents they represent and the local government, translating and relaying the information from one party to the other (P2: Prilenska et al., 2020; Pehk & Ait, 2014; Holvandus & Leetmaa, 2016). Evidence from the case studies, as well as from research done by other authors (ibid.) indicates that urban professionals with degrees in planning-related fields, such as real estate, architecture, city management, etc., are overrepresented among the active members of neighbourhood associations. Until recently, neither Latvia, nor Estonia had higher education programs in planning, thus, planning is practiced by the professionals from related fields, such as architecture and geography. The professional knowledge of active association members synthesised with expertise regarding the local context, qualifies neighbourhood associations for proposing viable urban development visions.

Optimisation of public display procedures. The representatives of planning departments from Riga and Tallinn agree that the current "one size fits all" participatory procedures are insufficient for plans of major importance and redundant for plans of minor significance. Comprehensive and detailed plans for strategic areas, e.g. waterfront, require civic engagement activities beyond public display, which are continuously conducted in all planning phases and aim to involve diverse social groups. Detailed plans for tiny land plots featuring a few buildings and detailed plans of a technical nature may be combined with construction projects.

Combining participation procedures for minor detailed plans and construction projects, on the one hand, would optimise the acquisition of a building permit, and, on the other hand, free up resources for supplementary participation activities for major plans. The suggestion for integrating minor detailed plans with construction projects is challenged by the evidence from case studies, where design indications were removed from the plans and delegated to architectural competitions, as the stakeholders were unable to agree on the details. The divergence between the stated and revealed planning and participation procedures illuminates the inherent controversies of participatory planning, which is the subject of continuous debate and reframing among the actors involved.

To conclude, the relationship between planning legislation, governmental and grassroots initiatives exposes the friction between established planning frameworks and actual practices, the latter falling substantially behind the former in their development. Newly established planning frameworks, which aimed to transform the rational planning model into participatory planning model, were applied in the context of underdeveloped legal and fiscal implementation tools, as well as deficient expertise and experience of meaningful participation among the stakeholders, namely, local governments, planners,

developers and the citizenry. The aforementioned contextual conditions of obscure responsibilities and rights resulted in fragmented, ad hoc, application of legislation, causing the conflict between expectations and reality, and contributing to the increasingly controversial perceptions of participatory planning and its history among stakeholders.

The discord between established planning frameworks and evolving practices is reflected in the conflicting perceptions regarding participation in the negotiations of detailed plans for Mežaparks and Kalarand. The method of public display, which remains the prevailing participation procedure for detailed plans, is criticised for perpetuating the inherent controversies between the actors, stemming from the differences in authority over planning decisions, as well as from past experiences of urban development in the transitional planning system. The absence of dialogue, which is characteristic of public display procedures, exacerbates the biased perspectives of actors upon each other and prevents the actors from developing empathy towards the positions and interests of other actors. Furthermore, the narrow representation of actors and associated stakes, attributed to the complexity of information, high participation costs and obscure benefits, discredits the legitimacy of public display in fostering the "public" good.

Stated actor preferences in relation to participation formats align with respective theories (cf Horelli, 2002) and urge for diversifying participatory methods depending upon the nature of a plan and the area in focus. Plans and areas of strategic significance demand civic engagement throughout the planning cycle by means of appropriate methods, responding to the planning phase, purpose of participatory exercise, number and profile of actors involved. The amount of public interest in relation to the plan or area in question, as well as the preferred participation formats, should be acknowledged upon the initiation of the planning process, namely, while drawing the action plan for the forthcoming plan (cf Hamdi & Goethert, 1987). The aforementioned procedures require a pro-active position from the part of planning agencies, which should acknowledge the diversity of private interests, constituting the "public" interest, and aligning the diverging stakes.

4. Findings: Gamified responses to participation challenges

The chapter responds to **research question 3:** How do participatory games address the challenges posed by participatory planning practices?, and **research question 4**: How do role-playing games and co-design contribute in better deliberation of urban issues? The chapter draws upon articles No. 4-6, which discuss the application of games for participation in planning and, specifically, of the deliberative game developed in the framework of the current research.

The analysis of publications about participatory games revealed a set of characteristics, which allowed to compare and classify participatory games in relation to planning contexts and phases, as well as perspective participants and purposes of participatory exercises. The joint examination of the aforementioned characteristics and participatory planning challenges revealed through the case studies of Mežaparks and Kalarand (chapter 3) illuminated potential gamified responses to context-sensitive participation barriers and enabling conditions.

The established relationships frame the design of a role-playing board game - Participation Game, which reflects the practice of public hearings and unfolds in the process of deliberation over a neighbourhood project among stakeholders with diverging perspectives and decision-making capacities. The initial prototype of the game underwent four successive modifications based on player feedback. The experience of designing a game iteratively in collaboration with perspective players reveals the contribution of co-design to player-centred game systems and allows for the exploration of the potential of co-design in fostering triple-loop learning.

4.1. Characteristics of participatory games

With the gamification of society games are increasingly applied in non-game contexts to attract and retain users (Deterding et al., 2011). Participatory planning, as a part of the political domain, exposes ludic features, related to a certain degree of theatricality, improvisation, mastery and competitiveness, turning it into a fruitful arena for experimenting with games for participation (Rodriguez, 2006; Lerner, 2013). It is argued, that games articulate and enhance essential features of successful participatory methods, such as clearly defined goals, transparent and rule-based decision-making, as well as the accessibility of the relevant information (Lerner, 2013; Rowe & Frewer, 2000). Therefore, there are increasing attempts to employ games as either standalone participatory methods, or in combination with other methods (cf Gordon & Baldwin-Philippi, 2014; Gordon et al., 2017).

Horelli (2002) asserts that the choice of participatory methods depends upon (i) the purpose of participatory exercise, (ii) its context and the planning phase, (iii) the number and profile of stakeholders involved, and (iv) the level of shared decision-making (chapter 1). The spatial contexts of games range from a neighbourhood (e.g. B3 - Design You Marketplace!) to a city and region (e.g. Mobility and Energy Safari). The number of players vary from small groups engaging three to five participants (e.g. @Stake) to large groups engaging thousands of participants (e.g. Big Urban Game). Player profiles include residents of different age groups and social status interested in the area in focus. The level of engagement ranges from educating residents about specific issues (e.g. Water Management Game) to integrating their preferences into policies (e.g. Community PlanIt!) and empowering them to implement small-scale neighbourhood projects (e.g. PlayNoord). A share of games does not aim to contribute

directly to plans and policies, therefore these games are applied independently of planning activities (e.g. ZWERM).

The essential features of participatory games diverge from those of traditional civic engagement methods (cf Rowe and Frewer, 2000; Rowe and Frewer, 2005; revisited in Brown & Chin, 2015). The differences stem from the nature of games, which in their essence are rule-based and goal-oriented exercises, pursuing transparency and equality (Devisch et al., 2016). The analysis of published research on participatory games establishes a set of twelve characteristics, which allow to compare and classify participatory games. These characteristics include (1) the objective of the game; (2) the profile of the player, (3) the method of player recruitment, (4) the nature of information flow between players; (5) the nature of interaction tools fostering information exchange between players, (6) the level of game contextualisation; (7) the planning phase, where the game is potentially applied, (8) the nature of information flow between players and sponsors of the game; (9) the nature of the data collected during game sessions; (10) the mode of capturing data; (11) the mode of processing data; (12) the impact of the collected data either on game design, or on the urban projects, plans and policies. The aforementioned features of participatory games analysed in relation to the challenges of participatory planning practices in Riga and Tallinn identify the niches for applying games in the local context.

The objective of the game. Participatory games may be classified into two categories, based on the nature of their contribution concerning the built environment and the actors who shape the built environment. The first category collects and/or generates resident-related data, which informs urban design projects, plans and policies. The second category builds social capital through increasing the visibility of planning issues, fostering civic learning and collective action, as well as through shaping actor networks, which are essential for implementing urban design projects, plans and policies.

Games from the first category act as alternatives to traditional participation methods, such as surveys, focus groups, design charettes and other exercises, which source relevant data on planning from the residents. These games facilitate information flows between players and sponsors, through simplification of information input for players and limitation of information output from sponsors to the relevant and just-in-time clues (Gordon & Baldwin-Philippi, 2014; Thiel et al., 2017; Wilson et al., 2019; Prandi et al., 2017). Thus, these games are the remedy to participation barriers related to the nature of the communicated information, namely - the abundance and complexity of information.

A share of the aforementioned games pursue an increase in participation rates measured by the number of participants and contributions through employment of online participation technologies, such as web platforms and applications for mobile devices, as well as through the “fun” element, entwined in the interface or storyline (ibid.). Another share of these games pursue enhancements in participation quality by structuring interactions between players and sponsors, as well as facilitating the aggregation and documentation of relevant information (Johnson et al., 2017; Tan, 2014). The essential characteristics of games from the first category, which are less relevant for the games in the second category, are related to the profile, number and recruitment of perspective players, planning phases, modes of capturing and processing data, as well as to the significance of the data for projects, plans and policies in question.

Games from the second category usually educate players about various aspects of the built environment and create opportunities for networking, thus, contributing to building spatial or interest communities. These games are applied regardless of planning activities and pay specific attention to the nature of the interaction between players.

Player profile and the method of recruitment in relation to representativeness. Participatory games target the users of the area in focus regardless of their residential and property ownership status. A share of participatory games targets specific groups within the population of users, such as children, young adults or urban practitioners. The body of literature on participatory methods brings forward the purposeful selection of participants, involving a representative sample of the population potentially affected by a plan as an essential feature of a successful participation process (Rowe & Frewer, 2000; Fung, 2006; Nabatchi, 2012).

In the observed participatory games players were either selected purposefully based on specific criteria or self-selected. Games applied within academia featured purposeful selection, recruiting either perspective players or players who are capable to meaningfully contribute to game design (Constantinescu et al., 2017; Gugerell & Zuidema, 2017; Prandi et al., 2017). Games applied in the field relied mainly on self-selection, except for a few games which selected players based on their capacity to transform in-game visions into real-life projects (e.g., PlayNoord). Compared to the general population, young adults and highly educated individuals were overrepresented (Cord et al., 2015; Gordon and Baldwin-Philippi, 2014; Thiel et al., 2017).

The issue of the "silent majority", which challenges the legitimacy of participatory planning in Riga and Tallinn, may be partially addressed through data generation games, which generate relevant data on planning as a spin-off from the core activity. The data generated by popular commercial games and leisure activities has contributed to exploring outdoor recreation patterns (Geocaching), hyperlocal places (Ingress), public space qualities (Pokémon Go), as well as places of interest to young citizens (Urban Shaper) (Cord et al., 2015; Olszewski et al., 2016; Potts et al., 2017; Stark, 2015). Furthermore, the joint analysis of data generated by games and sourced through questionnaires reveals the discrepancies between stated and revealed preferences (Cord et al., 2015).

Nature of communication between stakeholders in relation to perceptions of the other. The aspects of communication include the nature of information flows between players, between players and sponsors of the game, as well as the interaction tools fostering information exchange between all parties. Communication may be classified into one-way, two-way and deliberative (chapter 1). One-way communication is directed from one party to another, for example, from players to sponsors of the game in the form of contributions about the experiential qualities of the urban environment, or from the sponsors of the game to players in the form of clues about in-game missions. Two-way communication is limited to information exchange between the parties, for instance, during the question and answer session before or after the game session. Deliberative communication is characterised by structured discussion, pursuing collective problem framing or solving where all participants have equal opportunities to speak and to be heard, as well as show respect towards one another's position (Nabatchi, 2012). The interaction tools vary depending on the game type. Online games usually allow to create polls and comment upon the contributions of other players. Board games include structured discussions and collective activities.

Games, which involve the elements of interaction and role-playing address perception bias, characteristic of the negotiations over the detailed plans for Mežaparks and Kalarand, through fostering empathy towards stakeholders' positions and underlying interests. If interaction elements enable structured information exchange, encouraging all players to express their positions and to perceive the positions of other players,

then empathy building unfolds equally well in the context of online (e.g. Community PlanIt!) and face-to-face interaction (e.g. Community Conversational). Role-playing elements are of specific value for empathy and consensus building among actors with diverging positions (Innes & Booher, 1999; P5: Prilenska, 2019b). Role-playing exercises encourage participants to suspend their usual perspectives, and to practice the art of reasoning and acting from the perspective of their respective roles (Tan, 2014; Prilenska, 2019b). Welcoming the diversity of private positions, constituting the public interest, enables participants to align their interests with alternative interests in the pursuit of win-win solutions (Rein & Schön, 1996; Hulst & Dvora, 2016).

The level of contextualisation in relation to context-sensitiveness. Contextualisation levels vary across games from low to high depending on the relation of the game to a certain location. Regardless of the objective, many participatory games are usually attached to specific areas, as they aim either to collect/generate planning relevant content or target certain communities. Many online games and some board games are contextualised through the use of maps, therefore they are customisable for other locations by changing the map (e.g. Community Conversational) or the GIS coordinates of the area in focus (e.g. Geo-Zombie). Other games are intertwined with the context through the storyline (e.g. Play Before Plan) or elements of the gameplay (e.g. Water Management Game), therefore their customisation to other locations requires substantial effort.

The high level of contextualisation within the game, on the one hand, enables the ability of the game to remedy context-specific problems, but, on the other hand, limits the applicability of the game in other contexts. The low level of contextualisation within the game limits its responses to context-specific problems. Games with medium levels of contextualisation maintain a certain degree of flexibility and responsiveness, which enables their use in different contexts. The cases described in the previous chapter (chapter 3) require higher levels of contextualisation within game design, targeting contextually conditioned participation barriers and enabling conditions.

Planning phase in relation to the timing of engagement. The findings from Riga and Tallinn reveal the demand for diversifying participation methodologies depending on the nature of the plan or area in focus. Comprehensive plans and detailed plans for strategic areas require community engagement throughout the planning cycle, from initiation to maintenance. Although an array of participatory games potentially caters to all planning phases, the observed participatory games were applied mostly in the early planning phases. A share of games, classified as information sourcing and sharing games, were employed for collecting experiential information about the built environment from large participant groups in the pre-design phase. Another share of games, classified as deliberative games, were used in developing design solutions in small groups in the design phase based on the collected information.

Information sourcing and sharing games address the stated preferences of the representatives of the public for early engagement through mapping the perceived values and deficiencies of the built environment, as well as sourcing ideas for advancing the built environment. The contributions from residents in the format of geo-referenced text or images are usually collected either through web platforms (e.g. Community PlanIt!), or through applications for mobile devices, like smartphones (e.g. Geo-Zombie) or Apple Watch (e.g. Change Explorer). The user-centred approach, which allows sharing ideas easy and quickly all the time and from any location via Internet, facilitates massive outreach, involving hundreds (e.g. Täsa) and thousands of participants (e.g. Community

PlanIt!). Notably, mobile applications enable participation during residual time slots in-between the time slots reserved for core activities, for instance, while waiting for a bus (Leao & Izadpahani, 2016). The collected contributions shape the foundation for developing the forthcoming plan (or policy).

Deliberative games address the demands from the part of the citizenry to participate in framing planning problems and developing responses. The deliberation is usually structured by rules communicated through the game interface. The latter often includes the scale model of the area in focus (e.g. Play Noord) and/or cards prompting certain questions or actions (e.g. Community Conversational). The scale model or cards act as "boundary objects", t.i. entities simultaneously enabling polysemy across knowledge domains and certainty within one domain (Barley et al., 2012). The "boundary objects" act as "means of translation" and communication between stakeholders from diverse contexts (Stark & Griesemer, 1989, p.393) focusing and steering discussions towards anticipated goals.

Nature of captured data, its collection and processing. Games, which aim to produce planning relevant content, face the challenge of data collection and analysis. Most observed online games capture open-ended contributions in the form of geo-referenced images and text (e.g. Täsa). The quantitative part of the contributions, e.g. geo-tags, is processed and visualised by means of computer algorithms. The qualitative part of the contributions, e.g. the message communicated through text or image, requires aggregation and interpretation by a skilled qualitative researcher. The latter involves subjectivity in terms of the interpretation of meanings and the prioritisation of issues. Additionally, as the number of contributions grows, the demands for human resources increase. Some online games address the aforementioned challenges by capturing closed-ended contributions in the form of responses to multiple-choice questions (e.g. Change Explorer), which are processed by means of statistical methods.

Face-to-face deliberation games face similar challenges of capturing and interpreting emergent discourses and outputs (Johnson et al., 2017). Data capture usually involves observation and video-recordings of game sessions, debriefings with players, as well as evaluation questionnaires (e.g. City Makers, Community Conversational). These aforementioned methods produce massive amounts of qualitative data, posing a data processing challenge. Summarising game outputs after certain time intervals in the form of intermediate results, as well as at the end of the game session (e.g. Play Noord, Participation Game), may aid in addressing the aforementioned challenge.

The impact of the game in relation to social capital. The impacts produced by participatory games vary depending on the objective of the game. Some games produce planning-relevant content, whereas other games focus on building social capital. Most of the participatory games analysed were applied within research projects and, hence, had a minor impact upon real-life planning contexts. However, the outcomes produced within academic contexts indicate that participatory games can successfully achieve the anticipated goals. Information sourcing games increase the number of participants involved and the number of contributions received, whereas deliberative games facilitate developing empathy and consensus building through dialogue. Games from the second category increase the awareness and understanding of urban issues within the community, as well as facilitate the access to the embedded social capital. In the absence of mediators (e.g. neighbourhood associations and other interest groups) games have

the potential to act as methods of information transfer and translation, deliberation, education, as well as contribute substantially to community cohesion.

The limited application of games in real-life planning contexts may be attributed, on the one hand, to the lack of relevant experience of planning agencies and the biased perception of games by other actors (Ampatzidou et al., 2018), and, on the other hand, to the limited sample of participatory games under examination.

4.2. The setup of Participation Game

The Participation Game integrates the findings of the preceding research phases, namely, local planning context (sub-chapter 3.1), participation challenges (sub-chapter 3.2) and essential characteristics of participatory games (sub-chapter 4.1). The design of the initial game prototype is rooted in the practice of public hearings and associated controversies. The game-play unfolds around "public hearings" of an imaginary neighbourhood project, which involve an array of "local stakeholders". The game interface consists of (1) the information board, which presents the context of the "project", (2) the visioning board, which presents the "project", (3) a card with the narrative, (4) as set of role and voting cards. Players are encouraged to take on the roles and, through reasoning and acting from the perspective of their roles, negotiate the consensual decisions in relation to the "project".

The "casing" of the Game. Urban area Mukusala. As the detailed plans for case study areas Mežaparks and Kalarand were already established and, hence, the public interest towards these areas had declined, the game was contextualised in the urban area Mukusala, in Riga, Latvia, which, at the time of game development, was transforming and, hence, in the focus of public attention. Mukusala neighbourhood represents a mix of industrial and housing patches of relatively low density and poor quality. Due to its strategic location at the intersection of the main traffic routes and in the vicinity of the city centre, Mukusala neighbourhood was given a priority development status by the city council. The future development of the area is a subject to multiple professional, academic and public discussions and design competitions. Most discussions and visions are related to the strategic development of the neighbourhood in the city context (e.g., connectivity), as well as on the design of strategic neighbourhood assets (e.g., waterfront).

Contrary to strategic visions, the Participation Game focuses on a project for a small residential and industrial cluster at the intersection of Laivu and Buru streets, where the interests of stakeholders, residents, entrepreneurs, property owners and developers, may potentially clash. Contextual information, which shaped the narrative of the game, was based on the anthropological study of the area by sociologist Dāvis Malahovs. The experiences from Mežaparks and Kalarand complemented the narrative of the game, by introducing complex property relations into the story, as well as the informal uses of the property by the local resident and entrepreneur community. The aforementioned complementary elements of the story articulated the controversies between stakeholders' interests.

The objective of the Game. The game was conceived as a reflection of the public hearings as the pivotal moment of a public display procedure, which is the prevailing civic engagement method in Latvia and Estonia (P2: Prilenska et al., 2020; Perjo et al., 2017). The initial game prototype simulates the public hearings of a project, which causes controversy among the stakeholders due to the differences in their roles, stakes and decision-making capacities. Consequently, there is distinction between the purpose of

the research phase and the in-game objective. The research phase explores the opportunities for optimising public hearings in the pursuit of better empathy and consensus building among stakeholders through an incremental collaborative transformation of game prototypes. The in-game objective, in turn, was the facilitation of empathy and consensus-building between stakeholders in the pursuit of better plans through rule-based and goal-oriented deliberation. Thus, the objective of the game in relation to the essential characteristics of participatory games is the production of meaningful content for a forthcoming plan.

The timing of engagement. The game, as a reflection of public hearings, is designed for the intermediate phase of the planning cycle, namely, Planning & Design, where completed plans are negotiated and, occasionally, modified. In the first round of the game stakeholders are presented a "project", which is developed for the area by a "private planning office" upon request from a potential "developer". If, in the first round, the stakeholders do not accept the solutions proposed by the "project", then, in the second round, they negotiate preferred modifications to the "project". If, in the second round, stakeholders are unable to reach a consensus, then, in the third round, the final planning decisions are taken by a "representative of the local municipality". The experiences from Mežaparks and Kalarand reveal that the involvement of the public during the public hearings was referred to as "late", and that the public tends to oppose planning decisions developed without their participation. In five game sessions the initial "project" was rejected, and the players displayed the preference towards collectively developing planning decisions, conforming the evidence from the case studies.

The nature of communication. The game is designed to enable face-to-face two-way communication characteristic of public hearings, which potentially evolves into deliberative communication. In the first round, the nature of communication was limited to stating stakeholder preferences in relation to the area in focus and positions towards the proposed "project", and was classified as two-way communication. In the second round, the nature of communication evolves from two-way into deliberative communication. The evolution of communication is attributed to the goal of the game (consensus building), as well as to the game interface, which, acting as a "boundary object", focuses and steers the discussion. In the third round, players return to two-way communication and complete the discussion, stating their positions towards the final decisions. The initial game interface is drafted in a professional style and reflects the abundance and complexity of information, which is communicated in the public display. After successive modifications, prompted by player preferences, the game interface transformed from "professional" to a "cartoonish", revealing the preference for reduction and simplification of information output and input, reflecting the insights from the case studies.

Representativeness, player profile and the method of recruitment. The target audience of the game was confined to university students of planning relevant curricula, namely, architecture, planning, sociology, urban and regional economy, who were recruited through university outreach. The game familiarised the participants with the existing participation opportunities and procedures, as well as with some basic urban design principles. There was no intention to involve the participants from the non-academic environment and, specifically, participants residing in or using Mukusala neighbourhood, due to the experimental nature of the game, which did not intend to contribute to actual change in the focus area.

Players were encouraged to take on different roles, following the findings of research on participatory games which brought forward role-playing as an essential enabling condition for empathy and consensus building. The nomenclature of roles was inspired by the stakeholders present in Mukusala neighbourhood, as well as by the experiences from Mežaparks and Kalarand. The set of roles represented diverse and divergent stakes and included local residents, entrepreneurs, developers, planners and the representatives of local government, as well as property owners and renters, neighbourhood residents and neighbourhood users who reside in other neighbourhoods. The role-playing was appreciated by players for giving insight into diverse perspectives and their causes. Building on the findings from Mežaparks, where non-residents (users) were perceived as major beneficiaries of the forthcoming plan, the game assigned equal participation opportunities to non-residents (users) and non-owners (renters). Power relationships assigned to the roles roughly approximated real-life relationships, where the representative of the local government was granted the right to make final decisions in case other stakeholders could not reach a consensus.

The nature of captured data, its collection and processing. The findings from the research on participatory games highlighted the challenge of capturing and processing massive amounts of qualitative data. Pursuing the capture of planning-relevant content, the game was structured in three rounds and the outcomes of each round were captured by means of photographs and notes, taken by game masters. The game process and emergent discourses were captured via video-recordings. In the final round, the players were prompted to outline negotiated planning decisions and articulate their position towards them.

The position of the Participation Game within the 3d matrix. The Participation Game focuses on developing planning solutions, therefore it is most suitable for the intermediate stages of planning cycle, namely, planning & design phase. The gameplay structured around face-to-face role-playing, sketching and modelling, enables players to frame and express their ideas through various means. The level of participation, or shared decision-making, is very much dependent on the application context. On the one hand, the game enables collaboration and empowerment through developing consensual spatial visions and their implementation agreements. On the other hand, if applied in an academic context, the game acts merely as an educational activity about participatory planning and urban design issues. **Figure 4.1** illustrates the position of the Participation Game within the tree-dimensional matrix.

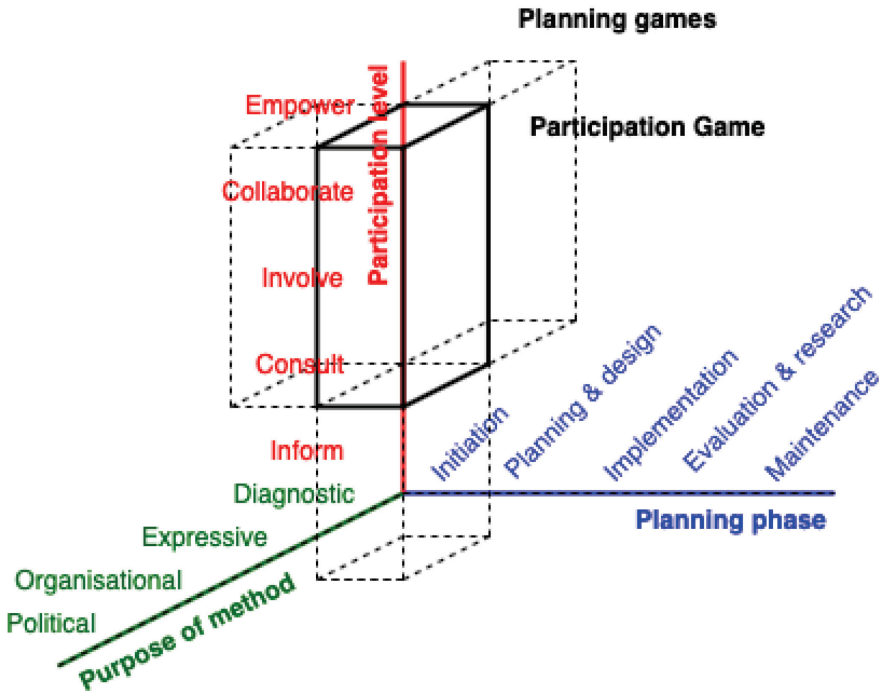

Figure 4.1. *Three-dimensional matrix of planning phases, participation levels and methodological purposes, where the niche of Participation Game is delineated by the box.*
Source: Prilenska, 2020.

In line with the research findings, the applicability of the Participation Game, delineated by a cube, is confined to the Planning & Design phase of planning (blue axis), Expressive methodological purpose (green axis), and participation level fluctuating from Consultation to Empowerment (red axis).

4.3. The evolution of Participation Game

Participatory games usually create frameworks for collective design activities, but designers rarely invite players to shape these frameworks (Vines et al., 2013). Traditional literature on game design advocates for a complete set of unambiguous rules as a prerequisite for any game (Rodriguez, 2006; Adams, 2013). The emerging literature on game design explores the opportunities for game co-design (Gugerell & Zuidema, 2017; Khaled & Vasalou, 2014). Co-design, arguably, aligns games with player preferences, mitigates knowledge gaps (especially, if a game tackles controversial issues) and enables civic learning (ibid.). Game co-design sessions encourage players to play around with a barebones game prototype, populating it with narratives and rules. The co-design of the Participation game follows the DPE (Design-Play-Experience) approach (sub-chapter 1.2).

The DPE approach. The DPE approach, elaborated in chapter 1, consists of three phases, design, play and experience, which cyclically follow each other (Winn, 2009). Each phase, in turn, contains four interdependent elements (or layers), learning, storytelling, gameplay and user experience, where learning is the least and user experience is the most flexible layer (P8: Prilenska & Feofilovs, 2017). For each game session a game prototype was created (design phase), during the game session the players interacted

with the prototype (play phase), after the game sessions players reflected on the elements (or layers) of the prototype (experience phase). For the next game session the elements (or layers) were modified accordingly. **Table 4.1** summarises the modifications after each game session, whereas **Figure 4.2** shows the initial and the final game prototype. Prilenska (P5: 2019b) provides a detailed account of the iterative design process from session to session, whereas the following section reflects the evolution of the game across layers.

Table 4.1. *Summary of the incremental design process.*

RQ	Objective of game session	Design	Play	Experience
Game session 1	Find out how the presence of the neighbourhood association and the collective vision affect the negotiation process and its outcomes. Find out how the informal appropriation of space by the neighbourhood association or by individual residents affect the negotiation process and its outcomes.	Two-dimensional information and visioning boards, pen and paper for sketching, role and voting cards. Four narratives, which differ by the variables "neighbourhood association" and "appropriation of space". Twelve roles: entrepreneur, resident, city council representative, planner, observer and game facilitator. Three rounds, each ends with voting.	Game rounds well defined. Players ignore the collaborations indicated by the role cards. Players dislike the pre-designed "collective vision". Planner makes sketches of the collective vision, and other players, also, get involved in sketching. Players demonstrate a lack of knowledge about basic urban design principles and ask for the facilitator's advice.	Players are focused on consensus building. Players occasionally make jokes about their roles and the city council. Smooth consensus building.
Game session 2	Same as in Game session 1.	The narrative complemented with additional challenges. The role of developer added. Role descriptions complemented with attitudes towards the project and behaviour.	Similar to game session 1. Planner fails to produce a sketch of the collective vision. Sketching is taken over by other players.	Similar to game session 1. Consensus building hampered by additional challenges, which causes some frustration.
Game session 3	Test the mixed three- and two-dimensional interface, and the shift from sketching to construction with pre-designed units.	Three-dimensional information board, two-dimensional visioning board, two-dimensional construction units. The role of planner abolished. Role descriptions complemented with resources.	Game rounds merged into a single round. Players engage in collective construction. Players ignore the resources allocated by the role cards. Construction units aid in producing a collective vision.	Players demonstrate higher engagement, than in sessions 1 and 2. High engagement with collective construction prevents players from negotiating agreements.

Game session 4	Test the three-dimensional interface. Test the suitability of the game for pupils.	Three-dimensional information and visioning boards, three-dimensional construction units. Role descriptions complemented with financial capacities.	Similar to game session 3. Players ignore the roles and their financial capacities.	Players lack teamwork and negotiation skills . Some players are excluded from the game. Those who are included are engaged. Players struggle with consensus building.
Game session 5	Find out how the newly introduced challenges influence dynamics and vision. Find out if it is possible to manipulate players into producing a desired vision.	Role descriptions complemented with additional challenges related to public transport and cycling paths.	Similar to game session 3. Players pay attention to roles and their financial capacities.	Similar to session 3. Financial aspects indicated by the roles encourage players to negotiate agreements. Consensus building resembles puzzle-solving.

Figure 4.2. *The evolution of the game interface.*
Source: Prilenska, 2019b.

The transformation of objectives. The initial objective of the game was to find out how the presence of a community and a common vision among the members of the community, as well as the appropriation of public space by the community or individuals, affects the outcomes of negotiations about the future development of the planned areas. The attempt to simulate a real-life situation within the magic circle of the game did not work out as expected. Therefore, the objectives of later game sessions shifted towards testing gameplay and the interface, as well as the suitability of the game for certain player profiles. Additionally, the relationship between the introduction of new rules, such as those related to cycling and public transportation, and the outcomes was examined.

The learning layer. The learning layer, as the least flexible, had minor changes. The primary educational objective was to familiarise players with the participatory process and reveal the challenges of consensus-building between stakeholders with diverging interests and varying (decision-making or power) capacities. The primary educational objective was derived from research on participatory games (sub-chapter 4.1), which emphasised the deliberative potential of games. The primary educational objective was appreciated by players and was retained in the final prototype. The secondary educational objective emerged from the early game sessions, which exposed the ignorance of basic urban design principles among students in bachelor and master levels of planning related curricula. The secondary educational objective, to familiarise students with urban design principles, was introduced starting from the third session, and was also highly appreciated and was included in the final prototype.

The storytelling layer. The first prototype of the Participation game was developed to simulate propositions derived from research on public participation in planning urban areas Mežaparks in Riga and Kalarand in Tallinn (sub-chapter 3.2). For Kalarand, the neighbourhood association managed to negotiate more public benefits than for Mezaparks, arguabl, due to the high activity of the local community who, firstly, had a clear vision for the area, and, secondly, informally appropriated the area for recreation (P2: Prilenska et al., 2020). Therefore, the first prototype had four storylines, which were different in terms of the collective vision and appropriation of space. However, from the early game sessions it became apparent, that players prefer to improvise within the boundaries of their roles, creating visions and collaborating during the game, rather than conform to visions and collaborations indicated in the role cards. Thus, the idea of an in-game simulation of a real-life situation was abandoned. Instead, the storytelling shifted from the narratives to the roles, advancing the characters, their background, decision-making and financial capacities.

The gameplay. The initial gameplay consisted of two to three rounds, with each round concluding with the players voting for or against the neighbourhood project. In the first round, players discussed the existing project, which was developed by game designers, and their positions towards it, guided by the cues in their role cards. In the second round, players collectively developed an alternative neighbourhood project. If by the end of the second round, the players could not reach a consensus, in the third round the player representing City Council took the final decision. With the transformation of the interface from a two-dimensional to a three-dimensional one, the rounds were merged together. The players became engaged in collective visioning encouraged by the three-dimensional construction units. Unlike sketching, which resulted in a series of completed sketches to vote for, the collective construction process was continuous, without a completed result that could be voted for. The collective construction process began spontaneously soon

after the game started and finished only when the time allocated for the game session ran out. Notably, the role of the planner, who was responsible for sketching, transformed into the three-dimensional construction units, which enabled collective visioning by multiple players simultaneously.

User experience. The user experience layer (or interface), as the most flexible, had major changes. The interface of the first prototype was two-dimensional, and consisted of the information and visioning boards, narrative, role and voting cards, translucent paper, and colourful markers for sketching. To support the secondary educational objective, the learning of urban design principles, the interface was transformed from a two-dimensional into a three-dimensional one. The information board was replaced with a three-dimensional model of the area in focus. The visioning board, translucent paper and markers, were replaced by a game board, two- and three-dimensional construction units, such as houses, trees, fragments of roads, etc., with dimensions proportionally corresponding to their real-life counterparts. The design of the role cards remained unchanged, while the narrative and voting were abandoned due to the changes in gameplay.

4.4. Experiences from co-design

The themes emerging from the analysis of game dynamics and results illuminate the challenges and opportunities of game co-design. The process and the outcome of co-design sessions are dependent on the choice of players (or co-designers) and on the framing of the co-design activity. Players' performance in the game and in reflecting upon the game varies depending on knowledge, skills and experiences associated with game design, as well as with their professional domain. The contribution of co-design to shaping game systems and fostering triple-loop learning depends on the framing of co-design activities.

The nexus between co-design and player profile. The players came from the former Soviet Bloc countries where planning institutions are still in transition, and civic engagement is an emerging phenomenon. Most players had not previously taken part in participatory activities and were unaware of participatory opportunities and procedures. For most players, the Participation Game was their first experience of participating in a negotiation regarding the potential development of a neighbourhood. Despite the absence of real-life participation experience, players gave preference to a developer-led approach to planning, and were sceptical towards the capacity of neighbourhood associations to influence planning decisions and about the ability (or willingness) of the local government to balance private and public interests. There were subtle differences in the performance of players depending on their study curricula. Sociology and regional development students performed better in adapting the roles and negotiating financial and building agreements, whereas architects were more focused on design issues. Students performed better than high school pupils who lacked teamwork and negotiation skills. Furthermore, students seemed to be more engaged in the game than high school pupils, and were able to provide constructive feedback concerning the design of the game. Thus, the target audience of the game is decisive in determining the content and the format of the game, as well as the format of the co-design process.

