# Measuring Urban Resilience In The Context of Well-Being

## An Assessment of Wellbeing In Ankara

**CP 502 Planning Studio Final Jury** | Elif Özge Büyüksoy - 2592301

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MASTER OF CITY PLANNING

# Urban Resilience Concept

- Urban resilience is a planning approach that enables the dynamics of the city to **tackle in a coordinated and comprehensive manner** within the framework of sustainable technological innovations in case of all kinds of dangers, risks and threats in the physical, environmental, social and economic fields that cities may encounter (OECD, 2022).
- The United Nations (UN) defines the resilience concept as the ability of all settlements, societies and systems to **protect themselves, ensure the sustainability of the system, restructure in a short time, use the resources effectively** and have the necessary resources to be able to **adapt to changes** (Karahan, 2018).

# Qualities of Resilient Systems

**Reflective** → Reflective systems have mechanisms to continuously **evolve**, and will **modify standards or norms** based on emerging evidence, rather than seeking permanent solutions based on the status quo.

**Robust** → Robust systems include **well-conceived, constructed and managed physical assets**, so that they can **withstand the impacts of hazard events** without significant damage or loss of function.

**Redundant** → Redundancy refers to **spare capacity** purposely created within systems so that they can accommodate disruption, extreme pressures or surges in demand.

**Flexible** → Flexibility implies that systems can **change, evolve and adapt** in response to changing circumstances.

**Resourceful** → Resourcefulness implies that people and institutions are able to **rapidly find different ways to achieve their goals** or **meet their needs** during a shock or when under stress.

**Inclusive** → Inclusion emphasises the need for **broad consultation and engagement of communities**, including the most vulnerable groups.

**Integrated** → Integration and alignment between city systems promotes consistency in decision-making and ensures that all investments are **mutually supportive to a common outcome.**

City Resilience Index, The Rockerfeller Foundation

# Dimensions of Resilient Systems

**01** ***Environmental-Physical Dimension***
Ecosystem and biodiversity, basic needs, infrastructure facilities, adequate and safe natural resources, construction and balanced distribution of natural area.

**02** ***Economical Dimension***
Efficient use of resources, sector diversity, integration of innovative models, employment opportunities, skills and training opportunities.

**03** ***Social Dimension***
A healthy living space, access to social facilities, a safe and inclusive social environment, environmental quality, participation of the citizens.

**04** ***Governance Dimension***
Collaboration between central government, local unit and citizens, management approach that encourages transparency and participation, holistic and sustainable strategies for crises.

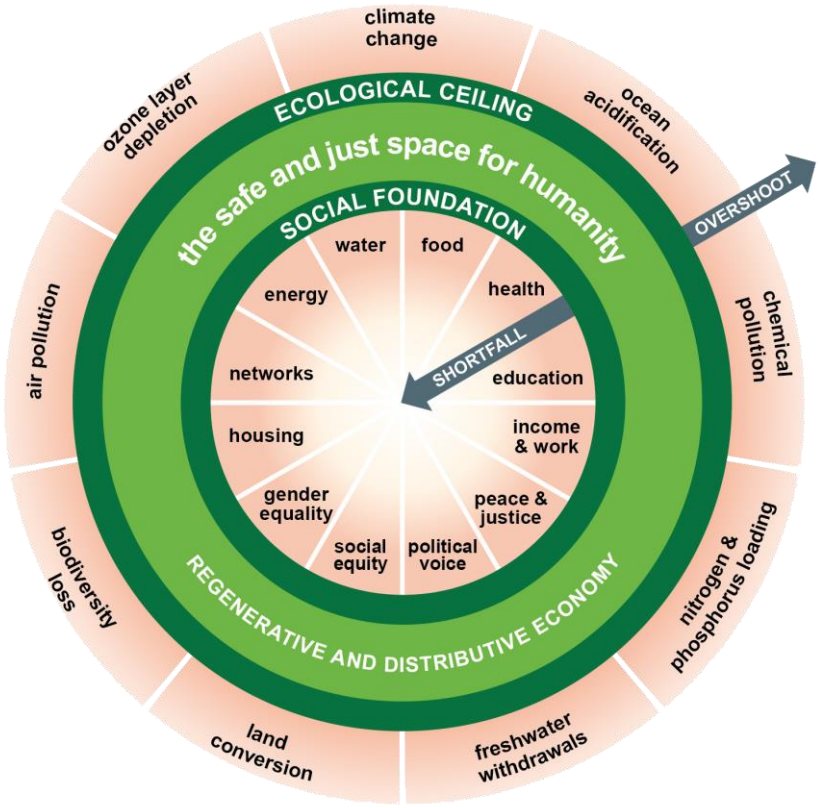
# The Concept of Sustainable Well-Being and Its Relationship with Resilience

