THE EFFECT OF CROWDSOURCING ON CITIZEN PARTICIPATION: CASE STUDIES OF ANKARA METROPOLITAN MUNICIPALITY AND ISTANBUL METROPOLITAN MUNICIPALITY

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ABSTRACT

THE EFFECT OF CROWDSOURCING ON CITIZEN PARTICIPATION: CASE STUDIES OF ANKARA METROPOLITAN MUNICIPALITY AND ISTANBUL METROPOLITAN MUNICIPALITY

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Since the middle of the 20th century, there is a search for involving citizens into urban planning for creating democratic decision-making environment, building trust, and creates more livable and desired cities for all, and uncovering unnoticed problems and solutions by using local knowledge of the citizens. Early theories reveal that language is one of the most important criteria for connecting with citizens. Today, the government now offers its services from online platforms. Sprawling social media platforms and increasing adaptation to them make digital platforms an opportunity for shift from e-government to e-governance for establishment of two-way communication. Crowdsourcing offers local governments the opportunity to harness local knowledge to uncover unnoticed problems and solutions and increase the legitimacy of plan decisions by ensuring citizen satisfaction; on the other hand, it ensures that the voices of the citizens are heard, and they become the builders and shapers of the city. In this thesis, the effect of crowdsourcing practices on citizen participation has been examined through the studies of Ankara Metropolitan Municipality and Istanbul Metropolitan Municipality. The findings show that in crowdsourcing practices, citizens help the local government at some points about unnoticed problems and solutions and changes the perception of the local government. The fact that there is a significant relationship between the number of

applications from the districts and the socio-economic development (SE-GE) values in the Participatory Budgeting in Istanbul also shows that the physical infrastructure alone is not sufficient for citizen participation and requires a more holistic approach to increase the social and economic well-being of the citizens. Based on these case studies, Arnstein's Ladder of Citizen Participation model is revised for crowdsourcing applications, and it is expected to give an idea about the stage of crowdsourcing practices.

Keywords: Crowdsourcing, citizen voice, digitalization, local knowledge, 'ladder of citizen participation'

ÖZ

KİTLEKAYNAK KULLANIMININ VATANDAŞ KATILIMINA ETKİSİ: ANKARA BÜYÜKŞEHİR BELEDİYESİ VE İSTANBUL BÜYÜKŞEHİR BELEDİYESİ ÖRNEK ÇALIŞMALARI

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20. yüzyılın ortalarından itibaren demokratik karar alma ortamı oluşturmak, güven inşa etmek, herkes için daha yaşanabilir ve arzu edilen kentler yaratmak, vatandaşların yerel bilgi birikimini kullanarak gözden kaçan sorunları ve çözümleri ortaya çıkarmak için planlama alanına vatandaşları dahil etme arayışı vardır. Geçmişteki teoriler, dilin vatandaşlarla bağlantı kurmak için en önemli kriterlerden biri olduğunu ortaya koymaktadır. Günümüzde hükümetler, hizmetlerini çevrimiçi platformlardan sunmaktadır. Sosyal medya platformlarının yaygınlaşması ve bunlara artan adaptasyon, dijital platformları e-devletten e-yönetişime geçiş için iki yönlü iletişim kurulması için bir fırsat haline getirmektedir. Kitlekaynak kullanımı, yerel yönetimlere, yerel bilgileri fark edilmeyen sorunları ve çözümleri ortaya çıkarmak için kullanma ve vatandaş memnuniyetini sağlayarak plan kararlarının meşruiyetini artırma olanağı sunarken; bir yandan da yurttaşların seslerinin duyulmasını sağlayarak kentin yapıcısı ve şekillendiricisi olmalarını sağlar. Bu tez çalışmasında kitlekaynak uygulamalarının karar alma sürecine etkisi, Ankara Büyükşehir Belediyesi ve İstanbul Büyükşehir Belediyesi'nin çalışmaları üzerinden incelenmiştir. Bulgular, kitlekaynak kullanımı uygulamalarında vatandaşların bazı noktalarda gözden kaçan sorunlar ve çözümler sunarak yerel yönetime karar almada

yardımcı olduğunu, bazı noktalarda ise yerel yönetimin algısını değiştirdiğini göstermektedir. İstanbul'daki Katılımcı Bütçe uygulamasında ilçelerden gelen başvuru sayısı ve sosyo-ekonomik gelişmişlik (SEGE) değerleri arasında anlamlı bir ilişkinin bulunması da vatandaş katılımı için fiziksel altyapının tek başına yeterli olmayıp vatandaşların sosyal ve ekonomik refahlarını artırmak için daha bütüncül bir yaklaşım gerektirdiğini göstermektedir. Bu vaka çalışmalarından yola çıkılarak Arnstein'ın Vatandaş Katılım Merdiveni modeli kitlekaynak kullanımı uygulamaları için revize edilmiştir.

Anahtar Kelimeler: Kitlekaynak, vatandaş sesi, yerel bilgi, dijitalleşme, 'vatandaş katılım merdiveni'

To my family

ACKNOWLEDGMENTS

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INTRODUCTION

''We must not think only of society or the group acting on the unique individual, but also of many unique individuals, through a process of communication, creating and where necessary extending the organization by which they will continue to be shaped... If man is essentially learning, creating, and communicating being, the only social organization adequate to his nature is a participatory democracy, in which all of us, as unique individuals, learn, communicate, and control. Any lesser, restrictive system is simply wasteful of our true resources; in wasting individuals, by shutting them out from effective participation, it is damaging our true common process.''
(Williams, 1961, p. 117-118).

1.1   Problem Definition, Aim of the Study, and Research Questions

For years, there has been a search for involving citizens in the urban planning domain for creating a democratic decision-making environment, problem-solving, and better public service provision. Citizen participation is seen as a basic human right and since they are the subject of the decision-making process citizens have a right to make an impact on decisions that affect their well-being, accessibility to public services, interests, goals, needs, and so, their life (The International Covenant on Civil and Political Rights Article 25; UN Declaration on the Right to Development Article 2; Lister, 1998; Steiner, 1988; Gaventa and Valderrama, 1998; Bingham,

Nabatchi, and O'Leary, 2005). It means that citizens must also be an object of the process, rather than just the subject of the process to be an influential body on urban planning and their surrounding environment. In other words, they should be 'makers and shapers' rather than 'users and choosers' (Cornwall, and Gaventa, 2001). In planning, an answer should be sought not only to the 'what' question, which refers to the result, but also to the 'how' question, which refers to the process, and for this, the quality of citizen participation is vital. For involvement in the planning process citizens need to make heard their voices for expressing their complaints, needs, and desires; offer their ideas and suggestions for development; and decide for their future. Citizens need access to the process and being presented is insufficient; they must have a chance to communicate and be heard (Webler and Tuler, 2000).

The way that people connect and communicate with one another has undergone a profound shift as a result of the internet. The internet serves as a platform for social interaction, bringing together those who have common goals or interests, which can help people create a sense of belonging and identity (Sen, 2011). Today, with the development of ICT, more effective, faster, and easier communication can be established with citizens, and they can be reached more easily, and the appropriate spaces required for citizen participation have started to change by keeping up with the digital process. Especially in the last decade, the diversity of ICT platforms, their compatibility and quality of devices, and their usage area of them have increased and continue to develop. The adaptation of the applications to smartphones and tablets, the rapid increase of alternative social media platforms, the involvement of people in these systems, and the fact that these platforms have become a source of information, and news has an important place in business and daily life make ICTs a part of human life which have made adapting these platforms to the urban agenda inevitable for administrations.

For reaching a successful citizen participation process, appropriate tools should be used for communicating with citizens and hearing their voices. ''Crowdsourcing'' as a tool for online participation is one of the most appropriate tools for benefitting from citizens' knowledge, producing solutions to urban problems to improve the

quality of public services, and so creating democratic participation culture. Citizens can contribute to the crowdsourcing activity process by giving feedback, proposing suggestions, and making complaints. A crowdsourcing activity is not dependent on scale, and it can be used at local, regional, and national levels.

In this thesis, crowdsourcing implementations that are realized by metropolitan municipalities will be evaluated to understand the dynamics of crowdsourcing examples in Turkey. To analyze whether their success in achieving well-functioned citizen participation or not. Ankara Metropolitan Municipality (AMM) and İstanbul Metropolitan Municipality (İMM) are selected for case studies since they have implemented different types of crowdsourcing activities. AMM implemented two different crowdsourcing activities; the first is crowdmapping implementation by presenting PurpleMap; and they opened a survey platform where people can examine pilot square design projects made for Ulus 100. Yıl Square Competition and choose the best one to be implemented, while İMM implemented Participatory Budgeting. This thesis aims to investigate how the increasing interest and adaptation to the internet and social media platforms have created a large digital user base and so, how this crowd can play a role in urban planning. The main research question (RQ) is;

RQ: How do crowdsourcing applications contribute to the decision-making process, problem-solving, and better public service provision in urban planning?

Sub-RQ 1: What are the challenges of using crowdsourcing as an online participation tool?

Sub-RQ 2: How the crowd contributes to the crowdsourcing activities?

Sub-RQ 3: How do local governments use the crowd's knowledge: recommendation, selection, or implementation?

The first Sub-RQ answers the difficulties encountered in implementations and suggestions on which subject to be more successful in future crowdsourcing initiatives.

The second Sub-RQ seeks to bring out the role attributed to citizens and the local governments' expectations of them. It is questioned how local governments benefit from crowds' local knowledge and how crowds contribute to the crowdsourcing activity. It is questioned whether the citizen assumes the role of helping in making decisions that shape the city or directly taking the decision-making role in crowdsourcing practices.

The last Sub-RQ is to understand how LG listens to the citizen. In other words, it is questioned whether the created crowdsourcing activity remains in the dimension of 'tokenism' (Arnstein, 1969) and remains 'phoney' participation (Cornwall and Gaventa, 2001) in which there is no change in power relations.

1.2   Methodology of Research

For evaluating mentioned crowdsourcing implementations, case studies across the world will be examined in the 'Evaluation of Case Studies' table (Table 3.7.). By doing that, factors that affect the crowdsourcing process will be evaluated. Then, what needs to be done to make successful implementation will be presented in the thesis in the 'Criteria for Success of Crowdsourcing Implementation' table (Table 3.8.). For understanding actor intentions, semi-structured interviews were made with citizens of Ankara and İstanbul (informal actors) and local government bodies (formal actors). While preparing interview questions, criteria obtained from the literature were used.

In Ankara, interviews were made with the Department of Culture and National with two employees and 7 citizens for Ulus 100. Yıl Çarşısı Survey and Women Counseling Center with two employees and 12 citizens for the PurpleMap platform. In İstanbul, interviews were made with the head of İstanbul City Council and 5 citizens for the Participatory Budgeting program. For interviews with local government bodies and citizens, interview control carts were prepared (Table 1.1.). Data obtained by local government bodies, SE-GE data, and open data from the case studies are also used for statistical analysis. After the interviews are done, case

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studies will be evaluated with the criteria obtained from the literature review. In the end, case studies will be located on Arnstein's ladder of citizen participation. This model will be revised at the scope of crowdsourcing and the digital era.

Table 1.1.Interview Control Cart for Local Government Bodies

A) Questioning the Purposes of Crowdsourcing and Preparations Made	
Questions	**Parameters**
How the subject of the applications was chosen and the reasons for making it on digital platforms (strengthening communication with citizens, identifying problematic places in cities, creating a culture of participation, pleasing citizens, lack of resources, etc.)	Clearness
What was planned for the success of the application before the application was made? (What was considered for citizens who could not participate?, What incentives were organized for citizen participation?)	Inclusiveness
Through which channels were the applications decided to be delivered to the citizens? (web, mobile application, social media, etc. Which was more effective? Was there an analysis for use beforehand?)	

Table 1.1. (cont'd)

B) Evaluation Process of Contributions of Citizens	
According to which criteria and by whom are the complaints, suggestions, projects and feedbacks evaluated?	
How does the evaluation process of notifications from citizens work? (Is an unnoticed problem mentioned? Is it considered as data during the planning phase? Does it serve as a complementary element?)	
What features can be added or removed on the platform to make it more efficient in the future?	Ease of Use Two-Way Communication
Participation in the platform is also provided anonymously. Do you think that joining anonymously gives more opportunities for false reports or "troll" users, as in some examples abroad?	Security and Privacy
What were the advantages and disadvantages of implementing projects directly from citizens or the result of voting? (Political and planning aspects) (For Ulus 100. Yıl Çarşısı Survey and Participatory Budgeting)	Commitment

Table 1.1. (cont'd)

C) Evaluation of Practices by Local Governments	
What difficulties were encountered in the processes? What kind of applications will there be in the future to solve them?	
Evaluation of the applications in terms of efficiency (Did the applications made in the digital environment become more effective?, was there an increase in the number of participation and the quality of the incoming notifications?)	
Which of the incentives was successful/failed? (if any)	

D) Evaluation about Urban Planning	
What effect do you think this practice will have on the planning of cities?	
What do you think about the impact of this practice on public participation?	

Table 1.2. Interview Control Cart for Citizens

Information About the Study
The aim of the study is to investigate the effect of crowdsourcing practices of local governments and their bodies in Ankara and Istanbul on citizen participation.

A) Evaluation of the platform from the eyes of the citizens	
Questions	Parameters
Where to get information about in the existence of the platform? (From its environment, social media, website etc.)	
Evaluation of the platform in terms of its purpose, possibilities and ease of use (Is the purpose clearly explained?, Can other users see the comments, feedback or complaints? If they can see / if not, how does this affect the use of the platform)	Clearness Transparency
Is there diversity among citizens using the platform? (age, subject of complaint, region of complaint, area of influence of the project for competitions, etc.)	Inclusiveness

Table 1.2. (cont'd)

B) Platform experience	
Role on the platform (Active/Passive User)	
Frequency of use of the platform	
Reasons to use the platform	
Recommendations for the platform (What features can be added/removed?)	Ease of Use Clearness Accountability and Transparency
Evaluation of this process, if feedback was received from the municipality (Was the response satisfactory?, How long did it take to respond?, Was the reported problem resolved?, Has a change been made in the area subject to the complaint?, etc.)	Two-Way Communication Accountability and Transparency
For competitions, budget and survey applications - Evaluation of the voting system (such as number of votes, possible problems in the voting process-mutuality, if the project has been submitted, have there been technical glitches)	Clearness Open Data
Has the implementation of the applications in the digital environment been helpful in obtaining information about your environment or city?	
Did the implementation of the applications in the digital environment have an effect on your following other works of the municipalities?	

Table 1.2. (cont'd)

C) Evaluation of the municipality's provision of services and practices in the digital environment in terms of accountability, openness, inclusiveness and reliability	
Evaluation of joining as an anonymous user (Does anonymous users undermine the security of the platform?, makes the anonymous user option more inclusive for sensitive issues?)	Privacy and Security
For competitions, budget, and survey applications - Evaluation of the elimination process of the projects on the feasibility and legal basis (Is the reasons explained, how does the non-disclosure affect the process?)	
Evaluation of the inclusivity of projects (is it for the public good, does it appeal to a particular segment or individual?)	Inclusiveness
Evaluation of the deadlines submitted by the municipalities in the voting and project submission processes in the applications (were the deadlines sufficient to present the project, were the necessary introductions made before the voting process?)	
Opinion on the purpose of the implementations (planning tool, public satisfaction, supporting participation, a political tool)	
For competitions, budget and survey applications - Evaluation of the projects submitted to the vote from the eyes of the citizens (was the content of the submitted projects detailed?, should the	Clearness

projects be presented in more detail and evaluated?, evaluation of the diversity of the submitted projects)	

D) Evaluation about Urban Planning

What effect do you think this practice will have on the planning of cities?	Commitment
What do you think about the impact of this practice on public participation?	

1.3   Structure of the Thesis

The Structure of the Thesis (Figure 1.1.), starts with the development of the ICT and its relationship with the participatory development movement. These developments laid the groundwork for crowdsourcing practices and enabled their application in other forms, bringing them to an important position in citizen participation. In the model, which motivations of local governments to implement and which technological developments guide crowdsourcing practices are given as keywords. In this model, the implementation of the crowdsourcing activity consists of three parts: preparation, process, and result. In the preparation part, motivation factors, publicity of the platform, strategies for vulnerable groups should be defined. After these, when the clear problem definition has been made and the roles assigned to the stakeholders, crowdsourcing can be started and moved on the next stage, process. In the process, how crowdsourcing can be used in planning (participation in the decision-making process, problem solving and improvement of public services) are stated. Afterwards, how citizens can contribute to crowdsourcing practices (through suggestion, complaint, and feedback) and how local governments can use this contribution (by making implementation, selection between generated ideas, recommendation) is one of the critical points of the model. It means that, not just the result of the crowdsourcing activity has an importance, but also process has an

importance for the success of the implementation. This issue is discussed within the ''Ladder of Citizen Participation'' model for analyzing the balance of the decision-making power for the case studies in this thesis.

MAIN RQ — How do crowdsourcing applications contribute to the decision-making process, problem-solving, and better public service provision in urban planning?

Preparation Phase | Process | Result

Benefit from Local Knowledge

Participatory Development Movement

Decentralized Decision-Making Process

Involving Marginalized Groups

Main Motives of Crowdsourcing for LGs
-creating more stronger communication
-building a sense of participation
-hearing the voices of citizens
-satisfaction of citizens
-lack of resources of local governemnts

Clear Problem Definition Properly Defined Task and Roles for Stakeholder

Improvements in Public Services

Complaint

Recommendation

No Commitment

Crowdsourcing

Digital Participation

Problem Solving

Feedback

Selection between Generated Ideas

Commitment

Technological Advancements
-Open Data Platforms
-Government Platforms for Suggestion, Feedbacks, Complaints, etc.

Using Collective Intelligence of Citizens

Participation in Decision-Making

Suggestion

Implementation

Crowd Contributions

Crowd's Decisions Evaluated as

Advancements in ICT
Quick adaptation of ICT by people
Emergence of Digital Platforms
Adaptation of Local Governments to ICT

Online Public Service Delivery
(e-government platforms)

Increasing Possibilities of Make Heard Citizen Voice
(e-government to e-governance)

Publicity of the Platform Additional Strategies for Marginalized Segments Ways of Participation

Digital Citizenship

Digital Users as Crowd

Sub RQ-1: What are the challenges of using crowdsourcing as an online participation tool?

Sub RQ-2: How the crowd contributes to the decision-making process?

Sub RQ-3: How local governments use crowd's knowledge: recommendation, selection, or implementation?

Figure 1.1. Thesis Structure

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This study is composed of 6 chapters.

In the 'Introduction', the problem definition and its short background, the aim of the study, and the methodology of the research are introduced.

In Chapter 2, 'Literature Review', research is being conducted on when 'citizen participation' began to be addressed, what developments took place in this process, why citizen participation and citizen voice are important, and definitions and explanations of keywords are given. Also, Arnstein's Ladder of Citizen Participation model will be explained and revised considering the digital era and crowdsourcing.

In Chapter 3, 'Examples of Crowdsourcing Practices from the World' will be represented. It is aimed to create a ''Criteria for Success of Crowdsourcing Implementation'' by examining how crowdsourcing is used as a tool in citizen participation in the digital era and the factors in the success of this tool.

In Chapter 4, 'Case Studies', internet usage behavior and accessibility will be given to the cities involved in the thesis. After that, PurpleMap, Ulus 100. Yıl Çarşısı Survey and Participatory Budgeting initiatives are explained and semi-structured interviews with actors of the case studies will be given. The semi-structured interviews will be given in order of ''Criteria for Success of Crowdsourcing Implementation''.

In Chapter 5, 'Discussion', a general evaluation will be made, and the research question will be answered. As indicated in the Figure 1.1., ways of crowd contribution to the crowdsourcing process and how the local governments use these contributions will be evaluated.

In Chapter 6, 'Conclusion', the main findings will be summarized. Limitations of the study will and suggestions for future studies for local government will be given.

CHAPTER 2

LITERATURE REVIEW

2.1 An Overview of Planning Theories: From Instrumental Rationality to Citizen Participation

At the beginning of the 20th century, vulnerable groups that have low living conditions and those who are on the negative side of the unbalanced power relationship and cannot hold the power found a place in the planning by emerging the ''Garden City'' model by Ebenezer Howard (Eraydın, 2020). However, instrumental rationality came to the fore after World War II to prevent delays and shorten the time for quick implementation of plans. Focusing only on the technical point of view and the physical side of planning, and ignoring the uncertainty in planning, the planning could not keep up with the changes, could not respond to the increasing diversity in cities, changed power relations, and therefore increased social problems. These problems caused emerging new theories as a response to instrumental rationality planning theories where planning was isolated from social issues and where planners were considered as a technocrat or technician. Some of the best-known examples of these theories are advocacy planning (Davidoff, 1965), incremental planning (Lindblom, 1959), and communicative planning (Habermas, 1981).

Auguste Comte is associated with the development of the rational-comprehensive planning theory as he thought that the use of specific hierarchical norms might be used to address permanent social issues. Comte thought that society would advance to a higher level of civilization with the aid of sociology. The rational-comprehensive planning theorists believed that the plan would be better if the planning problem was thoroughly examined. In the pursuit of a better society, descriptive science becomes an instrument of normative planning. This method is clear in the idea of ''public interest,'' which is stated as the objective of rational, comprehensive planning

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(Mäntysalo, 2005). Rational Planning Model planners hold the view that planning should be based on factual considerations, utilize analytical methods, adhere to instrumental rationality, and operate under the value-free assumption. Following the means-ends approach, they also gather and evaluate data, provide decision-makers choices, and discuss the most suitable ways to achieve policy objectives (Khisty and Leleur, 1997). Its true strength lies in its basic simplicity, despite its capacity for extensive methodological refinement and expansion. The essential themes addressed—ends, means, trade-offs, and action—appear in almost every planning project (Hudson et al., 1979). This technical view of planning depends on certainty and perfect future predictability to be legitimate. (Smith, 1973). It has a strong technical structure but ignores social interaction and dealing with social conflicts cannot be tackled just by using technical language and expertise (Khisty and Leleur, 1997). This technical point of view, which focuses on the public interest, has also been criticized for not allowing participation, plural interests, and not taking into account the ''uncertainty'' problem in planning. These problems have led to the discussion of planning and the emergence of different planning theories (Hudson et al., 1979).

In the 1960s, advocacy planning pioneered by Davidoff comes in forward from the notion of overseeing the urban rights of underprivileged groups. Davidoff (1965, 332; as cited in Mattila, 2020) proposed that rather than relying on a single, unified form of plan, planning should be based on the policy of numerous competing plans. He thought that since single plan-oriented policies had been replaced by several interest groups, these "unitary plans" no longer served the public interest (Mattila, 2020). According to Davidoff, the view that equates physical planning with urban planning is nearsighted. This approach is understandable considering the historical background of planning, but this understanding must be abandoned today when it is necessary to combine information and technology to effectively combat numerous problems affecting the urban population (Ersoy,2007). The advocacy planning movement emerged as a reaction to the fact that the poor's voices were simply not heard during the planning process and that their inner-city low-rent housing was

routinely demolished in order to relocate middle-class or commercial residents to land with high ratable value (Damer and Hague, 1971).

Davidoff led a movement to allow minorities access to the suburbs, which was based on a specific conception of the ideal city. The main aim was social inclusion which refers to access to benefits rather than participatory or deliberative democracy (Fainstein, 2005). What is required is a planning process that fundamentally incorporates community engagement as opposed to an all-or-nothing approach (Smith, 1973). In this approach, a planner as an advocate will file a lawsuit in line with his and his client's expectation of a good city and social life. The advocate planner must assume a responsibility beyond merely informing his client; because the planner can analyze the current trends and visualize the future form of the city and its effects on the citizens (Ersoy, 2007). In advocacy planning, the emphasis is shifted from, for instance, cost-benefit evaluations to an evaluation of the equal distribution of benefits and drawbacks. This suggests that who initially have few or no options are given the chance to encounter a real decision situation (Holden, 1998).

The incrementalist sees ultimate harmony whereas the advocate planner sees unresolvable conflict (Fainstein and Fainstein, 1971). Both partisan mutual adjustment and advocacy planning fall short in the face of ambiguity issues. They both discuss the politics of planning from the perspective of uncertainty. Both reduce political plurality to the coexistence of mutually adversary interest groups that strategically interact with one another. Here, the counterpart's behavior is viewed as both a source of uncertainty and a control issue (Mäntysalo, 2005). However, both have problems. According to the liberal-advocate mindset, information can be used by underrepresented or relatively unorganized groups to enable them to engage more effectively in the planning process since it meets a demand generated by a pluralist political system. However, the liberal advocate has been portrayed as the nurse who cares for the sick but is unable to stop the illness from starting in the first place (Forester, 1982). Also, in advocacy planning theory, it is ignored that the state - whether at the local or central level- is a structure that reflects the balance of power in the society and that contains all the contradictions and relations of that structure

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(Ersoy, 2007). Among the criticisms leveled against progressive planning are the invalidity of the pluralist political structure theory in capitalist countries and as a result, the decisions are made largely in line with the desires of the power centers in the society, and the progressive planning theory gives legitimacy to this situation; one of the main features of this approach to planning is that creating alternatives is not meaningful in this method (Etzioni, 1967; as cited in Ersoy, 2007). The incrementalists' stance serves as a crucial counterargument to the rational-comprehensive urge to gather all the information, but it doesn't offer much about how to enhance planning practice or what planners should be doing (Forester, 1982).

Communicative planning theory (CPT) developed by Habermas criticizes the conventional planning approach since it evaluates knowledge production as a techno-scientific analysis and deductive logic and not considering other knowledge forms and value systems like local, tacit, expressive, and experiential knowledge (McGuirk, 2001). These types of knowledge can be obtained by communication with stakeholders. Since citizens have much closer relations with their surrounding environment, their local and tacit knowledge, and experiences with their environment cannot be obtained by just making a technical analysis. Because of that, communication comes to the fore. These knowledge forms can be obtained through storytelling, personal contacts, one-to-one dialogues, and thus two-way communication. Knowledge in CPT is ``not a pre-formulated store of systematized understandings but is specifically created anew in our communication through exchanging perceptions and understandings and drawing on stocks of life experiences and previously consolidated cultural and moral knowledge available to participants'' (Healey, 1993, page 241; as cited in McGuirk, 2001). In communicative rationality ''human beings (rather than nature) are seen as the ultimate authors of knowledge and reality'' (Khisty and Leleur, 1997, p.126). A communicative ethic is required, one that encourages people to "listen for difference, not merely in own interests, but in values and cultural references." (Healey, 1997, page 266; as cited in Pløger, 2001). An institution's design must be radically open to debate, criticism, and adjustment, acknowledging that divergent viewpoints and ideals are necessary for

planning. Healey said that collaborative planning and public participation could serve as such a venue.

Far from abandoning reason as a guiding principle for modern society, according to Habermas, there should be a change in perspective from a subject-object, individually conceived conception of reason to one that emphasizes inter-subjective communication. Such thinking is necessary because *''living together but differently''* in a shared area and time forces us to look for solutions to our common problems by coming to an understanding of how to ''act in the world'' (Hailey, 1992). Communicative planning emphasized how language and communication influence planning practice, public discourse, policymaking, and collaborative processes. Habermas proposes the discourse ethic as a prerequisite for the creation of intersubjectively agreed-upon rules and standards of moral judgment on ''how to communicate democratically.'' A system where all claims are assessed by using commonly accepted standards of judgment—which, in Habermas's opinion, should be the comprehensibility, integrity, legitimacy, and truth of statements—ensures that power is equalized in communication (Pløger, 2001).

The countermeasures against structural power were offered, but they lacked an explanation of the underlying tactics and circumstances that could lead to their intended effects. This response was coupled with efforts made by other academic fields to examine communication, with a particular emphasis on a rhetorical content, 'ways of knowing,' storytelling, and the listener's openness to the speaker. According to communicative theorists, a more just result could be achieved by speaking truth to power, using a variety of discourse forms, and involving all parties in the communication process. However, if open communication causes the power to lose its advantages, they are more prone to repress unpleasant truths or marginalize those who speak to them. Social power comprises the capacity to regulate and channel communication and is tough to counter (Fainstein, 2005).

By establishing deliberative forums that might (temporarily) remove the power context of planning and the inequities that stakeholders bring to participatory

processes, CPT aims to change power relations (McGuirk, 2001). In this era, these deliberative forums are online forums in which citizens gather and communicate with each other and the local government. Here, the design of the platform and the behavior of the local government are crucial because the opportunities given to the citizens through the platform can be considered the first step towards changing the balance of power. Manipulation, misinformation, and making the participation process a window-dressing activity are related to the behavior of the local government. In this context role of the planner in the communicative rational theory is determined as a ''critical friend'' who deals with misinformation and misleading, as guide and mediator (McGuirk, 2001).

One of the problems with participation is the unequal weight of stakeholders. In the presence of certain power groups in society, how to ensure the participation of the parties on equal terms is an important problem area. Meanwhile, some segments have never been organized and therefore cannot be involved in decision processes. It is not clear how the interests of this unorganized segment, who are left out of the process, will be represented (Gedikli, 2012). Listening to everyone and hearing their voices as a normative approach to communicative planning is not enough for dealing with social issues, and there are problems that must be handled. In a large, socially divided group, there are issues with ensuring adequate representation of all interests, guarding against demagoguery, achieving more than token public participation, preventing economically or institutionally powerful interests from setting the agenda, and preserving minority rights. These questions have been the subject of endless debate within political theory, and they have never really been settled. In its reliance on goodwill, communicative planning theory often tends to ignore them and dismisses the idea that the nature of the barriers to reaching a consensus based on tolerance emerges from a social environment that has to be examined. Another problem is that CPT ignores the actual power dynamics that shape the context in which planning practice takes place, presuming rather than confronting the political and powerful interests that permeate planning discussion. It is stated that CPT minimizes the difficulties of claiming alternative forms because it separates planners

from their positions in a nexus of power, knowledge, and rationality where their professional forms of knowing, reasoning, and valuing are justified (McGuirk, 2001).

The CPT can be seen as a social action and a radical step in the planning domain. Language is the core of communicative rationality rather than highly technical language and the dominant role of experts. *''Planning theory with other theoretical discourses—specifically debates around marginality, identity and difference, and social justice in the city—because these are debates which empower groups whose voices are not often heard by planners''* (Sandercock, 1997, p. 110; as cited in Fainstein, 2005). Planners influence participation by playing role in who is contacted, who can attend informal design review sessions, and who tries to persuade whom of which project development possibilities. Planners accomplish this by influencing not simply the facts that certain citizens may know, but also their confidence and expectations. Planners not only arrange information and drawings; they also arrange cooperation, consent, or activism (Forester, 1982). As the number of stakeholders increases, the range of diversity and interests among participants also widens in the decision-making process, the planning process can be more legitimate. This participation process should address all segments of society. By involving more citizens in the decision-making process and increasing the variety of ideas, planning topics will be diversified, and it will provide a medium that will allow more problems to come to light and better solutions to be found. It is important to provide a free environment, enhance open discussions, and motivate citizens for contributing participation process. For effective participation in planning, the process is as important as the results, because the processes themselves have consequences and lessons to be learned from them. In other words, the means-ends approach remains at the technical level, and the process should be given importance at the governance level. In other words, the *'how'* question, which refers to the process before the *'what'* question regarding the outcome, is a vital point for the decision-making process in planning. Given those internet-based fora typically allow users to present their arguments without disclosing their backgrounds, their positions in society, or

their identities, the internet has the potential to be an egalitarian space where the strength of arguments matters more than the position of a user (Mattila, 2020). In particular, the usage areas of social media, the opportunities it offers, and the increasing adaptation to social media make social media platforms more important in terms of citizen involvement and listening to citizen's voice. Public opinion and underlying sentiment are greatly influenced by media as a source of knowledge about other people and places. It is a crucial accountability mechanism because it brings up significant issues—like corruption, for instance—that might not otherwise be discussed or handled in public. However, it is important to use social media correctly. Misuse of social media makes it an instrument for the dissemination of false information and has the potential to cause divide communities (Sen, 2011). This situation makes it difficult to listen to citizen voices and disables the participation process.

2.2   Citizen Voice

In the field of international development, participatory development has been the topic of long-running discussions. Public participation is usually considered as an umbrella term including numerous modes of connection with people, ranging from informing and listening to applying collaboratively accepted solutions through discourse, discussion, and research (Hügel and Davies, 2020). Public participation should be viewed as a means of achieving the primary goal of government planning and intervention, which is to resolve the free market to provide common welfare, prevent overexploitation of limited resources, control external consequences, and make a contribution to a just distribution of goods (Fiskaa, 2005). According to Fischer (2000), three key aims are aided by participation. First and foremost, public engagement and the normative logic that underpins the debate, give democracy its meaning. Secondly, citizen engagement helps to legitimize policy creation and execution on a normative level. Finally, but certainly not least, community engagement can enhance the expert investigation. It can be understood that

participation is the main component of the democratic environment since citizens can have their voice to be heard in this way, and it assists policymakers in the decision-making process.

Rocha and Sharma (2008) describe the voice as expressing one's preferences, thoughts, and viewpoints, and voice-expression mechanisms are essential for guaranteeing that diverse interests, ideas, and views may be expressed, heard, and acted upon. Voice mechanisms can be formal (working with the media, engaging in policymaking and budget procedures, tracking public expenditure, reviewing public service delivery, and participating in public commissions and hearings) or informal (range of citizen or civil society-led actions such as public rallies, protests, lobbying campaigns, and public interest lawsuit). However, the difference between hearing and listening is crucial. Citizens can express their needs, desires, interests, and wishes, but cannot make sure whether their opinions are heard or not. According to Chambers (1998), the upper classes have more and more material possessions, and they are increasingly linked through immediate communication, whereas the number of people living in poverty rises and they are separated from society and each other and so, they have no voice. For creating a participatory environment, marginalized groups must be empowered and enabled to express themselves. Empowerment is a concept that focuses on power relations in society and how they may be organized for social structure. Individuals' freedom and self-determination are increased as a result of empowerment, allowing them to achieve what they desire and need (Hoque et al., 2022). Citizen participation aims to empower all to make better decisions collectively, with higher chances of contributing to fair and equal livable societies, not about empowering us all to have less to do with each other.

The development of information and communication technologies (ICTs) has made it simpler and faster for individuals to engage with one another, express their thoughts, reach out to others, contribute to the agenda, and criticize government actions. ICTs have the potential to expand the political, social, and economic freedoms of individuals and communities, hence promoting empowerment (Bailur and Gigler, 2014). By using ICTs, open content creation may be a powerful tool for

economic, political, cultural, and social development, but only when people's voices are properly valued in the development process. The important thing is the *'voice that matters'* rather than having a voice. In other words, the government can listen to citizens, but if the government does not hear the voice, it has no meaning (Tacchi, 2012). To attain *'meaningful voice'* a dynamic conceptualization of voice is required, one that prioritizes listening. This is not an automated process, and as is all too common in development projects, voice' may be encouraged but not always heard. Also, participatory approaches can turn out to be a form of top-down participation, in which 'insiders' learn what 'outsiders' want to hear, or merely an exercise in administrative work sharing or the necessary language to secure funds (Tacchi, 2009). ICTs can encourage the gain of meaningful voice by offering platforms, but it is not enough to develop digital platforms for voice to count in this way; other arrangements, such as social institutions and political procedures, must also be in place (Schwittay and Braund, 2019).

According to Goetz and Gaventa (2001), voice has a variety of means used by civil society actors to apply pressure on service providers to demand improved service results, such as complaints, organized protests, lobbying, and participation in decision-making and product delivery. Since public services are carried out under monopoly, it can be said that citizens as consumers have no right to ''exit'' and there left two options: 'voice' or 'loyalty'. However, in this context, loyalty is also mandatory since there are no other alternatives that supply these services. Because of that, awareness of the situation that citizens are both subjects and objects of the decision-making process is crucial for building a participation culture. Since citizens are consumers of the city and experience the city services every day, citizens' voice is important for knowledge creation. Providing feedback and sharing their knowledge and information with their local governments is important for making better decisions and increasing public service quality. In this context, "do the people see what they say and respond to the local government?" emerges as another question. If gathered data and feedback would not share with the public, citizens cannot be informed and cannot listen to other citizens' voices.
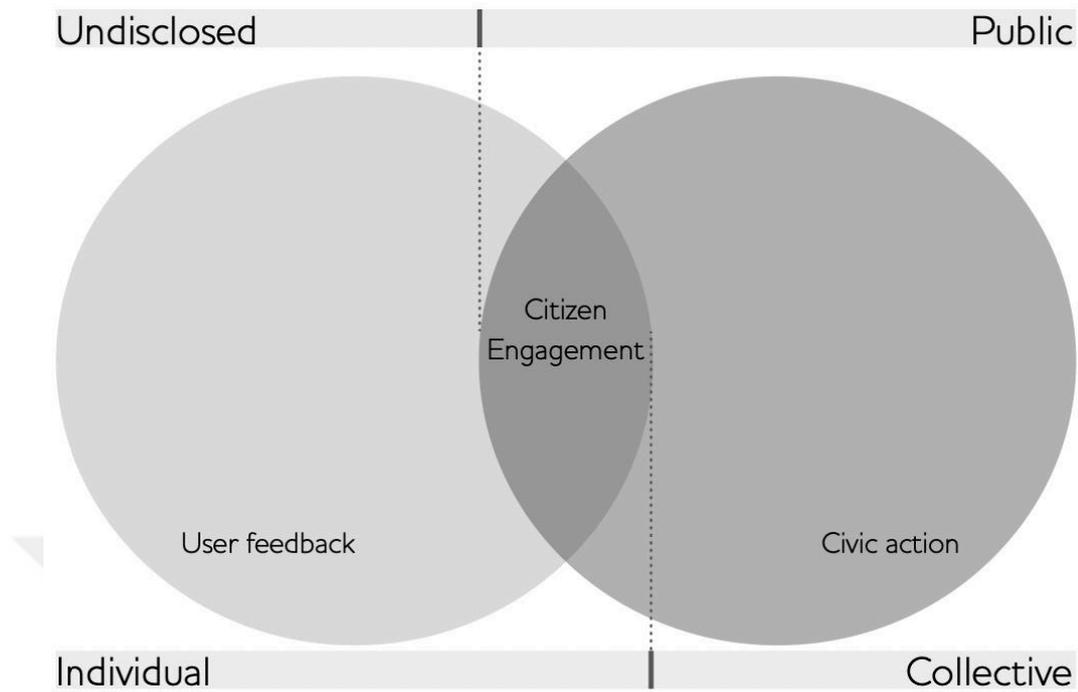
Figure 2.1.Difference and Overlap between User Feedback and Civic Action

Source: Peixoto and Fox, 2016.