The contribution to player-centred game systems. The design of the game changed from session to session based on player feedback and observed behaviour captured through questionnaires and video recordings. The questionnaires prompted players to express their opinion concerning the strengths and weaknesses of the game, and to suggest modifications. The analysis of video recordings captured players' actions (play phase) and emotions (experience phase), revealing the dynamics of gameplay. No significant discrepancies between stated (feedback) and revealed (observable behaviour) preferences were found. The format of the Participation Game underwent substantial modifications, while the underlying educational objective - familiarising players with the participatory aspects of planning, was maintained throughout the process. In the course of incremental co-design the game evolved from a basic two-dimensional game, which offered flexibility in the interpretation of roles and the freedom to sketch into a three-dimensional game with clear role descriptions and a pre-designed set of building units. Each game session was conducted with a different group of players. Therefore, the players did not have the opportunity to compare the prototypes. However, the content analysis of questionnaires and the template analysis of video recordings imply that, one the one hand, the game became more rigid and limiting, and, on the other hand, more entertaining and playable. The findings suggest that co-design facilitates the development of game formats that are more appealing to perspective players, while retaining the educational goals conceived by game designers.

The contribution to triple-loop learning. During game sessions, players acted in line with the rules of the game and did not attempt to transcend or question them by changing and/or adding the rules, or by raising broader issues about planning and/or participation. In-game challenges were treated like a puzzle which had to be solved according to the rules of the game. The limitations of the game became evident during the final session, where additional rules regarding cycling and public transportation allowed to orchestrate the resulting collective vision. The rules allowed to reduce the number of parking spaces in exchange for building a bus stop, while building the cycling path did not give any benefits. Thus, the collective vision included the bus stop and excluded the cycling path. Although co-design enables players to influence all game layers, from learning to interface, most player comments are related to the upper levels - gameplay and interface, leaving the lower levels - learning and storytelling, intact. The phenomenon might be attributed to the relatively unstructured arrangement of the co-design process, which encouraged players to comment upon observable, superficial, game aspects, while diverting attention from obscure, underlying concepts. Triple-loop learning (sub-chapter 1.2**)** enables players to reframe the concepts and models underlying social reality. The unstructured arrangement of the co-design exercise failed to steer players towards questioning broader and deeper aspects, corroborating earlier findings reported by Gugerell & Zuidema (2017), which asserted that a free-form co-design process succeeds in single- and double-loop learning, but does not encourage triple-lop learning.

To conclude on the nexus between games and participation, participation challenges in the context of Riga and Tallinn should be addressed by means of multiple gamified approaches applied sequentially throughout the planning cycle, e.g., information sourcing and sharing games in the pre-design phase to achieve extensive outreach, and deliberative games in the design phase to negotiate consensual planning decisions based on the information derived in the previous phase. The diversification and combination of

approaches supports tactor preferences for flexible participation strategies, responding to the nature of a plan or area in focus.

The experiences from the Participation Game reveal the potential of role-playing and "boundary objects" in relation to focusing and driving discussion towards certain goals. The structured nature of games creates the essential conditions for deliberation, namely, adequate opportunities for all players to speak and be heard by other players (Gastil, 2008, p. 9-10), which, as evidenced by the examples of Kalarand and Mežaparks, are often absent from traditional public participation procedures, such as public display. The conditions of equality and fair play characteristic of games create an atmosphere of mutual respect among players, reducing conflict between players with diverging roles, capacities and experiences, and fostering empathy towards alternative perspectives. The aggregation and documentation of intermediate game results enables capturing planning relevant content and tracing its development dynamics. Thus, the introduction of game elements into negotiations of pressing issues allows to frame and document the process, increasing the chance to reach the desired consensual outcomes.

Game co-design is an emerging practice, which requires further research in terms of framing and conducting co-design activities. The experience of co-designing the Participation Game revealed the tension between the requirement for flexibility and uncertainty within co-design activities and, at the same time, player preferences for rigidity and clarity within game environments. It appears that both in-game dynamics, as well as the dynamics of co-design, are heavily dependent on player profiles and their respective capacities. The games and co-design activities should be carefully composed to provide adequate challenges, addressing player knowledge, skills and experiences, while pursuing certain learning and/or design goals. Creating co-design activities that aim to encourage players to question and renegotiate existing social realities, and, at the same time, avoid biases ensuing from the scaffolding of the co-design activity, remains a topic for further inquiry.

5. Conclusions

5.1. On the research design and findings

This study aimed to explore and elucidate the role of games in enhancing civic engagement in spatial planning in Riga and Tallinn by means of a multi-method qualitative inquiry grounded in the constructionist worldview, which, in turn, celebrates the multitude and diversity of realities and interpretations, which exist in a state of continuous flux. The adopted philosophical tradition is compatible with the contemporary spatial planning paradigm, which conceptualises planning as an institution of social transformation, drawing upon a variety of perspectives and aiming at aligning and/or modifying these perspectives through deliberation in the pursuit of a liveable and sustainable city. Discussing the origins of institutionalisation, Berger and Luckmann (1991, pp. 76-77) assert that, the more actors engage over time in a practice, the "thicker" and "harder" it becomes, outgrowing the initial dependency on the arrangements between the actors, experienced as "the subjective", and transforming into an independent phenomenon, experienced as "the objective". Following the adopted philosophical stance and the notion of planning, the inquiry drew upon the input from study participants, revealing a variety of planning related experiences, examined the relationships between the "subjective" realities and the "objective" practices, as well as made an endeavour to question and modify the established perceptions and practices through gaming.

In line with the principles of qualitative research, the inquiry was organised into phases, each of which responded to a certain research question through a certain research strategy and an array of corresponding data collection and analysis techniques. This way of organising the research allowed to modify the inquiry in response to emergent insights and research interests, and to accommodate the evolution of planning practices and gaming approaches, which occurred between 2014 and 2019, such as the proliferation and institutionalisation of neighbourhood associations and other interest groups, fluctuations in governmental public participation policies and associated initiatives, the growth of interest in games for mobile devices, as well as the reemergent interest in board games. Furthermore, the use of multiple research strategies and techniques enhanced the author's understanding of inquiry methods, and established the nexus between participatory planning procedures and gaming. The study of real-life cases of Mežaparks and Kalarand inspired the design of the Participation Game, which, building upon existing practices, enables to explore and elucidate the underlying concepts, as well as attempts to question and transform them. On the other hand, the phasing and methodological diversity contributed to a certain degree of fragmentation of research findings, which required rigorous synthesis efforts in the analysis and writing up phases.

The philosophical paradigm adopted by the inquiry was employed to study the transition of the planning systems of Latvia and Estonia from the positivism of the rational-comprehensive planning model to the constructionism of the participatory planning model, which has been unfolding since 1991 until today, t.i. 2019. The notion of public participation, which was introduced into planning legislation in the mid-1990s, experienced substantial transformation in the course of two decades, being moulded by the local institutional context, and obtained its current political and administrative form by the mid-2010s. The development of governmental initiatives in the domains of

legislation and engagement activities arguably encouraged the emergence of grassroots activism. In Riga and Tallinn grassroots activism was marked by the rapid proliferation and institutionalisation of housing and neighbourhood associations, as well as other residents' interest groups. Neighbourhood associations united under the city-scale umbrella organisations by 2018 and are recognised as legitimate stakeholders in the discussions of planning initiatives, as well as mediators between governmental agencies and local residents. Thus, the idea of public participation, which was initially imported and implemented in a top-down manner, gradually took root in local civic society and stimulated bottom-up activism.

Despite the aforementioned achievements, the actors involved in planning urge for further modifications of the planning system through optimisation of participatory and planning procedures. In the existing system, urban development is shaped by the legacy of the blueprint comprehensive and detailed plans, which determine land uses and building codes within a certain area and timespan (the latter is either limited or open). Legally required participation procedures for plans of varying scale and significance are limited to public display and public hearings as a part of public display, which request public opinion upon completed plans and, thus, are of a consultative nature. The legally required minimum is occasionally complemented by additional participation procedures in the form of surveys, thematic discussions, working groups, etc. upon the initiation of a plan or while developing planning solutions, which are also of an advisory nature. Thus, civic representatives have an opportunity to influence planning decisions only at certain points of the process through taking part in public displays or additional participatory activities. After plans are ratified, the next opportunity to contribute occurs when (or if) a new plan is initiated. The inability of the existing system to accommodate continuous public engagement, as well as the rapid socio-economic (e.g. shrinking, financial crisis) and cultural changes (e.g. increasing popularity of utility cycling), demand for fundamental changes in participatory and planning approaches. However, the currently implemented technical advancements, such as the introduction of planning information systems, indicate that the existing system will remain dominant in the next decade without any substantial modifications.

Assuming the longevity of the existing planning paradigm, there is still space for enhancing planning agencies and participation methodologies. Participation in Riga and Tallinn unfolds in the context of complex, hierarchical, fragmented and fluid planning agencies, which, as argued by other stakeholders involved in planning, are struggling with internal communication and coordination issues. On the one hand, planning agencies experience pressure from legal frameworks, which determine participatory procedures, and, on the other hand, from the multitude of diverging private interests - developers, land owners, neighbourhood associations, etc., which claim their share of authority in planning decisions. Limited financial, legal and leadership capacities of the planning agencies in the context of laissez-faire property relations restrict their role to facilitators of development, rather than drivers of development.

Neighbourhood associations advocate for the modification of participatory practices towards participant-centred approaches, which acknowledge the interests of participants in relation to the urban environment and shape the planning agenda accordingly, and include participants in developing planning solutions. Furthermore, neighbourhood associations express a preference for a proactive position of the planning agency, which balances the interests of developers and the general public in the pursuit of a sustainable and liveable city. The generic participation method of public display is

criticised for its inherent limitations, resulting in a non-representative and late involvement of public stakeholders, non-deliberative communication, as well as the complexity of the communicated information. The aforementioned deficiencies, arguably, perpetuate conflicting perspectives and varying capacities to influence decision-making among the stakeholders. There appears a salient need for a shift in planning strategies from the part of the planning agency, and a demand for diversifying participation methods pursuing better representation and alignment of stakes.

Participatory approaches should be diversified, based on the nature of the plan or area in focus, as well as on the planning phase and purpose of the participatory exercise. The diversification of participatory approaches urges for a proactive position of planning departments, which have to evaluate the salience of the plan or area in focus for the city and determine the potentially affected population. Participation purposes, procedures and the salience of the anticipated outcomes for the forthcoming plans should be clearly articulated to the perspective participants. Based on the nexus between participation efforts and the degree of authority in planning, the representatives of the public may evaluate the costs and benefits of their participation.

Pursuing a diversity of stakes and higher participation rates, information about participation opportunities should be communicated to and collected from a larger resident community. The information can be delivered and aggregated by improving existing online information and consultation platforms (e.g., web pages of planning departments, planning information systems, social media campaigns), and also making use of traditional approaches (e.g., open house). The communicated information should be provided in formats friendly to the layperson. The task of sharing and sourcing information in such formats may be potentially addressed by games for online platforms and mobile devices. Applied in the pre-design planning phases, these games may potentially increase the quality and quantity of contributions, and involve underrepresented groups, such as young adults. Furthermore, given the closed-ended input formats, the data from large populations may be collected, processed, and visualised by means of computer algorithms, removing data aggregation processing and interpretation challenges.

To achieve the alignment of stakes, participatory approaches should enable deliberative communication between the stakeholders. The task of dialogue building may be addressed by role-playing or visioning games, which focus on framing and solving problems collectively. Applied during the design phase, these games mitigate conflicts caused by the divergent stakeholder positions, roles and capacities, and enable arriving at consensual decisions. The consensus building capacity of the games is demonstrated by the Participation Game, which is iteratively developed in collaboration with perspective players in the framework of the Thesis. The Participation Game succeeded in aligning the diverging interests of the actors involved through role-playing and the use of “boundary objects”, which focused and steered deliberation. As a spin-off from shaping the collective vision, the actors negotiated the implementation plan, as well as the distribution of responsibilities and funds. Successful play-tests within academia indicate the need for play-tests in the field in the discussions of forthcoming neighbourhood projects, where the Participation Game may aid in acknowledging and aligning actor perspectives and, hence, in achieving a shared understanding of current issues and potential future responses.

5.2. On the limitations and directions for further research

Research phases 1 and 2. The research on participatory practices draws on the case studies of Riga and Tallinn and, specifically, Kalarand and Mežaparks. These cases are of a deviant or extreme nature, due to their remarkable position within the local context. Although urban development processes in the capital cities unfold within the same legal frame as in non-capital cities, they are characterised by greater complexity and numerous controversies, stemming from the presence of the national government and ensuing implications for the administrative, entrepreneurial and cultural landscape. The cases of Kalarand and Mežaparks, in turn, stand out from the body of other detailed planning initiatives due to the strategic significance of these areas for their respective cities, resulting in a diversity and great number of stakeholders involved, as well as profound emotionally-laden controversies among them. Although these cases do not represent typical participation issues, they, nevertheless, illuminate the sensitivity of participation practices upon the spatiotemporal and cultural context, establish causal links between the methodologies of participation and the resulting processes and outcomes, as well as raise new research questions, creating vectors for further research.

The current planning paradigm is characterised by a fragmented property landscape and, hence, requires deliberation among diverse actor groups, namely, planners, developers, neighbourhood associations, etc., who claim their stake in planning decisions. In the pursuit of better participatory planning practices it is essential to understand how these actor groups conceptualise themselves in relation to other actor groups, namely, whose interests do they represent and how do these interests relate to the interests of the general urban population, as well as what contribution to and impact on urban development they want to make.

Despite the proliferation and institutionalisation of neighbourhood associations and interest groups, they represent a marginal share of the urban population. The acute issue of the “silent majority”, which is often perceived by planners as the main beneficiary of the plan, sparks discussions about how accurately “public” interests are represented by other actor groups who claim competence in this matter, namely, planners and neighbourhood associations, as well as about the underlying causes of non-participation and potential ways of addressing them.

The demands from the public for better leadership from the local government in aligning diverging stakes and driving the development of the city poses a set of questions about the nexus between the organisational culture of the local government, namely, the distribution of duties across agencies, internal communication and collaboration, and the capacity of the local government to shape urban development visions, as well as planning and taking actions accordingly.

Research phases 3 and 4. The research on games as effective alternatives to present participatory methods draws upon the reported cases of applying games as participation techniques in planning. The observed games were developed and applied in the contex of research projects and, hence, only a small share of them were applied in the field. In trying to understand the impact of games on participation numbers and the quality of participation, the findings of research projects have to be validated though comparison with findings from the field. The latter calls for studying cases of applying games in real-life participatory exercises, where the stakes are high and the disagreements between the stakeholders are deep, as in the cases of Mežapark and Kalarand.

Another potential research vector, which is partially addressed in the Participation Game, points to the issue of stakeholder participation in decisions concerning participation procedures. In trying to design participation strategies efficently, it is essential to obtain the opinion of stakeholders about their preferred formats of participatory exercises and the expected benefits of participation. Furthermore, it is necessary to acknowledge what kind of plans and policies are perceived by the stakeholders as worthy of effort. The inquiry into participation procedures has to be carefully designed, enabling the stakeholders involved to transcend the boundaries of existing planning concept and to reframe them accordingly.

Despite the aforementioned limitations, the research succeeded in achieving the posed research aim and responding to the associated research questions. Context-sensitive participation challenges of Riga and Tallinn, perpetuated by deficiencies in existing traditional participatory methods, may be addressed by means of emerging alternative participatory methods, namely, information sourcing and sharing, as well as deliberation games. Participatory games, applied within the framework of research projects, exhibit the capacity to enhance participation rates and the quality of contributions. The success within academia must be extensively validated in the field, where the playful aspect of participatory games may remedy the acute controversies between the actors and move them towards constructive dialogue.

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Ahmad, M., Rahim, L. Ab., & Arshad, N. I. (2014). A review of educational games design frameworks: An analysis from software engineering. *2014 International Conference on Computer and Information Sciences (ICCOINS)*, 1–6. https://doi.org/10.1109/ICCOINS.2014.6868452

Amory, A. (2007). Game object model version II: A theoretical framework for educational game development. *Educational Technology Research and Development*, *55*(1), 51–77. https://doi.org/10.1007/s11423-006-9001-x

Ampatzidou, C., Gugerell, K., Constantinescu, T., Devisch, O., Jauschneg, M., & Berger, M. (2018). All Work and No Play? Facilitating Serious Games and Gamified Applications in Participatory Urban Planning and Governance. *Urban Planning*, *3*(1), 34–46. https://doi.org/10.17645/up.v3i1.1261

Anderson, C. (2008, June 23). The End of Theory: The Data Deluge Makes the Scientific Method Obsolete. *Wired Magazine*. Retrieved 13 January 2020, from https://www.wired.com/2008/06/pb-theory/

Aravena, A. (2014). *My architectural philosophy? Bring the community into the process*. TEDGlobal 2014, Rio de Janeiro. Retrieved 13 January 2020, from https://www.ted.com/talks/alejandro_aravena_my_architectural_philosophy_bring_the_community_into_the_process/discussion?referrer=playlist-11_must_see_ted_talks

Arnstein, S. R. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*, *35*(4), 216–224. https://doi.org/10.1080/01944366908977225

Baker, W. H., Addams, H. L., & Davis, B. (2005). Critical Factors for Enhancing Municipal Public Hearings. *Public Administration Review*, *65*(4), 490–499.

Barley, W. C., Leonardi, P. M., & Bailey, D. E. (2012). Engineering Objects for Collaboration: Strategies of Ambiguity and Clarity at Knowledge Boundaries. *Human Communication Research*, *38*(3), 280–308. https://doi.org/10.1111/j.1468-2958.2012.01430.x

Barnett, J., & Beasley, L. (2015). *Ecodesign for cities and suburbs*. Island Press.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge.* Penguin Group.

Berthelsen, C. B., & Frederiksen, K. (2018). A Comprehensive Example of How to Conduct a Literature Review Following Glaser's grounded Theory Methodological Approach. *International Journal of Health Sciences*, *6*(1), 90–99.

Block by Block. (n.d.). *Our work. Project selection*. Block by Block. Retrieved 13 January 2020, from https://www.blockbyblock.org/our-work

Brown, G., & Chin, S. Y. W. (2013). Assessing the Effectiveness of Public Participation in Neighbourhood Planning. *Planning Practice and Research*. https://doi.org/10.1080/02697459.2013.820037

Campbell, S. (2003). *The Enduring Importance of National Capital Cities in the Global Era* (URRC 03-08; Urban and Regional Research Collaborative. Working Paper Series). University of Michigan. Retrieved 13 January 2020, http://www-personal.umich.edu/~sdcamp/workingpapers/URRC%2002-7.pdf

Chan-Magomedov, S. O. (2001). *Architektura sovetskogo avangarda. Kn. 2: Social'nye problemy.* Strojizdat.

Charmaz, K. (2006). *Constructing grounded theory.* SAGE Publications.

Charmaz, Kathy. (2008). Constructionism and the Grounded Theory. In Holstein J.A. & Gubrium J.F. (Eds.) *Handbook of Constructionist Research* (pp. 397–412). The Guilford Press.

City of Tartu. (2019). *Get involved. Participative budgeting in Tartu 2019*. Retrieved 13 January 2020, from https://www.tartu.ee/en/participative-budgeting#participative-budgeting-in-tartu-2019

Coghlan, D., & Brannick, T. (2005). *Doing action research in your organisation (2nd edition).* SAGE Publications.

Connelly, S. (2006). Looking inside public involvement: How is it made so ineffective and can we change this? *Community Development Journal*, *41*(1), 13–24. https://doi.org/10.1093/cdj/bsi046

Constantinescu, T. I., Devisch, O., & Kostov, G. (2017). City Makers: Insights on the Development of a Serious Game to Support Collective Reflection and Knowledge Transfer in Participatory Processes. *International Journal of E-Planning Research*, *6*(4), 32–57. https://doi.org/10.4018/ijepr.2017100103

Construction law (Būvniecības likums), (1995). Retrieved 16 August 2020, from https://likumi.lv/doc.php?id=36531&version_date=13.09.1995

Corbin, J., & Strauss, A. (1990). Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology*, *13*(1), 3–21.

Cord, A. F., Roeßiger, F., & Schwarz, N. (2015). Geocaching data as an indicator for recreational ecosystem services in urban areas: Exploring spatial gradients, preferences and motivations. *Landscape and Urban Planning*, *144*, 151–162. https://doi.org/10.1016/j.landurbplan.2015.08.015

Coughlan, P., & Coghlan, D. (2002). Action research for operations management. *International Journal of Operations & Production Management*, *22*(2), 220–240. https://doi.org/10.1108/01443570210417515

Creswell, J. W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches.* SAGE Publications.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Approaches (3rd edition).* SAGE Publications.

Creswell, J. W., & Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches (3rd edition).* SAGE Publications.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research (3rd edition).* SAGE Publications.

Davidoff, P. (1965). Advocacy and Pluralism in Planning. *Journal of the American Institute of Planners*, *31*(4), 331–338. https://doi.org/10.1080/01944366508978187

Davis, M. (2017). Ingress in Geography: Portals to Academic Success? *Journal of Geography*, *116*(2), 89–97. https://doi.org/10.1080/00221341.2016.1227356

Davy, B. (2014). Polyrational property: Rules for the many uses of land. *International Journal of the Commons*, *8*(2), 472. https://doi.org/10.18352/ijc.455

de Freitas, S., & Oliver, M. (2006). How can exploratory learning with games and simulations within the curriculum be most effectively evaluated? *Computers & Education*, *46*(3), 249–264. https://doi.org/10.1016/j.compedu.2005.11.007

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. *MindTrek '11: Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9–15. https://doi.org/10.1145/2181037.2181040

Devisch, O. (2008). Should Planners Start Playing Computer Games? Arguments from SimCity and Second Life. *Planning Theory & Practice*, *9*(2), 209–226. https://doi.org/10.1080/14649350802042231

Devisch, O., Gugerell, K., Diephuis, J., Constantinescu, T., Ampatzidou, C., & Jauschneg, M. (2017). Mini is beautiful. Playing serious mini-games to facilitate collective learning on complex urban processes. *Interaction Design and Architecture(s) Journal*, *35*, 141–157.

Devisch, O., Poplin, A., & Sofronie, S. (2016). The Gamification of Civic Participation: Two Experiments in Improving the Skills of Citizens to Reflect Collectively on Spatial Issues. *Journal of Urban Technology*, *23*(2), 81–102. https://doi.org/10.1080/10630732.2015.1102419

Dimitrovska-Andrews, K. (2005). Mastering the post-socialist city: Impacts on planning the built envronment. In I. F. E. Hamilton, K. Dimitrovska-Andrews, & N. Pichler-Milanović (Eds.), *Transfromation of cities in central and Eastern Europe: Towards globalization* (p. 153). United Nations University.

Dörner, R., & Spierling, U. (2014). Serious Games Development as a Vehicle for Teaching Entertainment Technology and Interdisciplinary Teamwork. *Proceedings of the 2014 ACM International Workshop on Serious Games - SeriousGames '14*, 3–8. https://doi.org/10.1145/2656719.2656724

Duke, R. D. (2011). Origin and Evolution of Policy Simulation: A Personal Journey. *Simulation & Gaming*, *42*(3), 342–358. https://doi.org/10.1177/1046878110367570

Faehnle, M., & Tyrvainen, L. (2013). A framework for evaluating and designing collaborative planning. *Land Use Policy*, *34*, 332–341. https://doi.org/10.1016/j.landusepol.2013.04.006

Fainstein, S. S. (2019). Urban planning. In *Encyclopaedia Britannica*. Encyclopaedia Britannica, Inc. Retrieved 13 January 2020, from https://www.britannica.com/topic/urban-planning

Feldt, A. G. (2014). Experience with Simulation / Gaming: 1960—2010. *Simulation & Gaming*, *45*(3), 283–305. https://doi.org/10.1177/1046878114543983

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, *12*(2), 219–245. https://doi.org/10.1177/1077800405284363

Flyvbjerg, B. (2011). Case Study. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of Qualitative Research* (4th edition, pp. 301–316). SAGE Publications.

Fonseca, R. B. (2013). Action Research applied to design of environmental educational games. *SBC – Proceedings of SBGames 2013 - Art & Design Track – Full Papers*, 361–370. Retrieved 13 January 2020, from https://www.sbgames.org/sbgames2013/proceedings/artedesign.html

Forester, J. (1982). Planning in the Face of Power. *Journal of the American Planning Association*, *48*(1), 67–80. https://doi.org/10.1080/01944368208976167

Forester, J. (1987). Planning In the Face of Conflict: Negotiation and Mediation Strategies in local Land Use Regulation. *Journal of the American Planning Association*, *53*(3), 303–314. https://doi.org/10.1080/01944368708976450

Forester, J. (2006). Making Participation Work When Interests Conflict: Moving from Facilitating Dialogue and Moderating Debate to Mediating Negotiations. *Journal of the American Planning Association*, *72*(4), 447–456. https://doi.org/10.1080/01944360608976765

Forester, J. (2012). From Good Intentions to A Critical Pragmatism. In R. Crane & R. Weber (Eds.), *The Oxford Handbook of Urban Planning* (pp. 284–305). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195374995.013.0015

Friedmann, J. (1973). *Retracking America: A theory of transactive planning*. Anchor Press.

Friedmann, John. (1998). Planning theory revisited. *European Planning Studies*, *6*(3), 245–253. https://doi.org/10.1080/09654319808720459

Friedmann, John. (2008). The Uses of Planning Theory: A Bibliographic Essay. *Journal of Planning Education and Research*, *28*(2), 247–257. https://doi.org/10.1177/0739456X08325220

Friedmann, John, & Hudson, B. (1974). Knowledge and Action: A Guide to Planning Theory. *Journal of the American Institute of Planners*, *40*(1), 2–16. https://doi.org/10.1080/01944367408977442

Fung, A. (2006). *Varieties of participation in complex governance. Public Administration Review, 66*, 66–75. https://doi.org/10.1111/j.1540-6210.2006.00667.x

Gaber, J. (2007). Simulating Planning. *Journal of Planning Education and Research*, *27*(2), 113–121. https://doi.org/10.1177/0739456x07305791

Gastil, J. 2008. Political Communication and Deliberation. Thousand Oaks, CA: SAGE Publications

Gehl, J. (1987). *Life between buildings: Using public space.* Island Press.

Gehl, J. (2010). *Cities for people*. Island Press.

Glaeser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Aldine.

Gordon, E., & Baldwin-Philippi, J. (2014). Playful civic learning: Enabling reflection and lateral trust in game-based public participation. *International Journal of Communication*, *8*(1), 759–786. https://doi.org/1932–8036/20140005

Gordon, E., Haas, J., & Michelson, B. (2017). Civic creativity: Role-playing games in deliberative process. *International Journal of Communication*, *11*, 3789–3807.

Graells-Garrido, E., Ferres, L., Caro, D., & Bravo, L. (2017). The effect of Pokémon Go on the pulse of the city: A natural experiment. *EPJ Data Science*, *6*(1), 23. https://doi.org/10.1140/epjds/s13688-017-0119-3

Gugerell, K., & Zuidema, C. (2017). Gaming for the energy transition. Experimenting and learning in co-designing a serious game prototype. *Journal of Cleaner Production*, *169*, 105–116. https://doi.org/10.1016/j.jclepro.2017.04.142

Hall, P. (1983). The Anglo-American connection: Rival rationalities in planning theory and practice, 1955 - 1980. *Environment and Planning B: Planning and Design*, *10*(1), 41–46. https://doi.org/10.1068/b100041

Hamdi, N., & Goethert, R. (1997). *Action planning for cities: A guide to community practice.* John Wiley.

Healey, Patsy. (1996). The communicative turn in planning theory and its implications for spatial strategy formations. *Environment and Planning B: Planning and Design*, *23*(2), 217–234. https://doi.org/10.1068/b230217

Healey, Patsy. (2013). Circuits of Knowledge and Techniques: The Transnational Flow of Planning Ideas and Practices: The transnational flow of planning ideas and practices. *International Journal of Urban and Regional Research*, *37*(5), 1510–1526. https://doi.org/10.1111/1468-2427.12044

Hess, D. B., & Tammaru, T. (Eds.). (2019a). Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania. Springer International Publishing. https://doi.org/10.1007/978-3-030-23392-1

Hess, D. B., & Tammaru, T. (2019b). Modernist Housing Estates in the Baltic Countries: Formation, Current Challenges and Future Prospects. In D. B. Hess & T. Tammaru (Eds.), *Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania* (pp. 3–27). Springer International Publishing. https://doi.org/10.1007/978-3-030-23392-1_1

Hiob, M., & Nutt, N. (2016). Spatial planning in Estonia – From a socialist to inclusive perspective. *Transylvanian Review of Administrative Sciences*, *47*(E/February), 63–79.

Holman, N., Mace, A., Paccoud, A., & Sundaresan, J. (2015). Coordinating density; working through conviction, suspicion and pragmatism. *Progress in Planning*, *101*, 1–38. https://doi.org/10.1016/j.progress.2014.05.001

Holt-Jensen, A., & Pollock, E. (2009). *Urban sustainability and governance: New changes in Nordic-Baltic housing policies.* Nova Science Publishers.

Holvandus, J., & Leetmaa, K. (2016). The Views of Neighbourhood Associations on Collaborative Urban Governance in Tallinn, Estonia. *PlaNext - Next Generation Planning*, *3*, 49–66. https://doi.org/10.24306/plnxt.2016.03.004

Horelli, L. (1997). A methodological approach to children's participation in urban planning. *Scandinavian Housing and Planning Research*, *14*(3), 105–115. https://doi.org/10.1080/02815739708730428

Horelli, L. (2002). A Methodology of Participatory Planning. In R. B. Bechtel & A. Churchman (Eds.), *Handbook of Environmental Psychology* (pp. 607–628). John Wiley & Sons.

IAP2 (International Association for Public Participation). (2018). *Core Values, Ethics, Spectrum – The 3 Pillars of Public Participation*. IAP2 International Association for Public Participation. Resources. Retrieved 13 January 2020, from https://www.iap2.org/page/pillars

Innes, J. E. (1996). Planning through consensus building. *Journal of the American Planning Association, 62*(4), 460-472. http://dx.doi.org/10.1080/01944369608975712

Innes, J. E., & Booher, D. E. (1999). Consensus Building as Role Playing and Bricolage. *Journal of the American Planning Association*, *65*(1), 9–26. https://doi.org/10.1080/01944369908976031

Innes, J. E., & Booher, D. E. (2004). Reframing Public Participation: Strategies for the 21st Century. *Planning Theory & Practice*, *5*(4), 419–436.

Irvin, R., & Stansbury, J. (2004). Citizen Participation in Decision Making: Is It Worth the Effort? *Public Administration Review*, *64*(1), 55–65. https://doi.org/10.1111/j.1540-6210.2004.00346.x

Isbister, K., Flanagan, M., & Hash, C. (2010). Designing games for learning: Insights from conversations with designers. *Proceedings of the 28th International Conference on Human Factors in Computing Systems - CHI '10*, 2041. https://doi.org/10.1145/1753326.1753637

Jacobs, J. (2016). The Death and Life of Great American Cities. In Fainstein S. S. & DeFilippis J. (Eds.) *Readings in Planning Theory (4th edition)*. https://doi.org/10.1002/9781119084679.ch4

Johnson, I. G., MacDonald, A., Briggs, J., Manuel, J., Salt, K., Flynn, E., & Vines, J. (2017). Community Conversational. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems - CHI '17*, 2320–2333. https://doi.org/10.1145/3025453.3025559

Kahila-Tani, M., Broberg, A., Kyttä, M., & Tyger, T. (2016). Let the Citizens Map – Public Participation GIS as a Planning Support System in the Helsinki Master Plan Process. *Planning Practice and Research*, *31*(2), 195–214. https://doi.org/10.1080/02697459.2015.1104203

Khaled, R., & Vasalou, A. (2014). Bridging serious games and participatory design. *International Journal of Child-Computer Interaction*, *2*(2), 93–100. https://doi.org/10.1016/j.ijcci.2014.03.001

Kiernan, M. J. (1983). Ideology, politics, and planning: Reflections on the theory and practice of urban planning. *Environment and Planning B: Planning and Design*, *10*(1), 71–87. https://doi.org/10.1068/b100071

Kiili, K. (2005). Digital game-based learning: Towards an experiential gaming model. *The Internet and Higher Education*, *8*(1), 13–24. https://doi.org/10.1016/j.iheduc.2004.12.001

Kleinhans, R., Van Ham, M., & Evans-Cowley, J. (2015). Using Social Media and Mobile Technologies to Foster Engagement and Self-Organization in Participatory Urban Planning and Neighbourhood Governance. *Planning Practice & Research*, *30*(3), 237–247. https://doi.org/10.1080/02697459.2015.1051320

Klosterman, R. E. (1983). Fact and Value in Planning. *Journal of the American Planning Association*, *49*(2), 216–225. https://doi.org/10.1080/01944368308977066

Krek, A. (2005). Rational Ignorance of the Citizens in Public Participatory Planning Alenka Krek. *CORP 2005 GEO MULTIMEDIA Proceedings 10th International Conference on Information & Communication Technologies (ICT) in Urban Planning and Spatial Development and Impacts of ICT on Physical Space*, 165–169.

Krenjova, J., & Raudla, R. (2018). Policy Diffusion at the Local Level: Participatory Budgeting in Estonia. *Urban Affairs Review*, *54*(2), 419–447. https://doi.org/10.1177/1078087416688961

Lane, M. B. (2005). Public participation in planning: An intellectual history. *Australian Geographer*, *36*(3), 283–299. https://doi.org/10.1080/00049180500325694

Le Corbusier. (1987). *The city of to-morrow and its planning.* Dover.

Leao, S., & Izadpahani, P. (2016). Factors Motivating Citizen Engagement in Mobile Sensing: Insights from a Survey of Non-Participants. *Journal of Urban Technology*, *23*(4), 85–103. https://doi.org/10.1080/10630732.2016.1175824

Leetmaa, K., & Hess, D. B. (2019). Incomplete Service Networks in Enduring Socialist Housing Estates: Retrospective Evidence from Local Centres in Estonia. In D. B. Hess & T. Tammaru (Eds.), *Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania* (pp. 273–299). Springer International Publishing. https://doi.org/10.1007/978-3-030-23392-1_13

Leetmaa, K., Tammaru, T., & Anniste, K. (2009). From Priority-led to Market-led Suburbanisation in a Post-Communist Metropolis. *Tijdschrift Voor Economische En Sociale Geografie*, *100*(4), 436–453. https://doi.org/10.1111/j.1467-9663.2009.00551.x

Lefebvre, H. (1991). *The production of space* (D. Nicholson-Smith, Trans.). Blackwell.

Lerner, J. (2013). Playing with power: Participatory planning games in Rosario's villas. *Latin American Perspectives*, *20*(189), 185–201. https://doi.org/10.1177/0094582X12467760

Lerner, J. (2014). *Making democracy fun: How game design can empower citizens and transform politics.* MIT Pres.

Lydon, M. (Ed.). (2012a). *Tactical Urbanism Vol. 2. Short-term action, long-term change*. Retrieved 13 January 2020, from https://issuu.com/streetplanscollaborative/docs/tactical_urbanism_vol_2_final

Lydon, M. (Ed.). (2012b). *Tactical Urbanism Vol.1. Short-term action, long-term change*. Retrieved 13 January 2020, from https://issuu.com/streetplanscollaborative/docs/tactical_urbanism_vol.1

Marcuse, P. (2016). The Three Historic Currents of City Planning. In S. S. Fainstain & J. DeFilippis (Eds.), *Readings in planning theory* (pp. 117–131). Wiley-Blackwell.

Mason, J. (2002). *Qualitative researching* (2nd edition). SAGE Publications.