- The concept of **sustainable well-being** means that these rights and needs are provided to the citizens in a **balanced manner** by the urban systems, and that the citizens of today and the future live at a high level of well-being by reaching life satisfaction in the environment created by this (SYKE, 2018).
- **The doughnut economy model**, in which resilient urban systems are reflected as a model, is a model that bridges the city in terms of well-being approach.

# The Concept of Sustainable Well-Being and Its Relationship with Resilience:

## «The Doughnut Economy Model»

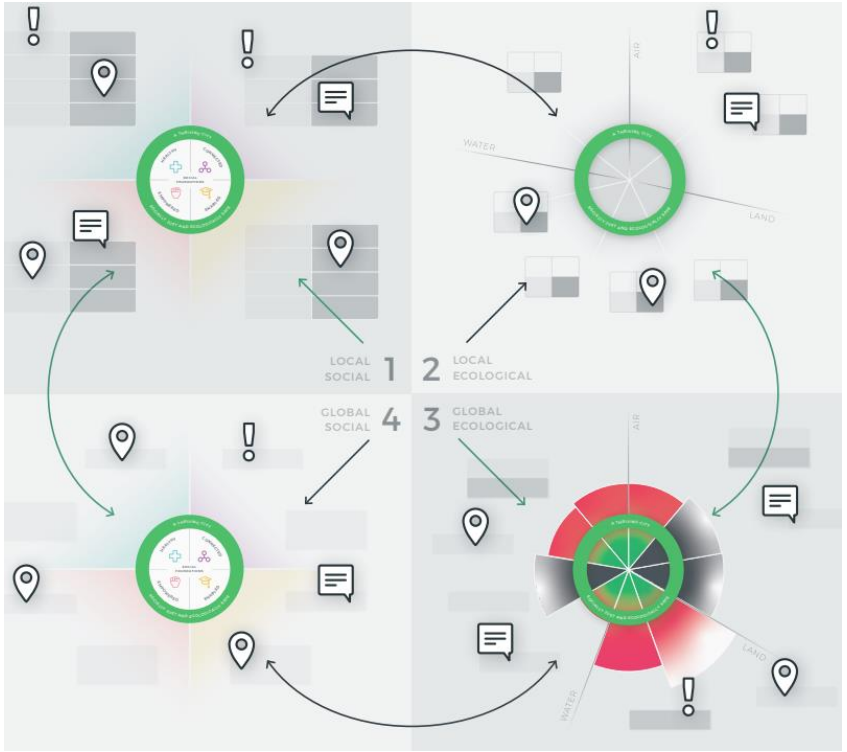
- **The inner circle** of the model includes **basic human needs,** it is stated that the urban interventions for these needs should be done **without disturbing the ecological order** in **the outer ring**.
- Increasing the level of well-being of humanity in cities depends on the simultaneous elimination of this **social shortfall and ecological overshoot**.
- **The ring in the middle** is the **safest, most resilient and well-being urban space** at this point (Raworth, 2012).



# The Concept of Sustainable Well-Being and Its Relationship with Resilience:

## «The Doughnut Economy Model»

In the **Amsterdam** approach, questions about how the city can be the **home of the citizens** by developing while respecting the rights of all people and the health of the whole planet, have been advanced and answers have been sought within the scope of **local-social, global-social, local-ecological, global-ecological** frameworks (DEAL, 2019).



# The Concept of Sustainable Well-Being and Its Relationship with Resilience:

## «The Doughnut Economy Model»

In the study process of **Finland**, it was stated that the indicators determined throughout the country should be in line with the **Sustainable Development Goals** and that the goals created as a result should be created in balance **without exceeding the social and ecosystem limits** in the Doughnut Economy Model. Again, the current situation of the country was examined through this model and classified as good, alarming, poor and ambigious (Annukka, et al., 2019).