Peixoto and Fox (2016) make a distinction between citizen and civic action (Figure 2.2.1.). Citizen as a citizen voice, which is related to top-down accountability of institutions, means individual actions and feedback that triggers the administrative action, whereas civic means collective action, and these two approaches are mutually reinforcing. If ICT platforms link public input to policymakers' capability to detect and respond to service delivery challenges, they can strengthen top-down accountability. Where the issue is getting politicians to care in the first sense, the question is *''how ICT platforms can bolster downward accountability by enabling the collective action needed to give citizen voice some bite''* (Peixoto and Fox, 2016, p.24).

2.3   Role of Knowledge and Open Data in Citizen Participation

Knowledge is becoming the primary catalyst for economic and social progress in modern countries. Internet access has democratized knowledge, and in theory, everyone has access to all sources of information (Kersting, 2012). Drucker (1993) also states that knowledge is the most important resource and for obtaining something, knowledge is the necessary source. Traditional factors of production—land, labor, and capital—have not evaporated, but they have resigned themselves to a secondary position. They may be gained, and they can be obtained quickly if knowledge is available.

Knowledge has two forms: tacit knowledge and explicit knowledge. Tacit knowledge is defined in Cambridge Dictionary as the knowledge that cannot be received through education, books, or other sources, but rather from personal experiences, such as working in a specific organization. Polanyi (1966) claimed that, unlike ''explicit'' knowledge, ''tacit'' knowledge cannot be represented readily or systematically whereas explicit knowledge can be represented in drawings, mathematical functions, and codes, which can then be saved in books and computers as words, numbers, or symbols. As Polanyi (1966) claimed, *''we can know more than we can tell''* since we can only transmit our knowledge partially (Polanyi 1966, p.4, as cited in Dortheimer and Margalit, 2020). Even an expert or professional may not be aware of the information that he has (King, 2007).

Tacit knowledge is difficult to describe since it is personal, local, and frequently ingrained in practice. Its transmission relies on close social contact, sharing tales, and anecdotes to improve understanding of the practice and foster interpersonal and inter-organizational trust (Rashman et al.,2005). A high level of tacitness, which refers to the non-codifiable accumulation of information and abilities developed through practice, makes understanding the relationship between competency and its consequence more challenging (King, 2007). For transmitting explicit information, efforts such as storing and disseminating documented knowledge through websites are appropriate, but personal interactions are preferable for sharing tacit knowledge

(Alavi and Denford, 2011). Citizens can begin to identify and find tacit knowledge as the exchange of information improves (Przysucha, 2020). Therefore, local governments can interact with their citizens to turn tacit knowledge into explicit knowledge, especially in complex tasks. For this, two-way communication between citizens and local governments has an important place. With ICT, which has developed with the use of the internet and social media, efforts should be made to reveal tacit knowledge. While efforts are being made to evaluate tacit knowledge, a democratic environment is created between local governments and citizens since citizen involvement is tried to be achieved.

According to Lane (2005), for increasing the political quality of planning, citizen involvement in the decision-making process is vital. In contrast to previous models of planning that assume a holistic society, society is regarded as atomistic and each individual in the society has contradictory interests and they are competing with each other. Also, citizens have different information and knowledge about their surrounding areas and used spaces and they have different perspectives due to their socio-cultural characteristics. This situation makes it more important to citizen participate and make their voices heard in planning. This situation is not only positive for the citizens, but also has a positive effect on local governments in listening to different ideas and needs, considering different interests, and seeking solutions to different problems. Whereas participation was once regarded as a complementary part of decision-making, participation is now seen as a critical component of planning and decision-making in the modern period. Citizens can contribute to the planning process with their own expertise and socio-cultural perspectives, and they can relate their local understanding of problems to the solutions proposed by planners (Van Herzle, 2004). Knowledge, conversation, interest, and participation in public issues, public decision concerns, and the community are all aspects of civic engagement and omnipresent online connection enhances not only communication between local government and citizens but also public service quality and efficiency (Haltofova, 2018).

Local knowledge refers to facts and information gained by an individual that is particular to a location or generated from a location-based context. It could also refer to distinct abilities or experiences gained in a given region. Local knowledge is described as actual information held by people and other local actors, such as NGOs, and can include ordinary personal experiences and recollections of locations (Staffans et. al., 2010). Local knowledge emerges via interaction among individuals who share the same local environment when it is shared inside a residential community. Local knowledge is also known as communal knowledge when defined this way (Bradford, 2005). Mostly, citizens have an affinity with their surrounding environment. While the scale of a city neighborhood is ideal for cultivating an engagement culture, urban government tends to work at a larger city scale, making it difficult to harness local citizen energy (Gleeson and Dyer, 2017).

In large-scale citizen participation applications, the internet, and social media platforms, which are widely used today, can be used. Millions of people are reached on these platforms, and it is possible to listen to the voices of citizens by using an effective mechanism. To transmit tacit knowledge to explicit knowledge, open data platforms can be created to gather different information from different stakeholders. According to the Open Knowledge Foundation any content, information, or data that is reachable for everyone, re-usable, and redistributable without any legal, technological, or societal restrictions — is referred to as ''open knowledge.'' Since information is reliable when it is created in an accessible, critical, and collaborative manner (Eräsaari, 2006), open data platforms have an important role in producing and disseminating knowledge.

The US government took the first move in this direction in mid-2009 with the opening of ''www.data.gov'', and the UK government followed suit in 2010 with the launch of data.gov.uk (Batagan, 2012). Also, the Declaration of Open Government in Australia in 2010, Ireland's Open Data Portal, Open Government Declaration from Italy in 2011 are other initiatives from other countries (Bătăgan et al., 2017). Today, these initiatives are applied by local governments. By creating an open data platform, information from different channels can be combined and related

and offer new solutions for the problems or help to detect unnoticed issues in the cities. According to OECD (2018), open government data is important for transparency, openness, quality of public services, and civic innovation. Also, open data is useful for cost-reduction, which is about the transaction and access costs, and because anyone has the opportunity to monitor and access data, open data can prevent corruption. These benefits can positively affect the inclusion of citizens in the decision-making process. Access to information is one of the preconditions of good governance to hold governmental organizations accountable. For planning, cities must become more linked and smarter if open data is to play a vital role in future urban development (Bătăgan et al., 2017).

Data is the basis for building an evidence basis that can be utilized to communicate with other stakeholders, influence policy, and negotiate with city governments (Gleeson and Dyer, 2017). Data is important for all stakeholders to realize what happened in their surrounding environment and increase their life quality. For example, traffic information when going to work or school, learning about crime issues in the surrounding environment, realizing the local government's efficiency about pollution or infrastructure in their neighborhood, and the scale of public services can be understood from shared data from local government. Also, citizens can contribute data through their local knowledge and support mutual benefit from data for local governments and other stakeholders. However, how ordinary citizen is attached to data and how to harness citizens' energy to contribute to the data is debatable, and increasing the data attachment of citizens by building a culture of participation is crucial. The emphasis here is not just informing citizens with data or applications but also engaging citizens in the decision-making process and motivating them to take an action for producing the future of the city. Because of that, the digital connectivity of citizens demands a shift from traditional ways to a new type of urban governance. By providing accessibility to the data, citizens can have more control over the aims and strategies of the planning process about which problems should be given priority and determining the vision of the city. Moreover, if a plan, proposal, or project is accepted by most citizens, there will be fewer

objections and arguments about them, and their implementation will be easier (Fiskaa, 2005).

Implementations that put people in the center and try to benefit from their tacit knowledge continue to increase. This can be considered as the tendencies that lead the citizen to be not only affected but also affected. In other words, the citizen no longer assumes the role of the subject, but also of the object. With the development of ICT, citizens can access and monitor data, and this will affect the transparency and accountability of local governments in their planning processes. Therefore, it is essential to establish not only one-way, but creating two-way communication. In other words, not just government-to-citizen interaction but also the interaction between citizen-to-government and citizen-to-citizen should be empowered. Governance as a democratic model provides two-way communication between stakeholders and makes knowledge production dissemination more efficient way.

2.4 New Concepts that Emerged with the Advancement of ICT

2.4.1 E-government and E-governance

With the advancement of ICT, the names of some actions have been adjusted like e-shopping, e-teaching, e-trade, e-health, e-traveling, etc. Especially, in the COVID-19 pandemic disease situation adaptation to ICT tools became inevitable and vital for everyone to continue their education, to keep working in their jobs, or maintain their life through remote working, online education, online shopping, or social activities like attending online concerts, visiting online museums, etc. Suddenly, this short process and changing production and consumption behaviors became the new normal and even though the pandemic is over, some business sectors and educational institutions remain with the online process. Therefore, staying with ICT tools and using them more day by day cannot be disregarded by local bodies to keep in touch with their citizens. Advancement in ICT makes communication more accessible, easier, and faster, and with quick adaptation to these developments, people want to

communicate with their local bodies by using ICT tools more than the traditional way. Many of the local bodies have begun these initiatives before the pandemic started. However, with the growing importance of digital life and living without it getting harder every day, local bodies' implementations of online delivery services have become crucial areas for urban planning and citizen participation in this process. Both terms, government and governance have adapted this process since offering and delivering services to citizens and communicating online with them has become necessary. Online public service provision and online communication between citizens and the local government revised the terms: e-government and e-governance. Although these two terms, e-government, and e-governance, sometimes be used interchangeably, there are certain distinctions between them. For analyzing the differences between e-government and e-governance, first, there needs to be looked at definitions of these terms from different institutions and authors.

E-government is defined by Fang (2002) as a method for governments to use the most cutting-edge information and communication technologies, especially web-based Internet applications, to provide citizens and businesses with more convenient access to government information and services, enhance the effectiveness of service quality, and increase opportunities to take part in democratic institutions and practices. Digital government creates a platform for stakeholders, including ordinary citizens, to share their thoughts on policy alternatives and strategies—and for government agencies to demonstrate that they are listening (or not). Moreover, it can foster a deeper relationship between the government and citizens, translating at least part of the spirit of Athenian democracy into the language of the massive, complicated, postmodern state (Baxter, 2017).

Table 2.1.Definitions of e-government

Definition of e-government	Source
the application of information and communication technologies (ICTs), notably the Internet, to improve government	OECD, 2003 (from OECD The e-Government Imperative, 2003).
Use of ICTs to offer government services to citizens and businesses more effective and efficient manner.	United Nations (URL-1)
Using ICT in public management coupled with organizational reform and new skills to enable better services, democratic processes, and policy support.	EU, 2004
The use of ICT by government agencies to improve connections with people, enterprises, and other branches of government	World Bank, 2015 (URL-2)
Use of electronic technology to simplify or otherwise enhance government operations, with the goal of reducing corruption, increasing transparency, providing better convenience, increasing revenue, and lowering expenses	Godse and Garg, 2007
The use of ICTs to government processes and practices with the goal of boosting efficiency, transparency, and citizen engagement is known as electronic government (or e-government).	Valdmaa and Udikas, 2020

From different sources, e-government definitions are presented above (Table 2.1.). While the term's definition change from different sources, the main point is the same: e-government was derived from the internet boom and driven by the government enabling the administrative bodies to offer better services to their citizens anywhere at any time by using ICT tools. The main aim is to increase the efficiency of services by enhancing their quality and speed while becoming more accountable and transparent.

In terms of governance, Keohane and Nye (2000) define it as the formal and informal operations and institutions that lead and control a group's collective activity. The subset of government that performs with power and establishes formal

responsibilities is known as government. Governments do not have to carry out all aspects of governance. Private businesses, business groups, nongovernmental organizations (NGOs), and organizations of NGOs all participate in it to build governance, usually in collaboration with government agencies, sometimes without governmental authority. According to this definition, e-governance does not have to be limited to the public sector and involves both formal and informal activities. In the business sector, it also entails managing and implementing policies and procedures (Palvia and Sharma, 2007). Valdmaa and Udikas (2020) defined e-governance as the integration of numerous stand-alone systems between government-to-citizen (G2C), government-to-business (G2B), government-to-government (G2G), government-to-employees (G2E), as well as back-office practices and interactions within the government framework by using ICT. They state that e-society and e-governance are relatively recent developments in human history. Every civilization must develop e-governance by its particular traditions and circumstances. E-governance is the way of the future for governments in which e-democracy will play a role in this. A more specific definition for urban governance is the combined impact of formal and informal processes conducted by governmental agencies and administrations at a variety of geographical scales (global, national, regional, municipal, local), market organizations, civil society, associations, and individuals to affect the future of a specific problem in the public sphere by using a variety of tools (like laws, norms, behavioral patterns, communication structures, economic processes, etc.) and various operating modes (such as negotiation, conflict, dialogue) (Certomà and Rizzi, 2017). Citizen e-participation in urban governance is the widespread use of ICTs to encourage citizens' participation in the urban policy process at various stages, without regard to time or space constraints, through processes of information, discussion, or active participation, with crowdsourcing in urban governance being a particular form of active e-participation (Silva, 2014). According to Poblet (2011), there are three types of IT-related governance: ''IT-supported governance'' in which IT supported the conventional type of service distribution; ''IT-enhanced governance'' in which IT is a complementary part of

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governance and provides a channel between citizens and government; and ''IT-enabled governance'' in which IT has a role of empowerment of citizens and used for accessing data. However, in the first type, IT-supported governance, is more related to e-government initiatives and since it is just about service distribution as a top-down process and one-way communication it cannot be seen as a governance type. If communication happens one way, that cannot be said that there is an ICT-enabled citizen voice (Peixoto and Fox, 2016). On the other side, IT-enhanced and IT-enabled types of governance should be seen as major principles for e-governance initiatives. These two types of governance are reflecting accessibility, transparency, and an interactive environment in which two-way communication is emphasized which is one of the major differences between e-government and e-governance. In the top-down approach, major actors like governments and donors provide citizens with accessible data by using the web and/or mobile applications whereas, in the bottom-up approach, citizens can collaborate on independent platforms that have the potential for grassroots movements. In the integrated form of ''top-down'' and ''bottom-up'' approaches platforms are created to combine and analyze data supplied by official authorities such as governments, funders, and businesses with crowdsourced primary data and feedback (Bott et al., 2011).

Definitions vary according to the objectives of the institutions and their responsible countries. Both terms share similar characteristics like accountability, transparency, and accessibility. The main idea behind these terms is to offer services in better and more efficient way. Technology has a facilitator role in both emerging terms since it is continuously evolving and adapting to improvements that are very quickly by the people. Governance focuses on long-term processes whereas government focuses on instant decisions. Since governance considers social objectives more than government, governance is mainly about processes rather than decisions (Godse and Garg, 2007). It means that, in governance, the main question should be *''how?''* rather than *''what?''*. Unlike e-government, e-governance is not just offering public services on the webpage. In other words, e-governance is not just a reflection of the government on the webpage, but also it offers an interactive environment between

stakeholders for increasing communication in a specific area. Manoharan (2015) states that governance is two-way communication whereas government is one-way communication and so, in governance citizens can actively participate rather than obtain information from the government. E-governance is an active bridge between ruler and ruling, or government and governed. Since it is a citizen-involvement process, all citizens and other stakeholders should be involved. In other words, accessibility and creating an inclusionary environment must be one of the main targets in the decision-making process. As mentioned before, just providing services online or creating digital platforms is not sufficient for citizen involvement. To bring citizens together and organize an innovative process there should be initiatives for motivation. There should be clear definitions and instructions for realizing this kind of participation. ''Who communicates with whom?'', ''what is the purpose?'', ''who gains what?'', ''whether spending time worth participating or not?'', ''whether the taken decisions be implemented at the end of the decision-making or not?'' are the potential questions that should be answered for governed citizens. Since people are concentrating on digital platforms, there is huge potential for benefitting from them. E-governance is not just a tool for offering services, but also it can be used for problem-solving innovatively. It opens doors for innovation and builds a culture of participation for the future. The transition from e-government to e-governance also changes the role of citizens and citizenship definition. As stated in structure of the thesis (Figure 1.1.) e-governance is a gate for supporting the communication between citizens and local governments and starting point for implementation of digital participation.

2.4.2 Changing Citizenship Concept: Can Digital Citizens Become Creators and Shapers of the City?

The spreading of the digitalization process in many sectors has also changed the dynamics in social roles. Now, people have new social roles as digital employees, digital customers, digital activists, and so digital citizens (Valdmaa and Udikas,

2020). According to Bennett (2007), traditionally, citizenship means ''dutiful citizen'' in which they are informed by the government by mass media about matters and compelled to do something. In the digital world, citizenship is virtually a given, but it does entail a set of responsibilities or actions, such as evaluating news feeds or creating digital identities. (Pangrazio and Sefton-Green, 2021). People's behaviors, instead of their official status as citizens of a nation-state and the rights and obligations that entail, are frequently used to define digital citizenship. It refers to citizens who create and play a part in society (Hintz, Dencik & Wahl-Jorgensen). In other words, citizens are no longer just registered individuals in a nation, instead, they are active stakeholders who have a greater role in the political arena with the convenience of the digitalization process. Digital citizenship is the right to online participation in society (Mossberger, Tolbert, & Mcneal, 2007) and this kind of right has the potential to increase participation since it is much easier and faster. Digital citizenship is about how the digital promote new types of engagement, not only civic responsibilities, or self-responsibilities (Pangrazio and Sefton-Green, 2021). This type of transformation has changed power relations by providing a platform that enables every stakeholder to enter and exit whenever they want. Therefore, citizens have started to become both subjects and objects of the process. Citizens are not just considered consumers, but also providers and producers of knowledge (Silva e Davis Jr., 2008; Goodchild 2007). This relationship has the potential to drastically alter how communities' approach various decisions concerning their daily lives (Borges and Zyngier, 2014). Baxter (2017) identifies three difficulties for citizen participation in the decision-making process before the digital age: citizen apathy, lack of time and resources, and being complex and multidimensional nature of policymaking and implementation. If citizens feel emotional, enthusiastic, and excited; feel fear and worry about their interests; caring other people's rights; there would be a tendency to participate political process or vice versa. However, how these issues are addressed, strategies for local governments to increase the use of ICT tools for participation, and ways to involve citizens' attention in the decision-making process, even if local governments provide physical infrastructure for

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participation, are also important in the digital era. Emerging problems like the digital divide, data privacy, and data security should also be addressed.

The digitalization process has the potential to put the public sphere at the center of the democratic decision-making process. Since controlling and restricting people is getting harder in the democratic type of management, citizen voices could be heard more than ever, and they could be more involved in the decision-making process thanks to the benefits of digital transformation. The internet offers regular citizens to get in touch easier with city institutions and open-source collaboration to deal with feeling powerless about involving the decision-making process and making difference. To benefit from these potentials, it is also important to use the right tool for participation.

2.4.3 Changing Spaces: From Physical Spaces to Cyberspaces

The platform suggests a libertarian idea of open and inclusive environments, which are interactive by design in the world of Web 2.0, and they have their participation logic or designs. This structure is open in the sense that it is both inclusive and undetermined (Schwittay and Braund, 2019). Since people continuously make contributions to various platforms, local governments can benefit from that by creating their digital platforms. By creating a such platform, *'undiscovered experts'* (Aitamurto, 2012) find a shot to engage and share their experiences and opinions. It's also worth thinking about the contrasts and similarities between amateurs and experts. Citizens, called 'amateurs' by the media, are specialists in everyday life and citizenship. Their experiences, views, and thoughts are valuable since they use public services regularly.

Cyberspace, rather than being a centrifugal force that tears society apart, may be one of the key kinds of glue that holds a more free and varied society altogether (Dyson et. al.,1996). In that regard, cyberspace is compatible with contemporary scientific conceptions of space-time in that it sees this information network as the result of interactive relationships between machines and humans through time, rather than as

empty blank (Ethier, 2015). Humans are progressively creating digitally stored cyberspatiality warehouses of data, knowledge, information, and disinformation. People are constantly contributing to cyberspace—creating, characterizing, and growing it at a breakneck pace that is only increasing quicker. In digital platforms, users can contribute to generate information unconsciously which are *''ambient producers''* (Jurgenson and Rey, 2010). Each post represents a new cycle in the consumption cycle, and each cycle has the potential to generate new needs and data, that, when collected across all users, create new markets and support capitalism's continuing expansion. In this way, prosumption is both a structural and ideological reality of the digital world (Rey, 2012). Especially in the last decade, social media platforms are the cyberspaces are not just the spaces where communication is happened mostly, rather these spaces involve consumption and production together, instead of separation of them, which is prosumption. The prosumption society will most likely be a non-alienated society, according to mainstream and progressive analysts of the phenomenon. This is because the user, as a prosumer, is theoretically reconnected to his or her creative essence as well as to other people (Comor, 2010; as cited in Dusi, 2016). Crowdsourcing activities can both increase and decrease alienation among users. Postigo (2003) states that offering unwaged web-based works is an attempt to decrease alienation and crowdsourcing may be extremely inspiring, representing a hopeful reunion of worker and product in a post-industrial economy when labor is becoming increasingly alienated (Brabham, 2008). Cyberspaces are mass intellectuality's communicative and prosumptive medium, through which the world's structural linkages are now 'augmented'. Since it is designed to facilitate and enhance those activities in which individuals are currently engaged, social media's augmented reality avoids separate action from intentionality (while, of course, extracting value from those activities all the while) (Rey, 2012).

As the connection between users increases and communication strengthens, alienation may decrease, which can strengthen the community to take collective civic actions. This may make it easier for citizens to react collectively (when necessary) to negative actions by governments. This turns into a driving force for local

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governments to be accountable and transparent in their actions. It reveals the potential of the digital era to change the dynamics power relations in the decision-making process. Since accountability and transparency are major demands from the public, governmental authorities should be much clear about what they operate. Also, getting together the non-state actors and acting and thinking collectively is possible on social media platforms. Therefore, the digital era provides shifting power from government to citizen when its digitalization properly used. Moreover, crowdsourcing creates demands for equality and diversity in the context of power relations since it is used as a tool for various domains in policymaking (Hansson et al., 2018). Role of the internet and social media became undeniable for years and using them is not optional anymore, it is necessary for offering spaces for citizens to participate and achieving democracy.

In the decision-making process of the urban planning, to detect varied interests, needs, and wishes of the citizens and to make better decisions about them, it is logical to get citizens' opinions (Garcia et al., 2011). Because of that, seeking new and more efficient ways of communication that face-to-face interactions cannot meet is crucial for urban planning. Involving citizens as a component of urban planning and making broader public participation in the decision-making process enhances the legitimization and acceptance of the decisions and increases the support of the citizens to local government. Digital platforms have the potential to create new spaces for engagement and participation by offering free speech on several platforms, easier access to information, and reaching much more people and interaction, but the main question is how to use digital platforms as a tool for participation. However, it can still be said that digital platforms are not completely secure, and it is not possible to implement a participation application directly through these platforms. While there are problems such as time, place, transportation, and hard to follow up in face-to-face participation, there are also new problems in the usage of digital tools like security, privacy, trust, digital divide, etc.

2.5   Collective Intelligence and Crowdsourcing

Communication is a critical factor in advancing open government ideals since it improves openness and integrity and is a precondition for citizens to engage in public life and hold their government accountable. Furthermore, changes in traditional media markets, the rise of social media, and the increasingly complex problem of misleading information and disinformation are altering how the government and citizens interact. Special focus should be paid to ensuring that digital tools help to broaden the scope and inclusion of all voices in policymaking, particularly those from traditionally marginalized groups. Having digital tools and access does not mean that there will be sudden positive changes in the participation process and power relations in the decision-making. It is about building a culture in which citizens are aware of their rights, opportunities, roles, and what they can do. Crowdsourcing in urban planning can be considered one of the most recent 'democratic innovations,' or methods and instruments aimed at increasing and deepening citizen engagement in public processes since it offers citizens that have different interests to take part in the planning process. In this context, crowdsourcing is a tool for building a culture of citizen participation by using opportunities of the Internet (Gleeson and Dyer, 2017) through providing to date, comment-enabled forums and blogging platforms have been utilized to gather feedback.

However, just receiving feedback and informing citizens about activities are not sufficient to benefit from their opinions and create a participation culture. To get meaningful results from citizens' opinions and use their knowledge in the decision-making process, as many people as possible should be included. Also, as indicated before, since cities as diverse structures with socio-cultural characteristics, different needs, preferences, and wishes can direct more creative perspectives and meaningful results for all. In other words, enabling collective intelligence can help to resolve the problems in cities to benefit from diversity.

Maithili et al. (2012, p.245) defined collective intelligence as *''the ability of human groups to develop toward greater complexity and harmony through mechanisms*

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such as variation-feedback-selection, differentiation-integration-transformation, and competition. '' The belief is that a group of individuals can handle problems more quickly and provide more insight and a better solution than any single person could. By using the wisdom of the masses, the value of applications can be improved. The notion of enhancing collective intelligence is at the heart of Web 2.0. The process of collective intelligence is defined as the interactive exchange of information and the ongoing creation and maintenance of a group viewpoint. A commonly accepted view or content could be the outcome of collective intelligence, but it could also emerge indirectly as a presented selection of information (Hoegg, Roman, et al., 2006). When individuals work together, collective intelligence is a sociological concept that outlines how a group's intellect emerges. The group communicates information and tackles issues collectively by engaging and even competing, giving them a better chance of finding answers than they might have on their own. Because the public develops knowledge by reaching a consensus on accurate responses and ignoring or discarding faulty or deviant ideas, this method works.

Howe published an article called ''The Rise of Crowdsourcing'' in Wired magazine in 2006. He used the term ''crowdsourcing'' as using amateurs' (crowd) talents to outsource activities and it is an open call for producing innovative solutions (Howe, 2006). Crowdsourcing can be used for problem identification, problem-solving, consultation, innovation, or in troubles like lack of human resources and time constraints. Crowdsourcing is a concept that aims to harness the collective intelligence of groups. Zhao and Zu (2012) define crowdsourcing as a collective intelligence system that consists of nodes composed of individuals or businesses that are linked together by information transfer linkages that may entail online or offline communication. *''The crowd's strength lies in its composite or aggregate of ideas, rather than in a collaboration of ideas''* (Brabham, 2010, p.1125) and because of that diversity in the crowd is one of the aspects that determines the success of crowdsourcing process. Each member of a larger group (i.e., crowd) contributes ideas and/or performs minor tasks which add up to the final output. Because so many

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individuals have knowledge or experience in several different areas, they may work together to establish the truth and finally filter out any lies from the content.

Crowdsourcing does not use a novel mechanism. To benefit from distributed knowledge there have been some initiatives. In 1714, in Britain, the government awarded a monetary prize for the best method of measuring a ship's longitudinal location, known as the Longitude Prize. Planters Peanuts had a public logo-design contest in 1916, which resulted in the creation of Mr. Peanut, and the Toyota logo was created through a similar competition in 1936, as was the architecture of the Sydney Opera House in 1955. These examples were established to promote problem-solving. However, the inability to access a larger population, collaboration problems, and pure inertia were the limitations (Kietzmann, 2016). The crowdsourcing technique still operates the same way it did in the past: anybody may engage in the task. Today, the mentioned problems that happened in the past can be overcome thanks to advancements in ICT. Compared to public meetings, which may incur fees for the venue as well as the time of many public authorities, crowdsourcing is less expensive and may elicit feedback from a greater crowd. Because it is electronic, it may be handled immediately, which might mean cataloged, saved, reported, included, or addressed. Furthermore, the participant's contact information is automatically delivered, making it trustworthy and accessible and these features of crowdsourcing make it a more inclusive process.

For a more comprehensive definition of crowdsourcing, Estellés-Arolas & Gonzalez-Ladron-de-Guevara (2012) made research that is based on eight characteristics. By considering previous definitions, and state that each kind of crowdsourcing method needs to specific definition according to these characteristics like crowdfunding, crowd creation, crowd voting, and collective intelligence which are defined by Howe (2006) while he categorizes crowdsourcing practices. Their definition is;

> *''Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or a*

company proposes to a group of individuals of varying knowledge,
heterogeneity, and number, via a flexible open call, the voluntary
undertaking of a task'' (Estellés-Arolas and Gonzalez-Ladron-de-
Guevara, 2012, p. 197).

From this definition, it can be understood that anyone can organize a crowdsourcing
process to benefit from the collective intelligence of the diverse group for problem-
solving and anyone can join the process by one's will, which will refer to motivations
and intent (Peixoto and Fox, 2016) since it is an open call. Schenk and Guittard
(2009) define crowdsourcing as outsourcing the crowd in which any individual can
join the activity. The aim of crowdsourcing is an open call for everyone, not just
experts or professionals.

Aitamurto (2012) identifies five benefits of crowdsourcing: the ability to quickly
acquire information from a large crowd; as the number of participants grows,
additional information and views become available; including citizens in the
decision-making process; raising awareness of existing challenges; the possibility of
citizen empowerment. Additional to these benefits, the reduction of transaction costs
is another factor that triggers participation. Also, the development of ICT makes
crowdsourcing one of the cornerstones of democratic participation at the local
government scale. Local governments can use citizens' knowledge (citizens have a
wealth of information about their concerns) to develop innovative solutions to
increasingly serious and complex societal problems through crowdsourcing, and
local governments can use citizens' knowledge to find solutions to pre-defined
problems (Haltofova, 2018). Local governments can benefit from and reach more
people than their number of employees, and by reaching citizens, local governments
can gather data in a shorter time and with fewer resources by using digital platforms.
In the local government context, crowdsourcing activities have the potential to lead
the social innovation process and to make radical changes in the decision-making
process in the planning rather than voting, and reaching consensus (Certomà and
Rizzi, 2017).

Involving individuals at the forgotten level of local government may boost participation and local authorities' capacity to create more inclusive and cohesive communities, as well as advocate citizen-led efforts to promote democratic society (Shayo, 2019). Shirky (2008) points out that the use of crowdsourcing for government policy advocacy, e-democracy, and e-governance has grown exponentially due to broad and simple accessibility to technology such as the Internet, mobile phones, and other ICT tools. In circumstances in which inadequate data and information or when the problem is rooted in the realm of tacit knowledge, crowdsourcing can be used to direct these issues to the crowd to aid decision-making and define the problem, aims, and strategies. Moreover, crowdsourcing has the potential to support the spreading and retention of new capabilities and strengthen social bonds like in neighborhoods where people tend to share the same values and so in the crowdsourcing platform users tend to share the same interests. Shared culture will help to understand citizens' problems and needs (Certomà and Rizzi, 2017).

Crowdsourcing has been a popular approach for involving individuals in activities ranging from urban planning to new product design and addressing complicated scientific challenges (Aitamurto, Leiponen & Tee, 2011). Crowdsourcing can be used as a tool to find a solution because of a lack of resources like a financial budget, human resources or experts, lack of time, or lack of ability. Also, organizations and institutions could use crowdsourcing for gaining the support or trust of society to show they respect their decisions by implementing or considering their ideas. To address these issues missing parts of the process can be outsourced. Crowdsourcing can be a way to respond to and deal with increasing differences or diversity in society, to make more open the decision-making process more, and approach this process more critically where openness is crucial for achieving mutual benefit for citizens and public administration since planning is a never-ending process. Crowdsourcing harnesses the help of a diverse group of online users to solve an issue allowing information to be exchanged effectively across many actors, and because of the prevalence of smartphones, crowdsourcing apps for smartphones are used to

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harness the power of the mobile crowd to share information or improvement of services (Lee et al., 2017).

There are three actors in crowdsourcing projects: individuals, organizations, and enablers (platforms) (Schenk and Guittard, 2011; Zhao and Zu, 2012). Individuals are from the crowd, and they are providers; organizations directly benefit from public involvement, and enablers connect the crowd and organizations. In the urban planning context, the organization component is the city administration, the crowd component is citizens as members of an online community, and the platform is the technology that serves as a facilitator (Haltofova, 2018). There are three cases for crowdsourcing to emerge: an organization has work that must be completed; online community volunteers to do the assignment; and consequently, both the organization and the online community profit (Brabham, 2013). Also, the free will of the crowd and openness trigger the happening of crowdsourcing (Hansson et al, 2018).

Hansson et al. (2018) classify crowdsourcing activities into three types: human computation, crowd competitions, and peer collaboration. Human computation can be expressed as non-domain specialists in research analysis is a trend within scientific areas that aims to engage non-domain experts in scientific activity and assign tasks to volunteers who are motivated by altruism, learning, and/or social prospects (Lease and Alonso, 2014). Citizens can contribute by reporting incidents, providing feedback, and offering their local knowledge about the content. Crowd competition or idea competition in which the crowd is invited to participate in the process due to monetary incentives, reputation, or public acknowledgment, and individuals can participate individually or as a group. Peer collaboration is related to debate and collaboration, and it entails leveraging social media networks to discover a solution to a problem or change provided by a person or an organization. There are no direct awards or monetary incentives for participating, and it is voluntary (Hansson et al., 2018).

TRADITIONAL PRODUCTION

CROWDSOURCING

USER PRODUCTION

A top-down, hierarchical process

Locus of control is in the organization

Examples:
- In-house product development
- Simple voting marketing campaigns (e.g., DEWmocracy)

A shared top-down and bottom-up process

Locus of control is between organization and online community

Examples:
- Peer to Patent
- Amazon Mechanical Turk
- InnoCentive
- Threadless

A bottom-up, grassroots process

Locus of control is in the online community

Examples:
- Wikipedia
- YouTube
- Open Source Software

Figure 2.2. Crowdsourcing as a Blend of Traditional Top-Down Production and Bottom-Up User Production.

Source: Brabham et al., 2013

Figure 2.2.2. illustrates that crowdsourcing differs from other, comparable types of online participatory culture and user-generated data initiatives in that it combines a typical, hierarchical top management method with a bottom-up, open process engaging an online community. The center of control in crowdsourcing situations should be shared among the organization and the online community, instead of being centered on others (Brabham et al., 2013). Schenk and Guittard (2009) also differentiated crowdsourcing and the user-innovation process where crowdsourcing is a firm-based organization, rather than meeting the needs of users like in the user-innovation process. About the difference between crowdsourcing and big data, crowdsourcing is a two-party attempt that requires an organization and an online community to collaborate in harmony to handle problems consciously and deliberately. On the other hand, big data analysis could involve an active crowd working in a crowdsourcing task, but in several situations, big data refers to large amounts of data analysis detached from the hands. Users, for example, are not aware

of how their internet search habits contribute to Google Flu Trends data. In other words, people are passive contributors in the big data process, whereas they are active contributors in the crowdsourcing process and are aware of what they contribute (Brabham, 2013).

What kind of tasks can be assigned to citizens is also important when organizing crowdsourcing activities. In certain ways, organizational entities can outsource certain tasks to a wide, diverse, and decentralized network of individuals by using online crowdsourcing platforms. By focusing on a self-selection mechanism in which end-users choose whether to participate crowdsourcing becomes different from the upward approach to the decision-making process (Toraldo et. al., 2015). Schenk and Guittard (2009) classified crowdsourcing tasks into three categories: routine tasks, complex tasks, and creative tasks. A routine task is an integrative form of crowdsourcing, and it can be more applicable and cheaper on a smaller scale, but as the scale increases, it becomes harder to implement. A complex task is a selective form of crowdsourcing in which innovation and new products are required. A creative task can be formed in both integrative and selective forms in which uniqueness and novelty are the prerequisites for this kind of task rather than solving the defined problem. The crowdsourcing scale can vary according to the scale of the problem, and it is crucial that determine the time dimension and extent of the activity. Because of that while assigning a task to the crowd, the scale and type of task should be classified to get as much efficiency as possible. The crowd should be defined according to the target to be achieved with crowdsourcing and a platform suitable for crowdsourcing should be designed.

2.5.1   Crowd

Crowdsourcing is an open invitation for everyone to engage in an online task where 'the crowd' refers to an undetermined number of individuals. Outsourcing, on the other hand, implies that a particular agent is assigned to the task. The crowd is asked to engage in an online task by submitting information, knowledge, or talent through

crowdsourcing tools (Aitamurto, Leiponen & Tee, 2011). The ''crowd'' refers to a group of Internet users who contribute to the problem-solving process by proposing solutions. Rather than a collaboration of ideas, the crowd's strength comes in its composite or aggregate of ideas (Brabham, 2010). In another definition, the crowd refers to the workers who are outsourced to do the task in which various groups may be included in this unit (non-experts, experts, informal members, customers, business partners, etc.) and it can be described by its size, composition, homogeneity, and level of competence (Chiu, Liang, and Turban, 2014). In 1980, Alvin Toffler used the word, *prosumer*, in his book ''The Third Wave''. Prosumption is described as *''the interrelated process of production and consumption''* (Ritzer, 2015, p.9, as cited in Yamamoto, Nah, and Bae, 2020), wherein people act as both producers and consumers. In media terms, prosumers are not regular media consumers, but instead active players in the media ecosystem, and they participate in a slightly different kind of media production and consumption (Chu, 2010). In the context of crowdsourcing, users in the crowd are prosumers in which they are both consumers and producers of the content.

A crowdsourcing activity could be collaboratively or competitive to the problem or design of the process. It depends on what kind of solution is asked of the crowd, in other words, it is up to the problem definition. For example, if the local government asks for crowd design of the bus stops like in ''Next Stop Design'' there would be competition among the participants in the crowd. However, through the process, the role of the crowd could be changed according to the steps of the process. Bott et al. (2011) identifies three types of users: temporary users, normal users, and power users. Temporary users have the right to only monitor what happened, normal users have the right to articulate their opinions, and power users have the right to edit and help to integrate users and their activities and numbers are correlated with the success of a crowdsourcing platform. The platform should enable all mentioned options, but it should enhance the increasing number of power users to create a more participatory environment.