Mason, J. (2006). Mixing methods in a qualitatively driven way. *Qualitative Research*, *6*(1), 9–25. https://doi.org/10.1177/1468794106058866

Mitgutsch, K., & Alvarado, N. (2012). Purposeful by design?: A serious game design assessment framework. *Proceedings of the International Conference on the Foundations of Digital Games - FDG '12*, 121. https://doi.org/10.1145/2282338.2282364

Moore, G. T. (1987). Environment and behavior research in North America. In D. Stokols & I. Altman (Eds.), *Handbook of environmental psychology* (Vol. 2, pp. 1371–1410). Wiley.

Nabatchi, T. (2012). Putting the "Public" Back in Public Values Research: Designing Participation to Identify and Respond to Values. *Public Administration Review*, *72*(5), 699–708. https://doi.org/10.1111/j.1540-6210.2012.02544.x

Nienhuis, I., van Dijk, T., & de Roo, G. (2011). Let's Collaborate! But Who's Really Collaborating? Individual Interests as a Leitmotiv for Urban Renewal and Regeneration Strategies. *Planning Theory & Practice*, *12*(1), 95–109. https://doi.org/10.1080/14649357.2011.546671

Ojamäe, L., Paadam, K., & Liias, R. (2009). Regeneration of Mustamäe. In A. Holt-Jensen & E. Pollock (Eds.), *Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies* (pp. 188−195). Nova Science Publishers.

Olszewski, R., Turek, A., & Laczynski, M. (2016). Urban Gamification as a Source of Information for Spatial Data Analysis and Predictive Participatory Modelling of a City's Development. *Proceedings of the 5th International Conference on Data Management Technologies and Applications - Volume 1: Data*, 176–181. https://doi.org/10.5220/0006005201760181

Paadam, K. (2003). *Constructing residence as home: Homeowners and their housing histories [PhD Thesis].* TPK.

Paadam, K. (2009a). Countries in transition—The Baltic countries. In A. Holt-Jensen & E. Pollock (Eds.), *Urban Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies* (pp. 171–177). Nova Science Publishers.

Paadam, K. (2009b). Residential policy challenges in Estonia. In A. Holt-Jensen & E. Pollock (Eds.), *Urban Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies* (pp. 179–195). Nova Science Publishers.

Paadam, K., & Ojamäe, L. (2012). *The potential formation of the waterfront area in the vicinity of the future Tallinn City Government building. On assessments and dispositions of the related actor groups [Report].* Tallinn University of Technology.

Pehk, T., & Ait, J. (2014). Tallinn neighbourhood associations as the experts of local living. *The Finnish Journal of Urban Studies*, *2*(52). Retrieved 13 January 2020, from https://www.yss.fi/journal/tallinn-neighbourhood-associations-as-the-experts-of-local-living/

Perjo, L., Fredricsson, C., & Oliveira e Costa, S. (2017). *Planning Systems and Legislation for Brownfield Development in the Central Baltic Countries*. Nordregio. Retrieved 13 January 2020, from http://www.balticurbanlab.eu/materials/planning-systems-and-legislation-brownfield-development-central-baltic-countries.

Pilsēta cilvēkiem. (n.d.). *Pilsēta cilvēkiem*. Retrieved 13 January 2020, from https://www.pilsetacilvekiem.lv

Poplin, A., Shenk, L., & Passe, U. (2017). Transforming Pervasive into Collaborative: Engaging Youth as Leaders with GIS through a Framework that Integrates Technologies, Storytelling, and Action. *Interaction Design and Architecture(s) Journal*, *35*, 182–204.

Potts, R., Jacka, L., & Yee, L. H. (2017). Can we 'Catch "em All"'? An exploration of the nexus between augmented reality games, urban planning and urban design"'. *Journal of Urban Design*, *22*(6), 866–880. https://doi.org/10.1080/13574809.2017.1369873

Prandi, C., Roccetti, M., Salomoni, P., Nisi, V., & Nunes, N. J. (2017). Fighting exclusion: A multimedia mobile app with zombies and maps as a medium for civic engagement and design. *Multimedia Tools and Applications*, *76*, 4951–4979. https://doi.org/10.1007/s11042-016-3780-9

Prilenska, V. (2018). Neighbourhood guide (Apkaimju Gids)—Riga. In A. Bogle & E. Popova (Eds.), *Methodological guidelines for teachers* (pp. 90–94). HafenCity University Hamburg.

Prilenska V. (forthcoming) Spatial retrofitting of modernist housing estates.

Prilenska, V. (2019a). Current research vectors in games for public participation in planning. *Architecture and Urban Planning*. https://doi.org/10.2478/aup-2019-0016

Prilenska, V. (2019b). Participation Game: Reflections on the Iterative Design Process. *PlaNext – next Generation Planning*, *9*, 97–122. https://doi.org/10.24306/plnxt/62

Prilenska, V., & Feofilovs, M. (2018). Game design as an interdisciplinary teaching tool in built environment studies. In A. Bogle, F. Kasting, E. Popova, & M. J. M. von Seggern (Eds.), *think the link City elements—Infrastructure and networks in shaping harbour areas* (pp. 31–43). HafenCity University Hamburg.

Prilenska, V., Paadam, K., & Liias, R. (2019). Civic engagement in the (post-socialist) transitional society: Two case studies. In N. Čamprag & A. Suri (Eds.), *Three decades of post-socialist transition*. Technische Universität Darmstadt.

Prilenska, V., Paadam, K., & Liias, R. (2020). Challenges of civic engagement in the (post-socialist) transitional society: Experiences from waterfront urban areas Mezapark in Riga and Kalarand in Tallinn. *Journal of Architecture & Urbanism*, 44, 109-121. https://doi.org/10.3846/jau.2020.12223

Raagmaa, G., & Stead, D. (2014). Spatial Planning in the Baltic States: Impacts of European Policies. *European Planning Studies*, *22*(4), 671–679. https://doi.org/10.1080/09654313.2013.772730

Raphael, C., Bachen, C., Lynn, K.-M., Baldwin-Philippi, J., & McKee, K. A. (2010). Games for Civic Learning: A Conceptual Framework and Agenda for Research and Design. *Games and Culture*, *5*(2), 199–235. https://doi.org/10.1177/1555412009354728

RDPAD (Rīgas domes Pilsētas attīstības departaments). (2009). Rīgas teritorijas plānojums 2006.-2018. Gadam ar grozījumiem. Galīgā redakcija. Paskaidrojuma raksts. Retrieved 13 January 2020, from https://www.rdpad.lv/rtp/speka-esosais/

RDPAD (Rīgas domes Pilsētas attīstības departaments). (2017). Rīgas teritorijas plānojums līdz 2030. Gadam. Paskaidrojuma raksts. 1. Pielikums. Sabiedrības līdzdalība Rīgas teritorijas plānojuma līdz 2030. Dagam izstrādē. Retrieved 13 January 2020, from https://www.rdpad.lv/rtp/izstrade/

RDPAD (Rīgas domes Pilsētas attīstības departaments). (2020). Rīgas domes Pilsētas attīstības departamenta ziņu portāls (Riga Planning Department information portal). Retrieved 13 January 2020, from https://www.rdpad.lv

Reason, P., & Bradbury, H. (Eds.). (2008). *The Sage handbook of action research: Participative inquiry and practice (2nd edition).* SAGE Publications.

Regulations about spatial planning (Noteikumi par teritoriju plānojumiem), (1998). Retrieved 16 August 2020, from https://likumi.lv/ta/id/47075-noteikumi-par-teritoriju-planojumiem

Regulations about spatial development planning documents (Noteikumi par pašvaldību teritorijas attīstības plānošanas dokumentiem), Pub. L. No. 711 (2012). Retrieved 16 August 2020, from https://likumi.lv/ta/id/252164-noteikumi-par-pasvaldibu-teritorijas-attistibas-planosanas-dokumentiem

Regulations about spatial development planning documents (Noteikumi par pašvaldību teritorijas attīstības plānošanas dokumentiem), Pub. L. No. 628 (2015). Retrieved 16 August 2020, from https://likumi.lv/ta/id/269842-noteikumi-par-pasvaldibu-teritorijas-attistibas-planosanas-dokumentiem

RD (Rīgas dome). (1995). *Rīgas Attīstības Plāns 1995.-2005. g.*

RD (Rīgas dome). (2019). *BalsoRīga.lv*. Retrieved 13 January 2020, from https://balso.riga.lv

Apartment Associations Act, (1995). Retrieved 16 August 2020, from https://www.riigiteataja.ee/en/eli/523122015010/consolide

Apartment Ownership Act, (2001). Retrieved 16 August 2020, from https://www.riigiteataja.ee/en/eli/ee/531032014010/consolide

Planning Act, (2003). Retrieved 16 August 2020, from https://www.riigiteataja.ee/en/compare_original/512112013007

Planning Act, (2015). Retrieved 16 August 2020, from https://www.riigiteataja.ee/en/eli/ee/527062016001/consolide

Planning and Building Act, (1995). Retrieved 16 August 2020, from https://www.riigiteataja.ee/akt/28423

Rodriguez, H. (2006). The playful and the serious: An approximation to Huizinga's Homo Ludens. *Game Studies.* Retrieved 16 August 2020, from http://gamestudies.org/0601/articles/rodriges

Rousseau, J.-J. (1923). *The social contract and discourses by Jean Jacques Rousseau* (G. D. H. Cole, Trans.). J.M. Dent & Sons. Retreived January 13, from https://oll.libertyfund.org/titles/638

Rowe, G., & Frewer, L. J. (2000). Public participation methods: A framework for evaluation. *Science, Technology, & Human Values*, *25*(1), 2–29. https://doi.org/10.1177/016224390002500101

Rowe, G., & Frewer, L. J. (2005). A typology of public engagement mechanisms. *Science Technology and Human Values*, *30*(2), 251–290. https://doi.org/10.1177/0162243904271724

Roze, A. (2005). *Rīgas attīstības plāna (1995-2005) realizācijas izvērtējums. Par plānojuma struktūras veidošanu un teritorijas zonējuma pamatprincipu ievērošanu [Report]*. Retrieved 16 August 2020, from http://www.sus.lv/lv/petijumi/rigas-attistibas-plana-1995-2005-realizacijas-izvertejums

Ruoppila, S. (2007). Establishing a Market-orientated Urban Planning System after State Socialism: The Case of Tallinn. *European Planning Studies*, *15*(3), 405–427. https://doi.org/10.1080/09654310601017117

Sanoff, H. (2000). *Community participation methods in design and planning*. John Wiley & Sons.

Sanoff, H. (2010). *Democratic Design: Participation Case Studies in Urban and Small Town Environments.* VDM Verlag Dr. Müller.

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th edition). Pearson Education Ltd.

Schlagenhaufer, C., & Amberg, M. (2015). A Descriptive Literature Review and Classification Framework for Gamification in Information Systems. *ECIS 2015 Completed Research Papers*. Paper 161. Retreived January 13, from http://aisel.aisnet.org/ecis2015_cr/161

Schneider, S. H., & Busse, S. (2019). Participatory Budgeting in Germany–A Review of Empirical Findings. *International Journal of Public Administration*, *43*(3), 259–273. https://doi.org/10.1080/01900692.2018.1426601

Schön, D. A., & Rein, M. (1994). *Frame reflection: Toward the resolution of intractable policy controversies.* BasicBooks.

Sotamaa, O., Ermi, L., Laukkanen, T., Mäyrä, F., & Nummela, J. (2005). The Role of Players in Game Design: A Methodological Perspective. *In Proceedings of Digital Experience: Design, Aesthetics, Practice*, 35–42.

Spatial planning law (Teritorijas plānošanas likums), (2002). Retrieved 16 August 2020, from https://likumi.lv/ta/id/63109-teritorijas-planosanas-likums.

Spatial development planning law (Teritorijas attistibas planosanas likums), (2011). Retrieved 16 August 2020, from https://likumi.lv/doc.php?id=238807&version_date=08.11.2011.

Star, S. L., & Griesemer, J. R. (n.d.). Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science*, *19*(3), 387–420.

Stark, Erin. (2016). Playful places: Uncovering hidden heritage with Ingress. In Leaver T. & Wilson M, (Eds.) *Social, Casual and Mobile Games: The changing gaming landscape* (pp. 149–164). Bloomsbury Academic. http://dx.doi.org/10.5040/9781501310591.ch-011

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* SAGE Publications.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* SAGE Publications.

Tallinn. (2020). Tallinn, Planeeringud, Üldplaneeringud, Linnaosade üldplaneeringud (Tallinn Planning Department information portal). Retrieved 13 January 2020, https://www.tallinn.ee/est/ehitus/Linnaosade-uldplaneeringud

Tallinn Bicycle Week. (n.d.). *Meist. About Us in English*. Retrieved 13 January 2020, https://www.tbw.ee/tbw-st/about-us

Tammaru, T., Ham, M. van, Marcińczak, S., & Musterd, S. (Eds.). (2016). *Socio-economic segregation in European capital cities: East meets West*. Routledge.

Tammaru, T., Kulu, H., & Kask, I. (2004). Urbanization, Suburbanization, and Counterurbanization in Estonia. *Eurasian Geography and Economics*, *45*(3), 212–229. https://doi.org/10.2747/1538-7216.45.3.212

Tan, E. (2014). *Negotiation and Design for the Self-Organizing City. Gaming as a method for Urban Design [PhD Thesis]*. TU Delft. https://doi.org/10.7480/abe.2014.11.757

Thiel, S. K., Ertiö, T. P., & Baldauf, M. (2017). Why so serious? The Role of Gamification on Motivation and Engagement in e-Participation. *Interaction Design and Architectures*, *35*, 158–181.

Thistoll, T., Hooper, V., & Pauleen, D. J. (2016). Acquiring and developing theoretical sensitivity through undertaking a grounded preliminary literature review. *Quality & Quantity*, *50*(2), 619–636. https://doi.org/10.1007/s11135-015-0167-3

Treija, S. (2009). Housing and social cohesion in Latvia. In A. Holt-Jensen & E. Pollock (Eds.), *Urban Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies* (pp. 197–207). Nova Science Publishers.

Treija, S., & Bratuškins, U. (2019). Socialist Ideals and Physical Reality: Large Housing Estates in Riga, Latvia. In D. B. Hess & T. Tammaru (Eds.), *Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania* (pp. 161–180). Springer International Publishing. https://doi.org/10.1007/978-3-030-23392-1_8

Tuvikene, T. (2019). Between Community and Private Ownership in Centrally Planned Residential Space: Governing Parking in Socialist Housing Estates. In D. B. Hess & T. Tammaru (Eds.), *Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania* (pp. 321–336). Springer International Publishing. https://doi.org/10.1007/978-3-030-23392-1_15

Valdez Young, A. (2015). Play Before Plan: Games for the Public and Planners to Value the Street. *Journal of Urban Technology*, *22*(3), 97–119. https://doi.org/10.1080/10630732.2015.1040299

van Dijk, T., & Ubels, H. (2015). How Dutch professionals conduct interactive design sessions to foster 'shared understanding'''. *Environment and Planning B: Planning and Design*, *43*(3), 464–479. https://doi.org/10.1177/0265813515617658

van Hulst, M., & Yanow, D. (2016). From Policy "Frames" to "Framing": Theorizing a More Dynamic, Political Approach. *The American Review of Public Administration*, *46*(1), 92–112. https://doi.org/10.1177/0275074014533142

Wang, L., & Hoch, C. (2013). Pragmatic rational planning: Comparing Shanghai and Chicago. *Planning Theory*, *12*(4), 369–390. https://doi.org/10.1177/1473095213490553

Wates, N. (2000). *The community planning handbook: How people can shape their cities, towns and villages in any part of the world.* Earthscan.

Webber, M. M. (1983). The myth of rationality: Development planning reconsidered. *Environment and Planning B: Planning and Design*, *10*(1), 89–99. https://doi.org/10.1068/b100089

Wilson, A., Tewdwr-Jones, M., & Comber, R. (2019). Urban planning, public participation and digital technology: App development as a method of generating citizen involvement in local planning process. *Environment and Planning B: Planning and Design*, *46*(2), 286–302. https://doi.org/10.1177/2399808317712515

Winn, B. M. (2009). The Design, Play, and Experience Framework. In R. E. Ferdig (Ed.), *Handbook of Research on Effective Electronic Gaming in Education* (Vol. 3, pp. 1010–1024). Information Science Reference (an imprint of IGI Global). https://doi.org/10.4018/978-1-59904-808-6

Wolfswinkel, J. F., Furtmueller, E., & Wilderom, C. P. M. (2013). Using grounded theory as a method for rigorously reviewing literature. *European Journal of Information Systems*, *22*(1), 45–55. https://doi.org/10.1057/ejis.2011.51

Wu, H.-A. (2017). *Critical play: An action research investigation [PhD Thesis].* University of Illinois.

Yin, R. K. (2003). *Case study research: Design and methods (3rd edition).* SAGE Publications.

Yin, R. K. (2009). *Case study research: Design and methods (4th edition).* SAGE Publications.

Yin, R. K. (2018). Case study research and applications: Design and methods (Sixth edition). SAGE Publications.

Zimmermann, H. (2010). Do Different Types of Capital Cities Make a Difference for Economic Dynamism. *Environment and Planning C: Government and Policy*, *28*(5), 761–767. https://doi.org/10.1068/c286com

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Abstract

Games for enhancing stakeholder participation in spatial planning – the cases of Riga and Tallinn

This research presents the findings of an inquiry into the role of games in enhancing civic engagement in spatial planning in Riga and Tallinn. Spatial planning is recognised as a multifaceted domain, which, on the one hand, requires certain expertise and, on the other hand, calls for the alignment of positions and underlying interests between the actors involved. The demand for aligning controversial perspectives is tackled through the prism of serious games resulting in the development of the Participation Game. Due to the complexity of the research subject, the inquiry is grounded in the constructionist philosophical tradition and employs a qualitative sequential multi-method research design. Each research phase responds to a certain research question, illuminating the array of themes related to the research subject as well as informing the subsequent research phases and associated questions.

The first and second research phases trace the evolution of participatory planning in Latvia and Estonia from the mid-1990s until today and identify the barriers and enabling conditions for participation. The first research phase draws upon the case studies of bottom-up and top-down planning initiatives in Riga and Tallinn, whereas the second research phase builds on the case studies of participation in planning strategic urban areas Mežaparks and Kalarand. The inquiry employs the analysis of relevant documents as well as the analysis of interviews with multiple stakeholder groups involved in the planning process, such as planning agencies, planning offices, developers and neighbourhood associations. Participatory challenges, in line with the stakeholders' perspectives, are attributed to the deficiencies of civic engagement methods and to the history of urban development in the context of unclear rights and responsibilities which perpetuate the controversies between the stakeholders involved.

The third and fourth research phases focus on resolving the aforementioned challenges by means of serious games which are specifically developed for advancing public participation in planning decisions. The third research phase identifies participation-relevant characteristics of serious games and introduces the term "participatory games" through a rigorous study of published research on the topic. The fourth research phase focuses on the specific type of participatory games, namely, deliberative games, and examines the consensus-building potential of role-play visioning games by means of action research unfolding around the collaborative design of the Participation Game. The Participation Game, inspired by the experiences from Kalarand and Mežapark, encourages players to take on the roles of stakeholders with diverging perspectives and negotiate a collective vision for a small space with an uncertain property status within a neighbourhood. The research findings indicate that context-sensitive participation challenges of Riga and Tallinn may be addressed by means of emerging participatory games which exhibit the capacity to enhance participation rates and the quality of contributions, shape actor networks for implementing neighbourhood projects, as well as remedy acute controversies between the actors and steer them towards constructive dialogue.

Keywords: challenges, participatory games, participatory planning, Riga, Tallinn

Lühikokkuvõte

Mängud kui vahend huvigruppide osaluse suurendamiseks ruumiplaneerimises – Riia ja Tallinna juhtumid

Lõputöös on esitatud uurimistulemused mängude rolli kohta kodanikuaktiivsuse suurendamisel ruumiplaneerimise alal Riias ja Tallinnas. Ruumiplaneerimist tunnustatakse mitmetahulise valdkonnana, mis ühelt poolt nõuab teatavaid teadmisi ja teiselt poolt asjaosaliste seisukohtade ja alushuvide ühitamist. Vastuoluliste vaadete lähendamise probleemi lahendatakse "tõsiste" mängude prisma kaudu, mille tulemuseks on Osalusmängu väljatöötamine. Uurimisobjekti keerukuse tõttu põhineb uurimus konstruktsionistlikul filosoofilisel traditsioonil, rakendades kvalitatiivset järjestikust mitmemeetodilist uurimismudelit. Iga uurimisfaas vastab teatavale uurimisküsimusele, valgustades mitmesuguseid uuritavaga seotud teemasid, samuti teavitades järgnevatest uurimisfaasidest ja nendega seotud küsimustest.

Esimene ja teine uurimisfaas jälgivad osalusplaneerimise arengut Lätis ja Eestis 1990. aastate keskpaigast kuni tänapäevani ning tuvastavad osalemise takistusi ja hõlbustajaid. Esimene uurimisfaas tugineb alt üles ja ülalt alla kavandamise algatuste juhtumianalüüsidele Riias ja Tallinnas, teine uurimisfaas põhineb juhtumiuuringutel osalemise kohta strateegiliste linnapiirkondade Mežaparki ja Kalaranna kavandamisel. Uurimisel kasutatakse asjakohaste dokumentide analüüsi, aga ka mitmete planeerimisprotsessis osalevate sidusrühmade, näiteks planeerimisagentuuride, planeerimisbüroode, arendajate ja naabrusühenduste intervjuude analüüsi. Osalemisprobleemid on sidusrühmade perspektiividega kooskõlas seostatud kodanikuühiskonna kaasamismeetodite puudustega, samuti linnaarengu kahtlase ajalooga ebaselgete õiguste ja kohustuste taustal, mis põlistavad asjaosaliste vahelisi vaidlusi.

Kolmas ja neljas uurimisfaas keskenduvad eelnimetatud väljakutsete lahendamisele "tõsiste" mängude abil, mis on spetsiaalselt välja töötatud eesmärgiga edendada avalikkuse osalemist planeerimisotsuste tegemisel. Kolmas uurimisfaas määratleb "tõsiste" mängude osalusega seotud omadused ja tutvustab terminit "osalusmängud" selle teema kohta avaldatud uurimistöö põhjaliku uurimise kaudu. Neljas uurimisfaas keskendub konkreetset tüüpi osalusmängudele, nimelt arutelumängudele, ja uurib rollimängude visioonimängude konsensuse saavutamise potentsiaali Osalusmängu koostöökujunduse ümber toimuva tegevusuuringu abil. Kalaranna ja Mežaparki kogemustest inspireeritud Osalusmäng julgustab mängijaid võtma enda kanda erineva perspektiiviga sidusrühmade rolle ja pidama läbirääkimisi naabruses asuva ebakindla omandilise kuuluvusega väikese ruumi ühise visiooni üle. Uurimistulemused osutavad, et Riia ja Tallinna kontekstitundlike osalusprobleemidega saab tegeleda uute osalusmängude abil, mille abil saab tõsta osalusmäära ja panuse kvaliteeti, kujundada naabrusprojektide elluviimiseks tegutsejate võrgustikke, aga ka lahendada tegutsejate vahelisi teravaid poleemikaid ja suunata nad konstruktiivse dialoogi poole.

Märksõnad: väljakutsed, osalusmängud, osalusplaneerimine, Riia, Tallinn

Appendix

Publication I

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Challenges of recent participatory urban design practices in Riga

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Abstract

The paper reviews three urban revitalisation projects in Riga, Latvia that follow resident empowerment, i.e. the current trend in urban design and planning. *Pagalmu Renesanse* (Courtyard Renascence) and *Labas Vietas Talka* (Nice Place Clean-up) were launched within the framework of Riga - European Capital of Culture 2014. In turn, *Free Riga* was jointly launched by the artists and the entrepreneurs. The projects resulted in the revitalisation of the disused or low-quality urban spaces via the low-budget interventions. Instead of municipal agencies, these projects were initiated by the non-governmental organisations (NGOs) and the urban revival activists. *Free Riga* is still running. Therefore, the main research methods employed were the semi-structured interviews, the participant observations and the field observations. The projects differed from each other in terms of organisation, influence on the urban environment and resident engagement. *Pagalmu Renesanse* and *Labas Vietas Talka* had the clear organisation structures and the action plans, whereas *Free Riga* began its activity with any structure or plan. Overall, the projects succeeded in changing the local built environment. The resident engagement was evaluated according to the contemporary adaptation of Arnstein's (1969) classical work. The resident engagement varied from the consultation to the empowerment.

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Keywords: Bottom-up initiatives; communicative planning; Free Riga; Labas Vietas Talka; Pagalmu Renesanse; resident empowerment; Riga – European Capital of Culture 2014

1. Introduction

Resident empowerment or communicative planning (Backlund & Mantysalo, 2010) or participatory planning (Krivy, 2013) emerged in 1960s (Krivy & Kaminer, 2013). The idea of citizen control over decision-making in

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urban and regional planning was popularized by the works of such influential journalists and social activists like Jane Jacobs (1961) and Paul Barker (1969). Participatory planning flourished from late 1960s to early 1980s. Although still influential in Latin America and, to some degree, USA and some other parts of the world, participatory planning gradually lost its significance in Western Europe and was limited to public consultation (Krivy & Kaminer, 2013; Wortham-Galvin, 2013). In 2000s, with the emergence of social networking and blogging services, like *Facebook* (2004) and *Twitter* (2006), and the financial crisis of 2008-2009, the idea of resident empowerment became again relevant (Wortham-Galvin, 2013; Stenberg, 2013; Hansson et al., 2013). Indeed, information sharing platforms and other state-of-the-art media facilitate communication and allow the mobilisation of human and other resources on the fly. In turn, the decline of the economies impeded the realisation of construction projects and made space for discussion.

There are two fundamental differences between contemporary collaborative practices and those of 1960s - 1980s. Firstly, the scale of participatory projects reduced significantly, from large housing developments, for example in Norway (Selegrend, 1974-81; Bromstad, 1972-74) to small low-budget interventions in public space, for example since 2005 as world-wide Park(ing) Day and in Hammarkullen in Sweden (The Meeting Place and The Patio, 2010-2013) Secondly, recent collaborative projects start often as self-funded grassroots initiatives and in the case of yielding success they are later supported by municipalities. Past projects, in turn, often began as top-down initiatives aimed at citizen empowerment (Hatleskog, 2013; Stenberg, 2013; O'Connell, 2013).

The principal document on communicative planning, which is also a point of departure for the current paper, is the essay of Sherry Arnstein (1969) 'A Ladder of Citizen Participation'. Arnstein (1969) classified citizen participation practices onto eight levels, starting from no impact and ending with full citizen control over decision-making. Thereafter, many contemporary authorships have revised and adapted these ladders, such as Archon Fung's (2006) democracy cube, International Association for Public Participation's (2007) Spectrum of public participation, see Table 1) and Crispin Butteriss' (2012) engagement continuum.

Table 1. Spectrum of public participation (International Association for Public Participation IAP2, 2007).

Increasing level of public impact →				
Inform	Consult	Involve	Collaborate	Empower

In the case of Latvia, participatory urbanism is a new concept which became relevant in 1990s after the withdrawal from the Soviet Union and the subsequent privatisation of the housing stock (Paadam, 2009). *De jure* citizens were included in urban design and planning in the end of 1990s as the corresponding laws were passed, requiring the public approval of municipal and private development plans (LRS, 1995; LRMK, 1997; LRMK, 2007). *De facto* citizen impacts on decision-making were limited to a *veto* right.

In 2009, the situation changed when the municipality of Riga launched the project *Apkaimes* (Neighbourhoods). Among other functions, the project encouraged residents to participate in public discussions of municipal development plans *before* they were designed. Discussions were initiated and organised by municipal agencies and they were limited to public consultation (RDPAD, 2009).

Since 2012, the emergence of resident communities and communicative planning initiatives clearly shows the need for proactive resident involvement in urban development (Kokins, 2015; Ozola, 2015; Turlaja, 2015). New participatory projects significantly differ from the pilot project *Apkaimes* (Neighbourhoods). New projects are initiated and organised by non-governmental organisations (NGOs) and activists. They are jointly funded by the government, the focal municipality and private sponsors (Eglīte, 2014; Kokins, 2015; Kulikovska, 2014; Ozola, 2015; Prilenska, 2015; Rubenis, 2014; Turlaja, 2015).

In this paper, three new urban projects are reviewed, *Pagalmu Renesanse* (Courtyard Renascence), *Labas Vietas Talka* (Nice Place Cleanup) and *Free Riga.* We selected these projects based on the common characteristics. All the three projects are the small low-budget bottom-up initiatives aimed at the revitalisation of the disused or low-quality urban spaces, based on the resident empowerment.

We examined each project in terms of initialisation, organisation, funding, influence on the quality of urban environment and the degree of resident empowerment. Resident engagement was evaluated according to the contemporary interpretation of Arnstein's classification, i.e. the spectrum of public participation (IAP2, 2007). We are aiming to answer the main question "Have these projects succeeded in engaging the residents to higher degrees than that of public consultation?"

For the reviewing, the media publications about the projects, the field observations, the participant observation (Free Riga) and the semi-structured interviews with the experts and project organisers were relied upon. In addition, the project web pages, the project pages in social media and the television broadcasts about the projects have been analysed. From October 2014 to November 2014, the eight field observations at the project locations were conducted. From October 2014 to January 2015, the participant observation in *Free Riga* project was conducted as well as the six semi-structured interviews with the project organisers were carried out. The lengths of the five face-to-face interviews varied from 45 minutes to 1 hour. One interview was conducted via e-mail. The respective results and findings are reported as follows.

2. Pagalmu Renesanse

The project *Pagalmu Renesanse* (Courtyard Renascence) was launched within the framework of Riga - European Capital of Culture 2014. The project aimed at the redevelopment of the courtyards of the apartment buildings. The project began in May 2014 and the sketch design for the 9 out of 14 courtyards was completed in Autumn 2014 (Eglīte, 2014; Latvijas Ainavas Arhitektūras Biedrība, 2014).

The project was a joint venture between *Latvijas Ainavas Arhitektūras Biedrība* (The Latvian Landscape Architecture Union) and the housing associations. The project was initiated by the The Union, which in March 2014 distributed a call for applications in social networks, TV, radio, news websites and municipal client service centres. Housing associations had to apply by May 2014 and the number of openings was limited. The Union delegated a landscape architect for each courtyard. The landscape architects developed the sketch design in collaboration with the residents and consulted them on the legislative issues, such as the building permits. The services of each landscape architect were covered by *Nodibinājums Riga 2014* (The Foundation Riga 2014), The Union funds and the private sponsors. The construction works had to be managed and funded by the residents (Eglīte, 2014; Gāgane, 2014).

By October 2014, the construction works started on the courtyard on Ilģuciema street 3 (Fig. 1a). The housing associations of the courtyards on Maskavas street 163 and Kazarmu street 7 have applied for the building permissions (Eglīte, 2014). By November 2014, when one of the authors conducted the field observations, the construction works began on the both courtyards. Initially, the residents were complaining that the courtyards had the open access and were used by non-residents as parking spaces (Latvijas Ainavas Arhitektūras Biedrība, 2014). Therefore, the construction works started with the erection of the fences. Although the construction works began in only on the 3 out of 14 courtyards, the project contributed into the courtyard refurbishment (Latvijas Ainavu Arhitektūras Biedrība, 2014).

According to Eglīte (2014), the resident activity was low. The project funding did not cover the construction expenses and, generally, the residents were unwilling to invest their time and money. However, the residents participated in the clean-up events as well as they made the basic repairing and planting works. The residents organised and funded the redevelopment of the 3 courtyards only. The most designs were developed by the landscape architects or the landscape architecture students (i.e. the courtyard on Krišjāņa Barona street 122 k-2). The designs of the courtyards on Festivāla street 2, 4, 6 and Aviācijas street 25 were developed by the landscape architect and the local resident Indra Trofimoviča (Latvijas Ainavu Arhitektūras Biedrība, 2014).

3. Labas Vietas Talka

Labas Vietas Talka (Nice Place Clean-up) was launched within the framework of Riga - European Capital of Culture 2014 (Rīga 2014, 2013a). The project resulted into the redevelopment of the three neglected locations into

the public spaces. The pilot project *Alekša skvērs* (the square of Aleksis, fig. 1b) in Sarkandaugava neighbourhood began in May 2013 and was completed in May 2014. The following two projects, *Sālsmaize* (the Housewarming, fig. 2a) in Ziepniekkalns neighbourhood and *Apsolītā zeme* (the Promised Land, fig. 2b) in Čiekurkalns neighbourhood were launched in March 2014 and completed in September 2014 (Rīga 2014, 2013).

Fig. 1. (a) courtyard on Iļģuciema street; (b) *Alekša skvērs* in Sarkandaugava.

The projects were initiated and organised jointly by the NGOs *Ideju Talka* (Brainstorm) and *Laikmetīgas Arhitektūras Informācijas Centrs* (Architecture Information Centre). *Ideju Talka* is a venture which organises structured creative workshops (Rubenis, 2014a). *Laikmetīgas Arhitektūras Informācijas Centrs* is a group of urbanists and architects which provides project management, design and consultation services targeted at urban renewal. Among all, the group organises Riga Technical University's annual summer school (Turlaja, 2013b; Zāģere, 2014). The project was fully funded by the agency *Nodibinājums Rīga 2014*, which, in turn, was funded by the government (40%), the City Council (40%) and the private sponsors (20%) (Rīga 2014, 2013; Kuļikovska, 2014). The project aimed at the place-making by using the ideas to be generated by the local residents. Each sub-project had a different focus, but all the sub-projects followed the same phases from the initialisation to the completion. These phases were the brainstorm, the warming-up event and the opening event. During the brainstorm, the local residents, assisted by the project team, generated the design ideas for the redevelopment of the chosen location and voted for the best idea (Sarkandaugavas Attīstības Biedrība, 2013). During the warming-up event, the project team organised various interest raising activities in the design location and/or refurbished the location in collaboration with the local residents. During the opening event, the local residents and the project team gathered together for the celebration, the workshops and/or the further refurbishment activities (Kulikovska, 2014; Labas Vietas Talka, 2014; Rīga 2014, 2013). The project phases and the activities are summarised in Table 2.

Alekša skvērs, the square of Aleksis, is a permanent small daily-use recreational space for sitting, walking with a child or with a dog, entertainment and sport activities. Street furniture is transformable. Therefore, every visitor can use it in a different way. The square also includes a gymnastics wall for open air work out in warm season (Rīga 2014, 2013; Turlaja, 2013a). *Apsolīta zeme* (Čiekurkalns) is a small summer-use space for various open-air events. Street furniture is basic, there are some sitting places and space zoning elements. *Sālsmaize* (Ziepniekkalns) is an event space, a meeting point and a space for brief occasional communication with a dance floor and information boards (Kuļikovska, 2014; Rīga 2014, 2013).

According to the project description, *Labas Vietas Talka* is the first public space redevelopment project in Riga initiated by the NGOs and conducted in collaboration with the local residents (Riga 2014, 2013). However, the level of the resident engagement varied depending on the location and the sub-project focus. Since the project aimed primarily at the place-making by the design intervention, the residents were engaged in the certain activities only. The organisation and the funding were provided by the project team (Kulikovska, 2014). In the pilot sub-project, *Alekša skvērs* (Sarkandaugava), the residents actively participated in the brainstorming phase and some residents assisted in the execution of the minor refurbishment works. In *Sālsmaize* (Ziepniekkalns), the project residents were

engaged in the brainstorming phase and some minor activities during the warming-up phase. *Apsolītā zeme* (Čiekurkalns) was the only space which was fully refurbished by the local residents (Kuļikovska, 2014; Rīga 2014, 2013; Turlaja, 2013a). The local resident contributions are summarised in Table 3.

Fig. 2. (a) *Sālsmaize* in Ziepniekkalns; (b) *Apsolītā Zeme* in Čiekurkalns.

Table 2. Project timeline, phases and activities.