# Research Criteria and Survey Results

*İşçi Blokları Neighborhood*

- 1 primary school, 1 secondary school, 2 high schools, 2 family health centers, 1 university (Yüksek İhtisas University-Medical Faculty), 1 shopping mall, 1 marketplace, 4 mosques, 1 private hospital and 9 parks.
- **Social-institutional structure**: Çankaya House serving as a community center and 12 associations (Ministry of the Interior, 2022).
- 100. Yıl **Neighborhood Council**.
- Groups on social media-ex: 100. Yıl Initiative Group.
- **A neighborhood workshop**.

*Eryaman Neighborhood*

- 5 primary schools, 2 secondary schools, 3 high schools, 5 mosques, 3 family health centers and 7 parks.
- **Social-institutional structure**: 31 associations (Ministry of the Interior, 2022).

# Research Criteria and Survey Results

## 01

### *Economical Resilience*

- working status of the residents,
- the rate of home ownership.

## 02

### *Environmental-Physical Resilience*

- access to social and technical infrastructure
- the capacity adequacy of the common and green areas,
- the transportation habits,
- the difficulties encountered.

## 03

### *Social Resilience*

- the satisfaction level of the residents,
- their feeling of being safe and belonging.

## 04

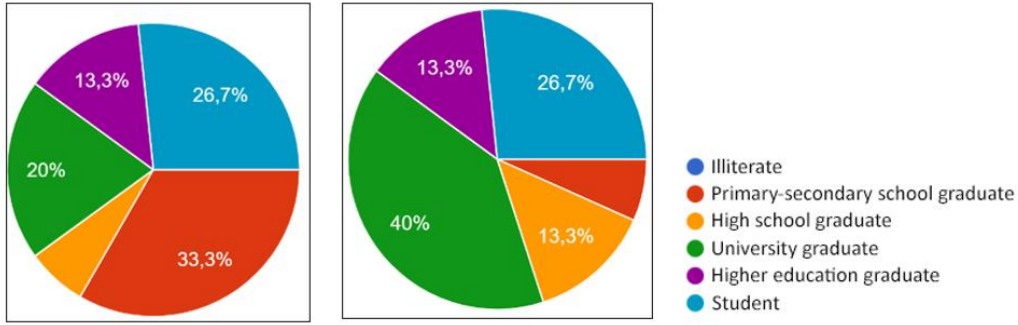
### *Governance Resilience*

- the level of social organization in the neighborhood,
- the level of cooperation between the neighborhood and the local authority,
- the presence of warning systems in the neighborhood in case of risk.

# Research Criteria and Survey Results

*Household Survey*

- 30 people (15 from İşçi Blokları, 15 from Eryaman),
- 14 men and 16 women.



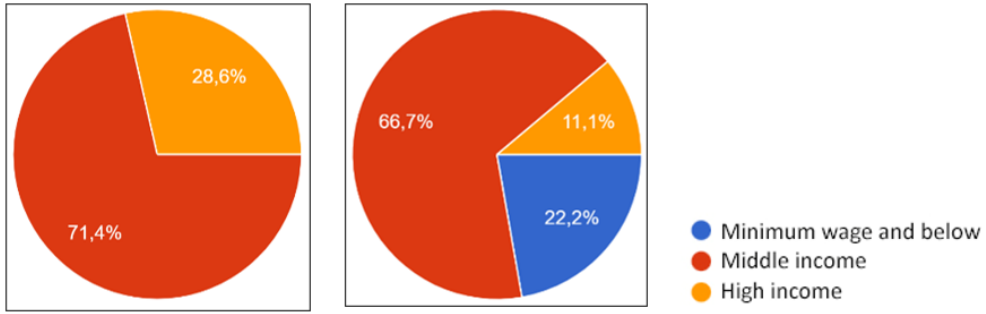

Educational Status of Survey Participants

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

# Research Criteria and Survey Results

*Household Survey-Economical Dimension*

- In İşçi Blokları Neighborhood, **46.7%** of the participants are **working**, **33.3%** are **not working** and **20%** are **students**. The reason for the high rate of unemployed is that there are a large number of **retired people** in the neighborhood.
- In Eryaman Neighborhood, **60%** of the participants are **working** and **20%** are **not working**, while **20%** are **students**.
- It has been observed that there is a variable structure of income distribution in Eryaman Neighborhood.

