

**Mobile Participation As A Source of Self Organizing City:  
Bridging the Gap Between Policy Making and Public Act**

**Participation for Sustainable Mobility**

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- How does social media works as a mobile participation tool in a «self-organizing system»?
- What is the role of the social media in decision making process?
- What can we obtain from different sources -Facebook, Twitter, Instagram and Foursquare-?
- How does this process occur in Turkey?



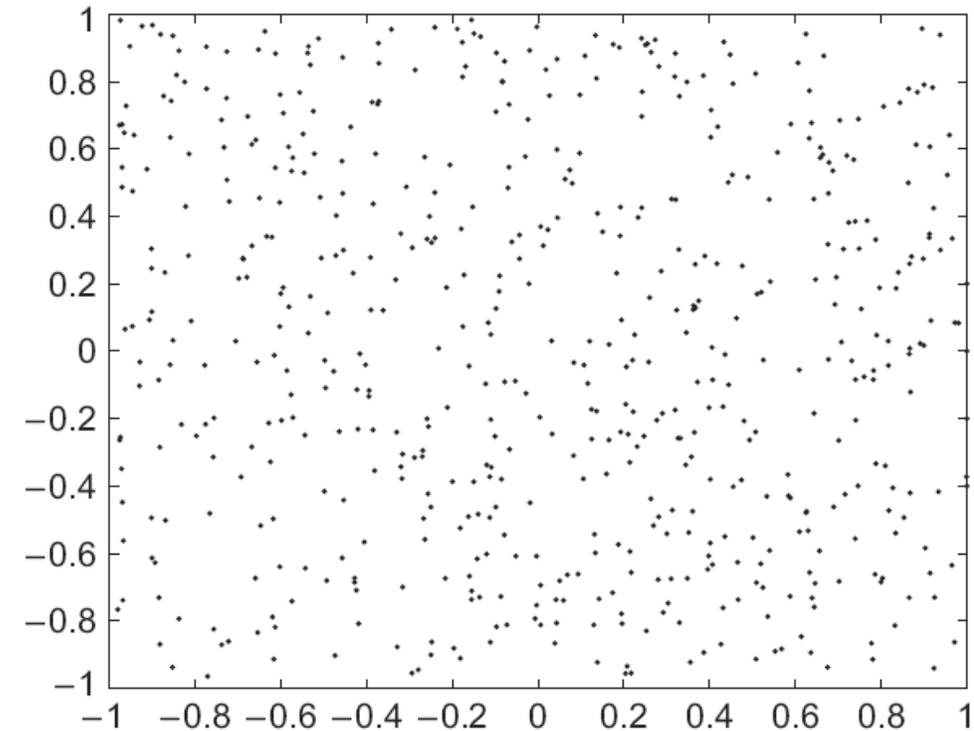
## Scope and Methodology:

- Definition of a Self-Organizing System
- Evaluation of the role of social media in decision making processes
- Scope of different tools
  - Facebook, Twitter, Instagram and Foursquare
- Discussion over a recent urban management process in Turkey
  - Twitter usage in one of the current urban management processes
    - Hashtag analysis

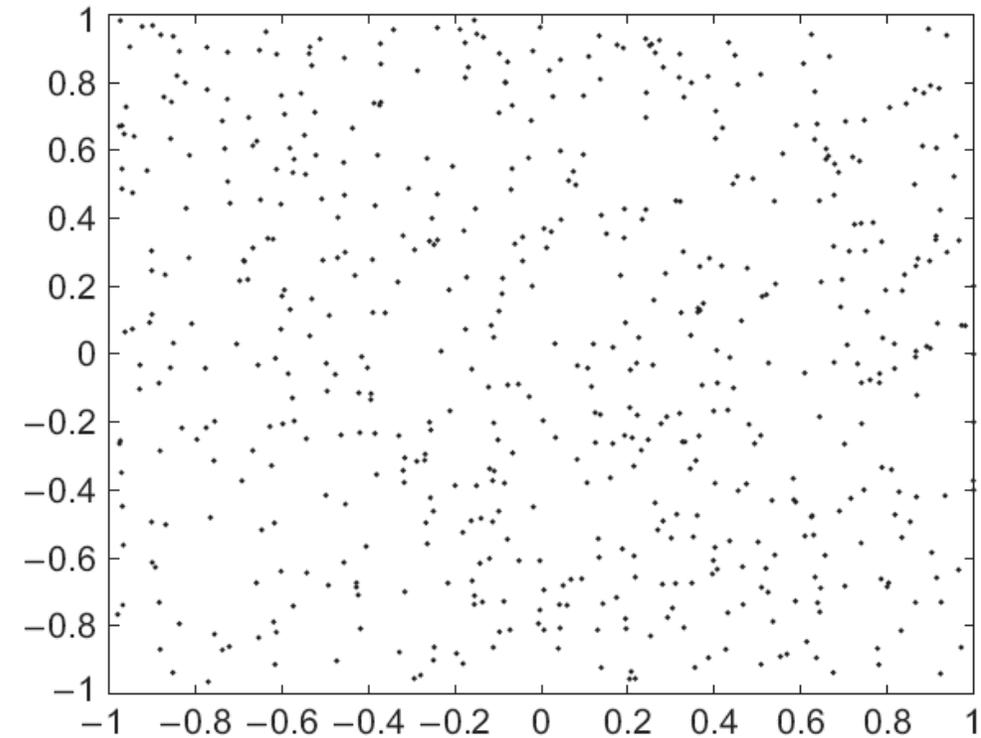


## Self Organization:

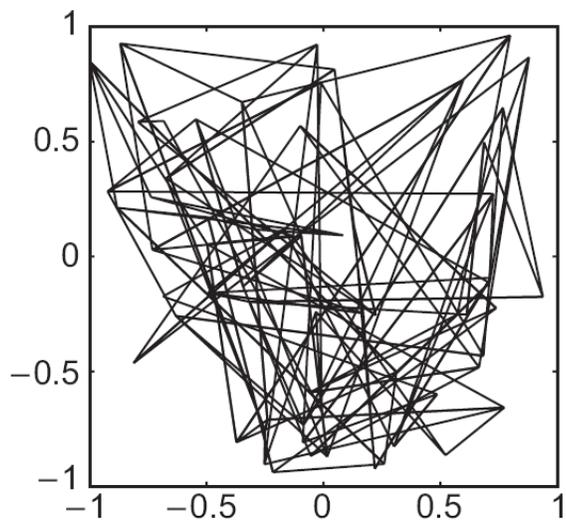
- primary purpose of the notion of self-organization:
  - the discovery of independently acting patterns of the environment *without the intervention of a teaching input*
- implementation
  - adaptation must be based on information that is available *locally*
- three principles  
*self-reinforcement, competition, cooperation*
- *Enduring process*