Date	Phase	Activities
		Alekša skvērs (Sarkandaugava)
2013 May 29	Warming up	Information stand installation, brief clean-up, information sharing with local residents
2013 May 31	Brainstorm	Idea generation and voting for the best ideas
2013 Jul 24, 25	Consultation	Design concept presentation, improvement suggestions from local residents
2014 Apr 5	Warming up	Painting of the fence, the wall and the masts, 1st layer
2014 Apr 24	Warming up	Painting of the fence, the wall and the masts, 2nd layer; sign installation
2014 Apr 26	Warming up	Design objects and gymnastics wall installation
2014 May 1	Opening event	Speeches, gymnastics performance, gymnastics consultation
		Apsolītā zeme (Čiekurkalns), *Sālsmaize* (Ziepniekkalns)
2014 Mar 11, 12	Brainstorm	1st round
2014 Apr	Brainstorm	2nd and 3rd rounds
2014 May 24, 25	Warming up	Marking project locations: in Ziepniekkalns, installation of decorative kerbs with texts by local residents marking the meeting place location, pathway bubble paintings in Čiekurkalns, information stand, trees painted blue
2014 Sep 6	Opening event	Making photographic portraits of local residents, salsa workshop, music band, oak-tree planting, festival *Baltā Nakts* (White Night) project
2014 Sep 13	Opening event	Clean-up, playground furniture installation and painting, gardening and fitness workshops, courtyard games

4. Free Riga

Project *Free Riga* was jointly initiated by the artists and the entrepreneurs. The project aims at the revitalisation of the disused buildings, by temporarily occupying them on a legal agreement basis. *Free Riga* was launched in September 2013 and it is currently running (Free Riga, 2014b).

In Riga, there are many abandoned houses. Some of them belong to private owners. The others are owned by the municipality and/or the state. These houses are disused for various reasons, such as an owner does not have resources to develop a house and is looking for an investor, or a house is for sale. Most houses need renovation. At the same time, there are creative initiatives, such as student organisations, rock bands, small design studios, etc.

Table 3. Organisations, professionals and local resident contribution as part of the three projects.

Project	*Alekša skvērs* (Sarkandaugava)	*Apsolīta zeme* (Čiekurkalns)	*Sālsmaize* (Ziepniekkalns)
Idea	Project team + local residents	Project team + local residents	Project team + local residents
Design	Square - Evelīna Ozola; gymnastic wall - design studion RIJADA and Design Catering	Landscape design studio ALPS	Landscape design studio ALPS
Element production	SIA Balta Trend	N/A	SIA Koka
Construction	SIA Balta Trend + project team + local residents	Project team + local residents	SIA Koka + project team + local residents
Local resident contribution	Idea, location clean-up, painting, installation of some elements	Idea, location clean-up, element installation	Idea, painting of design elements during the warm up event

Creative initiatives need office spaces, but they are not able to pay high rents. *Free Riga* is a mediator between house owners and initiatives (Free Riga, 2014b).

Free Riga gathers information about disused buildings and selects the buildings with the good technical condition and the highest potential in terms of central location, large halls for events, etc. It contacts the owners of buildings and makes legal agreements for temporary use. The length of a contract depends on essential renovation needs and the preferences of an owner. If a building does not need refurbishment, *Free Riga* may compromise with an owner and enter a short-term agreement, such as for one year. If a building needs substantial refurbishment, the length of a contract has to be long enough to cover renovation works. After *Free Riga* has signed a legal agreement, the building is handed over to creative initiatives. Buildings are only meant for offices. Initiatives pay no rent. Instead, they cover utility bills and make basic maintenance and refurbishment works. In exchange, an owner receives property tax breaks. There is a plan to establish a small *Free Riga* membership fee in the future (Prilenska, 2015). *Free Riga* was launched without any predetermined action plan, organisation model or funding. It started with the spontaneous sticker campaign in September 2013, when the group of the activists attached the yellow stickers with the slogan Occupy Me to the façades of the empty houses. Within a month, a web page and a Facebook page were set up. In February 2014, the first house on Līksnas street 26 was opened for initiatives to move in (Fig. 3). By November 2014, *Free Riga* had opened the two houses for initiatives to move in and it had the two more houses in progress (Free Riga, 2014b). In November 2014, the organisational structure of *Free Riga* was set up and the responsibilities were divided between the active members. The evolving organisation consists of small groups, such as a housing group, an initiative group and a public relations group, which manage their affairs independently, but share information with other groups. All strategic decisions are taken at general meetings where all groups are present. By January 2015, *Free Riga* has not got any permanent funding source. The organisation applies for grants or sponsorships for various small projects and events, such as web page developments and pop-up events (Prilenska, 2015).

By January 2015, *Free Riga* has partially revived the two formerly disused houses on Līksnas street 26 and Bruņinieku street 2. The houses were actively used for various events in Summer and early Autumn 2014. In late Autumn and Winter 2014, the number of the activities dramatically fell down because the central heating systems were off (Free Riga, 2014a). In addition, *Free Riga* was negotiating with the municipality to take over an abandoned building ensemble on Tallinas street 10 (Prilenska, 2015).

Free Riga is aiming at collaboration with various interest groups, rather than the activation of single residents. It has initiated many public discussions about disused buildings in Riga. These discussions have attracted a significant amount of visitors, such as the 1-year anniversary (in September 2014) attracted about 700 visitors (Rubenis, 2014b). *Free Riga* is the pure bottom-up initiative with no initial governmental or municipal support. The organisers are the local residents who have empowered themselves by engaging with *Free Riga.* Initiatives moving in houses and owners do not have a full decision-making capacity. They are collaborators. Overall, these features make it difficult to evaluate the actual degrees of local resident engagement.

Fig.3. Free Riga house on Līksnas street.

5. Conclusion

The key features of the three projects are compiled and compared in Table 4. The results and the degrees of resident involvement differed from project to project. According to Eglīte (2014) and Kulikovska (2014), the aims of *Pagalmu Renesanse* included the landscape architecture promotion and the courtyard refurbishment. The aim of *Labas Vietas Talka* was the place-making. The aim of Free Riga was the revitalisation of the disused buildings.

Table 4. Comparison of the key features of the three urban redevelopment projects in Riga during 2013-2014.

Project	Pagalmu Renesanse (Courtyard Renaissance)	Labas Vietas Talka (Nice Place Cleanup)	Free Riga
Aim	Redevelopment of courtyards in collaboration with residents	Place-making	Revitalisation of disused buildings
Time span	Spring - Autumn 2014	Spring 2013 - Autumn 2014	On-going since Autumn 2013
Initiator	The Latvian Landscape Architecture Union	NGOs LAIC, IdejuTalka and Sarkandaugava Development Community	The group of the artists and the entrepreneurs
Organiser	The Latvian Landscape Architecture Union and housing associations	NGOs LAIC and IdejuTalka; project in Sarkandaugava district jointly with Sarkandaugava Development Community	The group of the artists and the entrepreneurs; some activities jointly with NGOs Totaldobže, Urban Institute Riga, etc.
Funding	Municipal agency Nodibinājums Riga 2014; private sponsors	Municipal agency Nodibinājums Riga 2014; private sponsors	Governmental agency Valsts Kutūrkapitāla fonds for certain projects; membership fees (future)
Influence on urban environment	1 courtyard redeveloped and 2 courtyards in the process	2 significantly redeveloped places and 1 less redeveloped place	Activities began in two houses

Target resident group	Housing associations	Local residents	House owners and artists
Active resident group	Housing association activists	Youth, seniors and parents	Youth, artists, social activists
Resident contribution	Discussion, refurbishment works, organisation and funding of construction works	Discussion, refurbishment works	Discussion, refurbishment works, coverage of utility costs; membership fees (future)
Degree of resident engagement	From collaboration to empowerment	From consultation to collaboration	From empowerment to collaboration

Pagalmu Renesanse and *Labas Vietas Talka* had the clear organisational structures, the work plans and the funding. *Free Riga* started its activities with no organisational structure, plan or funding. One year after the initial activities, *Free Riga* shaped its organisational structure as well as defined and shared the responsibilities.

Pagalmu Renesance resulted in the courtyard clean-ups, the refurbishment and the redevelopment of the three courtyards. The latter have the fences and some basic children playground furniture. *Labas Vietas Talka* resulted in the redevelopment of the three public spaces. Thereof, *Alekša skvērs* and *Sālamaize* had the significant design interventions and *Apsolītā zeme* the minor one. *Free Riga* resulted in the temporary revitalisation of the two disused neglected houses.

In the case of *Free Riga*, it was difficult to evaluate resident engagement across various groups engaged with different decision making capacities. In the case of the two projects, the degrees of the resident engagement according to the spectrum of public participation (IAP2, 2007) could be evaluated as follows. The degree of *Pagalmu Renesanse* was from the collaboration to the empowerment. The landscape architects directly translated the resident preferences into the design (Eglīte, 2014). The construction management and the funding were handled by the residents. The construction phase was empowered, i.e. the residents had the full decision making capacity. In turn, the degree of *Labas Vietas Talka* was from the consultation to the collaboration. The designers artistically recycled the resident ideas (Kulikovska, 2014; Ozola, 2015). The construction works were handled by the project team, with the minor resident assistance, i.e. in collaboration.

During all the three projects, the resident engagement was the means to revitalise the neglected and disused urban spaces. It is true that the local residents were not fully empowered. Nevertheless, the emergence of these projects is a positive trend which shows that communicative urban design is becoming a common practice and that designers and city authorities recognise the significance of resident engagement. Aligning with Kulikovska (2014, we believe that project activities encourage resident community establishment and lead towards resident development.

References

Arnstein, S. R., 1969. A Ladder of Citizen - Participation. Journal of the American Institute of Planners 35, 216-224.

Backlund, P., Mäntysalo, R., 2010. Agonism and Institutional Ambiguity: Ideas on Democracy and the Role of Participation in the Development of Planning Theory and Practice – the Case of Finland. Planning Theory 9, 333-350.

Barker, P., 1999. Non-Plan Revisited: Or the Real Way Cities Grow: The Tenth Reyner Banham Memorial Lecture. Journal of Design History 12, 95-110.

Butteriss, C., 2012. A Ladder of Citizen Participation Revisited. Available at http://bangthetable.com/2012/02/23/a-ladder-of-citizen-participation-revisited/ (Accessed on 20 June 2014).

Eglīte, V., 2014. Semi-Structured Interview about the Project Pagalmu Renesanse. Interviewed by Viktorija Prilenska for PhD Thesis. 7 October 2014.

Free Riga, 2014a. Free Riga Facebook page. Available at https://www.facebook.com/FREERIGA. (Accessed on 29 November 2014).

Free Riga, 2014b. Free Riga web page. Available at http://www.freeriga2014.lv/. (Accessed on 29 November 2014).

Gāgane, G., 2014. Vypusk novostej. Interviewed by Elina Suvorova-Pilina and Oleg Gorjachev for Pervyj Baltijskij Kanal. 9 September 2014.

Fung, A., 2006. Varieties of Participation in Complex Governance. Public Administration Review 66, 66-75.

Hansson, K., Cars, G., Ekenberg, L., Danielson, M., 2013. The Importance of Recognition for Equal Representation in Participatory Processes: Lessons from Husby. Footprint: Delft Architecture Theory Journal 13, 81-98.

Hatleskog, E., 2013. Cooperatives, Control or Compromise? The Changing Role of Participation in Norwegian Housing. Footprint: Delft Architecture Theory Journal 13, 99-114.

IAP2 International Association for Public Participation, 2007. Spectrum of Public Participation. Available at http://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/imported/IAP2%20Spectrum_vertical.pdf (Accessed on 20 June 2014).

Kokins, T., 2015. Semi-Structured Interview about the Project VeloRiga and Communicative Planning. Interviewed by Viktorija Prilenska for PhD Thesis. 21 January 2015.

Krivy, M., 2013. Participation, Housing, and the Question of 'Good Architecture'. Footprint: Delft Architecture Theory Journal 13, 163-172.

Krivy, M., Kaminer, T., 2013. Introduction: The Participatory Turn in Urbanism. Footprint: Delft Architecture Theory Journal, 13, 1-6.

Kulikovska, G., 2014. Semi-Structured Interview about the Projects Labas Vietas Talka and Manual: Urban Sports and Architecture. Interviewed by Viktorija Prilenska for PhD Thesis. 28 November 2014.

Labas Vietas Talka, 2014. Labas Vietas Talka Facebook page. Available at https://www.facebook.com/labasvietastalka2014 (Accessed on 29 November 2014).

Latvijas Ainavas Arhitektūras Biedrība, 2014. Pagalmu Renesanse web page. Available at http://riga2014.laab.lv/index.php/par-projektu (Accessed on 27 November 2014).

LRMK Latvijas Republikas Ministru kabinets, 1997. Būvniecības publiskās apspriešanas noteikumi. Latvijas Vēstnesis, 933/934. Available at https://www.vestnesis.lv/?menu=doc&id=44751.

LRMK Latvijas Republikas Ministru kabinets, 2007. Paredzētās būves publiskās apspriešanas kārtība. Latvijas Vēstnesis, 3660. Available at https://www.vestnesis.lv/?menu=doc&id=157684.

LRS Latvijas Republikas Saema, 1995. Būvniecibas likums. Latvijas Vēstnesis, 414. Available at https://www.vestnesis.lv/?menu=doc&id=36531.

O'Connell, K., 2013. Newest Urbanism. Architect. Available at http://www.architectmagazine.com/architects/newest-urbanism.aspx (Accessed on 12 June 2014).

Ozola, E., 2015. Semi-Structured Interview about the the Pproject Labas Vietas Talka and Communicative Planning. Interviewed by Viktorija Prilenska for PhD Thesis. 20 January 2015.

Paadam, K., 2009. Countries in Transition - The Baltic Countries. In: Holt-Jensen, A., Pollock, E. (Eds.) Urban Sustainability and Governance. Nova Science Publishers, Inc.

Prilenska, V., 2015. Free Riga Activity Summary. Participants observed by Viktorija Prilenska for PhD Thesis. October 2014 - January 2015.

Radi Rīgu, 2014. Radi Rīgu web page. Available at http://radirigu.lv/ (Accessed on 26 November 2014).

Rīga 2014, 2013. Līdzdarbīga apkaimju publiskās telpas plānošana - Labas Vietas Talka. Availabe at http://www.riga2014.org/labasvietastalka (Accessed on 25 November 2014).

Rubenis, M., 2014a. idejuTALKA Facebook page. Available at https://www.facebook.com/idejuTalka (Accessed on 26 November 2014).

Rubenis, M., 2014b. Semi-Structured Interview about the Project Free Riga. Interviewed by Viktorija Prilenska for PhD Thesis. 5 October 2014.

Sarkandaugavas Attīstības Biedrība, 2013. Labas vietas talka - idejas Alekša skvēram Sarkandaugavā. Available at http://www.sarkandaugavai.lv/2013/06/labas-vietas-talka/ (Accessed on 26 November 2014).

Sarkandaugavas Attīstības Biedrība, 2014. Sarkandaugavas Attīstības Biedrība web page. Available at http://www.sarkandaugavai.lv (Accessed on 26 November 2014).

Stenberg, J., 2013. Citizens as Knowledge Producers in Urban Change: Can Participation Change Procedures and Systems? Footprint: Delft Architecture Theory Journal 13, 131-142.

Turlaja, A., (2013a). Alekša skvēra dizaina koncepcija gatava. Available at www.a4d.lv/lv/projekti/aleksa-skvera-dizaina-koncepcija-gatava/ (Accessed on 25 November 2014).

Turlaja, A., 2013b. Labas vietas talka Alekša skvēram Sarkandaugavā. Available at http://www.a4d.lv/lv/notikumi/labas-vietas-talka-aleksa-skveram-sarkandaugava/ (Accessed on 25 November 2014).

Turlaja, A., 2015. Semi-Structured Interview about the Project Labas Vietas Talka. Interviewed by Viktorija Prilenska for PhD Thesis. 19 January 2015.

Wortham-Galvin, B. D., 2013. An Anthropology of Urbanism: How People Make Places (and What Designers and Planners Might Learn from It). Footprint: Delft Architecture Theory Journal 13, 21-40.

Zāģere, S., 2014. Labas vietas talka - šogad Ziepniekkalnā un Čiekurkalnā. Available at http://www.a4d.lv/lv/notikumi/labas-vietas-talka-sogad-ziepniekkalns-ciekurkalns/ (Accessed on 26 November 2014).

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CHALLENGES OF CIVIC ENGAGEMENT IN THE (POST-SOCIALIST) TRANSITIONAL SOCIETY: EXPERIENCES FROM WATERFRONT URBAN AREAS MEZAPARK IN RIGA AND KALARAND IN TALLINN

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Abstract. Current case studies examine the shortcomings of civic engagement strategies during the design process and ratification of detailed plans for urban areas of strategic importance – Mezapark in Riga and Kalarand in Tallinn. Detailed plans caused public outcries and led to long-lasting and distressful negotiations between local communities, developers, designers and municipalities over the future development and use of these areas. The debates about detailed plans raised an increasing public interest in planning related issues and growing demands for greater civic engagement in decisions shaping the city. At the same time, the debates demonstrated the inability of local planning frameworks to meet public expectations. There appears a salient need for changing the planning culture. This paper studies the shortcomings of civic engagement strategies and the desirable changes through a series of semi-structured interviews with key stakeholders involved and the analysis of planning related documentation.

Keywords: civic engagement, conflict, Kalarand, Mezapark, planning, public space.

Introduction to the problem and theoretical considerations

It was only at the end of the 1990s when Latvian and Estonian legislations introduced the principle of democratic planning practice by the requirement for public display and involvement of citizens into discussions of urban plans. The actual activities, however, emerged towards the end of the first decade of the 2000s when two plans of public waterfront redevelopment were launched, respectively for Mezapark in Riga (2010–2013) and Kalarand in Tallinn (2003–2016). Both attracted public attention and were followed by protests from the part of the residents of adjacent neighborhoods. The debates about detailed plans demonstrated an increasing public interest in planning related issues, growing awareness of civil rights and a wish to be engaged in decisions shaping the city. The residents' voice highlighted deficiencies in the newly formed local planning frameworks and local engagement strategies, which left but limited space for consensus building. There appeared a salient need for a change in the planning tradition which, undoubtedly, is a long-term process assuming advancement of skills of all parties involved.

The discussion about the importance of civic involvement in planning can be traced back to the 1960s in classical essays of Davidoff (1965), Arnstein (1969) and Friedmann (1973). Davidoff and Friedmann advocated the need for co-planning with citizens, as the citizens provide experiential knowledge of places under planning and are the end users of places (re)created along the plans implemented. Arnstein, in turn, classified citizen engagement into levels by the degree of citizen influence on decision-making. Since the 1960s, participatory planning thought has been extensively discussed and further advanced (Forester, 1987; Healey, 1996; Innes, 1998; Huxley & Yiftachel, 2000; Hoch, 2007; Sager, 2012). The concept of "communicative turn" introduced to planning discourse (Healey, 1996) has gained support among civic leaders and firmly established itself in the planning practice (Faehnle & Tyrvainen, 2013; Shipley & Utz, 2012). As asserted, civic engagement legitimates planning decisions and promotes public support of plans, thus, facilitating plan ratification and implementation (Sager, 2012; Irvin & Stansbury, 2004). According to Irvin and Stansbury (2004, p. 56), the question of whether or not to involve the public is outdated and replaced by a new question about the best strategy for this purpose.

Civic engagement in the planning process is, however, a subject for continuous debates. The advocates claim that participation leads to balanced (and hence better) policy

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solutions, encourages mutual learning, trust and consensus building, promotes civic empowerment (cf Hoch, 2007; Faehnle & Tyrvainen, 2013; Innes, 1998; Irvin & Stansbury, 2004). The adversaries' critique is directed towards the practices of participation management, which with limited representation of certain group interests and inefficient resource expenditure lead to conflicts and frustration (cf Connely, 2006; Doorne, 1998; Huxley & Yiftachel, 2000; Irvin & Stansbury, 2004). Both parties acknowledge that participation is to be conceptualized context-wise and sensitively regarding to implementation (Connely, 2006). A relevant point for the current research is made by Hoyle (2000) who argues that an engagement strategy which is efficient in the society with established communities and long tradition of public involvement in municipal policy-making might be inadequate for the society with emerging communities and no experience of co-planning. The same concerns an observation that a well-intentioned participation strategy might fail if implemented poorly or partially (McGovern, 2013).

The experiences from Kalarand and Mezapark demonstrate that it is important to be specific in the analysis concerning the societal and urban contexts at discussions of the implementation strategies applied in civic engagement practice. The initiatives of waterfront redevelopment that have produced the highest resonance in the planning fields of both cities need to be understood within the recent 28-year history of Latvian and Estonian sovereignty. The fundamentally transformed political, economic and social circumstances, and especially the property reform having left the city but with insignificant share of land ownership (e.g. in Riga and Tallinn), continuously complicates the planning activities by putting the cities into marginal position between controversial stakeholder interests (Paadam & Ojamäe, 2012). Nevertheless, there is a heightened social demand for a cultural change in the field and, in particular, for participatory planning practices (ibid.).

This paper, drawing on the evidence from the case studies, intends to show how the advantages of participation acknowledged by increasingly institutionalizing communities can be counteracted by cities' poor participation strategies at engaging citizens into negotiations on urban redevelopment plans. Mere top-down approach of informing the public on planning intentions hardly qualifies as participatory practice or means to forestall conflict as to show the extended fierce debates between communities, developers and planners in Kalarand and Mezapark. Having eventually reached a compromise rather than full consensus, the experience of the parties demonstrates the very nature of a learning process under unfamiliar circumstances of communicating and negotiating different interests.

The paper aims to contribute into the discussion of evolving participatory practices by elucidating the nature of drawbacks in engagement strategies, in particular, upon the planning cultures in transition. It attempts at sketching the possible solutions to reoccurring complicated situations encountered at negotiations between different interested parties during the process of design and ratification of the detailed plans. The paper first introduces the problem areas of Mezapark and Kalarand, respectively in Riga and Tallinn, followed by an overview of the current planning legislation in Latvia and Estonia within the frame of conflict situations occurring in relation to participatory practices. The methodological considerations underlying the case study research are presented prior the findings and final comments.

1. Cases Kalarand and Mezapark

1.1. Mezapark and Kalarand – the urban areas in focus

Mezapark (Forest park, Figure 1, left) is a ~420 ha culture and recreational park located ~8 km by the Lake Kisezers. The park area was included in the city area in 1904. Forest areas, which constitute 80 percent of the park area, were shaped between 1920 and 1940, cultural and sports infrastructure was built in 1950–1965 and 2008–2011 (Grupa93, 2013; Latvian Riga Forests, 2017). Currently, Mezapark houses the zoo, Song and Dance Festival open air theatre, BMX track, obstacle park for children and adults, playgrounds for children, a beach, a small boat harbor, and multiple cafes.

The park is a municipal property area managed by the governmental institution Rigas Mezi (Riga Forests). In 2010, Rigas Mezi commissioned the plan of the area to the planning office Grupa93. Due to legislation changes, the plan had two public displays, in 2012 and 2013. It was approved in 2013 with minor modifications. Initially, key elements of the plan were: (1) division into four functional areas – for passive recreation, active recreation, waterfront activities and cultural activities; (2) traffic organization – separation of motor transport, pedestrians, cyclists, skaters and skiers, allocation of parking lots; (3) allocation of public utilities, including an amusement park; (4) a solid public waterfront promenade (Grupa93, 2013). In the debate about the plan, there were three points the citizens protested against: (1) the construction of an amusement park; (2) forest transformation for allocation of public amenities; (3) the construction of a solid public waterfront suitable for motor vehicle traffic (ibid.).

Kalarand (Figure 1, right) is a ~7 ha brownfield area located between the Northern edge of the Old Town and the sea. In the Soviet time, the area was a shipyard for the Union of Fishermen, inaccessible to the public (Pro Kapital, 2016), as was the rest of the central waterfront area with mostly military industries, port and severely controlled passenger harbor. After 1991, when the area was liberated from its previous functions and privatized with partly demolished or deteriorated industrial buildings, the waterfront of Kalarand became physically accessible to the public. Currently, the area houses a small yacht harbor, a fish market and an informal pop-up beach.

Figure 1. Top left: location of Mezapark in Riga; right: location of Kalarand in Tallinn (source: authors). Middle left: map of Mezapark; right: map of Kalarand (source: Open Street Map, 2017). Bottom left: Mezapark waterfront; right: Kalarand waterfront (source: authors)

The area is a private property and belongs to the Developer[1], which bought the land in 2001, demolished the fence around the area and the industrial buildings. In 2003, the Developer commissioned the plan of the area to an architecture office Nord Projekt. Due to public protests, the plan had four public displays, in 2008, 2012, 2014, and 2015. It was approved in 2015 with major modifications. Initially, key elements of the plan were: (1) a residential quarter with an underground parking accessible from the seaside; (2) an extended yacht harbor; (3) a public waterfront promenade as part of the city's vision. In the discussion about the plan there were three main conflict points: (1) the design of the apartment blocks; (2) the access to the seaside; (3) the elimination of the pop-up sandy beach with a swimming place initiated by the local residents[2].

Plan for Mezapark and plan for Kalarand have a number of similarities and differences. Both plans redesign a strategic space in the city. The size, history and function of the space are different. Both plans deal with waterfront design and accessibility issues. In case of Mezapark, the de facto private space was designated for public use, and in case of Kalarand, the de facto public space was threatened to become inaccessible. Both were subjected to a substantial public critique, followed by subsequent changes in plans. In Mezapark, these changes were minor compared to substantial changes in Kalarand. The participatory process, however, was similar and caused dissatisfaction among all stakeholders (Key characteristics of the cases Mezapark and Kalarand are summarized in Appendix 1).

1.2. Planning legislation

Following international practices, planning legislation in Latvia and Estonia requires public consultation prior to adopting binding urban plans. Until 1991, Latvia and Estonia were parts of the Soviet Union; therefore, the built environment was planned and developed by governmental institutions in the framework of planned economy and rational planning (Paadam, 2009). Since 1991, after the dissolution of the Soviet Union, Latvia and Estonia transferred to a democratic governance model paving the way to market economy and, hence, market driven urban development. The transition was impetuous, thus, planning legislation was initially adopted from other European countries and later modified to fit local conditions. Currently, urban development is regulated by relatively fresh documents: "Spatial development planning law" (Latvian Parliament, 2011) and regulation No 628 "Regulations about municipal spatial development planning documents" (Latvian Cabinet of Ministers, 2014) in Latvia and "Planning Act" (Estonian Parliament, 2015) in Estonia.

In their essence, planning legislations of Latvia and Estonia are similar. Municipality manages its own spatial development by means of comprehensive (territorial) and detailed (local)[3] plans. Comprehensive plan applies to the whole area of municipality, whereas detailed plan is concerned with a particular land plot or a group of land plots, and accordingly, in greater detail. Both plan types are binding[4] and consist of graphic (maps) and textual (regulations) parts. The requirement of public display with subsequent public discussion of a plan before sending it for approval to a municipal council is enacted. Public display is a time span of one month when any citizen can familiarize oneself with a plan and submit an opinion or a proposal about the plan. Public discussion is a meeting where citizen opinions and proposals are presented, evaluated, accepted or rejected. If an opinion or proposal is accepted, the plan is modified accordingly. If an opinion or a proposal is rejected, the legislation requires a rationale. In both countries, the final decision on acceptance or rejection is taken by the City Council[5].

As planning legislation is valid for all municipalities, from small settlements (~1 thousand residents per ~185 km^2, Baltinavas novads, Latvia (Latvian Office of Citizenship and Migration Affairs, 2016); ~60 residents per 12 km^2, Ruhnu Vald, Estonia (Estonian Ruhnu Municipality, 2017)) to big cities (~700 thousand residents per ~304 km^2, Riga, Latvia (Latvian Office of Citizenship and Migration Affairs, 2016); ~445 thousand residents per ~159 km^2, Tallinn, Estonia (Estonian City of Tallinn, 2017)), it sets minimum requirements for public involvement. Judging upon the comments received from Riga and Tallinn municipality officers, the legislation allows flexible strategies in response to the diverse local circumstances (Tallinn) and encourages proactive strategies towards public involvement given that there is the necessary institutional willingness (Riga).

> The aim of the law is not to be very precise just because there are so many different possibilities and so many different municipalities with their own resources (representative of Planning Department, Tallinn)

> I think the municipalities should apply the practice [of additional civic engagement activities, which

[1] The name of the real estate company, which owns and develops the site, is anonymized.

[2] The information is derived from the interviews with planners, who represent Tallinn Urban Planning Department.

[3] In Latvia and Estonia, the planning documents of the same type are named differently, and appear under different names also in scientific publications. A city master plan in Latvia is named "territorial plan" and in Estonia "comprehensive plan", and a plan for a plot of land or a group of plots of land in Latvia is named "local plan" and respectively "detailed plan" in Estonia.

[4] In Estonia comprehensive plans are binding for a local authority and not binding for land owners. Detailed plans, which must be in accordance with a comprehensive plan, are binding for both a local authority and land owners.

[5] In Estonia detailed plans that are in accordance with a comprehensive plan are ratified by City Administration, which consists of a Mayor and Deputy Mayors (non-elected body). Detailed plans that introduce changes into a comprehensive plan are ratified by a City Council (elected body).

> are complementing those, required by law], but at their own initiative (representative of Planning Department, Riga)

Apparently, the legislation, while stipulating civic engagement to be part of the planning process, leaves space for interpretations. Therefore, the question of how institutional actors such as municipalities apply these regulations in practice remains to be answered in each space-time specific context, either as unavoidable formal procedures or meaningful negotiations between all the stakeholders. How municipalities act towards citizens' initiatives or protests or, specifically, neighborhood associations, will be discussed on the experiences of Kalarand and Mezapark in this paper. (The similarities and differences between Latvian and Estonian planning frameworks, as well as between the cities of Riga and Tallinn, are summarized in Appendix 2).

2. Methodological considerations

Inspired by indications of complicated participatory processes in Mezapark and Kalarand, our aim was to find out how the planning systems in Latvia and Estonia could be modified to meet the growing demand for community engagement in planning. For an advanced in-depth inquiry of the public engagement practice in particular, the cases were revisited upon the following research questions: (1) How and under which circumstances did the stakeholders become dissatisfied with the civic engagement process in cases of Mezapark and Kalarand? (2) In what ways do the stakeholders prefer the civic engagement process to be changed in future? The broader aim of the research was to develop a holistic understanding of the issues hampering civic engagement in transforming societies with, in particular, the planning systems continuously in transition.

2.1. Research strategy

The explored problem-driven experiences of public engagement practices from Mezapark and Kalarand are set in real-life contexts of two cities at similar circumstances of societal transformation, yet sensitized towards their specific nature. Therefore, an approach of a multiple case study with embedded units was adopted to enable a comparative analysis of multiple sources of evidence attained by exertion of various methods and additional inquiries arising during the analysis process (Yin, 1994, 2018). It is asserted along with Creswell (2013, p. 101, 102) that the study limited to fewer cases, two in the current research, within defined scope and boundaries of time ensures deeper insight into the phenomenon under observation. To capture the depth of different views on the experience in question, and thus of multiple realities, the social constructivist perspective rooted in interpretivism (King & Horrocks, 2011) was adopted to conduct a qualitative study. As an attempt to construct a holistic understanding of civic engagement, this in-depth research builds on argumentations drawn on interpretations of generated data (Mason, 2007; Bazeley, 2013; Creswell, 2013) of both the subjective and structural nature.

2.2. Selection of cases and data generation

The principal challenges in the civic engagement process studies are the availability and accessibility of information (cf Creswell, 2007, 2013) as well as the assumed informative quality of data (Rudestam & Newton, 2007). As such, the cases of Mezapark and Kalarand were purposefully selected with some awareness of the problem issues encountered in the practice of applying participatory approach in urban planning, the regulations of which had been only recently introduced in the legislations of Latvia and Estonia. The selected cases are explicit representations of the complexity of participatory planning, which with a number of stakeholders pursuing their interests in the areas under redevelopment, were considered a promising source for new knowledge production on ample and multifaceted information.

Accruing from the rationale behind this qualitative case study, a number of methods and techniques were applied for data generation. To set the stage, literature research on relevant publications was first conducted. The document analysis of two categories included planning laws and regulations for Latvia and Estonia, and detailed plans for Mezapark and Kalarand, mostly accessible online. Some plan related documents for Kalarand were sourced from the designer and developer. The original cover text for Mezapark plan with building regulations for the planned area, citizen proposals with designer's comments was available. The cover text for the Kalarand plan was accessed from the task of the architectural competition for a housing project in the area, with a brief historical background of the area, future vision and architectural assignment developed in accordance with the detailed plan. Additionally, the report describing the sequence of events during the planning process for Kalarand was examined. The information on the cases was available to a different degree, with Mezapark having documented the process and outcomes in greater detail.

The experiential accounts on the documented planning process and perceptions of the actual process, as well as preferences for prospective participatory planning were generated on semi-structured interviews with three distinct stakeholder groups: representatives of neighborhood associations, property development companies and cities' planning departments. Eighteen interviews, nine on both cases, were conducted in March–June 2016, September–November 2016 and additionally in December 2018, following the qualitative logic of reflexivity as concerns being open to the emerging new questions/dimensions during the analysis conducted in parallel with interviewing, and the respective adjustment of the research questions (cf Mason, 2007; King & Horrocks, 2011).

2.3. Data processing

Resulting from a thematic analysis of different integrated data sources (Bazeley, 2013; King & Horrocks, 2011)

Table 1. Matrix of data sources and emerging themes (source: authors)

Source / Theme	Interviews	Documents	Scientific publications
Quality of contributions into the planning process	Opinions about residents' capacity to contribute into the planning process	Documented residents' opinions and proposals with designers' responses	Reflections on residents' capacity to contribute into the planning process
Perceptions of the other	Attitudes towards different stakeholders	–	Interpretations of attitudes towards different stakeholders
Mode of engagement (When? How?)	Opinions about current engagement procedures	Legal requirements for engagement	Analysis of real-life and ideal engagement procedures
Representativeness	Evidence on participants and the degree of their engagement	Number and affiliation of residents engaged	Evidence on the number and profile of participants
Roles of planning departments (referred to as "local government")	Opinions about the attitude and actions of the planning department	–	Recommendations for planners
Outcomes of negotiations	Perceptions of final outcomes	Changes in final plans compared to initial plans	–

evolving from upon the procedures of initial coding of interviews towards comparable code categories on, also, the planning documents and relevant publications, building consistent interrelationships within the overall aim of this research, the analysis arrived on an advanced level of comprehensive themes enabling answering the research questions. Table 1 presents the matrix of the themes that emerged in the analysis of the related data sources. The detailed presentation of different stakeholders' perceptions along with the interrelated themes from literature and as such against the planning documents will be discussed in section 4 Findings. Following the code of ethics, all quotations are anonymized.

3. Findings and discussion

3.1. Quality of contributions

The analysis of interviews allows asserting that the plan design and adoption process for Kalarand and Mezapark were hampered by mutually biased mistrust between developers, designers and planners representing a "pro development professional" group, and the citizenry in general and neighborhood associations, in particular, a "counter development laymen" group. While designers abstained from expressing direct judgements, the developers and planning department officers were skeptical about the competences of the residents and their ability to provide meaningful contributions. "The public… pays attention to visual details not… entering into real topics", says a developer from Tallinn. "Usually the opinions of the citizens are subjective", adds a municipality officer from Riga.

The analysis of documents on planning procedures proved the biased attitudes to be unreasonable. Firstly, neighborhood associations had professionals among their members, lawyers (both), architects (Kalarand), and spatial planners (Mezapark). Secondly, citizen feedback about the plans was precise and constructive. The designer of the Mezapark plan received and documented 21 comments on 55 A4 pages. Three of these comments were letters from neighborhood associations, containing 13, 18 and 19 points each. Four of these comments were letters from private persons containing 4, 6, 10 and 48 points each. Residents' well-structured comments were supported by a community-wide survey about the values of Mezapark. Moreover, some comments pointed out mistakes and inaccuracies in the planning documents, which were later corrected by the designer. For the Kalarand plan, a similar document providing information about the resident comments was not available. However, judging upon interviews with community representatives, the residents studied the plan thoroughly, highlighting controversial points. Furthermore, the community hired a professional consultancy to evaluate the plan, which revealed the deficiencies, including the mismatches between the plan and higher-level planning documents (Lindmae, 2014).