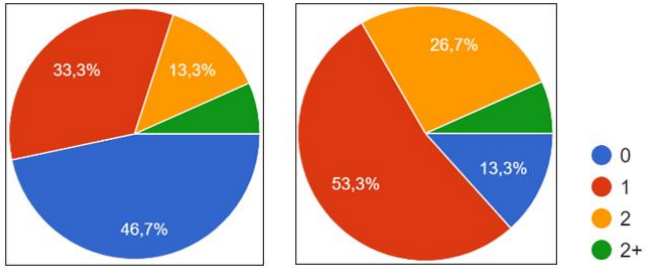



Income Range of Employees from Survey Respondents

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

# Research Criteria and Survey Results

*Household Survey-Economical Dimension*



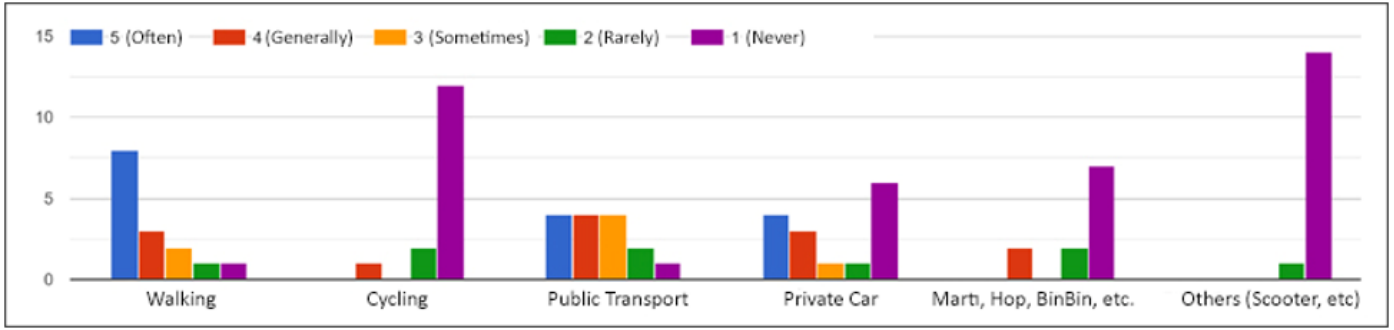

Number of Employees in the Household of Survey Participants

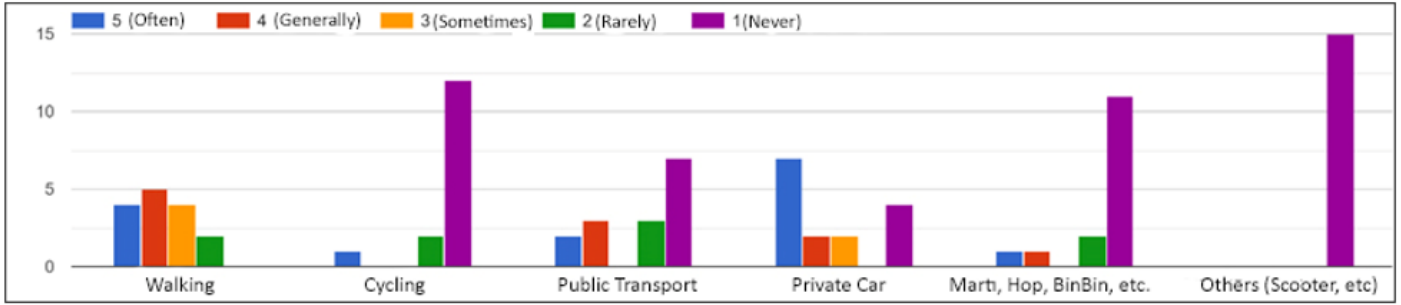
(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

- The amount of rent paid by the tenants varies between **1500-4000 TL** in the İşçi Blokları Neighborhood, and between **2500-3500 TL** in the Eryaman Neighborhood.
- Therefore, it is possible to say that there are rental housing opportunities for every income group in the İşçi Blokları Neighborhood.

