

Can the Innovative Use of Mobile Phones Support More Effective Land Administration Services?

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Land Administration Systems

Products and services are of the appropriate quality level, affordable, easy to use, support short transaction times and are fully transparent.

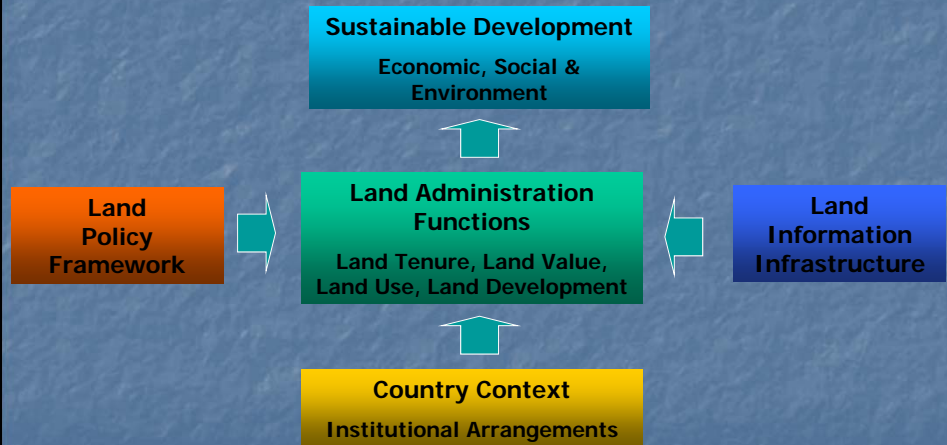
‘Sustainable’ land administration systems are systems that serve society well, by providing effective sets of products and services that are fully inclusive to meeting demand now and in the future. This includes the poor who are currently excluded from participating in many countries.

Source: www.bth.se/exr/market.nsf

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The Land Management Paradigm

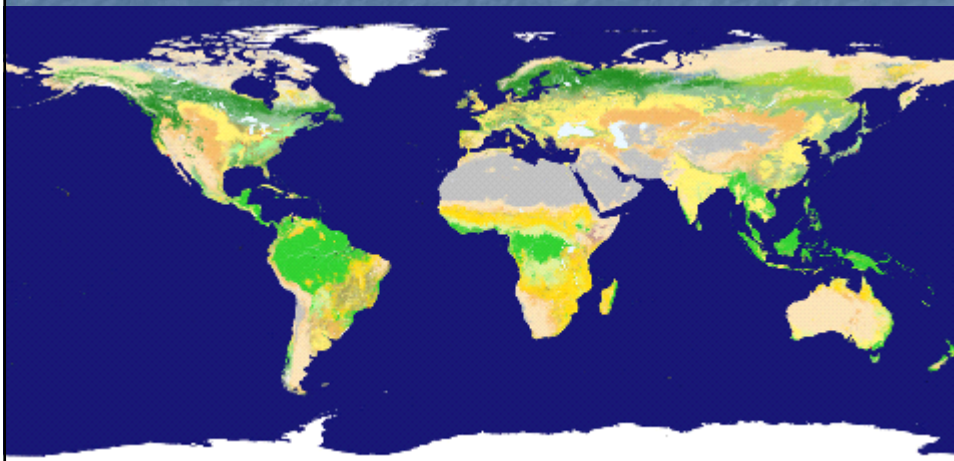


Source: Enemark, 2005

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Land Administration Systems are only fully operational and work reasonably well in about **30 and mainly western countries**.

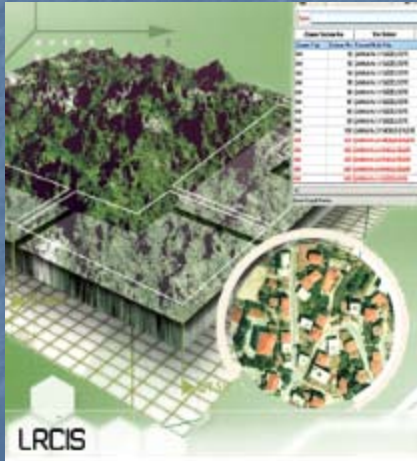


Source: <http://earthobservatory.nasa.gov>

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Our Current Solutions are not Scalable or Sustainable



Source: www.havelsan.com.tr

New and innovative solutions must be found.