The review of co-planning cases shows that the quality of citizen input is a common concern due to the lack of relevant education and access to the relevant information (Doorne, 1998; McGovern, 2013; Vayona, 2011). However, the experience from Kalarand and Mezapark proves that these concerns should be treated contextually. In both cases, the representatives of neighborhood associations were professionals in the planning field, and socially and politically active citizens. There is a positive trend in the quality of public input, as a planner from Tallinn admits, "[citizens] know more about... urban planning... and… [the share] of constructive criticism… is getting higher".

3.2. Perceptions of the other

Another recurring argument from the developers and planners was about the resistance of the community to any change – "I don't like it" attitude. "[The community's]…

wish was just to prolong the process and to maintain the status quo", claims a developer from Tallinn. "The residents don't want any development", echoes a planner officer from Riga. Community representatives clearly stated in the interviews that the residents approve the idea of developing the area, but resist the proposed design solutions. Instead, in Mezapark, the community suggested a balanced neighborhood development plan drawn on self-initiated resident survey. In Kalarand, the residents fought for maintaining a small beach area with self-made street furniture as commented by a community representative, "... it has been about... the use of sea-side... the access to the sea-side… never…against the development". These examples showcase the critique against inconsiderate top-down planning and a clear demand for bottom-up approach.

The communities expressed mistrust in the developers and designers, and, at the same time, were skeptical about the ability of municipalities to protect their interests. The citizens were struggling rigorously for precise wordings in the building regulations to avoid any later misinterpretation. They feared that any kind of ambiguity would be interpreted in favor of the developer, allowing developers "tricks" as it was expressed with reference to developer's potential intentions.

> In professional language [the designer] can put it in a way that no one pays attention…and it gets through… (a community representative, Riga)

> [The developer and the city] haven't agreed that… this [area] is in public use. Legal... agreements behind it… the contracts... everything was missing (a community representative, Tallinn)

The mismatches in the plans and plan complexity only contributed to the residents' concerns. In case of Mezapark, the designer prepared infographics summarizing the main features of the plan. Original documents, building regulations, maps, street sections, cover text, etc., were available at the municipality's website. However, the residents claimed that the infographics provided limited information and, thus, were misleading.

> The construction of an amusement park is not reflected in the infographics, thus residents get a corrupted impression of the essence of the plan (a community representative, Riga)

In Kalarand, on the contrary, the residents blamed the developer and designer for the absence of infographics as the original plans were unreadable.

> The detailed plan is like absurdly complex... in public display the drawing of the plan was… I don't know... 10 meters long …And they expect that on computer screen you will understand everything! (a community representative, Tallinn)

Developers and designers, in turn, were disappointed by mistrust from the part of the community, arguing that landowners' dispositions have changed over the past ten to fifteen years and they are interested in producing quality.

> … the profit comes if the property is good and if the surroundings are good, if the public spaces are good, if the accessibility is good… (a developer, Tallinn)

Developers and designers unanimously agree upon the difficulty of overcoming the mistrust and proving the plans to have been designed according to the planning legislation and there is no hidden agenda.

> [There were] cases where… there was something in the project, which no one paid attention to… and when the project was realized… it didn't meet the expectations…but it happened unintentionally (a designer, Tallinn)

Examining the public display process, it becomes obvious that "there was a discussion, but there was no dialogue", as a designer in Riga admitted. Conflicting parties took defensive positions and, thus, were unwilling to accept the other's concerns and arguments. Mistrust in opponents' abilities and intentions exacerbating tensions is a "common disease" of many co-planning initiatives (cf. Inness & Booher, 1999) and the only way to achieve success is to build trust by respecting the other's position.

3.3. Mode of engagement

A crucial issue rarely discussed is the timing and nature of resident involvement, in other words, when to involve citizens in the planning process and what questions to ask. Usually, the residents are invited to comment on the final plan. There is neither a co-design phase, nor an opportunity to refuse the initiation of a plan (Casini, 2017). Residents may either approve final solutions proposed by a plan, or criticize them. As an expert from Tallinn admits, "it's kind of…too late".

Nevertheless, a working group with limited public access was founded in Mezapark, to discuss solutions proposed by the plan as it progressed. In Kalarand, a few mediation meetings were held between the stakeholders to address the protests of individual local residents and neighborhood association and seek consensus about solutions proposed by the plan. Neither a working group nor mediation meetings are required by the legislation.

Planners, developers and community representatives agree that the planning approach should be modified to encourage early engagement. The representative of a Tallinn neighborhood association suggests that it should start from "mapping the values of a neighborhood or the city". Although not required by legislation, early engagement was recommended at the time when plans were under development, as indicated by a planner in Tallinn, "We encourage planners and land owners… to start with... the involvement of community before it's legally necessary… ".

Planners from Riga and Tallinn consider the current planning procedures as redundant and resource consuming, in particular, the detailed plans, similar to construction projects and mostly on one land plot at a time, developed by private planning or architecture offices. Planners'

suggestion is to merge the two to save the resources and to introduce the residents in due time to a planning proposal, and a design proposal, which follows the plan. As a planner from Riga remarks, "the residents could see /.../ how this wonder will look like, and what they have to expect".

A common concern among planning scholars is managed participation, which creates the appearance of engagement activity without real intention to include residents' opinions into plans (Connelly, 2006; Johnson et al., 2017), the more the late engagement, allowing no significant changes to the schemes already negotiated with key players (Wilson et al., 2019, p. 2). The reasons for that are often of technical nature, i.e. the timing of engagement or the nature of data collected. As Johnson et al. (2017) report, decision-makers prefer quantitative data over qualitative, and it is unclear how to translate qualitative data generated in discussions into evidence that is meaningful for decision makers.

3.4. Representativeness

Citizens involved in the discussion of plans were limited to local communities. Mezapark residents were represented by a neighborhood association Mezapark and Pavu Street community – a total of 51 participants (counted by contributions). Kalarand residents were initially represented by individuals. Since 2012, the case was overtaken by a neighborhood association Telliskivi Selts – a total of ca 2400 participants (counted by signatures). Despite the significance of both areas for the cities, residents from the neighborhoods not bordering the areas of detailed plan were not involved in negotiations.

The designer and the developer of the Mezapark plan assert that the association and the community involved in negotiations are non-representative of the local residents with differentiated preferences, which they relate to their specific housing conditions. While the involved residents live in the detached houses bordering the area of the detailed plan, the non-involved residents live in nearby blocks of flats at Ostas Street as well as in other parts of the city, and come to Mezapark on sunny days after visiting the Zoo. Their critique concerns the residents of detached housing, opposing the development with an intention to maintain a sense of their private property on an extended spatial scale, while the area could offer enjoyable conditions also for the families residing in flats in tight spatial conditions or people from other neighborhoods.

> They want playgrounds for children, sport infrastructure for children. The opportunity to visit events. /.../ the place where they could enjoy nature. /.../ for many Riga residents [infrastructure is important]. In Riga there are few places /…/ to have a walk in the forest, with paths, lighting, catering and recreational places (a developer, Riga)

A designer from Riga asserts that there is no unified public opinion about the projects of strategic importance. There is often a share of citizenry who supports a project, and who criticizes it. It is essential to balance divergent public interests.

> Living in the city we all have certain duties and responsibilities /.../ It happened that those who live further are satisfied with the project, but those, who live closer, say, we do not like it (a designer, Riga)

In Kalarand, there were no comments from the part of interviewees about the deficiency in representativeness as the community bordering the area of the detailed plan was well represented by the Telliskivi Selts. Additionally, the Tallinn Planning Department commissioned a qualitative study on preferences for waterfront development, which was conducted from the perspectives of a wide range of potential users, involving, also, citizens of other neighborhoods as well as neighborhood associations. With the exception of only a few business actors, the interviewees of various social standing were explicit in their support for public access to the waterfront and the local residents' intentions to save Kalarand and the beach (Paadam & Ojamäe, 2012).

Strategies for involving passive (or underrepresented) residents' groups are widely discussed among participatory planning researchers (cf, Brown & Kyttä, 2014; Thiel & Frohlich, 2017). Donders et al. (2014) argue that the "usual" participants are often non-representative of local communities. Nienhuis et al. (2011) confirm the argument on the study on Netherlands, which shows the overrepresentation of the unemployed, housewives/househusbands or the retired among the "usual" participants, while other residents' groups remain underrepresented. Thus, instead of balancing stakeholder interests, participation merely reshuffles them (Nienhuis et al., 2011, p. 107). The case of Mezapark illustrated the deficiencies of partial representativeness. Although planning department officers, designer and developer mentioned the need to involve "the silent majority", there were no efforts made to inform or involve them beyond the minimum legal requirements.

3.5. Roles of planning departments

Planners and designers recurrently argued that the active minority who participates in public displays and discussions often follows their vested interests. "I often encounter the cases, where [the residents] think about their own benefits rather than about public interest", says a planner from Riga. "/…/ often it is not in the interest of a wider audience, but in the interest of someone in the community", adds a planning officer from Tallinn. The designer from Riga supports the opinion of planning officers, stating that "there should not be any NIMBY groups hiding among the participants". Their accounts on interactions with negotiating parties are fairly consistent with realities encountered in their daily professional activities as well as their main task to be seeking for balanced solutions for various "selfish" interests of resident groups, land owners, developers or entrepreneurs etc. Their task, however, assumes listening and considering equally the voices of all

different stakeholder groups.

> Public interest consists of various interests... at the end of the day the city has to decide... what stays on the table /… / But it… depends on what do you want to get… do you want to get more cars or do you want to get more pedestrians?… I'm talking about… the end result philosophically… (an expert, Tallinn)

Furthermore, the task of municipality is to ensure that these various interests are represented in the discussion. The more interests are present, the closer is the common understanding of the shared "public interest".

The stakeholders are though critical of the municipalities having taken passive positions and showing no initiative in mediating the conflicts.

> [The municipality] could have helped us with in the planning process... let's meet…let's… find out a solution… do something extra, than what is required by the planning law. But they didn't show any initiative (a community representative, Tallinn)

The interviewed residents, for example, repeatedly expressed the concern about the municipality not exercising its "legal rights", the "legal power" to steer the development of the city towards sustainability with balanced stakeholder interests.

> The task of the municipality to design a sustainable city, where the interests of [residents and developers] are aligned… Developers and residents need good environment. The developer can request to build a nuclear plant… And the city should say why there can't be a nuclear plant next to the kindergarten (a community representative, Riga)

The developers, in turn, urged the city to define the priorities and take the decisions fast, as the circumstances for development change rapidly together with economic situation. According to a developer representative from Tallinn, "the City… should have taken clearer decisions faster...than they took".

The criticism on participatory practices of municipality is common for local contexts, whereas the current discussion on the topic tends to be rare. Speaking of the role of the planner, Forester (1987) emphasizes that the planners often have to manage conflicting situations between various parties; therefore, negotiation and mediation skills are essential. Shipley and Utz (2012) support the argument by stating that the task of the planner (or the administrator) is to balance different interests and ensure the fairness of the process and outcomes for all stakeholders. Thus, planners are in a difficult position, as their tasks are to navigate through conflicting interests and, furthermore, to address political agenda of elected representativeness. Local municipalities in Tallinn and Riga are just entering the field of communicative planning and, thus, have little experience managing such complex situations. As a designer from Riga asserts, "we cannot /.../ jump over certain development stages [of a civic society]".

3.6. Outcomes of negotiations

3.6.1. Mezapark

After protests and negotiations, the citizens managed to achieve certain changes in the plans to meet their preferences. The idea about the construction of an amusement park was withdrawn and the design of the waterfront was subjected to a competition. The waterfront was a contradictory issue as there was no unified opinion among the citizen groups. The interviewees asserted that some residents wanted a solid waterfront accessible for motor transport, while others were advocating for a soft, natural waterfront, vulnerable to water fluctuations. The competition allows another round of debates on the waterfront design.

> If we had a promenade, [Pavu Street residents] could use it [to access their properties]. They wouldn't need to go through the park. Cafe suppliers could, also… avoid entering the park (a developer, Riga)

> Greece is an excellent example where due to solid waterfronts the link to the water doesn't exist… How many places there are in Riga where is it possible to walk with the kids along the natural water edge? From the sustainability perspective… We won't be able to get a natural waterfront after building an artificial one! (a community representative, Riga)

Despite some accomplishments, the community representatives consider Mezapark plan "a lost case", as two of three conflict issues, forest transformation and waterfront redevelopment, remained in the plan. The developer, in turn, regrets that the amusement park construction was rejected.

3.6.2. Kalarand

In Kalarand, the expansion of the harbor and the construction of the waterfront road were dismissed. The citizens also secured a 20 m wide traffic-free seaside promenade and a beach with a swimming place, resulting in 40 percent of the private area being in public use and managed by the municipality. The design of the buildings on the site was subjected to a design competition.

> …from our territory... over forty percent will be given to the public use… from the six hectares we can cover only twelve thousand three hundred square meters… twenty percent of the total area (a developer, Tallinn)

Both conflicting parties, the developer and the community, were to a certain extent satisfied with the outcomes, and the plan was ratified. The developer was satisfied with the opportunity to start developing the area, as larger and better public spaces could potentially raise the future housing value.

> We came to the decision that [the conditions of the detailed plan] are acceptable for us... Because… the

public areas... will increase… the value of the area (a a developer, Tallinn)

The community, in turn, assured the public waterfront and the beach with a swimming place it was worth fighting for. "We had a… long and painful cooperation… and we… reached quite a good outcome for the public seaside… ", says a community representative from Tallinn.

Civic participation is often criticized for its managed nature and the lack of public influence on actual decisions (cf McGovern, 2013; Connely, 2006). Indeed, according to Latvian and Estonian legislation, the final decision is taken by municipality. Municipal decision can override any proposal from any stakeholder and can be argued against only in the court. The experiences of Kalarand and Mezapark cannot, however, be considered redundant (cf Faehnle & Tyrvainen, 2013). The reason is that the collective efforts, especially those of the residents, managed to improve the quality of plans and preserve local values.

Conclusions

General observations from the study of Kalarand and Mezapark allow concluding that the debates surrounding the development plans of the areas in focusreveal that the change of planning culture is a long-term process and takes more than the changes in the respective legislation. It is asserted that the compromise on the area development was eventually reached due to the gradually growing recognition of the value of civic engagement in urban planning, involving representatives of municipalities, developer companies and institutionalized resident communities represented by neighborhood associations.

However, these case studies on urban waterfront sites need to be considered contextually, also, against their specific position in the patchwork of urban districts in Tallinn and Riga, offering a development potential for stakeholders of different profile and having therefore become the sites of struggles. With planning of public space at the core, it is asserted that the interest of citizens and residents of adjacent prestigious neighborhoods were to a smaller or greater degree met primarily due to high concentration of cultural capital in these areas, i.e. the presence of highly educated active residents, often professionals in the fields of urban planning, architecture, law etc. As different from a "usual" community member (cf Nienhuis et al., 2011), these residents pertain the capacity to pursue their interests and produce alternative vision for urban development.

The evidence from the research shows, however, that moving towards efficient civic engagement does not proceed without complications. Mutual prejudice and mistrust, which can be related to the slowly disappearing legacy of the previous social system as well as the early 1990s practices, hamper negotiations. There is continuously space for the cities' planning offices to take a professional position of an "enlightened" mediator between the equally respected stakeholders and pave a way towards democratic participation culture.

Today, civic engagement is regulated by the national legal planning framework with no distinctions for small or big municipalities of various financial and professional capacities. This implies that the requirements for civic engagement procedures are limited to a public display with a subsequent public hearing. Despite having greater capacity, the big Riga and Tallinn municipalities fulfil only the basic legal requirements with redundant planning framework requiring public displays for each and every detailed plan, which might not altogether require public display. These resources could be redirected to introduce engagement procedures for plans of strategic importance, meeting public interest beyond the immediacy of detailed plans, the negotiations of which are often self-initiated by the local residents. Hence, the protection of residents' interests relies with active individuals' and neighborhood associations' capacities. The reasons for this practice could also be found in the fragmented organization of the planning departments with divided responsibilities for lower level plans and higher level plans, which further complicates steering the development of the city and participation culture to be rooted in both cities.

References

Arnstein, S. R. (1969). A Ladder of citizen participation. *Journal of the American Institute of Planners*, *35*(4), 216–224. https://doi.org/10.1080/01944366908977225

Bazeley, P. (2013). *Qualitative data analysis: Practical strategies*. SAGE Publications.

Brown, G., & Kyttä, M. (2014). Key issues and research priorities for public participation GIS (PPGIS): A synthesis based on empirical research. *Applied Geography*, *46*, 122–136. https://doi.org/10.1016/j.apgeog.2013.11.004

Casini, C. (2017). Citizen engagement for sustainable development of port cities: The public debate about development projects of livorno port. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (Vol. 10409 LNCS, pp. 416–429). https://doi.org/10.1007/978-3-319-62407-5_29

Connelly, S. (2006). Looking inside public involvement: How is it made so ineffective and can we change this? *Community Development Journal*, *41*(1), 13–24. https://doi.org/10.1093/cdj/bsi046

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. SAGE Publications.

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design. Choosing Among Five Approaches*. SAGE Publications.

Davidoff, P. (1965). Advocacy and pluralism in planning. *Journal of the American Institute of Planners*, *31*(4), 331–338. https://doi.org/10.1080/01944366508978187

Donders, M., Hartmann, T., & Kokx, A. (2014). E-participation in urban planning: Getting and keeping citizens involved. *International Journal of E-Planning Research*, *3*(2), 54–69. https://doi.org/10.4018/ijepr.2014040104

Estonian City of Tallinn. (2017). *Statistical yearbook of Tallinn 2017*. https://www.tallinn.ee/eng/Statistics-and-yearbooks

Estonian Parliament. (2015). *Planning Act*. Riigikogu.

Estonian Ruhnu Municipality. (2017). *Welcome to Ruhnu!* http://ruhnu.ee/en/web/english/english

Faehnle, M., & Tyrvainen, L. (2013). A framework for evaluating and designing collaborative planning. *Land Use Policy*, *34*, 332–341. https://doi.org/10.1016/j.landusepol.2013.04.006

Forester, J. (1987). Planning in the face of conflict: Negotiation and mediation strategies in local land use regulation. *Journal of the American Planning Association*, *53*(3), 303–314. https://doi.org/10.1080/01944368708976450

Friedmann, J. (1973). *Retracking America: A theory of transactive planning*. Anchor Press.

Grupa93. (2013). *Kultūras atpūtas parka "Mežaparks" lokālplānojums* (Detailed plan). Riga.

Healey, P. (1996). The communicative turn in planning theory and its implications for spatial strategy formations. *Environment and Planning B: Urban Analytics and City Science*, *23*(2), 217–234. https://doi.org/10.1068/b230217

Hoch, C. J. (2007). Pragmatic communicative action theory. *Journal of Planning Education and Research*, *26*(3), 272–283. https://doi.org/10.1177/0739456X06295029

Hoyle, B. (2000). Confrontation, consultation, cooperation? Community groups and urban change in Canadian port-city. *Canadian Geographer*, *44*(3), 228–243. https://doi.org/10.1111/j.1541-0064.2000.tb00706.x

Huxley, M., & Yiftachel, O. (2000). New paradigm or old myopia? Unsettling the communicative turn in planning theory. *Journal of Planning Education and Research*, *19*(4), 333–342. https://doi.org/10.1177/0739456X0001900402

Innes, J. E. (1998). Information in communicative planning. *Journal of the American Planning Association*, *64*(1), 52–63. https://doi.org/10.1080/01944369808975956

Innes, J. E., & Booher, D. E. (1999). Consensus building as role playing and bricolage. *Journal of the American Planning Association*, *65*(1), 9–26. https://doi.org/10.1080/01944369908976031

Irvin, R., & Stansbury, J. (2004). Citizen participation in decision making: Is it worth the effort? *Public Administration Review*, *64*(1), 55–65. https://doi.org/10.1111/j.1540-6210.2004.00346.x

Johnson, I. G., McDonald, A., Briggs, J., Manuel, J., Salt, K., Flynn, E., & Vines, J. (2017). Community Conversational. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems – CHI '17* (pp. 2320–2333). https://doi.org/10.1145/3025453.3025559

King, N., & Horrocks, C. (2011). *Interviews in qualitative research*. SAGE Publications.

Latvian Cabinet of Ministers. (2014). Noteikumi par pasvaldibu teritorijas attistibas planosanas dokumentiem (No. 628). *Latvijas Vestnesis*, *215*(5275).

Latvian Office of Citizenship and Migration Affairs. (2016). *Latvijas iedzīvotāju skaits pašvaldībās*. Riga.

Latvian Parliament. (2011). Teritorijas attistibas planosanas likums. *Latvijas Vestnesis*, *173*(4571).

Latvian Riga Forests. (2017). *Kultūras un atpūtas parka "Mežaparks" vēsturiskie attīstības laikposmi*. http://www.rigas-mezi.lv/lv/mezaparks/vesture/?doc=7091

Lindmae, M. (2014). *Urban waterfront regeneration and public participation. Confrontation or cooperation? The case of Kalaranda, Tallinn* (unpublished Master thesis). Barcelona, Universitat Autonoma de Barcelona.

Mason, J. (2007). *Qualitative researching*. SAGE Publications.

McGovern, S. J. (2013). Ambivalence over participatory planning within a progressive regime. *Journal of Planning Education and Research*, *33*(3), 310–324. https://doi.org/10.1177/0739456X13481246

Nienhuis, I., van Dijk, T., & de Roo, G. (2011). Let's collaborate! But who's really collaborating? Individual interests as a leitmotiv for urban renewal and regeneration strategies. *Planning Theory & Practice*, *12*(1), 95–109. https://doi.org/10.1080/14649357.2011.546671

Paadam, K. (2009). The Baltic countries – Introduction. In A. Holt-Jensen, & E. Pollock (Eds.), *Urban sustainability and governance: New challenges in Nordic-Baltic housing policies* (pp. 171–177). Nova Science Publishers.

Paadam, K., & Ojamäe, L. (2012). *The potential formation of the waterfront area in the vicinity of the future Tallinn City Government building. On assessments and dispositions of the related actor groups*. Tallinn University of Technology. https://uuringud.tallinn.ee/uuring/vaata/2012/Tallinna-Linnavalitsuse-uue-hoone-kavandamisest-lahtuv-mereaarse-lahiala-kujunemine-ja-sellega-seotud-kasutajagruppide-hinnangud-ja-hoiakud

Pro Kapital. (2016). *Kalaranna 1 registered property. Public one-stage architectural competition. Terms of reference* (unpublished competition rules). Tallinn.

Rudestam, K. E., & Newton, R. R. (2007). *Surviving your dissertation: A comprehensive guide to content and process*. SAGE Publications.

Sager, T. (2012). *Reviving critical planning theory: Dealing with pressure, neo-liberalism, and responsibility in communicative planning*. Routlege. https://doi.org/10.4324/9780203104187

Shipley, R., & Utz, S. (2012). Making it count: A review of the value and techniques for public consultation. *Journal of Planning Literature*, *27*(1), 22–42. https://doi.org/10.1177/0885412211413133

Thiel, S.-K., & Frohlich, P. (2017). Gamification as motivation to engage in location-based public participation. In G. Gartner, & H. Huang (Eds.), *Progress in Location-Based Services 2016* (pp. 399–421). Springer International Publishing AG. https://doi.org/10.1007/978-3-319-47289-8_20

Vayona, A. (2011). Investigating the preferences of individuals in redeveloping waterfronts: The case of the port of Thessaloniki – Greece. *Cities*, *28*(5), 424–432. https://doi.org/10.1016/j.cities.2011.05.007

Wilson, A., Tewdwr-Jones, M., & Comber, R. (2019). Urban planning, public participation and digital technology: App development as a method of generating citizen involvement in local planning process. *Environment and Planning B: Planning and Design*, *46*(2), 286–302. https://doi.org/10.1177/2399808317712515

Yin, R. K. (1994). *Case study research: design and methods*. SAGE Publications.

Yin, R. K. (2018). *Case study research and applications. Design and methods*. SAGE Publications.

Appendix

Appendix 1

Comparative case summary. Mezapark and Kalarand

	Mezapark	Kalarand
Location	Riga	Tallinn
Area	420 ha	7 ha
Current use	Culture and Recreation Park	Brownfield, yacht harbor, fish market, informal beach
Planned use	Culture and Recreation Park	Housing, yacht harbor
Client	Governmental institution "Rigas Mezi" ("Riga Forests")	Private Developer
Designer	Planning office "Grupa93"	Architecture office "Nord Projekt"
Start of planning activities	2010	2003
Plan ratification	2013	2016
Planning document	Detailed plan, local plan	Detailed plan
Purpose of the plan	Division into functional areas, traffic organization, allocation of public utilities, waterfront design	Allocation of housing, yacht harbor extension, waterfront design
Public engagement mode	public display, public meeting	
Number of public displays	2 (years)	3 (2008, 2012, 2015)
Additional public engagement activities	no	Research conducted by Urban and Residential Studies research group, Tallinn University of Technology, 2012, followed by an exhibition
Local community	Mežaparka attīstības biedrība (Mežapark neighbourhood association), since 1997	Telliskivi Selts (Telliskivi neighborhood association), since 2012
Key stakeholders involved	Urban Development Board (City), "Grupa93" (Designer), "Rigas Mezi" (Client), local community representatives, local residents individually	Chief City Architect (City), "Nord Projekt" (Designer), private Developer (Client), local community representatives, local residents individually
Number of residents involved (at different stages)	51 (counted by contributions)	~2400 (counted by signatures)
Key argument points	Construction of amusement park, forest transformation, solid waterfront	Housing design, access to the seaside, elimination of the beach

Appendix 2

Comparative summary of planning framework

	Riga, Latvia	Tallinn, Estonia
Legal framework		
National planning document(s)	"Spatial development planning law" ("*Teritorijas attīstības plānošanas likums*"); Regulations No 628 "Regulations about municipal spatial development planning documents" ("*Noteikumi par pašvaldību teritorijas attīstības plānošanas dokumentiem*")	"Planning Act"
Author(s)	Latvian Parliament, Latvian Cabinet of Ministers	Estonian Parliament
Year(s)	2011, 2014	2015
English translation	no	yes

End of Table Appendix 2

	Riga, Latvia	Tallinn, Estonia
Requirement for public participation	upon the completion and prior to ratification of a plan	
		upon the initiation of a plan
City planning document(s)	"Riga territorial plan 2006-2018" ("*Rīgas teritorijas plānojums 2006.-2018. gadam*"); "Riga historic centre and its protection zone plan" ("*Rīgas vēsturiskā centra un tā aizsardzības zonas teritorijas plānojums*"); "Regulaions about the use and development of Riga territory" ("*Rīgas teritorijas izmantošanas un apbūves noteikumi*") Thematic plans	"Tallinn comprehensive plan" ("*Tallinna üldplaneering*"); "Neighbourhood comprehensive plans" ("*Linnaosade üldplaneeringud*"); Thematic plans
Author(s)	RDPAD, Riga City Council	TLPA
Year(s)	Territorial plan valid since 2006 to 2018; historic centre plan valid since 2006 onwards (revised in 2013)	City plan valid since 2001 onwards; 5 district plans developed in different years between 2006 and 2017 and valid onwards; 3 district plans are in development
English translation	no	
Requirement for public participation	no	
Organisational framework		
Department responsible for planning	City Development Department (*Pilsētas attīstības departaments*)	Urban Planning Department (Linnaplaneerimise *Amet*)
Number of positions (2016)	118	98.5
Unit responsible for planning of municipal area	Urban Development Board	Chief City Architect
Number of positions	30	35
Unit responsible for hard infrastructure (roads, utility networks)	Does not include; roads are developed by Transportation departments; utility networks – by governmental and private organizations	
City scale plan	Territorial plan, 2006–2018; historic center plan, since 2006	Comprehensive plan, since 2001; district plans, since 2006
Unit responsible for city scale plan(s)	Territorial Planning Unit; Historic Centre Planning Unit	no separate unit; district units
Neighborhood scale plans	Local plan	Detailed plan
Unit responsible for planning of neighborhood scale plan	Local Planning Unit	Detailed Planning Unit
Number of public engagement specialist positions	2	1
Mode of public engagement	Public display (time span) and public discussion (meeting) of a final plan	
Input expected from public	Opinions and proposals	
	If an opinion or a proposal is accepted, the plan is modified accordingly; if an opinion of a proposal is ignored, rationale is required	
Institution which ratifies a plan	City Council	City Council (comprehensive plans), City Government (detailed plans)

Publication III

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Civic engagement in the (post-socialist) transitional society: two case studies

***Abstract**: The case studies examine community engagement in the design of detailed plans for urban areas of strategic importance - Mezapark in Riga and Kalarand in Tallinn. The detailed plans caused public outcries and lead to long-lasting negotiations between local communities, developers, designers and municipalities over the design and use of these areas. The debates highlighted the increasing public interest in planning related issues and the demands for greater civic engagement. At the same time, the debates demonstrated the inability of national and local planning frameworks to meet public expectations.*

The cases were studied through the analysis of national and local legal and institutional planning frameworks, documentation related to the detailed plans of Mezapark and Kalarand, stakeholder opinions, which were collected through a series of semi-structures interviews. The data was thematically organised into a code matrix, which set facts against opinions and reflections from scientific publications on civic engagement. From the code matrix a number of themes emerged, which reflect, arguably, the key challenges of civic engagement in the (post-socialist) transitional society.

The preliminary conclusions are: (1) stakeholder opinions about the outcomes diverge from each other and from the actual facts, which is caused by deeply emotional engagement into the process; (2) the local communities are capable to deliver high quality contributions, as community activists are usually professionals in planning, architecture and/or legal fields; (3) community activists, designers, developers and local authority are in antagonistic relationship and have biased perceptions of each other; (4) civic engagement is regulated by national legal frameworks, which are valid for all municipalities, and thus, are rather basic; (5) the public is poorly represented during the process, as many potentially affected groups are left out; (6) local authority does not usually take a role of a mediator in solving conflicts. All in all, there appears a salient need for change of local planning culture.

***Keywords:** civic engagement, conflict, Kalarand, Mezapark, public space.*

Introduction

Following the worldwide planning practice Latvian and Estonian legislation introduced the requirement for public display and discussion of urban plans by including the corresponding regulations into the legislation in the end of 1990s. The actual activities, however, emerged

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towards the end of the first decade of the 2000s when two plans of public waterfront redevelopment were launched, respectively for Mezapark in Riga (2010 - 13) and Kalarand in Tallinn (2003 - 16). Both attracted public attention and were followed by protests from the part of the residents in adjacent neighbourhoods. The debates about detailed plans demonstrated the increasing public interest in planning related issues, the demands for greater civic engagement, and, at the same time highlighted deficiencies of local engagement strategies. There appeared a salient need for changing the planning culture, which undoubtedly is a long-term and continuous process assuming advancement of skills of all parties involved.
The experiences from Kalarand and Mezapark demonstrate the importance of an analysis to be specific about the context as well as the implementation strategies applied in civic engagement practice. The initiatives of waterfront redevelopment having produced the highest resonance in the planning fields of both cities need to be understood in the context of the past 25-year history of Latvian and Estonian sovereignty and, hence, the transforming societal circumstances. The evidence from case studies show how the advantages of participation can be counteracted by poor participation strategy, which is concerned only with informing the public about the redevelopment plans without a clear intention to incorporate the public into negotiations, and as such leads to mutually biased dispositions instead of creating trust. These plans having provoked an outcry from local residents, resulted in long-lasting fierce debates between communities, developers, designers and municipalities. Although the opponents of the initial plans finally managed to reach a (partial) consensus with the plan initiators, all parties were unanimously dissatisfied with the process.

Latvia and Estonia - planning legislation

Following international practices, planning legislation in Latvia and Estonia requires public consultation prior to adopting binding urban plans. Until 1991 Latvia and Estonia were parts of the Soviet Union, therefore the built environment was planned and developed by governmental institutions in the framework of planned economy and rational planning (Paadam, 2009). Since 1991, after the dissolution of the Soviet Union, Latvia and Estonia transferred to a democratic governance model paving the way to market economy and, hence, market driven urban development. The transition was impetuous, thus, initially planning legislation was copied from other European countries and later modified to fit local conditions. Currently, urban development is regulated by relatively fresh documents: 'Spatial development planning law' (Latvian Parliament, 2011) and regulations Nr. 628 'Regulations about municipal spatial development planning documents' (Latvian Cabinet of Ministers, 2014) in Latvia and 'Planning Act' (Estonian Parliament, 2015) in Estonia.
In their essence planning legislations of Latvia and Estonia are similar. Municipality manages its own spatial development by means of *comprehensive* and *detailed* plans. *Comprehensive* plan applies to the whole area of municipality, whereas *detailed* plan is concerned with a particular land plot or a group of land plots, and accordingly, in greater detail. Both plan types are binding and consist of graphic (maps) and textual (regulations) parts. The requirement of public *display* with subsequent public *hearings* of a plan before sending it for approval to a municipal council is enacted. Public *display* is a time span of one month when any citizen can familiarise oneself with a plan and submit an opinion or a proposal about the plan. Public *hearings* is a meeting where citizen opinions and proposals are presented, evaluated, accepted or rejected. If an opinion or proposal is accepted, the plan is modified accordingly. If an opinion or a

proposal is rejected, the legislation requires a rationale. In both countries the final decision on acceptance or rejection is taken by the City Council.

Mezapark and Kalarand - the urban areas in focus

Mezapark (Forest park) [fig. 1] is a ~420 ha culture and recreational park located ~8km by the Lake Kisezers. The park area was included in the city area in 1904. Forest areas, which constitute 80 percent of the park area, were shaped between 1920 and 1940, cultural and sports infrastructure was built in 1950-1965 and 2008-2011 (Grupa93, 2013; Latvian Riga Forests, 2017). Currently, Mezapark houses the zoo, Song and Dance Festival open air theatre, BMX track, obstacle park for children and adults, playgrounds for children, a beach, a small boat harbour and multiple cafes.

Kalarand [fig. 1] is a ~7ha brownfield area located between the Northern edge of the Old Town and the sea. In the Soviet time the area was a shipyard for the Union of Fishermen and was not accessible to the public (Pro Kapital Eesti, 2016), as the rest of the central waterfront area with mostly military industries, port and severely controlled passenger harbour. After 1991 the area was privatised, industrial buildings deteriorated and demolished, and the area became physically accessible to the public (Pro Kapital Eesti, 2016). Currently, the area houses a small yacht harbour, a fish market and an informal pop-up beach.

Plan for Mezapark and plan for Kalarand have a number of similarities and differences. Both plans redesign a strategic space in the city. The size, history and function of the space are different. Both plans deal with waterfront design and accessibility issues. In case of Mezapark the de facto private space was designated for public use, and in case of Kalarand the de facto public space was threatened to become inaccessible. Both were subjected to a substantial public critique, which lead to changes in plans. In Mezapark these changes were minor compared to Kalarand where the changes were relatively substantial. Participatory *process*, however, was similar, and caused dissatisfaction among all stakeholders.

Fig. 1. Top left: location of urban area Mezapark in Riga; right: location of urban area Kalarand in Tallinn (authors). Middle left: map of Mezapark; right: map of Kalarand (Open Street Map, 2017). Bottom left: Mezapark waterfront; right: Kalarand waterfront (authors).

Methodological approach

The goal of this research was to understand how the planning system in Latvia and Estonia should be modified to meet the growing demand for community engagement in planning. For an advanced understanding, the following research questions were defined: (1) Why were the stakeholders dissatisfied with the civic engagement process in cases of Mezapark and Kalarand? (2) How would the stakeholders like to change the civic engagement process in the future?