# Research Criteria and Survey Results

*Household Survey-Environmental-Physical Dimension*



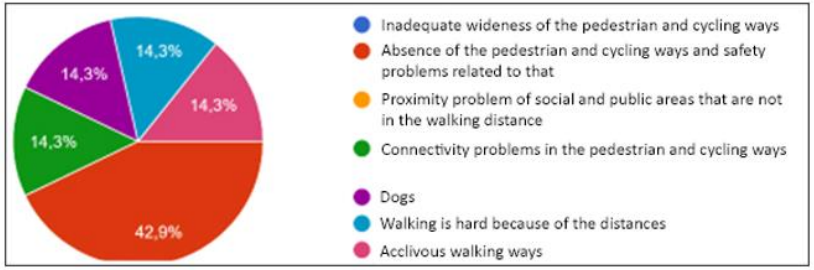

Transportation Methods Preferred by Survey Participants

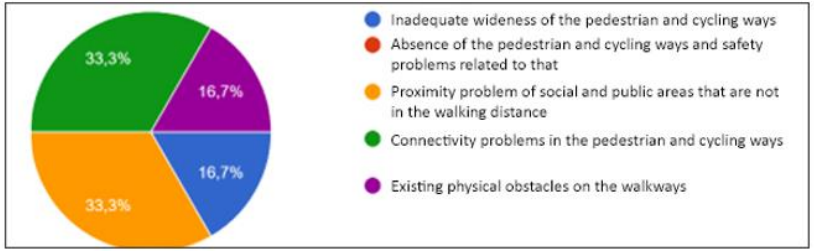
(İşçi Blokları Neighborhood above, Eryaman Neighborhood below)

# Research Criteria and Survey Results

*Household Survey-Environmental-Physical Dimension*

- **53.3%** of the participants stated that they **did not encounter any difficulties** in the İşçi Blokları Neighborhood while accessing the neighborhood by walking or cycling, **46.7%** said that **they faced difficulties**.
- In Eryaman Neighborhood, 60% of them stating that they **did not have any difficulties** and **40%** of them stated that **they had difficulties**.



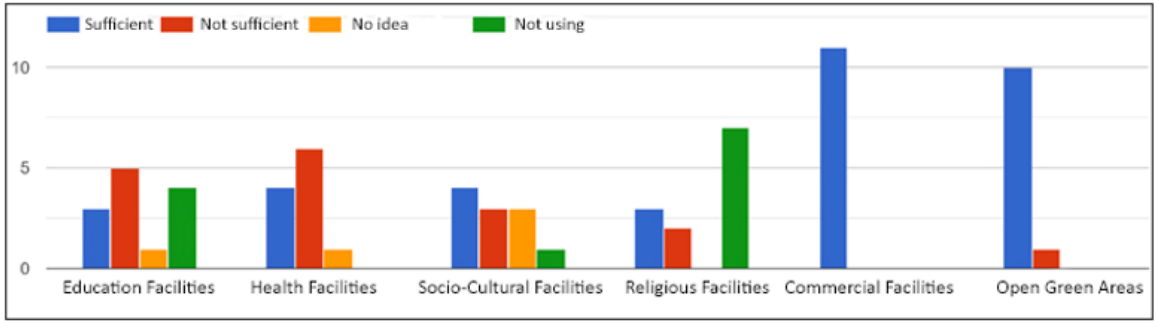



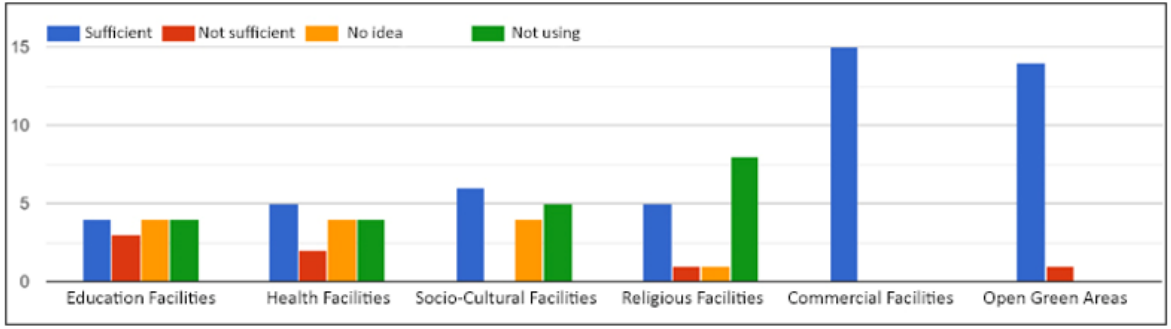

Difficulties Encountered in Walking and Cycling Transportation in Neighborhoods

(İşçi Blokları Neighborhood above, Eryaman Neighborhood below)