Chiu et al., (2014) state that Herbert Simon's decision process model which consists of three phases (intelligence, design, and choice) should be used to reveal the potential of the crowd and understand their different needs of them. In this model (Figure 2.3.), first gathering information and problem definition should be made, and then the solution(s) ideas are generated. In the last phase, the best alternative or solution is selected. About the role of the crowd, Chiu et al., (2014) identify roles for each phase of Herbert Simon's decision process model: in the intelligence phase crowd's role may be to search and discover, asking opinions, make predictions, and knowledge accumulation; in the design phase generating ideas and proposing solutions, fostering creativity and innovation; and in the choice phase; evaluation and provide feedback.
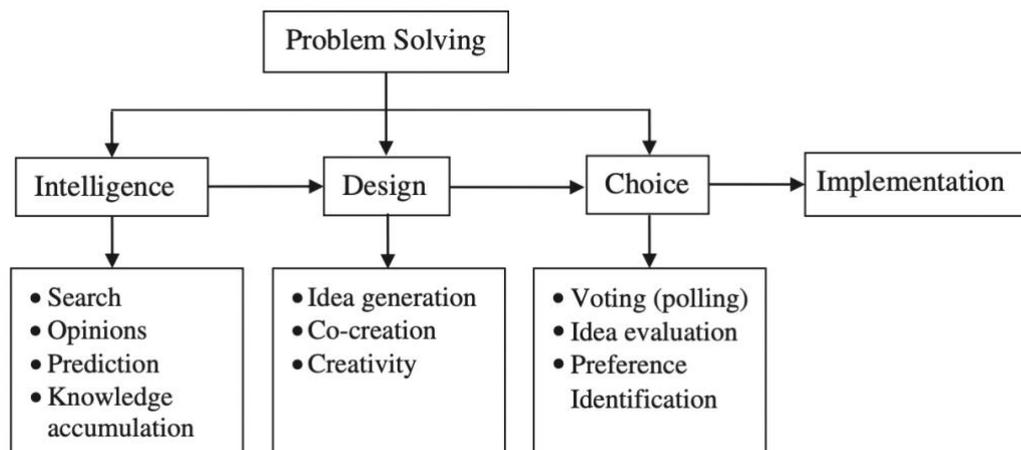
Figure 2.3. Roles of the crowd in different decision-making phases

Source: Chiu et al., 2014

In this model (Figure 2.3.), choosing the best alternative is important for differentiating collaborative and competitive modes of the decision-making process. Here, competitors are not the enemies like in Schmittian antagonism, rather they are ''adversaries'' who disagree but see each other as having ''legitimate'' points of view (Crowder, 2005).

If there is too much cooperation and communication among problem-solvers that could lead to compromise or disaster, the key to aggregating rather than averaging

ideas is for participants to produce entire unique ideas and submit them for peer assessment (Brabham, Sanchez, and Bartholomew, 2010). Individuals in the crowd are not recognized as worthy actors in a democracy, nor appreciated as full participants in public issues, if the popular discourse delegitimizes and dismisses them as mere amateurs (Brabham, 2011). This coincides with the prevailing thought in instrumental rationality. This kind of situation also causes demotivate citizens to engage in the decision-making process and endangers future crowdsourcing implementations.

Before the assessment of crowdsourcing initiatives, there needs to be a preliminary assessment for measuring whether there is an appropriate infrastructure or not and barriers that have to be overcome. For example, in Sri Lanka, an initiative of e-governance failed since the majority of the population has no access to the internet and some forms and documents are only reachable on PCs (Hattotuwa, 2008). Because of that, knowing the audience and determining their capabilities and abilities before designing a crowdsourcing organization is crucial for preventing the mentioned problems.

2.5.2 Crowdsourcing, Urban Planning, and Role of Planner

Every urban planning endeavor is, in fact, dependent on a problem. Planning is a decision-making process that aims to solve problems and make decisions that affect the future and shape human life. In this decision-making process, it is essential to consider the thoughts, wishes and needs of the citizens, since they are the subject of the process. Decisions made by ignoring or not listening to the affected part in the decision-making process also significantly affect both the impact of planning decisions and the reaction to these decisions. For the planning decisions to be accepted, the opinions of those who evaluate and criticize these decisions are important. Therefore, the citizen should be included in the planning process, and in this process, the citizen should not only assume the role of the subject but also the role of the object. This is only possible with a strong construction of the

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communication mechanism. Public participation has been a specific area in the urban planning and as indicated before, how to communicate with citizens is the central issue of public participation. As the population increases in cities, socio-cultural differences, interests, problems and needs also diversify depending on the place and social structure, and this makes it more difficult to reach more citizens. With the development of ICT, people's access to social media platforms and their frequent use in daily life also requires the tool to be chosen for communication with citizens to be designed according to this trend. This tool should be designed to be inclusive, accessible, high impact potential, understandable and able to contribute. However, not only which tool is chosen, but also how it will be used is important, and the planners have a job to do.

Planner is someone who builds platforms for an interactive and non-hostile debate among equals rather than just a loyal supporter of the voiceless and underprivileged (Blake and Gaffikin, 2007). It means that the planner's role is providing spaces for communication in which everyone can join and providing information dissemination and knowledge transfer between all parties. Innovative structures and processes to encourage a citizen-centric bottom-up approach are the role of urban planners in this context (Gleeson and Dyer, 2017). Local governments and planners are becoming deeply focused on citizen involvement in urban planning and management. It shows that they are increasingly becoming aware of the different advantages of including the citizens in planning processes. These advantages include gaining rapid access to up-to-date local knowledge for problem-solving which is not easily available through traditional strategies (Li et al., 2020).

Asking specific questions will better serve the urban planners (Brabham, 2013). Posing questions by narrowing the scale of implementation may engage citizens more effectively to generate a creative solution or opinions. This approach also provides clarity for preparing a crowdsourcing process. In other words, citizens will better understand the what the task is. The simple existence of interest groups in the planning phase, who attend meetings to represent the interests of a part of the public, may intimidate the average citizen with elaborate graphs, maps, scientific data, and

expertise, discouraging non-experts from participating in the future (Hibbard and Lurie, 2000). In other words, planners should present some terms in the most basic ways in which everyone can understand what meant by displaying data. Using appropriate language is important to reach citizens and help to involve in decision-making process. Otherwise, it causes demotivate to citizens to take part in the decision-making process. These non-verbal data sharing is part of communication process with residents. Therefore, to reach high quality communication and make sustaining it common language should be used between planners and citizens.

Crowdsourcing is a tool that serves mentioned purposes and can keep up with the developments and evolve continuously with the influence of digitalization and the developments in ICT. Crowdsourcing activities help to identify problems that are not taken on the agendas of local governments. Typically, the issue is how to effectively manage shifting populations by using diverse infrastructure while keeping residents, developers, business owners, and the environment in mind. If an issue can be properly defined and all relevant facts made accessible, the problem can be crowdsourced (Brabham, 2009).

Public authorities communicate with and incorporate citizens in the public service provision, engage citizens in political discussions about their future living environment, and encourage citizens to articulate their requirements for smarter living spaces, primarily through digital platforms (Steils et al., 2021).

AS-IS IMPLEMENTATION	MIDDLE GROUND	CONSULTATIVE
Organization commits to implement crowdsourcing outcomes as-is.	Organization commits to crowdsourcing outcomes selected through a shared selection process.	Organization makes no commitment; crowdsourcing outcomes are recommendations.
Example: We the People petitions for official White House response (in some cases).	**Example:** Challenge.gov's Apps for Healthy Kids contest, which used a jury of experts to choose a winner.	**Example:** President Obama's Citizen's Briefing Book.

Figure 2.4.   Degree of Upfront Government Commitment to Crowdsourcing Outcomes

Source: Brabham, 2013

Crowdsourcing outcomes are divided into three categories by Brabham (2013): 'as-is implementation,' 'middle ground,' and 'consultative.' The government directly executes the choice of the crowd in an 'as-is implementation' circumstance. In the 'consultative' circumstance the government does not guarantee that none of the suggestions offered by a crowdsourcing effort will be implemented. In other words, the government agrees to utilize crowdsourcing results only when it feels they are valuable or if these results can be implemented and there is no guarantee that any of the online community's contributions will be used in the end. Finally, in the case of a 'middle ground' circumstance, a collaborative choice mechanism ensures that the online community has a considerable voice in the decisions, but the government retains the right to offer a backdoor if the effort fails. This model is the last phase of the structure of the thesis (Figure 1.1.), to see how the local government evaluates citizens' contributions.

2.5.3 Motivation Factors and Success Criteria for Crowdsourcing

"We don't have to engage in grand, heroic acts to participate in the process of change. Small acts, when multiplied by millions of people, can transform the world" (Zinn, 2004, as cited in Bettez and Hytten, 2013).

To be successful in crowdsourcing activities, before the process is designed, it is necessary to analyze the trends and the usage behavior of people. Since it is an online activity that takes its power from online users, there needs to be looked at why people use social media platforms. In this context, social interaction, information seeking, expressing of opinions, learning, entertainment, fear of missing out are some of the reasons mentioned in the literature (Abbas Naqvi et. al., 2020; Liu, 2010; Przybylski et al., 2013; Whiting and Williams, 2013). Also, for monetary reasons, both individuals and companies are using social media for advertising since it makes it easier to reach more people to promote their products or what they can offer. In terms of public engagement, motivation factors are similar to social media. Social influences in which participants in public engagement are heavily influenced by others, which has an impact on their motivation and actions (Cheung and Lee, 2010), expressing themselves and enjoyment (Brabham, 2012), learning (Wjinhoven et al., 2015), gaining financial rewards (Zhao and Zhu, 2014; Archak and Sundararajan, 2009) and according to self-determination theory autonomy, competence, and relatedness (Deci and Ryan, 2000) are some of the factors that affect citizen's motivation to participate.

Trust is another factor that affects using digital platforms which is defined as the *''willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that another party''* (Mayer, Davis, and Schoorman, 199, p.712) and it is derived from reciprocity which can be created voluntary organizations (Putnam, 1993). Kwon et al. (2021) found that the usage of localized social media has an impact on the enhancement of interpersonal trust. It is reasonable to believe that trust has a direct impact on the continuous usage of a social

media site (Hallikainen, 2015), and considering trust as a prerequisite for civic participation is rational (Hazel Kwon, Shao, and Nah, 2021). Trust is a key aspect in the creation of social bonds, democratic stability and economic efficiency (Newton, 2001) and the ability to draw social capital from one's network and it is thought to influence the perceived social capital that may be generated from a social network (Hallikainen, 2015).

For creating a trustworthy environment and increasing participation, accountability and transparency of the state is crucial. Chambers (1998) put attention to transparency and selection for follow-up which are two points that are commonly agreed upon in the context of participatory development. To make the process transparent, facilitators should make it clear from the start who they are, what they are doing, and why, as well as what can and cannot be expected. In the selection process, groups can be selected where an ongoing program can provide responsible follow-up. According to the UN (2009), accountability refers to the requirement to demonstrate that work was completed in compliance with agreed-upon norms and standards, as well as to disclose performance outcomes fairly and honestly about specified roles and/or goals. To hold the state accountable, Rosanvallon (2008) identifies three principles: oversight (monitoring), prevention (support or resistance), and judgment (juridification). From these principles, citizens should have the power to make their voice heard when they think differently from the state and each other, and they should have the option to discuss and follow the state's activities. As the advancements in technology raise traditional methods of participation also decline in insignificance and so, indirect democracy gains importance (Rosanvallon, 2008). Because of that, there is a power shift from the state to the citizens, and providing a trustworthy environment becomes necessary for both sides. Moreover, Sharma (2010) adds that bringing to the light covered interests, intense communication, and creating personal bonds are important to create mutual trust among citizens which helps to strengthen the community. These also made the community feel comfortable on the platforms while communicating and interacting with each other. Especially in

diverse communities, they help to enhance the quality of the content since citizens from different segments of society can be involved easier.

According to Newman (2008), actors should commit time and resources for successful collective actions, but they tend to make short-term commitment rather than long-term. For this reason, what can be done to attract interests of the actors to involve them into decision-making process is crucial for achieving long-term commitment. It must be accepted that interactivity has cognitive boundaries, and unless the reasons are powerful enough to directly touch people's emotions and so access their creativity, it will be difficult to capture their interest and keep them engaged for long enough to make an impact (Sowmya and Pyarali, 2014). To take their attention motivation source has a critical importance. Financial rewards, recognition, fun, or helping to the others can be a factor for participation. For, example, in contrast to expected result, Zheng et al. (2014) found that recognition has more impact on participation than financial rewards. Therefore, there is no single and definitive factor that always positively affects motivation of the participants.

Using crowdsourcing is the preferred platform to engage peers to crowdsourced ideas in which *''vote''* or *''like''* is used for peer engagement. Peer engagement does not show that there is a strong commitment between peers in which liking an idea does not mean that there will be mutual work between peers, and they spend time and money for that work (Deichmann et al., 2021). Deichmann et al. (2021) define the idea commitment as investing time and effort to realize an idea between peers to realize *''walk the talk''*, rather than just 'like' or 'vote' it. In other definition, commitment is *''an agreement or pledge to do something in the future''* (Merriam-Webster's Collegiate Dictionary, 2022). Both definitions imply that there is an active engagement and imply a responsibility of parties in commitment situation. One may like a post about the climate crisis and ways to mitigate carbon footprint, there is no guarantee that he will imply those ways on the post. An individual may not 'like' the post even he supports the idea on the post and if there are situations like that the idea in the post may seem unreasonable or unsupported and it may prevent the applying

the idea even the idea is 'good'. In other words, this situation may hinder the creativity of the idea.

Deichmann et al., (2021) think that crowdsourcing activities should be designed to enhance collaborative team-based competition platforms, rather than competition contests because team members could give support to the 'idea creator' emotionally and by giving feedback to reach better results. Whether emotional support always good for a commitment is a problematic issue. Forming a team may have caused negative consequences. People may support one even whose idea is not creative or functional or not agree with the crowdsourced task but if he is 'one of them' like a colleague, political thought, or relative he may gain unjust support and overshadow the other's ideas and prevent their visibility in the platform. Also, forming a team may restrict one's freedom and feel compulsory to support an idea that does not fit in his thoughts.

In order to enable the citizen to devote a certain amount of time to crowdsourcing activities, the necessary motivation resources should be considered, and the scale of the activity should be specified within this time frame. In the first phases of crowdsourcing processes, to increase participation of citizens to planning process there should be motivations that encourage the awareness of having a role. According to Zheng et al. (2011) and Leimeister et al. (2009), motivation consists of two factors: intrinsic factors and extrinsic factors. First one, intrinsic factors, can be correlated with the desires and needs of the citizen. Intrinsic motivation refers to when a person's decision to participate is influenced by internal incentives, such as enjoyment or challenge, whereas extrinsic motivation refers to when a person's decision is influenced by external motivation, such as financial reward or reputation (Ryan and Deci, 2000). On the other side, extrinsic factors, comprise from benefits like public recognition. For example, The SAVE Award (Securing Americans Value and Efficiency) serves as a model for motivation via recognition. The finest ideas, according to President Obama, frequently come from the front lines. Because of that, in 2009, Obama established the SAVE Award, which seeks ideas from federal employees on how to make government more productive and efficient while also

ensuring taxpayer funds are well managed. The SAVE Award has received tens of thousands of cost-cutting proposals from federal employees throughout the last five years. The President's Budget, notably the Cuts, Consolidations, and Savings section, contains many of the most promising proposals. The SAVE Award's purpose is to generate ideas which will save money whilst simultaneously enhancing government operations. (URL-3). Intrinsic motives like creativity, play, and altruism are related to extrinsic motivations like greater career prospects. This implies that people associate values like play, creativity, and altruism with their reputation and profession (Berdou, 2017). Therefore, motivation cannot be related with certain issues. Citizens may participate for love of the community, for fun, monetary rewards, willingness, and increase their skills. These are all may affect citizens to take part in the crowdsourcing process.

Polarization between bottom-up and top-down stakeholders, lack of enthusiasm for the benefits of collaboration, narrow focus and aims of the city institutions and cannot see the bigger picture, through a highly technical procedure that is only understandable by specialized organizations with the expertise and competence to intervene, when necessary, may cause endanger and prevent the citizen participation (Gleeson and Dyer, 2017). In other words, when defining a problem, it should be noted that the problem is clear and understandable and local bodies should be careful about sharing information and data to be clear for citizens rather than too many technical or long reports and documents, and so they can understand, compare, and comment on shared resources (Poblet, 2011). Otherwise, it causes local governments to be misunderstood, local governments may lose the crowd's attention and counteract, and criticisms may start against the local governments.

On the other hand, misinformation may lead to decreased trust and usage of social media platforms. Misinformation *is "a category of claim for which there is at least substantial disagreement (or even consensus rejection) when judged as to truth-value among the widest feasible range of observers."* (Southwell et al., 2018, p.3). According to cognitive theory, individuals do not always have the information correctly. As a result, those who are involved in politics are more willing to

disseminate information and disinformation if it fits their ideological molds and is consistent with their beliefs (Valenzuela et al., 2019). A local community serves as the foundation on which to create public and social trust since it is where people live, work, and go about their everyday lives. Because of that, there are some initiatives to protect a trustworthy environment from misinformation in social media. For example, Facebook tries to prevent misinformation with its applications like ''Today In'', a news feed algorithm that prioritizes locally originated content over generic viral content, and ''Local Alerts'', which focuses on local governments and first responders for crisis information management, are two examples of how the social media industry has recently learned the importance of place in trust-building. The readiness of the social media sector to engage with local organizations to restore digital citizens' confidence is demonstrated by Facebook's shift toward location-based content marketing (Kwon et al., 2021).

According to Surowiecki (2004), there are three types of problems: cognition (choosing the best option or solution for a problem since in some cases there is no certain answer to the problem), coordination (how control of the participants' behaviors although they try to solve to the same problem), and cooperation (there are some issues like being selfish, trust, or people who are trying to dominate the space). These issues may discourage people to involve in the decision-making process and it causes a lack of diversity and independence. This is an undesired result since the best collective judgments are the result of conflict and contest, not consensus or compromise, variety, and independence are critical. When presented with cognition issues, an intelligent group does not require its participants to change their perspectives for the group to achieve a resolution that all can agree on. Instead, it works out how to employ processes to combine and make collective judgments that reflect not just what any one individual in the group believes, but what they all think in some way (Surowiecki, 2004). In other words, being independent of every member of the group is vital for idea production, and reaching the best answer and figuring out the independent results is crucial for making collective decisions to good ones.

To sum up, gaining financial rewards, recognition, gaining or increasing abilities, fun and enjoyment, altruistic behaviours, social interaction, expressing oneself, sharing opinions increase the attractiveness of the digital platforms and trust, easy to use and stay up to date are affecting factors that affect the sustainability of these platforms. However, as indicated before there is no single guideline for motivating citizens to participate. Because of that before the application of crowdsourcing initiative, there needs to be preliminary analysis of crowd for motivating factors for citizen involvement. If individuals do not see the value of their opinions and ideas urban and regional economies may suffer from a lack of crowdsourcing knowledge even on large scales (Roth et al., 2013). Otherwise, crowds could resist the crowdsourcing tool, ''crowdslapping'' (Howe, 2006), and use a variety of approaches, ranging from peaceful protest and rational arguments submitted to a crowdsourcing site by a citizen to destructive crowdslapping, that takes the shape of 'flaming' or 'flooding' (Dutton, 1996; Lange, 2006) an online forum with repetitive or offensive content that discourages others from participating in a product (Brabham, 2008).

2.5.4 Design of the Digital Platform for Crowdsourcing Activity

Since knowledge management is the source of power, the well-being of a society, business, or person relies on operating knowledge space. Levy (2010) chronologically classified anthropological space into three phases which is an anthropological structure of proximity that is reliant on human technologies, significations, language, culture, norms, representations, and sentiments: earth; territorial space where possession and exploitation of fields is a source of wealth in which knowledge is based on writing; commodity space is based on movement management; and knowledge space is a proposal that will govern instead of abolishing previous spaces. The three components of the knowledge space are speed, mass, and tools. Levy (2010) emphasized the importance of competitive space for constructing an intelligent community. Even when there is agreement on goals, the

varied viewpoints, governance, and institutional obstacles that divide various players will make collaborative and integrated governance and planning extremely challenging (Dyer et al., 2017). Also, Aitamurto et al. (2011) suggest that competitions can be more helpful to obtain the ''best'' solution rather than a community-based approach. Depending on the type of crowdsourcing activity, whether there should be a collaboration or competition may change.

According to Chiu et al. (2014), mass participation is key for achieving successful results from the crowdsourcing activity and so users' behaviors, motivations, and perceptions need to be explored. Platform selection can be discussed in this context. It is important because the design and usability of the platform have the potential to the increased productivity of the crowd and the quality of the results of the activity. It should be investigated which platforms are used more, which ones are more satisfying, or which features of the platforms that users prefer in daily life when creating a new platform affect their satisfaction. Creating complex platforms may lead to prejudices against the platform since ease to use is crucial for attracting users. The design and identity of the digital platform are crucial for building a participation culture.

Kersting (2012), divided platforms into two types: 'invented' platforms and 'invited' platforms. Invented platforms can be considered as a top-down approach structured by governments whereas invited platforms are part of a bottom-up approach structured by civil societies. In invited platforms, as an example of demonstrative participation which is an informal form of participation (Kersting, 2012), citizens can get together, share their ideas, express themselves, and monitor what is happening in their environment (Shayo, 2017).

Creating a specific type of platform is important to take attention and benefit from the platform. For example, Instagram was created for sharing pictures, Twitter was created for sharing ideas and opinions for anything. Both platforms have opportunities to learn about citizens' expectations, complaints, and needs. However, it is hard to follow these platforms for three reasons. First, people who live in another

city can make comments on other cities, or ''trolls'' may sabotage the process. Moreover, fake accounts are a threat to put other citizens in a difficult situation. Because of that many of the local governments put preconditions for verifying systems to understand whether an individual lives in the same city or not by putting preconditions like address, phone number, citizenship number, etc. Second, since not all citizens use social media platforms or use few of them, they may miss the process. It makes it necessary for local governments to manage and follow several social platforms and it makes harder the process. Lastly, it is about security problems. Hackers and cyberbullies are increasing day by day and cracking the accounts of local governments would be a great problem. They may be sharing inappropriate or fake news about individuals and organizations. It does not mean that using the most popular social platforms is not good for local government. Even, they are useful for sharing the actions of local governments and disseminating them. However, these platforms are not trustworthy for gathering information for citizens. This approach would help to increase the accountability, transparency, and credibility of local governments.

The gap between mass media (one-to-many) and personal media is bridged by social media (one-to-one) (Kersting, 2012). Lee et al. (2017) found that crowdsourcing platforms should contain design aspects that stimulate social connection and promote the feeling of community among city people, through chatting and social networking. Creating spaces for citizens to make discussions instead of just expressing themselves should be one of the main goals to achieve one-to-one communication like the other the most used social platforms like Facebook, Twitter, Instagram, etc. Increasing opportunities for communication and interaction can increase the usage of the platforms. For example, if a citizen uses an online petition service to articulate his/her complaints or needs for the local government he should see the other citizens who have articulated the same problems in their petitions make him see the problem in the local government or help him how to solve his complaints without applying online petition service. This also helps to save time for both sides and has mutual benefit to both parties.

Marketing and promotion of websites or mobile apps are crucial for attracting citizens to use them. No matter how good or well-designed is app or website is, it does not make sense unless nobody or a low number of individuals use it. Since these platforms are created for hearing and listening to the voices of citizens, a low number of citizens' voices will not provide the whole society's wishes or needs, and so desired outcomes cannot be reached in this process. Platforms that are mostly used by the public should be chosen when crowdsourcing want to be implemented (Hansson et al., 2018). To reach a more extensive audience and draw more citizens' interest social media platforms can be used like Twitter, Facebook, YouTube, Instagram, etc. which are the most popular platforms and involve millions of users (Figure 2.6.).

The five most used digital platforms are presented in Figure 2.6. and they all are free to use. These platforms are not just available and affordable for a specific group, everyone can utilize them and change people's lifestyles on a global scale.
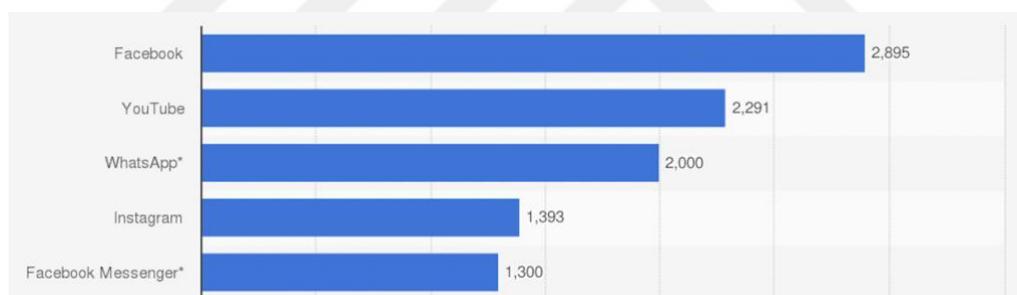
Figure 2.5. Most popular social networks worldwide as of October 2021, ranked by number of active users *(in millions)*

Source: Digital 2021: October Global Statshot Report, p. 62, 2021

The Internet encourages people to engage; it supports both economic well-being and democratic involvement (Mossberger et al, 2008), and as a result, it is no longer just a medium but a vital dynamic environment, whose growth should be a top priority for government (Staffans et. al., 2010). As technology changes day by day, it continues to offer new opportunities for communication in digital environments. Therefore, keeping up with these rapid changes and following the changes in social media will also be effective in increasing the continuity of crowdsourcing, as it has

an important role in understanding the changing behavior of individuals in communication. Miard (2009) determines three factors for facilitating political mobilization: mobility (react instantly), personalization (one-to-one communication), and multimodality (tool for live broadcasting), and these features have the potential to transform mobile phones into tactical and organizational tools for any group or organization seeking to organize people behind a shared aim. The correct and effective use of these applications is more important than a hi-tech application to ensure participation. For making a social impact, the mobile phone is the best tool since it is more affordable, and easy to use since it is less demanding about skills and abilities (Poblet, 2011). A mobile phone is a tool that makes it possible to empowerment of citizens and organize bottom-up participation (Hellstrom, 2008).

There needs to be a balance between control and autonomy of the users. In other words, managing the freedom of the users on the platform is a critical issue in crowdsourcing activities. According to self-determination theory, the ''autonomy need'' is defined as the degree to which an individual feels free when performing an activity, whereas the competence need is defined as the degree to which an individual feels effective when dealing with difficulties. The relatedness demand is defined as the degree to which an individual feels linked to others in an activity, and these are the necessities that people want to be satisfied and fulfilled (Lee et al., 2017). However, too much trust in crowd wisdom is also risky (Lanier, 2006) since crowdsourcing may result in grouping between participants and it may slow down the process. Giving full autonomy for controlling the crowd to the local government does not always give the best results and if this process does not organize this process can result in lock-ins (Certomà and Rizzi, 2017). Also, the best ideas may be hindered because of the grouping since participants choose an idea that belongs to the member of their group. Moreover, this situation results in decreasing diversity and gives rise to dominant groups. In this context, *'homophily'* is one of the most fundamental concepts influencing the structure of social networks in urban settings. The concept of homophily says that we tend to behave similarly to our peers. We

like to hang out with people who share our interests (Roth et al., 2013). Creating platforms in which everyone feels more independent may help to prevent organizational prejudices. It is important because if group thinking leads to undesired situations or outcomes, it will endanger the success of the crowdsourcing activity. To prevent groupthink individuals should feel independent (Janis, 1982). Giving people control over the methods — that is, the process – but not necessarily the ends is the key to innovation when it comes to offering freedom. In other words, if you offer the individual the option to choose how to climb a certain mountain, they will become more creative. You don't have to let them pick which mountain to climb.

Social media also enables more talking than listening and people may feel demotivated since platforms are too noisy and crowded (Sifry, 2010). To deal with these issues, management of platforms, determining who is the crowd in each situation, and what can be done for preventing negative situations of the process like tribalism or clustering are crucial when introducing crowdsourcing activities. Amabile (1998), relates mismanaging freedom with defining aims and goals. He supports that individual creativity is typically boosted by well-defined strategic goals. People in the process should understand what they should do and where they go. Static and centrally controlled types of crowdsourcing can decrease the motivation of the users since it is harder the integration of NGOs and other social organizations into crowdsourcing initiatives in authoritarian regimes. Also, in this type of government citizens' trust may decrease they may think that their data will be abused or misused, and this lack of trust may cause *'sysop vandalism'* or *'administrative censorship'* (Bott et al., 2011). Gleeson and Dyer (2017) also state that bottom-up initiatives can strengthen creative thinking and have a role in building trust and feel-good that positively affect local community capital rather than just accepting top-down initiatives of the local planning process.

Building a platform is not limited to its interface and visual quality but should be considered as a mechanism that decides what is offered to the citizens on that platform and how they can act. How citizens can access the platform, ease of use, security and privacy are also factors affecting the use of the platform. Therefore,

while constructing the platform, the usage behaviors of the citizens should be taken into consideration, and it should be considered with a system that can prevent undesirable situations such as grouping and authoritarianism.

2.6 Ladder of Citizen Participation

Arnsteins's Ladder of Citizen Participation model is one of the most widely used models for who has the decision-power in the citizen participation process. This model will be used for where citizens are located in the crowdsourcing practices in this thesis. After the criteria for the success of crowdsourcing practices are determined, this model will be used to evaluate the opportunity that the local government gives to the citizens and whether they are effective in the final decision or not. This model will be revised considering the digital era and crowdsourcing. For revising, the original and other revised models will be examined.

Arnstein's ''Ladder of Citizen Participation Model'' consists of eight rungs: (1) Manipulation, (2) Therapy (Non-Participation); (3) Informing, (4) Consultation, (5) Placation (Tokenism); (6) Partnership, (7) Delegated Power, (8) Citizen Control (Citizen Power). This model (Figure 2.7.) implies there is a gradation of citizen participation (Arnstein, 1969).
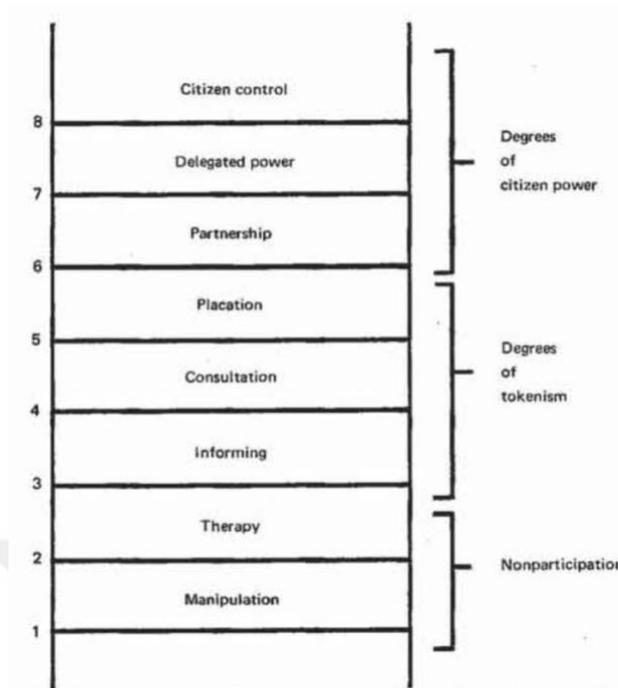
Figure 2.6 Eight Rungs on a Ladder of Citizen Participation

Source: Arnstein, 1969

In the first two rungs, citizens have no power to participate and have a voice. The main aim of these two rungs is ''educate'' or ''cure'' the participants. The Manipulation stage represents the distorting of participation into a public relations vehicle by power holders, as opposed to meaningful citizen participation (Arnstein, 1969). Therapy is a type of participation in which participants take part in activities that divert attention away from the root of their problems (Jarke and Jarke, 2021).

Tokenism is a type of participation in which citizens have some autonomy and a voice, but they hardly have the power to actively alter the status quo of decisions and plans that have already been made by others (Cardullo and Kitchin, 2019). In ''Informing and Consultation'' stage citizens may be heard but there is no assurance for guarantee to their ideas will be considered. Because of that, she points out that ''Consultation'' should be combined with other modes of participation for talking about meaningful participation. Arnstein put ''Placation'' higher level of tokenism since citizens can advise in this rung, but again decision-making power still belongs

to the powerholders. In the ''Informing'' stage there is a one-way communication (officials to citizens) and there is no channel for feedback (Arnstein, 1969). One-way communication cannot be regarded as participation since there needs to be an option that a common platform where both parties can participate. However, it can be seen as a first step toward participation since transparency and accountability principles started to be considered when reaching for inform them about what is going on and getting their views.

In the last three rungs, 'Degrees of Citizen Power', citizens started to gain some degree of autonomy and get a chance to negotiate. In 'Partnership', power is redistributed at this rung of the ladder through negotiations between citizens and those in positions of power. Through shared policy boards, planning committees, and methods for resolving impasses, they decide to distribute planning and decision-making tasks. The ground rules cannot be changed unilaterally once they have been established through some type of give and take (Arnstein, 1969). The results of the partnership ought to have a significant impact on the decision-making process (Jarke, 2021). Partnerships are more likely to take place when the counterpart has enough organizational and technological capabilities (Willems et al., 2017; as cited in Lim et al., 2018). Otherwise, the trust will be fragile, and the powerholders would prefer to hand over the projects to competent private parties (Lim et al., 2018). In the ''Delegated Power'' rung, citizens have the dominant decision-making power. In this rung, the ladder has been scaled to the point where citizens now control the important cards that guarantee the program's accountability to them. Powerholders should initiate negotiations to settle conflicts rather than respond to outside pressure (Arnstein, 1969). In the last rung, ''Citizen Control'', citizens have the full administrative power. Citizens are asking for the level of authority (or control) that ensures participants or residents can run a program or an institution, be fully in control of managerial and policy decisions, and be able to negotiate the terms under which 'outsiders' may alter them (Arnstein, 1969).

This model explains citizen power degrees in the decision-making process. It considers the power relationship between citizens and administrations. However, there are critiques about the model.

Salem (2016), compiles limitations of the Arnstein's model as; the model's exclusive focus on the power dynamic between government and citizens, where citizens and governments compete for greater shares of decision-making authority; with emphasis on the results of the participation process without taking into account the importance of the process itself; and the model's assumption of citizen participation realizes in democratic environments. Salem proposed a new model for citizen participation (Table 2.2.) by considering authoritarian state structure in the digital era. Since if 'citizen control' occurs there cannot be talked about authoritarian state, 'citizen control' was removed. By starting from the bottom, 'Surveillance' is a new ladder in terms of its context. It can be understood that government could gather data from citizens, but these data would not serve as a tool for decision-making process. Also, there is no information about whether government is monitoring citizens or not. 'Façade' is also a new rung in Salem's model. It is related to today's digital platforms. Platform may exist, but there is no guarantee of the government is monitoring and evaluating the platform. 'Information' can be seen as a 'informing' rung in the Arnstein's model. 'Consultative' rung emphasizes the 'commitment' term like in the Arnstein's model. 'Selective Participation' concept also emerges as a new rung. the elected members may not fully reflect the thoughts and wishes of the people who elected them, and in this process, the personal interests of the elected members may be abused as 'elected members.' Also, as stated in the explanation in the table, it is difficult to talk about participation in a process that takes place in a 'closed' environment with negotiation. For this reason, this rung could be thought of by placing it before the 'consultative' rather than after it. At the highest form of the participation, 'transparency' principle was emphasized, and it is stated that all the decisions and outcomes whether they are positive or negative should be explained and shared with the citizens.

Table 2.2. A proposed extension of Arnstein's ladder of citizen participation for the digital era, considering authoritarian contexts

Non-participation	Government control	No participation process exists and the government practices firm control on policymaking
	Surveillance	Online public-government interaction processes and platforms may exist, but serve only as sources of information for government surveillance, monitoring and profiling, with no contribution to policymaking taking place
	Façade	Public-government interaction platforms and initiatives are signalled to the public but they do not function or merely serve as a cosmetic layer
Tokenism	Informative	Some types of information and datasets are made open for the public to be able to make decisions (though not necessarily always updated or in useful formats)
	Consultative	Initiatives are put in place where the public are consulted and crowdsourced but government does not commit to include input in policymaking
	Selective participation	Selected members of the public are invited (not necessarily based on merit or expertise) to take part in closed online participation processes
Participation	Collaborative (partnership)	Functioning public initiatives and online platforms are established for public contribution to policymaking, where policymaking takes place interactively
	Empowerment	A transparent process (and platforms) exists where the government reports details and outcomes of the participatory process, including outcomes which do not fit government stated agendas

Source: Salem, 2016

Collins and Ison (2006) have criticism about Arnstein's Ladder of Citizen Participation. They determine two problems about the model. Firstly, Arnstein's conception of participation lacks context conceptually and lacks any way to make sense of the context in which the ladder is utilized. Secondly, model does not offer no guidance on how involvement may advance as a participation process between interested stakeholders.

> ''The underlying epistemology of participation, as understood in many policy-making arenas, is limited by its implicit and explicit association of participation with power; with consequences for the

> *kinds of tools and techniques designed to enable participation''*
> (Collins and Ison, 2006, p.7).

Changing periods and experiences have paved the way for the formation of new ladder-type citizen participation models. For example, Cardullo and Kitchin (2019) revised Arnstein's model in the context of a smart city for Dublin. They expanded the model by adding a ninth rung as a 'choice' (Table 6.2.) The main reason behind this revision is the privatization of the services. They assign citizens to the role of 'consumer' as choosing which services to purchase from the available suppliers' market and 'resident' as who can afford the price of the purchase or rent and have the option to live in a smart building or smart district which are usually exclusive, gated communities. As can be seen in the Table 2.3., there are added columns in the model which makes it a scaffold instead of a ladder. Cardullo and Kitchin (2019) evaluated 'consumerism' as a technocratic framing of 'non-participation'. Lim et al. (2018), evaluate the 'consumerism' rung as a suitable rung in the context of the digital era and neoliberalism structure.

Table 2.3.Scaffold of smart citizen participation

Form and Level of Participation		Role	Citizen Involvement	Political discourse/ framing	Modality	Dublin Examples
Citizen Power	Citizen Control	Leader, Member	Ideas, Vision, Leadership, Ownership, Create	Rights, Social/Political Citizenship, Commons	Inclusive, Bottom-up, Collective, Autonomy, Experimental	Code for Ireland, Tog
	Delegated Power	Decision-maker, Maker				Civic Hacking, Hackathons, Living Labs, Dublin Beta
	Partnership	Co-creator	Negotiate, Produce	Participation, Co-creation		
Tokenism	Placation	Proposer	Suggest		Top-down, Civic Paternalism, Stewardship, Bound-to-succeed	Fix-Your-Street, Smart Dublin Advisory Network
	Consultation	Participant, Tester, Player	Feedback	Civic Engagement		CIVIQ, Smart Stadium
	Information	Recipient				Dublinked, Dublin Dashboard, RTPI
Consumerism	Choice	Resident, Consumer	Browse, Consume, Act	Capitalism, Market		Smart building/ Smart district
						Smart meters, Mobile/locative media
Non-Participation	Therapy	Patient, Learner, User, Product, Data-point	Steered, Nudged, Controlled	Stewardship, Technocracy, Paternalism		Dublin Bikes, Smart Dublin
	Manipulation					Traffic control

Source: Cardullo and Kitchin, 2019

This model is important for the assigned role to the citizens in each rung and these roles are compatible with the power of the citizens. Also, it gives insights into how a citizen can participate in the decision-making process.