The authors started with general study of the cases, adjusting the research questions and data collection techniques as new information was discovered. Main data collection techniques were semi-structured interviews with stakeholders, analysis of planning documents, and analysis of relevant scientific publications. The interviews were conducted with five stakeholder groups: neighbourhood associations, developers, designers, Planning Department officers. The interviews were recorded in March - June 2016, September - November 2016 and December 2018. Nine interviews were conducted in Riga and nine in Tallinn. For the interviews the key representatives of each stakeholder group were selected, assuming they had plenty of information to share about their distinct experience and, thus, different perspective on the cases.

Planning documents were of two categories, Latvian and Estonian planning laws and regulations, and detailed plans for Mezapark and Kalarand. Most information was available online. Some plan related documents for Kalarand were derived from the designer and developer. The original cover text for Mezapark plan (in Latvian) was reviewed. The text included building regulations for the planned area, citizen proposals and designer comments on these proposals. The cover text for Kalarand plan (in English) was derived from the task for an architectural competition for a housing project in the area in focus. The text briefly described the historic background of the area, future vision and architectural assignment, which was developed in accordance with the detailed plan. Additionally, the report describing the sequence of events during the planning process for Kalarand was examined. The information on the cases in two cities was available to a different degree. As for Mezapark there was more official factual information about the process and outcomes, as well as thoroughly documented resident opinions about the plan with designer comments.

Findings

Quality of Contributions

Neighbourhood associations had professionals among their members, lawyers (both), architects (Kalarand) and spatial planners (Mezapark). Secondly, citizen feedback about the plans was precise and constructive. The designer of Mezapark plan received and documented 21 comments on 55 A4 pages. Three of these comments were letters from neighbourhood associations, containing 13, 18 and 19 points each. Four of these comments were letters from private persons containing 4, 6, 10 and 48 points each. Comments were well-structured and well argumented. The residents supported their arguments with a community wide survey about the values of Mezapark, with response rate of 10 percent. Moreover, some comments pointed out mistakes and inaccuracies in planning documents, which were, later, corrected by the designer. For Kalarand plan a similar document providing information about the resident comments was not available. However, judging by the interviews with community representatives, the residents studied the plan thoroughly, highlighting controversial points.

Furthermore, the community hired a professional consultancy to evaluate the plan, which revealed the deficiencies of the plan, including the mismatches between the plan and higher-level planning documents (Lindmae, 2014).

Mutual Perceptions

The communities expressed mistrust in developers and designers, and, at the same time, were sceptical about the ability of municipalities to protect their interests. The citizens were struggling rigorously for precise wordings in the building regulations to avoid any later misinterpretation. They feared that kind of ambiguity would be interpreted in favour of developer, allowing developers 'tricks' as it was expressed with reference to developer's true intentions. 'In professional language [the designer] can put it in a way, that no one pays attention…and it gets through…', says a community representative from Riga. '[The developer and the city] haven't agreed that… this [area] is in public use. Legal... agreements behind it… the contracts... everything was missing', adds a community representative from Tallinn.

Mode of Engagement

In case Mezapark there was a woking group with a limited public access, which discussed solutions proposed by the plan as it progressed. In case Kalarand there were a few mediation meetings between the stakeholders with an aim to reach a consensus about the solutions proposed by the plan. The working group and mediation meetings are not required by the legislation. The working group was established due to the strategic significance of Mezapark for the city. The mediation meetings were held to address the protests of individual local residents and neighbourhood association.

Planning officers from both countries agree that detailed plans are redundant, as they are similar to construction projects, t.i. most of them for one land plot at a time, and are developers by private planning or architecture offices. Thus, detailed plans and construction projects should be merged to save the resources. Civic engagement will benefit from the merging of the two, as residents would be able to see a planning proposal, and a design proposal, which follows the plan.

Representativeness

Citizens involved into the discussion of plans were limited to local communities. Mezapark residents were represented by Mezapark neighbourhood association and Pavu Street community - total of 51 participants (counted by contributions). Kalarand residents initially were represented by individuals. Since 2012 the case was overtaken by Telliskivi Selts neighbourhood association - total of ca. 2400 participants (counted by signatures). Despite the significance of both areas for the cities, residents from the neighbourhoods, which do not border the areas of detailed plan, were not involved in negotiations.

Roles of Planning Departments

The stakeholders blamed the municipalities for taking passive positions. Residents unanimously criticised municipality for showing no initiative in mediating the conflicts. Furthermore, residents repeatedly expressed the concern, that the municipality is not exercising its 'legal rights', 'legal power' to steer the development of the city towards equilibrium, where the interests of the stakeholders are balanced, and towards sustainable environment. The developers, in turn, urged

the city to define the priorities and take the decisions fast, as the circumstances for development change rapidly together with economic situation.

Conclusions

The quality of contributions from the part of neighbourhood associations is high due to the presence of experienced professionals in the planning field, architects, geographers, lawyers, etc., among the members of community associations. The profile of a 'usual' member of a neighbourhood association is different from those often described in scientific publications (cf Nienhuis et al., 2011). The active members of neighbourhood associations are usually highly educated working individuals, socially and politically active and capable of producing an alternative vision for an urban area in focus.

The attitudes of stakeholders towards other stakeholders are mutually biased. On the one hand, neighbourhood associations mistrust developers and designers, claiming that developers have hidden agendas, and designers, in turn, are masking these agendas by means of professional jargon. On the other hand, developers claim that neighbourhood association resist any change. This attitude of developers is often supported by the representatives of planning departments, and exacerbated by their concerns, that the neighbourhood associations are unable to provide any other information except for the information about the identity and values of a place.

Civic engagement is regulated by national legal planning framework. The national planning framework is valid for small and big municipalities with various financial and professional capacities, therefore, the requirements for civic engagement procedure are limited to a public display with a subsequent public hearing. Despite having capacities to introduce additional engagement procedures, big municipalities, like Riga and Tallinn, fulfil only the basic legal requirements. The redundancy of planning framework, which requires public displays for each and every detailed plan, leads to expenditure of recourses on plans, which might not require public display at all. These resources could be redirected to introduce engagement procedures for plans of strategic importance.

Residents engage into negotiations about detailed plans on their own initiative. Although, planning officers, designers and developers acknowledge the need to involve wider audience, then the immediate residents, into discussion, there are no efforts to inform or involve residents beyond those required by planning legislation.

Planning departments and planning levels in Riga and Tallinn are fragmented, hence the duties and responsibilities of individual planners are limited, and the scope of planning documents is limited. The fragmentation turns planning departments into institutions which supervises the conformity of lower level plans with the upper level plans, rather than into institutions which steer the development of the city. The duty to protect residents' interests is transferred to the neighbourhood associations and individual residents, which causes dissatisfaction from the part citizenry.

References

Grupa 93 (2013) Kultūras atpūtas parka "Mežaparks" lokālplānojums. (Detailed plan), Riga.

Estonian Parliament (2015) Planning Act. Tallinn: Riigikogu.

Latvian Cabinet of Ministers (2014) Noteikumi par pašvaldību teritorijas attīstības plānošanas dokumentiem No. 628. Latvijas Vestnesis, 215 (5275).

Latvian Parliament (2011) Teritorijas attīstības plānošanas likums. Latvijas Vestnesis, 173 (4571).

Nienhuis, Ivo, Terry van Dijk and Gert de Roo (2011) Let's collaborate! But who's really collaborating? Individual interests as a leitmotiv for urban renewal and regeneration strategies. Planning Theory & Practice, 12(1), pp. 95–109.

Paadam, Katrin (2009) The Baltic countries – Introduction. In: Holt-Jensen, Arild, Eric Pollock (eds) Urban sustainability and governance: New challenges in Nordic-Baltic housing policies. New York: Nova Science Publishers, pp. 171−177.

Pro Kapital Eesti (2016) 'Kalaranna 1 registered property. Public one-stage architectural competition. Terms of reference' (unpublished competition rules), Tallinn.

Riga Forests (2017) Kultūras un atpūtas parka "Mežaparks" vēsturiskie attīstības laikposmi. [Online] Available at: http://www.rigasmezi.lv/lv/mezaparks/vesture/?doc=7091 (accessed on 1st March, 2017).

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Current Research Trends in Games for Public Participation in Planning

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***Abstract* – The research, outlined in the paper, explores games as methods for better public participation in planning. Drawing on the thematic analysis of scientific publications, prominent authors and research centres, as well as key research themes, are identified. The themes include motivational aspects of gamified participation, online and pervasive games for massive civic engagement, deliberative and educational games for collective problem-solving, game co-design for questioning and reframing planning concepts. The paper concludes with the benefits of gamification for participatory planning practice.**

***Keywords* – Games, literature review, methods, public participation, urban planning.**

Introduction

The ideas of public participation in planning decisions emerged in the 1960s and since then have been gradually institutionalized [1], [2]. Today, participatory planning is practiced in many parts of the world with varying success [3]. South American and African countries feature some prominent participatory planning examples [1], [4], [5], while some Western countries, which pioneered and developed participatory ideas, are struggling with the decreasing public interest towards participation [6]–[8]. The latter is, arguably, due to the rigidity and complexity of Western planning systems and the inefficiency of traditional civic engagement methods, such as public display [3], [9]–[11]. The efforts to get and keep residents involved, gave rise to a constellation of alternative participation methods, from participatory budgeting to ICT aided participation, among which games occupy a certain niche [12]–[15].

Scopus search results by the items "games", "participation" and "planning" indicate a substantial growth in the number of publications exploring the potential of participatory games since 2011 until today (2019). Some contributions build on applications of well-known commercial games (e.g. SimCity, Minecraft and Pokémon Go), whereas others reflect upon the experiments with non-commercial games specifically developed for participatory purposes (e.g. Community PlanIt, Play [Location], Community Circles) [5], [16]–[20]. Games designed for the purposes beyond entertainment are referred to as "serious games" [21]. In the current article serious games, developed for participatory purposes, are referred to as "participatory games".

Serious gaming entered the planning domain in the 1960s. Early games focused on simulating the relationship between urban policies and regulations, land-uses, population dynamics, infrastructures and ecology [15], [22], [23]. In the course of development, serious planning games diversified their repertoire, focusing, among other topics, on participatory design and planning [24], [25]. In contrast to "play" (from "paidia"), which is an unstructured activity without rules and goals, "game" (from "ludus") is structured by rules to achieve a certain goal [26]. Due to their structured nature and transparency ensuing from the rules and goals, if treated seriously, games may potentially become standalone participation methods at certain planning phases [1].

Research summarized in the current paper draws on recent scientific contributions, and explores the potentials of participatory games for better public participation in planning. The paper indicates a few research centres and authors who have developed a variety of participatory games and published most on the topic. These centres include, but are not limited to, Engagement Lab at Emerson College (USA) and Newcastle University (UK), which focus on games with digital components, Play the City and Play!(UC) (Netherlands), which focus on collaboration fostering board games. The authors include Thiel [20], [27], [28] who focuses on motivational aspects of gamification, Gordon [18], [29], and Devisch [26], [30], [31] who study how games contribute to collective learning, and Poplin [32]–[35] who publishes on various aspects of games.

Furthermore, the paper reveals the topical research themes in the domain of participatory games, namely, the motivational aspects of gamified participation, massive civic engagement by means of online and/or pervasive games, deliberative and educational games for collective problem-solving, game co-design for questioning and reframing planning concepts. The paper concludes with potential application areas for games in participatory planning practice.

I. Methodology

Literature review is a summary of published research on the topic conducted by accredited scholars [36], [37]. The generic purpose of the literature review is to provide the context and theoretical foundations for further research, as well as to identify knowledge gaps and establish a benchmark for evaluating the findings [38], [39]. The objective of the current literature review is to acknowledge the advancements in the field of participatory games and to discuss the potential application of participatory games in the planning process.

The literature review focuses on publications about non-commercial games, which were developed for participatory purposes. Publications were sourced from the Scopus database in June 2019 using five sets of search items: (1) "game", "games", "gamified"; (2) "community", "public", "civic"; (3) "participation", "involvement", "engagement"; (4) "urban", "city", "neighbourhood", (5) "planning", "design". The items within each set were separated by a Boolean operator "OR", and the sets were connected by a

Boolean operator "AND". The years of publications were limited to the last 10 years, from 2009 to 2019, and the sources of publications − to journals and conference proceedings. The scope of contributions was refined by screening titles, abstracts and keywords, and limited to case studies. Complementary scientific contributions, which provide insights into the topic, were sourced by means of forward and backward reference search.

Table I (see Appendix) contains the list of 22 examined non-commercial participatory games, their brief descriptions, authors and years application, as well as the relevant literature. Out of 22 listed games 20 games were sourced from the literature and 2 games − Energy Game and Participation game, which fit the scope of the research, are developed by the author. The well-known commercial games, such as Geocaching, Minecraft, SimCity, Cities Skylines, Ingress and Pokémon Go, which were either adapted for participatory purposes or generated participatory spin-offs, are not within the scope of the research [5], [17], [30], [40]–[42].

Following the grounded theory approached [39], [43], the body of literature on participatory games was analysed thematically, and seven topical research themes were identified. The vectors were labelled as (1) gamified versus non-gamified methods, (2) information sourcing games, (3) data generation games, (4) pervasive games, (5) deliberative games, and (6) co-designed games. The themes are elaborated and discussed in **Section 3**, Findings & Discussion.

Six (out of seven) themes, which relate to specific game characteristics, are positioned according to the framework of participatory methods proposed by [3]. In her seminal article on methodology of participatory planning [3] the author argues that the choice of methods depends upon (1) the context, (2) number and profile of participants, (3) anticipated participation level [44], [45], and (4) participation phase [46], [47].

In the current article, the multifaceted definitions of criteria determining methodological choice and proposed by [3] are simplified. The context, which in [3] is defined as cultural, territorial, institutional, thematic, etc. is narrowed down to the spatial scale. The levels of participation are defined by the type of information flow, where public communication is a one-way information flow from the planning authority to residents, public consultation is a one-way information flow from residents to the planning authority, and public participation is an information exchange between both parties [14], [45]. The planning process is characterized by four phases: initiation, planning, implementation, and maintenance [3], [46], [47].

II. Findings and Discussion

A. Gamified Versus Non-gamified Methods

With the gamification of society, blending game design elements into non-game contexts to attract and retain users has become a ubiquitous practice [73]. "Fun" is a significant motivator for residents to involve in participatory activities [74]. Therefore, a branch of participatory games research is dedicated to studying the differences between gamified and non-gamified participation [28], [59]. The impact of gamification on participation was evaluated in the case studies of smartphone applications for sharing geo-referenced content Community Circles, HINT! and Geo-Zombie for which gamified and non-gamified versions were developed [28], [59]. The aforementioned applications employed reward systems, such as points and leaderboards (Community Circles, HINT!), as well as a narrative appealing to perspective users (Geo-Zombie). The research findings suggest that participants derive "fun" from various aspects. Some players enjoy "gameful" aspects, such as the competitive and captivating gameplay, whereas others are motivated by "serious" aspects, such as the interest in urban environment, opportunities to raise concerns and share ideas, as well as learning and socializing [20], [28], [59], [75], [76]. Although "serious" aspects are the major motivators for engagement in participatory projects, while gamification is a minor motivator, gamification succeeded in increasing participation rates and, specifically, the activity of participants [28], [59]. Game scholars argue, that gamification is often associated and limited to reward systems, which are merely secondary elements structuring the gameplay and measuring progress, while the primary elements are those evoking emotional experiences, providing space for experimentation and generating the state of flow [77]–[80]. Therefore, further research on participatory games should focus on motivational aspects of the latter [28], [81].

B. Information Sourcing Games

The expansion of Internet connectivity and the growth of digital literacy among all social groups prompted the emergence of online participatory methods. The latter was preceded by established approaches, namely, PPGIS (Public Participation Geographic Information Systems) and citizen science, which used to crowdsource information for planning and scientific purposes by means of paper-based questionnaires [82], [83]. Contemporary online participatory methods employ online platforms or applications for mobile devices, may or may not contain game elements, and collect contributions in the format of geo-referenced texts or images [20], [76], [84], [85]. These methods are usually applied in the early stages of planning, namely, in the initiation and research & design phases, with the purpose either to source experiential information about the spatial qualities and the patterns of use (e.g. Community PlanIt in Boston and Detroit; Maptionnaire in Helsinki), or to inquire about the opinions on the completed projects (e.g. Stickyworld for the Main Street project in Tallinn; web pages for competition projects in Sippo and Vasaa) [18], [85]–[87]. Compared to face-to-face methods online methods provide the opportunity to participate at any time within a project time frame and from any location, are free from limitation posed by the capacity of meeting spaces, and collect contribution in a structured or semi-structured format [18], [85], [86], [88]. Due to the aforementioned benefits online methods, arguably, are capable of massive outreach and engage the usually underrepresented groups, such as youth and working age citizens [18], [85]. For example, Community PlanIt involved 1,494 participants, of whom in Boston one third were students, and in Detroit two thirds were

of 35 years old or younger [18], and Community Circles involved 780 participants in Turku [20].

C. Data Generation Games

Public participation is often criticized for being non-representative, as it involves a small number of participants of certain profile and, thus, does not reflect the variety of interests within the population [7], [20], [74], [85]. The reasons for non-participation vary from being disinterested about urban issues or unaware about participation opportunities, to taking a rational decision not to participate because the costs of participation outweigh its benefits [8], [89]. The big data opens an opportunity to enquire about the preferences of population groups, including non-participants, indirectly and at a relatively low cost [40], [90]. Data producing technologies, such as environmental, transportation, building management sensor systems, as well as user-generated content, like social media, administrative and census data, etc., generate massive unstructured information [91]. The patterns in the massive unstructured information, discovered by means of data mining methods, enable formulating assumptions about spatial preferences of the residents, which can be partially validated through surveys involving those willing to participate [17], [40], [90], [92]. Games, and specifically participatory games, generate (or are designed to generate) the data revealing the preferences of the players [40], [68], [90]. Although commercial games are excluded from the review, it is worth mentioning that the data generated by commercial location-based games Geocaching, Ingress and Pokémon Go, indicates the points of interest in the city, including the hyperlocal and emerging places, as well as outdoor recreational spaces overlooked by city guidebooks and maps [40], [42], [90]. Non-commercial participatory game Urban Shaper developed for high-school pupils, reveals that the youth of Płock (Poland) exhibit interest in public places, which are located not further than 600m from their respective schools [68].

D. Pervasive Games

The advancement of GPS mobile devices gave birth to location-based games, from low-tech geocaching to high-tech Pokémon Go, which successfully activated the once neglected spaces [17], [40], [90]. Location-based games are also referred to as "pervasive", since they extend beyond the "magic circle" of the game, the spatiotemporal frame, invading public spaces and engaging outsiders [93]. Pervasive participatory games vary from multi-player games, which treat the public space as a playground (e.g. Big Urban Game; ZWERM), to single-player applications for mobile devices, which encourage certain location-based activities (e.g. Play Before Plan; Change Explorer) [11], [50], [61], [72]. The benefits of pervasive games depend on their purpose and design. A four week long game ZWERM is reported to nurture face-to-face communication and community cohesion in two adjacent residential districts of Ghent [72]. The interaction among neighbourhood residents was achieved by means of an interactive device in the shape of a tree, installed in the heart of each neighborhood, which required combo (two people at once) check-ins [72]. The device produced a honeypot effect, attracting new participants and generating spin-off activities, such as check-in parties and scheduled check-ins [72]. An Apple watch application for sourcing location-based information ChangeExplorer claims to increase the number of contributions by means of notifications popping-up upon approaching the area under planning [11]. In contrast to most participatory games, which are designed for the laymen, a series of pervasive games Play Before Plan is developed for urban practitioners, such as planners, architects and policy makers [61]. These games enlighten professionals about the local spatial practices at Rye Lane Street in London, which differ substantially from perspective top-down plans and policies, through a series of missions aimed at visiting characteristic locations and communicating with local businessmen [61].

E. Deliberative Games

The information flow in participatory activities is classified into one-way and two-way flow [45]. One-way information flow, from sponsors to participants and vice versa, is limited to informing participants about planning activities or sourcing contributions from participants, whereas two-way information flow enables deliberation between the sponsors and participants [45]. Civic engagement methods, including a share of participatory games, are often limited to one-way information flow (e.g. a share of information sourcing and sharing games) [14]. Traditional methods enabling information exchange, such as public hearings or thematic discussions, are often characterized by the dominance of vociferous individuals or groups who aim to express their concerns and revolve around a limited set of topics [8], [10]. Furthermore, unless the discussions are recorded and transcribed verbatim, the conclusions are captured for further use, while the discourses are usually left out [10], [45]. The aforementioned deficiencies may be addressed by engaging into discussions well-trained facilitators and observers, which is rarely the case [10], [45], [94]. Therefore, a number of participatory games are designed for facilitating deliberation and capturing the data generated in the process. The card game Community Conversational encourages every participant to speak out and to diversify discourses by means of action and question cards [10]. The discourses are being recorded with a camera aided by the software, which traces the cards, allowing to perform searches within the massive qualitative data [10]. Speaking out or acting in turns fostered dialogue, where all opinions are expressed and heard, enabling building empathy and widening individual perspectives [10]. Role-play games, Play[Location] and Participation Game, foster players to act and reason from alternative positions (roles) while collectively shaping a common vision for a particular area by means of three-dimensional construction units [19], [60]. The role-play fosters consensus building among stakeholders with diverging or even conflicting interests through taking on the opponent's perspective (role) [19], [60], [95].

F. Co-designed Games

Participatory games often create a framework for a co-design activity (e.g. collective vision for the future development of a neighbourhood), but are rarely co-designed [56], [96]. The game

mechanics is usually developed by experts with limited involvement from the part of perspective players, who have to follow the established rules, choices and ramifications [97], [98]. The practice is supported by the traditional body of literature in game design promoting the completed unambiguous set of rules as a prerequisite for a game [93], [99]. Participatory games, as a part of serious game domain, use game mechanics to achieve serious outcomes through an entertaining process, thus posing a severe design challenge [21], [78]. The challenge may be addressed by bringing into the design process perspective players who become active co-designers, rather than passive informants [54], [56], [98], [100]. The co-design approach is believed to align games with players' preferences, mitigates the knowledge gaps, and provides the space for mutual learning [98], [100]. The findings from research on game co-design indicate that playing with an existing barebone game prototype yields better results than designing a game from scratch [54], [56], [98]. The barebone prototype encourages the introduction of new rules and narratives while scaffolding the relationships between game elements, emerging experiences and anticipated outcomes [54], [56], [98]. In the course of iterative co-design procedures, applied for creating board games City Makers, Energy Safari and Participation Game, the initial game underwent substantial transformations, and initial game objectives were adjusted accordingly [54], [56], [60]. The playful co-design procedure did not result into substantial reframing of existing planning models and discourses, as was expected earlier [56], [60]. Thus, further research should focus on structuring co-design procedure to trigger triple-loop learning [56], [60].

G. Educational Games

A share of participatory games focuses on education with no intention to produce planning related outcomes. Education (or learning) and entertainment are the fundamental features of games [21]. Some scholars believe that entertainment stems from learning, as the latter is an enjoyable activity for humans [101]. In-game learning represents a set of progressive challenges with continuous support and instant customized feedback enabling active learning (or learning by doing), which is believed to be more efficient than passive learning (e.g. lecturing) [21]. Games provide space for experimentation, which allows exploring a range of choices and their ramifications without facing real-life undesirable consequences in case of failure and receiving in-game reward in case of success [18], [29]. Participation games may play out real-life situations by setting challenges and modelling possible responses, and thus prepare players for real-life action [29]. The characteristic examples are simulation games Urbax21 and Water Management Game. The former is a role play game, which explores the relationship between the building regulations and socio-economic changes in the city [69]. The latter models possible scenarios for solving drinking water shortage problems in peri-urban communities [70].

Conclusions

H. The Application of Games in Planning

Table II matches the themes elaborated in **Section II**, Findings and Discussion, with criteria outlined in **Section I**, Methodology. Games have a wide application context, varying in spatial scope from neighbourhood to region. Depending on their nature games involve small and large number of players. Large samples are characteristic for digital games, while small samples − for board games. Many games do not specify player profile, targeting at generic urban population. Some games are designed for specific player groups, such as children (e.g. Pop-up Pest), youth (e.g. Geo-zombie) or representatives of peri-urban communities facing the shortages of drinking water supply (e.g. Water Management Game). A few games set specific criteria for players, aiming at better representation and meaningful contributions (e.g. Play [Location], Energy Safari). The nature of information flow in games varies from communication to participation. Information sourcing and data generation games are limited to public consultation, whereas deliberative and co-designed games by fostering information exchange achieve public participation. Games are usually in the early planning phases, namely, initiation and design, which are the stages where project frameworks are established and key decisions are taken [46]. The aforementioned statement aligns with the findings from the research on the real-life application of games [15]. However, games may be applied also in later phases for studying and reporting the qualities and use patterns of newly built or refurbished spaces, as well as for evaluation purposes.

I. Games for Better Participation

To sum up, the current paper reviews scientific publications on participatory games and reveals common research themes. The ongoing research focuses on the motivational aspects of gamified and non-gamified participation, as well as the contribution of game elements, such as reward-systems, appealing story, emotionally captivating gameplay, etc. into better participation. The evidence from case studies suggests that irrespective of motivation to participate gamification yields the increase in the number of participants and contributions per participant. The findings align with the efforts to enable massive participation through gamified online platforms and applications for mobile devices, which succeeded in recruiting hundreds of participants. Online participatory games are not only "fun", they also provide convenient means to participate, capture and analyse player contributions. The information generated while playing location-based games, if analyzed correctly, may supply additional, non-articulated by players, insights into player preferences.

Another branch of the ongoing research focuses on the learning potential of games and, specifically, on civic learning for enabling collective action and change. The empirical evidence suggests that games with deliberation elements and role-play games in particular, enable participants to widen their perspectives and appreciate opposing or diverging positions. Educational games facilitate understanding of existing planning systems, whereas

game co-design enables questioning and reframing the underlying concepts. The accumulation of knowledge and skills within the resident community, as well as mutual learning between resident and planning communities, fosters transformation of planning institution in pursuit of better participation.

J. The Limitations and Directions for Further Research

Due to resource constrains current research builds on a limited literature sample, namely, scientific contributions sourced from a single data base, which results into certain bias. Further studies should diversify the literature sample, expanding the search to other relevant contributions (e.g. professional journals) and databases. To examine the real-life application of participatory games an additional research of planning agencies and their daily practices is recommended.

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References

1. **Lerner, J.** Playing with power: Participatory planning games in Rosario's villas. *Latin American Perspectives*, 2013, Vol. 20, Issue 189, pp. 185–201. https://doi.org/10.1177/0094582X12467760
2. **Shipley, R., Shipley, S.** UTZ. Making it Count: A Review of the Value and Techniques for Public Consultation. *Journal of Planning Literature*, 2012, Vol. 27, Issue 1, pp. 22–42. https://doi.org/10.1177/0885412211413133
3. **Horelli, L.** A Methodology of Participatory Planning. In Robert B. Bechtel, Robert & Arza Churchman, ed., *Handbook of Environmental Psychology*. S.l.: John Wiley & Sons, 2002, pp. 607–628. ISBN 0-471-40594-9.
4. **Aravena, A.** My architectural philosophy? Bring the community into the process. TEDGlobal 2014 [online]. *TED Ideas worth spreading* [cited 13.01.2020]. https://www.ted.com/talks/alejandro_aravena_my_architectural_philosophy_bring_the_community_into_the_process/discussion?referrer=playlist-11_must_see_ted_talks
5. BLOCK BY BLOCK. Our work. Project selection [online]. *Block by Block* [cited 13.01.2020]. https://www.blockbyblock.org/our-work
6. **Connelly, S.** Looking inside public involvement: How is it made so ineffective and can we change this? *Community Development Journal*. 2006, Vol. 41, Issue 1, pp. 13–24. https://doi.org/10.1093/cdj/bsi046
7. **Nienhuis, I., Van Dijk, T., De Roo, G.** Let's Collaborate! But Who's Really Collaborating? Individual Interests as a Leitmotiv for Urban Renewal and Regeneration Strategies. *Planning Theory & Practice*, 2011, Vol. 12 , Issue 1, pp. 95–109. https://doi.org/10.1080/14649357.2011.546671
8. **Donders, M., Hartmann, T., Kokx, A.** E-Participation in Urban Planning: Getting and Keeping Citizens Involved. *International Journal of E-Planning Research*, 2014, Vol. 3, Issue 2, pp. 54–69. https://doi.org/10.4018/ijepr.2014040104
9. **Rowe, G., Frewer, L.J.** Public participation methods: A framework for evaluation. *Science, Technology, & Human Values*, 2000, Vol. 25, Issue 1, pp. 2–29. https://doi.org/10.1177/016224390002500101
10. **Johnson, I.G., Macdonald, A., Briggs, J., Manuel, J., Salt, K., Flynn, E., Vines, J.** Community Conversational. In: *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems - CHI '17*. S.l.: Association for Computing Machinery, 2017, pp. 2320–2333. ISBN 978-1-4503-4655-9. https://doi.org/10.1145/3025453.3025559
11. **Wilson, A., Tewdwr-Jones, M., Comber, R.** Urban planning, public participation and digital technology: App development as a method of generating citizen involvement in local planning process. *Environment and Planning B: Planning and Design*, 2019, Vol. 46, Issue 2, pp. 286–302. https://doi.org/10.1177/2399808317712515
12. **Schneider, S.H., Busse, S.** Participatory Budgeting in Germany–A Review of Empirical Findings. *International Journal of Public Administration*, 2019, Vol. 43, Issue 3, pp. 259–273. https://doi.org/10.1080/01900692.2018.1426601
13. **Kleinhans, R., Van Ham, M., Evans-Cowley, J.** Using Social Media and Mobile Technologies to Foster Engagement and Self-Organization in Participatory Urban Planning and Neighbourhood Governance. *Planning Practice & Research*, 2015, Vol. 30, Issue 3, pp. 237–247. https://doi.org/10.1080/02697459.2015.1051320
14. **Klamert, K., Münster, S.** Child's play - A literature-based survey on gamified tools and methods for fostering public participation in urban planning. In: *Electronic Participation, 9th IFIP WG 8.5 International Conference, ePart 2017, St. Petersburg, Russia, September 4-7, 2017, Proceedings,* S.l.: Springer International Publishing, 2017, pp. 24–33. ISBN 978-3-319-64321-2. https://doi.org/10.1007/978-3-319-64322-9_3
15. **Ampatzidou, C., Gugerell, K., Constantinescu, T., Devisch, O., Jauschneg, M., Berger, M.** All Work and No Play? Facilitating Serious Games and Gamified Applications in Participatory Urban Planning and Governance. *Urban Planning*, 2018, Vol. 3, Issue 1, pp. 34–46. http://dx.doi.org/10.17645/up.v3i1.1261
16. **Minnery, J., Searle, G.** Toying with the City? Using the Computer Game SimCity™4 in Planning Education. *Planning Practice and Research*, 2013, Vol. 29, Issue 1, pp. 41–55. https://doi.org/10.1080/02697459.2013.829335
17. **Potts, R., Jacka, L., Yee, L.H.** Can we 'Catch 'em All'? An exploration of the nexus between augmented reality games, urban planning and urban design. *Journal of Urban Design*, 2017, Vol. 22, Issue 6, pp. 866–880. https://doi.org/10.1080/13574809.2017.1369873
18. **Gordon, E., Baldwin-Philippi, J.** Playful civic learning: Enabling reflection and lateral trust in game-based public participation. *International Journal of Communication*, 2014, Vol. 8, Issue 1, pp. 759–786.
19. **Tan, E.** *Negotiation and Design for the Self-Organizing City. Gaming as a method for Urban Design*. S.l.: TU Delft, 2014. A+BE | Architecture and the Built Environment. ISBN 978-94-6186-356-0. https://doi.org/10.7480/abe.2014.11
20. **Thiel, S.K., Ertiö, T.P., Baldauf, M.** Why so serious? The Role of Gamification on Motivation and Engagement in e-Participation. *Interaction Design and Architectures*, 2017, Vol. 35, pp. 158–181.
21. **Winn, B. M.** The Design, Play, and Experience Framework. In: *Handbook of Research on Effective Electronic Gaming in Education*. Hershey, PA, USA: Information Science Reference (an imprint of IGI Global), 2009, pp. 1010–1024. ISBN 978-1-59904-808-6. https://doi.org/10.4018/978-1-59904-808-6.ch058
22. **Duke, R. D**. Origin and Evolution of Policy Simulation: A Personal Journey. *Simulation & Gaming*, 2011, Vol. 42, Issue 3, pp. 342–358. https://doi.org/10.1177/1046878110367570
23. **Feldt, A.G.** Experience with Simulation / Gaming: 1960–2010. *Simulation & Gaming*, 2014, Vol. 45, Issue 3, pp. 283–305. https://doi.org/10.1177/1046878114543983
24. **Sanoff, H.** *Community participation methods in design and planning*. New York, NY, USA: John Wiley & Sons, 2000. 320 p. ISBN 0-471-35545-3.
25. **Sanoff, H.** *Democratic Design: Participation Case Studies in Urban and Small Town Environments*. S.l.: VDM Verlag Dr. Müller, 2010. 168 p. ISBN 978-3-639-28830-8.
26. **Devisch, O., Poplin, A., Sofronie, S.** The Gamification of Civic Participation: Two Experiments in Improving the Skills of Citizens to Reflect Collectively on Spatial Issues. *Journal of Urban Technology*, 2016, Vol. 23, Issue 2, pp. 81–102. https://doi.org/10.1080/10630732.2015.1102419
27. **Thiel, S.-K., Lehner, U., Sturmer, T., Gospodarek, J.** Insights from a m-participation prototype in the wild. In: *2015 IEEE International Conference on Pervasive Computing and Communication Workshops (PerCom Workshops 2015)*. S.l.: IEEE, 2015, pp. 166–171. ISBN 978-1-4799-8425-1. https://doi.org/10.1109/PERCOMW.2015.7134013
28. **Thiel, S.-K., Frohlich, P.** Gamification as Motivation to Engage in Location-Based Public Participation. In: Georg GARTNER and Haosheng HUANG, ed., *Progress in Location-Based Services 2016*. S.l.: Springer International Publishing AG, 2017, Lecture notes in Geoinformation and cartography, pp. 399–421. ISBN 978-3-319-47289-8. https://doi.org/10.1007/978-3-319-47289-8_20
29. **Gordon, E., Haas, J., Michelson, B.** Civic creativity: Role-playing games in deliberative process. *International Journal of Communication*, 2017, Vol. 11, pp. 3789–3807.
30. **Devisch, O.** Should Planners Start Playing Computer Games? Arguments from SimCity and Second Life. *Planning Theory & Practice*, 2008, Vol. 9, Issue 2, pp. 209–226. https://doi.org/10.1080/14649350802042231
31. **Devisch, O., Gugerell, K., Diephuis, J., Constantinescu, T., Ampatzidou, C., Jauschneg, M.** Mini is beautiful. Playing serious mini-games to facilitate collective learning on complex urban processes. *Interaction Design and Architecture(s) Journal*, 2017, Vol. 35, pp. 141–157.
32. **Poplin, A.** Games and serious games in urban planning: study cases. In: *Computational Science and Its Applications - ICCSA 2011*. S.l.: Springer, Berlin, Heidelberg, 2011, pp. 1–14. Lecture Notes in Computer Science. ISBN 978-3-642-21887-3. https://doi.org/10.1007/978-3-642-21887-3_1

