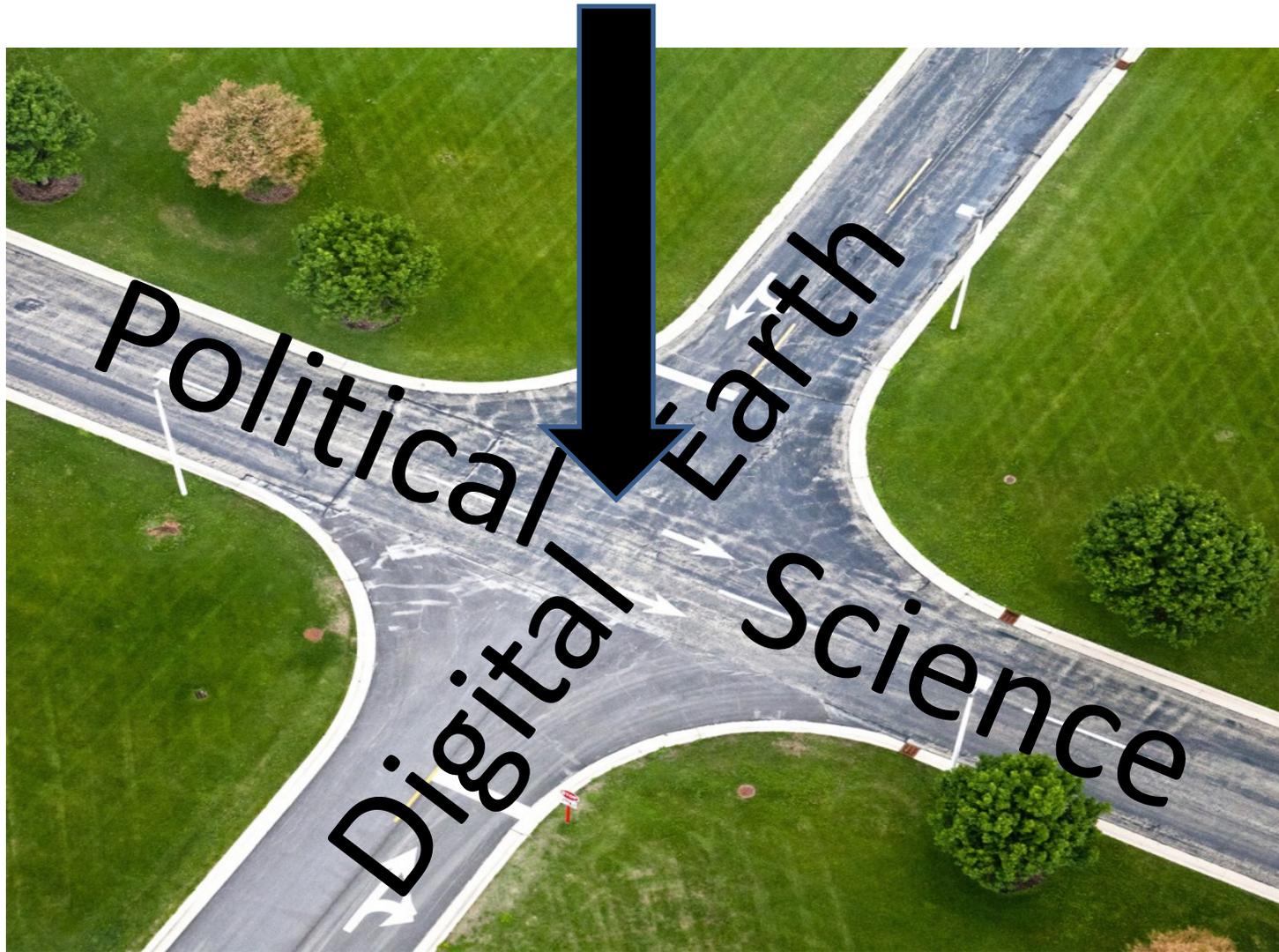


Transparency and Accountability on Digital Earth: A down-to-earth account

Yola Georgiadou



Goals



Digital Earth

- Annoni et al. (2011). *A European perspective on Digital Earth*
- Georgiadou et al. (2011). *A Digital Earth view from East Africa*
- Craglia. et al. (2012). *Digital Earth 2020: towards the vision for the next decade*
- Goodchild et al. (2012). *Next-generation Digital Earth*
- Ehlers et al. (2013). *Advancing Digital Earth: Beyond the Next Generation*
- Foresman et al. (2014?) *Digital Earth Curriculum (under review)*
- ...

Goals = Things we care about passionately

- Equity (equal access)
- Privacy
- Efficiency
- Security
- Transparency
- Accountability
- Resilience
- Sustainability
-

Goals ... Principles... Values... Criteria



Pres. Obama's Open Government

THE WHITE HOUSE

Office of the Press Secretary

January 21, 2009

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND
AGENCIES

SUBJECT: Transparency and Open Government

My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government. Transparency promotes accountability and provides information for citizens about what their Government is doing.



President Obama's Goals

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ABOUT

COUNTRY COMMITMENTS

NETWORK

OUTREACH

COUNTRY COMMITMENTS



- COUNTRY COMMITMENTS
- PARTICIPATING COUNTRIES**
 - ACTION PLAN TEMPLATE
 - GUIDANCE FOR PARTICIPATING COUNTRIES
 - INTENT TO JOIN OGP
 - OGP TIMELINE
 - INDEPENDENT REPORTING MECHANISM
 - CONSULTATION

Country Log-In

Click a country name to view its commitment to OGP

ALL | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P | R | S | T | U

1 of 6 >>

- ALBANIA** ✓ Commitments Delivered
- ARGENTINA** ✓ Commitments Delivered
- ARMENIA** ✓ Commitments Delivered
- AZERBAIJAN** ✓ Commitments Delivered
- BRAZIL** ✓ Commitments Delivered
- BULGARIA** ✓ Commitments Delivered
- CANADA** ✓ Commitments Delivered
- CHILE** ✓ Commitments Delivered

Ehlers et al 2013

“DE will not be based on a ready-to-make grand concept but will rather evolve as a series of often small and sometimes disruptive changes.”

“In full bloom, DE will manage to bridge the gap between its developers and stakeholders, particularly the private citizen, and thereby stimulate further innovation and co-creation processes.”

Ehlers et al 2013

- *DE will evolve as a series of often small and sometimes disruptive changes [in relations between ...]*
- *DE will bridge the gap between its developers and stakeholders*
- Commerce vs Citizen: disruptive changes
- Citizen to Citizen: large (?) changes
- Government vs Citizen: small changes (?)
- DE will bridge this gap in different ways depending on the type of the policy problem

DE will evolve as a series of often small and sometimes disruptive changes

→ *Empowering citizens*

DE will bridge the gap between its developers and stakeholders

→ *Engaging society*

- Commerce vs Citizen: disruptive changes
- Citizen to Citizen: large (?) changes
- Government vs Citizen: small changes (?)