Krabina (2016) proposed ''the E-participation Ladder'' (Figure 2.8.) which focuses issue of how citizens participate in politics and how power is distributed rather than just focusing on political participation. This model considers today's digital era and by adding necessary elements there would be impact participation at the end of the process.
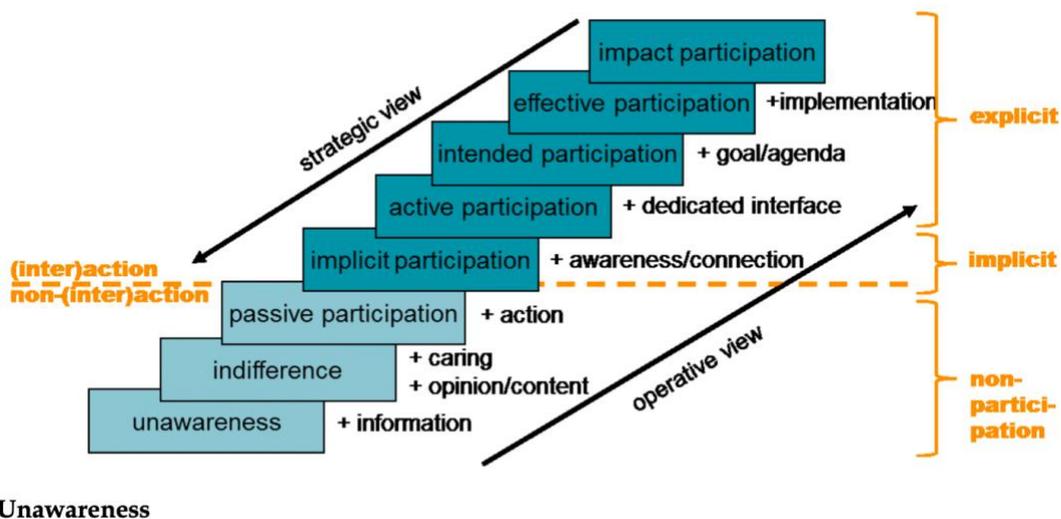
Unawareness

Figure 2.7. The E-Participation Ladder

Source: Krabina, 2016

The model starts with giving information to citizens for overcoming the ''unawareness'' stage. However, for going beyond the ''indifference'' stage, provided information should be relevant to the topic of participation and should take the attention of citizens. According to Krabina (2016), one of the key questions of this ladder is *'' How can we find those among the informed who do care?''*. This stage is related to the inclusiveness of the citizen participation process. It was emphasized that the process should be determined to whom it appeals and that it attracts the attention of the citizens who are expected to contribute. However, instead

of reaching citizens that care about the process, there need to be initiatives for making care of the citizens. It raises the author's following question: ''How can we make people care about the topic? ''.

After ''caring about'' the process, there needs to be motivation for action. The question "Why do citizens participate?" should be emphasized. Until this process, Krabina (2016) determine these three stages as the ''non-participation'' phase of the ladder. After that, he divides the ladder into ''implicit'' and ''explicit'' phases of the ladder in which (inter)action take place. The distinction between these two topics is determined as ''awareness''. People may contribute to the database by sharing, commenting, clicking, etc., but they may be unaware of what they contribute. However, Krabina (2016) states that there should be a mechanism for interpreting implicit participation since there may be important interaction for analysis. After ''active participation'' stage, there should be dedicated interface. The aim is to gather relevant data to determined platforms. This issue is emphasized in the thesis. There should be a determined goal for preventing irrelevant issues on the participation platform. The author put this requirement seventh ladder. It could be both positive or negative. Created platform without an aim, may discourage to participate and determining an aim for this platform may be hard after the platform created. However, short-term participation platforms could be revised according to an aim. In this model, the last element is implementation which emphasized in the thesis before. What is meant by ''implementation'' here is the use of the result obtained as a result of participation in some way.

Arnstein's Ladder of Citizen Participation is revised in this thesis by considering crowdsourcing practices and other models (Table 2.4.). The revised model was also shaped according to the citizen's participation in the crowdsourcing process and the evaluation form of the process.

The participation process in crowdsourcing applications starts with a clear problem definition. Both sides should be aware of what the task is, and the role assigned to them. For making clearer these concerns, open data about the problem and the task

should be given and this data should be provided through a common platform so that everyone can monitor the changes in the relevant data and process. It is important to prevent misinformation and to ensure that everyone acts with common information. In this context platform is a new type of urban space citizens and local governments come together, and the freedom of movement on this platform determines how effective the participation process will be. Once the relevant items (clear problem definition, assigned roles, open data about the problem, and a common platform) are properly provided, the crowdsourcing process can begin (Brabham, 2009). The quality of citizen participation in the decision-making process depends on the process and the level of influence of the citizen in the final decision.

Since crowdsourcing is the voluntary undertaking of a task (Estellés-Arolas and Gonzalez-Ladron-de-Guevara, 2012), citizens are involved in the process by being aware of the participation process. Thus, once citizens enter the crowdsourcing platform, they will begin with the ''informing'' stage which is the first step toward legitimate citizen participation (Arnstein, 1969). At this stage, one-way communication is carried out from the citizen to the local government. It is the first difference of the revised model from other forms of the ladder of citizen participation. In other models, a one-way flow of information is realized through local government to citizens, but in crowdsourcing there is already a task for citizens and citizens can engage in it voluntarily. It means, if citizens join the crowdsourcing process, for example by participating in a survey that aims to gather data from citizens, they will provide information to the local government. The local government can also provide its own data set to the citizens so that they can have better knowledge when conducting the survey, but the first purpose here is to fill the local government's own deficiencies rather than inform the citizens. That is, the main information provider is the citizen, while the recipient is the local government. At this stage, there is no guarantee to give feedback to the citizen. Because of that, this stage is revised as 'commensalism' in the new model while the local government benefits from citizen knowledge, citizens remain in an unaffected position because there is no feedback from the local government.

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In the next stage, 'consultation', citizens are asked to give feedback to the local government as a task, e.g. about a specific public service or joining a satisfaction survey. However, there is no assurance of evaluation of this feedback. In other words, citizens can be listened, but could not be heard. Local government can choose not to act.

The third stage is 'illusionary'. In this stage, the local government presents the projects to the citizens that have already been planned but are undecided or that the citizen wants to choose from among these options. At this stage, crowdsourcing is turned into a political tool. Citizens' role is decisive in this stage, and they are normal users in here. Since the projects are already planned and each presented projects are suitable for local government there is no change in the status quo. This type of participation can be seen as 'phoney' participation although the crowdsourcing outcome is implementation. It is like a coin flip game where both sides of the coin are the same for the local government.

In the first two stages, citizens stay as a data point and this situation may demotivate them for future tasks since their contribution is not being appreciated. There is uncertainty in the first two rungs about whether citizens' contributions will be used or not. The local government is not obliged to use all the data obtained, but to ensure the principles of accountability and transparency at these stages, it should be explained to the citizens why the data obtained from them is used and not used. Citizens are 'temporary' or 'normal users' in these stages. In the third stage, there is no uncertainty problem, but already-made decisions are presented to the citizens. The local government may seem to fulfill the wishes of the citizens, but until this stage, they are not the plans prepared according to the results obtained by communicating with the citizens.

For talking about active citizen participation there must at least be two-way communication between citizens and local government. Interaction between citizens is also a desired situation for the participation process to exchange ideas, discuss relevant topics, and act together.

The fourth stage is 'Placation' in which citizens are asked to advise to the local government. In this stage, citizens are asked for their suggestions for new action. There is a concern about involving as many citizens as possible since there is a search for listening ideas for problem-solving. Difference between consultation and placation, consultation stage concerns existing services, whereas placation is about future implications in the city. In consultation citizens asked to make the routine task, but in placation citizens asked to be more creative. However, there is no commitment by the local government to implement one or more of the citizen's recommendations. The citizen still has not been able to go beyond the 'normal user'.

The fifth stage is 'Collaboration' in which there is a shared aim and partnership for solving a problem. In this stage, local government could arrange crowd competitions for design of physical spaces or listen to the suggestions of citizens for strategic plans and select between them for direct implementation or revise them for implementation. The power user role is attributed to the citizen and there is a partial decision-making role for citizens in this stage. However, the dominant decision-maker is still the local government since the citizens' suggestions can be revised through negotiation or expert knowledge.

The sixth stage is 'Delegated Power' in which a certain resource is provided to the citizens for implementing their projects in the city. Participatory budgeting activities are related to this stage. Citizens are power users in this stage, and they are expected to do creative tasks. The decision-making power is attributed to the citizens and local government has a role for the arrangement of the crowdsourcing activity and put its expert knowledge at the service of citizens. At this stage, citizens assume the role of prosumers and become both producers and consumers of urban space.

Table 2.4.Revision of Ladder of Citizen Participation Model

Rungs	Explanation	Crowd's Role
Commensalism	Data collection from citizens by crowdsourcing	Intelligence
Consultation	Receiving feedback from citizens for existing public services	Intelligence
Illusionary	Offering the citizen a choice among decisions that have already been planned	Choice
Placation	Receiving suggestions from citizens for the future implementations	Design
Collaboration	Implementation of citizen suggestions directly or revised. Local government has the power to choose among suggestions	Design-Choice
Delegated Power	Commitment for direct implementation of citizen suggestions that are chosen by citizens. LG has an expertise role.	Prosumer

CHAPTER 3

EXAMPLES OF CROWDSOURCING PRACTICES IN THE WORLD

In the public realm, crowdsourcing can be used in various fields. Citizens can involve the decision-making process by contributing the open data with their local knowledge in municipal budgeting (Bernardino and Freitas Santos, 2020), crisis situations like natural catastrophes (Hughes, 2014), civil conflict (Bott et al., 2013), preparing strategic planning (Haltofova, 2018), improving public service efficiency and building a stronger communication between local government and citizens (King and Brown, 2007; Weinstein, 2017), regional development (Roth et al., 2013). In this study, participatory budgeting, crowdmapping, and improvement of public services and communication and enhancing citizen engagement activities are presented within the scope of case studies in order to be related to the case studies in the thesis.

3.1 Participatory Budgeting

Participatory budgeting has importance in informing citizens about the local and central government's operations like spending, resource allocation, and prior domains. Moreover, by increasing knowledge of the citizens about the local and central bodies' operations, it has the potential to enhance the accountability of that bodies and build trust between citizens and their administrative organizations.

Another argument for involvement in the developing world is that it is a natural and intended outcome of trends toward fiscal decentralization. Fiscal decentralization aims to eliminate central authority control and promote allocative efficiency by allowing local preferences to take precedence. As a result, the promise of fiscal decentralization is also a promise of participation, and the success of one is contingent on the success of another. The case for good governance is also linked to broader economic development considerations. Top-down investment plans and

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public policies that do not consider the interests and supervision of the people they serve will fail (Moynihan, 2007).

Participatory budgeting, one of the tools for crowdsourcing, was first implemented in the capital of the southernmost state of Brazil, Porto Alegre municipality in 1989. The main aim of these kinds of implementations is to empower and enhance democracy (Wampler and Avritzer, 2004). Participatory budgeting is one of the most creative citizen involvement methods which has become a global benchmark and is also acknowledged as the most promising tool for society's democratization owing to its capacity to attract communities together for a shared purpose (Bernardino and Freitas Santos, 2020).

3.1.1   Better Reykjavik

Reykjavik is capital and largest city of Iceland which is one of the least populated countries in Europe (366,425) (World Bank, 2020). Iceland's economy grew significantly in 2007, to the point where it topped both the pro capita GDP and the Human Development Index (HDI). The subprime mortgage crisis that began the financial instability in the summer of 2007 had a severe knock-on effect on the entire global financial system, which resulted in a sharp contraction of credit, especially after the collapse of the investment bank Lehman Brothers in September 2008. Icelandic banks were found to be insolvent and unable to pay their loans. The three significant Icelandic banks previously mentioned failed and were nationalized (Bani, 2012). In what became known as the 'pots-and-pans revolution' in January 2009, tens of thousands of Icelanders gathered in front of the parliament to call for the resignation of the ruling party, which eventually ended in the election of the first social-democratic government in the history of Iceland (URL-4). To deal with the protests and financial crisis, ''Better Reykjavik'' became the official agendas and policies setting platform. The platform allows citizens to submit their ideas and discuss which issues should be prioritize for local problems. Lackaff (2016) determines three characteristics of Better Reykjavik that distinguish it from similar

applications: founded and managed by a grassroots nonprofit group, not by a government; quickly gained considerable buy-in from individuals; has been normalized. Since the mechanism supports for public interaction and policy formation it is more akin to crowdsourcing platforms.

Better Reykjavik is a collaborative initiative between the Citizens Foundation, the city of Reykjavik, and its citizens that fosters connections and enhances trust and public policy. It serves several democratic purposes, including agenda formulation, participatory budgeting, and policymaking. It is a platform for crowdsourcing solutions to urban concerns. Debating systems, crowdsourcing, the contribution of multimedia material, and substantial usage of AI are examples of innovations that have been made to enhance both the user experience and the supplied content. Instead of the traditional comment section, which frequently degenerates into heated arguments and name-calling with little to no useful content, it has a debate system that is based on users adding talking points and arguments for and against ideas. (OECD, 2020). Better Neighborhoods (later known as My Neighborhood) was the name of the participatory budgeting program that Better Reykjavik launched in 2011. Residents of Reykjavik and the city government work together to decide how much money will be allocated for development and maintenance projects in the city's ten most populated neighborhoods.

Better Neighborhoods project consists of 5 steps: idea submitting by citizens; evaluation of citizens' ideas by city of Reykjavik according to cost and technical issues; voting of the ideas by citizens; executing the selected ideas; experiencing the results. New records are almost broken consistently in terms of participation, which has risen continuously (OECD, 2020). Between 2012 and 2018, 696 ideas have been approved (Bjarnason, 2019).
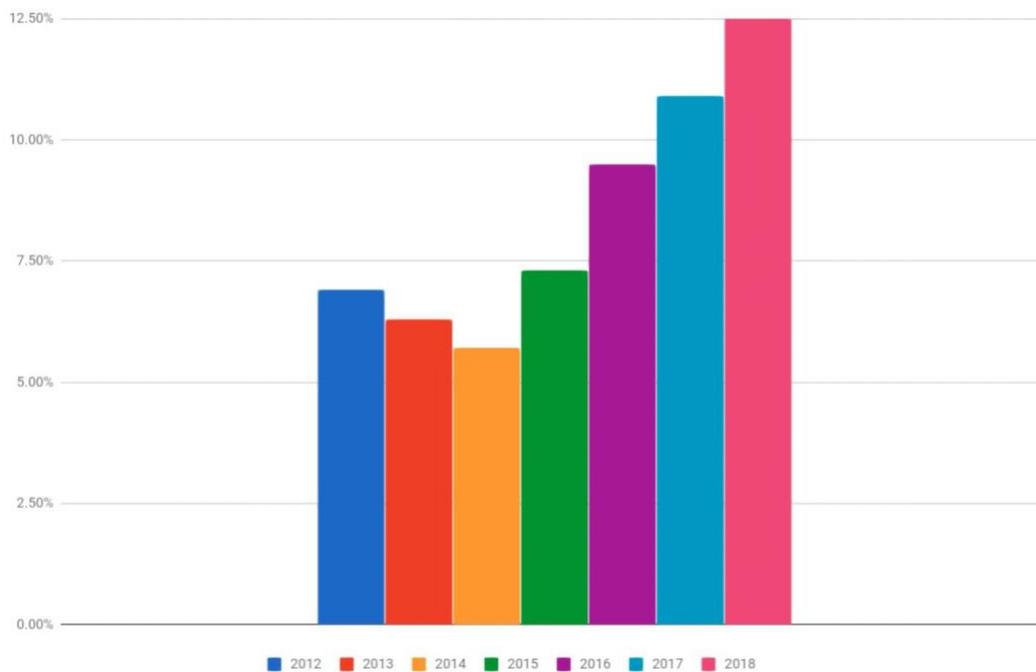
Figure 3.1. Reykjavik Participatory Budgeting vote participation (%)

Source: Bjarnason, 2019

One of the challenges of the process is getting citizens and administrative organizations to participate. Not just motivate citizens, but also there needs to be motivations for administrative organizations to break resistance to change and adaptation to digital era and participation opportunities offered by digitalization. Another challenge is uncertainty about how long the projects will take and what their long-term impact will be. This may demotivate citizens to participate for future crowdsourcing initiatives.

According to Lackaff (2016), there are three factors that Better Reykjavik is successful: quick adaptation, being an iterative process and sufficient resources; clearly defined goals and user profile; being connected with social media platforms like Facebook and Twitter.

Better Reykjavik application is a crowdsourcing initiative made after the problems experienced in the Reykjavik City. With this application, problem solving was

sought with the citizens. At the same time, it is aimed to increase trust to the local government. The number of participants has increased especially in recent years. However, the continuity of the program depends on the adaptation of the initiative by both citizens and public institutions. In this context, the user profile is important. As Lackaff (2016) stated, users have not reached the level to harm the platform. In other words, the analysis of the user profile and behavior is also important for the platforms to be established and the applications to be made. Another lesson learned here is that there must be a commitment in practice. In this way, citizens will receive the reward of their efforts for the implementation, and this will be a motivation for them. Finally, together with the discussion system on the platform, citizens also contribute to problem resolution by communicating among themselves. It is important for the crowdsourcing platform to make their voices heard not only to the city administration but also to each other.

3.1.2   Decide Madrid

In response to the 2011 15-M (anti-austerity) protests in Spain, Decide Madrid was established. There was an extensive online network of activists and bloggers who used social media to campaign and aided this movement (Davies and Procter, 2020). By incorporating citizens in the creation of creative and workable ideas and initiatives, the City Council of Madrid hopes to foster citizen participation in the management of the city and enhance their quality of life through this platform (Pina et al., 2022). Several issues with the Decide Madrid platform were experienced. The platform needed a significant communication effort, which was carried out through billboards, public transportation, special events in the square, and home communications. The administration's top objective was to involve as many individuals as possible before launching the platform's full range of features (Secinaro et al., 2022). Initial attempts were successful in incorporating many citizens into the platform, but it was still insufficient for participatory budget implementation. The definition of a specific law that legalizes citizen initiative

proposal or support, as well as the subsequent resource allocation through the participatory budget, solved this problem.

The platform is open to every citizen for debate, comments, and proposals, but only Madrid citizens who have registered and are at least 16 years old are eligible to verify their accounts, which enables them to submit, support, and vote on participatory budgeting proposals. There are 5 types of activities in the platform: debates, proposals, polls, processes, and participatory budgeting. In debates, citizens voice their concerns, opinions, and ideas and express their agreement or disagreement with the debate's core topic and/or other participant's responses. In the proposal section, users can include supporting papers, audio resources, and/or videos to their requests. These requests can be supported by verified users. In the polls section, proposals that get the support of 1% of Madrid residents who are 16 or older (27,662 people in 2018) are put to a vote. When requests that get the support of 1% or when city council demand polls carry out. In the processes stage, the city council gains citizens through debates, surveys, and requests. In the last type of participation activity, participatory budgeting, citizens decide how to spend 2% of the budget (Pina et al., 2022).

On the homepage, participation activities are categorized, and citizens can participate in any activity they want (Figure 3.2.).
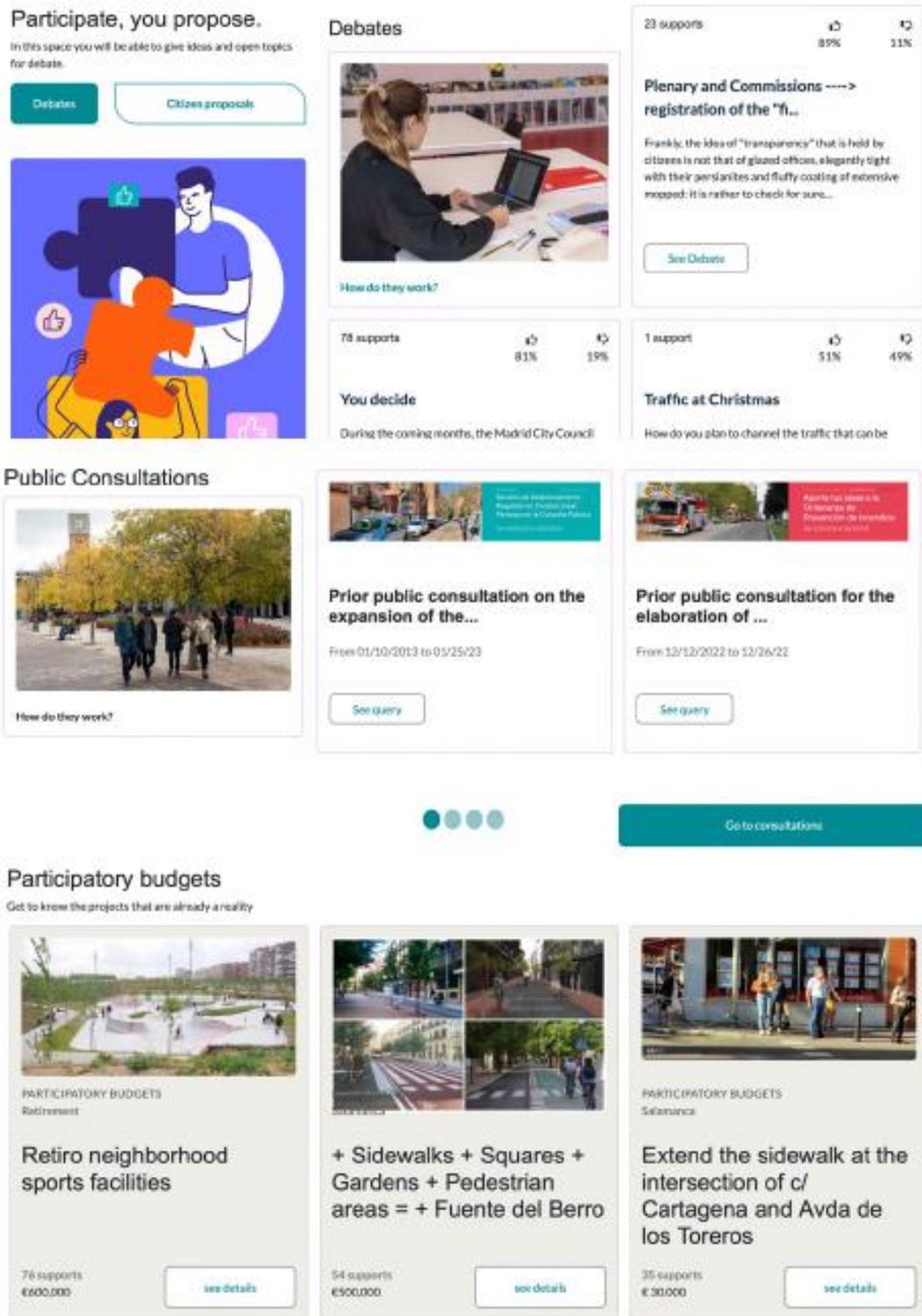
Figure 3.2. Homepage of the Decide Madrid Platform

Source: URL-5

The Participatory Budgeting process consists of four phases: proposal submission phase, support phase (prioritization of projects), evaluation phase (analysis of the feasibility of projects), final voting phase, and dissemination of the most voted projects (Table 3.1.).

Table 3.1.Phases of Participatory Budgeting Program in Decide Madrid

Phases of the Participatory Budgeting Program	Description of Phases
Proposal Submission Phase	Any citizen over 16 years of age can make a proposal for a district or whole city as an individual or as a group. Similar projects are grouped in this phase by City Council. Once accepted, the initiatives are available for viewing by everyone on the Decide Madrid website.
Support Phase	With the Decide Madrid website, anybody over the age of 16 who is registered in Madrid, even if they have never participated before, will be able to support, for one month, any participatory budget projects they consider to be relevant, necessary, or advantageous.
Evaluation Phase	Analysis and technical feasibility and legal compliance are evaluated in this phase. Projects may be regarded infeasible for a variety of reasons, if their cost exceeds the budget allocated for their specific territorial scope, if they fall outside the scope of the City Council, if they are in violation of the laws that apply, if they are technically impossible, if a similar project has already been approved or regarded infeasible in a previous call.
Final Voting Phase	Registered citizens over 16 years can vote for one specific district of their choice. The available budget and the projects with their project budget are published in both the vote on projects for the entire city and for the districts. The budget allotted to that particular geographical area may be spent on projects one at a time, while it is not necessary to use it all entirely. Votes for and against the projects are accepted during this stage. By deducting the sum of the negative votes from the total positive votes, each negative vote is converted into one-third of a positive vote.
	Projects with a general scope will receive 30% of the call's funding, while district-specific projects would receive 70% of it. The distribution within the districts will be inversely correlated with the population.
Dissemination of the Most Voted Projects	The results of the winning proposals will be announced on Decide Madrid following this last voting process.
	The Participatory Budgets portion of the website posts the municipal budgets when they have been authorized, and each project is tracked there to provide updates on its progress. The procedure is coordinated by the Delegated Area of Territorial Coordination, Transparency and Citizen Participation,

Source: URL-6

Citizens can view both winners and no-winners projects both on the list and on the map (Figure 3.3.).
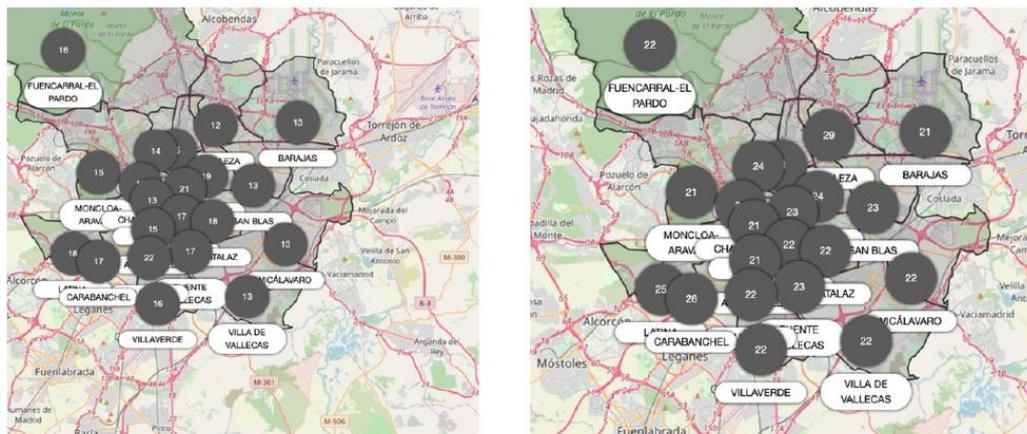
Figure 3.3. Winners (left-hand side) and No-winners (right-hand side)

Source: URL-6

Citizens can follow up on the process of the winning projects from the beginning of the program (from 2016 to 2021) (https://decide.madrid.es/budgets/presupuestos-participativos-2021/information). Citizens can view the number of support and negative votes for the projects, total votes, budget of the project, and location of the project on district and city scales. Also, projects can be viewed as technically feasible, in study and analysis, in process, in execution, and finalized. Projects can be viewed in detail by category of the project (consumption and commerce; culture, leisure and sport; urbanism, housing and infrastructure; education, training and employment; emergencies and security; taxes, fees, and fines; register and other personal documents; participation and association; health; social services; transportation, vehicles, and parking; public roads and the environment), explanation of the scope of the project, cost, data, location, date, and cost report. However, mentioned features are not available in all project details.

Table 3.2.Participants Statistics of the Program from 2016 to 2021

Year of the Participatory Budgeting Program	Number of Participants	Percent of Men	Percent of Women	Percent of Non-Defined
2016	44574	50.61%	49.13%	0.26%
2017	66758	49.64%	50.28%	0.08%
2018	90646	47.77%	52.2%	0.03%
2019	74683	46.84%	53.11%	0.04%
2021	49535	49.23%	50.51%	0.25%

Source: https://decide.madrid.es/budgets

When looking at the participants' statistics of the program from 2016 to 2021 (Table 3.2.), there is a decline in the number of participants from 2018. The participation rates of women and men were close to each other. Because of the COVID-19 pandemic situation, the 2020 Participatory Budgeting program could not be realized.

According to Davies and Procter (2020), the problem lies in increasing awareness and involvement. Less than 10% of the city's people are enrolled in 'Decide Madrid,' and only 56% of Madrid residents are aware that it even exists. Only 2 out of more than 13,000 proposals have been passed, despite reducing the threshold for approval (from 2% of the census population to 1%), according to the study. They express these problems as a lack of awareness about the platforms, inability to access the internet, a lack of time or interest, worries about the quality level of the proposals, apprehension that the available budget is insufficient to effect any significant change, and the belief that more urgent socio-economic projects. Also, they determined another problem that suggestions from citizens remain on a small scale. Citizens should be able to offer solutions to more complex problems and studies should be made on how to benefit from collective intelligence. Another problem is lack of feedback quality and poor provision of information. In Decide Madrid, citizens can

only monitor participatory budgets and a system should be put in place to summarize and give visibility to their comments. The lack of moderators and other ways to organize debates, proposals and comments has had a negative effect on the debates and processes modules, pushing many citizens to participate on an ad hoc basis (Pina et al.,2022). Due to the requirement for signatures, Decide Madrid has difficulty getting citizen ideas through the legislative process. Despite the high levels of participation, only two ideas have gathered enough signatures to be submitted for a vote by the Council, and none of them have even reached half the minimum level of support (Aragon et al., 2018).

According to Pina et al. (2020), there are three factors that make the platform successful: commitment between the city council and citizens, appointing qualified workers for this program, and the use of ICT. Also, the mayor has a critical role in coordination and providing resources for the initiative and this shows that political will is a vital factor in this type of digital innovation. As indicated by the high number of participants and submissions, providing the public with the chance to directly affect how laws and policies are made is in response to a deeply felt need (URL-7).

Decide Madrid as the first citizen participation initiative in Madrid allows citizens to have agenda setting, policy analysis and preparation, and policy formulation (Pina et al., 2022). It enables citizens to make their voices heard through its debate and consultation system. This platform creates a direct and two-way relationship between citizens and local government. Also, by establishing debate programs communication between citizens was enhanced.

In this case study, the Participatory Budget program is mostly focused on. Lack of awareness and interest, quality, and micro level proposals (Davies and Procter, 2020), lack of feedback and poor information provision (Pina et al., 2022), procedural barriers (Aragon et al., 2018) are the challenges of this platform. On the other side, qualified employees, commitment between local government and citizens (Pina et al., 2022) and political will (URL-7) are the success factors of the Decide Madrid Participatory Budgeting initiative. The fact that only registered citizens can

vote and follow the projects both prevents the security weakness that can be 'troll' at the voting stage and acts as a driving force for citizens to be included in the platform. The fact that the budget of the projects, the support and participant data, the cost report, and the stage of the projects can be viewed, makes the platform accountable and transparent. Lastly, platform is connected with the social media platforms like Twitter, YouTube, Instagram, and Facebook which makes the platform more visible and reachable for citizens. Participatory Budgeting activities and news are shared through with these platforms.

3.1.3   Youth Participatory Budgeting Portugal

The Council of Ministers adopted Youth Participatory Budgeting Portugal in September 2017, intending to improve democracy and include young citizens in decision-making processes in Portugal. The Portuguese Institute of Sport and Youth is promoting a campaign to encourage young people to become more active in public life and spending decisions. Although some municipalities in Portugal had already implemented youth participatory budgeting efforts, these projects were isolated and had a different effect than those pushed at the national level and under the supervision of the Portuguese government. Young citizens aged between 14 and 30 are encouraged to present and vote on investment initiatives through youth participatory budgeting. This program lasted three years between 2017 and 2019. This initiative consists of 5 phases: submission of proposals, technical analysis, public consultation, voting, and presentation of results (Table 3.3.).

Table 3.3. Phases of the Youth Participatory Budget Program

Name of the Phases	Date	Explanation of the Phases
Submission of Proposals	02-09.10.2017	The Youth OP website or during participation sessions that will be held across the nation are the two places where interested parties can submit proposals. Location of the Face-to-face meetings are announced at the website (URL-6).
Technical Analysis	30.10.2017- 06.11.2017	Services with competences will analyze proposals and transform them into projects that meet established criteria.
Public Consultation	06.11.2017- publication of the provisional list; 07-11. 11.2017- period for filing complaints; 17-24.11.2017- assessment and possible rectifications of the proposals; 27.11.2017-publication of the definitive list of projects.	
Voting	27.11.2022- 22.12.2017	Voting the finalist projects via SMS or OP Jovem page
Presentation of the Results	26-29.12.2017	Announcement of winners

Source: URL-8

The combination of technology improvements, such as the construction of a digital platform and face-to-face meetings were able to pique the attention of several young people, not only in the concept formulation process but also in the debate and voting process. Location, date, and hour of the meeting were shared on the website for each city.

142 municipalities participated in this program and the budget, 300.000 euros, was allocated between municipalities due to the number of winning projects. 169 of 424 project proposals were selected. Proposals were categorized into four groups: inclusive sports, education for the sciences, social innovation, and environmental sustainability (URL-9). Among the 169 projects, 7 projects became the winners at the end of the voting (Table 3.4.). Winning projects were shared with their number of votes, name of the participant, theme of the project, short description and document that include scope and aim of the project, location, and its necessary budget (URL-10).

Table 3.4. Winning Projects

Name of the Project	Theme	Scope
Liga-te à Pateira (Connect Yourself to Pateira)	Environmental Sustainability	Municipalities of Águeda and Aveiro
Arribeirar	Environmental Sustainability	Municipalities of Águeda, Aveiro and Oliveira do Bairro
O Grande Livro Do Parque (The Great Book of the Park)	Science Education	Municipalities of Águeda, Aveiro and Oliveira do Bairro
Banco de Ajudas Técnicas Desportivas	Inclusive Sport	National level
Minhotacleta	Environmental Sustainability	Municipalities of Viana do Castelo and Caminha
App Caderneta do Aluno (App Students' Book)	Science Education	National level
Gym4All	Inclusive Sport	Municipalities of Seia, Oliveira do Hospital and Gouveia,

Source: Adopted from Paz (2020)

According to Paz (2020), young people learn about democracy through non-formal activities, engaging in a cub of young people, a youth center or a sports club, and developing skills that contribute to their employability. Participatory Budgeting should be understood as a process in continuous evolution, prepared to correct challenges and transform them into opportunities. Youth Participatory Budgeting has contributed to the innovation of being a national-level activity, a pioneer in the world, and progressive reforms to strengthen its deliberative decision-making and institutional sustainability.

In their study, Bernardino and Santos (2020) found that this program could aid entities in better comprehending the program's significance and effect, participants might aid in the program design, and it can inspire other public bodies and serve as a model for other nations. It is also important that young segment of the society can draw the attention of local government to different issues may create awareness for these topics. For this reason, crowdsourcing practices for different age groups are also important to benefit from the ideas of the young people. Finally, with such participation programs, an awareness for the future can be created so that the voice of the citizens can be heard and listened to.

In summary, this initiative helps to create awareness of young segment of the society about democratic participation environment and joining the decision-making process. In other words, participatory budgeting program helps to influence to the city. For increasing participation, multiple approach for dissemination of knowledge from different channels, creating transparent and accountable mechanism by presenting all phases of the initiative and make them visible and trackable by every citizen, support the initiative with face-to-face activities for marginalized groups in the society are the motivation tools. In this crowdsourcing activity, themes of the projects can be diversified for getting more creative ideas. Lastly, commitment between citizens and the local government is vital for keep citizens on the platform and increase their motivation and their will. Since it is a continuous process, local government should be open to the technological developments and be able to respond them.

3.2 CrowdMapping

Digital mapping platforms which are collectively created by using and integrating data from the users are one of the most used types of crowdsourcing activities like Ushahidi activities, SeeClickFix, FixMyStreet, OpenStreetMap. This type of interactive mapping can be formed in two types: coordinated by governments (top-down) and independently created by users (bottom-up) and they both have the potential to the democratization of accessibility and information flows through citizens and both can change their approach from top-down to bottom-up approach or vice versa (Bott et al., 2011).