# Research Criteria and Survey Results

*Household Survey-Environmental-Physical Dimension*



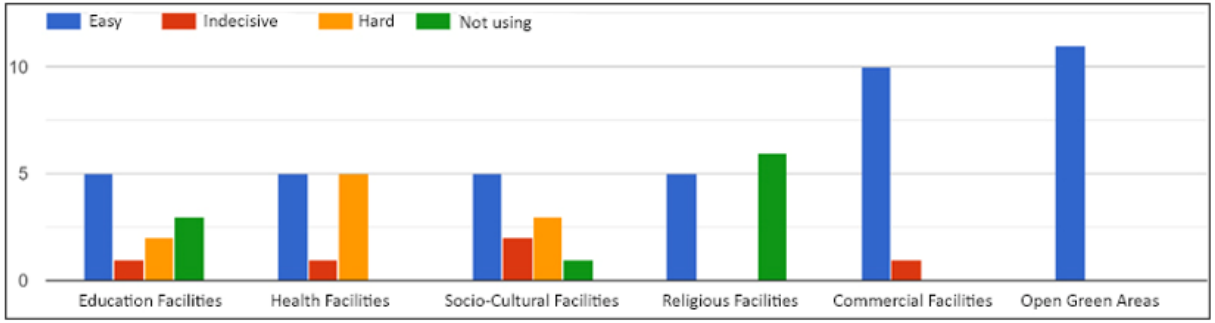



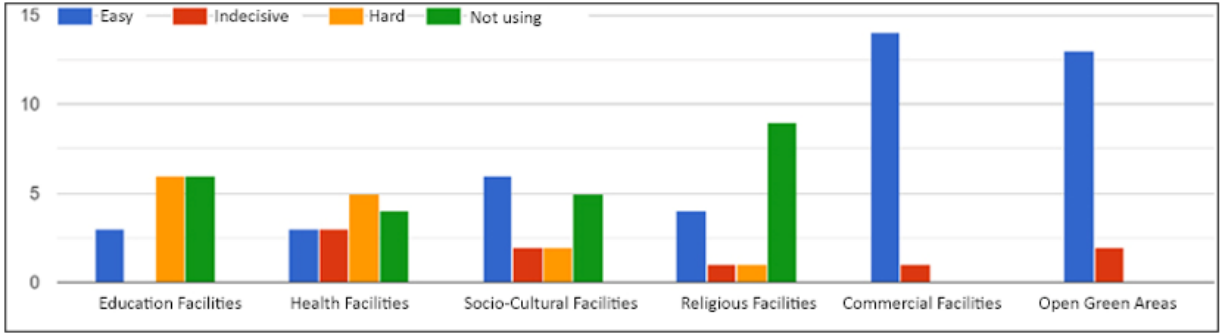

Evaluation of Capacity Adequacy of Social and Public Spaces in Neighborhoods

(İşçi Blokları Neighborhood above, Eryaman Neighborhood below)

# Research Criteria and Survey Results

*Household Survey-Environmental-Physical Dimension*



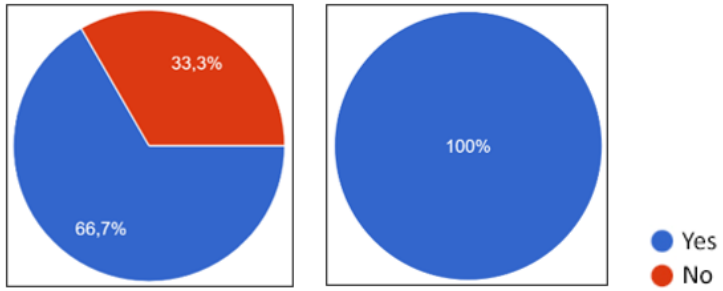

Evaluation of Ease of Access of Social and Public Spaces in Neighborhoods

(İşçi Blokları Neighborhood above, Eryaman Neighborhood below)