- DE will bridge this gap in different ways depending on the type of the policy problem

1. Empowering citizens

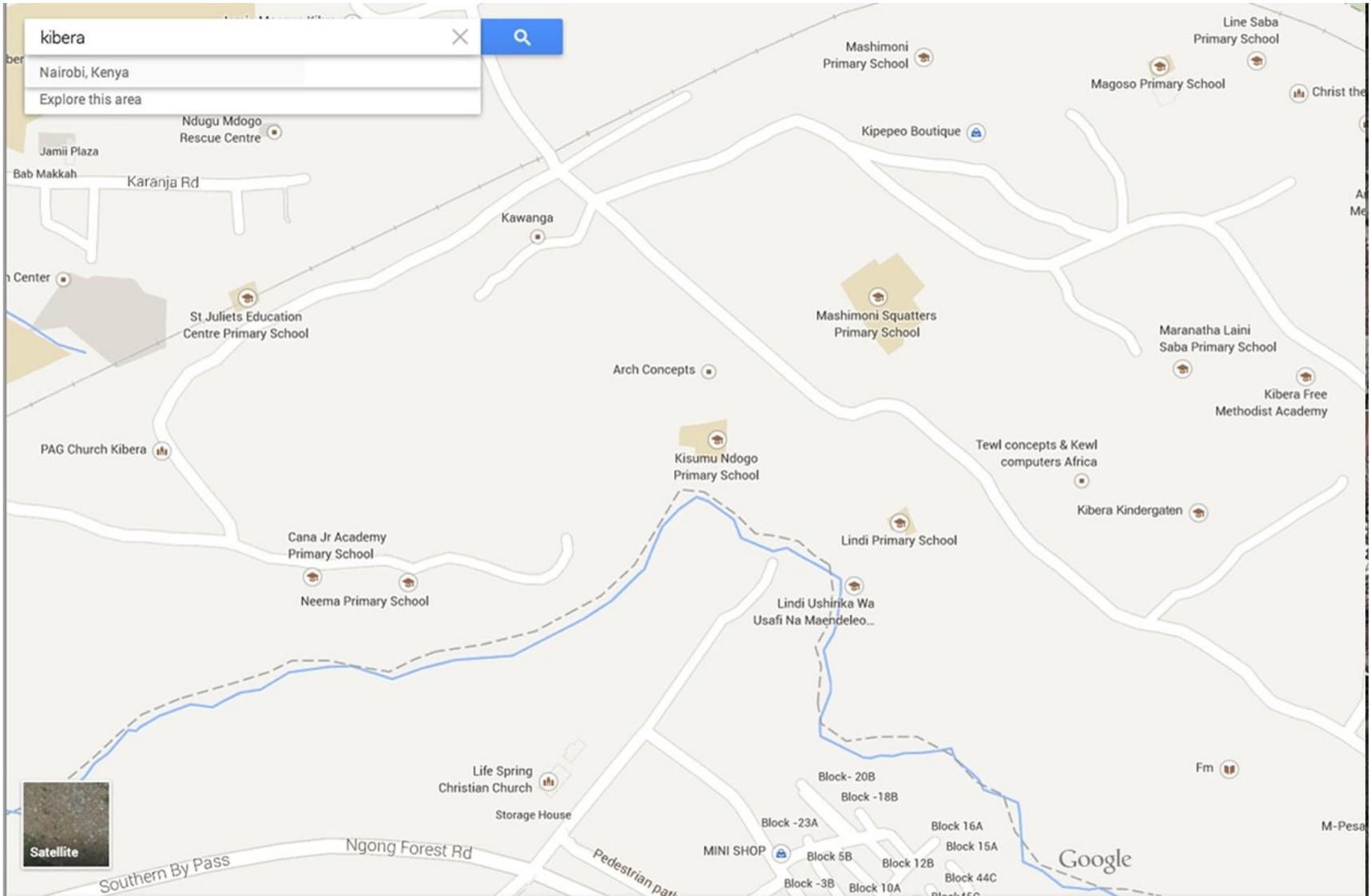


- Commerce vs Citizen: disruptive changes
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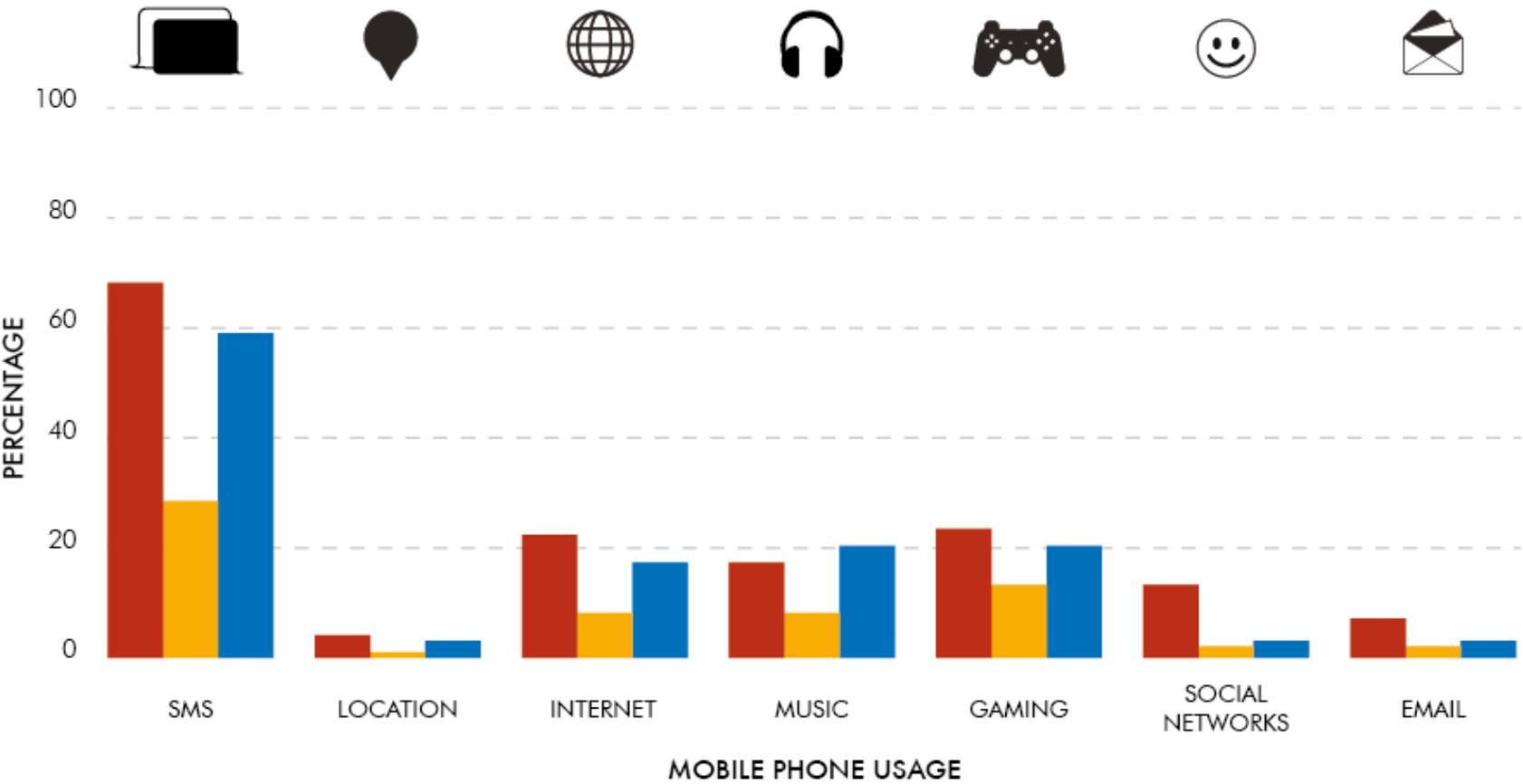