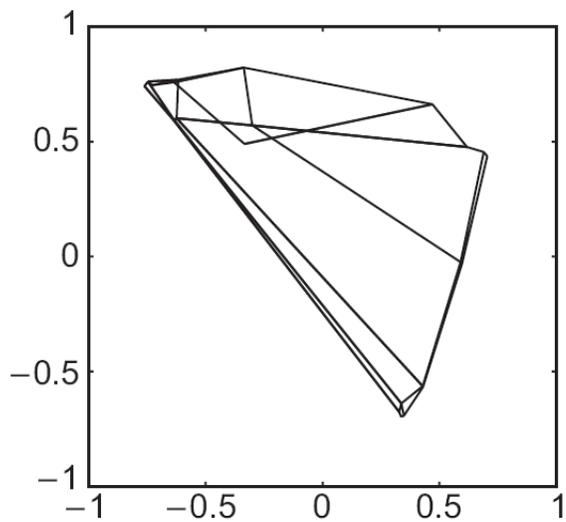
- 
- Requirements:
    - inputs should be exposed to a sufficient number of **triggering factors**
    - only the **winning input** and its **neighbors** adapt the changes easily
    - the resulting adjustment enhances the responses to the same or to a similar input that occurs **subsequently**



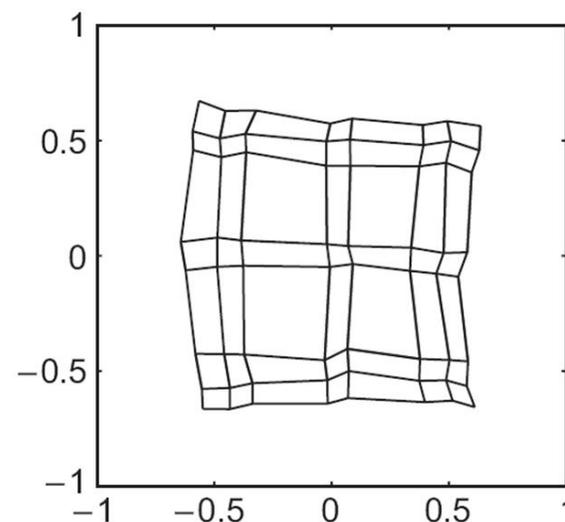
- Patterns changes according to the inputs and frequency of recurrence