# Research Criteria and Survey Results

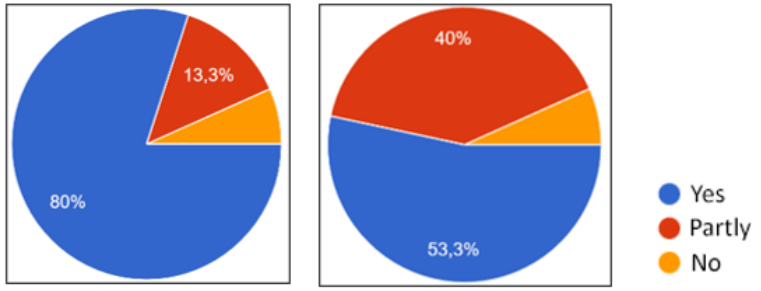
*Household Survey-Social Dimension*

- **67%** of the participants in İşçi Blokları Neighborhood have lived in the neighborhood for more than 5 years, **53%** of the Eryaman participants stated that they have lived in the neighborhood for **less than 5 years**.
- **60%** of the participants in İşçi Blokları recognize their neighbors, **46.7%** of the participants in Eryaman recognize their neighbors.




Existence of Common Areas to Spend Time with Neighbors in Neighborhoods

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

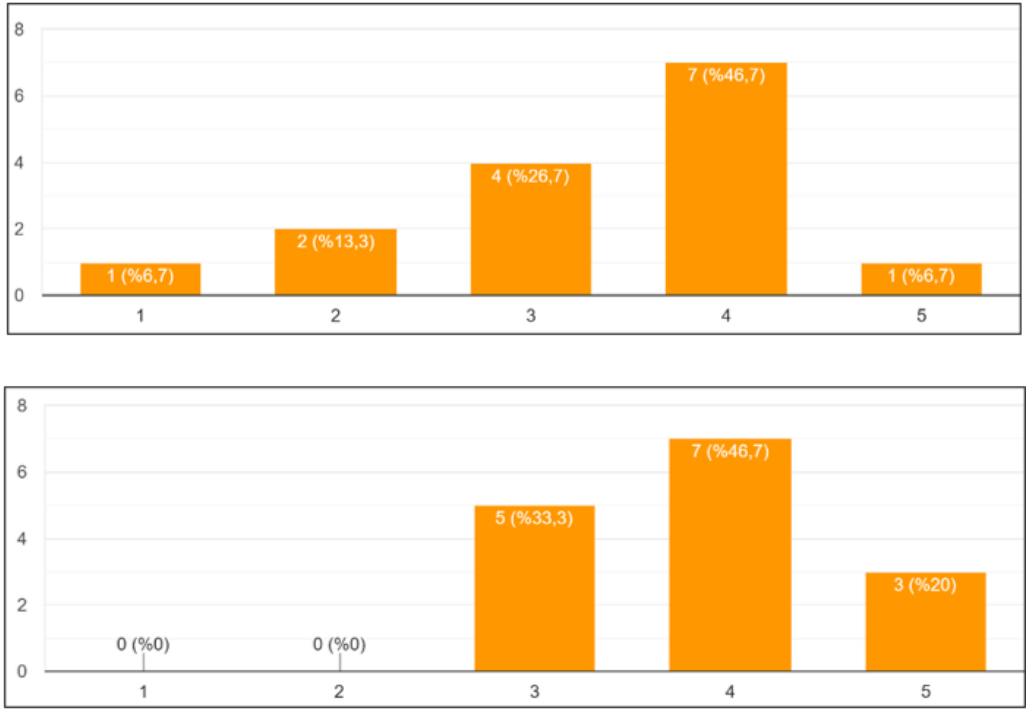



Sense of Belonging in Neighborhoods

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

# Research Criteria and Survey Results

*Household Survey-Social Dimension*



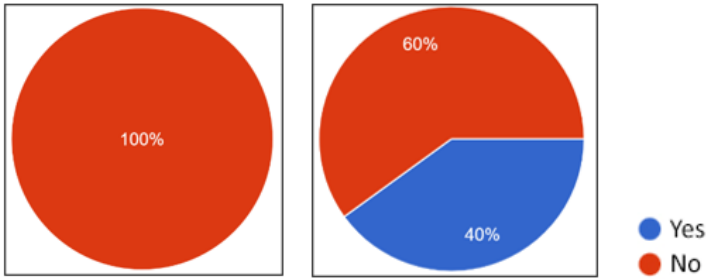

Satisfaction with Access to Common Activity Areas and Services in Neighborhoods

(İşçi Blokları Neighborhood above, Eryaman Neighborhood below)