OpenStreetMap – Map Kibera



Mobile phones

DAILY MOBILE PHONE USAGE IN EAST AFRICA (2011)

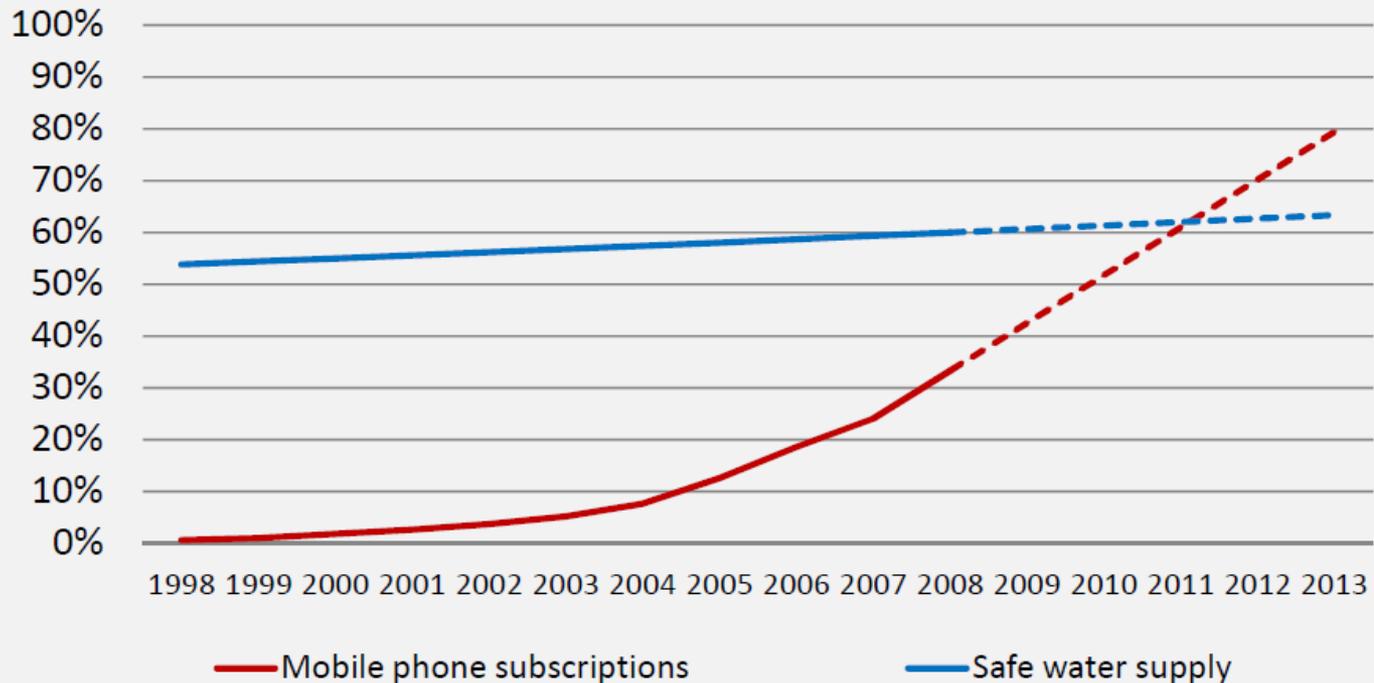


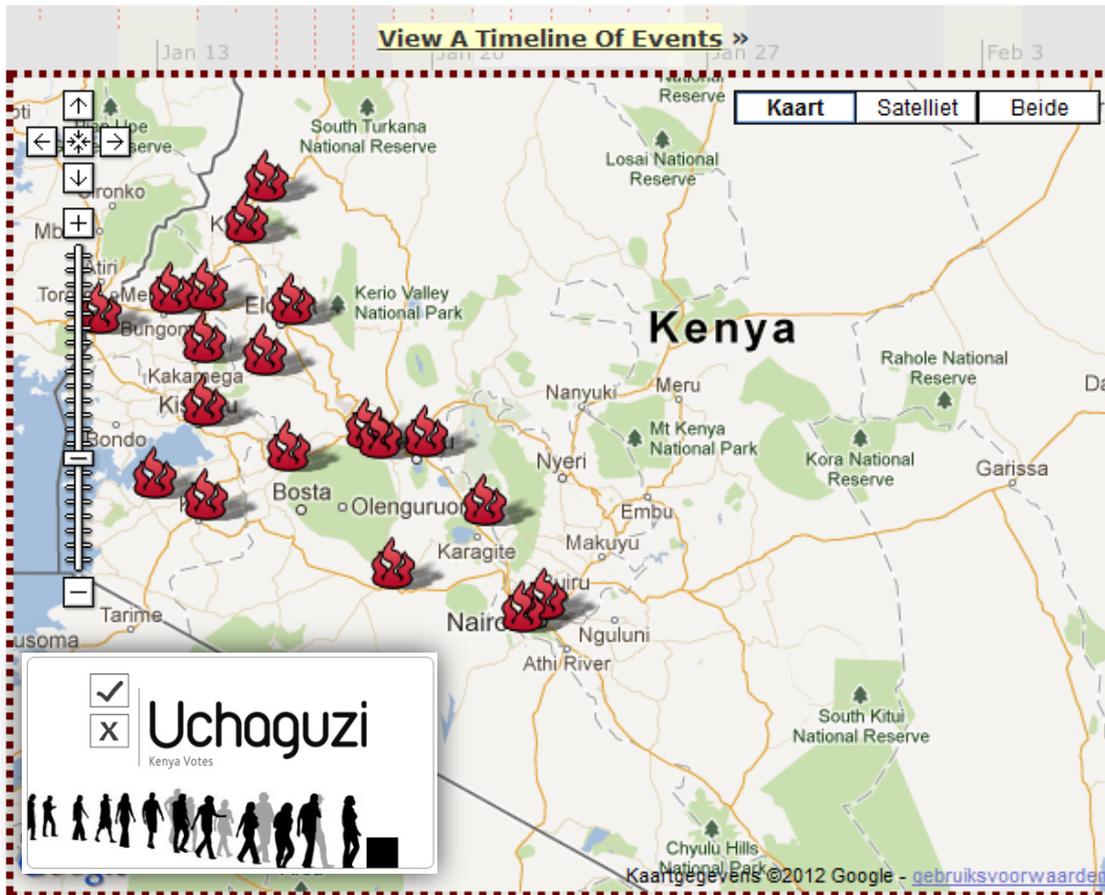
Kenya Uganda Tanzania

Source: iHub research

Mobile phones

By 2012, more Africans ~~will~~ have a mobile phone than access to safe drinking water





Filter By Category

- ALL CATEGORIES
- RIOTS
- DEATHS
- PROPERTY LOSS
- GOVERNMENT FORCES
- CIVILIANS
- LOOTING
- RAPE
- PEACE EFFORTS
- INTERNALLY DISPLACED PEOPLE

GO

Submit An Incident!

Submit Via SMS

Send your SMS to **6007** on
your phone
(Safaricom/Celitel)

Subscribe To Ushahidi News



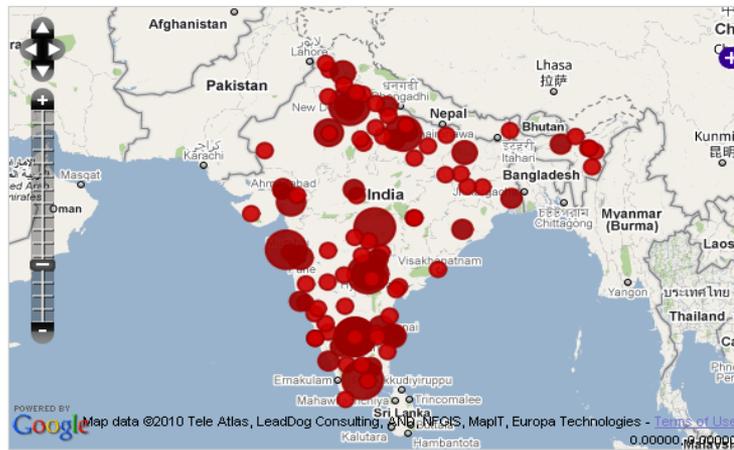
VOTE REPORT INDIA

Home Submit an Incident Get Alerts Blog About Partners How to Help

MEDIA FILTER → **REPORTS** NEWS PICTURES VIDEO ALL SHARE