3.2.1 ''Free to Be''

Free to Be is a crowdmapping application created in partnership with CrowdSpot, Monash University's XYX Lab, and, most importantly, young women. It is a platform for women's real-life stories to be discovered and shared with those in positions of power in order to make change in the status-quo. Girls and women were urged to drop pins – happy or sad – on areas they love, avoid, feel safe in, and think should be improved on the interactive map. Melbourne was selected as pilot area for Free to Be platform in 2016, and then it implemented in five cities: Madrid, Delhi, Lima, Kampala, and Sydney (Figure 3.9.). It has given young women in these cities the ability to make their voices heard about unsafe situations and locate areas where change is needed. (URL-11)

Figure 3.4. Free to Be Platforms; (1) Lima, (2) Kampala, (3) Madrid, (4) Delhi, (5) Sydney, (6) Melbourne

Source: URL-12, URL-13
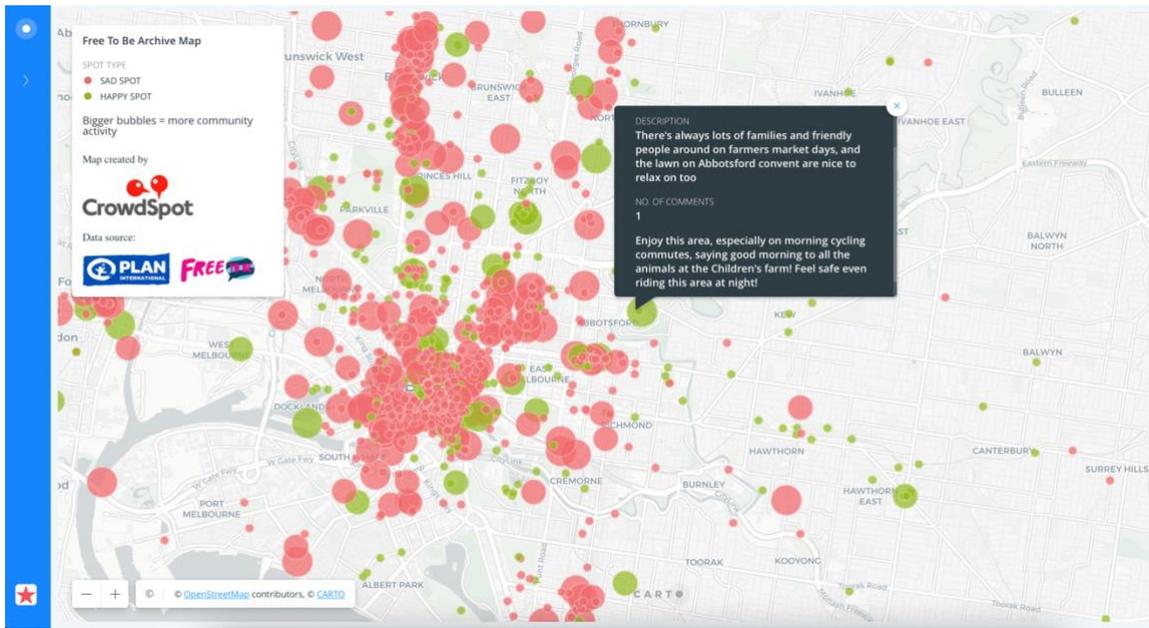
Figure 3.5. Comment Enabled Platform in Melbourne

Source: URL-13

Table 3.5.Statistics of ''Free to Be'' platform in Madrid, Delhi, Lima, Kampala, and Sydney

Location	Population (million)	Total Pins (number)	''Bad Pins'' (%)	''Good Pins'' (%)	Total Comments (number)	''Bad Comments'' (%)	''Good Comments'' (%)	No Action was Taken by Local Authorities (%)
Madrid	3.3	951	84	16	672	88	12	73
Delhi	16	14876	63	37	4602	70	30	No data
Lima	10	2037	89	11	1290	94	6	82
Kampala	1.5	1253	80	20	1251	80	20	84
Sydney	5	2083	75	25	1479	79	21	69

Source: Goulds et. al., 2018

In the Table 3.5., total pins from citizens were given for each city. About the usage of the platform, both in Kampala and Delhi, advertising the website through conventional and social media were unsuccessful and produced a small number of responses. Furthermore, due to a lack of internet connection, a lack of digital literacy, or exposure to advertisements and information about the website in mainstream media, the most vulnerable girls and young women in some of the city's poorest neighborhoods simply were unable to use this platform. When looking at the ''no actions taken by local authorities'' it can be said that this crowdmapping initiative is seen as recommendation for local authorities and there is no commitment between citizens and local authorities for acting. In Madrid, anonymity cause a problem because of ''trolls''. In the data collection phase of the project, 1200 of the 3000 responses were accepted as offensive and false (Tanner et al., 2020). Anonymity can be considered as both advantage and disadvantage. It is advantage because the aim of the platform is a sensitive issue and people can hesitate to give their personal information. On the other hand, it is a disadvantage since trolls in the digital platforms give wrong information and make difficult to analyze the responses and detecting problematic areas in the city. Although there is a global effort to collaboratively map locations, this difficulty might lead to discontent, inadequate participation, or incorrect answers. Another problem is related with design of the platform. Participants had to put a pin as close to the location as they could because several areas of the Delhi map, notably those on the city's outskirts, were not visible (Tanner et al., 2020).
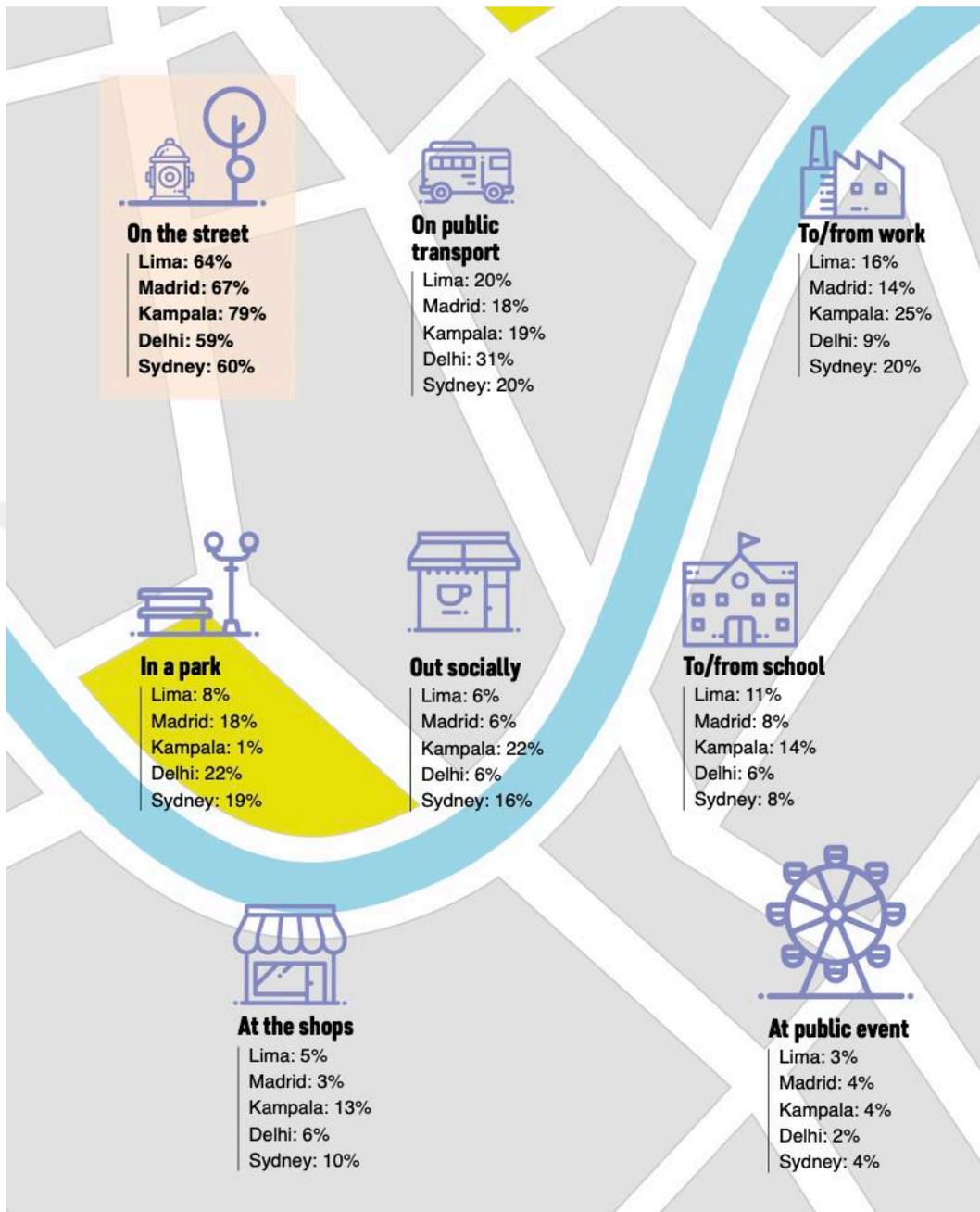
Figure 3.6. Percentage of bad pins by different types of locations

Source: Goulds et. al., 2018

In the Figure 3.11., percentage of bad pins by different types of locations is shown. 'Bad pins' depends according to the public uses in different cities. Therefore, conducting such studies is also helpful in determining the problematic areas in the

city. This type of studies and data give hints about identifying priority areas for problem solving in the decision-making process.

The results show that girls and young women are pressured into modifying their behavior in order to escape harassment, even though it is obvious that many men and boys' views and behavior, as well as society's complicity, need to change. To acknowledge that significant portions of the female population routinely experience fear, are denied the space and opportunity to live, work, or play in our cities, or the ability to influence and drive change in their own communities, this issue needs to be reexamined (Goulds et al., 2018).

Matthewson et al. (2018), examined what happens next after the incidents happen in Sydney and 36% of the respondents answer as '' Happens so often that I'm just used to it''. Although the behavior that needs to be changed is not in women, a change in behavior has been observed in them.

In this crowdmapping implementation, the main aim was making cities safer for all. In this context, map helps to identify unsafe locations in the cities and helps to understand what makes a location unsafe. The commitment between citizens and local government stayed as a problematic issue since most of the bad pins remain unanswered by local governments. ''Troll'' attack as a security bug and design of the platform as an ease of use are other issues for this platform. Since these problems harms to the transparent and accountable environment, they cause to decrease participants' motivations and creates a negative influence for future crowdsourcing implementations. For prevent this negative effect, local governments should try to include more citizens and needs to demonstrate that it listens to citizens and acts by creating a commitment. This type of crowdmapping tool shows the not just physical, but also social causes of the unsafety issue in the city. Because of that this type of implementations should be supported with long-term political programs for behaviour change.

3.2.2   HarassMap

A founding group of four women, along with tech partners, mentors, and volunteers, founded HarassMap in December 2010. A volunteer offered Frontline SMS and Ushahidi, 2 parts of free software that can be connected to create an anonymous reporting and mapping system that can be used both online and through SMS, to the co-founders in 2009. Considering that 97% of Egyptians at the time, half of whom are women, owned a cell phone, it seemed like a chance to reawaken public interest in this subject. The model took a year to design, during which time the situation was examined, and a strategy was created to focus on the issues we believed the advocacy-focused NGO programs that were already in place did not adequately address (URL-14).

The platform links social networking, text messages, mobile applications, Google Maps, and a public forum. Although the occurrences themselves are not confirmed, the contributions are evaluated for both their content and the accuracy of their mapping. Public reports remain anonymous, but those who submit them are pointed in the direction of assistance resources. Since its founding in 2010, HarassMap has also participated in a wide range of offline activities, from street-based awareness-raising to collaborating with the private sector and academic administrations (HarassMap, 2019). In order to plan monthly street campaigns, the community outreach team at HarassMap collaborates with volunteers in 23 governorates. It prepares volunteers to act as 'community captains' and execute outreach activities at least once or twice every month. Together with businesses like Uber, it also functions with smaller enterprises like cafes, kiosks, and taxis. The Marketing and Communications unit streamlines message, oversees media presence, and creates campaigns, while the Research unit maintains the crowdmap. The Safe Schools and Universities unit creates campus outreach teams (Abdelmonem and Galán, 2017).

HarassMap is an award-winner initiative. Awards received by the platforms are Deutche Welle and Shabab Talk Local Hero Award (October 2015), Cairo University Recognition Award (March 2015), 2014 Nominet Trust 100 – a list that

celebrates the people and organizations who are using digital technology to change the world for the better (December 2014), Deutsche Welle Best of the Blogs (BOBs) award for 'Best Use Of Technology For Social Good 2012' (June 2012), World Summit Youth Award (November 2011), Certificate of Recognition from the My Community Our Earth Partnership (URL-15).

When submitting a report, people give information about the location of the incident, a summary for the explanation of the incident, and demographic information about age, gender, and level of education. Each report receives a response that includes instructions on how to get free legal assistance and counseling (Flinkman, 2018). At the time of writing, HarassMap claims to have 10 full-time workers and more than 1,000 volunteers for its community outreach program (Rismann, 2014; as cited in Grove, 2015) and these volunteers are taught to speak with 'locals' and people who are visibly present on the street.

Figure 3.7. HarassMap Website

Source: URL-16

According to a study for HarassMap (Flinkman, 2018), people are more comfortable when they are staying in anonymous mode than in in-depth interviews. By staying anonymous, people provide more details about their experiences. In other words, the

anonymous platform provided individuals a method to voice their experiences and report incidents of harassment, which increased the extent of the problem in the sociocultural sphere (Cochrane et al., 2019). Since subject of the HarassMap is sensitive, it is a necessary option for citizens. HarassMap makes crowdsourced information from social media activist platforms available to a large population. Reports of harassment have a significant usability benefit over conventional data collection and reporting systems since they are timely and can be collected rapidly. Yet, there may be problems with control, corroboration, and verification of such data. It's possible that the sexual harassment victims who record incidents to HarassMap fundamentally differ from the overall population. It is also unknowable due to anonymity, which is essential to the project's success. In other words, data cannot be generalized for all. Lastly, there is no foolproof way to confirm or corroborate reports. Presently, the HarassMap staff checks each report for reliability. The process for classifying content as 'credible' or 'unreliable' is currently unscientific, and if the number of reports significantly expanded, the demand for skilled human coders might increase in the future (Pechaud, 2014).

By creating outreach teams, enlisting role models to serve as 'role models,' and creating internal procedures to handle sexual harassment charges, which HarrassMap refers to as 'escalation rules,' HarassMap intends to end the 'social acceptability'of public sexual harassment (Abdelmonem and Galán, 2017). Main aim is changing citizen behaviours and social norms and adapt citizens participation. The platform's anonymous option ensures that the content of the reports is more detailed, and the person or area involved in the complaint is clearer. Considering that the subject is sensitive, the anonymous option can be considered as a mandatory option for this and such platforms. The transparent publication of these complaints on the map and on the website also makes the platform attractive. In addition, the existing feedback mechanism enables two-way communication. As a challenge, HarassMap needs to have a message that is appropriate for their diverse audience, such as emphasizing the economic benefits when dealing with corporations. They should also make gender-based violence and discrimination a part of their service offerings (Cochrane

et al., 2019). It is important to make more of an effort to engage young people in conversation about sexual harassment and gender stereotypes by social media platforms. There should be more online forums where people can talk about and share their experiences with sexual harassment (Amel, 2014). HarassMap has been a success in Egypt, inspiring others to replicate it and engage in offline activities (Cochrane et al., 2019). Since crowdsourcing platforms are online and can reach larger audiences when supported by social media, they have a high potential to contribute to the development of platforms by learning from each other from cities around the world. This reflects the fact that crowdsourcing platforms have a constantly evolving nature and enable cities to be more livable and citizens to have their voices heard better with these and similar platforms.

3.3 Improvement of Public Services and Communication and Enhancing Citizen Engagement

3.3.1 FixMyStreet.com

In February 2007, FixMyStreet.com became operational in the UK (King and Brown, 2007). FixMyStreet.com site is designed for reporting, viewing, and discussing local problems like graffiti, fly-tipping, broken pavements, street lighting, noise, or pollution and allows to track these issues on the website. On the homepage, there is information provision about ''how to report a problem'' and ''recently reported problems'' (Figure 3.13.). Problems submitted to FixMyStreet.com by citizens are emailed to the relevant municipal authority. FixMyStreet.com contacts the problem creator four weeks later to see if the issue has been fixed. The creator or another citizen can publish an update at any time, and it will appear after the initial problem report (King and Brown, 2007). Citizens can also view the problems in the regions where the platform is located on the map. By clicking on the bookmarks, they can view the description and images of the problems (Figure 3.14.).

Santos, Rodrigues, and Oliveira (2013) identify main features of this platform as statistics on occurrences by the municipality; events search by the local government; subscription to event notifications in a specific location (the user can choose a local government or a radius around a particular street); the option to send a photograph; and incident reports are being discussed. The platform is constantly updated as the stages progress in line with the incoming reports, which makes the platform more transparent. On the platform, users can discuss their problems with public authorities and other users. Anonymity is an option for reporting issues on the platform. It gives freedom to users to decide the level of exposure to their personal identity. On the other side, in the case of anonymous users, social trust is not supported (Sowmya and Pyarali, 2013).
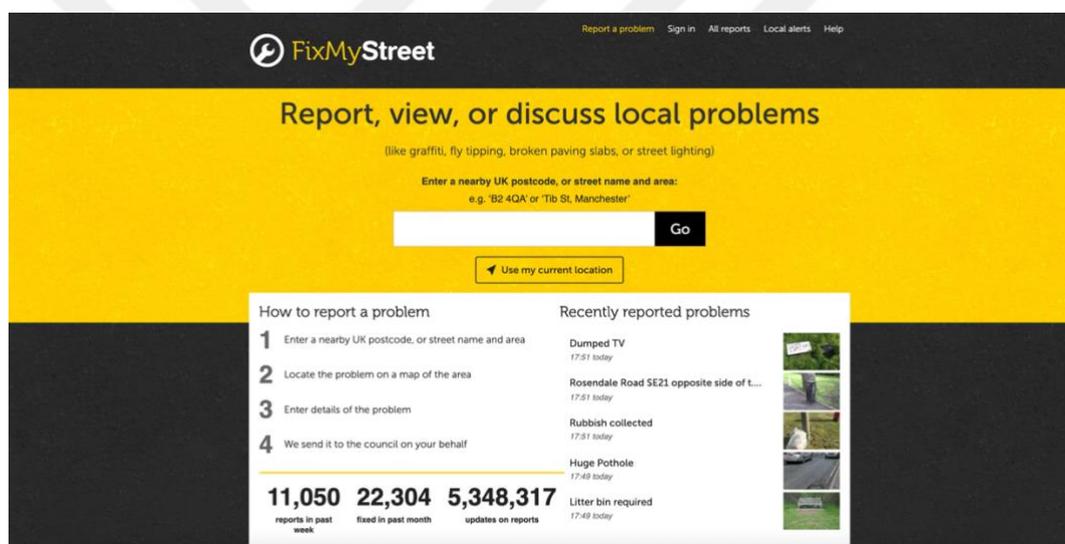
Figure 3.8. FixMyStreet.com Website Page

Source: URL-17
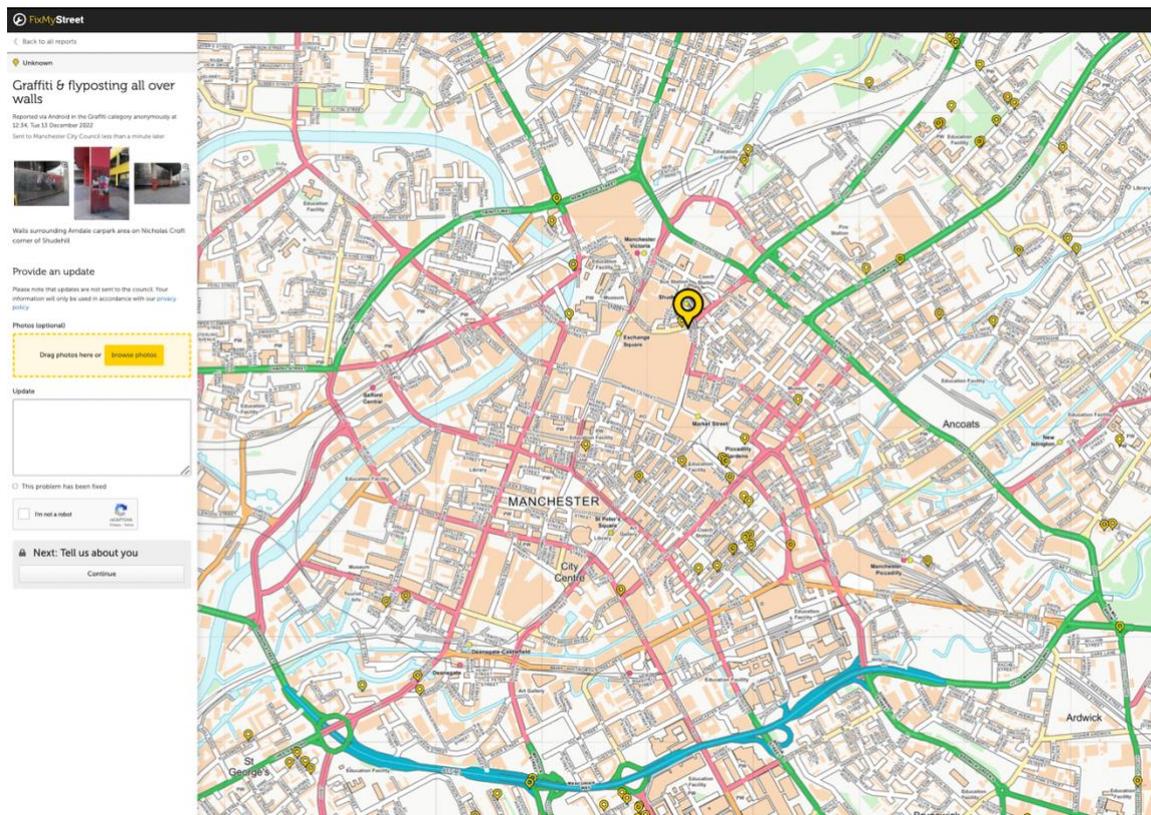
Figure 3.9. An example of complaint

Source: URL-18

The system's general design, representation styles, interface, access modes, and language should be carefully tuned to be as inclusive as possible rather than taking a *''one size fits all''* approach (Pak, Chua, and Vande Moere, 2017). Pak et al. (2017) investigate the FixMyStreet platform in the socially segregated city of Brussels. They discovered that individuals of certain ethnicities, as well as those with lower incomes, are marginalized by web-based civic engagement platforms. This might be due to the platform's late adoption, the affordability of electronic devices, and the internet. Turkish citizens in Brussels, on the other hand, appreciate online social media and actively engage in the FMS. It may happen because they appear to be more technologically proficient than other ethnic minorities, and they are more receptive to web-based civic participation.

FixMyStreet.com was one of the first programs to recognize the benefits of crowd-sourcing maintenance requests. It's a service given by mySociety, an e-democracy initiative aimed at creating 'socially focused tools with offline impact.' (Foth, Schroeter, and Anastasiu, 2011). FixMyStreet.com is a tool for enhancing the citizen's voice. Offering a globally visible platform for reporting, observing, and discussing local concerns, makes the 'complaints mechanism' public. Control is taken away from the council and placed in the hands of the citizens (King and Brown, 2007).

FixMyStreet.com expands to many countries like Uruguay, Australia, Croatia, Kosovo, Norway, Sweden, Switzerland, and UK. As can be understood from study of Pak et al. (2017), the platform should be designed by conducting studies for different groups in the society for the continuity and success of the platform. Preliminary studies should be carried out in order to measure the usage behaviors of citizens and to increase their adaptation. For the sustainability of this platform, which offers a more accountable and transparent environment for public service distribution, it should be put into practice together with the studies that will increase the adaptation of the citizens.

3.3.2 SeeClickFix

Ben Berkowitz, the founder of SeeClickFix first noticed a piece of graffiti in his New Haven, Connecticut, neighborhood in 2009. Berkowitz called a number of city hall agencies in an effort to get the graffiti removed, but he felt no closer to resolving the issue. Ben and four of his friends came up with the idea of creating a website and mobile app that would serve as a forum for communication between local inhabitants, including themselves and their neighbors, and the city hall in New Haven and they named it SeeClickFix. Berkowitz and his colleagues feel that by offering residents a mechanism to publicly document their problems about life quality, SeeClickFix empowers citizens (Berkowitz and Gagnon, 2017). Citizens can report problems, identify repairs that are needed, provide comments, and ask questions of

their local government officials using the SeeClickFix. It facilitates accountability and trust for local governments by providing effective and open workflows (URL-19). Users of SeeClickFix may create neighborhood watches where they can keep an eye on and report concerns in their communities. In the ''Watch Area'' they are in charge of, local government authorities can follow concerns that individuals have reported or receive notifications about them (Mergel, 2012). These issues are then taken up by advocacy organizations or elected officials, who subsequently put-up public solutions. The nature of the involvement in these examples makes it clear that no specialized skill is required of the users. The idea that crowdsourcing may be effective in tackling local and regional concerns is reinforced by the fact that most of the reported issues are local and community-oriented in nature (Misra et al., 2014). This platform allows citizens to have their voices heard in raising local issues. Officials from the local government can assign a work order number and update the status of the repair using the platform's direct feedback methods. A comprehensive feedback cycle is enabled by the automatic notification of citizens about changes in the status of their reported concerns (Mergel, 2012). Thanks to the feedback mechanism, two-way communication is provided between the citizen and the local government instead of one-way communication from the state to the citizen. In addition, follow-up mechanisms enable citizens to follow up their complaints and contribute to providing a trustworthy environment. In other words, this system draws attention to the principles of accountability and transparency.
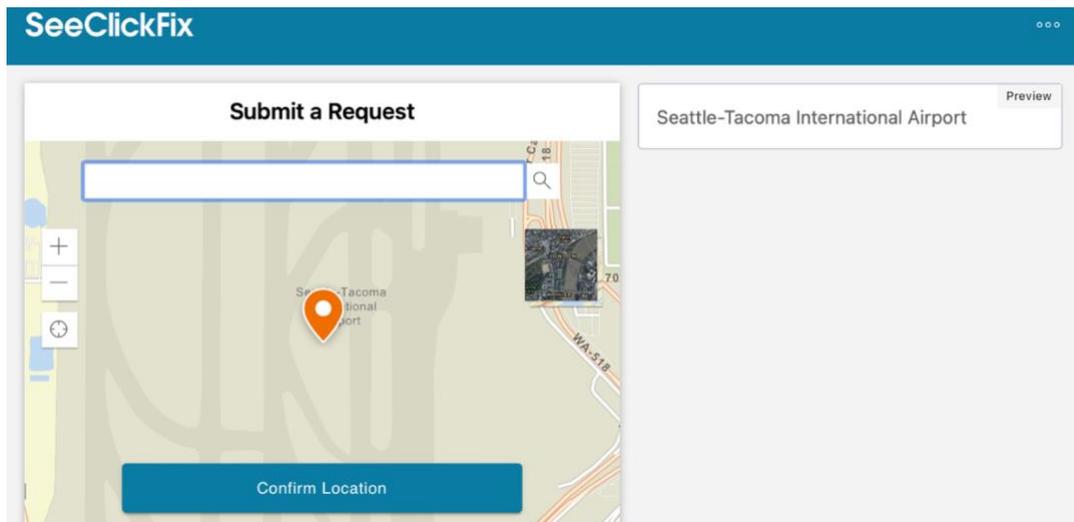
Figure 3.10. Request Page

Source: URL-20

Citizens can enter postal code or the name of the location in the report page (Figure 3.15.). If the local government where the location is located receives service from the SFC, the request categories are opened (Table 3.6.). But if not, SFC still offers other services (Figure 3.16.). Citizens can add description and images to their requests.

Table 3.6. Request Categories

ADA Compliance	Abandoned/ Junk Vehicles	Animal Control	Flooding	Graffiti	Illegal Dumping
Mailbox	Other	Overgrown Blush/Tree	Parks	Pothole	Property Maintenance
Recycling	Streetlight Out	Streetlight Request	Street Maintenance	Street Signs/Signals	Water Quality/Spill

Source: URL-20

Requests: New

Post to Neighbors

Start a conversation with neighbors and any unverified officials monitoring this area.

New Request

Learn More

We have lots of great information for new organizations to get started.

Product Info   Contact Sales

Introduce Us

Do you know a local government, non-profit, or other service provider that could benefit from SeeClickFix?

Introduce Us

Figure 3.11. Other alternatives for request

Source: URL-20

Figure 3.17. shows an example of request in Chicago. After the complaint citizens get an ID for follow-up the process. Also, citizens answer questions for better explanation of their request. It makes easier for solving the problem in the cities and makes more reliable of the request. In other words, this mechanism has potential to prevent trolls.
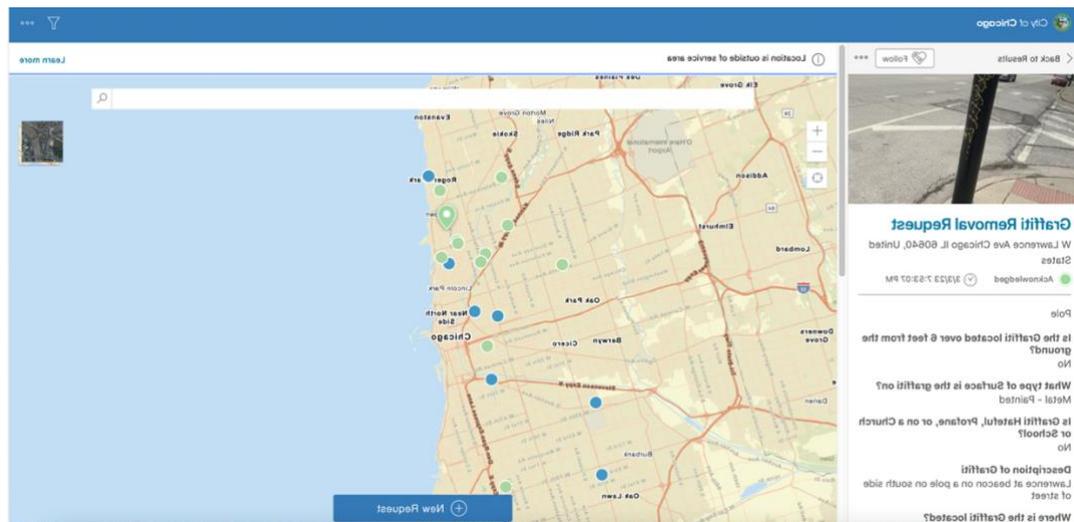
Figure 3.12. Request Example in Chicago

Source: URL-21

Having a multichannel approach as having connections with social media networks like Facebook and Twitter may help to deal with the digital divide and increase the inclusivity of the platform (Mergel, 2012). Mergel (2012) states that if the number of contributors will increase responsiveness will also increase and it makes SeeClickFix a valid platform for information exchange and creates a more trustworthy environment between citizens and local governments.

As a barrier, Mergel (2012) found that governmental non-adopters may never change their perspective on citizen engagement and won't be joining the movement. Instead, local governments with sufficient funding will continue to "reinvent the wheel" and create their programs.

Dixon, Jones, and Fernandez (2021) assess the efficacy of the SeeClickFix crowdsourcing participatory Geoweb data reporting tool about flood disasters in the context of socioeconomic and biophysical vulnerabilities. By promoting two-way contact between government agencies and citizens, the Geoweb application and crowdsourcing of flood-related information via SeeClickFix can help offer transparency to the decision-making and resource allocation processes. They found that using crowdsourcing data platforms across diverse groups can address

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marginalization in managing flood-related problems and it helps with recognizing the differences in the sorts of difficulties experienced by varied neighborhoods.

In summary, SeeClickFix is a useful crowdsourcing platform for creating trustworthy environment and two-way relationship between local government and citizens by establishing accountable and transparent. Since it damages the social trust anonymity (Sowmya and Pyarali, 2013) and changing citizens' and changing local governments' behaviours (Berkowitz and Gagnon, 2017) are seen as challenges for this platform. However, Sowmya and Pyarali (2013) states that anonymity helps to citizens to report sensitive issues with more courage. Therefore, they evaluated anonymity issue as both advantage and disadvantage. On the other side, feedback mechanism which supported by receiving ID number for follow-up; visualizing requests on the map (map-based reporting) (Mergel,2012); multiple approach for establishing connection with citizens by using social media, app for smartphone, website (Mergel, 2012; Sowmya and Pyarali,2013); and recognition as a motivation for citizens (Sowmya and Pyarali, 2013) can be evaluated as creating transparent and accountable environment and enhancing citizen participation by providing two-way relationship (Mergel, 2012; Dixon et al., 2013; Sowmya and Pyarali, 2013; Berkowitz and Gagnon, 2017).

3.4 Evaluation of Crowdsourcing Examples and Lessons Learned

Table 3.7. Lessons Learned from Case Studies

CS activity	Targeted Area	Way of Communication	Main Factors	
			Pros	Cons
Better Reykjavik	Problem-solving	Propose a Suggestion	Feedback and Follow-up mechanism (TRANSPARENCY and ACCOUNTABILITY)	Non-binding process- the final decision is up to the public authorities
	Decision-making process	Voting	Being qualified to meet the representation rate in all age groups (INCLUSIVENESS)	(NO COMMITMENT)
		Discussion	Discussion system (TWO-WAY COMMUNICATION)	Not long-term
			Increase in number of votes in the last 5 years	Not having a detailed plan
Decide Madrid	Problem-solving	Propose a Suggestion	COMMITMENT	Poor information provision (LACK OF CLARITY)
	Decision-making process	Voting	Secure voting system (SECURITY)	Procedural barriers
		Discussion	Transparent explanation of phases on website (TRANSPARENCY and ACCOUNTABILITY)	Micro level proposals
			Multiple approach for reaching citizens by using social media channels (INCLUSIVENESS)	
			Qualified employees	
			Political will of local government	
Youth PB in Portugal	Participatory Budgeting	Propose a Suggestion	COMMITMENT	Emotional propensity
		Voting	Reaching young citizens to hearing their voices and considering their needs carefully since crowdsourcing programs specialized for them	Inequality in the number of members in the teams and so, inequity in social network and project complexity
		Discussion	Supporting the process offline by arranging face-to-face meetings (INCLUSIVENESS)	

Table 3.7. (cont'd)

CS activity	Targeted Area	Way of Communication	Main Factors	
			Pros	Cons
Free-to-Be	Problem-solving		Offers unique platform for creating a secure space which provide having a voice by storytelling of the people's experiences.	No commitment **(LACK OF TRANSPARENCY AND ACCOUNTABILITY)**
	Better Public Services	Complaint	Anonymity **(PRIVACY)**	Lack of feedback system
				Map does not cover the whole city
				Anonymity **(SECURITY ISSUES)**
				Not considering people with lack of skills and problems with Wi-Fi connection **(INCLUSIVENESS ISSUES)**
				''Troll'' problem **(SECURITY ISSUES)**
HarassMap	Problem-solving		**COMMITMENT**	Need for more efforts to change people's perspectives
	Better Public Services	Complaint	Anonymity **(PRIVACY)**	Need for better use of social media
			Transparency about feedback mechanism that everyone can see complaints and answers **(TRANSPARENCY and ACCOUNTABILITY)**	
			Public-private partnership for campaigns and combination of online and offline activities to reach greater population **(INCLUSIVENESS)**	
			Affect other cities to take act for safe city concept	

Table 3.7. (cont'd)

CS activity	Targeted Area	Way of Communication	Main Factors	
			Pros	**Cons**
	Problem-solving		**COMMITMENT**	Lack of public appreciation
	Better Public Services		Provides opportunity for discussion with public authorities and other users **(TWO-WAY COMMUNICATION)**	Anonymity **(SECURITY ISSUES)**
				Not considering people with lack of skills and problems with Wi-Fi connection
FixMyStreet.com		Complaint	Follow-up and Feedback system **(TRANSPARENCY and ACCOUNTABILITY)**	and **(INCLUSIVENESS ISSUES)**
			Multiple approach for reaching citizens by using social media channels **(INCLUSIVENESS)**	
			Support the complaint with visuals **(CLARITY)**	
SeeClickFix		Complaint	**COMMITMENT**	Anonymity **(SECURITY ISSUES)**
			Open feedback mechanism **(TRANSPARENCY and ACCOUNTABILITY)**	
			Multiple approach for reaching citizens by using social media channels **(INCLUSIVENESS)**	
			Anonymity **(PRIVACY)**	
			Support the complaint with visuals **(CLARITY)**	

In these examples, people are gathering for a shared aim and communicating with each other and local governments to share their thoughts about the projects in the cities, report problems, generate ideas, and get feedback. Although topics of these examples are different from each other, they have the same logic: using crowd to generate and disseminate knowledge, idea production, and in the end, problem-solving by harnessing local knowledge, offering better public services. The important thing here is that the motivation factor is clear and gathers a high number of people in a digital platform. Therefore, not just providing technical infrastructure is one of the most important preparations to ensure communication between users in the platform, but also giving citizens an aim is a key point for achieving success. However, there are still problems in crowdsourcing activities as stated in Table 3.7. Commitment is the key factor that affects sustainability of the crowdsourcing process. If there is no commitment, crowdsourcing activities cannot be sustained and fails. Institutional design and a strong feeling of commitment to the organization's mission at the top can help to foster willingness to respond in some instances and ICT platforms play a critical role in bolstering response capability in these situations (Peixoto and Fox, 2016).

From these examples and literature, criteria for success can be generated as;

- **Clearness:** To benefit from citizen knowledge, citizens should understand what the problem is about and what the task is (Amabile, 1998; Sharma, 2010; Chiu et al., 2014). In order to meet this criterion, information about what is requested from the citizen, how the process is planned, expectations at the end of the process and how the obtained data will be used should be presented to the citizens at the beginning of the process. While talking about clarity, the language used when communicating with citizens is also important in this regard. Instead of using technical language, and long and confusing reports shared data should be clear and understandable for citizens (Poblet, 2011). Humanitarian initiatives have turned to crowdsourcing when traditional means have failed to give the essential information rapidly enough (Bott et al., 2011). *''A picture is worth a thousand words''* is an adage to

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emphasize visual information can have more meaning and can tell more words and texts and so, presenting information by using geographic visualization helps to easier, gaining different insights which are not understood from other data representation types (Mora, 2011). Especially in the planning domain, what tasks are wanted to be done or what has done so far in the crowdsourcing process can be shown and helps to understand better by using visuals.

- **Open Data About the Problem:** Instead of presenting some documents, providing open data enables processing, reaching results about citizens' daily experiences (Duval, 2010) and thus citizens can help to enhance public services in platforms such as SeeClickFix which enables citizens to report issues to local government (Bott et al., 2011). When designing a competition, relevant data should be shared with the crowd to generate ideas. Otherwise, lack of information would prevent the idea generation and getting successful results. Also, open data can reveal what is missing and what citizens can contribute it.

- **Two-Way Communication:** Creating a platform that enables communication between stakeholders can help to discover undiscovered experts (Aitamurto, 2012). Since the logic behind this initiative is that platform offers libertarian and inclusive spaces (Schwittay and Braund, 2019) these platforms have a potential to hold society together (Dyson et. al.,1996), and getting opinions and thoughts of the citizens to make sure making better decisions (Garcia et al., 2011). Also, these platforms are suitable for developing a feedback mechanism which is an important motivation factor. Creating an interactive platform strengthen not just communication between local government and citizens, but also communication between citizens. By presenting debate options especially idea production platforms like participatory budgeting (Decide Madrid, Better Reykjavik and Youth Participatory Budgeting in Portugal) citizens can

discuss with each other of problems in the cities and it can provide to discover new problems or solutions by using collective intelligence of the crowd.

- **Design of the Platform:** Created platform should contain 'easy to use future' to attract more citizens and prevent 'exit' of the platforms. Also, offering several options like commenting, sending visuals, communication with others in the platform have potential to attract more users. Engagement to platforms should be supported by mobile phones to reach more citizens (Hellstrom, 2008; Poblet, 2011). While crowdsourcing has a lot of benefits for governance efforts and urban planning projects, its negative repercussions in terms of quality, accuracy, trust, and privacy must be addressed to prevent the consequences of technological misuse and the risks that this poses to citizens (Poblet, 2011). Misusing crowdsourcing could result in undesired outcomes like privacy and security issues. The design of the crowdsourcing activity is crucial for preventing that kind of situation.

- **Inclusiveness:** For talking about citizen participation, process should include all citizens. Citizens should be aware of existence of the process and initiatives of the local governments. As Chambers' (1998) *''put the last first''* idea, if marginalized segment of the society not included in a decision-making process, that cannot be said that that there is a participation process. Multiple approach for information provision and enable citizens to use the created platform by using social media should be adopted.

- **Privacy and Security of the Citizens:** For citizens to use the platform freely, data security must be guaranteed and what will be done with data should be explained (Martin-Shields, 2013). In addition, some crowdsourcing applications should also provide the option to use anonymously depending on the subject. As seen in the case studies like HarassMap and FreetoBe, anonymity not only increases the number of participants, but also increases the quality of the notification content from the citizen (Flinkman, 2018; Cochrane et al., 2019). Also, local government should develop a system that prevent ''troll'' attacks like in Madrid (Tanner et al., 2020).