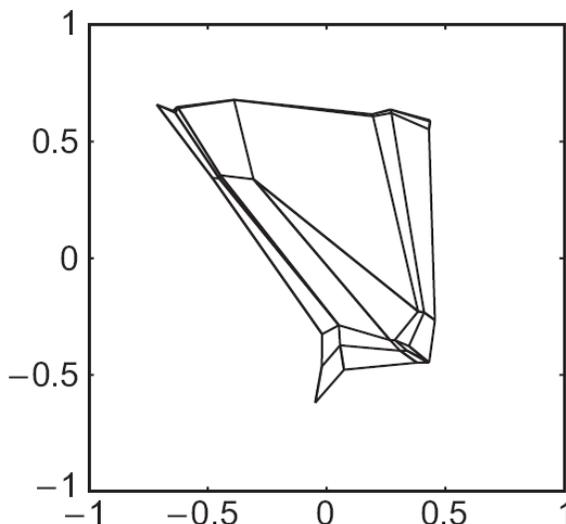
Initial randomized state



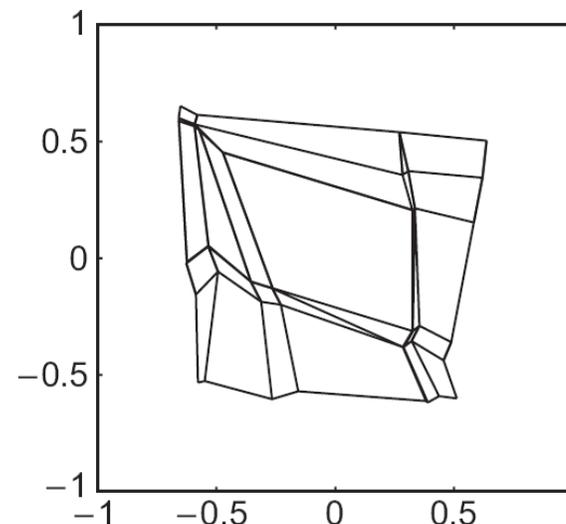
Iteration # 300



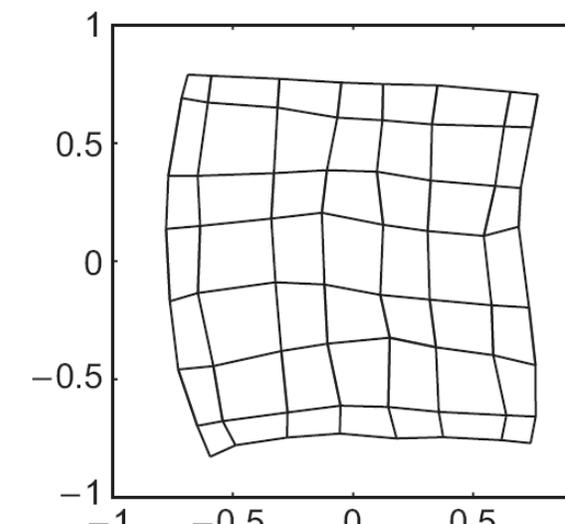
Iteration # 1000



Iteration # 600



Iteration # 800



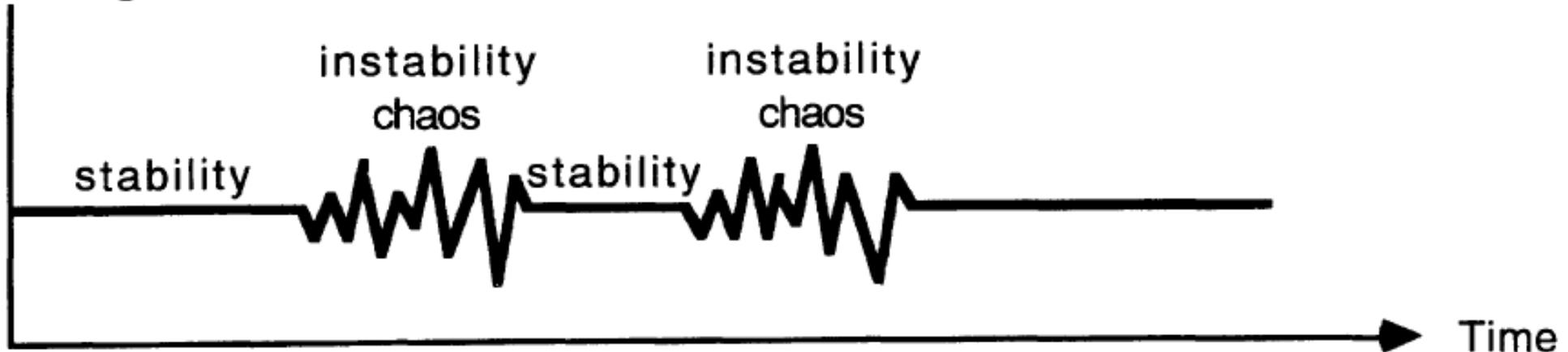
Iteration # 10000

## Self Organization and The City :

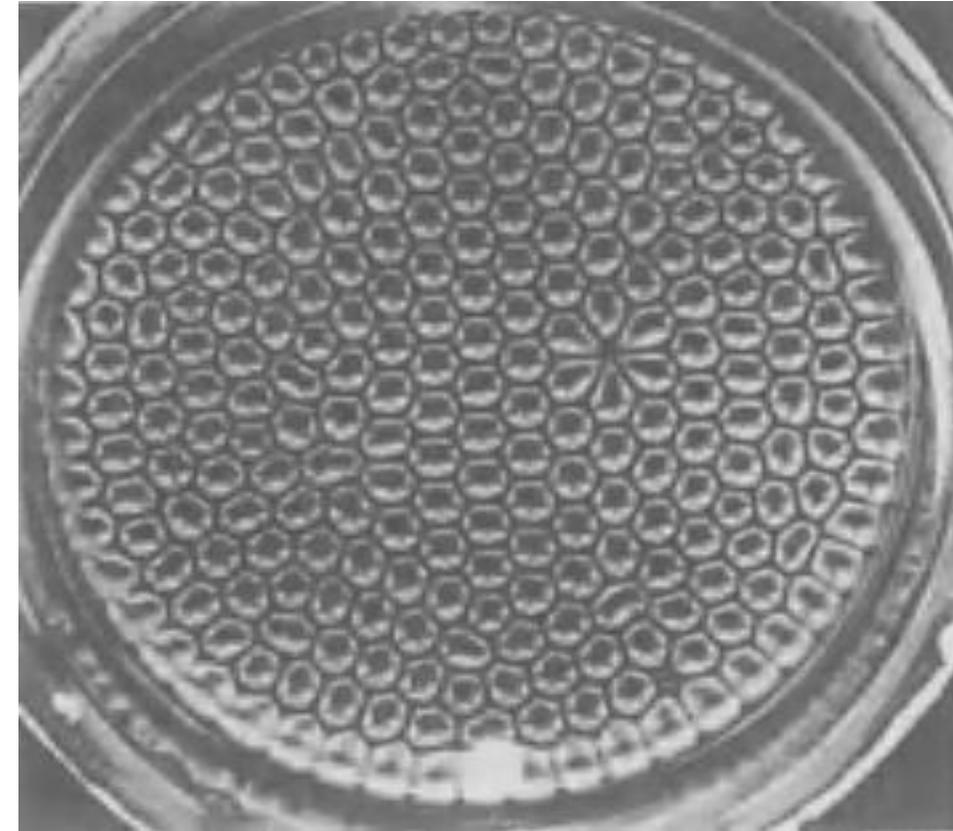
«Self-organizing systems, be they cities or the individuals that form their subsystems, are open, complex and are characterized by circular causality, reproduction and structuration» (Juval Portugali 1999)

- the evolution of open and complex systems involve
  - a long period of 'steady state'
  - followed by a short period of strong chaos
- from which the system re-emerges to a new level of steady state and structural stability, and so on..