33. **Poplin, A.** Playful public participation in urban planning: A case study for online serious games. *Computers Environment and Urban Systems*, 2012, Vol. 36, Issue 3, pp. 195–206. https://doi.org/10.1016/j.compenvurbsys.2011.10.003
34. **Poplin, A.** Digital serious game for urban planning: „B3-Design your Marketplace!" *Environment and Planning B: Planning and Design*, 2014, Vol. 41, pp. 493–511. https://doi.org/10.1068/b39032
35. **Poplin, A., Shenk, L., Passe, U.** Transforming Pervasive into Collaborative: Engaging Youth as Leaders with GIS through a Framework that Integrates Technologies, Storytelling, and Action. *Interaction Design and Architecture(s) Journal*, 2017, Vol. 35, pp. 182–204.
36. *The A-Z of social research: a dictionary of key social science research concepts* (Eds.: R. L. Miller, J.D. Brewer). London; Thousand Oaks, Calif: SAGE, 2003. 362 p. ISBN 978-0-7619-7132-0.
37. **Taylor, D.** The Literature Review: A Few Tips on Conducting It. *University of Toronto. Writing Advice* [online, cited 13.01.2020]. https://advice.writing.utoronto.ca/types-of-writing/literature-review/
38. **Creswell, J. W.** *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. 3rd edition. Thousand Oaks, California, USA: SAGE Publications, 2009. 296 p. ISBN 978-1-4129-6557-6.
39. **Saunders, M. N. K., Lewis, P., Thornhill, A.** *Research methods for business students*. 7th edition. Edinburgh Gate, Harlow, Essex, England: Pearson Education Ltd., 2016. 768 p. ISBN 978-1-292-01662-7.
40. **Cord, A. F., Roessiger, F., Schwarz, N**. Geocaching data as an indicator for recreational ecosystem services in urban areas: Exploring spatial gradients, preferences and motivations. *Landscape and Urban Planning*, 2015, Vol. 144, pp. 151–162. https://doi.org/10.1016/j.landurbplan.2015.08.015
41. **Eklund, A.** Gaming the Real World [online]. *Plethora-project* [cited 13.01.2020]. https://www.plethora-project.com/gaming-the-real-world
42. **Stark, E.** Playful places: Uncovering hidden heritage with Ingress. In: *Social, Casual and Mobile Games: The changing gaming landscape*. New York: Bloomsbury Academic, 2016. ISBN 978-1-5013-1060-7.
43. **Charmaz, K.** *Constructing grounded theory*. London, UK: Sage Publications, 2006. 416 p. ISBN 978-0-7619-7352-2.
44. IAP2 International Association for Public Participation. Core Values, Ethics, Spectrum – The 3 Pillars of Public Participation. IAP2 International Association for Public Participation. Resources, 2018 [online]. *IAP2* [cited 14.01.2020]. https://www.iap2.org/page/pillars
45. **Rowe, G., Frewer, L. J.** A typology of public engagement mechanisms. *Science Technology and Human Values*, 2005, Vol. 30, Issue 2, pp. 251–290. https://doi.org/10.1177/0162243904271724
46. **Hamdi, N., Goethert, R.** *Action planning for cities: a guide to community practice*. Chichester; New York: John Wiley, 1997. 264 p. ISBN 978-0-471-96928-0.
47. **Wates, N.** *The community planning handbook: how people can shape their cities, towns and villages in any part of the world*. London: Earthscan, 2000. 240 p. ISBN 978-1-85383-654-1.
48. ENGAGEMENT LAB. What's @stake? [online]. *atstakegame* [cited 14.01.2020]. https://atstakegame.org
49. **Hummel, K.** @Stake: A Role-Playing Card Game. 18. September 2015 [online]. *NCDD. Resource Center* [cited 14.01.2020]. http://ncdd.org/rc/item/10150/
50. **Cameron, K.** Using a B.U.G. to Promote Urban Design. 1. March 2004 [online]. *Metropolis* [cited 14.01.2020]. http://www.metropolismag.com/cities/using-a-b-u-g-to-promote-urban-design/
51. **Ferri, G., Coppock, P.** Serious Urban Games. From play in the city to play for the city. In: *Media and the City: Urbanism, Technology and Communication* [Eds.: Simone Tosoni, Matteo Tarantino and Chiara Giaccardi]. S.l.: Cambridge Scholars Publishing, 2013, pp. 120–134. ISBN 978-1-4438-4943-2.
52. **Salen, K**. Big Urban Game [online]. *Katie Salen. Selekted Work* [cited 14.01.2020]. https://www.katiesalen.me/projects#/big-urban-game/
53. STEVENMN01. B.U.G. Blue Day 1, 3. June 2011 [online]. *YouTube Video* [cited 14.01.2020]. https://www.youtube.com/watch?v=2opyxELpaHM
54. **Constantinescu, T. I., Devisch, O., Kostov, G.** City Makers: Insights on the Development of a Serious Game to Support Collective Reflection and Knowledge Transfer in Participatory Processes. *International Journal of E-Planning Research*, 2017, Vol. 6, Issue 4. https://doi.org/10.4018/IJEPR.2017100103
55. INSHENGXIA. What is „Community PlanIt", 9 February 2013 [online]. *YouTube Video* [cited 14.01.2020]. https://www.youtube.com/watch?v=w-cJ09qtkOpw
56. **Gugerell, K., Zuidema, C.** Gaming for the energy transition. Experimenting and learning in co-designing a serious game prototype. *Journal of Cleaner Production*, 2017, Vol. 169, pp. 105–116. https://doi.org/10.1016/j.jclepro.2017.04.142
57. **Prilenska, V.** Serious game for modelling neighbourhood energy supply scenarios. In: *SBE19 Thessaloniki − Sustainability in the built environment for climate change mitigation. 23−25 October 2019, Conference Proceedings.* S.l.: IOP Science.
58. PLAY!UC. Floating City [online]. *Play!UC Playing with Urban Complexity* [cited 14.01.2020]. http://play-uc.net/?page_id=529
59. **Prandi, C., Roccetti, M., Salomoni, P.** Valentina NISI and Nuno Jardim NUNES. Fighting exclusion: a multimedia mobile app with zombies and maps as a medium for civic engagement and design. *Multimedia Tools and Applications*, 2017, Vol. 76, pp. 4951–4979. https://doi.org/10.1007/s11042-016-3780-9
60. **Prilenska, V.** Participation Game. Reflections on the iterative design process. *PlaNext*. In print.
61. **Valdez Young, A.** Play Before Plan: Games for the Public and Planners to Value the Street. *Journal of Urban Technology*, 2015, Vol. 22, Issue 3, pp. 97–119. https://doi.org/10.1080/10630732.2015.1040299
62. **Valdez Young, A.** Shopomama. 25 August 2012 [online]. *ISSUU* [cited 23.08.2019]. https://issuu.com/betterthanliving/docs/shopomama
63. **Valdez Young, A.** Arrivalocity. 25 August 2012 [online]. *ISSUU* [cited 23.08.2019]. https://issuu.com/betterthanliving/docs/arrivalocity
64. **Valdez Young, A.** Pech City, 25 August 2012 [online]. *ISSUU* [cited 23.08.2019]. https://issuu.com/betterthanliving/docs/pechcity
65. KULTÚRAKTÍV. Games: Pop-up Pest [online]. *KULTÚRAKTÍV* [cited 23.08.2019]. https://kulturaktiv.hu/en/projects/pop-up-pest/
66. **Toth, E., Poplin, A.** Pop-up Pest: An Educational Game for Active Participation of Children and Youth in Urban Planning. In: *REAL CORP 2013. Planning Times You better keep planning or you get in deep water, for the cities they are a-changin'. Proceedings of 18th International Conference on Urban Planning, Regional Development and Information Society.* Schwechat-Rannersdorf, Austria: CORP – Competence Center of Urban and Regional Planning, 2013, pp. 731–741. ISBN 978-3-9503110-4-4.
67. **Toth, E., Poplin, A.** ParticiPécs − a cooperative game fostering learning about the built environment and urban planning. In: *17th AGILE Conference on Geographic Information Science (AGILE 2014), Workshop Geogames and Geoplay,* June 03–06, 2014, Castellón, Spain. 2014.
68. **Olszewski, R., Turek, A., Laczynski, M.** Urban Gamification as a Source of Information for Spatial Data Analysis and Predictive Participatory Modelling of a City's Development. In: *Proceedings of the 5th International Conference on Data Management Technologies and Applications - Vol. 1: DATA*. 2016, pp. 176–181. https://doi.org/10.5220/0006005201760181
69. LOGIVILLE. Urbax 21. Simulation pédagogique de l'aménagement urbain [online]. *Urbax 21*. [cited 23.08.2019]. https://www.urbax.eu/en/presentation-2/
70. **Gomes, S. L., Hermans, L. M., Islam, K. F., Huda, S. N., Hossain, Z., Thissen, W.A.H.** Capacity Building for Water Management in Peri-Urban Communities, Bangladesh: A Simulation-Gaming Approach. *Water*, 2018, Vol. 10, pp. 1704–1723. https://doi.org/10.3390/w10111704
71. ILAB.O. ZWERM [online]. *Player Vimeo* [cited 23.08.2019]. https://player.vimeo.com/video/65648085
72. **Laureyssens, T., Coenen, T., Claeys, L., Mechant, P., Criel, J., Van De Moere, A.** ZWERM: A modular component network approach for an urban participation game. In: *CHI '14: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 2014, pp. 3259–3268. https://doi.org/10.1145/2556288.2557053
73. **Deterding, S., Dixon, D., Khaled, R., Nacke, L.** From game design elements to gamefulness: Defining gamification. In: *MindTrek '11: Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 2011, pp. 9–15. https://doi.org/10.1145/2181037.2181040
74. **Leao, S., Izadpahani, P.** Factors Motivating Citizen Engagement in Mobile Sensing: Insights from a Survey of Non-Participants. *Journal of Urban Technology*, 2016, Vol. 23, Issue 4, pp. 85–103. https://doi.org/10.1080/10630732.2016.1175824
75. **Bowser, A. E., Hansen, D. L., Raphael, J., Reid, M., Gamett, R. J., He, Y. R., Rotman, D., Preece, J. J.** Prototyping in PLACE: A Scalable Approach to Developing Location-Based Apps and Games. In: *CHI '13: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 2013, pp. 1519–1528. https://doi.org/10.1145/2470654.2466202
76. **Bowser, A., Hansen, D., Preece, J., He, Y., Boston, C., Hammock, J.** Gamifying citizen science: A study of two user groups. In: *CSCW Companion '14: Proceedings of the companion publication of the 17th ACM conference on Computer supported cooperative work & social computing,* 2014, pp. 137–140. https://doi.org/10.1145/2556420.2556502
77. **Raczkowsky, F.** Making Points the Point - Towards a History of Ideas of Gamification. In: Mathias Fuchs, Sonia Fizek, Paolo Ruffino and Niklas Schape, ed., *Rethinking Gamification*. Lüneburg, Germany: Meson Press, Hybrid Publishing Lab, Leuphana University of Lüneburg, n.d., pp.141– 160. ISBN 978-3-95796-000-9.
78. **Bogost, I.** Persuasive Games: Exploitationware, 3 May 2011 [online]. *Gamasutra* [cited 14.01.2020]. https://www.gamasutra.com/view/feature/134735/persuasive_games_exploitationware.php
79. **Yannakakis, G. N., Paiva, A.** Emotion in Games. In: *The Oxford Handbook of Affective Computing* [Eds.: Rafael Calvo, Sidney D'Mello, Jonathan Gratch and Arvid Kappas]. S.l.: Oxford University Press, 2014. ISBN 978-0-19-994223-7.

80. **Geher, G.** Video Games and Emotional States. why your kid is addicted to Fortnite, 3 September 2018 [online]. *Psychology Today* [cited 14.01.2020]. https://www.psychologytoday.com/intl/blog/darwins-subterranean-world/201809/video-games-and-emotional-states
81. **Nicholson, S.** A User-Centered Theoretical Framework for Meaningful Gamification. In: *Games+Learning+Society 8.0. June 13–15, 2012,* 2013, 658 p.
82. **Brown, G., Kyttä, M.** Key issues and research priorities for public participation GIS (PPGIS): A synthesis based on empirical research. *Applied Geography*, 2014, Vol. 46, pp. 122–136. https://doi.org/10.1016/j.apgeog.2013.11.004
83. **Wiggins, A.** Free as in puppies. In: *Proc. CSCW 2013*, 2013, pp. 1469–1480. https://doi.org/10.1145/2441776.2441942
84. **Ertiö, T.-P.** Participatory Apps for Urban Planning—Space for Improvement. *Planning Practice & Research*, 2015, Vol. 30, Issue 3, pp. 303–321. https://doi.org/10.1080/02697459.2015.1052942
85. **Kahila-Tani, M., Broberg, A., Kyttä, M., Tyger, T.** Let the Citizens Map—Public Participation GIS as a Planning Support System in the Helsinki Master Plan Process. *Planning Practice and Research*, 2016, Vol. 31 Issue 2, pp. 195–214. https://doi.org/10.1080/02697459.2015.1104203
86. **Eräranta, S., Kahila-Tani, M., Nummi-Sund, P.** Web-based Public Participation in Urban Planning Competitions: *International Journal of E-Planning Research*, 2015, Vol. 4, Issue 1, pp. 1–18. https://doi.org/10.4018/ijepr.2015010101
87. EESTI ARHITEKTUURIKESKUS. Main Street: giving public spaces back to people [online]. *Peatänav* [cited 14.01.2020]. http://www.peatanav.ee/en
88. **Oser, J., Hooghe, M., Marien, S.** Is Online Participation Distinct from Offline Participation? A Latent Class Analysis of Participation Types and Their Stratification. *Political Research Quarterly*, 2013, Vol. 66, Issue 1, pp. 91–101. https://doi.org/10.1177/1065912912436695
89. **Krek, A.** Rational Ignorance of the Citizens in Public Participatory Planning Alenka Krek. In: Manfred SCHRENK, ed., *CORP 2005 GEO MULTIMEDIAProceedings 10th International Conference on Information & Communication Technologies (ICT) in Urban Planning and Spatial Development and Impacts of ICT on Physical Space*. S.l.: Department of computer aided planning and architecture, Vienna University of Technology, 2005, pp. 165–169. ISBN 3-901673-12-1.
90. **Graells-Garrido, E., Ferres, L., Caro, D., Bravo, L.** The effect of Pokémon Go on the pulse of the city: a natural experiment. *EPJ Data Science*, 2017, Vol. 6, Issue 1, p. 23. https://doi.org/10.1140/epjds/s13688-017-0119-3
91. **Thakuriah, P., Tilahun, N. Y., Zellner, M.** Big Data and Urban Informatics: Innovations and Challenges to Urban Planning and Knowledge Discovery. In: *Seeing Cities Through Big Data* [Eds.: Piyushimita Thakuriah, Nebiyou Tilahun and Moira Zellner]. Cham: Springer International Publishing, 2017, pp. 11–45. https://doi.org/10.1007/978-3-319-40902-3_2
92. **Goodspeed, R.** Digital knowledge technologies in planning practice: from black boxes to media for collaborative inquiry. *Planning Theory & Practice*, 2016, Vol. 17, Issue 4, pp. 577–600. https://doi.org/10.1080/14649357.2016.1212996
93. **Rodriguez, H.** The playful and the serious: An approximation to Huizinga's Homo Ludens, 2006 [online]. *Game Studies* [cited 14.01.2020]. http://gamestudies.org/0601/articles/rodriges
94. **Van Dijk, T., Ubels, H.** How Dutch professionals conduct interactive design sessions to foster 'shared understanding'. *Environment and Planning B: Planning and Design*, 2015, Vol. 43, Issue 3, pp. 464–479. https://doi.org/10.1177/0265813515617658
95. **Innes, J. E., Booher, D.E.** Consensus Building as Role Playing and Bricolage. *Journal of the American Planning Association*, 1999, Vol. 65, Issue 1, pp. 9–26. https://doi.org/10.1080/01944369908976031
96. **Sotamaa, O., Ermi, L., Laukkanen, T., Mäyrä, F., Nummela, J.** The Role of Players in Game Design: A Methodological Perspective. In: *Proceedings of Digital Experience: Design, Aesthetics, Practice. DAC 2005.* 2005, pp. 35–42.
97. **Isbister, K., Flanagan, M., Hash, C.** Designing games for learning: insights from conversations with designers. In: *the 28th international conference: Proceedings of the 28th international conference on Human factors in computing systems - CHI '10*. Atlanta, Georgia, USA: ACM Press, 2010, p. 204. https://doi.org/10.1145/1753326.1753637
98. **Khaled, R., Vasalou, A.** Bridging serious games and participatory design. *International Journal of Child-Computer Interaction*, 2014, Vol. 2, Issue 2, pp. 93–100. https://doi.org/10.1016/j.ijcci.2014.03.001
99. **Adams, E.** *Fundamentals of game design*. Third edition. Berkeley, CA: New Riders, 2014. 576 p. ISBN 978-0-321-92967-9.
100. **Luck, R.** What is it that makes participation in design participatory design? *Design Studies*, 2018, Vol. 59, pp. 1–8. https://doi.org/10.1016/j.destud.2018.10.002
101. **Gee, J. P**. *Good Video Games and Good Learning: Collected Essays on Video Games, Learning and Literacy*. 2nd edition. S.l.: Peter Lang Inc., International Academic Publishers, 2013. 194 p. ISBN 978-1-4331-2393-1.

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Appendix

Table I

List of Reviewed Participatory Games [Author of the Article]

No.	Name	Description	Designer	Year	References
1.	@Stake	Role-play card game for fostering empathy and creativity	Engagement Lab, Emerson College	2014–2015	[29], [48], [49]
2.	B3 – Design Your Marketplace!	Desktop/laptop application for modelling public spaces in three dimensions	HafenCity University	2009	[32], [34]
3.	Big Urban Game	City wide five day long race in groups carrying 7.6 m tall inflatable figures through a series of checkpoints	Design Institute, University of Minnesota	2003	[50]–[53]
4.	Change Explorer	Apple Watch application (complemented by iPhone application) for conducting geo-referenced surveys	Digital Civics, Newcastle University	2015	[11]
5.	City Makers	Card game for education about street businesses and fostering collaboration	Play!(UC), University of Groningen	n.d.	[31], [54]
6.	Community Circles[1]	Smartphone application for collecting and sharing geo-referenced content (problems, ideas, photographs)	Telecommunication Research Center Vienna	n.d.	[20], [27], [28]

No.	Name	Description	Designer	Year	References
7.	Community Conversational	Board game for dialogue building with video and geo-referenced content capturing, and audio content transcription into text	Open Lab, Newcastle University	n.d.	[10]
8.	Community PlanIt	Desktop/laptop application for collecting and sharing geo-referenced content (problems, ideas, photographs)	Engagement Lab, Emerson College	2011–2012	[18], [55]
9.	Energy Safary[2]	Board game for education about energy transition and fostering collaboration	Play!(UC), University of Groningen	2016	[31], [56]
10.	Energy Game	A prototype of a digital game (developed in Unity, available through GitHub) for building neighbourhood energy supply scenarios	Viktorija Prilenska, Tallinn University of Technology; Māris Lenšs, Emīls Terjavjainens, Normunds Budevičs, Ģirts Upītis and Liene Versune, Albert College	2018–2019	[57]
11.	Floating City	Idea collecting application for a computing device (e.g. desktop, smartphone)	Play!(UC), University of Groningen	n.d.	[31], [58]
12.	Geo-Zombie	Smartphone application for crowdsourcing geo-referenced accessibility data (text, photographs) for physical spaces	Catia Prandi, Marco Roccetti and Paola Salomoni, Department of Computer Science and Engineering, University of Bologna; Valentina Nisi and Nuno Jardim Nunes, Madeira Interactive Technologies Institute, University of Madeira	n.d.	[59]
13.	HINT!	Smartphone application for crowdsourcing geo-referenced accessibility data (text, photographs) for physical spaces	Catia Prandi, Marco Roccetti and Paola Salomoni, Department of Computer Science and Engineering, University of Bologna; Valentina Nisi and Nuno Jardim Nunes, Madeira Interactive Technologies Institute, University of Madeira	n.d.	[59]
14.	NextCampus	A prototype (physical model + Excel calculation sheets) of a digital game for scenario building about university campus relocation	Alenka Poplin, D. Kulus, T. Prill, A. Wagner, HafenCity University	2009	[33]
15.	Participation game	Role-play board game for negotiating alternatives and collectively constructing neighbourhood project	Viktorija Prilenska, Tallinn University of Technology	2018–2019	[60]
16.	Play Before Plan[3]	Smartphone application for planners and other urban practitioners to learn from spatial and economic strategies applied in Rye lane	Adriana Valdez Young, littleBits and English for Action	2012	[61]–[64]
17.	Play [Location][4]	Role-play board game for co-designing a neighbourhood vision	Play the City	2011–2015	[19]
18.	Pop-up Pest	Game in public space, which educates children about spatial aspects of downtown Pest	Eszter Toth, HafenCity University in co-operation with kulturAktiv	2012	[65]–[67]
19.	Urban Shaper	Group problem solving game for high-school pupils, which focuses on urban regeneration issues and collects geo-referenced data	Robert Olszewski, Agnieszka Turek, and Marcin Łączyński, Warsaw University of Technology and University of Warsaw	2016	[68]
20.	Urbax21	Role-play game with hybrid interface (digital + pen and paper) for educating student and agency representatives about urban policy issues	Thierry Vilmin	n.d.	[69]
21.	Water management game (originally, no name)	Role-play board game for educating rural-urban fringe residents about drinking water management	Sharlene L. Gomes, Leon M. Hermans and Wil A.H. Thissen, Faculty of Technology, Policy, and Management, Delft University of Technology	2018	[70]

No.	Name	Description	Designer	Year	References
22.	ZWERM	Neighbourhood wide four week long pervasive community-building game, supported by a network of hardware elements across the neighbourhood	imec iLab.o	2013	[71], [72]

n.d. – no date.

[1]Two versions of the application were developed: a gamified and non-gamified; the game was tested in real-life under the name "Täsä" in Turku, Finland
[2] "Energy Safari" has a modification - "Mobility Safari", which uses similar interface and game mechanics, and focuses on smart mobility.
[3]The series of applications "Play Before Plan" includes two games, "Arrivalocity" and "Shopomama", as well as a non-gamified app "Pech City". Print version is also available.
[4] The series of games "Play[Location]" includes an array of iteratively developed games from the early prototypes "Play Almere Haven" and "Play Oude Western", through an intermediate prototype "Play Istanbul", to full-fledged games: "Play Noord" and "Play Oosterwold".

Table II
Summary of Themes and Criteria with Examples [Author of the Article]

Themes	Context: neighbourhood, city, region	Number (large, small) and profile (defined, undefined) of participants (large, small)	Participation level: communication, consultation, participation	Planning phase: initiation, design, implementation, maintenance	Examples
Information sourcing games	neighbourhood or city	large, undefined	consultation	design	Change Explorer, Community Circles, Community Planit, Floating City, Geo-zombie, HINT!
Data generation games	neighbourhood or city	large, undefined	consultation	design	B3 – Design Your Marketplace, Urban Shaper, Energy Game, NetCampus
Pervasive games	neighbourhood or city	small, undefined	communication or consultation	either n/a, or design	Big Urban Game, Change Eplorer, Community Circles, Geo-zombie, HINT! Play Before Plan, ZWERM
Deliberative games	neighbourhood	small, defined or undefined	communication, consultation or participation	design	@Stake, Community Conversational, Play[Location], Participation Game
Co-designed games	neighbourhood or city	small, defined	communication, consultation or participation	either n/a, or initiation	City Makers, Energy Safari, Participation Game
Educational Games	neighbourhood, city or region	small, defined or undefined	communication	either n/a, or initiation	Pop-up Pest, Urbax21, Water Management Game

Publication V

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Participation Game: Reflections on the Iterative Design Process

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Civic engagement in decision-making concerning the built environment has become a widely acknowledged practice. Today this is no longer about the dilemma of civic engagement, but rather about the best strategy for the purpose. Games and gamified applications are gaining popularity as efficient tools for civic engagement, which attract and retain participants, as well as foster learning and experimentation. The article presents the case of a role-play urban design game, Participation Game, which was developed in the iterative design process. The initial prototype of the game was transformed from session to session based on the player feedback, collected through questionnaires and debriefings, as well as the analysis of video recordings of game sessions. The overarching goals of the game were, firstly, to familiarise the audience with public hearings of urban design related projects, and, secondly, to find out how the changes in the setup of the game influence the player experience and the outcomes. The findings indicate that game setup limits the opportunities for discussion, and might even steer it towards desirable (for game authors) outcomes.

Keywords: case study, iterative design, role-play, serious game, urban design

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Introduction

Civic engagement in urban planning has become a widely acknowledged and increasingly normalized practice in the Western developed economies. Since 1970s the requirements for civic engagement in discussions of urban planning issues are being gradually included in the legislation of democratic countries (Shipley & Utz, 2012). According to Irvin and Stansbury (2004, p. 56), today this is no longer about the dilemma of civic engagement, but rather about the best strategy for the purpose.

Games and gamified applications are gaining popularity as efficient tools for civic engagement, which attract and retain participants, as well as create space for experimentation, facilitate learning and consensus building, or, alternatively, allow crowdsourcing ideas and experiences (cf Gordon et al., 2017; Thiel et al., 2017). The games, designed for purposes beyond entertainment, are referred to as "serious games" (Dörner & Spierling, 2014). Serious games pose a set of challenges for designers, as they require from a designer the mastery in game design, as well as the knowledge of educational theory and the domain in focus (Winn, 2009).

One of the approaches towards serious game design is the progressive iteration, which includes prototypes, play-tests, feedback collection and analysis, and transformation of prototypes based on the findings (ibid.). The approach urges for a prototype which is developed enough to be playable, and, at the same time, encourages addition of new rules and narratives (Gugerell & Zuidema, 2017). Additionally, iteration requires an elaborate methodology of data capture of user game play experience, opinions and suggestions (Constantinescu et al., 2017).

The current article presents a case of Participation Game, a role-play board game, which simulates negotiations between stakeholders with diverging interests about the future development of two vacant land plots in the neighbourhood. The goals of the game stem from the research on community engagement practices in the Baltic context, namely, in Riga and Tallinn. The research examines two cases, community engagement in the design process of detailed plans for urban areas Mezapark in Riga and Kalarand in Tallinn. In case Kalarand the community managed to negotiate more public benefits, then in case Mezapark, arguably, due to the presence of an active community with a clear vision, and an informal appropriation of the space in focus of a detailed plan by the community (Prilenska et al., 2019). The initial goal of the game was to find out how does the presence of a community and the common vision among the members of the community, as well as the appropriation of public space by the community or individuals, affect the outcomes of negotiations about the future development of a space in focus of a plan. The game was developed iteratively during a series of five game sessions and was adjusted after each game session based on user behaviour and input. In the course of designing the game and its goals transformed substantially. The article focuses on the progressive design of the game, and discusses game sessions, their outcomes, and the changes made to the game based on the outcomes.

Theoretical Foundations

Games are believed to foster active learning, or "learning by doing", as they offer to a player a set of progressive challenges, with the adequate support and instant feedback (Winn, 2009). Learning by doing creates space for experimentation, for playing out the real-life situations without real-life (often, undesirable) consequences, thus, preparing players for real-life challenges (Gordon & Baldwin-Philippi, 2014; Gordon et al., 2017). Furthermore, games represent complex real-life phenomena as simplified models, thus, fostering understanding

and resolution of complex problems (Constantinescu et al., 2017). Some authors suggest, that learning *per se* for humans is an enjoyable activity, and that (video) games are enjoyable specifically due to the learning principles they are usually based on (Gee, 2013). Above all, games evoke emotional experiences, which, again, per se for humans is a strong motivation (Geher, 2018; Yannakakis & Paiva, 2014).

Games, which are designed for other purposes, rather than amusement, such as learning particular content or deliberation, are referred to as "serious games" (Ampatzidou et al., 2018; Dörner & Spierling, 2014; Winn, 2009). Serious games entered the urban planning domain in the 1960s, when urban policy games CLUG (developed by Feldt in 1960s) and Metropolis (developed by Duke in 1964) were developed (Duke, 2011; Feldt, 2014). These games were intended for educating planning students and local government representatives about land-use and budgeting issues (Duke, 2011; Feldt, 2014). Later, serious games were introduced into civic engagement activities with an intention to develop "a shared understanding" of a phenomenon, define common goals and identify a range of action vectors (van Dijk & Ubels, 2015, p. 464; Sanoff, 2000). Recently, after the success of pervasive smartphone games Ingress (Niantic, 2012) and PokemonGo (Niantic, 2016), a constellation of serious games emerged, which focus on sourcing ideas and experiential information about the built environment from the players (cf Thiel et al., 2017; Prandi et al., 2017; Wilson et al., 2019).

In games for civic engagement specific attention was paid to role-play for deliberation (cf Gordon et al., 2017; Sanoff, 2000; Tan, 2014). Innes and Booher (1999) conceptualise deliberation within a group of stakeholders as a role-play. Stakeholders bring to the table a set of roles associated with certain perspectives (ibid.). These roles include, but are not limited to professional - a representative of a governmental institution or a lobbyist, personal - a parent or a cyclist, as well as the roles as participants in the discussion - a naysayer or an enthusiast (ibid.). Consensus building (or dialogue) calls for the ability to suspend the usual perspectives and welcome other possible perspectives (ibid.; Gordon et al., 2017; Johnson et al., 2017). Thus, games, which include role-play, allow players to practice the art of reasoning and acting from unusual perspectives, as well as develop the awareness and empathy towards positions, which differ from their own.

Designing serious games is a challenge, as serious games have simultaneously be entertaining and fulfil certain serious tasks (Winn, 2009). In serious games educational theory, domain knowledge and game design converge (ibid.). Winn (2009) suggests DPE (design, play, experience) framework for developing serious games focused on learning. The DPE framework implies an iterative design process, where 'the designer designs the game, the player plays the game, which results in the player's experience', and the designer adjusts the game based on the experience of play-tests (ibid., p. 1014). Conducting the play-tests with the target audience is crucial, as the game is adjusted based on player feedback (ibid.).

Several authors report iterative game (co-)design experience with perspective audiences. The attempts to co-design games from scratch did not work out as intended, as target audiences often do not have the essential knowledge about the domain in focus and/or game design (Khaled & Vasalou, 2014; Gugerell & Zuidema, 2017). Transformation of a barebones prototype, which allowed modifications based on player input yielded better results (ibid.; Constantinescu et al., 2017). Player input was collected through observations and debriefing (Gugerell & Zuidema, 2017), interviews and surveys (Prandi et al., 2017), video recordings and player move tracking sheets (Constantinescu et al., 2017). Gugerell and Zuidema (2017) note, that the completion of an ambiguous rule set with co-designers could be the focus of a serious game itself.

Methodology

The game

The game was designed to reflect the prevailing community engagement practice in the Baltic countries (and worldwide) - the public hearings (Prilenska et al., 2019; Rowe & Frewer, 2000). Public hearings usually involve stakeholders directly affected by a project, plan or policy, such as local residents and entrepreneurs. During the public hearings the final version of a project, plan or policy is presented, followed by the questions, answers, objections and proposals round. Therefore, the game represents a board game, where players take over the roles of stakeholders with diverging interests and involve into discussion about the proposal of an upcoming project in the neighbourhood.

The game was developed for educational context, and its target audience are university students and high school pupils. The game was developed and tested iteratively from March 2018 to January 2019 in a series of five game sessions, and was modified after each game session based on player feedback. The overarching goals of the game are twofold, on the one hand, to familiarise the audience with public hearings of urban design related projects, and, on the other hand, to find out how the changes in the setup of the game influence the player experience and the outcomes.

The interface of the game consists of the narrative, role and voting cards, information and visioning boards. The appearance and the content of the information and visioning boards developed substantially in the iterative design process (Figure 1; Figure 2). The appearance of the narrative, role and voting cards had minor changes, while the content had major changes (Appendix 1; Appendix 2). The gameplay had minor changes (Table 2; Table 3). Section 4, *The evolution of the Participation Game*, describes in detail game sessions, player feedback and the changes made to the game based on the player feedback.

The urban area in focus

The game is set in Mukusala neighbourhood in Riga, which is currently in the focus of public attention due to its relatively rapid transformation. The neighbourhood is located on the left bank of Daugava across the city centre on the right bank (Figure 3). The neighbourhood is populated since 1250s, and used to house a female monastery. From 15th century until mid-18th century the area used to serve military purposes. From the mid-18th century until now the area developed as mainly industrial area with a few low-income housing patches. Currently, the area represents a mix of large vacant plots, industrial buildings (mainly workshops for small low-tech businesses) and low-rise low-income housing (detached houses or small apartment blocks). Compared to other central areas the neighbourhood is scarcely built and the quality of existing building stock is poor.

Due to strategic location close to the city centre and at the intersection of main transportation lines the city council designated the area as a priority development. Since 2009 a number of “anchor” objects were developed, such as a shopping mall, Latvian National Library, a business centre, a university campus and a few luxury housing estates. In the near future Rail Baltica high-speed railway line will go along the northern border of the neighbourhood. In 2017-2018 the area was in the focus of student urban design competition, which involved urban planning and architecture students from University of Latvia, Riga Technical University and RISEBA. In 2019 the area was in the focus of MadCity conference and hackaton in urban planning. Therefore, some perspective players were familiar with the area.

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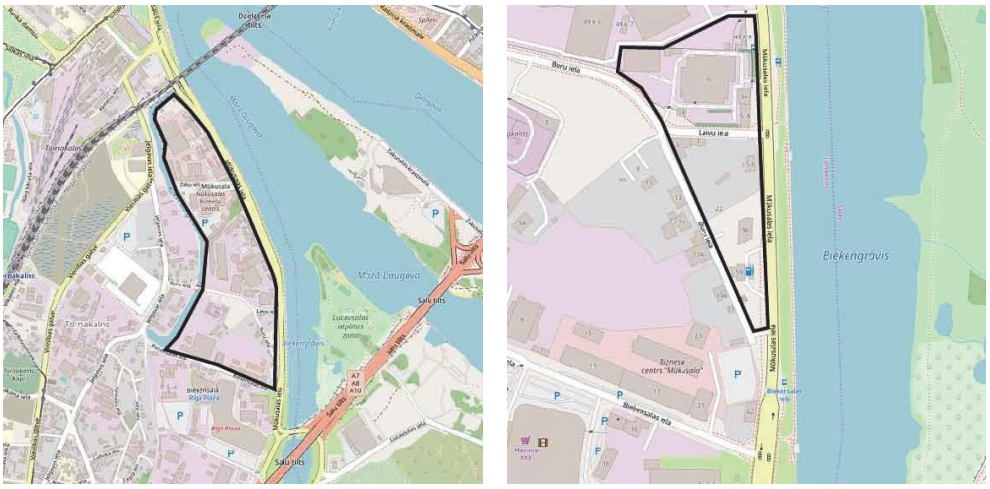
Figure 1. *Two dimensional information (top) and visioning boards (bottom), session 1. Source: © Viktorija Prilenska.*

Figure 2. *Three dimensional information board, visioning board and building units, game sessions 4 and 5. Source: © Viktorija Prilenska.*



(a) Mukusala neighbourhood. (b) The location in focus.

Figure 3. *The urban area in focus. Source: © Viktorija Prilenska.*

Data collection and analysis

Game sessions. Players were recruited through university professors (or school teachers). Four sessions were conducted with students in architecture and urban design (20 participants), urban studies (8) and sociology (9). One session - with high school pupils (23). The number of players per game session varied from seven to 23. With 21 players and more the game took place simultaneously at two tables. Game sessions took place on 8 May 2018 in Riga, 12 August 2018 in Hamburg, 23 November 2018 in Tallinn, 25 January 2019 and 1 February 2019 in Riga. Four Game sessions took place at university campuses and one - in the premises of Riga planning department. There was no intention to play the game outside the educational context as real-life stakeholders, such as residents or local entrepreneurs, are not interested to participate in activities of experimental nature with no perspective of incorporating the results into real-life plans or policies (cf Brown & Chin, 2013; Horelli, 2002).

Video, audio and photo records. Each game session, including the debriefing, was video (four sessions) or audio (one session) recorded, and the outcomes were photographed. The camera (microphone) was placed at the short side of a table, fitting the majority of participants into a video frame. Additionally, the positions of roles at the table were documented. The video (audio) records were divided into five-minute fragments, and each fragment was thematically analysed. The themes were pre-established, and included the number and roles of discussants, the opinions expressed and activities performed, as well as group dynamics. For the sample of thematic analysis of a video fragment refer to Appendix 3.