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Table 3.8. Criteria for Success of Crowdsourcing Implementation

Criterion	How?
Clearness	Clear explanation of the aim and scope of the platform by using a clear language
Inclusiveness	Multiple approach for information provision and participation channels by using social media and integrate online activities with offline activities
Security and Privacy	Clear explanation of how to use and confidentiality of data and offering ''anonymity'' option in necessary situations
Open Data	By establishing open data platforms to inform citizens about the problem
Two-way communication	Designing an interactive space by offering debate and comment options for ensuring communication not just between local government and citizens but also between citizens
Ease of use	To create a simple platform that can be used by everyone, free from unnecessary information and design an understandable interface
Commitment	Empower citizens in the decision-making process to ensure their effort and clearly demonstrate that they meet their demands

CHAPTER 4

CASE STUDIES

In this chapter, ''PurpleMap'' and ''Ulus Square and 100. Yıl Çarşısı Survey'' that were carried out by the AMM and ''Participatory Budgeting Program'' that carried out by İMM will be examined according to ''Criteria for Success of Crowdsourcing Implementation'' that obtained from case studies from the world. In the Table 4.1., case studies and interviewed actors. Before examining the case studies, internet usage will be presented.

Table 4.1. Case Studies and Interview List

Case Study	Interview with Formal Actors (Primary Data)	Interview with Citizens (Primary Data)	Secondary Data	Crowdsourcing Type	Impact Area
Purple Map	Women Counseling Center- 2 Sociologists	12 citizens	The Research of Needs Analysis in Urban Services for Women Report	Crowdmapping	Problem Solving Public Service Provision
Ulus Square and 100. Yıl Çarşısı Survey	Department of Culture and Natural Heritage- a city planner and an architect	7 citizens	Previos Surveys' Reports	Crowdvoting	Decision-making
Participatory Budgeting	Head of İstanbul City Council	5 citizens	2022 'Your Budget' Monitoring and Evaluation Report SE-GE Data	Participatory Budgeting	Decision-making Public Service Provision

4.1   Internet Usage Behavior and Accessibility

Before assessing crowdsourcing initiatives in Ankara and İstanbul; physical accessibility, usage behavior, and social media trends in Turkey should be examined.

In 2021, 92.0 percent of households had access to the Internet from their homes, according to the results of the survey. In the previous year, this percentage was 90.7%. According to the Statistical Regions (SR) Level 1, the proportion of households with Internet access was highest in TR1 Istanbul (Istanbul) with 97.1%, followed by TR5 West Anatolia (Ankara, Konya, Karaman) with 94.2% (TURKSTAT, 2021).

Table 4.2. Proportion of households with broadband access by Statistical Regions Level 1, 2011-2021

SR Level 1		Broadband						Fixed broadband (ADSL, cable, optic fibre, etc.)						Mobile brodband (3G,4.5G via mobile phone or modem)					
		2011	2017	2018	2019	2020	2021	2011	2017	2018	2019	2020	2021	2011	2017	2018	2019	2020	2021
TR	Turkey	39.3	78.3	82.5	87.9	89.9	92.0	36.7	40.0	44.5	49.1	50.8	61.9	5.3	72.4	79.4	86.9	86.9	88.5
TR1	Istanbul	56.1	89.4	90.0	95.5	95.7	97.1	53.8	60.8	62.3	65.6	69.1	79.0	7.1	80.6	89.2	94.8	90.8	90.0
TR2	West Marmara	38.3	69.3	74.5	79.4	83.4	85.8	34.0	37.7	47.0	46.9	52.2	59.5	7.9	65.9	71.7	77.5	78.4	84.6
TR3	Aegean	37.5	77.4	80.5	85.6	90.0	89.9	35.2	40.1	44.7	49.2	53.7	63.3	4.8	71.1	75.7	84.7	88.1	88.3
TR4	East Marmara	49.5	73.1	79.0	88.7	90.3	93.7	45.4	43.8	49.9	57.0	56.3	67.5	8.0	60.0	71.0	87.4	85.6	89.0
TR5	West Anatolia	44.9	83.7	83.3	91.4	92.6	94.2	43.2	47.5	52.2	57.3	60.5	69.0	3.9	81.6	80.3	89.8	86.6	87.0
TR6	Mediterranean	31.5	79.1	86.0	87.8	90.3	91.3	28.8	36.4	40.4	42.4	46.6	58.0	4.4	75.2	84.4	86.9	89.7	90.1
TR7	Central Anatolia	33.9	76.5	82.0	88.7	87.5	89.6	28.5	29.3	32.4	45.2	40.0	56.8	8.6	71.3	80.5	87.9	86.3	87.1
TR8	West Black Sea	29.1	76.1	77.7	80.2	81.2	84.5	27.2	31.0	34.9	41.8	40.2	50.2	3.5	70.7	73.5	79.4	79.6	83.4
TR9	East Black Sea	37.7	68.7	80.5	83.8	86.3	88.3	36.7	27.6	38.8	36.2	35.9	53.5	1.2	64.0	75.3	83.6	84.3	87.8
TRA	Northeast Anatolia	20.6	67.2	75.5	87.0	86.9	86.6	19.0	20.1	19.4	25.8	31.4	34.3	2.6	64.4	71.6	86.0	85.5	84.8
TRB	Centraleast Anatolia	22.1	72.3	78.3	87.3	87.8	90.4	21.2	15.8	16.0	25.6	25.3	39.5	1.1	69.4	75.7	85.9	87.5	88.8
TRC	Southeast Anatolia	20.0	68.9	78.5	80.6	86.2	93.8	18.2	15.1	21.6	27.2	24.5	42.5	2.9	67.8	78.0	80.1	85.4	92.0

Source: TURKSTAT, 2022

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Table 4.3. . Proportion of individuals using internet by sex and Statistical Regions Level 1, 2018-2022

SR Level 1		Total					Male					Female				
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
TR	Turkey	72.9	75.3	79.0	82.6	85.0	80.4	81.8	84.7	87.7	89.1	65.5	68.9	73.3	77.5	80.9
TR1	İstanbul	84.0	86.6	88.7	90.9	93.1	88.6	91.2	91.7	94.0	94.9	79.2	81.9	85.6	87.7	91.3
TR2	West Marmara	70.0	71.6	77.8	78.4	83.6	78.2	76.7	82.8	82.6	87.4	61.4	66.6	72.8	74.2	79.7
TR3	Aegean	73.5	75.8	80.4	81.2	82.9	80.5	82.1	85.6	85.7	87.7	66.4	69.4	75.4	76.7	78.1
TR4	East Marmara	76.7	77.7	82.9	85.1	87.6	83.1	82.3	87.6	88.7	90.8	70.3	72.8	78.0	81.5	84.3
TR5	West Anatolia	79.8	83.3	85.5	88.1	88.9	84.6	89.2	89.2	91.9	91.6	75.0	77.6	81.8	84.4	86.3
TR6	Mediterranean	71.7	74.5	77.8	80.7	83.8	78.4	80.9	83.3	85.0	87.2	65.1	68.3	72.2	76.6	80.4
TR7	Central Anatolia	69.4	76.8	77.2	80.3	83.6	77.2	83.5	83.4	86.8	88.8	61.8	70.2	71.1	74.2	78.2
TR8	West Black Sea	65.6	69.5	70.2	76.2	81.0	73.4	75.6	77.5	81.0	85.4	57.6	63.4	63.3	71.4	76.8
TR9	East Black Sea	67.7	66.7	72.5	79.9	80.3	77.6	73.5	80.1	86.8	86.3	57.9	60.1	64.9	73.1	74.2
TRA	Northeast Anatolia	51.9	61.3	67.8	68.4	70.5	64.0	71.9	76.2	79.8	80.2	39.3	50.6	58.7	56.9	60.7
TRB	Centraleast Anatolia	60.4	63.2	68.0	74.8	75.3	71.3	74.4	78.0	83.3	83.3	49.9	52.1	58.1	65.5	67.6
TRC	Southeast Anatolia	58.4	58.4	63.8	76.9	79.2	72.8	68.7	75.7	87.2	86.5	45.8	49.0	52.2	66.8	71.8

Source: TURKSTAT, 2022

Table 4.4. Proportion of individuals using internet by sex and age group, 2004-2022

Age Group	16 - 24			25-34		
Year	Total	Male	Female	Total	Male	Female
2018	**90.7**	94.7	86.5	**90.1**	94.5	85.6
2019	**90.8**	94.8	86.6	**91.7**	95.2	88.2
2020	**91.8**	93.8	89.7	**93.5**	96.3	90.7
2021	**95.7**	97.2	94.1	**95.8**	98.0	93.7
2022	**95.5**	96.4	94.5	**96.5**	97.8	95.2
Age Group	35-44			45 - 54		
Year	Total	Male	Female	Total	Male	Female
2018	**80.7**	88.3	73.0	**61.5**	71.8	51.1
2019	**85.9**	91.9	79.9	**68.5**	77.3	59.6
2020	**89.1**	94.6	83.6	**74.8**	82.7	66.8
2021	**90.9**	95.7	86.1	**80.1**	87.3	73.0
2022	**92.6**	96.3	88.8	**83.6**	89.3	77.9
Age Group	55 - 64			65-74		
Year	Total	Male	Female	Total	Male	Female
2018	**39.2**	47.8	30.8	**17.0**	23.0	11.9
2019	**42.6**	52.2	33.2	**19.8**	25.3	15.0
2020	**50.9**	59.2	42.8	**27.1**	34.9	20.4
2021	**58.6**	66.4	50.9	**32.5**	40.0	25.9
2022	**64.2**	71.2	57.4	**36.6**	43.8	30.3

Source: TURKSTAT, 2022

The individuals who use the internet the most are in the age group of 25-34, and the rate of internet use of individuals between the ages of 16-24 and 35-44 comes after this age group. However, as the age increases, a serious decrease is observed and the individuals who use the internet the least are in the 65-74 age range (Table 4.2.).
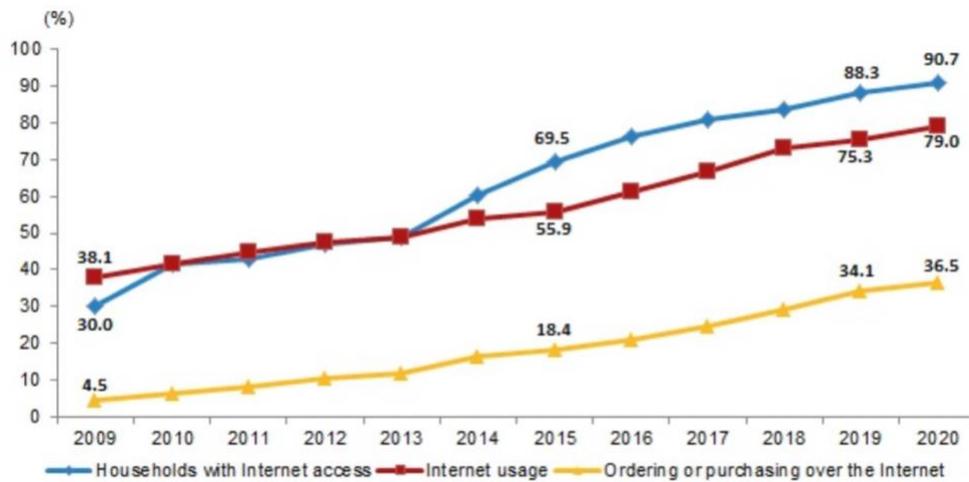
Figure 4.1. Households with Internet access and Internet usage in individuals

Source: TURKSTAT, 2021

In the Figure 4.1., change in households with internet access and internet usage in individuals is shown. In 2021, 82.6 % of people aged 16 to 74 used the internet. In the previous year, this rate was 79.0 %. When the proportion of Internet users is separated by gender, it is found to be 87.7% for males and 77.5 % for females (TURKSTAT, 2021).

Share of individuals aged 16 to 74 used the internet for individual goals for contact or interaction with public authorities or public services between April 2020 and March 2021 raised 51.5 % to 58.9%. People used e-government services mostly for reaching information (55.8%). In the second place, filling forms online (32.3%) and in the third place downloaded and printed official forms (27.7%) take place (TURKSTAT, 2021).

It can be understood that both the rate of using e-government services and the rate of internet users is increasing. In terms of internet usage, Istanbul and Ankara, which were selected in the study, are in the first place.

Deloitte (2021) made an online survey for understanding digital consumption trends in Turkey in 2021 with 1000 participants. The survey was conducted with users in 14 different countries and the average of these country values was taken and

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compared with the global average (Australia, Austria, Belgium, Denmark, Germany, Ireland, Italy, Japan, Netherlands, Norway, United Kingdom, Poland, Sweden, Turkey). 91% of the participants have a smartphone while 77% of them have a laptop. When examining the research findings on a worldwide and local scale, it is notable that the participants' smartphone ownership and frequency of usage are high, and that their smartphones are new. Approximately three out of every four users have a phone that is less than three years old. In comparison to past years, the frequency of phone changes in Turkey has reduced. In comparison to 2019, the percentage of persons who changed their phones in the previous two years reduced by 9 percentage points to 49 percent. The global average, on the other hand, fell by one percentage point from 2019 to 51 percent.

The survey indicates that people change their internet service quality during the COVID-19 pandemic process. In this period, 68% of the participants from Turkey change their internet service quality, whereas this rate is 35% on the global average. Also, during the pandemic period, usage of ''media and entertainment'', ''daily life activities'', and ''health'' activities that are available online showed a higher increase in Turkey when compared with the global average.

In Turkey, 84% of participants agree fake news is a serious problem of our time, and 64% believe it is difficult to tell whether information is accurate or not. Fake news, data privacy, and other issues caused 27% of respondents to stop using social media partially or completely.

It can be understood from the surveys that conducted by TURKSTAT (2021) and Deloitte (2021) that people in Turkey have habit to use ICT tools for their daily activities and needs and this ratio increased especially during the pandemic period. Also, when compared to the global average, ownership, adaptation, and usage of the ICT tools there is no significant difference.

According to another research, GWI (2021) survey, people aged between 16 and 64 in Turkey use the internet 8 hours per day. People spend their time for internet on mobile for 4 hours 16 minutes and on computers tablets for 3 hours 44 minutes.

Figure 4.2. Devices Used to Access to the Internet

Source: GWI (Q3 2021) figures represent the findings of abroad global survey of internet users aged 16 to 64.

When examining which device people use to spend time on the Internet, smartphones come to the fore with 94%. Laptop and desktop usage is also in the second place with 74.1% with a decrease in usage when compared to previous year (-1.2%).

Figure 4.3. Online Privacy and Security

Source: Data for Concerns About What Is Real and What Is Fake on the Internet via Reuters Institute for The Study of Journalism's "Digital News Report 2021*. Figures Represent the Findings of a Global Study of Online News Consumers

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Significant part of the people (60.3%) concerns about fake news on the internet. Also, people worry about how their information and data might be used and they try to find other ways to hide themselves while using the internet.

Figure 4.4. Social Media Users Over Time

Source: Kepios Analysis, Company Advertising Resources and Earnings Announcements

As can be seen in the Figure 4.4., social media users almost doubled in the last 9 years and every year number of users has increased. It can be understood that number of people that use the internet and social media channels is increasing every year.

About the social media platforms Facebook (34.4 million people can be reached), Instagram (52.15 million), YouTube (57.4 million people can be reached) and Twitter (16.1 million people can be reached) are the most used platforms, and they are also the favorite social media platforms of the people in Turkey. These platforms have important potential to reach citizens since they are the most used and preferred platforms. Therefore, local governments can use these platforms for dissemination of news, their actions, take interest of the citizens. When choosing social media platforms and the applications they have designed, municipalities should also pay attention to whether these applications are compatible with mobile since number of mobile users are the highest.

In the case studies, examples are selected from Ankara and İstanbul. Ankara Metropolitan Municipality has made investments for the internet infrastructure for increasing usage and accessibility. Wi-Fi points provided by AMM cover a total area of 7,627,000 m². Wi-Fi service is provided in areas defined as 'city square' in lower density areas (Ayas Town Square, Bala Town Square, Çayırhan Town Square, Haymana Town Square, Kalecik Town Square, Nallıhan Town Square, Polatlı Town Square) (Figure 4.5.).
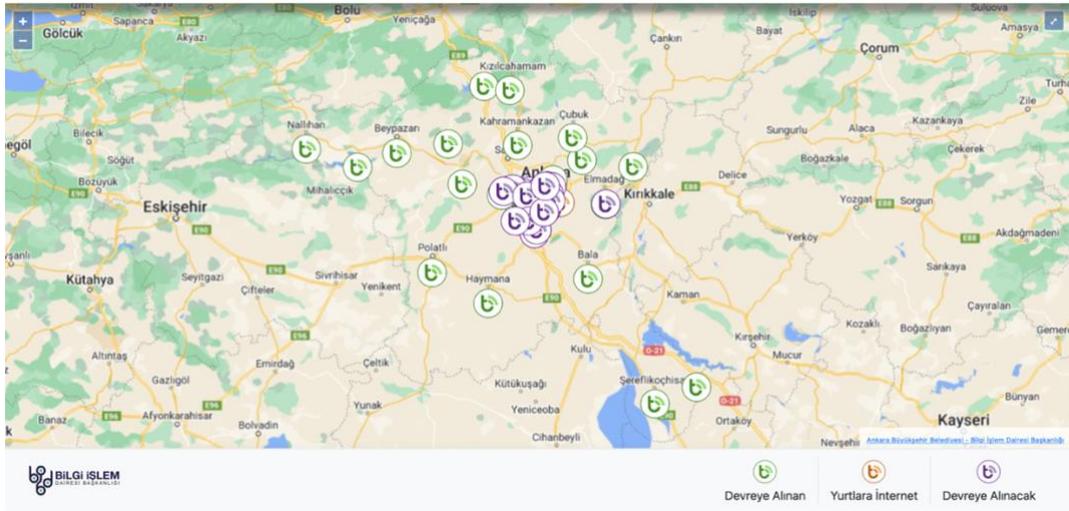
Figure 4.5. Wi-Fi points that provided by AMM

Source: URL-22

Internet infrastructure was provided to all 928 villages in Ankara by AMM. However, the rate of internet usage in the neighborhoods in these regions also varies. Although there is sufficient infrastructure, there is no internet use in 2 neighborhoods, and internet use is very low in some neighborhoods (Table 4.5.)

Table 4.5. Internet Usage in Villages of Ankara

Area	Neighborhood	Date	Usage (GB)
KAHRAMANKAZAN	EMİRGAZİ	02.01.2021	184.5938
GÜDÜL	ÖZÇALTI	02.01.2021	117.6865
GÜDÜL	ÖZÇALTI	03.01.2021	113.3916
GÜDÜL	ÖZÇALTI	26.12.2020	108.8467
GÜDÜL	ÖZÇALTI	27.12.2020	102.1494
PURSAKLAR	YUVA	25.09.2021	97.9092
PURSAKLAR	YUVA	30.03.2021	90.7399
PURSAKLAR	YUVA	28.09.2021	97.1842
PURSAKLAR	YUVA	31.03.2021	86.1052
PURSAKLAR	YUVA	26.09.2021	89.9747
YENİMAHALLE	YUVAKÖY	08.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	09.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	11.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	12.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	14.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	16.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	17.01.2022	0.0007
YENİMAHALLE	YUVAKÖY	18.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	20.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	22.01.2022	0.0006
YENİMAHALLE	YUVAKÖY	30.01.2022	0.0005
YENİMAHALLE	YUVAKÖY	03.02.2022	0.0005
YENİMAHALLE	YUVAKÖY	02.04.2022	0.0001
YENİMAHALLE	YUVAKÖY	08.04.2022	0.0000
YENİMAHALLE	YUVAKÖY	14.04.2022	0.0000

Source: URL-23

IMM WiFi, which provides free internet service at 8,740 points in Istanbul, has reached 4.6 million subscribers and 120 thousand daily usages (Figure 4.6.). The service, whose quality has been increased with its strengthened infrastructure, is preferred by Istanbul citizens as well as foreign guests. In other words, approximately 30% of İstanbul citizens use Wi-Fi services of İMM.
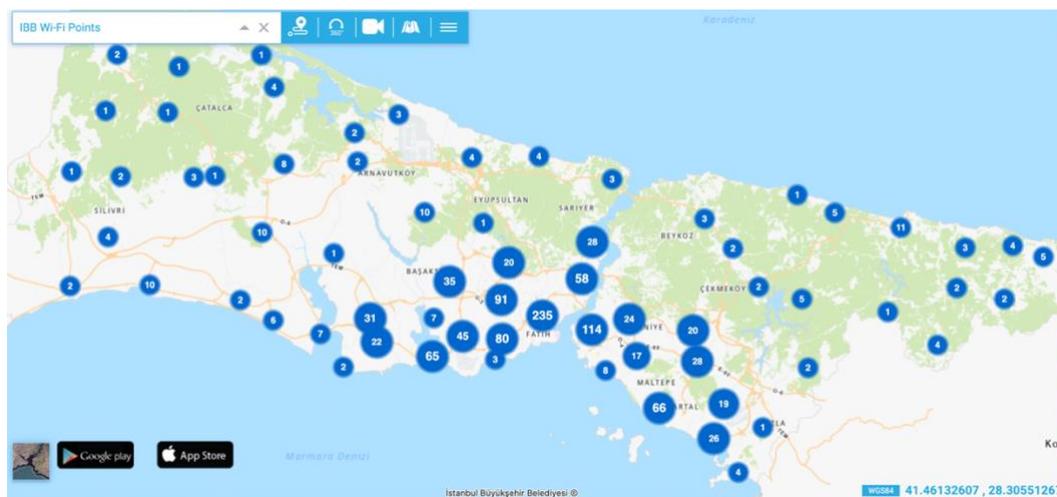
Figure 4.6. Wi-Fi points that provided by İMM

Source: URL-24

4.2   PurpleMap

Table 4.6. PurpleMap Project

Name	Year	Aim	Stakeholders	Scale
PurpleMap	2021-continues	Making the city safer for women by revealing unsafe and dangerous places through interactive digital map	AMM, TESSF, UN Women, Sida	Citywide

PurpleMap is a crowdmapping activity for gathering feedback from citizens. PurpleMap service can be accessed both from the ''Başkent Mobil'' application designed for smartphones and from the website of the Ankara Metropolitan Municipality from PCs and laptops.

For analyzing this platform, 2 employees from Women Counseling Center (WCC) and 12 citizens. Also, the Research of Needs Analysis in Urban Services for Women conducted by the Department of Women and Family Services is used that obtained by WCC.

PurpleMap project was carried out by the Ankara Metropolitan Municipality (AMM) in cooperation with UN Women and the Turkish Economic and Social Studies Foundation (TESSF) within the scope of ''Local Equity Action Plan'' on January 4, 2021. It is funded by Sweden through the Swedish International Development Cooperation Agency (URL-25).

Women's feedback on the Purple Map, which was developed with the goal of making the city safer for women, by revealing unsafe and dangerous places in Ankara. Women are now involved in the planning and budgeting of services thanks to the map (URL-26).

Objectives of AMM are providing lighting in designated areas to keep the city safe; successful application of public resources, grants, and funds; improving assistance systems in areas where early marriage and forced marriage are a concern according to the locations where women's anonymous tips densify in the city via the ''Report Risk Area'' button on the Map platform.
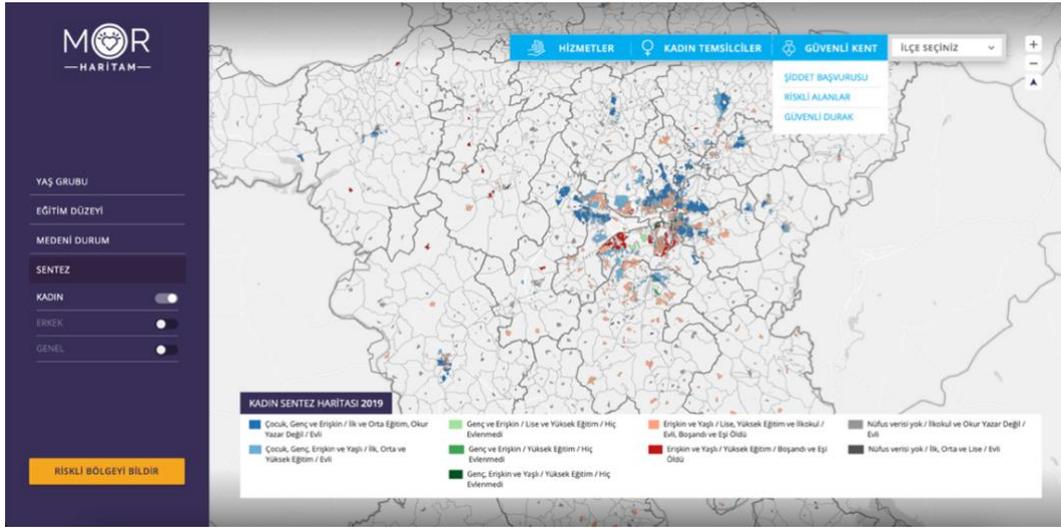
Figure 4.7. PurpleMap Website

Source: URL-27

Citizens can use ''Report Risk Zone'' (Figure 4.8.) tab to report feedback to the AMM. After clicking this option application asks gender, age, subject of the complaint, and explanation about the complaint. It is optional to submit age and gender to use this service and citizens can stay anonymous while explanation is mandatory for completing the complaint. Then, citizens mark the area subject to the complaint on the map. After completing the complaint, the message *''Your complaint has been received, thank you for your feedback.''* appears. In the first five months of experience of the map, received applications are distributed as 56.25% is lighting demand, 37.5% is unsafe/risky area, 6.25% is pavement/ramp demand (AMM Report, 2021).
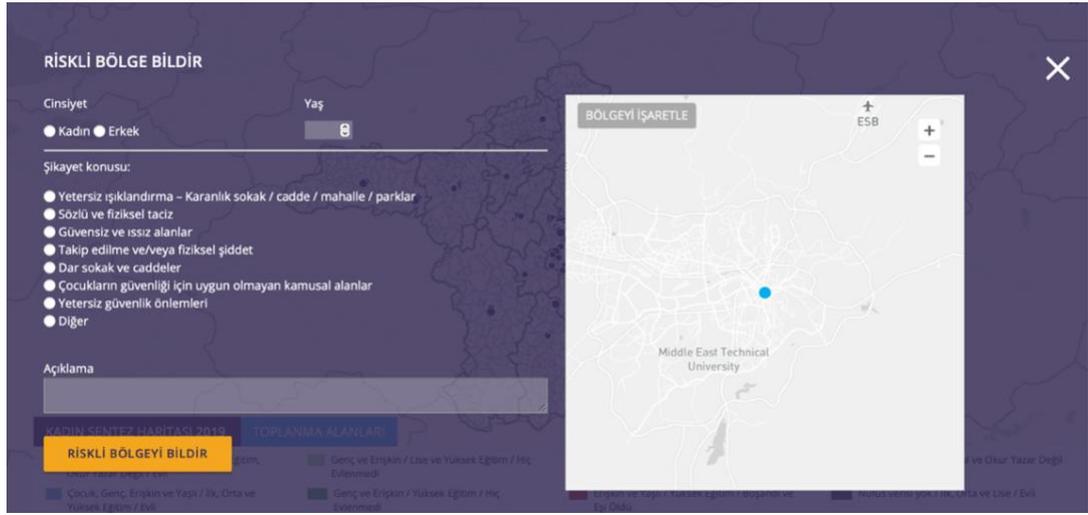
Figure 4.8. ''Report Risk Zone'' Tab

Source: URL-27

About the operation of the platform, the local government makes a partnership with ENERJISA (responsible corporation for energy distribution) for lighting problems and ANFA (provides security service) for security problems. However, there is a challenge for the organization in the context of intervention: if the area of the complaint is not belonged to the local government intervening become much harder and the problem may not be resolved. Therefore, there should be another partnership with other institutions and organizations to serve on a larger scale. PurpleMap should be introduced to other institutions and number of relevant stakeholders should be increased.

Table 4.7. Stakeholders in the PurpleMap

Institution	Mission
AMM	Implementation
TESSF	Data Provision and Design of the Map
UN Women	Execution

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Sida	Fund
ENERJISA	Lighting Issues
ANFA	Security Personels

Source: Adapted from URL-26

4.2.1 Success Criteria of Purple Map

4.2.1.1 Clarity About the Aim of the Platform

PurpleMap was implemented with the aim of ''making the city safer for women'' as indicated on the website of the municipality (URL-25). *''Purple Map was designed within the scope of the "Gender Equality in Political Leadership and Political Participation Project in Turkey" funded by Sweden through the Swedish International Development Cooperation Agency (SIDA) and carried out by UN Women in Turkey''* statement is written at the main page of the platform (URL-27). When citizens were asked about the relevance of the relationship between the purpose and operation of the platform at first glance the answers vary.

> *''The platform gives information about its purpose from its name. The name of organizations such as MorÇatı comes to mind, and it can be said that they have determined their purpose by deducing from this thought. However, I do not see an initiative for ''Gender Equality in Political Leadership and Political Participation Project in Turkey'' which is written on the main page. The map shows women delegates, but it does not give something about gender equality and so, I think that map does not reflect its purpose. The local government should also work on the platform like a live line to get in touch with the citizens more. Because if it does not become strong in communication, we cannot talk about interaction and therefore participation here.''* (Participant 1)

''...it cannot go beyond reporting and solving physical environmental problems. Physical solutions may have positive effect to making cities safer, but I cannot say the same about the woman empowerment.''. (Participant 2)

Some citizens think that the platform should be strengthen for having an impact;

''...the platform seems to have turned into a platform for complaints about the environment where people live. There is no channel to talk with local government and it makes platform weaker since the local government must keep in touch with citizens as an elected administration. What is the advantage of designing an online platform if we are going to make a notification or contact by phone?'' (Participant 3)

''... it shows the location of centers that created to help women. However, to contact those institutions, we still must call or go face to face...I think the platform should be more advanced in communicating with these institutions.'' (Participant 4)

On the other side, some of the participants think that this initiative was made for creating a participation culture in the city.

''I see the platform as where encourage women to not remain silent about certain issues and to react to these situations. In this way, I think it was designed as an application to increase participation about raising awareness. Also, I understood from this initiative that municipality wants to increase adoption of social media platform of citizens.'' (Participant 5)

''I think this platform is a start in terms of adaptation to today's trend and adapt people to online communication with municipality. Because such an application has not been made before and when we look at both the purpose and the interface of the platform, I think it is arduous work.'' (Participant 6)

Also, citizens think that PurpleMap has a potential to achieve women empowerment and it draws attention to violence against women:

''Nowadays, the news about violence against to women and harassment issues are increasing. I think it is a valuable work for reporting these issues by offering stay as anonymous. People may hesitate to utter such issues and anonymity option have a potential to prevent this situation. Also, the map shows the location of "Women's Centers", and nursing homes (Day Nursing Homes). I find that very helpful for women who do not know these locations and they can receive help from these centers. This municipality's approach is successful for woman empowerment. However, I think that if there is another communication channel with the municipality on the platform, it will help the citizens who have difficulty using it.'' (Participant 7)

'' I think that showing locations of centers about women services and applications have potential to driving force for women who hesitate to apply or report their negative experiences. However, when I review the applications from citizens it seems it is mostly used for lighting problems. Also, I would expect to see feedback that the issues have been resolved. (Participant 10)

''If municipality are more active in communicating with people, I think the platform will be successful in terms of women's empowerment. The fact that it is a platform that will draw attention to the increasing violence against women today makes the application more valuable.'' (Participant 12)

From the interviews, that can be said that there is a conflict in the ideas of citizens. However, it is clear that problems related to communication were often mentioned. It was emphasized in most of the interviews that the municipality should be strengthened in communication with the citizens. It is seen that citizens who think negatively also have this view because of the communication issue. The platform has been designed online to solve problems faster, but it has been stated that it has weaknesses in this regard. According to interviews, the system is well-designed about showing locations of services, but the platform does not give opportunity the communicate with those centers. This makes the platform weak from citizens' perspectives. Although the drawing an attention to violence against women is

appreciated issue by the citizens, there needs to be more powerful communication channel between local government and citizens.

4.2.1.2   Inclusiveness

For dissemination of this application, it was introduced to headmen in the central districts, information meeting was held in AMM, visuals of the map were distributed to women in rural areas and roll-ups of the map were placed in the municipality service building and units.

When asked whether they have a strategy for the segments who could not participate (the elderly, the poor, and those without technical means) during the interview with WCC indicates that there is no additional strategy for vulnerable segment of society and the platform appeals mostly to young audiences and people who can use the platform. Also, they stated that there was no analysis before the platform opened to the public since most people use mobile applications today and most of the applications come from the mobile application. *''People who can use the platform''* expression brings one of the most problematic issues about citizen participation. This approach raises the topic of Chambers' (1983) ''putting the last first'' as mentioned before in the thesis. He sees the participatory method as enabling the poor segment of society (1998) and expressing themselves. However, in this platform, there is no strategy for enabling the digitally marginalized segment of society. If this group does not make their voice heard, they remain a marginalized group ''again''.

From the interview with WCC, they said that there is just one employee for reviewing citizens' applications. This leaves us with the following dilemma: there is a lack of staff in the organization or there are very few applications coming from this platform. Both are problems for the platform. If there are very few applications, there is a problem with the publicity of the platform. In the interview with the organization, they stated that the promotion of the platform was promoted through social media and by going to universities and making face-to-face presentations, but the desired number of users could not be reached. This statement confirms the second hypothesis

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which is the publicity of the platform. However, it does not prove the first statement. When looking at the applications to the platform there are 421 applications the platform between 2019 and 2022. According to Numbeo, Ankara is ranked 267th among 423 cities when viewed as a crime index. A crime index is an estimate of the overall crime level in a particular city or country. Less than 20 crime rates very low, 20 to 40 crime rate low, 40 to 60 crime rate moderate, 60 to 80 crime rate high, over 80 crime rate very high (URL-28).

According to this research, Ankara's crime index was 39. However, when we look at the case studies, Madrid's crime index is determined as 30 and Sydney as 34.1. Despite this, the number of applications in these cities was higher than the PurpleMap platform. In other words, the low usage of the PurpleMap platform is not because Ankara is a safe city. Because of that problem may cause by other factors like publicity, low interest of citizens, lack of easy-to-use features, etc.

In the Table 4.8., distribution of applications per district is shown in the central districtis in Ankara. Applications come from 11 of the 24 districts. Keçiören is the highest about the applications (32%) and Mamak is at the second place (27%). There is no application from 13 districts which consists of 7,7 of the total population of the city.

Table 4.8. Applications per district

District	Application Rate (%)	Number of Application	Population
Keçiören	26,6	112	939279
Mamak	24	101	687535
Altındağ	12,6	53	413994
Yenimahalle	11,87	50	704652
Çankaya	7,36	31	942553
Sincan	7,36	31	572609
Etimesgut	5,46	23	614891
Çubuk	1,90	8	95449
Pursaklar	0,95	4	162389
Polatlı	0,95	4	128378
Şereflikoçhisar	0,95	4	33140
Ayaş	0	0	12998
Akyurt	0	0	40625
Bala	0	0	20521
Beypazarı	0	0	48357
Çamlıdere	0	0	8100
Evren	0	0	2952
Gölbaşı	0	0	150047
Güdül	0	0	8079
Haymana	0	0	26016
Kahramankazan	0	0	59123
Kalecik	0	0	12794
Kızılcahamam	0	0	26872
Nallıhan	0	0	26553
TOTAL	100	421	5782285

Source: URL-27 (retrieved 12 May 2022)

Among the social media accounts, the 55-64 age group is the most aware (47.8%). It has been observed that the 18-24 and 25-34 age group, which is expected to be highly involved in social media, is aware of about 34%. It was concluded that the people who follow the social media accounts the most are the 35-44 age group with 70.7%. *"We see that the 18-24, 25-34 age group, which is the young group we expect to be, is aware of about 34%. We can say that those who follow the social media*

accounts the most are those in the 35-44 age group with 70.7%." (Department of Women and Family Services, 2022).

About the PurpleMap platform, in the survey conducted with 6000 women, it was determined that 37% were aware of this application and 48% were using this application. Age groups with low rates of awareness of the purple map application include those 65 and older (28%), 25 to 34 (35.2%), and 35 to 44 (37%), respectively. 55.4% of people aged 35 to 44 reported using the app. It can be said that publicity of the platform could not be successful for young women participation. There should be new approaches for including young women into the platform for increasing participation in the platform. Since young segment of the city consists highest percentage (26.3%) (URL-29), it is important that including this segment into the participation process. Because of that, new approaches should address to increase motivation of the young citizens. Figure 5.1. shows that PurpleMap is the best platform in the context of performance. It can be understood that the platform is important for local government since it has the best score. If more people are involved in the process, the platform can become a successful tool in solving more citizens' problems and communicating with citizens with new suggestions and interventions.

The district-based awareness rates for the purple map are as follows: 27.6% for Gölbaşı, 31.4% for Altındağ, and 34.3% for Çankaya. Residents of Altındağ also reported using the service at the highest rate, with a 63.2% response rate. Although the usage and knowing the existence of the PurpleMap it is first place in the ''Service Performance Evaluation'' (Department of Women and Family Services, 2022).

4.2.1.3   Privacy and Security

PurpleMap does not offer interactive environment where citizens and local government can communicate one-to-one or one-to-many. This issue was asked both citizens and local government. Also, PurpleMap offers an option of remain as

anonymous which can be also seen similar platforms like FreetoBe and HarassMap platforms.

When asked WCC if they want to make the platform a more interactive environment, such as Instagram, Twitter, and Facebook, where users can write comments and "like" under applications for supporting a statement, there are some hesitations of local government since;

> ''...Designing the platform as an interactive environment may have caused an unwanted discussion between citizens and it may affect the platform negatively. In other words, the platform can be used outside of its purpose''.

About the same issue, some citizens think the same;

> '' I find it more positive not to comment on different complaints because the platform can turn into a discussion platform. Considering that the purpose of the platform and some of the complaint issues are sensitive, I think it would be healthier not to turn it into such a platform''. (Participant 9)

> ''...some people may take advantage from the platform to harass women in the platform. Since the platform was created for woman safety, it would not be appropriate.'' (Participant 10)

> ''Making the platform more interactive may help to increase participants in the platform. However, it may damage the structure and purpose of the platform. People may abuse the platform and ''trolls'' problem may happen. If there would be an interactive platform, there should be control system what people say, since the applications are automatically published in the map.'' (Participant 11)

> '' I do not find it right to criticize my bad situation and act according to these criticisms.'' (Participant 12)

It can be understood that the problem is not making the platform interactive or not. The problem is citizens' adaptation to the platform and their behavior in the platform. This is related to the previous topic, interventions to make the city safer. Citizens

think the same in both topics which are changing people first rather than the physical environment in the city. People do not want to the platform to be more interactive since they have doubts of other citizens. They think some people could abuse the platform by harassing citizens on the platform or trolling the platform.

