

## **Geographic Knowledge: The Key to Survival in the GeoEconomy**

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### **Geomatics is important! Use is Increasing!**

- Lots of specialists in geomatics or geospatial say these things... some even believe it!
- Geospatial data are increasingly being used in resource management, the environment, & security however it is defined (military, natural hazards, policing, emergency dispatch;
- Users in government range from small municipalities to national governments;
- Geospatial data are now available to individuals;
- The “Geospatial” dimension in corporate systems has become a necessity for all organizations everywhere; &
- Geospatial is growing in importance in best business practices.

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## ..... **More comments on it importance**

- There are significant benefits associated with implementing a location-based intelligence solution.....better information leads to better decisions;
- Geospatial helps one stay competitive;
- Better information is now available to citizens;
- There are new ways to leverage corporate information and data.

This is all true but.....

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**.... all of this still fails to capture the REAL  
importance of geospatial**

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**Simply stated, the real importance is not understood until you realize that we have entered a new economy:**

**We are now in the age of the GeoEconomy**



**The geo-economy is characterized by :**

- New tools to
  - Obtain better location information
  - Distribute location information
  - Integrate location information; and
  - Use location information
- Better location information (allowing us to return to our evolutionary roots)
- Industry is organizing itself based on location of raw materials, suppliers, and clients
- Citizens at large have access to and use location information



We have moved from the position in the past when most economic decisions by everyone were based on what I call “geo-luck”.....

Now decisions can be based on solid geospatial information using reliable and well tested tools....

People can now make what I call intelligent geo-decisions....

Removing or significantly reducing luck from the equation

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The rest of this presentation discusses how we got where we are, and provides some observations on today .... and tomorrow as we all become more Geo-aware...  
...and rely less and less on Geo-luck

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## Some History: Past Economies and Geo-luck

- Nomadic – hunter/gatherers
- Agriculture – led to concentrations of people at specific locations .... and specialization
- Industrial revolution
  - Machinery
  - Ford and his production lines
- Just-in-time manufacturing...outsourcing
- Satellite communications
- The Internet ...



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## All past economies & human endeavor have been tied to location: success came to those who made the best location decisions...or had the best “geo-luck”

- Nomads – hunter/gatherers
- Agriculture...read Jared Diamond
- Industry – based on specialization and location to produce and deliver products more efficiently
- Production lines – based on minimizing movement
- Just-in-time...time (and distance) reduced to minimize inventory
- Outsourcing...moved production to an economic location
- The internet... Nortel and the “death of distance”

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**The objective of this presentation...  
and our company.....**

**Is to help you understand how you can help  
others reduce their dependence on Geo-luck....**

**And increase your ability to help others (and  
yourselves!) make sound Geo-decisions**



**The Factors Allowing the Change to Occur from  
Luck to Decision Making**

Some in the so-called geospatial industry argue that  
the difference is the capability to routinely provide  
geospatial information using the Internet...

While important this is only part of it....

To this we add a series of developments that have  
converged to make it possible for geospatial data  
to be central in our economic and personal worlds



## The Factors: Relevant Developments

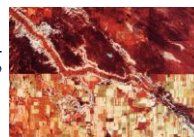
- Changes related to data:
  - Different data access policies (in some places)
  - “No-cost” data (A fallacy ... someone always pays!!)  
... a different paradigm to pay for data
  - More data of different types
    - GPS – real-time position
    - Imagery (as a backdrop,  
as an information source)
    - Parcel and address information to the block face
    - Etc, etc, etc
  - Geospatial “intelligence” is often built into the data
  - Provision of some data sets or types has been seen to be a profitable business...albeit with costs to society not always accounted for



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## More Factors

- Better and lower cost tools to:
    - Position oneself (GPS)
    - “Handle” the data ... from simple overlays to spatial data bases
    - Integrate diverse data sets (without ever having the data in hand!) to create new information
    - Extract information from imagery
  - Visibility leads to better understanding
  - Better understanding leads to
    - More use, better tools, wider interest
    - More integration with other data
    - Some concerns – e.g. privacy, big brother, etc
- ....and the cycle continues and builds



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## The Symptoms: Observations

- Geospatial is returning to prominence after years of neglect and misguided activity
  - Think National Atlas of Canada
  - Think Brandenberger's ISP paper
- Less “play”, more real uses
- 1999 UN Statement on geospatial data /infrastructure
- Eaton's Department Store vs. Wal-Mart
- Geospatially-enabled companies = successful companies
- New concept of geospatial....  
our work for Quebec City
- Japanese teenagers and cell phones =>  
gaming & location
- General Motors and On-STAR GPS
- Growth of geospatial data infrastructures
- Traditional GIS companies...changing focus



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## More Observations and Symptoms

- Lower geomatics enrollments – geospatial has been made to appear boring and unprofitable by its practitioners...
- Limited vision...not an issue in this room today!
- The engineering invasion
- The invasion of the money-men

**Google**  
Canada



**Microsoft**

- Smart data => allows inexperienced users => more users
- Geospatial training in application disciplines
- Cook-book solutions...vs. tailored solutions
- More geospatial professionals are working for non-geospatial firms than for geospatial

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## The Result

- In our personal lives, the information we use is increasingly being encoded and organized by location.
  - Understanding how to access that information using location tools can:
    - Improve our business decisions
    - Save us time
    - Give us advantages that enhance our quality of life.
- Think back to that nomad hunter gatherer...look at today's over-fishing accelerated by geospatial data!

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## The Result

- More money being spent on data acquisition
- Increasingly sophistication is provided to users in the data, or in the use of the data => out-sourcing
- Geospatial data's geometric accuracies ... have become less unimportant to many users
- Big players are buying up undervalued and under-funded geospatial players
- Companies not ready for change are dying (change management services!)
- Opportunities for growth are huge in the use and provision of geospatial analysis

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## **An example....Municipal Uses**

- Infrastructure Management, Maintenance and Planning (track age, make a case for funding, can be tied to ground imagery or other information => reduce risk and cost)
- Land Use Planning and Zoning, permits & inspections
- Transit and School Buses
- Parks and Recreation Management
- Policing
- Economic Development



## **Some Considerations as Clients Develop Geo-awareness**

- Hammers and nails – buyer beware;
- Home grown vs. of-the-shelf;
- The “disappearing vendor;”
- Every beneficiary should have their data and their needs built into the data and presentation tools;
- Use standards and insist on their application (e.g. OGC)
- Learn from others – someone somewhere has done it!



## Geo-Entrepreneurs

- Lots of room, lots of opportunity
- Find a real problem of real people ...and solve it... address things that keep people with money awake at night;
- Many faculty members have become successful in business - MDA, Itres, GeoTango, DIGEM, CARIS, etc;
- A number of GEOIDE students have become entrepreneurs, and others are looking at business;
- There is lots of mentoring (and even some financial) help out there for young entrepreneurs....but it is NOT for everyone and it is not easy...
- But it can be fun and rewarding....



## What's next?

- Geospatial will be even more pervasive than it is today
- Geospatial Data Infrastructures will be more important
- The pace at which companies go “under” and economies become less competitive will increase
- The impact will vary greatly from country to country
- More companies (geospatial and others) will go bankrupt...be geospatially nimble or die
- We will see geospatial tied to risk ... environmental and economic
- The solutions to risk will lead to more opportunities for geospatial...geo-decision making will replace geo-luck.
- The GeoEconomy will be with us for a while
- Our company....