# Research Criteria and Survey Results

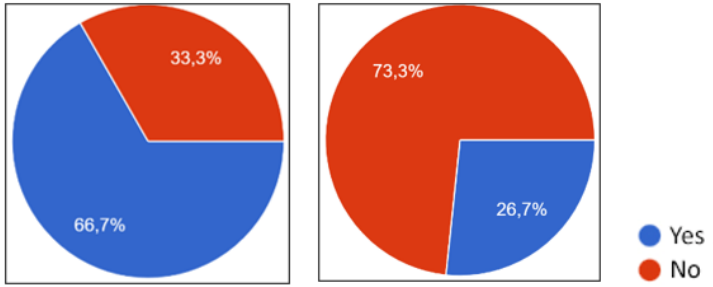
*Household Survey-Governance Dimension*

- Although there is an existing neighborhood council in İşçi Blokları, **53.3%** of the participants did not have any information about the **existence of a neighborhood council.** In Eryaman, **60%** of the participants **have no idea** about the existence of the neighborhood council.
- **66.7%** of the participants **do not participate in the social media** accounts of İşçi Blokları Neighborhood, which is very active. In Eryaman, **80%** of participants **do not participate in social media** groups.




Presence of Risk Mechanism in Neighborhoods

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)




Participation in Association Activities in Neighborhoods

(İşçi Blokları Neighborhood on the left, Eryaman Neighborhood on the right)

# Research Criteria and Survey Results

*Local Authority Survey*

- Ayşegül Emekçi, the headman of İşçi Blokları Neighborhood for **2 terms-8 years**.
- İsa Bulut, the headman of Eryaman Neighborhood for **5 terms-23 years**.
- **A neighborhood council** exists in İşçi Blokları Neighborhood but not in Eryaman. The council is not used effectively.
- **A warning system in the risky situations** is asked and such system was not existed in the İşçi Blokları, however a warning system was existed in Eryaman during the pandemic period due to the high population.
- **Social aid organizations and social media groups** are **existed** in İşçi Blokları and the local authority actively participated in all the activities.
- In Eryaman Neighborhood, there is **no aid organizations and social media groups**.

# Research Criteria and Survey Results

*Local Authority Survey*

*The importance and duties of the municipality and the headman in ensuring the participation of the residents in the local government and the safe execution of social projects*

*Ayşegül Emekçi (the headman of İşçi Blokları Neighborhood):*

- "As headmen are in charge of building a bridge between the people and the administration, in case of any **help or participation** in the administration, they should know the part of the people who want to participate and should encourage them. It is necessary to keep the identity of the people who want to help in **social aid projects** and the people to be helped confidential, and **to treat the personal rights carefully**. The people to whom the aid will go should be chosen **fairly** by the headman. The headman **should think about all living things** and should encourage every individual to participate in the administration and to express their thoughts in order to protect everyone's rights."

# Research Criteria and Survey Results

*Local Authority Survey*

*The importance and duties of the municipality and the headman in ensuring the participation of the residents in the local government and the safe execution of social projects*

*İsa Bulut (the headman of Eryaman Neighborhood):*

- "Since the neighborhood is a neighborhood that has already established its order, **the municipality** rather than the headman **is more active** in political situations such as **participation**. If social assistance will be provided, the **public wants to communicate directly with the headman** and deliver their aid to those in need. We work with the **district governor** in various social responsibility projects such as working for the disabled. Since the only problem is the **MERNİS system**, things such as the contact information of the neighborhood and the list of those in need do not come directly to the headman's office anymore. Naturally, in big neighborhoods, it can be **difficult for the headman to get to know everyone** and **form an aid organization** unless there is a demand from the locals."

# Evaluation of Findings

In resilient cities, especially at the neighborhood scale, each of the economic, environmental, social and governance dimensions that make up the city should be **well-structured**, and strategies should be developed to create a neighborhood structure with **high adaptability to risks**. In neighborhoods where each dimension is not sufficiently developed, the level of well-being in the neighborhood will **decrease** as **both social inadequacies and ecological excesses** will arise, as the Doughnut Economy Model presents. It is possible to talk about the inability to produce **adequate strategies for the governance dimension**, especially at the neighborhood scale, within the scope of the resilient city approach, and therefore, there is not enough cooperation between the neighborhood and the headman or between the headman and the municipality.

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