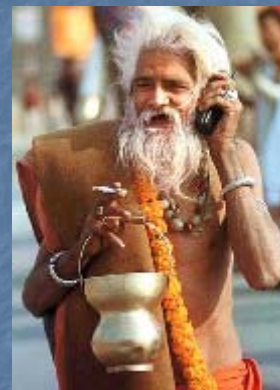
Can Mobile Phones support citizen centric solutions?

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Mobile phones have made a bigger difference to the lives of more people, more quickly, than any previous communications technology.

They have spread the fastest and proved the easiest and cheapest to adopt.



Source: www.w3.org

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It is estimated that around 4 billion people currently have mobile phones and 6 billion will have them in 2013

With the developed markets now saturated, a significant portion of this growth will be in developing countries

In the year to March 2009, an additional 128 million signed up in India, 89 million in China and 96 million across Africa

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What has changed to support mobile phone growth in developing countries?

Adoption of the 'Indian Model' – an innovative, dynamic tariff model with outsourcing and sharing of the infrastructure network.

Lower costs in establishing and operating mobile networks and serving customers, leading to lower and more affordable mobile phone ownership.



Source:
www.eastvalleytribune.com

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Mobile phones are already changing the developing world

- Agricultural information services for prices, weather and farming tips
- Gathering health information in the field to help manage drug stocks
- Verifying the authenticity of drugs



Source: <http://uwnews.org>

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Mobile Phones & GDP



- An increase of 10 percentage points in mobile-phone adoption in a developing country leads to an increase in GDP per person of 0.8 percentage points.
- The mobile service that is delivering the most obvious economic benefits is money transfer, better known as 'mobile banking'.
- This has grown out of using pre-paid calling credit as informal currency and is well placed to bring financial services within reach of billions of 'unbanked' people across the developing world.

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Ushahidi

- Allows Africans caught up in political unrest to report incidents of killing, violence and displacement.
- An open source tool to crowdsource information in times of crisis.
- A simple goal to aggregate information from the public for use in crisis response.



Ushahidi is used to identify areas where aid is required

<http://www.ushahidi.com>

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The screenshot shows the Ushahidi website in a Windows Internet Explorer browser window. The page title is "Ushahidi.com - Mapping Reports of The Post-Election Crisis in Kenya". The browser address bar shows "http://www.ushahidi.com". The website has a navigation menu with links: HOME, REPORT AN INCIDENT, CONTACT US, ABOUT, BLOG, and HOW TO HELP. The main content area features a map of Kenya with several red markers indicating reported incidents. To the right of the map is a "Filter By Category" section with a list of categories: ALL CATEGORIES, RIOTS, RAPE, PROPERTY LOSS, GOVERNMENT FORCES, PEACE TALKS, LOOTING, RAPE, PEACE OFFICERS, and INTERNATIONAL ORGANIZED PROTEST. Below the filter is a "GO" button. There is a prominent red "Submit An Incident!" button, a grey "Submit Via SMS" button, and text that says "Send your SMS to 5007 on your phone (Safaricom/Celcel)". At the bottom right, there is a green "Subscribe To Ushahidi News" button. The Windows taskbar at the bottom shows the Start button, several open applications, and the system tray with the date "Ca 11 2008" and time "12:00".

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University of Washington Free Suite of Tools 'Open Data Kit'

- Computer scientists at the University of Washington have used Android, the open-source mobile operating system championed by Google, to turn a cell phone into a versatile data-collection device.
- Used by organizations around the world that need inexpensive ways to gather information in areas with little infrastructure.



