The Role of Citizens in the Smart City

Lasse Berntzen

SMART 2016 : The Fifth International Conference on Smart Cities, Systems, Devices and Technologies
Smart cities

- Smart city is a concept
- Most definitions includes the use of computer technology
- Main objective is to improve quality of life for its citizens
  - Provide better services
  - Reduce environmental footprint, sustainability
  - Facilitate participation
Smart cities

“Projects of smart cities have an impact on the quality of life of citizens and aim to foster more informed, educated, and participatory citizens. Additionally, smart cities initiatives allow members of the city to participate in the governance and management of the city and become active users”
Smart cities

Some application areas:
• Communication
• Culture
• Energy
• Environment/climate
• Health
• Tourism
• Transport
Smart Cities

• Many definitions include more administrative aspects:
  – Good governance
  – City management

• Where CITIZEN PARTICIPATION plays an important role
Big Data for Smart Cities

- Sensors
  - Including real-time video
- Human sensors
- Social media
- Open data sets
Smart

- Smart city
- Smart buildings
- Smart devices
- Smart citizens
The Role of Citizens

Citizens can have different roles in the smart city:

• **Political processes and decision-making**
• Experts (sharing insight)
• Volunteers (sharing time)
OECD Model

Political participation

• In order to take active part in policy-making and political processes, the citizens need access to information

• The transparent smart city
Preconditions for participation

This model was presented at ICDS 2010
Berntzen, L. & Karamagioli, E.
Regulatory Measures to Support eDemocracy
IEEE Computer Society

Preconditions for user participation and involvement
Transparency

• Documents
• Meetings
• Processes
• Benchmarking
• Decision-makers and their agendas
• Disclosure
Documents

- Access to documents used in the political decision making processes
- Mail records
Meetings

• Agendas
• Proceedings (webcasts)
• Minutes
Meetings

**Møteplan 2. kvartal 2016**

_Du ser her en liste over alle møtene det er sendt ut innkalling til, ordnet etter utvalg og ukenummer. Dersom du klikker på et ukenummer, får du en liste over alle møtene den uken, og ved å klikke på et møte får du mer informasjon om det._

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_Førige kvartal | Neste kvartal_
Webcasting
Processes

• It is important for citizens to understand the processes leading to the decisions
• Processes may be visualized as a flowchart
• Timeline
Digital Planning Dialog

http://nettv.regjeringen.no/digitalt-planregister-og-plandialog
Benchmarking

• The possibility to compare how the city is doing compared to other cities.

• Indicators
### Grunnskoleopplæring - KOSTRA

#### Lag egne tabeller og figurer

1. Velg tabell som inneholder de variablene du ønsker
2. Velg verdier fra ulike variabler
3. Se din skreddersydde tabell, eksporter eller lagre

**Tabell: 04684: D. Grunnskoleopplæring - nivå 3 (K)**

**Logg inn**

<table>
<thead>
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<th>Rotér tabell</th>
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#### D. Grunnskoleopplæring - nivå 3 (K) etter region, statistikkvariabel og tid

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<td>243 098</td>
<td>277 328</td>
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<td>0709 Larvik</td>
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<td>427 949</td>
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**Fotnote(r):**
En generell kompensasjonsordning for merverdiavgift innført fra 1.1.2004 kan føre til brudd i trendserien fra 2003 til 2004 i ulike regnskapsbegreper. Ordeningen vil kunne innebære reduksjon i netto driftsutgifter totalt, netto driftsutgifter på funksjon/tjenestemål, korrigerte brutto driftsutgifter totalt, korrigerte brutto driftsutgifter på funksjon/tjenestearområde og brutto driftsutgifter på funksjon/tjenestearområde eller økning i brutto driftsinntekter på funksjon/tjenestearområde. For nærmere forklaring henvises til Faglig veiledning kapitlerne 2B - 2E.

Funksjon 383 for musikk- og kulturskoler er flyttet fra tjenester for grunnskole til tjenester for kultur f.o.m 2001

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**University College of Southeast Norway**
Decision makers

• The personal interests of decision makers should be known to the citizens
Register of interests

Søk

Her kan du gjennom søk i kommune, fylkeskommune eller kommunalt eid selskap søke på personer i kommunal sektor og se deres ulike roller som blant annet folkevalgt, ansatt, styreleder, styremedlem, oppdragstaker og innehaver av andre næringsinteresser.


Namn: Kjendis, Karen Anne

Registererte politiske vev, ansettoffsforhold samt andre vev og interesser:

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<th>TYPE INTERESSER</th>
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<td>Utvalg</td>
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<td>Utvalg</td>
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Kontakt oss: styrevvervregisteret@ks.no

© Styrevvervregisteret
Disclosure

• Citizens should be able to ask for information regarding the running of the city.
Information

• Information (and Transparency) is important, not only for the citizens, but for employees, the press etc.

• No participation without informed citizens
OECD Model
Consultations

• The city asks for input on specific issues, and provides a service for collecting input from its citizens
• Some kind of feedback should be provided on how the input has been used
• If input is not valued, interest will disappear
OECD Model
Participation

• Consultations are top-down. The city asks its citizens for input on specific issues
• Participation is different. The citizens may raise issues they are concerned about
• The goal is to have a dialog between the city and its citizens.
Discussion Forums

• Several Norwegian municipalities established discussion forums to collect input and start dialog with their citizens.

• Unfortunately, they have been closed down, one after another due to abuse.

• Racial discrimination, attacks on city employees.
Citizen initiative

• Between elections, citizens can raise issues by making a “citizen initiative”.

• The citizen initiative is embedded in the legislation. If the initiator manages to collect signatures from 2% of the population or 300 signatures, the local council is obligated to discuss the initiative.