Socio-spatial configuration



«In certain situations external forces acting on the **system do not determine/cause its behavior, but instead trigger an internal and independent process** by which the system spontaneously self-organizes itself:» (Juval Portugali)



Christine Bénard experiment (1996)

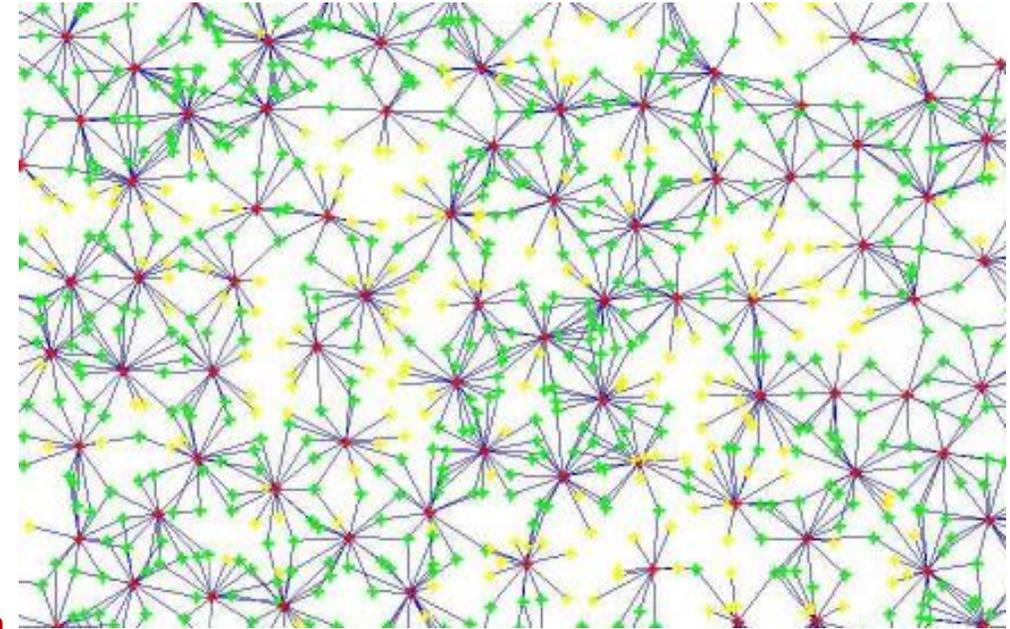
the spatial order appears spontaneously, by means of self-organization.

- the complexity of the self-organization process is created by individual behaviors
- the action get the **power from below**, which can be defined as a **bottom-up process**
- the process is shaped by the social and physical environment -it has expanded since the **virtuality** has changed the **environmental boundaries** -
- public protests triggered by a government act provide an example and reflect the growing expectations of citizens as well as their reactions against the issues that they were affected

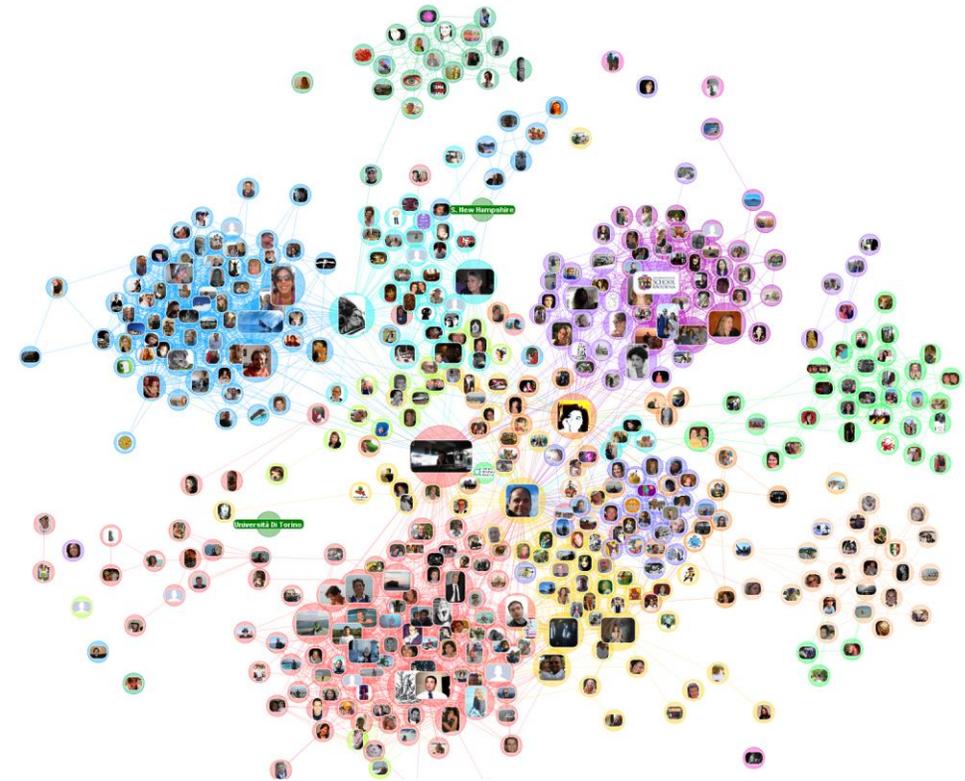


## Social Media As A Source of Self Organizing City:

- using the social media with a **communicative approach** enables both the administrators and citizens to **spread the necessary information** to the **larger numbers of individuals**
- the social media interfaces such as Facebook and Twitter hold a great potential for a self-organizing process by **reflecting personal experiences** into the real world and provide information about **collective trust and satisfaction**
- this **big data** obtained from social media can be seen as a **part of complexity theory** and as a **virtual self-organizing system**



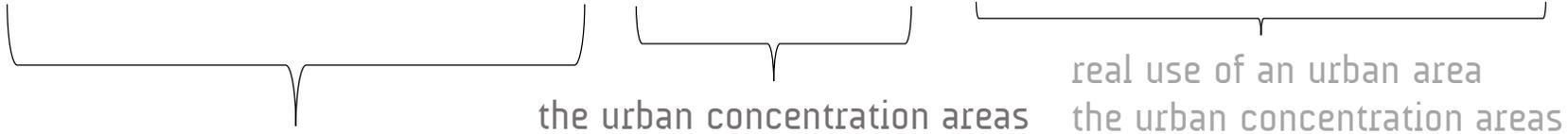
- information spread through social media reaches random passive users and allows remote participation
- this creates a certain degree of knowledge and increase in the capacity building
- people tend to support the planned policies and projects when they are involved in the decision-making process



## Purpose of Using Different Tools:

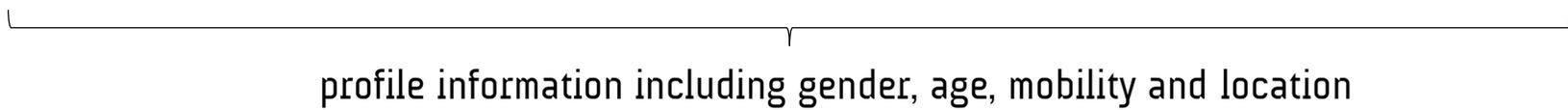
How can governments benefit from big data?