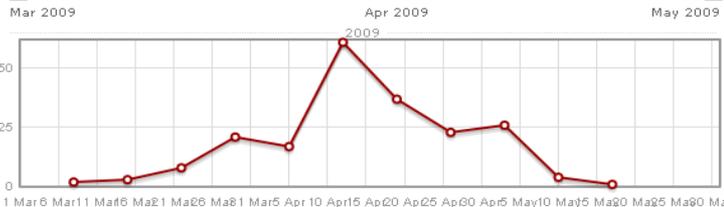
↓ CATEGORY FILTER

Click on the dots to view reports



- All Categories
- Forged Vote (FORG)
- Violence (VIOL)
- Voter Bribing (BRIB)
- Voting Machine Problems (EVOM)
- Other Irregularities (OTHR)
- Inflammatory Speech (HATE)
- Election Commission Interventions (ECIN)
- Voter Name Missing (MISS)
- What Went Well (WELL)

From: Mar 2009 To: May 2009



REPORT IN FOUR WAYS

- By sending a message starting with VoteReport to **5676785**
- By sending an email to report@votereport.in
- By sending a tweet with the hashtag #votereport
- By [filling a form](#) at the website

EXAMPLE SMS REPORT

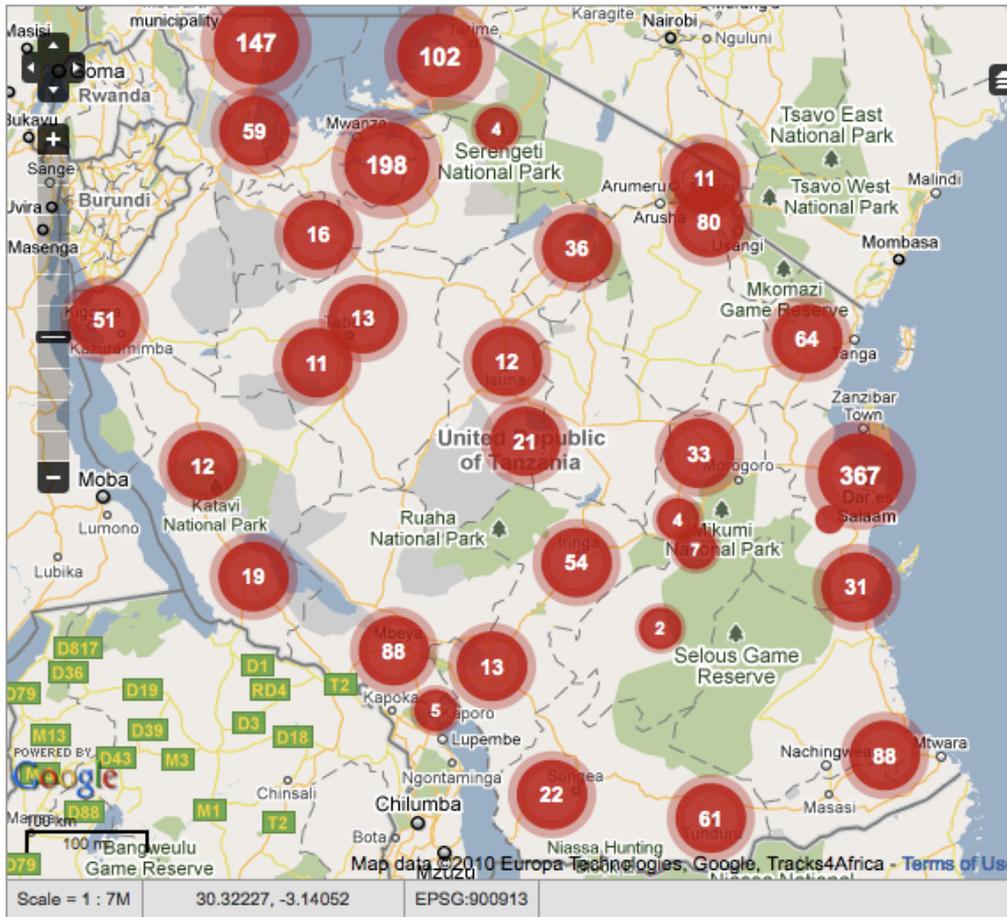
votereport #Pune #VIOL Violence in Pune's Boat Club area. 6 injured. Situation under control. Source: NDTV.