Regarding anonymity, local government indicates this option has both disadvantages and advantages. The advantage of being anonymous on the platform is that citizens could feel more comfortable, and it leads to more applications.

> ''Since the platform also includes sensitive issues, it has complaints such as harassment, which should not cease to be anonymous''.

Citizens also think that the anonymity option is more attractive for reporting harassment issues.

> ''Since this situation is reported by giving a name, the complainant shouldn't see the complainant. I think that this situation makes the citizens more comfortable for the region where they will complain.'' (Participant 8)

When asked whether it is a better option to wait for the municipality to find a solution to this situation instead of reporting it to the police;

> '' People may hesitate when reporting these situations. Today, people can do things they cannot say or do outside more easily than on social media. Perhaps the existence of such platforms allows people to voice their complaints instead at least somehow of doing nothing.'' (Participant 9)

The disadvantage of being anonymous is that this option makes it more difficult to follow up on the applications for WCC. It is stated that while it makes people feel more comfortable while applying, it also creates a problem of uncertainty.

''FreetoBe'' platform experienced a similar situation. In this platform, there were ''troll'' problems in Madrid as mentioned before in the study. Almost 40% of the applications were determined as fake and offensive in Madrid. However, citizens indicate that they feel more comfortable with the anonymous option like the PurpleMap platform. The anonymity option also causes follow-up of the

applications. Since there is no contact information and no personal information, the organization has a problem with evaluating the applications of citizens.

Some think that anonymity should be offered as an option;

> ''...the anonymous option can be removed in the options for insufficient lighting or unsafe and uninhabited areas. However, I believe that the anonymous option is correct for harassment''. (Participant 4)

Since PurpleMap covers sensitive situations, offering an ''anonymity'' option is important to increase the participation. In the case study examples, this option has both advantages and disadvantages. As advantages, it motivates citizens to participate and have their voices heard. Also, using this option helps that the content of incoming notifications is wider and more comprehensive. As a disadvantage, anonymity cause troll problem. In cases where it does not work with the follow-up mechanism, it prevents the control of the incoming notification or the communication path when more detailed information is requested.

4.2.1.4   Two-Way Communication

When creating an application, there is no ID number or such options for follow-up or there is no information is required from the citizen for feedback. This makes it hard for local government to reach applicants. For example, if there is a missing information in the application, it is not possible to reach the applicant and complete it.

Citizens are also having some thoughts about this lack of feedback mechanism. One interviewer said;

> '' There is no feedback system, and I am not sure whether my complaint about the area is considered or not. The platform may offer an option like ''creating account'', so we can track our complaints or feedback on this platform''. (Participant 1)

Also, another interviewer criticized this problem:

''We make a complaint, but we do not have any information on whether these complaints and suggestions are considered, examined, or not.'' (Participant 3)

This lack of a feedback system causes applicants to follow their complaints and the platform;

''Since we cannot enter our contact information like e-mail or phone number, there is no channel to reach us. I cannot know whether there is a change or not about my complaint.'' (Participant 8)

As can be seen in the case study examples, feedback mechanism and follow-up opportunity make these types of platforms more accountable. There can be an ''ID number'' for follow-up the complaint. This problem is also highlighted in the interviews. Lack of feedback and follow-up mechanism can be considered as communication problem between citizens and local government. Lack of this system cause problems for both local government and citizen. PurpleMap is a crowdsourcing implementation and communication system should be powerful for serve the purpose and sustainability of the platform.

4.2.1.5   Design of the Platform and Open Data

Women have access to all data in their areas, including locations and phone numbers for kindergartens, violence prevention centers, vocational courses, and counseling clinics in the districts. As stated in the TESSF website the subject of project is determined as ''Digital Policy Tools'', ''Urban Governance and Sustainability'', and ''Social Gender Equity''. This initiative intends to make it easier for municipalities to adopt data-driven gender equality policies and to include citizens in the process by allowing data to be partially shared. PurpleMap is to be a resource and information center for urban women by displaying gender-sensitive municipal services such as women's centers, social aid, and daycare centers (URL-26).

The PurpleMap includes ;

1- Women's age, education, and income level based on neighborhood,

2- Neighborhoods where refugee women and girls live intensely,

3- Addresses and phones of kindergartens,

4- Neighborhoods where violence is intense,

5- Neighborhood information of all women's counseling centers, BELMEKs, women's clubs, Centers for Preventing Violence against Women, and Domestic Violence Offices,

6- Addresses of women's clubs, women's counseling centers and vocational courses of district municipalities on a neighborhood basis,

7- Neighborhood and contact information of women mukhtars and council members (women's counseling center has been created),

8- Unsafe areas,

9- Disaster epidemic assembly areas,

10- Age, number of households and neighborhood distribution of social assistance recipients

When asked to evaluate the platform in terms of ease-of-use citizens had difficulties when marking risk areas;

> '' I had difficulty in marking the exact place where I would file a complaint. When I looked at the complaints written by other citizens, some of them marked their relatives because they could not find the exact place to complain''. (Participant 7)

Another problem is determined by the complexity of the map when asked the citizens they stated that colors and data that cannot be hidden on the map make it complex. They think that provided data should be optional on the platform. Because of that

complex form of the map, they think that marking an area and make a complaint would be more difficult for the elderly.

Today, people are familiar with how to use digital platforms, but there is a segment of the society like old people and people with disabilities. It can be understood from interviews with citizens, having complicated interface, existence of the multiple colors and background data that make the interface more complicated, and incompatibility of the mobile version citizens had difficulty using the map. The map should be presented in a simpler form.

4.2.1.6 Effects on the Planning

In the interviews with citizens, when asked about how much impact the platform will have on urban planning within the scope of the ''safe city'', citizens' responses are;

> ''...Let's suppose all the lighting problems and all the deserted areas are solved. What about the people in these areas? If there will be a safe city, there should be a long-term process rather than just fixing electricity poles or providing security.'' (Participant 3)

> ''... improvements in streetlights will not always change the person who comes from ahead. This intervention seems to be good for designing a safer city, but there needs to be initiatives for changing people's behaviors.'' (Participant 6)

> '' Assigning police or security to an area that is marked as unsafe does not turn that area into a safe area in one fell swoop. Nor does fixing lighting problems solve the security problem.'' (Participant 10)

> '' Complaint issues remain on very small scales and since there are many complaints in already built areas, I believe that this will be resolved with studies that guide the society rather than planning''. (Participant 11)

Responses draw attention to the following questions: ''Does brightness means safer spaces?''. Chalfin et al. (2022) found that the installation of streetlights resulted in a

minimum 36 percent decrease in outdoor index offenses at night. Also, Welsh and Farrington (2008), found that improved street lighting provides to reduce crime. According to Chalfin, Kaplan, and LaForest (2002), streetlight outages have little effect on outdoor nighttime crime in the affected street segments, but they cause crime to spread to surrounding street segments.

Kalms, Hunt, and Yang (2019) found a correlation between light levels and unsafe places. Analysis of more than 80 of Melbourne's most dangerous "hotspots" by women revealed no relationship between young women's views of urban safety and brightness. However, studies show that more nuance is required while designing lighting to improve women's urban perceptions. The result of the analysis reveals that places with more light are more likely to be perceived as unsafe locations; the average light intensity in these locations was double that of safe locations. This finding could change how lighting should be designed in urban areas (Kalms, Hunt, and Yang, 2019).

It can be understood that the improvement of streetlights has a positive impact on reducing crime. However, as Kalms, Hunt, and Yang (2019) mentioned, the improvement of streetlights alone is not enough. Also, Chalfin, Kaplan, and LaForest (2002) found that action taken in one place can bring problems in other areas. Therefore, there needs to be a holistic approach while intervening in risked and unsafe areas. Improvement of streetlights should be supported by additional interventions to make cities safer. It cannot be the only thing to make cities safer, but it is a complementary tool. Citizens points out at the interviews that there needs to be structural change. They see these initiatives as small-scale interventions and short-term process. They think that it will not be possible to talk about the safe city without changing people and perceptions. Because of that, this implementation should be supported with social programs and scale of this project.

4.3   Participatory Budgeting

Table 4.9. Participatory Budgeting Program

Name	Year	Aim	Stakeholders	Scale	Participation
Participatory Budgeting	2021	Include İstanbul citizens in the existing processes in making decisions regarding municipal services and to create new mechanisms that will enable citizen participation	İMM, İstanbul City Council, İPA	Citywide	4873 project applications and 147,837 votes

Participatory Budgeting program was implemented by the İstanbul Metropolitan Municipality in 2021 and 2022. In this thesis first implementation is analyzed, but strategies for 2022 Participatory Budgeting program are also considered. Interviews made with Head of İstanbul City Council and 5 citizens. In addition, the 2022 'Your Budget' Monitoring and Evaluation Report prepared by the Istanbul City Council and socio-economic development data (SE-GE) was also used for analysis.

İstanbul Metropolitan Municipality implemented the Participatory Budget Model as of June 2021 to include İstanbul citizens in the existing processes in making decisions regarding municipal services and to create new mechanisms that will enable citizen participation. The main aims of the projects are establishing accountability; providing city stakeholders with the opportunity to know how public resources are used and to classify these resources according to their priorities; creating a sense of belonging and solidarity in society; use of budget funds and other public resources for areas where it is most needed to improve quality of life; making it easier for women, young people, elderly people, people with disabilities, immigrants, minorities and disadvantaged population groups to make their voices heard and take an active role in the city's governance process, in the process of making budget expenditure decisions; equal, fair and transparent use and distribution of public services for all; ensuring a sense of trust and cooperation between citizens

and public administrators. Budgeting program consists of five phases; receiving ideas, suggestions, and project applications; preliminary evaluation and technical evaluation; submission of projects to voting; evaluation of voting results; budgeting, implementation, and monitoring (Table 4.11).

Table 4.10. Phases of İstanbul Participatory Budgeting

Phase	Date	Explanation
Receiving Ideas, Suggestions, and Project Applications	2-15 August, 2021	Individually or in groups (NGOs, professional chambers, unincorporated initiative, platforms, assemblies, and working groups of city councils in Istanbul), all Istanbul residents aged 12 and up convey their ideas and projects to find solutions to a problem they see in Istanbul or a need that arises. Digital platforms, district city councils, headmen's meetings, and Istanbul City Council working groups will be used to collect project proposals and suggestions.
Preliminary Evaluation and Technical Evaluation	16-20 August, 2021	Projects will be evaluated based on scope and preliminary evaluation criteria, such as whether they were submitted by individuals or groups residing in Istanbul, whether they were within the scope of IMM's duties and responsibilities as defined by law, and whether they were compatible with municipal policies, objectives, and targets. The financial resource demands of the projects will be established, as well as the budget value, by the Istanbul City Council.
Submission of Projects to Voting	21-29 August, 2021	The "project basket" approach will be implemented, with citizens of Istanbul voting on projects that pass preliminary and technical evaluations. The citizens of Istanbul will choose the projects that are prioritized according to the established upper limit from the project display, and they will be able to vote by building their own project basket.
Evaluation of Voting Results	11.Sep.21	The projects that received the most votes will be examined and publicized within the budget limit.
Budgeting, Implementation, and Monitoring	15.Nov.21	The voting results will be shared with public during the process of including the projects chosen in the budgets of the relevant entities and their implementation. The suggestions will go into effect on January 1, 2022. The Istanbul City Council will provide detailed updates on all process developments on a regular basis.

Source: İstanbul City Council, 2022

4.3.1 Success Criteria of Participatory Budgeting

4.3.1.1 Clarity of the Process and the Open Data About the Projects

In the second phase, there was a jury for evaluation. Heads of Departments in the Istanbul Metropolitan Municipality, experts from the Istanbul Planning Agency and experts and volunteers from the Istanbul City Council took part in the jury. In the evaluation process of the projects, firstly, the compliance on the legal ground is checked. At this stage, compliance with the area of responsibility is reviewed. Afterward, the compatibility of the incoming projects with the strategic plan of Istanbul is examined. After these stages, the projects are evaluated in terms of feasibility. The heads of departments of the municipality are also involved in these stages, and compliance with the legal ground is evaluated in more detailed here. Similar projects are grouped and evaluated within themselves. The reason for the next participatory budgeting practice started earlier than last year is that it is aimed to bring together heads of departments and citizens''.

As a result of the preliminary evaluation made by the IMM Departments and IPA experts, 4155 projects were evaluated as negative, and this situation was reported to the project owners via SMS. 718 projects were re-evaluated in the technical evaluation, and 465 of them were evaluated negatively, and again, this situation was reported negatively to the project owners. Of the remaining 253 projects, 85 were found to be similar, 23 as projects, and the remaining 168 projects were submitted to direct voting. Among the 4873 project applications from the citizens of Istanbul, 191 projects were put to the vote by the votes of the citizens of Istanbul, and 147,837 votes were cast. 27 projects were included in the 2022 budget plan.

Table 4.11. Voting Results and Projects' Information

Project Name	Voting Rate (%)	Budget (TL)	Project Duration (Year)	Sustainable Development Goals	Target Area	Subject	Target Group
The Seas Are Now Cleaner	36.02	350	1	6,11,14	İstanbul	Environment and Climate Change	Everyone
Value For Nature	25.08	1.000.000	1	2,11,15	İstanbul	Health&Sports	Animals
Insufficient Fund	15.09	10.000.000	1	2,5,10	İstanbul	Transportation	Everyone
Address Parking System	14.78	200	1	3,7,9	İstanbul	Transportation	Everyone
Disaster Volunteers	14.24	3.000.000	1	11	İstanbul	Disaster and Risk Management	Everyone
Road Lighting with Solar Energy	14.23	10.000.000	2	3,7,9,11,15	İstanbul	Environment and Climate Change	Everyone
Let's Keep the Bees Alive, Let's Repair the Environment	13.51	1.000.000	1	3,11,12	İstanbul	Environment and Climate Change	Everyone
Clean Community Activities	13.06	120	1	3,11	İstanbul	Environment and Climate Change	Everyone
City Furniture for Istanbul	11.39	750	1	3,11	İstanbul	Disaster and Risk Management	Everyone
Children should not be left without a playground	10.79	1.000.000	1	3,11	İstanbul	Social Servies	Children
Favour Fountain	10.72	1.000.000	2	6,9,11	İstanbul	Cultural Life and Unique Heritage	Everyone
Stray Animals Food Vending Machine	10.71	2.000.000	1	11	İstanbul	Environment and Climate Change	Animals
Social Platform	10.6	3.000.000	1	3,11	İstanbul	Health&Sports	Everyone

Table 4.11. (cont'd)

Project Name	Voting Rate (%)	Budget (TL)	Project Duration (Year)	Sustainable Development Goals	Target Area	Subject	Target Group
Dynamic Central Refuge	10.12	1.000.000	1	3,9,11	İstanbul	Transportation	Everyone
Volunteer Order	9.55	400	1	11	İstanbul	Disaster and Risk Management	Everyone
Electric Bicycle for Transportation	9.54	10.000.000	1	3,12	İstanbul	Transportation	Everyone
Global İstanbul	9.27	5.000.000	1	4,8,11	İstanbul	Social Services	Everyone
CityVillage	8.72	4.900.000	1	3,12	Çatalca	Environment and Climate Change	Everyone
Collection of Recyclable Waste	8.6	1.000.000	1	12,13	İstanbul	Environment and Climate Change	Everyone
''Geçir'' (boat version of the taxi app)	8.37	3.500.000	1	9,11	İstanbul	Transportation	Everyone
Tests for Detection of Genetic Diseases	8.03	7.500.000	1	3	İstanbul	Health&Sports	Everyone
Esenler Green Space	7.35	25.000.000	2	3,9,10,11,15	Esenler	Environment and Climate Change	Everyone
Education Support Program	7.11	4.000.000	1	4,10	İstanbul	Social Services	Children
Istanbul Youth	7	3.000.000	1	3,4,8,10,11	İstanbul	Social Services	Everyone
''Old'' Spaces Button	6.58	8.000.000	2	3,11	İstanbul	Social Services	People aged 65 and over
A Healthier Life	6.1	450	1	3	Güngören	Social Services	Youth
Social İstanbul	5.99	50.000.000	1	3,11	İstanbul	Social Services	Everyone

Source: URL-30

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Figure 4.9. Sustainable Development Goals

Source: URL-31

27 projects determined according to the voting results were shared with the 'sustainable development goals', indicating the duration of the project and the voting percentage (Table 4.9.).

When citizens are asked about the variety of projects submitted to the vote and the evaluation of the projects selected as a result of the voting;

> '' There is a very diverse set of projects in the voting process. However, the documents and explanation of the projects did not seem enough to me. For example, in the some of the projects, we see only one image in the project document. Also, some of them have no documents for the project. Maybe the description of projects is enough for some citizens, but I think a description report with a minimum number of characters could be required on this tab.'' (Participant 1)

> ''I think there needs to be more explanation about the project and they could be more detailed. Another issue is rejected projects. I want to see the reason for rejected projects. ''

''I liked that the projects included the physical whole of the city, groups such as children and the elderly, and not only human rights but also animal rights.'' (Participant 2)

''Selected projects have diversity, and it makes the participatory budgeting process more comprehensive since it considers more themes.'' (Participant 3)

''I find the topics of the selected projects very meaningful for today's problems and attentive because they are different from each other. However, I think that some projects can be integrated.'' (Participant 4)

The proposed projects are associated with sustainable development objectives and cover all objectives except 1 (No Poverty), 16 (Peace and Justice), and 17 (Partnership for the Goals). 3 (Good Health) and 11 (Sustainable Cities and Communities) are the most targeted sustainable development goals in the planned projects. 24 of the 27 projects will be implemented throughout İstanbul and other three projects will be implemented in Çatalca, Esenler, and Güngören neighborhoods. About the subject of the projects, ''Environment and Climate Change'' repeated 8 times, ''Social Services'' repeated 7 times, ''Transportation'' repeated 5 times, ''Disaster and Risk Management'' and '' Health and Sports'' repeated 3 times, and '' Cultural Life and Unique Heritage'' become one project's subject title.

According to citizens, the themes and target audience of the selected projects are successful, and it makes the implementation more comprehensive. They stated that projects address all age groups and all habitants of the city include animals. However, citizens indicated that there needs to be more explanation about projects. There could be more detailed documents about the projects, and it makes the platform more accountable. Also, with better information citizens can better understand the size, scope, and operation of projects. Another issue about the process is that there is no information about rejected projects. In Decide Madrid and Youth Participatory Budgeting in Portugal, rejected projects were also presented to the citizens and it gives citizens to opportunity the compare. Lastly, citizens criticize that

some projects can be integrated since they include the same subject. However, projects with the same subject were merged, but this issue came as a shortcoming to the citizens as the municipality did not provide direct information about it and did not present the combined projects in a way that could be accessed by all citizens. Therefore, the projects that are combined in future studies should also be presented to the citizens and informed.

4.3.1.2   Inclusiveness

Comprehensiveness of projects is important for being successful in participatory budgeting since some vulnerable groups and citizens are unable to participate in the participatory budgeting process.

When asked if there is an additional strategy or incentive been considered for those who cannot participate;

> '' Since Istanbul is very large in scale, it is also important and difficult to take care of vulnerable and disadvantaged groups at this scale. Looking at the selected projects, it is seen that there are projects that include everyone. The first Participatory Budget application was made as a pilot project. "Idea Marathons" were organized to include disadvantaged and vulnerable groups. The number of Idea Marathons also increased to 12 in the second year. Two regional applications were made. After January, there will be additional strategies to increase participation. Participation will be encouraged by organizing meetings in each district and "Participation Café" meetings organized by the Istanbul City Council. Daily plans will also be made for citizens whose accessibility and working hours do not match to participate in these events. It is also aimed to move the application to the "Super Application" platform. Participation will also be supported through mukhtars.''

As indicated before, 24 of the 27 selected projects have the feature of addressing the whole of Istanbul.

Idea Marathon is a face-to-face implementation for detecting problems and needs of citizens and idea productions. The idea marathon lasted for 6 hours, and 62 more projects were included with this implementation. It is an example of integration of online and offline activities like in ''Youth Participatory Budgeting in Portugal''. Supporting crowdsourcing applications with face-to-face applications in cities where marginalized segments are concentrated is also important in terms of idea generation and problem determination.

When asked about the age distribution of the participants, it was stated that the age of the participants varied according to the theme. For example, it has been observed that the age of the participants is lower in terms of climate. In ''Youth Participatory Budgeting in Portugal'', society there is a concentration in the number of votes on environmental sustainability. It can be understood that if there is a lack of participation of an age group or an audience, studies should be carried out on the interest of that audience.

It was also asked how to solve the problems and what is planned about these problems. For the time issue, initiatives will start earlier and is planned for a longer time. It is planned to organize more events such as the ''Participation Café'' meetings organized by the Istanbul City Council and the ''Idea Marathon'' in each district for the groups that could not attend. These types of initiatives consist of a combination of online and face-to-face communication. The logic behind these initiatives is increasing trust and interaction between citizens and local government. However, by adding features like comment, like, share etc. online platform can be made interactive like in ''Decide Madrid''. Mentioned activities are organized for mostly vulnerable groups, but for citizens who wants to use digital platforms and want to participate and see what is going on in the process, digital platform should be developed for creating more interactive environment.

4.3.1.3   Two-Way Communication

There is a follow-up system for citizens who offers an idea or a project. Each user who uploads a project is given an ID number so that she can follow her project. As stated before, citizens also are informed by the municipality why their project was denied. It can be said that there is a follow-up and feedback system in this implementation. However, some citizens stated that there needs to be a more detailed explanation of why their project is denied.

> *''Feedback could be shared with the public by hiding the name of the project owner. Thus, knowing which projects were rejected and for what reasons can set an example for citizens who will make suggestions in the future and enable them to work on these issues.''* (Participant 2)

It is also seen in the interviews in the report that the feedback on the project proposal should be more detailed. Citizens want to have information about not only the selected projects but also the rejected projects. In order to be more transparent and accountable in these and similar studies to be carried out in the future, the rejected projects should also be shared with the citizens.

4.3.1.4   Design of the Platform

In the citizen interviews included in the report of the Istanbul city council, the citizens do not think that the process is understandable for everyone. They expressed their concerns, especially for vulnerable groups and groups without opportunities.

> *'' There can be practical training for those who have difficulties using and understanding the process. I think that every citizen has an idea or suggestion for their environment or the city they live in. Especially for vulnerable groups, such training can be more effective in engaging them.''* (Participant 3)

> *'' No matter how much we are familiar with these platforms today, we often see that old people are not fully accustomed to these platforms. If we want to*

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include them in this process, additional work should be done on the process.''
(Participant 5)

In the interviews made in the report, citizens think that it may be difficult for some citizens due to their education level or not having a smart phone or computer.

In the voting process, some citizens indicated that voting mechanism is enjoyable. Every citizen who votes is given the right to put ideas/projects with a maximum of 1000 points in their basket. It can be seen as gamification *which* make the process more attractive for some citizens and it can be said that it has potential to trigger participation.

4.3.1.5   Effects on Planning

When asked what kind of contribution the citizen made in the idea stage, it was said that the citizen both changed the existing thoughts and was not included in the agenda.

> *'' The idea of "Urban Furniture" changed the institutional perspective of the municipality on this issue. The multi-functionality of the proposal in the project was effective in this. The idea of "Evaluation of Leisure Time Activities" became one of the projects that the municipality considered, although it was not chosen by the citizens…Thanks to this application, notifications from citizens provide information about the place and the user. For example, a citizen from Sultanbeyli district was able to express the lack of space by simply saying "I want to swim". These and similar notifications also contribute to planning and express many things.''.*

As mentioned before in the thesis, crowd have potential to produce better ideas and solutions, to present improved projects with more insight. Since they are also the users, they can design the projects for citizen satisfaction. The examples of 'Urban Furniture' and 'Evaluation of Leisure Time Activities'

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support this statement. With this application, citizens had the chance to voice their problems. Even if they did not present a project, they had the option of stating the lack in their environment by simply saying their problem. A stated problem can be evaluated within the scope of an urban problem and the deficiencies of the city are expressed.

In the report, the effect of the application is not directly related to planning but is discussed through urban problems.

> "...This project takes what people are talking about from being just ideas and says, let's ask everybody, let's do it if they want to." (a citizen view from İstanbul City Council Report)

In addition, in the interviews in the report, citizens saw this project as an opportunity to make improvements and create new formations. They think that the project is beneficial in solving problems and that the problem-solving process proceeds in the form of democratic participation. Also, this implementation helps to show where the budget is being spent.

> '' The project plays an important role in determining the problems, bringing the existing and unnoticed problems to the agenda, and solving these problems. Along with this process, it has provided the citizens with the experience of solving the problems in the city and the implementation of the solutions they offer in the city. Thus, citizens are more involved in planning and will have the experience of living in the city they have planned.'' (Participant 2)

> '' Citizens will begin to live in a city where the plan they decided together is implemented rather than the plan prepared and presented at the higher authorities.'' (Participant 3)

> '' With this practice, I think that the point of view of what local governments should offer to the citizens and how they will make the city more livable for the citizens will also change. Also, the level of satisfaction in the plans to be made at the planning stage will also increase.'' (Participant 4)

> *'' I find it transparent that an application made within the scope of the budget allows citizens to see where their money is spent and increase their questioning. Therefore, citizens can see what can and cannot be done.''*
> (Participant 5)

With this application, it is possible to express the unnoticed problems in the city. The presented projects draw attention to the issues that the citizens both want and see lacking. With the implementation of these projects, while increasing public satisfaction, it also gives the citizens a decision-making role. In this way, it helps citizens gain a new perspective both in questioning the projects to be done and in questioning where the budget is spent. This program has a strong role on increasing transparency since how the budget is allocated. Finally, citizens and the municipality also help each other recognize what they expect and their capacity to generate ideas.

4.4   Ulus Square and 100. Yıl Çarşısı Survey

Table 4.12. Ulus Square and 100. Yıl Çarşısı Survey

Name	Year	Aim	Stakeholders	Scale	Participation
Ulus Square and 100. Yıl Çarşısı Survey	2022	Meet the 'right to speak', accountability and transparency principles and indecision for the future of the area	AMM	Area-Based	28,765 votes

This case study is the second leg of the decision-making process on Ulus 100. Yıl Çarşısı. Since the competition phase could not be included in the thesis, survey phase was analyzed. There was similar type of surveys that held by AMM like ''color and design of the new buses'' and "National Design Competition for Street and Street Signs, Building Door Numbers, Architectural Promotion Signs and Original Fonts". These two surveys were made before the case study. The change in the participation rate compared to the previous applications will also be examined. Since this initiative

has more simpler form than other case studies, its analysis is different from them. The main purpose here is to examine the effects of online survey consultation with citizens in a decision-making process where the local government is hesitant, and to offer suggestions for such practices to be made in the future. Interviews were made with a city planner and an architect who are working at Department of Culture and Natural Heritage and 7 citizens of Ankara. Also, previous surveys' data obtained from the AMM were used for comparing.

In the context of participatory democracy, AMM started a survey for Ulus 100.Yıl Çarşısı whether it should be transformed as an urban square or preserved and restored. The opposing views of a group of experts on the area subject to the survey were a factor in the municipality's conducting this survey. While a group of experts defended the view that it should be preserved, a group of experts defended the view that it should be demolished, and the city should be given an urban square because it has no historical value. This survey started at July 22, 2022, and continued until August 15, 2022. In order to vote, citizens had to enter the 'Right to Speak' module in the 'Baskent Mobile' application (Figure 4.11.).
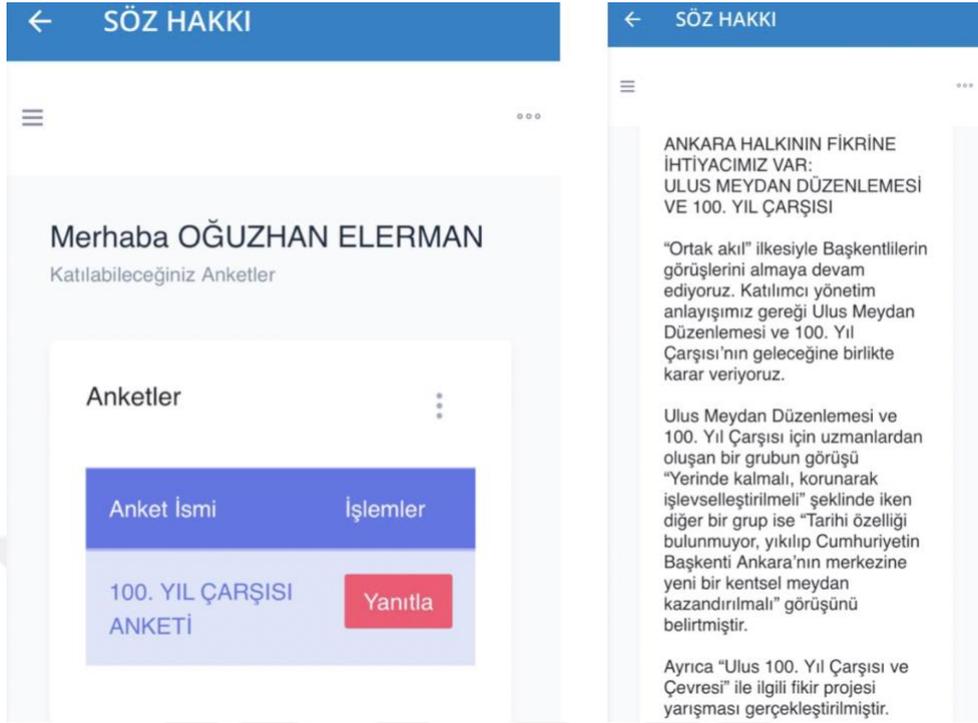
Figure 4.10. Survey Home Page and Survey Description

Source: Başkent Mobile Application

Figure 4.11. First Option Offered for Survey Area (Voting for Urban Square)

Source: Başkent Mobile Application

Figure 4.12. Second Option Offered for Survey Area (Voting for Preserve and Restore)

Source: Başkent Mobile Application

In the survey, in which 28765 citizens voted, 19959 citizens, who made up 69% of the participants, preferred the option *"I prefer an urban square to Ulus"*. The studies shown by modeling in the options in the survey were also taken from the projects participating in the 'idea project competition' organized by the municipality.

Idea project competition was held on February 15, 2022, and due date for submission was May 10, 2022. After four days jury started to evaluate the projects and results were announced on May 23, 2022.

(https://yarismayla.ankara.bel.tr/yarismadetay/14)

In the survey, the winning projects in the "100. Yıl Çarşısı and Its Neighborhood Idea Project Competition" held before were put to the vote. For the survey, promotions were made on the Web Site and mobile, and participation in the survey was ensured through the mobile application (BaşkentMobil). When asked why such an implementation was made in the meeting with the municipality;

''The implementation was carried out in line with the principle of "common mind". A survey was conducted in line with the citizen's "right to speak" in the interventions and practices in the city. Within the scope of the municipality's "transparency" principle, this survey was carried out on digital platforms. In addition, on the future of the field related to the survey, there was an indecision between ''Should it be protected? Should it be transformed into a square?", and this was another reason for us to ask the citizens.''

Same issue was indicated on the website of AMM as*;*

'' The Metropolitan Municipality, which took action after a group of experts was of the opinion that "it should stay in place, be preserved and functionalized," and another expert group defended the view that "it has no historical feature, a new urban square should be brought to the center of Ankara, the Capital of the Republic, by being demolished." AMM opened it to the people of Ankara.'' (URL-32).

4.4.1 **Success Criteria of Ulus Square and 100. Yıl Çarşısı Survey**

4.4.1.1 **Clarity of Aim of the Survey**

Some professional chambers such as the Union of Chambers of Turkish Engineers and Architects (TMMOB) Chamber of City Planners and Chamber of Architects opposed the decision to collapse because such a decision should not be made with a survey. This issue was asked to the municipality as *''What were the advantages and disadvantages of implementing projects directly from citizens or the result of voting?''* in terms of whether it is right for the citizen to be the decision maker for an important and critical area of the city rather than experts.

''Discussions on this issue continue. However, this situation sounds like the debate "art for art'' or "art for society?". As a result, since both the citizens use the area, it is an important behavior in terms of user satisfaction that they

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make the decision. The lack of ''square'' in the city may also have affected the result of the survey being a square. When we look at recent history (20-25 years ago), we see that Ulus has changed a lot in terms of profile today. Maybe there is a need for a transformation that will change the image of Ulus in people's eyes and the identity of this place, and the citizen has chosen the transformation.''

When citizens are asked about the purpose of conducting such a survey from their perspective;

'' Since the planned area is an area where many people work and visit in Ankara, I believe that the survey addresses the public interest. The fact that the projects presented in the survey are also carried out by the citizens is an indication of how important the citizens' decision is and that the application to be realized in this area is left entirely to the user, that is, to the citizen.'' (Participant 1)

''I believe that the survey was conducted with the aim of ensuring public satisfaction. After all, I find it valuable that the decision about our own living environment is ours.'' (Participant 3)

'' I think that the area included in the survey is one of the oldest settlements in Ankara and it is a region that is suitable for reaction from the purpose of planning, since it is also used daily. I think that both options presented will receive a reaction here, since the area is a critical area. That's why I think that this situation is left in the hands of the citizens and done under the name of public satisfaction.'' (Participant 4)

The fact that the citizens should have the right to have a say in the interventions to be made in the city and the indecision about what to do in the voting area has directed the municipality to make such an application. Citizens were pleased that they put one of the important areas of the city to their vote. In addition, it is understood from the interviews that the indecisiveness in the municipality is normal, because an intervention in a critical area may cause a reaction.

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4.4.1.2   Inclusiveness

When asked whether an additional strategy was implemented for the segment that could not participate, it was also said that such a strategy was not considered.

About the making survey online instead of traditional ways local government thinks that if the survey had been in traditional ways, the number of citizens participating might not have been this high and continuous increase in social media and its use also has a strong effect.

About the same issue citizens agree this issue. They stated that if the survey had conducted in face-to-face, there will be a lot less participation. Also, participants think that the process should be like this now. The widespread and continuous use of online platforms today and the fact that these platforms have become a necessity rather than a preference also increase the adaptation of people.

> *''The area here is not attractive in general and I do not find it safe. I also think its conversion is necessary as it is obsolete. I think that presenting a survey about this area is also positive for the citizens.''* (Participant 4)

It can be said that making an online survey affects citizen participation positively. It encourages citizens to participate in the decision-making process. Also, they think that social media shapes today's world, and the local government adapt this process and this adaptation of local government makes them pleased as a citizen.

4.4.1.3   Design of the Process

When asked whether this stage is the most appropriate participation stage for citizens or what other stages it can be included in, it was stated that such participation opportunities should be given to the citizens in stages such as analysis and problem determination. This issue brings out the questions of ''which phase of planning is suitable for citizen participation?'' and ''how can citizens participate in the decision-making process?''. Analysis, problem detection, aim determination, solution

generation, picking the best solution, and implementation are phases of planning. Citizens participate in the process in the phases of solution generation with idea contests and picking the best solution with an online survey. However, citizens could be included in the analysis process as they stated in the interviews;

> *''I found successful that making an online survey for a specific area of the city. The survey presents us with two projects. However, we cannot know whether citizens' thoughts were considered or not. Maybe, before this process, the municipality could conduct another survey that asks citizens about their needs and wishes for Ulus.''* (Participant 1)

> *''We are just voting on two projects that are presented by the local government. Although the survey process is valuable for attracting citizens to follow what the local government has been doing, the process should be more inclusive''* (Participant 5)
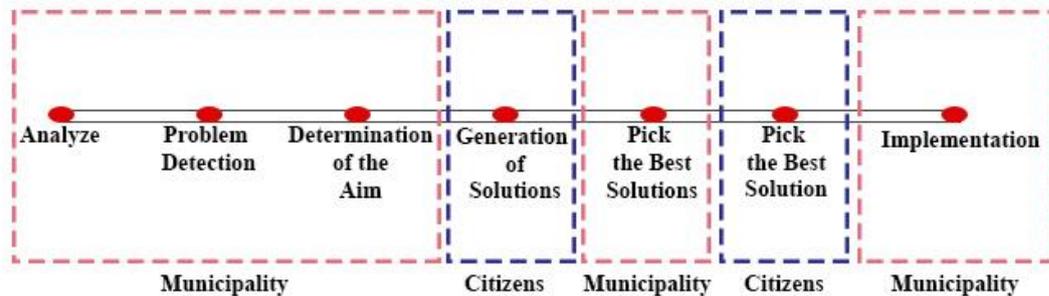
Figure 4.13. Process of the Ulus Square and 100. Yıl Çarşısı Survey

As mentioned by AMM, citizens included into the decision-making process in the stages of ''generations of solutions'' by competition and ''picking the best solution'' by voting. They stated that citizens can be included in early stages like analyze and problem detection. Municipality evaluated projects as solutions for the subject area and determine the winners of the competition. After that, which implementation should take place in the area presented to the voting and citizens give their decision as designing a square with the 69% of the votes. It is a very high percentage and

because of that there may be more square design projects for citizens to vote. If there are another opposite side design citizens may choose the other option.

4.4.1.4 Effects on Urban Planning

When asked about the impact of these and such practices on cities in the future,

> '' I think that as the municipalities take such initiatives, they will give more importance to the opinions of the citizens than they plan, because the results of the survey are shared openly, and since the practices are physical, it is also clear what has been done because of the survey. I think that the political empowerment of municipalities is through public satisfaction. Whether these initiatives are successful or not also depends on the municipality's implementation of the result, because many citizens can follow this process.'' (Participant 2)

> ''I think that such practices will have the effect of attracting more attention and following the citizens, and that's why more citizens will participate in these practices. This, in turn, will allow future investments to be more careful and the citizens to be more involved in these investments. Thus, this approach will create better cities. Also, it will impose more responsibility on the municipality.'' (Participant 6)

> '' I see it as a baby step for citizens to have a say in the planning. I believe that as such applications increase, the undesirable areas of the cities will decrease and they will be more livable, and the preferable areas will increase. I do not think that participation will be only through surveys, but I believe that steps like this will grow, and participation will be more efficient.'' (Participant 7)

Citizens find that these initiatives will affect city planning positively since these practices consider citizens' thoughts and their choices. If future initiatives would include citizens in more phases in the decision-making process, they think that there

will be more livable cities. Also, in the interviews, citizens mentioned ''responsibility'', ''clarity'', and ''follow''. It means that this type of initiative makes the municipality more accountable and transparent which are the main concepts of citizen participation. Since citizens are observing what is going on in the process, the municipality must keep its word to encourage citizens to participate. For this work the municipality, citizens see this work as a starting point and since projects and votes belong to the citizens, they think citizens have a valuable effect on this planning process.