Facebook	Twitter	Instagram	Panaromio	Foursquare
<ul style="list-style-type: none"> <li>• the number of mentions</li> <li>• comments</li> <li>• likes</li> <li>• followers</li> </ul>	<ul style="list-style-type: none"> <li>• the number of mentions</li> <li>• comments /tweets</li> <li>• likes</li> <li>• followers</li> <li>• hashtags</li> </ul>	<ul style="list-style-type: none"> <li>• the number of photos</li> <li>• likes</li> <li>• followers</li> <li>• hashtags</li> </ul>	<ul style="list-style-type: none"> <li>• the number of photos</li> <li>• likes</li> </ul>	<ul style="list-style-type: none"> <li>• the number of check-ins</li> <li>• photos</li> </ul>



vast information on general public opinions and different approaches of various groups

real use of an urban area  
the urban concentration areas



profile information including gender, age, mobility and location

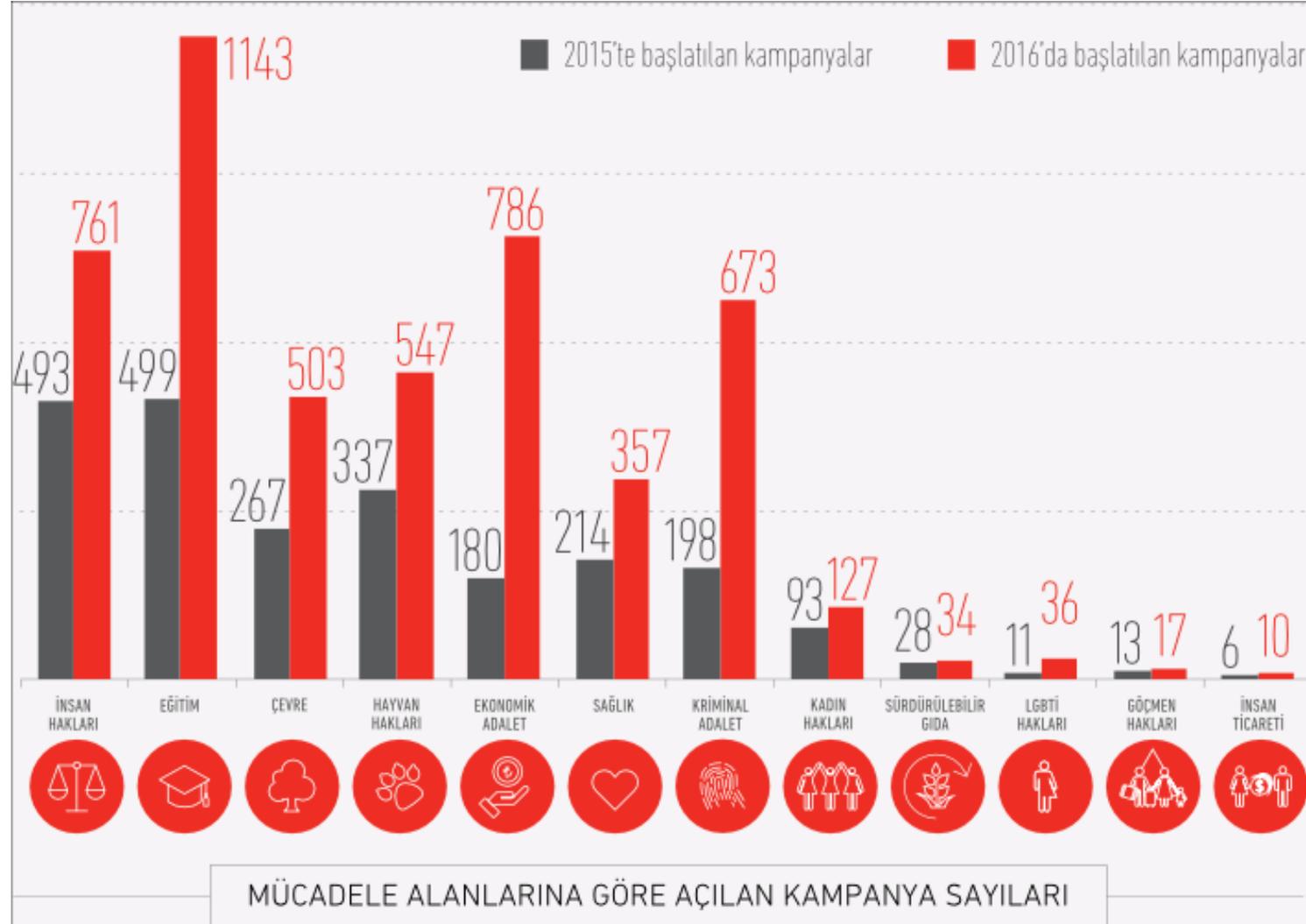




- the main idea of Twitter is based on sharing any information with a limited number of characters
  - multi-language,
  - more than 300 million active users monthly.
  - 500 million, 140 characters long tweets every day

- provides a
  - certain level of simplicity,
  - user-friendly interface, and
  - high intensity of user contributions
  - powerful source for analyzing citizens' sensitivity on a certain issue in a particular location

## What Is Hapenning In Turkey?





**TÜRKİYE'NİN ZEYTİNLİKLERİNİN ÖLÜM FERMANINA HAYIR!**

5 ca.  
@görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz...  
#ZeytinHayati...  
Jun 06, 2017