<http://uwnews.org>

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University of Washington Free Suite of Tools 'Open Data Kit'

- Members of the Surui tribe in Brazil test Open Data Kit as a tool to raise awareness of illegal logging on their lands. The tribe also plans to use the tool to take an inventory of its forests so it can participate in global carbon markets .
- Using it in Tanzania to guide health workers treating children under 5 years old
- Evaluating Ugandan text-messaging information hotline



<http://uwnews.org>

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Not Just a Communication Device

'big shift from holding a phone to your ear to holding it in your hand.'



Source: www.klipsi.ch

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By 2015 the majority of Mobile Phones will be Smart Phones



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Global Navigation Satellite Systems in 2015

- Multi-constellation GNSS providing around 100 satellites available for global positioning.
- New GNSS signals and constellations will provide better accuracy and reliability.
- Centimetre(s) positioning commonly achievable in a mobile environment.
- Indoor positioning will still require augmentation with other sensor systems (sub-metre).

High accuracy ubiquitous positioning will become an expectation amongst the majority of the population.



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Citizen Centric Mobile Land Administration Services?

Mobile (m) – Government Services



Crowdsourcing
(outsourced by an open call to the public)



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Potential Mobile Land Administration Services

- Accessing Customer Information Services
- Recording Ownership Rights
- Obtaining Title
- Accessing Land Information
- Paying Mortgage Instalments
- Marketing Real Estate
- Participating in Development Control / Planning

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Accessing Customer Information Services

- Plain English explanations of procedures.
- Electronic forms for completion.
- Best practice for land registration and cadastre.
- SMS alerts on applications / transactions in proximity of a property.
- Response to citizens' queries.



Remote guidance and support will be required when there is more significant citizen participation in land administration services.

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Recording Ownership Rights on a Phone

- a textual description of the boundaries.
- a verbal description.
- a video and commentary – this could include contributions from neighbours as a form of verification (mobile phone numbers of neighbours could be provided).
- the positions of the boundary points identified and recorded on imagery.
- the co-ordinates of the boundary points recorded using the GNSS capability of the phone.

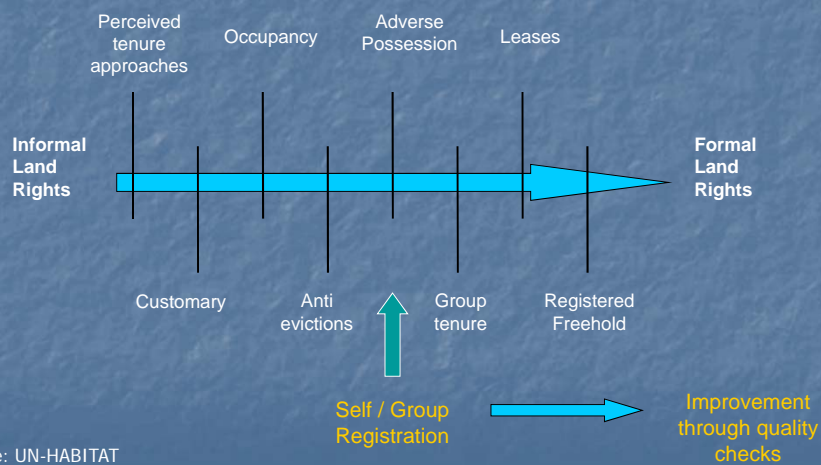
Increase the authenticity and quality of the registration application through community 'expert'.

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Recording Ownership Rights on a Phone

- Electronic submission to the land registration and cadastral authority for registration



Source: UN-HABITAT

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Obtaining Title

- Application payment using mobile banking.
- Mobile phones are currently being used to manage identification information, .e.g. Finnish ID Cards.
- Citizen Certificate can be incorporated into a chip ID card



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Accessing Land Information

- Mobile phones directly supporting Internet access
- Information services can now be accessed by mobile phones.
- This new channel creates much more accessibility for the citizen, bringing land administration services to a wider range of society many of whom are currently excluded



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Mortgage Payment Instalments

Mortgage payments using mobile banking.



