Monetising Geospatial Value and Practices for National Development: Some Issues

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The Value of a Geospatial Approach

The geospatial literature is replete with general statements on the value of geospatial approaches:

“The ‘where’ dimension is one the most natural, powerful, insightful and intuitive ways to explore the rapidly growing world of data and services.”

Stephen Lawler
Bing Maps, Microsoft
2013

- This Dialogue Forum must avoid “preaching to the converted” and take a hard look at the challenges we face and the evidence we need to convince others that what we do is of real and demonstrable value. General arguments and rhetorical statements are not enough.

Is geospatial special anymore?

“Geospatial technology has become a property of information processing itself, flowing round domain after domain like oil in a huge machine, looking to each to be integral with the science and information models that drive it….

GIS is no longer a focal concept.

Indeed a whole net set of actors has taken an interest in spatial information; not as participants in a traditionally defines geospatial market, but as institutions representing diverse industrial or societal domains.”

David Schell, OGC, 2013

The Importance of Effective Communication

- We must speak to people in a language that they understand, not in jargon.

Rapid Change

We must never forget that we are dealing with rapid change. We are good at dealing with technological change but less good at dealing with societal change. For example, the focus is increasingly on the individual use of information and this societal trend is likely to continue.

“The year 2013 should see the emergence of the individual as the focus for geospatial information.” (Professor Arup Dasgupta, Geospatial Media and Communications, 2013).

The Importance of a User Driven Approach

- If there is one issue on which stakeholders from all sectors agree it is that our solutions must be driven by user needs whether these are individual, institutional or societal.

The Goals of the Forum

- To examine how governments can make optimal use of their investments in geospatial infrastructure
- To capitalize on their investments in geospatial infrastructures to achieve national development goals.

Key Objectives of the Forum

- Highlight the role that supportive government policies play in realizing the potential of geospatial technologies.
- Demonstrate through case studies the inter-relationship between open policy environments, synergistic relationships within and between geospatial data producing agencies and the successful execution of national development programs
- Consider the challenges and barriers to achieving such policies

Key Objectives of the Forum (continued)

- Explore how increased capitalization of geospatial technologies and infrastructures can be achieved
- Provide concrete examples supported by credible quantitative and qualitative metrics of the value of geospatial information.

The Importance of “Human Interoperability”

In this room we have representatives from all over the world of:

- National mapping agencies
- Earth observation agencies
- Thematic mapping agencies
- Cadastral mapping agencies
- National development program agencies
- Macro economists, planning or vision agencies
- Private industry
- International organizations

The Importance of “Human Interoperability” (continued)

- The major challenge and opportunity will be to understand the position of each of these stakeholders and to create a new synergy.

Real Progress is Being Made

Among others:

- The launch of a new European Location Strategy and the European Union Locational Framework (2013)
- The availability online of over 1 million geospatial datasets in the Geoss Data Core (common resource for everyone) (2013)
- Standards Australia's research paper on " The Economical Benefits of Standardization: (2012)
- The European Association of Remote Sensing Companies Study on the Economic Benefits for a Free and Open data Polic for GMES (2012)

Real Progress is Being Made (continued)

- The United Nations Global Geospatial Information Management Initiative (2010)
- The Canadian Government's establishment of the Federal Committee on Geomatics and Earth Observation (2012) and the February 2013 announcement of a Canadian Geomatics Environmental Scan and Economic Value study

Two Recent Studies Commissioned by Google of Special Interest

- Putting the US Geospatial Services Industry on the Map (The Boston Consulting Group, December 2012)
- What is the Economic Impact of Geo Services (Oxera Consulting Ltd., 2013).

Two Recent Studies Commissioned by Google of Special Interest (continued)

The main findings of the US Study showed that the impact of geospatial services on the US economy is 15 to 20 times the size of the geospatial industry

- Geospatial industry: $73 billion in revenues in 2011; 500,000 high wage jobs
- Geospatial services: $1.6 trillion in revenues; used on a daily basis by 5.3 million workers (over 4% of US workforce)
- In addition US consumers place a direct value on geospatial services of $37 billion annually. Geo applications and location-enabled devices central to daily life
- Methodology included a survey of over 1000 business leaders from across the US.

Two Recent Studies Commissioned by Google of Special Interest (continued)

The impact study was at the global level and considered both the economic impact on the world economy and consumer welfare.

Divided into three categories

- Direct effects – revenue generated by firms + value added
- Consumer effects – benefits to consumers' businesses and government from using geoservices.
- Wider economic effects – improved efficiency elsewhere in the economy by cost savings and new products and services

Quantified these by calculating a monetary vlaue.

Two Recent Studies Commissioned by Google of Special Interest (continued)

- Direct effects:
  - $150-$270 billion revenue generated annually
  - $113 billion value added – 0.2% of global gross domestic product ($70 trillion)

- Consumer effects - 2 examples:
  - Journey time and fuel savings from improved navigation $22 billion
  - Education and information $12 billion

Two Recent Studies Commissioned by Google of Special Interest (continued)

Wider economic (supply side) effects:
- Cost savings and improved efficiency (not captured in market/financial transactions

Examples:

GPS	$10 billion
Time savings	$17 billion
Fuel savings	$ 5 billion
Emergency measures	$8-13 billion
Education	$11 billion
Competition	$1-3 billion

Two Recent Studies Commissioned by Google of Special Interest (continued)

- Estimates that the sector is growing rapidly at 30% per annum so already the estimates are out of date

Two Recent Studies Commissioned by Google of Special Interest (continued)

Methodology:

- A carefully constructed methodological framework based on a comparative approach to studies of other industrial sectors
- Gives a comparative order of magnitude of the economic impact by providing a range of estimates based on the best information available
- As with all economic impact studies the accuracy depends to some extent on the validity of the economic assumptions and the methodologies used.
- To my knowledge the first attempt to quantify the impact of the geospatial industry and location-based services at the global level.