Yeni Erkek Gazetesi  
Cumhuriyet Gazetesi  
Bakanlık  
1017-06-08

**CHP'li Akın'dan iktidara soru bombardımanı!**



görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz...  
Jun 06, 2017



**ZEYTİNLİKLERİMİZİ KATLEDECEK DÜZENLEMİYİ YÜKÜN MÜHALEFETİMİZ VE KAMUDUYU BASKISI SONUCU GERİ ADIM ATARAK KOMİSYONA ÇEKTİ!**

**KARARLI MÜCADELEMİZ DEVAM EDECEK!**

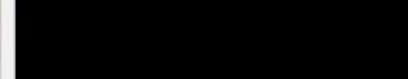
Bakın! Milletvekili Ahmet Akın  
#ZeytinCanlılar #ZeytinHayati #ZeytinBolumu https://t.co/1YkRFP0U  
Jun 06, 2017



**Cumhuriyet**  
@cumhuriyetgzt

Başbakan Binali Yıldırım'dan talan itirafı: Zeytin mi daha önemli, tesis mi? [cumhuriyet.com.tr/haber/siyaset/...](http://cumhuriyet.com.tr/haber/siyaset/)

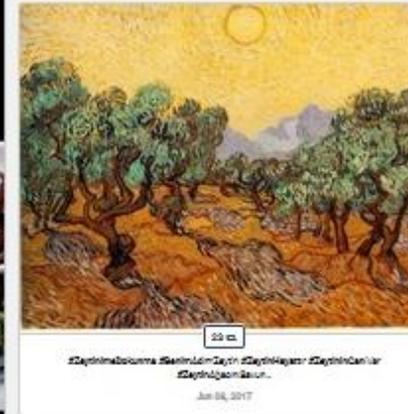
12:20 - 06 Haz 17  
50 ca.  
@öğrencilerimiz @görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz...  
Jun 06, 2017



Yani, öylesine ciddiye alacaksın ki yaşamayı yetmişinde bile mesela zeytin diyeceksin.

Nazım Hikmet

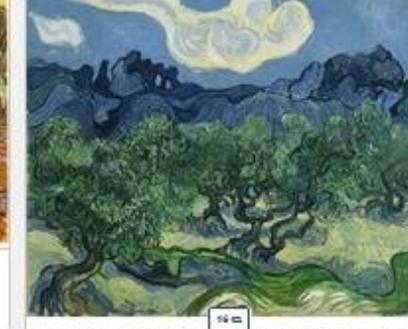
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#ZeytinHayati #ZeytinBolumu #ZeytinCanlılar https://t.co/1YkRFP0U  
Jun 06, 2017



5 ca.  
@öğrencilerimiz @görselöl. @öğrencilerimiz @görselöl. @öğrencilerimiz...  
Jun 06, 2017

**ZEYTİN AĞACIMA DOKUNMA!**

5 ca.  
#ZeytinBolumu #ZeytinHayati #ZeytinCanlılar https://t.co/1YkRFP0U  
Jun 06, 2017



- public act started against a government bill which will open olive grooves, meadows and coasts to industrial development with the permission of Ministry of Food, Agriculture and Livestock with the approval of a board selected from 6 Ministeries.
- the proposed regulation will be valid for each city that has one of these land uses and
- all initiatives that has industrial registry certificate will allow to build a facility on the site without paying taxes.
- The bill was proposed in 2002 for the first time and rejected 6 times since then



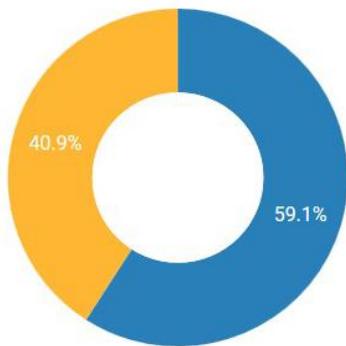
- the bill criticized because of
  - its economic results in agriculture and
  - social destruction for olive producers in the country
- the public act spread in the spring of 2017 and the government agreed to make changes in the bill
- the Twitter played an important role in the expansion of the reactions



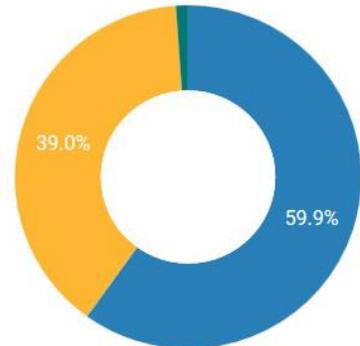
- according to the data obtained from the tweets the most of the users tended to write a custom tweet with the
  - #ZeytinHayattır (olive is life),
  - #zeytinimedokunma (do not touch my olive),
  - #zeytinağacı (olive tree),
  - #zeytinmilliservettir (olive is national wealth),
  - #zeytinbarıştır (olive is peace),
  - #birliktemümkün (it is possible together),
  - #zeytin (olive) hashtags



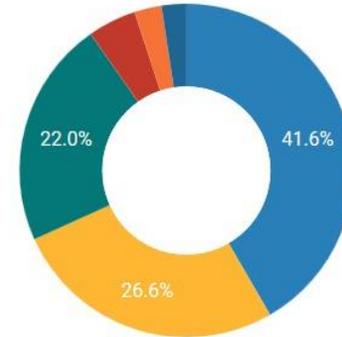
- almost 40% of the users retweeted the mentions
- most of the users linked their tweets to the change.org campaign
- it has seen that approximately 40% of the tweets sent via mobile phones, this followed by desktop computers