For more details, refer to our [reporting guide](#).

Submit an Incident



Ushahidi



	ALL CATEGORIES
	POLICE ACTION
	SECURITY ISSUES
	POSITIVE EVENTS
	HATE SPEECH
	VOTE COUNTING & RESULTS
	POLLING STATION LOGISTICS
	BALLOT ISSUES
	VOTER ISSUES
	OTHER
	ISSUES WITH OFFICIAL ACTORS
	MATERIALS & EQUIPMENT
	CAMPAIGN PROMISES

Accountability technologies

accountability technologie x Illegal fishing in Sierra Leon x

accountabilitytech.net

Taylor & Francis Onl... cim - Instinct to the... Taylor & Francis Onl... Human Geography Een nieuw kennisbel... www.hisp.uio.no/pu... COST | About COST DARIAH - Digital Re... Hôtel Novotel Paris ... EQUIPEX2011 S2H Other bookmarks Sign up for Tumblr

ACCOUNTABILITY TECHNOLOGIES

Archive Subscribe location

Sensing Place / Placing Sense II

Accountability Technologies

Symposium at ars electronica 2012, hosted at the Architekturforum Oberösterreich, September 1st, 2012, 10.00 - 20.00 h

Curated by Dietmar Offenhuber and Katja Schechtner

11TH OCTOBER 2012 PHOTO



Great example from Sierra Leone (via Guardian)

About

Program

Speakers

Location

Blog

Last year's symposium & exhibition: Sensing Place / Placing Sense

new book - inscribing a square: urban data as public space

Search

A group of 23 impoverished west African fishing communities has driven off a fleet of illegal, unreported and unregulated "pirate" trawlers by filming and reporting them when they are found in their waters.

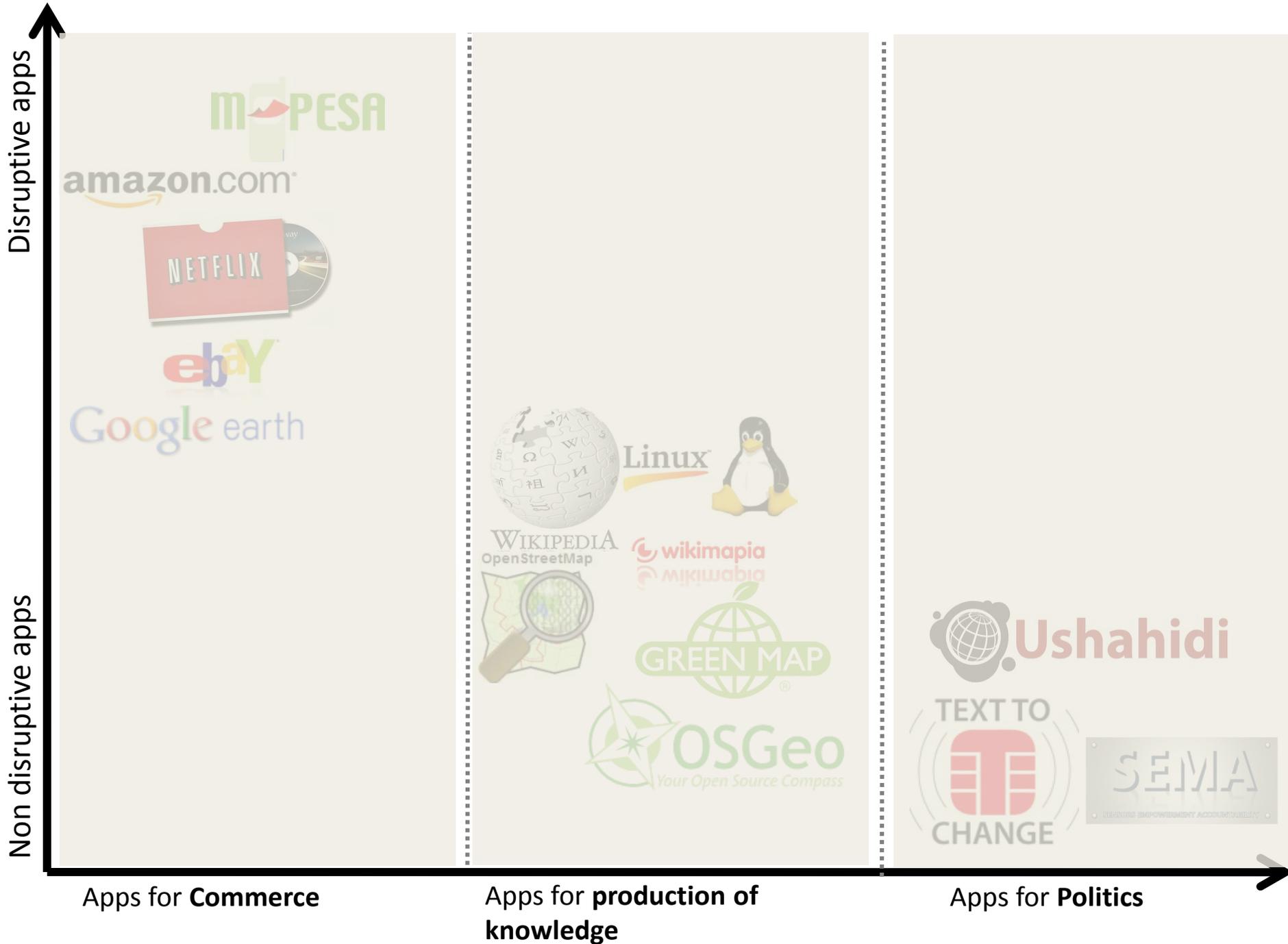
Images of the pirate ships and their GPS positions are analysed to establish the identity of the vessels and the evidence is passed on to European Union (EU) and African governments, fishing ports and other communities. Nine of the 10 ships identified by the Sierra Leonean communities were found to have licences to export their catches to Europe.