Source: www.wirelesszone.com

- Two way interaction with clients opens up the opportunities for essential feedback and quality checks.
- Mobile phone can play an important role in reducing corruption associated with financial transactions in the land sector.

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Marketing Real Estate Augmented Reality



Source: www.zoodle.co.nz



Source: <http://the-mobiler.com>



Source: <http://venturebeat.com/>

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Participating in Development Control / Planning

Mobile phone alerts provide citizens with details and location maps of new development proposals within the citizen's specified area of interest. This will let citizens understand what developments are part of the formal development process.



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Participating in Development Control / Planning



- Citizens text the location (postal address or GNSS derived co-ordinates) of a development to the planning authorities to query its legitimacy. The planning authorities check the current development proposals and alert the citizen.

Source: www.slipperybrick.com

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Conclusions

- The first text message was sent in December 1992 and today the number of text messages sent and received daily exceeds the total population of the planet.

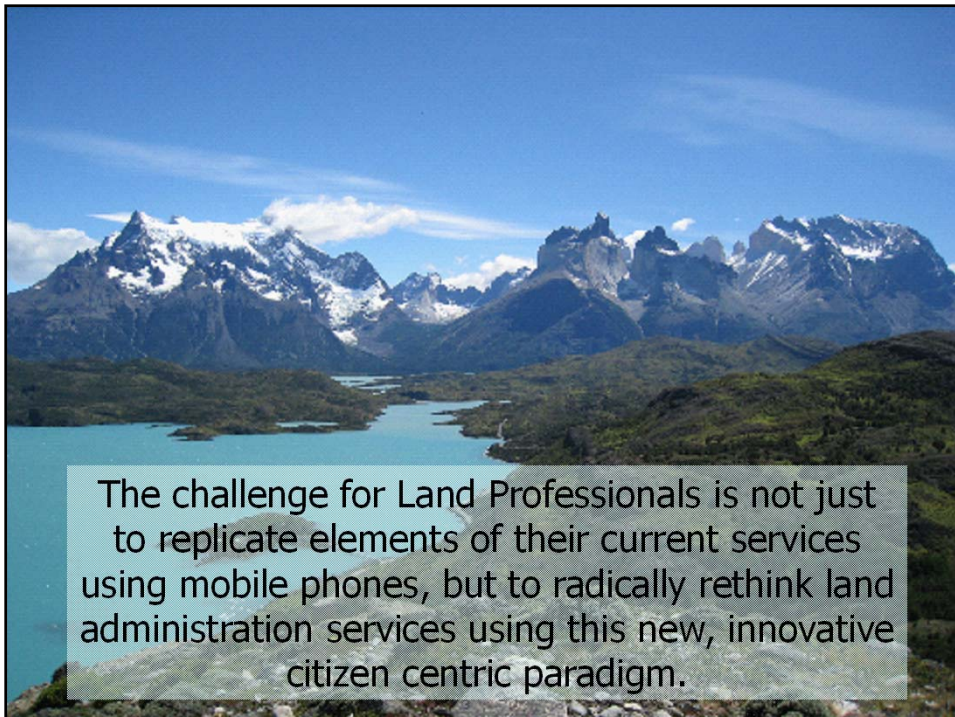


Source:
www.globaldevelopmentcommons.net

The increasing and innovative use of mobile phones in the developing world is fast turning them into a global development tool that is changing people's lives and improving GDP across nations.

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The challenge for Land Professionals is not just to replicate elements of their current services using mobile phones, but to radically rethink land administration services using this new, innovative citizen centric paradigm.



*"Each success only
buy's admission to a
more difficult problem"*

Henry Kissinger

Source: Global Player © alles-schlumpf Daniella Hartman

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