Male  
Female

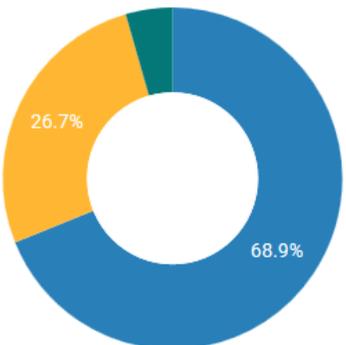


Original Posts  
Retweets  
Replies

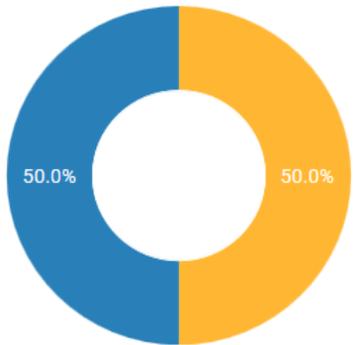


Android  
Desktop/Web  
iPhone  
Facebook  
iPad  
Other

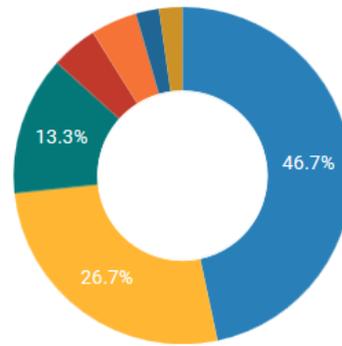
(June)



Retweets  
Original Posts  
Replies



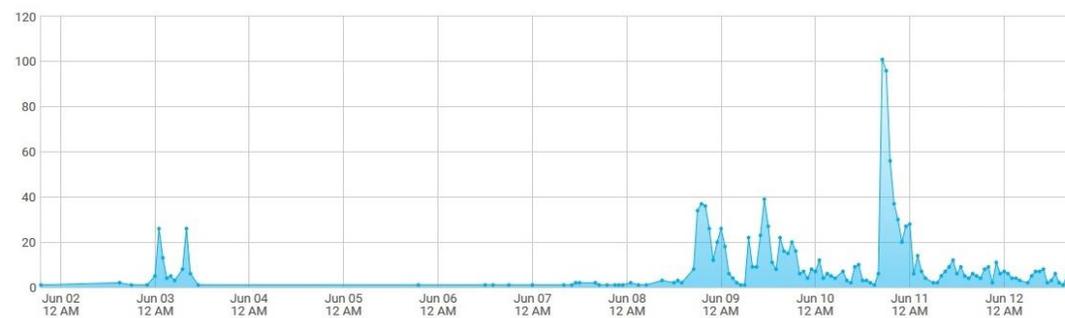
Female  
Male



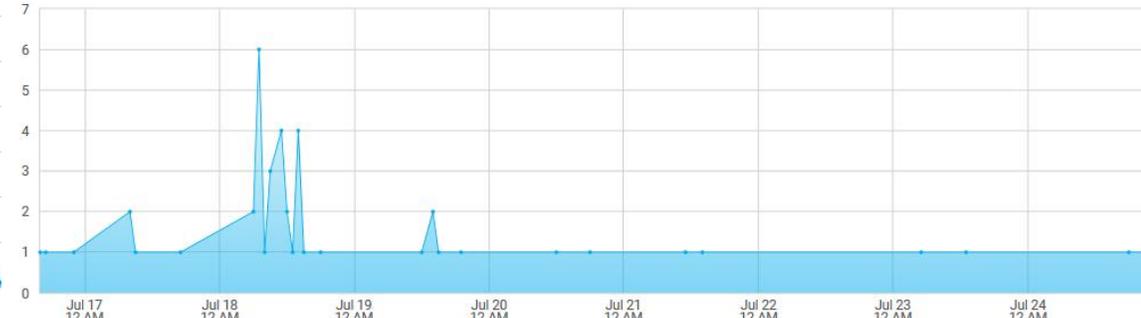
Android  
Desktop/Web  
iPhone  
Facebook  
iPad  
Twitter lite  
Mobile Web

(July)

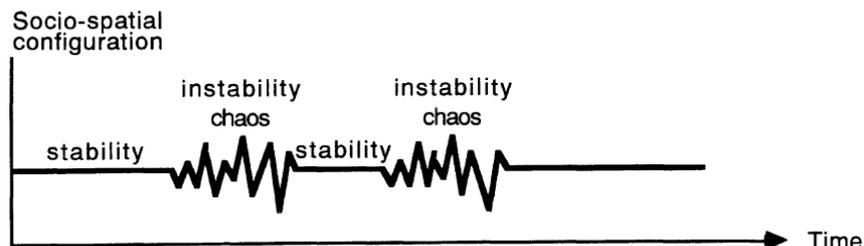
- the government organized a public meeting on 31<sup>st</sup> of May in 2017 and announced that they are not going to withdrawal the proposal
- one week later tweets related to the bill reached at the peak point
- the process mainly conducted by the citizens who will be directly affected by the change, and shortly it turned out to a public reaction on a virtual platform.



(June)



(July)



- the tweets sent in a week reached approx.
  - more than 1000 people, and
  - more than 100.000 impressions
- the area covered mainly Turkey but also United States, Brazil, some parts of Europe, Irland, Persia and India. This expansion also indicates the virtual local borders.



(June)



(July)

- second meeting was between the government and public, after the meeting the government expanded the olive grove definition regarding the number of trees.
- accordingly the site will be approached as an olive grove even if there is one olive tree on the land
- the penalties increased in case of damaging the trees
- the land uses including housing and touristic facilities were banned on the grooves
- the NGOs were included to the conservation board