CHAPTER 5

RESULTS and DISCUSSION

In this chapter case studies will be interpreted according to the ''Criteria for Success of Crowdsourcing Implementation''. Tables for the pros and cons of all cases will be presented and discussed over them by considering these criteria. Then, based on these evaluations, case studies will be placed in the "Ladder of Citizen Participation" model. Lastly, research questions will try to be answered.

5.1   Evaluation of Case Studies

5.1.1   Evaluation of PurpleMap

Table 5.1. Pros and Cons of the ''PurpleMap''

Pros	Cons
Privacy-Anonymity	Weakness in **Two-Way Communication**-Lack of Feedback System
Open Data-Demonstrating locations of complaints and related women centers	**Design** problem-Difficulties about using the platform
Affect other municipalities to take the same action	**Commitment and Accountability** Problem-Lack of Follow-up System
Starting point for disseminate crowdmapping	**Inclusiveness** problem-No additional approach for marginalized segment of the city
Draw attention to violence against women	**Inclusiveness** problem-Inadequacy of Publicity
	Clarity problem about the aim and content of the platform
	Problems about stakeholders
	Inadequacy in Employees

Table 5.1. shows pros and cons of PurpleMap platform. According to the ''Criteria for Success of Crowdsourcing Implementation'', 'privacy' and 'open data' criteria have met.

PurpleMap provides an anonymous option on the platform. It is a logical approach by considering past experiences (FreetoBe platform in mentioned 5 cities and HarassMap in Egypt) and citizen interviews. For people who hesitate to express their experiences, the anonymity option is seen as a trigger for citizen participation.

Showing the locations of complaints and related women's centers is considered a positive approach because citizens can see their location and access the centers closest to them. When citizens make a complaint, they can reach the information closest institution for their problem. Also, they can see the other complaints and problematic areas of their surrounding environment.

The fact that the platform is not interactive (no comments or discussion) can also be seen as positive for this case because citizens and the municipality think that the subject of the complaint here will diverge. It can be seen that some features of digital platforms may vary according to the topic and the environment. For example, both in the case studies and in the participatory budget application in Istanbul, the citizens want the platform to be designed in an interactive way. However, the lack of interaction on the PurpleMap platform, as it contains sensitive topics, was mostly positive by the citizens. Although citizens find interactive communication with each other inconvenient for this platform, they see the lack of communication with the local government as a problem. There is no feedback channel or follow-up option for the complaints and this problem creates uncertainty about whether complaints are considered or not, which goes against the principles of accountability and transparency. It is also an indication that there is no commitment.

The platform follows a promotional approach without considering the vulnerable citizens, and therefore that cannot be said that this initiative is citizen-oriented. If a participation process is mentioned, this process should appeal to all segments of society as much as possible and should be designed in a system that can involve every individual in the process. However, there is no additional strategy to involve all segments of society in the participation process of local government. There is no change in who can participate and who can affect the decision-making process and

public service quality. It may trigger the digital divide and create a new problem about participation since have-nots cannot join the participation process. As WCC mentioned, the desired participation rate could not be achieved in the promotions. Also, as the WCC study implies, the expected age group could not be reached since the citizens between 35-44 age interval have the highest usage percentage instead of 18-25 and 25-34.

PurpleMap platform triggers the same action in other cities in Turkey. Eskişehir province and Atakum Municipality started the same action. Despite the cons of the platform, it takes the attention of other municipalities, and this trend could be disseminated at the country level. As the HarassMap platform does, this application can spread to different cities and countries, making it easier for cities to learn from each other.
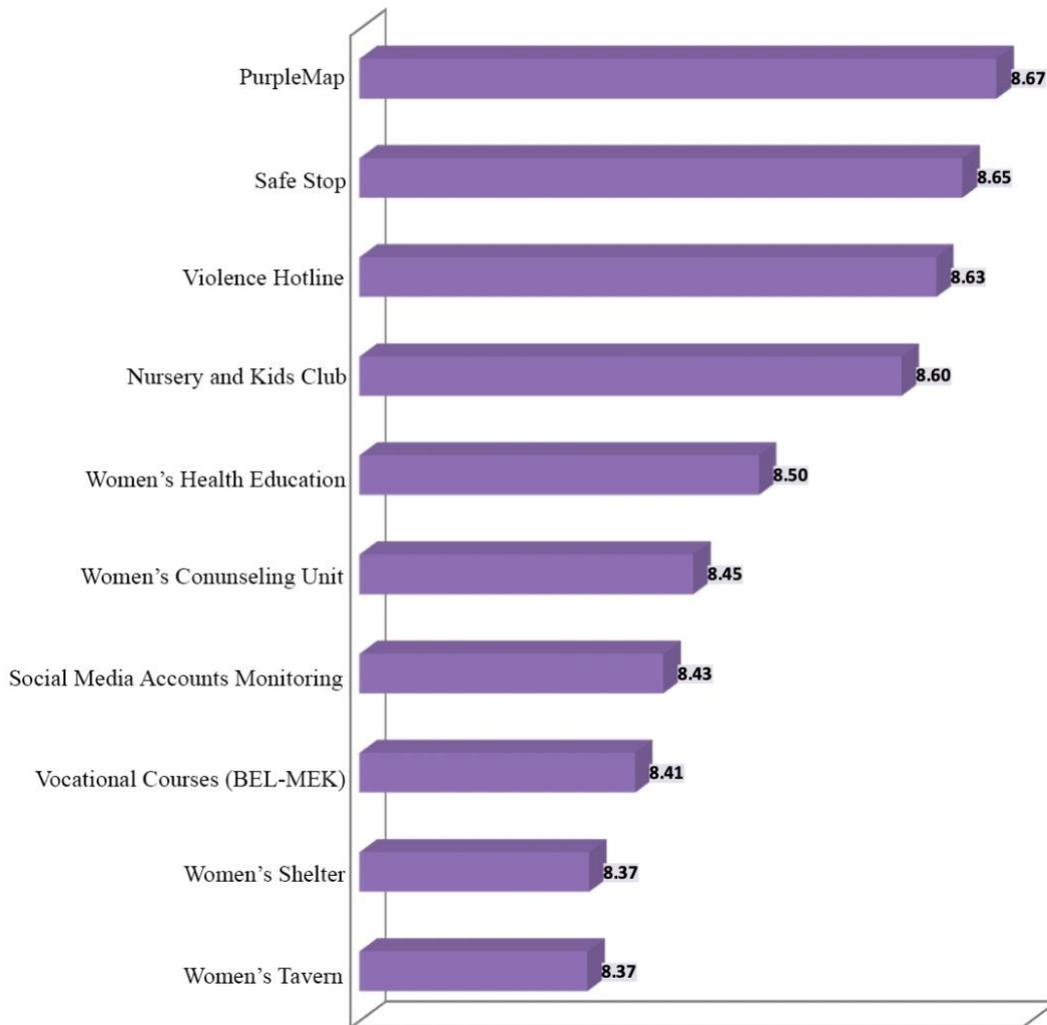
Figure 5.1.Service Performance Evaluation

Source: Department of Women and Family Services, 2022

PurpleMap is evaluated as better than the other applications of the municipality in terms of performance in the eyes of the citizens (Figure 5.1.). It can be said that there are deficiencies in the promotion, and this prevents the platform from being more successful in terms of citizen participation. Also, there should be a publicity approach that considers marginalized segments of society for talking about citizen participation.

Regarding usage, citizens indicate that there are problems with marking areas, the mobile version of the map, and the map's complexity is making it harder to use the

platform. Therefore, the platform should be more user-friendly and should have an approach that takes care of those who have difficulty using it.

The last problem with the platform is the lack of staff and inadequate stakeholders. Both problems were mentioned by WCC staff. The lack of staff may be a factor that will reduce the motivation of citizens in using the platform, as it will cause delays in solving the problems of the citizens. The lack of stakeholders may be a factor that may cause citizens to use the platform, as it will restrict the municipality from intervention and, in the same way, will cause delays in solving citizens' problems.

5.1.2   Evaluation of Participatory Budgeting Program

Interviews for Participatory Budgeting implementation made for the year 2022. However, from the interviews it was also asked how to solve the problems and what is planned about these problems in the 2023 Participatory Budgeting. Table 4.14. shows that pros and cons of the Participatory Budgeting initiative for the year 2022.

Table 5.2. Pros and Cons of the İstanbul Participatory Budgeting

Pros	Cons
Feedback and Follow-up System	Time
Long-term process	Lack of Publicity
Commitment between citizens and municipality	Inadequate strategies for vulnerable groups
Paying attention to the diversity of the subjects of the projects submitted to the vote	Inadequate explanation about projects
Application from all districts	Not submitting rejected projects and integrated projects to citizens
Emerging of new ideas that have not been considered before by the municipality	

PB implementation is successful with feedback and a follow-up system. IMM gives feedback to citizens on whether their project proposal was denied or not and by

giving ID numbers citizens can follow their project's application status. As indicated before in the thesis, the feedback system is one the most important factor that affects participation since it increases the motivation of the citizens, increases understanding about the result of the crowdsourcing implementation and so triggers citizens to make their voice heard. The importance of the quality of the feedback is also important in terms of the meaningfulness of the feedback. Feedback should be detailed and be able to explain the reason for a result in language that is understandable to the citizen. Considering both the report of the Istanbul City Council and the interviews held within the scope of the thesis, citizens stated that they expected more details and explanations regarding feedback. The quality of the feedback can be increased, and participation can be encouraged by conducting or monitoring studies on which kinds of reasons affect the participation of citizens positively or negatively. When given justifications for a government decision, such as a lack of prioritizing or the sufficiency of the current solution, citizens appear to appreciate it. These explanations are likely to aid citizens in comprehending the government's choice. They might cease utilizing the platform, however, if they realize that the government cannot regulate public input and that the government would be unable to address similar problems in the future (Schmidthuber, Hilgers, and Raudhama, 2021). It means that local government should have an increased capacity to offer more logical and acceptable feedback in future experiences.

This issue can also be related to the clarity of the projects. Citizens indicate that there is an inadequacy of explanation of the documents of the projects, and they demand more detail about them. They are pleased to share the voting percentage, project duration, scope, and domain of the projects, but having detailed documents for better understanding will also increase the acceptability and legitimacy of the projects by the citizens.

There is a commitment between citizens and municipalities as the projects selected as a result of the citizens' votes have started to be implemented directly. Until these voting processes, there are phases for evaluation of which projects should be included in the voting, but the municipality has a careful approach to increasing the

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diversity of the projects. With this approach, citizens can evaluate more problems in the city, and they can prioritize the main problem easier by looking at different projects. Also, this approach of the municipality helps to present more voices instead of focusing on certain issues. As they see more projects and ideas, citizens may discover problems they were not aware of.

The inclusiveness issue has both merits and demerits in this crowdsourcing practice. Sensitivity has been shown in the projects in terms of their diversity of them and their appeal to everyone, and project applications have been received from every district. However, the time problem has been an obstacle to reaching vulnerable groups. For the PB program to be held in 2022, it has been stated that in order to overcome this problem, face-to-face activities such as 'Participation Café' will be supported, and the number of these activities will be increased. This activity has also been shown to be beneficial. Even if it is not a project application, it is valuable in terms of stating the problems of the citizens.

When the relationship between the number of applications received by districts and the socioeconomic development scores of the districts (Ministry of Industry and Technology, 2022) was examined, this model is statistically significant since the p-value<0.05, t-stat> 1+1.96 (Table 4.13.). According to R^2 value, this model explains 27% variance of the dependent variable. In other words, it will not be enough to organize promotions and events to increase participation in the future and to include citizens from every district and segment. The Participatory Budget application is a powerful application for citizens to voice their problems and for local governments to solve them. However, for this practice to yield more efficient results, efforts should be made to reduce the difference in the level of development between the districts, and initiatives should be taken to increase the well-being of the citizens.

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Regression Statistics	
Multiple R	0.51845855
R Square	0.26879927
Adjusted R Square	0.24903708
Standard Error	15.9349857
Observations	39

Table 5.3.Regression Statistics

ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	3453.79488	3453.79488	13.6016998	0.00072186			
Residual	37	9395.17948	253.92377					
Total	38	12848.9744						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	18.0361756	5.26610724	3.4249541	0.00151886	7.36602877	28.7063224	7.36602877	28.7063224
SEGE Value	0.00682132	0.00184958	3.68804823	0.00072186	0.00307373	0.01056892	0.00307373	0.01056892

Table 5.4.Regression analysis for ''Number of Applications'' and ''SE-GE Data''

It has been stated in the interview with the İstanbul City Council that the main problem in the application is 'time'. To overcome this problem, the deadlines have been extended, and as stated above, incentives for participation have been increased and more time is planned to be allocated to these incentives to use the time more efficiently. This problem was also mentioned in the report. The other issues are lack of promotion, announcing the budget for the implementation, the need for face-to-face activities for increasing participation, need for stakeholders to involve marginalized segments of society.

To sum up, the Participatory Budgeting implementation that made by IMM is the first participatory budgeting implementation in a metropolitan municipality scale in Turkey. It was made as a pilot project and its effects were found to be positive and it will continue in 2023. With the projects that appeal to all segments of society in a

short time and the existence of feedback and follow-up systems, the citizens generally found the process transparent, but they think that these systems can also be improved. The implementation of the application entirely in digital environments excludes some groups and will be supported by face-to-face activities for these vulnerable groups. In particular, the number of 'Idea Marathons,' which will enable many projects to be considered, will be increased in 2022. On the other hand, as stated in the report, the lack of publicity will be addressed, and this approach has the potential to increase participation online as well.

5.1.3   Evaluation of Ulus Square and 100. Yıl Çarşısı Survey

Table 5.5. Pros and Cons of Ulus Square and 100. Yıl Çarşısı Survey

Pros	Cons
To vote on projects submitted by citizens	No additional approach for marginalized segment of the city
Principles of ''common mind'' and ''right to speak''	Survey could be conducted at other stages in planning
Commitment between citizens and AMM (implementation)	

Ulus Square and 100. Yıl Çarşısı Survey is a project that was carried out within the scope of "common sense" and the "right to speak" of the citizens, and the indecision of the municipality for the survey area also had an effect. Citizens stated that this survey was conducted on citizen satisfaction and the importance of users' opinions. No additional strategy was considered for vulnerable groups during the survey process. Considering the age groups participating in the survey, there is a significant difference between the elderly population and the adult population. The suggested projects in the survey are the projects selected as a result of the competition held for

this field. The participation of this process in the survey, which was done and which the citizens were pleased with, could have increased the participation of the citizens. The opinion that the survey can be done in different stages such as analysis and problem detection in planning was also stated by the municipality and the citizens. However, citizens were pleased with the fact that such a survey was carried out, and they also stated that it is beneficial for participation and that they would not be able to participate if it was not online. In addition, they argued that the process being online is also effective in terms of transparency and accountability. In the interviews, it was stated that this application and similar applications give importance to the satisfaction of citizens in the impact of this application on the planning and shaping of the cities in the future, and this will also act as a driving force that will increase the quality of the projects and plans presented. Thus, it is thought that these practices, in which citizens can participate in the process of building more livable cities, are important.

Table 5.6. Age distribution in the survey

Age	Column1	I prefer to urban square at Ulus.	I prefer to preserving the 100. Yıl Çarşısı by re-functioning	Number of Participants
14-20	Number	353	149	502
	%	70,3%	29,7%	
21-30	Number	2071	968	3039
	%	68,1%	31,9%	
31-40	Number	2763	1375	4138
	%	66,8	33,2%	
41-50	Number	1497	755	2252
	%	66,5%	33,5%	
51-60	Number	598	208	806
	%	74,2%	25,8%	
61-70	Number	244	80	324
	%	75,3%	24,7%	
71-92	Number	47	28	75
	%	62,7%	37,3%	
Did not specify age	Number	12386	5243	17629
	%	70,3%	29,7%	
TOTAL	Number	19959	8806	28765
	%	69,40%	30.60%	

Source: URL-29

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Table 5.5. shows that age distribution in the survey. 28.765 citizens participated in this survey, and it can be said that the adult population participates in the survey more. Participation is steadily decreasing in the age ranges beyond the 31-40 age range. This may be because this age group uses the survey area more or knows it better. However, a serious decrease is observed in the participation of the elderly population. Having an additional strategy for different age groups or vulnerable groups may be effective in reducing this difference in participation. Also, looking at the gender of the participants in the survey, 73% are female and 27% are male.

Before this survey, the same type of surveys submitted to the decision of the citizens were conducted. 17,135 people participated in the survey, which was concluded on 02.06.2021, design and color of the new buses were determined by the citizens (Table 5.6.).

Table 5.7. Voting Result of Design and Color of the New Buses

Design	Number of Participants	%
Red	4116	19
Purple	4777	22
Green	2429	11
Red-White	6596	31
Red-White Striped	3618	17
Total	21.536	

Source: Department of Information Technology Ankara Metropolitan Municipality, 2022

In another previous survey which was concluded on 02.09.2021, 17605 citizens participated in the "new street sign designs" survey conducted under the name of "An Ankara Project: Ankara on the Street" and 60% of these participants were men and 40% were women. Compared to the previous year's surveys, the participation rate has increased by about 63%, but when we evaluate it in terms of gender, the difference between the female-male ratio is significantly higher.

Lastly, looking at the year preferred by the participants according to their age groups, there is no change; each age group has shown a tendency towards making an urban square to Ulus.

Table 5.8. New street sign designs

Age	Male	Female	Total	Percentage
14-18	323	153	476	2.62%
18-25	2810	2014	4824	26.57%
25-35	3922	2763	6685	36.83%
35-45	2539	1399	3938	21.69%
45-55	849	594	1443	7.95%
55-65	328	263	591	3.26%
65-75	84	65	149	0.82%
75-85	10	17	27	0.15%
85-95	9	11	20	0.11%
TOTAL	10874	7279	18153	
	59.90%	40.10%		

Source: Obtained from interview with the municipality, 2022

Table 5.9. Voted Design Ideas

Design	Number of Participants	Percentage
Design A	8146	45%
Design B	4274	23%
Design C	5733	32%

Source: URL-29

5.2 Contributions of Crowdsourcing to the Urban Planning Process

In this section, research questions will be answered. The aim of the thesis is to examine the contribution of crowdsourcing activities to the decision-making process,

problem-solving, and better public service provision in urban planning. Before answering that, sub-research questions will be evaluated.

The first sub-research question is about the challenges that have been faced in the crowdsourcing process (Table 5.9.). Some challenges are common in all cases, and some are specific to the case. These challenges are determined due to being an online participation tool of crowdsourcing. The common problem in all cases is the publicity of the platforms. Nowadays, for online platforms, advertisement is crucial for platform recognition and awareness. If local governments want to implement crowdsourcing, they must adapt digital promotion to reach the crowd and allow time to make sure it reaches the crowd. After making the existence of the platform available to the crowd, it should also ensure that the platforms are easy to use by everyone to ensure continuity on these platforms. Since today's social media and other digital platforms are generally used by people to communicate, they should add the two-way communication feature in these platforms by considering them in the context of citizen participation. After that, local government should be sure that they can answer citizens' needs and if it alone is not enough to meet these needs, it should try to keep the citizen on the platform by including the complementary actors in the process.

Table 5.10. Challenges of crowdsourcing

PurpleMap	Participatory Budgeting	Ulus Square and 100. Yıl Çarşısı Survey
Weak in Two-Way Communication	Time constraint	Inadequacy of citizen involvement in process- need more inclusion in other phases
Publicity		
Platform Design Problem-Lack of Easy-to-Use Feature		
Inadequate actor orientation- Lack of Stakeholders and Staff		

5.2.1 Locating Case Studies on Ladder of Citizen Participation

For the second and third sub-research questions, Figure 5.2. explains the crowd's role in the case studies and local governments' evaluation type of the crowd's decisions, feedback, suggestions, and complaints. These sub-research questions are related to the final phase of the crowdsourcing process and locating the cases on the Ladder of Citizen Participation. As indicated before evaluation of the final decision by the local government is important for the motivation of the citizens and the future crowdsourcing implications. Seeing that their citizens' efforts are not valued demotivates them and can negatively impact future initiatives by reducing participation. For talking about citizen participation and the legitimacy of this process, there should be a negative or positive evaluation and explanation of these results to the citizens. In other words, feedback and follow-up mechanisms and two-way communication types should be reflected in the final decision and overlap with it for creating an accountable and transparent participation process and increase citizen trust in local government.

The results of these crowdsourcing activities are evaluated according to how the local government uses the final output of these activities gained by citizens: recommendation, selection, or implementation (Figure 5.2.).

Evaluation type / Communication type	Recommendation	Implementation	Selection (Jury Process)
Complaint	MorHaritam	MorHaritam	
Feedback	Participatory Budgeting	Participatory Budgeting	
New Suggestion (Project Proposal)			Ulus 100. Yıl Çarşısı Idea Project Participatory Budgeting (1st phase)
Survey		Participatory Budgeting (2nd phase) Ulus 100. Yıl Çarşısı Survey	

PLATFORMS

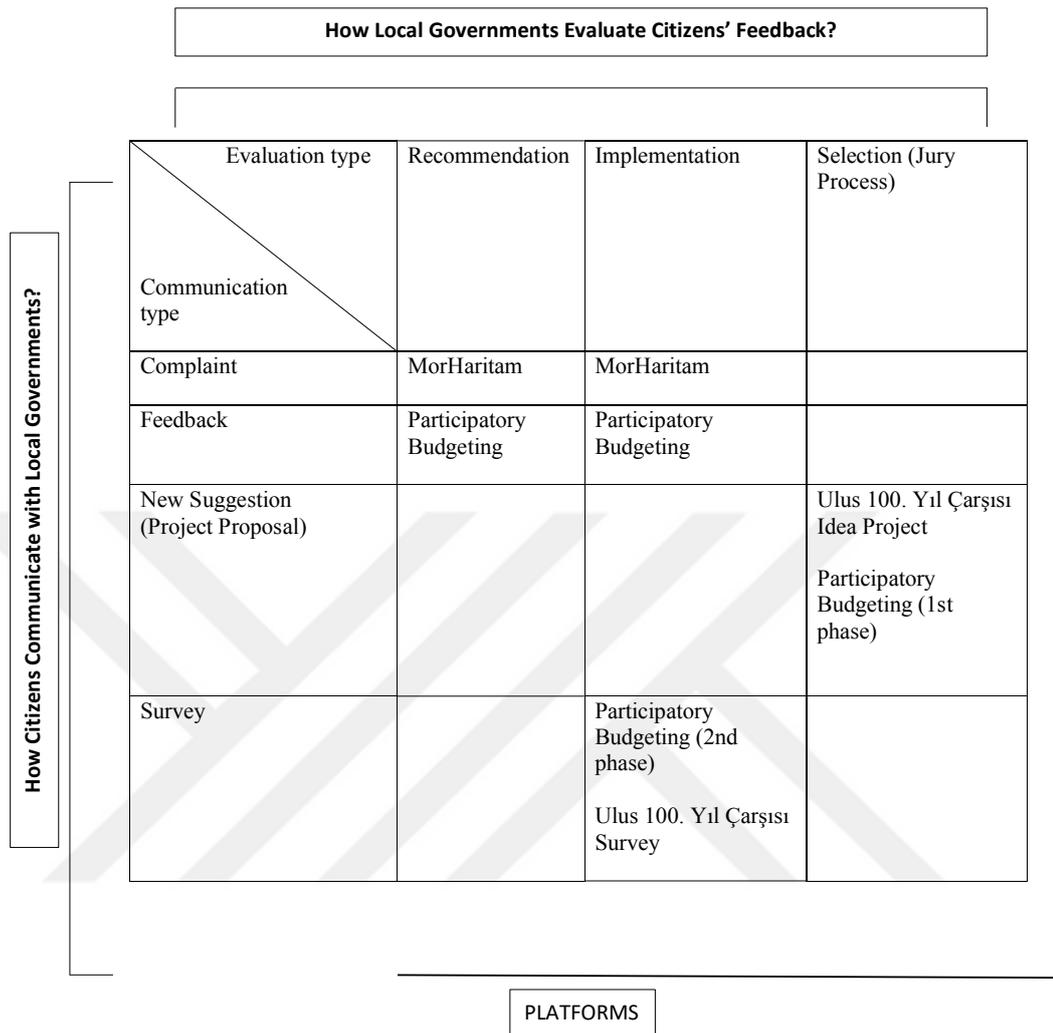How Citizens Communicate with Local Governments?

Figure 5.2. Participation Options and Evaluation of Process

Arnstein's Ladder of Citizen Participation is revised in this thesis by considering crowdsourcing practices and other models of the ladder of citizen participation (Table 5.10.). The revised model was also shaped according to the citizen's participation in the crowdsourcing process and the evaluation form of the process. For preparation phase and the process of the crowdsourcing activities are evaluated with ''Criteria for Success of Crowdsourcing Implementation''. According to these criteria contributions and challenges of crowdsourcing are determined and these are used to locate case studies on the ladder of citizen participation ladder.

Table 5.11. Ladder of Citizen Participation for Crowdsourcing Activities

Rungs	Explanation	Crowd's Role	Case Studies	Case Studies in Thesis	CS Outcome
Commensalism	Data collection from citizens	Intelligence			
Consultation		Intelligence	FreetoBe	PurpleMap	Recommendation
Illusionary		Choice			Implementation
Placation		Design			Recommendation-Selection
Collaboration			HarassMap, FixMyStreet, SeeClickFix, Better Reykjavik	100. Yıl Ç şısı	
Delegated Power		Prosumer	Decide Madrid, Youth Participatory Budgeting Portugal		Implementation

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PurpleMap platform does not provide feedback to the citizens which may cause a lack of trust in the future. Since there is no feedback channel, citizens hesitate about whether their applications were evaluated or not. Some citizens offered that the municipality could show what they were doing on social media and on the website about the applications to see what happened to their applications and if the municipality take action or not. In other words, citizens demand more accountable and transparent behavior from the municipality. Also, local governments have problems with the same issue because of the lack of a follow-up system. Since there is no possibility to follow up since there is no contact information of citizens who apply for the platform, there is no chance to fix or verify applications. Because of that, some applications are disregarded, and it may cause a lack of diversity in application topics and citizens. As stated in the thesis, feedback mechanism triggers make heard of citizen voice (Peicoto and Fox, 2016), help local governments to reach better results (Deichmann et. al., 2021), increases the motivation of users (SBTF, 2011), help to analyze data (Bott et. al., 2011). Also, Schmidthuber, Hilgers, and Raudhama (2021) found that when given justifications for a government choice, such as a lack of prioritizing or the sufficiency of the current solution, citizens appear to appreciate it. These explanations aid citizens in comprehending the government's choice. It means that feedback has a role to affect citizens' understanding of the outcome of the decision-making process. Since there is no feedback mechanism on the PurpleMap platform mentioned advantages cannot be implemented and it may decrease the participation rate and motivation of the citizens for using the platform. This statement is compatible with citizen interviews. They mostly complain about the lack of follow-up and feedback systems. There is no chance to know if citizens' complaints have been resolved and it is not possible to complete a complaint with incomplete information. That's why citizens' complaints and feedback cannot go beyond suggestions in this process. In other words, there is no commitment between citizens and local government. This is the most important reason that PurpleMap is located at the consultation stage. Citizens mark unsafe locations, but there is no guarantee and no information about the evaluation of citizen feedback. The lack of

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strategies for the involvement of marginalized groups in society makes weaker this crowdmapping activity and it is difficult to reach the crowd. It was also stated in the interviews that the platform is not user-friendly in terms of use, which may prevent the participation of citizens who want to be involved in the process and negatively affect the diversity of the audience on the platform. This situation reduces the potential of the local government to solve the problems in the city. Because of these problems, this crowdsourcing initiative stays at the infancy level and does not commit to hearing citizen voices. Even if every application is evaluated, since there is no feedback and follow-up system, it is seen as an approach that demotivates citizens, as understood from the interviews. In short, having no commitment, lack of strategies for inclusiveness, complicated design, and lack of two-way communications are the reasons for locating PurpleMap at the consultation stage.

Participatory Budgeting realized by IMM is located at delegated power stage since decide by voting that a certain resource is allocated to the citizen and how they will use this resource. Both the producers and consumers of the projects are citizens of İstanbul, and it makes them prosumers of their city. Here, İMM and İstanbul City Council have the role of expertise, and citizens have the role of proposer in the first stage and decision-maker in the last stage. Citizens have been successful in making their voices heard, and the local government has been successful in listening to the citizens. Citizens are involved in the planning process of analyzing, problem detection, generation of solutions, and picking the best ones. Local government has a role to control the propositions about compliance on the legal ground and the compatibility with the strategic plan for following a holistic planning approach with their experts.

Ulus 100. Yıl Çarşısı survey is located at the collaboration stage because this process consists of two-stage that include competition and selection survey and the local government committed to this decision. In the competition process, the jury selected the winning projects presented by citizens and the local government presented these projects in the survey for the future of the related area. Local government has a role to expertise in this process. However, the crowd can be involved in the analysis and

problem-detection processes. Also, there is a lack of strategy for involving marginalized segments of society, the crowd could not be reached completely.

For answering the main research question Table 5.11. was prepared. Crowdsourcing has contributed to urban planning in different processes in different ways. In the decision-making processes, the citizen helps the local government by providing its opinion and guiding it; the rapid progress of the process to identify problem areas in the city and benefit from citizen experience and local knowledge as it is evaluated by the inhabitants; and the citizens' offering new perspectives to the local government in an unnoticed or incomplete or wrongly thought application are seen as positive effects of crowdsourcing in terms of local government. The fact that citizens can make their voices heard more effectively and quickly, have a say in the formation of the city, and even own new practices in the city is also a positive effect of the use of crowdsourcing for citizens. In this way, citizens have assumed the role of being not only the 'user' but also the 'shaper and maker' of the city. In other words, they have assumed a more active role as 'prosumers'.

Crowdsourcing shows that there is a relationship between the well-being of the citizens and participation as can be observed in the Participatory Budgeting in İstanbul. Also, in the PurpleMap platform, citizens indicate that the platform should not be an interactive space, since people can behave inappropriately, and it may demotivate citizens to participate since there are sensitive issues in the platform. These two findings show that there should be strategies to change citizens' behaves and their socio-economic situation for increasing participation and get better efficiency.

Table 5.12. Effects on Crowdsourcing on Public Service Quality, Decision-Making, and Problem-Solving

Public Service Quality (Participatory Budgeting)	Problem-Solving (PurpleMap)	Decision-Making (Ulus Square and 100. Yıl Çarşısı Survey)
Bring up unnoticed problems and include them in the agenda for the future implications		To increase the acceptability of the application by leaving the choice to the citizens in an undecided initiative.
Perception changes in some issues	Citizen contribution from many parts of the city at the same time in problem determination	
Cost-effective and time-saving process by integrating problems and suggestions, offering a common and more effective solution	Affect other local governments to apply a same platform	
Statistically significant relationship between project submission and socio-economic data- Wellbeing of the citizens		
Due to the online presence of crowdsourcing, there is an increase in participation in the applications. However, it is not at the desired level.		
Effective in getting the opinions and listening to the voices of all segments.		

CHAPTER 6

CONCLUSION

In this study, how crowdsourcing activities made by local governments contribute to the decision-making, problem-solving, and public service quality in the planning domain and the citizens' perceptions of the participation process were examined. For case studies, PurpleMap as a crowdmapping, and Ulus Square and 100. Yıl Çarşısı Survey as a crowd voting carried out by AMM; and the Participatory Budgeting initiative carried out by İMM were selected for researching different types of crowdsourcing activities at the metropolitan municipality scale. The logic behind the thesis is that crowdsourcing is an online participation tool that deals with the diverse structure of the city and benefits from this diversity through citizens' local knowledge with the increasing adaptation of ICT.

Today, the digital era gains importance, and information and communication quality becomes vital for urban planning and changes the process of building and creating cities. As the citizen voices gains importance hearing them opens a new door for citizen participation. Crowdsourcing as a tool for providing to reach of creative ideas and for understanding citizen satisfaction can be a game-changing element when effectively used from this perspective. Because of that, asking 'how' that related to the process instead of just 'what' that related to the outcome becomes more important for the participation process. Therefore, in this thesis, the 'how' question is asked to both citizens and local government for evaluation of contributions of crowdsourcing and to improve the efficient usage of this tool. For evaluating case studies in the thesis, case studies from around the world were analyzed for determining the main criteria for the success of crowdsourcing. Also, semi-structured interviews were made with citizens of case cities and related local government bodies, and data that belongs to the cases were utilized. Arnstein's ''Ladder of Citizen Participation'' model is used for examining how the role attributed to the citizens and how their voices will be used affect the citizen participation process.

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6.1   Research Findings

The research findings are divided into two sections: the contributions of the crowdsourcing application and how it can be developed and the problematic issues.

One of the main contributions is that the quality of two-way communication affects the sustainability of the crowdsourcing process. Reporting why and how citizens' ideas are used and not used creates citizen trust and is effective in keeping them away from the participation process. In other words, feedback quality and follow-up option are crucial for citizen participation and it is important for accountability and transparency of the process.

The second contribution of the crowdsourcing tool is that citizens can instantly send their feedback to the local government regardless of location. Citizens do not reveal their names for their complaints in sensitive issues like in the PurpleMap platform for communicating with local government. Also, they can participate in voting from their mobile phones and have an impact from afar.

Crowdsourcing helps to revise the ladder of the citizen participation model in the context of the digital era. The ladder of citizen participation is useful for understanding that as the more active role attributed to the citizens their voices gain importance in the final decision, there are more creative ideas and have the potential to impact the local government's perspective and agenda. This situation can be observed in the Participatory Budgeting case in İstanbul. Although the citizens find some proposals more important, the local government has included a result outside of the voting on its agenda, and this shows that the local government gives importance to those that will serve the city among the projects that are not selected, rather than ensuring their satisfaction by implementing only the projects chosen by the citizens.

Crowdsourcing practices help municipalities learn from each other and increase their capacity. For example, PurpleMap as a crowdmapping tool for reporting issues to local government, affects other local governments to imply the same application.

In the context of problematic issues of crowdsourcing, there are three main findings. First, local governments should make more effort to promote the platforms and convey the existence of these platforms to vulnerable groups. In cases where citizens cannot be reached online, this process should also be supported by face-to-face activities. For example, this was done in the Participatory Budget process, and the request of a child was included in the agenda of the municipality, ''I want to swim'', in the face-to-face meetings. Second, a statistically significant result is found between the socioeconomic development data of the districts of İstanbul and the number of applications by the district. It means that, if it is desired to benefit more from the participation process, studies should also be carried out to increase the well-being level of citizens. Citizen participation is one of the important tools to make the city more livable, but it is not enough on its own. From this, it can be deduced that the establishment of the physical infrastructure alone is not sufficient and that a more holistic approach to increasing the social and economic well-being of citizens is required for citizen participation. The fact that citizens find it appropriate that there is no interactive environment on the PurpleMap platform, contrary to expectations, also supports this situation. Lastly, there should be better actor orientations for answering citizens' feedback. Local governments do not have jurisdiction over the whole city, and they need to connect them. For example, in the PurpleMap platform, some of the citizen complaints could not be answered since the complaint areas are not in the jurisdiction of the AMM.

To sum up, crowdsourcing helps local governments to communicate stronger with citizens. With their feedback and suggestions, local government benefits from citizens' knowledge and experiences. When they implement their choices, in return, citizens have a chance to live in the cities they want through their designs, their solutions, and their creations. Crowdsourcing activities reveal problems that are not on the local government's agenda, help to identify spatially problematic places, and by providing citizen satisfaction through implementing their choices it ensures that the plans are more acceptable and applicable. Strengthening communication with citizens and devising new strategies for groups that cannot participate to achieve

more efficient results will increase diversity and provide a better environment to benefit from 'amateurs' in the city. These applications will help to change the role of the citizen not only as 'users' in the city but also as 'makers and shapers' with the help of the local administration's expert, that is, to make the citizen a prosumer. However, for creating a culture and more efficient participation process, there should be strategies for increasing well-being of the citizens and nudge them to behavior change for acceptability of the platforms. The revised model was designed according to the crowdsourcing context and was made to assist at what stage participation is in future crowdsourcing activities. With different case studies, the model is still open to revision.

6.2   Limitations of the Research

This study has three limitations. Firstly, for a better understanding of the impact of crowdsourcing activities, there should be a simultaneous specific study for citizen motivation for understanding why citizens choose to participate or not. In this study, this issue was addressed but remains narrow. Also, there needs to be an investigation of other types of crowdsourcing practices to compare them.

Secondly, these case studies are at the infancy level, and they are the first examples in the context of crowdsourcing. They can be seen as pilot projects and as these case studies are repeated and revised, the findings will be changed too.

Lastly, there needs to be made interviews with different segments of society in the context of age, gender, socio-economic level, etc. to better understand how local governments can motivate and reach them for the participation process.

6.3   Suggestions for Future Crowdsourcing Practices

Based on the findings of this thesis, publicity of crowdsourcing practices is a common problem for local governments. Regardless of the idea behind the

crowdsourcing practice, when citizens cannot be reached, the legitimacy of the participation process decreases and reduces the efficiency of the activity. Therefore, more effective strategies should be developed for the promotion of crowdsourcing applications to citizens and the most effective communication channels should be determined by examining their usage behaviors. Also, there should be additional strategies for reaching vulnerable segments of the society. It can be supported by face-to-face activities.

Secondly, local governments should try to include citizens in more phases of the planning process. Rather than suggestions and choices, citizens could be involved in the problem definition and analysis phase of the planning process. In this way, unnoticed problems will be brought to the agenda more clearly, and this will positively affect the strategies created by local governments for the city.

Thirdly, in order to include the citizen, the platform should be user-friendly and should not be designed in a way that takes too much time for the citizens. Therefore, the role of the citizen should be clearly defined in the process and what is required of them should be pinpointed.

Finally, and most importantly, the focus should be on the effectiveness of two-way communication. In order not to leave the citizens in uncertainty and to ensure that the process is accountable and transparent, feedback should be provided to the citizens on relevant issues and a follow-up mechanism should be established for the demands, complaints, suggestions etc. of the citizens.

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