The effect of communities policing their own waters has been spectacular, says EIJ in a new report on pirate fishing in west Africa. More than US\$500,000 in fines has been collected from the vessel owners, \$6m worth of fish has been seized and none of the vessels has been reported in Sierra Leone's inshore exclusion zone for six months.

thanks, David

Tagged: news projects

Source: Guardian



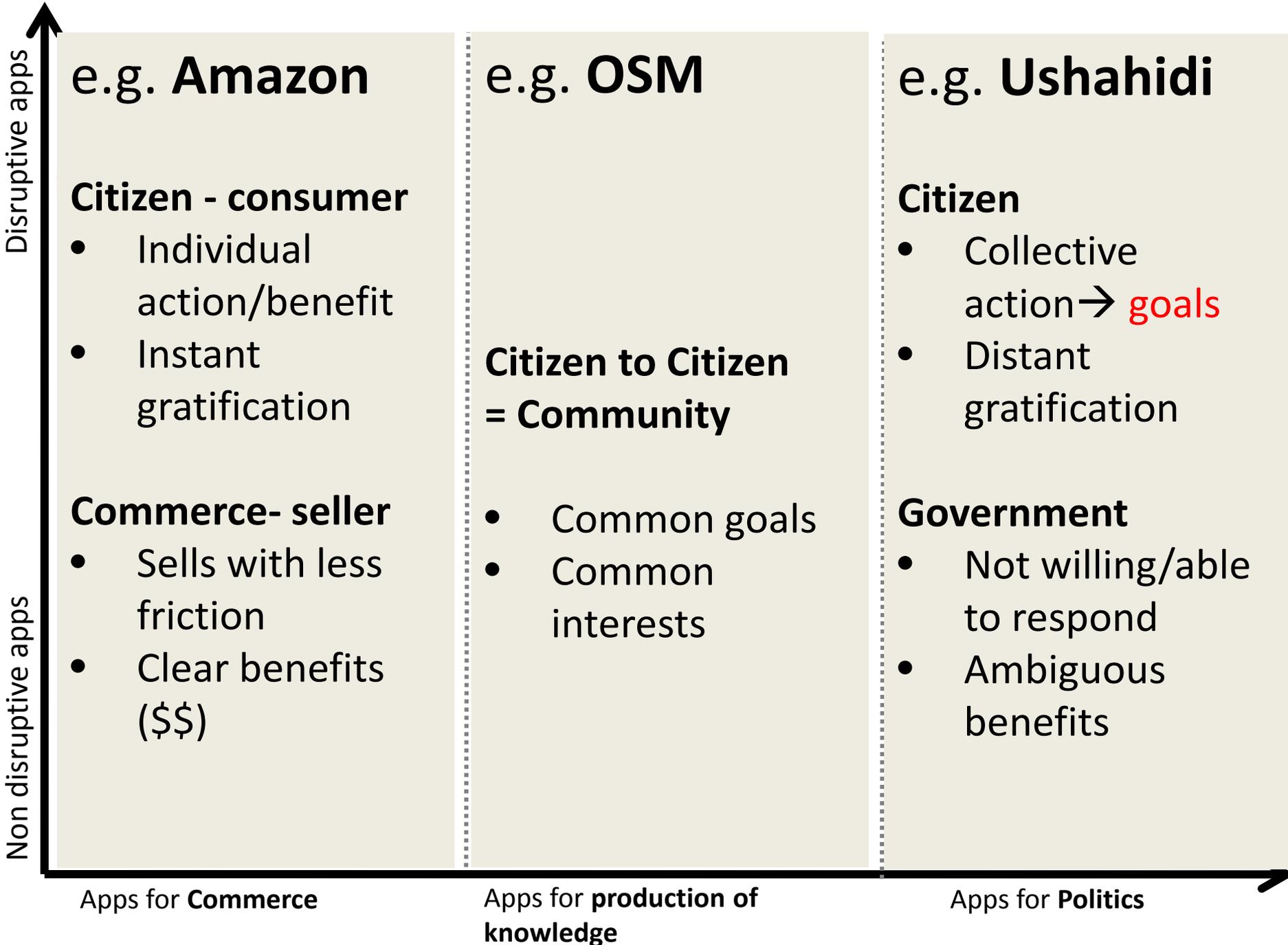
Disruptive apps
Non disruptive apps



Apps for Commerce

Apps for production of knowledge

Apps for Politics



e.g. Amazon

Citizen - consumer

- Individual action/benefit
- Instant gratification

Commerce- seller

- Sells with less friction
- Clear benefits (\$\$)