Observation. One game session was observed by a non-participant, who documented the power dynamics between the roles and players taking on these roles. The observer summarised the observations in as a narrative of ca. 300-400 words.

Evaluation forms. After the Game session players were requested to fill in anonymous evaluation forms. The evaluation forms contained the options for numeric and textual assessment of the game. Players were offered to rate the aspects of the game from “1” to “4”, “1” meaning unsatisfactory and “4” meaning very good. Players were, also, offered to elaborate in text the reasons for the assessment. The aspects of the game included the quality of introduction into the game, game interface, legends and role description, engagement, enjoyment and the degree of realism. The evaluation forms were analysed by means of an Excel spreadsheet. The average score of numerical evaluations was derived. The textual parts were analysed thematically, measuring the frequency of appearance of similar judgements. For the sample of the evaluation form refer to Appendix 4.

The Evolution of Participation Game

The initial setup of Participation Game

The narratives. In Mukusala neighbourhood there are two residential areas. One area is relatively isolated from the industries by a channel. The other area borders the industrial area, and, thus was selected as a game location. In the area there are two small apartment buildings, detached residential buildings, a hotel, garages and a large complex of workshops for low-tech enterprises (a former radio factory). The land is mainly privatised and belongs to physical or legal persons. There are two land plots, which belong to the city council, and used to house two two-storey wooden social houses with bad reputation. The houses burned down in 2015, and currently the land plots are vacant. The employees of adjacent enterprises use the land plots as an informal parking lot.

According to the in-game narrative a local landlord, who rents the workshops to small enterprises, wants to buy a land plot from the city council and build a parking lot for the employees. Local residents and entrepreneurs are invited to the public hearings of the project. Some locals prefer to have a recreational space instead of a parking lot, whereas the others prefer a parking lot. The task of the stakeholders is to reach a consensus about the future development of the land plot. Building on the research about community engagement practices in the Baltic context, there were two variables, (1) the community and (2) the appropriation of space, which make four couples, resulting into four in-game narratives (Table 1).

The role cards. The game has the following roles: three local entrepreneurs, five local residents, city council representative, planner, observer and moderator. All roles, except for a planner, observer and moderator, have the voting rights. The role cards contain the brief description of the situation and challenges. As the roles are location bound, the cards contain a picture of the house/enterprise and a code (R1, R2, E1, E2, etc.). The codes mark house/enterprise location on the information board. Depending on the number of participants the number of roles may vary, e.g. the roles of one entrepreneur and two residents can be excluded. For the sample of a role card refer to Appendices 1 and 2.

Table 1. In-game narratives

Nr. 1. Community + no appropriation of space	Nr. 3. No community + no appropriation of space
Present: informal parking lot Planned: parking lot The community is invited to the public hearing of a parking lot project and offers an alternative proposal - a recreational space	Present: informal parking lot + a degraded house Planned: parking lot The community is invited to the public hearing of a parking lot project
Nr. 2. Community + appropriation of space by community	Nr. 4. No community + appropriation of space by individuals
Present: informal playground + a meeting place Planned: parking lot The community is invited to the public hearing of a parking lot project and offers an alternative proposal - a recreational space	Present: informal playground + a meeting place + a degraded house Planned: parking lot The community is invited to the public hearing of a parking lot project

The information and visioning boards. The information board contains general information about Mukusala neighbourhood: photographs, building functions, the number or residents/employees in each building, land plot division and ownership (Figure 1, (top)). The visioning board contains the sketch of an existing situation and the sketch of a planned future situation - a parking lot (Figure 1, (bottom)). The visioning board is complemented by translucent sheets of paper and colourful felt-tip pens for sketching on top of the existing or a planned future situation. Additionally, the visioning board for narratives Nr. 1 and 2 contains “a community proposal”, a spatial vision designed by the author, which the community members are supposed to lobby.

The gameplay. The game has three rounds and lasts roughly two to three academic hours (90-120 min), including the evaluation of the game and a debriefing. Firstly, the author introduces the game, its goals and context. Then the roles are distributed randomly, players take seats at the tables assigned to them, read the role cards, ask questions (if any).

In the first round players one by one name their roles and express the opinions about existing and planned future situation. The round ends with voting for or against the future planned situation - a parking lot, and, in narratives Nr. 1 and 2, “a community proposal”. In the second round players discuss voting outcomes and suggest alternative proposals. “The planner” sketches a new vision, based on proposals of other players. The round ends with voting for or against the new vision.

If players voted unanimously for the new vision, then in the third round players one by one express their opinion about the vision. If players did not manage to reach a consensus, then “the representative of the city council” takes the final decision and explains it to other players, whereas other players one by one express their opinions about the final decision. In the end of the game session players fill-in game evaluation forms and discuss the dynamics and the outcomes of the game. The timing of activities is reflected in Table 2.

Table 2. The game-play, session 1 and 2.

Activity	Time (min)
Presentation	10
Round 0 - distribution of role cards - taking seats and reading the cards - questions and answers	10
Round 1 - naming roles and expressing opinions about existing and planned situation - voting for or against planned situation	10
Round 2 - discussion of the voting and alternative proposals - development of an alternative vision - voting for or against an alternative proposal	20
Round 3 - if consensus, then expressing opinion about an alternative vision - if no consensus, local government takes the final decision and explains it, others express their opinions about the final decision	10
Filling-in Game evaluation forms and a Coffee break	10
Debriefing	20
Total timing	90

Game session 1

Game setup. The game session was conducted with master students in sociology and in architecture (21) as a part of a course related to urban studies. Players had Latvian background and were familiar with the Mukusala neighbourhood. The turnout of students (21) was a half from the expected (40-45), therefore two narratives instead of four, Nr. 2 and 4, were tested, which were different from each other by the variable "the presence of a community". In both narratives the space was "appropriated" by either the community or individuals, meaning that the locals have arranged an informal recreational space on the land plots. Figure 4 shows the fragments of the visioning board, (a) reflects the "present" situation, whereas (b) reflects the "planned" situation. Figure 5 (a) shows "a community proposal", designed by the authors, which the community was supposed to lobby. The goal of the first game session, was to test the initial premises of the game, and the methodology of data collection and analysis.

(a) Present situation, narrative Nr. 4. (b) Planned situation, narrative Nr. 2.

Figure 4. *Fragments of the visioning board, game session 1. Source: © Viktorija Prilenska.*

Game play. In each 5 min interval more than half of the players were engaged into discussion. Game rounds were well articulated, as each game round ended with a sketch and voting. The players did not like neither the parking lot proposal, nor the "community proposal", and voted against both of them in the first round. In the second-round game rules and the moderator encouraged the player with a role of a planner to make a sketch. However, it worked only partially, as other players, also, participated in sketching or showed the desire to participate in sketching. Although the roles of planners were assigned to architecture students, they did not

have a sufficient knowledge in urban design, namely, the minimum standard dimensions of roads, parking spaces, landscaping elements and street furniture, and asked moderators for assistance. Consensus building went smoothly, as there was enough space for both functions, the parking and recreation.

Outcomes. The outcomes in both groups are similar. The land plot was divided into two parts, the smaller part was dedicated to the recreational space, and the larger - to the parking lot (Figure 5, (b)). Players agreed, that the perspective landowner, the landlord who owned workshop spaces, was responsible for building the parking lot and the recreational space with minimum facilities, namely, grass, threes and hedges. The residents, in turn, were responsible for building additional facilities, such as a playground, benches, picnic tables and alike. There was no substantial difference between the player group “with community”, narrative Nr. 2, and the group “without community”, narrative Nr. 4, neither during the game play, nor in the outcome, as the players formed alliances disregarding those indicated in their roles. The “appropriation of the space” seemed to have no substantial influence neither on the game play, nor on the outcomes.

(a) Community proposal, narrative Nr. 2. (b) Co-designed proposal, narrative Nr. 2.

Figure 5. *The fragment of the visioning boards and the co-designed proposals, game session 1. Source: Viktorija Prilenska*

Evaluation of Participation Game 1.0. The overall evaluation of the game was positive scoring the average of 3.4, with engagement, enjoyment and realism scoring the lowest (3.1), and the interface (3.6) and the roles (3.7) scoring the highest. Players appreciated detailed role descriptions, that allowed “diving into the role” (10 mentions), some players found the roles

"limiting" (1 mention), other players requested to add the mode of behaviour (e.g. aggressive, 1 mention) and the "facts" or "details" to build argumentation on (10 mentions) to the roles. Players enjoyed the diversity of views suggested by the role cards (2 mentions) and the opportunities to practice argumentation and consensus building skills (9 mentions). Players noted, that in real-life consensus building is more complex than in in the game (8 mentions), where the consensual solution was "obvious", and requested to escalate the conflict (5 mentions), by, for example, introducing financial aspects (2 mentions).

Evaluation of the methodology. Video recordings made with wide-screen action cameras provided a good overview of players, their actions and arguments. Five-minute intervals for the analysis of video recordings was an optimum unit of information.

The groups were observed by two sociology students, who wrote down the outcomes of voting, as well as the arguments and the agreements made during the negotiations. The observations duplicated the analysis of the video recordings, and the latter was more detailed. Therefore, in further game sessions no observations were conducted.

Evaluation forms, which consisted of numerical and textual evaluation were only partially filled in. The information in the textual part was repetitive or the textual parts were left blank. Therefore, for the next game sessions the questionnaires were twice shorter.

Game session 2

Game setup. The second session was conducted with a mixed group of bachelor and master students in architecture and urban design (10) within a framework of the Baltic International Summer School organised by HafenCity University. Students came from the former countries of Socialist Bloc (Poland, Russia, Moldova), which used to have a similar planning background, and were not familiar with the Mukusala neighbourhood. During the second game session the narrative Nr. 3 was tested, which was different from the narratives Nr. 2 and Nr. 4 by the variable "appropriation of space" (Table 1), namely the locals did not arrange any informal recreational space on the land plots, and the employees continue to use it as an informal parking lot.

The narrative was complemented with an additional challenge - to build a residential cluster, with the intention to escalate the conflict and hamper the consensus building by creating the shortage of space to house all functions, the parking, recreation and housing. Consequently, an additional role of the developer, who was responsible for lobbying the residential cluster, was introduced. The roles were complemented with player attitudes towards the project (e.g. negative) and the mode of behaviour (e.g. actively protest).

Game play. The game play was similar to the game play in game session 1. The introduction of an additional challenge, as well as the attitudes and the modes of behaviour, seemed to substantially prolong the negotiations, as the space was limited, and players were determined to lobby their interests. Initially, the role of a planner went to an unexperienced student, who was unable to produce a viable sketch. Thus, the sketching duty was later taken over by a more experienced student with more articulated leadership skills. The unfamiliarity of students with the location seemed to have no significant influence on the game play and the outcomes.

Outcomes. The land plot was divided into three parts, where the smallest part facing the street was allocated to recreation, the largest part in the back - to housing, and the medium part in the middle - to parking (Figure 7, (a)). Players agreed, that both land plots are sold to the

developer, and that the latter builds a parking lot and the recreational space. Initially, the developer agreed to build the aforementioned facilities in exchange for extra building rights, but in the course of negotiation this agreement was "lost". The landlords, who own the workshops and an apartment house, agreed to rent the necessary parking spaces from the developer.

Evaluation of Participation Game 1.1. The game scored the average of 3.0, with realism (2.4), interface (2.8) and roles (3.0) scoring the lowest and the engagement scoring the highest (3.5). Again, players noted, that in real-life residents do not have as much influence on decision-making as they were assigned in the game (2 mentions), and requested to add financial aspects to the description of the roles, thus, delineating the influence of each stakeholder on the decision making (4 mentions). Additionally, players expressed the preference for a three dimensional "less realistic and more gameful", "cartoonish", interface (4 mentions). One player noted, that although she disagreed with the position outlined in the role card, she had to act accordingly, and it was an interesting experience for her.

Game session 3

Game setup. The third session was conducted with a group of bachelor students in architecture and urban design (7) as an extracurricular activity. Players had Estonian background and were not familiar with the Mukusala neighbourhood. The goal of the game session was to test the new interface, which was partially two and partially three dimensional.

The information and visioning boards reflected the current real-life situation in the area, the information board was three dimensional scaled 1:400 (Figure 6, (a)) and the visioning board (or gaming field) - two dimensional scaled 1:100 (Figure 6, (b)). The visioning board had a grid overlay with a step of 6.25 cm, which was chosen as, firstly, it equals to two and a half 2.5 m wide parking spaces, and, secondly, it fits roughly the dimensions of a budget one family two storey house, which is 6 m wide and 12 m long, with a floor area of around 140 m^2.

The role of a planner was abandoned in favour of 6.25x6.25 cm building cards, which allow all players to participate in the design process (Figure 6, (d)). The cards embodied landscaping elements (grass, sand, paving, asphalt, fences, trees, hedges and gardens), parking spaces, street furniture (benches, tables, lights and playground equipment) and houses. Three dimensional models represented the cars. The cards and the models reflected roughly the realistic dimensions of the embodied elements scaled 1:100. "A carte blanche", a blank card, was introduced with the intention to allow for flexibility, which was previously ensured by sketching. "A carte blanche" could replace any other building card (if not enough) or embody an entirely new object, which is not captured by the cards. The information and visioning boards, as well as building cards, received a "cartoonish" look.

The financial aspect was brought in by allocating a certain amount of resources to each role (Figure 6, (c)). Roles with larges power capacities (e.g. landlords) had more resources and the resources were more valuable than roles with smaller power capacities (e.g. residents).

Figure 6. *The interface, game session 3. Source: © Viktorija Prilenska.*

Game play. Building cards successfully replaced the role of a planner distributing designing capacities between all players and reducing substantially the number of questions related to the dimensions of roads, parking spaces and other urban design elements. Furthermore, they seemed to make the game play more engaging, involving the majority of players into negotiations or designing activity during 5 min intervals. Game rounds merged, as building cards allowed continuous refinement of the co-designed proposal, which was in the state of flux throughout the game session (Table 3). The allocation of resources did not work as intended, as the players mixed up the resources and played around with the common pool of resources.

Outcomes. The outcomes of the current session were almost identical to the game session 2 (Figure 7, (b)). “The carte blanche” was used solely as a replacement for existing building cards, if they were not enough, not for the new ideas.

Evaluation of Participation Game 2.0. The game scored the average of 3.5, with the role descriptions and the realism scoring the lowest (3.3) and the engagement scoring the highest

(4.0). Players enjoyed the "fun" (2 mentions) and the insights into urban design (3 mentions) delivered by the game. At the same time players expressed the preference for the entirely three dimensional interface (3 mentions), clearer financial capacities of the stakeholders (1 mention) and requested the feedback from a professional planner about their co-designed proposal (idea sparkled during the debriefing).

Table 3. The game-play, session 3, 4 and 5.

Activity	Time (min)
Presentation	10
Round 0 - distribution of role cards - taking seats and reading the cards - questions and answers	10
Round 1 - naming roles and expressing opinions about existing and planned situation - development of an alternative vision - voting and expressing opinions about the final vision	60
Filling-in Game evaluation forms and a Coffee break	10
Debriefing	20
Total timing	110

Game session 4

Game setup. The fourth session was conducted with two groups of high school pupils (23) within a framework of the UNESCO project "Jauno mantotāju skola" ("Young heirs school"). Pupils had Latvian background, and most of them were not familiar with the location. The goal of the game session was to test a new three dimensional interface, as well as the suitability of the game for pupils.

The information board and the visioning board were left without changes, whereas building cards were replaced by three-dimensional building units, which roughly reflected the real dimensions of the objects (Figure 2). The idea of allocating resources to the roles was abandoned. The role cards were complemented with financial aspects, such as prices and areas of land plots, prices of street furniture, parking lots and housing, as well as financial capacities of each player.

Debriefing and game evaluation by the players were replaced by the discussion with professional planners, the employees of Riga planning department, who commented on the game and on co-designed proposals.

Game play. The game play was similar to the previous session, where the game rounds merged (Table 3). Players did not pay attention to the roles, financial issues and agreements, and focused mainly on the design. Part of students were highly engaged, whereas other, less vociferous pupils, were left out from the discussion. The game was played simultaneously on two tables with two groups of pupils and two moderators. The consensus building in the first group went smoothly, while in the second the players were struggling for leadership.

Outcomes. The first group proposed to divide the land plots into two parts, the smallest one facing the street was allocated to parking, and the largest one in the back to housing with an integrated playground. The second group proposed to divide the land plots into three parts, the medium part facing the street was allocated to parking, the largest part in the back - to housing and the smallest part in the middle - to a playground (Figure 7, (c)). There were agreements made regarding the building responsibilities. The parking lot was supposed to serve the whole neighbourhood, including the employees of the workshops and the residents of the apartment house.

The planners studied the co-designed proposals and responded, that according to building regulations in Riga parking lots in the front yard are prohibited, they should be located either in the back or side yards. According to the players front yard location was more convenient for the public parking lot, as it is more accessible to the users.

Evaluation of Participation Game 2.1. The planners told that they would not be interested in playing the game, as “games are for the youth”. They, also, requested to include alternative transportation opportunities into the game, such as public transportation and bicycle.

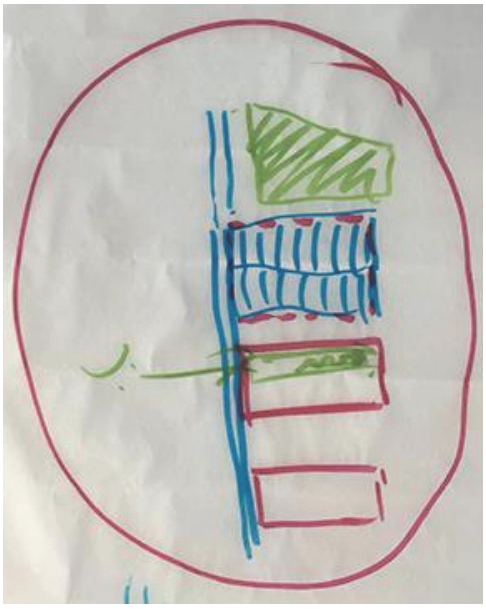
Game session 5

Game setup. The fifth session was conducted with a group of bachelor students in regional development and urban economy (8) as a part of a course related to urban studies. Players had Latvian background and were familiar with the Mukusala neighbourhood. The goal of the game session was to find out how the introduction of new rules would influence the game play and the outcomes - a co-designed proposal.

The information and visioning boards were left without changes. Building units were complemented by a bus stop and cycling path units. The role card of a city council representative was complemented by an additional rule, namely, the introduction of the public transportation line in the area gives 20 percent reduction in parking spaces. There were no additional rules concerning the bicycle path.

Game play. The game play was, again, similar to the one in game session Nr. 3 (Table 3). Players were highly engaged into negotiations and designing, some players stood up to have the better overview of the visioning board and move around the building units. Players acted well within the boundaries of their roles, paying attention to their own interests and interests of other players, as well as financial issues and agreements about the building responsibilities. Players did not raise any issues transcending the boundaries of the game, such as the relevance of a parking lot, recreational space, housing or alternative means of transportation for the area. They treated game challenges as a puzzle, trying to fit all functions into the limited space and to take into account the interests of all players to the maximum extent.

Outcomes. The land plots were divided into two parts, with the smaller part facing the street allocated to the parking lot, and with the larger part in the back allocated to the housing area integrated with an integrated playground (Figure 7, (d)). The houses were stocked on top of each other to save the space. The bus stop was built to reduce the amount of necessary parking spaces by %20. The duties to build the parking lot were shared between the landlords, who owned workshop spaces and who owned an apartment building. The duty to build a recreational space was delegated fully to the developer. Landlords and residents agreed, that on weekdays during the office hours the parking lot is used by the employees, while on weekends and on weekdays outside office hours the parking lot is used by the residents.



(a) Game session 2.

(b) Game session 3.

(c) Game session 4.

(d) Game session 5.

Figure 7. *Co-designed visions. Source: © Viktorija Prilenska.*

Evaluation of Participation Game 2.2. The game scored the average of 3.3, with engagement and realism scoring the lowest (3.1) and with the interface and role descriptions scoring the highest (3.5). Players enjoyed the opportunities for discussion (4 mentions) and consensus building (3 mentions), as well as the divergence of views between the players (3 mentions). Players noted, that in real life residents are often not involved in the decision making (2 mentions). The players requested to have a feedback from a professional planner about their spatial proposal (2 mentions) and provide the information about the best practices of urban design.

Discussion and Conclusions

The players

Eighteen participants out of 67, who took part in game sessions, studied architecture or urban design, nine students - sociology, eight students - urban studies, twenty-three participants were high school pupils, and three participants were university professors. Fifty participants were from Latvia, seven from Estonia, and ten were from other former Socialist Bloc countries.

Most players were sceptical towards the practice of civic engagement in planning and the capacity of resident communities to substantially influence planning decisions. They were convinced that urban development is developer driven, and that local government is unable to lobby public interests. Furthermore, most players admitted, they have never participated in public hearings, and Participation Game was their first encounter with the role-play consensus building exercise concerning the built environment.

During the game play, most players, including those with the role of a city council representative, made multiple jokes about the local government. The local government was represented as an institution, which is not ready to spend any resources for small scale public infrastructure (such as neighbourhood scale public spaces), which does not have its own position regarding the future development vector of the city, which cares mostly about the outcomes of elections, and tries to avoid direct confrontation with powerful interest groups (such as developers or land owners).

Player scepticism towards civic engagement may be explained by their cultural background, as all of them come from the former Soviet Bloc countries. In these countries urban planning practices are still in transition, resident communities entered the planning domain in early 2010s, and reached the capacity to influence the decision-making concerning the built environment only by the end of the current decade (Prilenska et al., 2019). Game sessions with players, who come from the countries with a long history of civic engagement, might have yielded different results. The degree of familiarity with game context, Mukusala neighbourhood, seemed to have no significant influence on the game play and the outcomes.

Sociologists and planners better adopted the roles with their characteristic behaviour, than architects. They, also, paid more attention to the agreements about financial and building responsibilities, than architects. Architects, in turn, focused on design, rather than on roles and agreements. All players revealed their weak knowledge about basic urban design principles, such as standard dimensions of roads, turning and parking places, as well as about the optimum arrangement of urban design elements. Therefore, building cards and units were helpful as learning and experimentation tools about urban design principles.

The role-play nature of the game turned out to be not suitable for high school pupils, who

ignored the roles and focused solely on design. Furthermore, the size of the group of 11-12 people did not work for the pupils, as less vociferous pupils were ignored and more vociferous pupils were struggling for leadership. It seems, that for pupils the optimum size of the group should be twice smaller, and that the game should focus on developing teamwork skills in first place, rather than on urban and participatory issues.

The format of the game

In the iterative design process the interface of the game transformed from a two dimensional to three dimensional, and the co-designed proposal, developed by players in the gaming process, transformed from a sketch to a three dimensional model assembled from pre-designed units.

Compared to a two dimensional interface, three dimensional "cartoonish" interface was more appealing to students and increased their level of engagement into the gaming process. On the one hand, building cards and units allowed multiple players to engage into modelling activity simultaneously. Besides, in contrast to sketching, modelling from pre-designed units did not require any drawing skills or knowledge of basic urban design principles. On the other hand, building cards and units limited player choices to the set of urban design elements, offered by game author. The "carte blanche", which was added to the set of pre-designed units with the intention to increase its flexibility, was used as a replacement for the existing elements, rather than as an embodiment of new elements or ideas.

During the game play students acted within the rules of the game, and did not make any attempts to transcend them, by changing and/or adding the rules, or by raising broader issues about planning and/or participation. In-game challenges were treated like a puzzle which had to be resolved within the framework of the game. Limitations of the game became especially evident during the final session, where additional building units and rules concerning the bus stop and the cycling path were introduced. The bus stop, which was useful in solving "the puzzle" with parking places, was built, whereas the cycling path, which did not give any in-game benefits, was neglected. These findings, along with the fact, that co-designed visions are surprisingly similar, suggest, that the rules of the game might steer players towards certain outcomes, and even allow to orchestrate the results.

In-game collaboration

The role cards indicated, that local residents and entrepreneurs are a part of a local community, assuming, that players will make in-game collaborations accordingly. However, players ignored the indications in the role cards and preferred to collaborate with their buddies. The findings imply, that within a game it is difficult to force collaborations, which do not exist in real life. These findings are specific for the particular game and cannot be generalised. There is evidence, that some pervasive games foster collaboration, cf Big Urban Game (Coppock & Ferri, 2013; Cameron, 2004) and community cohesion, cf ZWERM (Laureyssens et al.,2014), whereas some board games encourage building in-game alliances, cf Energy Safary (Gugerell & Zuidema, 2017) and City Makers (Constantinescu et al., 2017).

The iterative design

The design of the game changed from session to session based on player feedback, which was collected by means of evaluation forms and debriefing, as well as audio and video recordings of game sessions.

The analysis of evaluation forms showed that students are unwilling to fill in lengthy questionnaires, and, therefore, starting with game session 2 the evaluation form was reduced to one A4 page. In the evaluation forms students were slightly more critical towards the game, then during the debriefings, as the evaluation forms were anonymous.

The analysis of audio and video recordings showed the levels of engagement, measured by the number of players involved in the gaming process during 5 min intervals, player activities, unfolding discourses, as well as the dynamic of player mood during the session. In combination with direct player feedback from evaluation forms and debriefings, the analysis allowed to identify the strengths and the weaknesses of the game, as well as preferred directions for further improvement.

The game evolutioned from the basic game, which offered the flexibility in the interpretation of the roles and the freedom of sketching into the game with definite role descriptions and a pre-designed set of building units. The game became more rigid and limiting, and, at the same time, clearer and more convenient for the players.

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Disclosure Statement

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References

Ampatzidou, C., Gugerell, K., Constantinescu, T., Devisch, O., Jauschneg, M., & Berger, M. (2018). All Work and No Play? Facilitating Serious Games and Gamified Applications in Participatory Urban Planning and Governance. *Urban Planning*, 3, 34-46.

Brown, G., and Chin, S. Y. W. (2013). Assessing the Effectiveness of Public Participation in Neighbourhood Planning. *Planning Practice and Research. Planning practice & Research*, 28, 563-588.

Cameron, K. (2004, March 1). Using a B.U.G. to Promote Urban Design. *Metropolis.* Retrieved May 1, 2019, from www.metropolismag.com.

Constantinescu, T. I., Devisch, O., & Kostov, G. (2017). City Makers. *International Journal of E-Planning Research*, 6, 32-56.

Coppock P.J., & Ferri, G. (2013). Serious Urban Games. From play in the city to play for the city. In Giaccardi C., Tarantino M., Tosoni S. (Ed.) *Media and the City: Urbanism, Technology and Communication (Geography, Anthropology, Recreation)* (pp. 120-134). Cambridge: Scholars Publisher.

Dörner, R., & Spierling, U. (2014). Serious Games Development as a Vehicle for Teaching Entertainment Technology and Interdisciplinary Teamwork. *Proceedings of the 2014 ACM International Workshop on Serious Games - SeriousGames '14* (3–8). New York, NY, USA: ACM.

Duke, R. D. (2011). Origin and Evolution of Policy Simulation: A Personal Journey. *Simulation & Gaming*, 42, 342–358.

Open Access Journal

Feldt, A. (2014). Experience with Simulation / Gaming: 1960 - 2010. *Simulation & Gaming*, 45, 283–305.

Gee, J. P. (2013). *Good Video Games and Good Learning: Collected Essays on Video Games, Learning and Literacy (New Literacies and Digital Epistemologies).* New York, Bern, Berlin, Bruxelles, Frankfurt am Main, Oxford, Wien: Peter Lang Inc., International Academic Publishers.

Geher G. (2018). Video Games and Emotional States: Why your kid is addicted to Fortnite. *Psychology Today,* September 03. Retrieved July 1, 2019, from www.psychologytoday.com.

Gordon, E., & Baldwin-Philippi, J. (2014). Playful civic learning: Enabling reflection and lateral trust in game-based public participation. *International Journal of Communication*, 8, 759–786.

Gordon, E., Haas, J., & Michelson, B. (2017). Civic creativity: Role-playing games in deliberative process. *International Journal of Communication*, 11, 3789-3807.

Gugerell, K., & Zuidema, C. (2017). Gaming for the energy transition. Experimenting and learning in co-designing a serious game prototype. *Journal of Cleaner Production*, 169, 105-116.

Horelli L. (2002) A methodology of participatory planning. In Bechtel R. B., and Churchman A. (Eds) *Handbook of Environmental Psychology* (607-628). New York : Wiley.

Innes, J. E., & Booher, D. E. (1999). Consensus Building as Role Playing and Bricolage. *Journal of the American Planning Association*, 65, 9–26.

Irvin, R., & Stansbury, J. (2004). Citizen Participation in Decision Making: Is It Worth the Effort? *Public Administration Review*, 64, 55–65.

Johnson, I. G., MacDonald, A., Briggs, J., Manuel, J., Salt, K., Flynn, E., & Vines, J. (2017). Community Conversational. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems,* (2320–2333). New York, NY, USA: ACM.

Khaled, R., & Vasalou, A. (2014). Bridging serious games and participatory design. *International Journal of Child-Computer Interaction*, 2, 93–100.

Laureyssens, T., Coenen, T., Claeys, L., Mechant, P., Criel, J., & Van De Moere, A. (2014). ZWERM: A modular component network approach for an urban participation game. In Jones, M., Palanque, P., Schmidt, A., & Grossman, T. (Ed.) *Proceedings of the 32nd Annual ACM Conference on Human Factors in Computing Systems* (3259–3268). New York, NY, USA: ACM.

Prandi, C., Roccetti, M., Salomoni, P., Nisi, V., & Nunes, N. J. (2017). Fighting exclusion: a multimedia mobile app with zombies and maps as a medium for civic engagement and design. *Multimedia Tools and Applications*, 76, 4951-4979.

Prilenska, V., Paadam, K., & Liias, R. (2019) Civic engagement in the (post-socialist) transitional society: two case studies. In Čamprag, N. & Anshika, S. (Ed.) *Three Decades of Post-socialist Transition. Conference Proceedings* (287-294). Darmstadt: TU prints.

Rowe, G., & Frewer, L. J. (2000). Public participation methods: A framework for evaluation. *Science Technology and Human Values,* 25, 3-29.

Sanoff, H. (2000). *Community participation methods in design and planning.* Wiley.

Shipley, R., & Utz, S. (2012). Making it Count: A Review of the Value and Techniques for Public Consultation. *Journal of Planning Literature*, 27, 22–42.

Tan, E. (2014). *Negotiation and Design for the Self-Organizing City. Gaming as a method for Urban Design.* TU Delft.

Thiel, S. K., Ertio, T. P., & Baldauf, M. (2017). Why so serious? The Role of Gamification on Motivation and Engagement in e-Participation. *Interaction Design and Architectures*, 35, 158-181.

van Dijk, T., & Ubels, H. (2016). How Dutch professionals conduct interactive design sessions to foster 'shared understanding.' *Environment and Planning B: Planning and Design*, 43, 464-479.

Wilson, A., Tewdwr-Jones, M., & Comber, R. (2019). Urban planning, public participation and digital technology: App development as a method of generating citizen involvement in local planning process. *Environment and Planning B: Urban Analytics and City Science*, 6, 286–302.

Winn, B. M. (2009. The Design, Play, and Experience Framework. In Ferding R. (Ed.) *Handbook of Research on Effective Electronic Gaming in Education* (1010–1024). Hershey, PA, USA: Information Science Reference.

G. N. Yannakakis and A. Paiva, Emotion in Games, Calvo R., D'Mello S., Gratch J., and Kappas A. (Eds.) *Handbook of Affective Computing*, 2014. Oxford University Press.

Appendix 1: Example of a Role Card (session 1, narrative Nr. 4)

Entrepreneur. Landlord (E1)

Your situation:

- You own a large workshop complex at Laivu street and You lease it to small enterprises.
- The employees of small enterprises arrive to work mainly by car; thus, you need a parking lot.

Your challenges:

- Some enterprises moved out to the premises with a parking lot, which has surveillance and a guard.
- There is no space for a parking lot in the courtyard of the workshop complex, thus, you would like to buy a vacant land plot nearby and arrange a parking lot there.

The photograph of the workshops.

Appendix 2: Example of a Role Card (session 5)
The full set of role cards is provided in Supplementary materials.

Entrepreneur. Landlord (E1)

Your situation:

- You live outside the neighbourhood.
- You own a large workshop complex at Laivu street and You lease it to small enterprises.
- The employees of small enterprises arrive to work mainly by car; thus, you need a parking lot.
- There is no space for a parking lot in the courtyard of the workshop complex, thus, you would like to buy a vacant land plot nearby and arrange a parking lot there.

Your challenges:

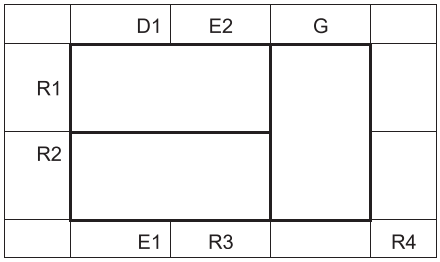
- You need 30 parking spaces. The price of one surface parking space is 2 thsd. euros. The price of one underground parking space is 20 thsd. euros.
- Nearby there are two vacant land plots. Land plot X belongs to the city council, its area is 721 m^2 and price - 50 thsd. euros. On the land plot X there is space for roughly 30 parking spaces. Land plot Y belongs to the developer, its area is 1588 m^2 and price - 100 thsd. euros. On the land plot Y there is space for roughly 60 parking spaces.
- You have 100 thsd. euros.

Your attitude/behaviour:

- You need the parking lot and You are determined to lobby Your interests.

The photograph of the workshops.

Appendix 3: The Fragment of Video Recording Analysis (session 5)



Locations of roles at the table. Camera moves around. E1 - local entrepreneur-owner (offices), E2 - local entrepreneur-owner (hotel), R1- landlord (blue-green), R2 - resident-tenant (young), R3 - resident-owner (retired), R4 - resident-owner (mortgage), D1 - developer, G - local government, O - observer, x - camera.

Game session 5, Legend 1					
…					
00:10	00:52	Round 2 - 42 min			
Start	End	Discussants	Activity	Group dynamics	Notes
00:10	00:15	all 8: landlord housing, resident, entrepreneur, landlord workshops, government, resident, developer, resident	Build, clarify the number of required parking lots, try to make alliances based on common interests and financial capacities (E1-D), propose public transport, discuss possible solutions, clarify positions	Focus, smile, laugh occasionally, rational approach	Speak between each other in small groups, rather active, ask question about urban design and game rules, stick to the rules
…					
00:20	00:25	8: landlord housing, government, resident, developer, landlord workshops, resident, entrepreneur	Build, search for common interests, clarify positions, discuss possible solutions, argument - “you voted against parking lot, and build parking lot”, answer “we voted against use of parking lot solely for enterprises”, compromise	Focused, rational approach, frustration, vociferous occasionally	Speak between each other in small groups, ask questions about urban design, stand up to build
…					

Appendix 4: Evaluation Form (session 5)

Game evaluation

Please, circle the corresponding answer (1- unsatisfactory, 2 - satisfactory, 3 - good, 4 -- very good; yes or no) or write!

How engaging was the game?

1	2	3	4

Evaluate the presentation!

1	2	3	4

Evaluate game interface!

1	2	3	4

Evaluate role description!

1	2	3	4

How realistic is the game?

1	2	3	4

Explain your opinion!

……
……

Aspects of the game, which you enjoyed?

……
……
……

Aspects of the game, which need improvement?

……
……
……

Are you willing to participate in the similar game once again? Yes / No

Any other comments?

……
……

Curriculum vitae

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Keelteoskus

Inglise keel	kõrgtase
läti keel	kõrgtase
vene keel	kõrgtase
saksa keel	kesktase
hispaania keel	algtase
prantsuse keel	algtase

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