• No positive response is guaranteed.
MinSak.no (MyCase)

• The government has established a platform “minsak.no” to facilitate both proposals and collection of signatures

• The platform has so far 685 registered initiatives
Kom med din sak!

Her inne kan du foreslå saker du mener vil gjøre din kommune eller fylkeskommune bedre.

På menyen til venstre kan du enten foreslå en sak selv, eller du kan skrive under på en sak som er foreslått i kommunen din, og som du vil støtte. For å samle underskrifter kan du også dele saken med venner og kjente på e-post, Twitter, Facebook eller Google+. Hvis du samler nok underskrifter, må kommunen eller fylkeskommunen du bor i vurdere saken din.

Du trenger underskrifter fra to prosent av innbyggerne, alternativt 300 personer i kommunen eller 500 personer i fylket.

Alle kan foreslå saker i sin egen kommune eller fylkeskommune. Du må ikke ha stemmerett eller ha fylt 18 år.

Se saker fra ditt hjemsted

Aktuelle saker
Social Media

- Many municipalities (184) have established themselves in social media (Facebook)
- These pages are mostly used for questions and answers, but there is some examples of dialog taking place
- Citizens have to use their Facebook profile, which disciplines the discussions
Social Media

• Two of my students made a solution to track the use of municipal Facebook pages
• Show comments, reactions and shares
Social Media

http://socialmediadata.citizencentric.net/maps_tableau.html
Participatory Budgeting

- Participatory budgeting has become widespread, where the citizens vote on the use of (a portion) of the total budget for a city. In this case, the results are a consequence of the participation.

- Participatory budgeting is a powerful mechanism to make participation work. The incentive to participate is high, since the citizens will see direct results from taking part in the decision making.
Political Participation

- Political participation is seen as important by many researchers
- A shift towards direct democracy
- Or support for indirect democracy?
- What is successful participation?
  - Quantity?
  - Impact?
Political Participation

• In my opinion, the “smart city” should listen to its citizens, since they sometimes have concerns that should be taken into account
• At the same time, we have to be realistic. Not all citizens have opinions on everything
• In their book “Stealth Democracy”, Hibbing and Theiss-Morse from USA support this
“Stealth Democracy”

• “The last thing people want is to be involved in more decision making: They do not want to make political decisions themselves; they do not want to provide much input to those who are assigned to make these decisions; and they would rather not know all the details of the decision-making process.”

• Hibbing and Theiss-Morse build on empirical data from U.S.A.
The Role of Citizens

Citizens can have different roles in the smart city:

• Political processes and decision-making
• Experts (sharing insight)
• Volunteers (sharing time)
Mobilization

• The smart city may use information technology to mobilize citizens to help making the city a better place to live
• I will now show some practical examples on how this can be done
Human sensors

• A “human sensor” is a person that observes some issue and reports it using some platform.
• Smart phones
Green Watch Project

• The project distributed 200 smart devices to citizens of Paris. The devices sensed ozone and noise levels as the citizens lived their normal lives, and the results where shared through a mapping engine

• The project showed how a grassroots-sensing network could reduce monitoring costs dramatically, and at the same time engage citizens in environmental monitoring and regulation
FixMyStreet

- FixMyStreet is an application that allows citizens to report on issues and problems through their computer or smart phone.
- The application is location based, it uses the address or GPS coordinates as a tag to show the exact location of the issue or problem. Typical problems are holes in the road, broken light bulbs in street lightning, abandoned vehicles, broken water pipes etc.
FixMyStreet

• FixMyStreet mobilizes citizens to alert the city administration when something needs to be fixed
• The application also provides feedback on status.
• It is possible to see how fast (or slow) the city is responding to reported problems
• FixMyStreet is widely used in United Kingdom, but the software itself is open source, and has been adopted by cities all over the world. In Norway, the application has been translated into „FiksGataMi“
• In this case the citizens are acting as „human sensors“. They observe something is wrong and report it
FixMyStreet

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Manglende skilting ved kryssing av gangvei øvers i Torsrudveien

Rapportert i kategorien Trafikkskilter anonymt 16:00, mandag
Sendt til Røyken og Statens vegvesen region sør 5 minutter senere

Det er ingen skilt i Torsrudveien før bilister som krysser den.
Bilveien går rett over gangveien, og det er fare for syklende og gående, særlig skolebarn. Fartscumpen er kun på den ene siden og for langt unna, slik at bilene gir gass etter den og over gangveien.

Det er mye biltrafikk over dette gangveikrysset og farten er ofte høy.

Her trengs det tydelige skilt som forteller at man krysser en
Sauberes Wiesbaden

• The project aims to promote the participation of the citizens to quickly and easily report illegal garbage in the area of Wiesbaden, Germany

• An app has been developed to make reporting easy. The app uses the location data from the mobile phone to give exact position of the problem
SafetyNet

- SafetyNet is a self-help network. The initial idea was to provide self-help to spouses of patients suffering strokes or dementia.
- The platform is run by a consortium of municipalities, and have later been extended to support parents of children with psychological problems, and relatives of drug abusers.
SafetyNet

• The whole idea is to learn from other citizens experiencing the same situation
• The platform includes video communication between network members, and access to a knowledge database with information written by medical professionals
SafetyNet

• The network is run by coordinators employed by the municipalities, and these coordinators also arranges off-line events

http://www.trygghetsnett.no/safetynet/safetynet-article755-599.html
Open Data

• Open data may be important for making even better applications for citizen participation
Conclusion

• Participation is more than political participation
• Researchers have been too concerned with political engagement
• But participation is more than politics, it can be used to build better services and achieve better quality of life for the citizens
Thank you for listening

If you are interested, please stay in touch

lasse.berntzen@hbv.no