e.g. OSM

Citizen to Citizen = Community

- Common goals
- Common interests

e.g. Ushahidi

Citizen

- Collective action → **goals**
- Distant gratification

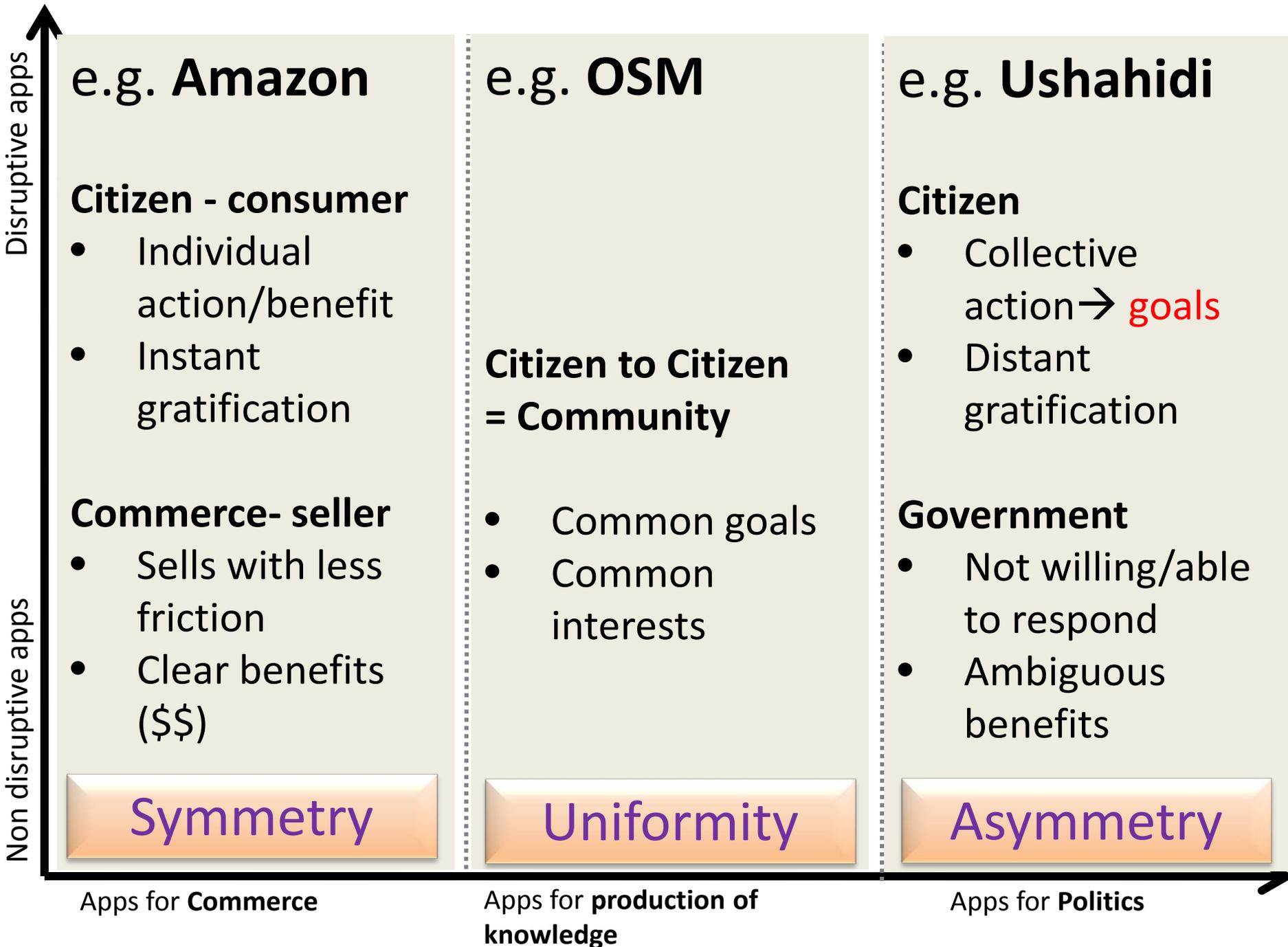
Government

- Not willing/able to respond
- Ambiguous benefits

Apps for **Commerce**

Apps for **production of knowledge**

Apps for **Politics**



e.g. Amazon

Citizen - consumer

- Individual action/benefit
- Instant gratification

Commerce- seller

- Sells with less friction
- Clear benefits (\$\$)

Symmetry

Apps for Commerce

e.g. OSM

Citizen to Citizen = Community

- Common goals
- Common interests

Uniformity

Apps for production of knowledge

e.g. Ushahidi

Citizen

- Collective action → goals
- Distant gratification

Government

- Not willing/able to respond
- Ambiguous benefits

Asymmetry

Apps for Politics

DE will evolve as a series of often small and sometimes disruptive changes

→ Empowering citizens

- Commerce vs Citizen: disruptive changes

- Citizen to Citizen: large changes

- Government vs Citizen: small changes (?)

GOALS

DE will bridge the gap between experts and stakeholders

Engaging society

- DE will bridge this gap in different ways depending on the type of the policy problem

Goals = Things we care about passionately

- Equity (equal access)
- Privacy
- Efficiency
- Security
- Transparency
- Accountability
- Resilience
- Sustainability
- ...

Equity is easy. Right?



*equal slices for everyone
in this room*

Equity – Objection 1



equal slices but unequal invitations

Equity – Objection 2



*(un)equal slices for
(un)equal ranks*

Equity – Objection 3



unequal slices but equal blocs

Equity – Objection 4



unequal slices but equal meals

Equity – Objection 5



unequal slices but equal value to recipients

Equity – Objection 6



unequal slices but equal starting positions

Equity – Objection 7



***unequal slices but equal
statistical chances***

Equity – Objection 8



unequal slices but equal votes

Equity is easy. Right?



*equal slices for everyone
in this room*

Wrong. Equity is complicated !

Dimension	Dilemma
Recipients	Equal slices / Unequal invitations (Un) Equal ranks / (Un) equal slices Equal blocs / Unequal slices
Item	Equal meals / Unequal slices Equal value / Unequal slices
Process	Equal starting positions / Unequal slices Equal chances / Unequal slices Equal votes / Unequal slices



And so are all goals and values we care about so passionately...

- Equity (equal access)
- Privacy
- Efficiency
- Security
- Transparency
- Accountability
- Resilience
- Sustainability
- ...

2. Engaging Society in DE

DE will bridge this gap in different ways depending on the type of the policy problem

DE knowledge:

Certain or Uncertain?

Goals of stakeholders:

Consensus or Dissensus?

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus among stakeholders</i>	<i>Dissensus among stakeholders</i>
Certain		
Uncertain		

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus among stakeholders</i>	<i>Dissensus among stakeholders</i>
Certain	<u>Problem type – 1:</u>	<u>Problem type – 3:</u>
Uncertain	<u>Problem type – 2:</u>	<u>Problem type – 4:</u>

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus among stakeholders</i>	<i>Dissensus among stakeholders</i>
Certain	Debate on technicalities	Debate on goals and values
Uncertain	Debate on means	Endless debate

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus among stakeholders</i>	<i>Dissensus among stakeholders</i>
Certain	<p><u>Cell 1</u>: Debate on technicalities</p> <p>Structured problems (tame)</p>	<p><u>Cell 3</u>: Debate on goals and values</p> <p>Moderately structured problems</p>
Uncertain	<p><u>Cell 2</u>: Debate on means</p> <p>Moderately structured problems</p>	<p><u>Cell 4</u>: Endless debate</p> <p>Unstructured problems (wicked)</p>

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus</i>	<i>Dissensus</i>
Certain	DE scientists excel here	DE scientists do not excel here
Uncertain		

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus among stakeholders</i>	<i>Dissensus among</i>
Certain	<p><u>Cell 1: Debate on technicalities</u></p> <p>Structured problems (tame)</p>	<p>Structured problems</p>
Uncertain	<p>Unstructured problems (wicked)</p>	<p><u>Cell 4: Endless debate</u></p>

Different strategies needed to tackle each problem type

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus</i>	<i>Dissensus</i>
Certain	<p><u>Cell 1</u>: Debate on technicalities</p> <p>Structured problems (tame)</p>	<p><u>Cell 3</u>: Debate on goals and values</p> <p>Moderately structured problems</p>
Uncertain	<p><u>Cell 2</u>: Debate on means</p> <p>Moderately structured problems</p>	<p><u>Cell 4</u>: Endless debate</p> <p>Unstructured problems (wicked)</p>

Tackling a tame policy problem

Research mode: Product or Service Design

Key questions: How? When?