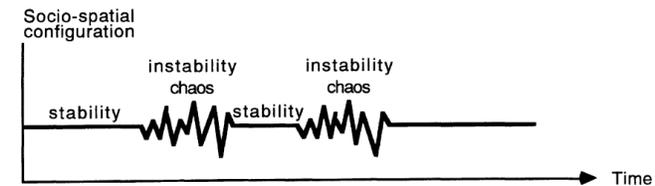
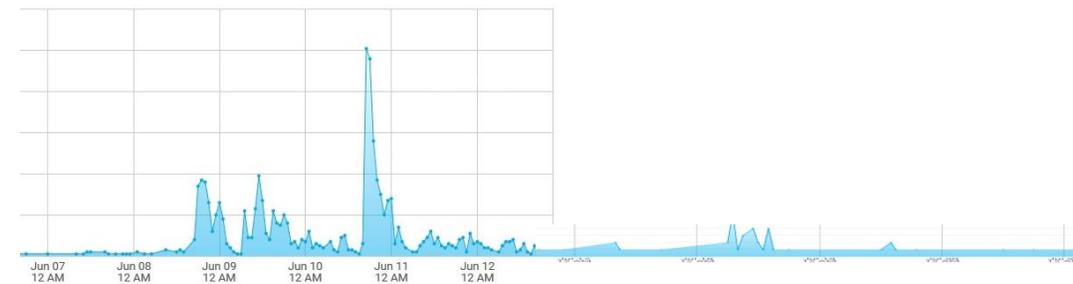


Kamuoyu baskısı zeytin kıyımını durdurdu!

<https://gazeteciyazaryusufyavuzblog.wordpress.com/2017/06/13/kamuoyu-baskisi-zeytin-kiyimini-durdurdu/>



- once the communication between citizens and government has started, the process moved to another stage, and the role of the Twitter transformed from being a platform for the public act to a tool for the information flow.
- the number of tweets started to decrease
- after the second meeting bill was drawn back for re-evaluation

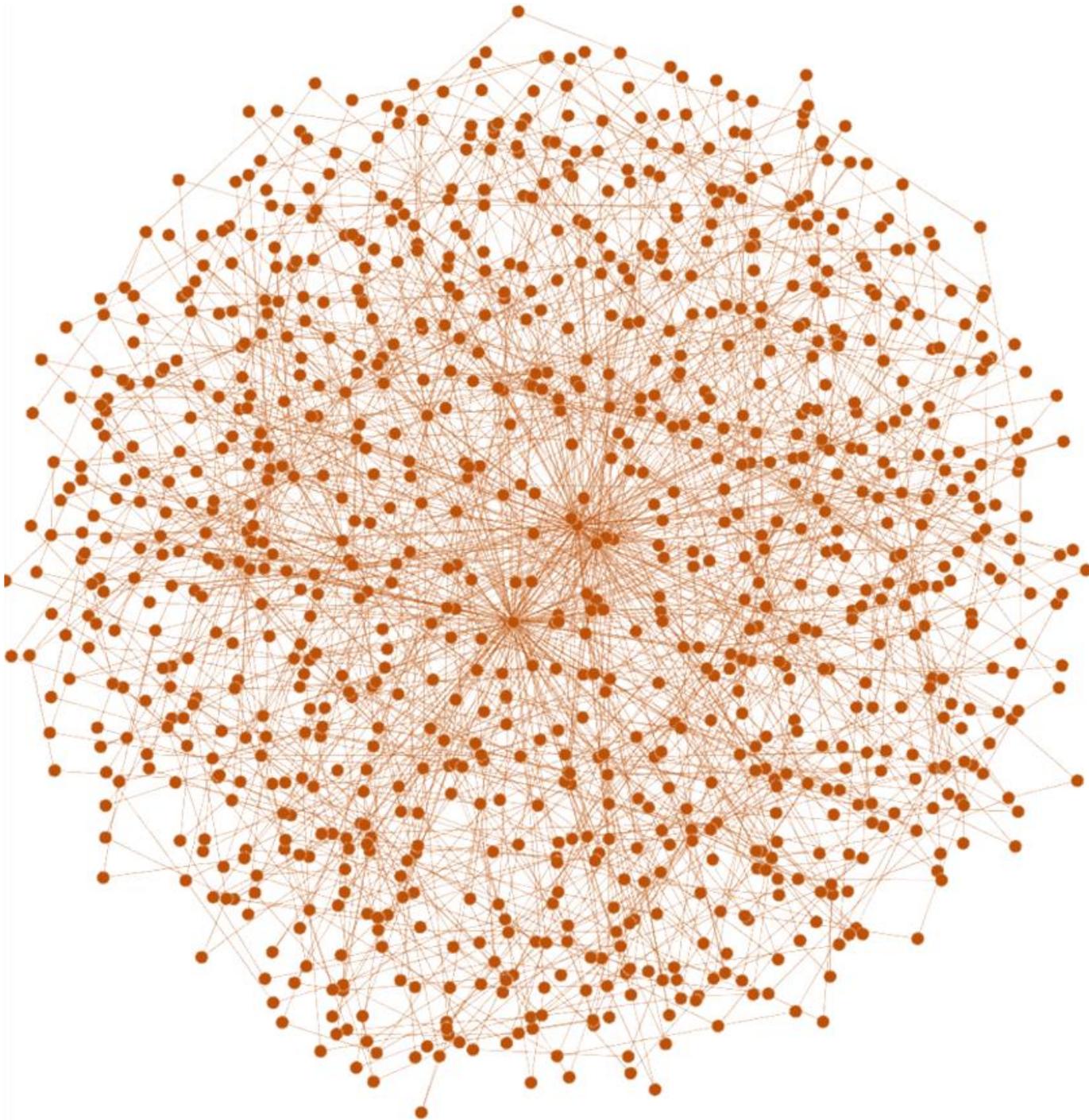


## Results and Discussion

- The big data obtained from social media is certainly enriching the social interaction, the function of cities, and planning and decision-making experiences
- But it is important to integrate these cost and time effective technologies into existing methodologies for strengthening the public engagement
- There might be some accessibility concerns on the usage limitations in terms of the income and age
- The social media should be approached as one tool out of others
- It is still an emerging methodology, which can be criticized in terms of its dependence on internet accessibility, costs and privacy.

- In the case of Turkey mobile technologies provided not only a virtual communication platform, but also created an opportunity to face to face meetings with the authorities
- Even in a short period of time an action of the government can create a public reaction, can be spread very rapidly through social media and create all the possibilities for a participatory planning process





THANK YOU.....