Research aims: Measuring, organizing, planning, adjusting

Research instruments: Measuring instruments, cost-benefit analysis, design algorithm, observation protocol

Research outcomes: Plan, product

Assessment criteria: Effectiveness, efficiency

Digital Earth and Problem Types

DE KNOWLEDGE	GOALS	
	<i>Consensus</i>	<i>Dissensus</i>
Certain	<p><u>Cell 1</u>: Debate on technicalities</p> <p>Structured problems (tame)</p>	<p><u>Cell 3</u>: Debate on goals and values</p> <p>Moderately structured problems</p>
Uncertain	<p><u>Cell 2</u>: Debate on means</p> <p>Moderately structured problems</p>	<p><u>Cell 4</u>: Endless debate</p> <p>Unstructured problems (wicked)</p>

Tackling a wicked policy problem

Research mode: Exploration

Key questions: What? For whom?

Research aims: Interpretation (conceptual coherence, frames)

Research instruments: Interviews (open), participant observation, content analysis (of internet fora, blogs, etc)

Research outcomes: New questions

Assessment criteria: Appropriateness, feasibility, creativity

Digital Earth has different roles

DE KNOWLEDGE	GOALS	
	<i>Consensus</i>	<i>Dissensus</i>
Certain Knowledge	DE as Problem Solver	DE as Mediator
Uncertain knowledge	DE as Analyst	DE as Problem recognizer

Lost in translation ? Two suggestions...



- *DE will evolve as a series of often small and sometimes disruptive changes*

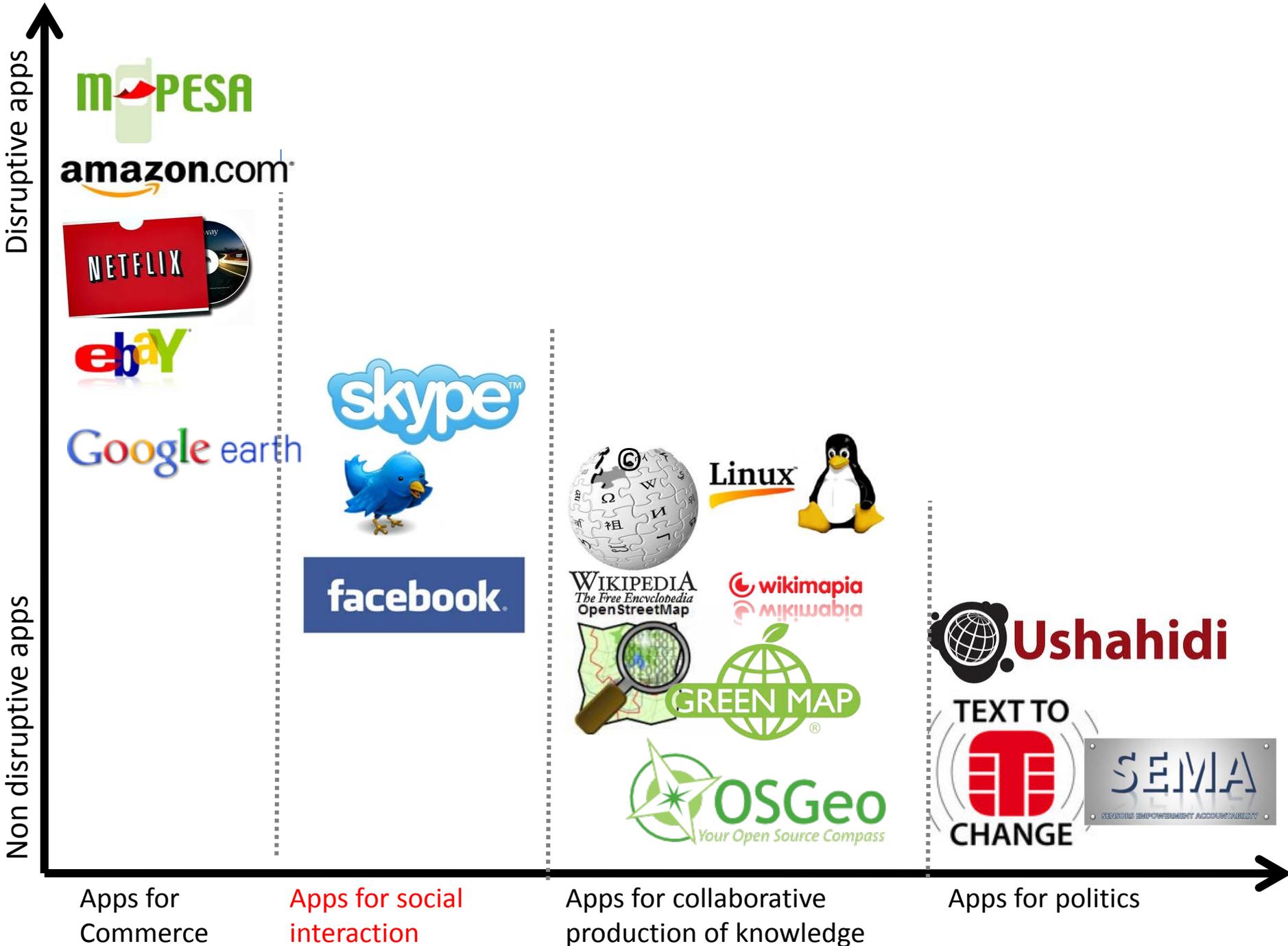
- Commerce vs Citizen
- disruptive change
- Citizen

- *DE will be*

- Commerce vs Citizen:
- changes

1. We need a DE Curriculum that emphasizes policy problems with dissensus in goals

- DE will bridge this gap in different ways depending on the **type of the policy problem**





Disruptive apps ↑

Non disruptive apps ↓

2. We need new spaces for debating goals & values



Apps for Commerce

Apps for social interaction

Apps for collaborative production of knowledge

Apps for politics



References

1. Fung et al. (2013) *Six models for the Internet + Politics*, International Studies Review
2. Georgiadou, Y., Lungo, J.H. and Richter, C. (2013) *Citizen sensors or extreme publics? Transparency and accountability interventions on the mobile geoweb*. International Journal of Digital Earth
3. Hoppe, R. (2011) *The governance of problems: Puzzling, Powering and Participation*. The Policy Press
4. Jeliaskova, M. and Hoppe, R. (2013) *Critical thinking about political problems*
5. Stone, D. (2001) *Policy Paradox: The Art of Political Decision Making*, 3rd edition, W. W. Norton & Company