



Legal and Policy Frameworks Around Geospatial Information Management

Kevin D. Pomfret, Esq.

Executive Director
Centre for Spatial Law and Policy
Partner, Williams Mullen



Objectives

- What Are the Unique Aspects of Geospatial Information From a Legal and Policy Standpoint?

Geospatial Information Management Undergoing Tremendous Change

- Collection of Geospatial Information
 - Small Satellites
 - Mobile devices
 - Unmanned Systems (Air, Ground, Maritime)
 - Internet of Things
- Use of Geospatial Information
 - Software
 - Computing Power
 - Machine Learning

• 3

Geospatial Information Management Undergoing Tremendous Change

- Distribution of Geospatial Information
 - Standards
 - Technical interoperability
 - API's
- Storage of Geospatial Information
 - Cloud
 - Distributed Networks

• 4

Increased Awareness of Value of Geospatial Information

Governments

- Spatial Data Infrastructures
- Place-based policies
- Sustainable Development Goals
- Climate Change
- Homeland Security/Law Enforcement
- Disaster Response

•

•5

Increased Awareness of Value of Geospatial Information

Businesses

- Location Based Services
- Business Intelligence
- Internet of Things
- Visualization
 - Customers
- Tracking
 - Assets
 - Employees

•

•6

Increased Awareness of Value of Geospatial Information

Individuals

- Navigation
- Social Media
 - WhatsApp
- Loved Ones
 - Monitoring elderly parents and children
- Gaming
 - Pokémon

•

•7

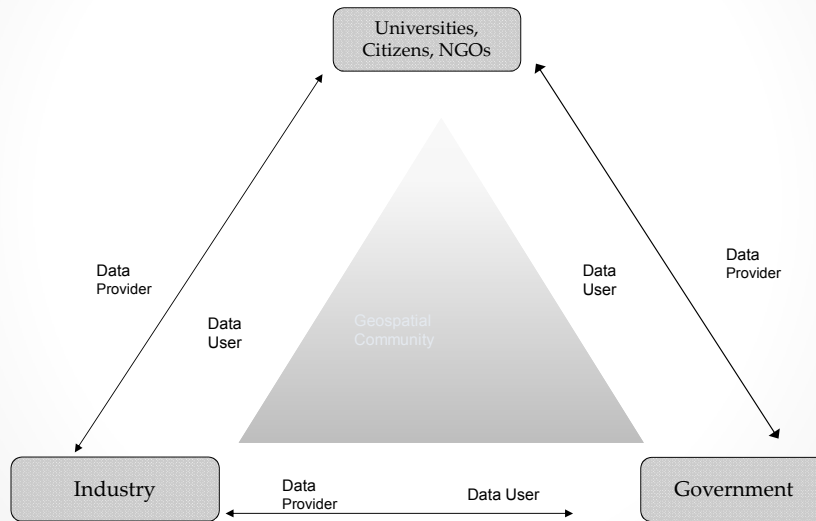
Growing Evidence Supporting Value of Geoinformation

- Google study (2012)
 - Geospatial services companies generate \$1.6 Trillion in revenue and \$1.4 Trillion in cost savings
- Ordnance Survey of Ireland study (2014)
 - Total value add to economy - 126.4 Million Euros
 - FTE Jobs in total economy - 3,078
- Natural Resource Canada study (2015)
 - \$21 billion of value to Canada's Gross Domestic Product (1.1%),
 - generate approximately 19,000 jobs in Canada's economy

•

•

A Geospatial Ecosystem In Which Everyone is a Data Collector and User



Geospatial Information

- **Versatile**
 - A data set can be used in a number of different applications, but . . .
 - Doesn't mean data is suited for all such uses
- **Geospatial information and other types of big data are relatively new, ...**
 - and applications using them are evolving
- **Creating a new ecosystem**
- **Cuts Across Technology Platforms**
- **And legal/policy domains**

Unique Aspects of Geospatial Information

- **Privacy**
 - Uncertainty over privacy from a location standpoint
 - Difficult to put location into existing privacy framework
 - Spatial data is critical to so many important applications
- **Data Quality/Liability**
 - New Applications
 - Versatility
 - Little precedent
- **Intellectual Property**
 - Role of Government Data
 - Variety of Sources
 - Uncertainty Associated with Copyright
- **Defense/Intelligence Roots**
- **Sector specific regulations**
 - Satellites, drones, autonomous vehicles

Risk that laws, regulations, precedents, policies developed to address one user groups use of geospatial information will impact other uses.

• 11

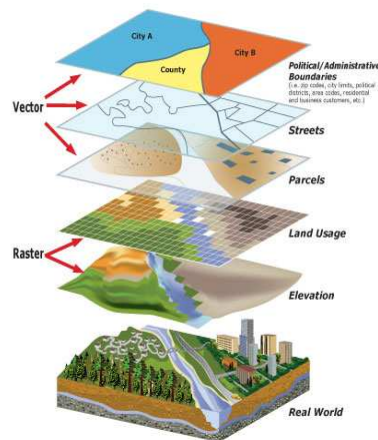
Why Legal Issues Are Important?

Geospatial products and services are increasingly be developed using data from a variety of sources

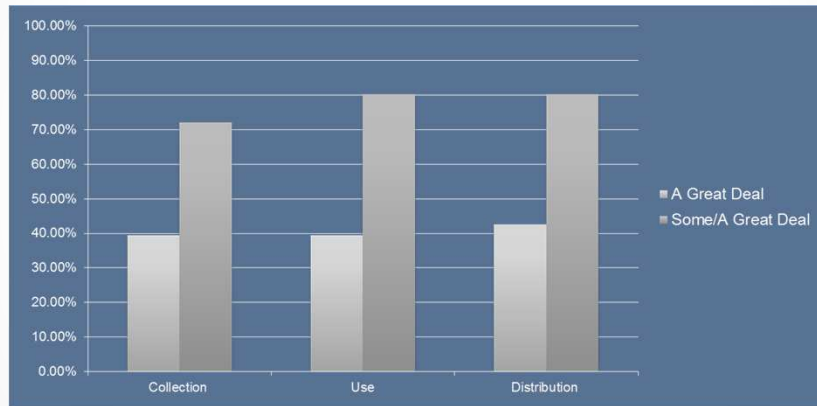
- Government
- Industry
- Crowd

Each are subject to their own licenses/data sharing agreements with varying terms/restrictions

Licensing becoming more complex and increases risks

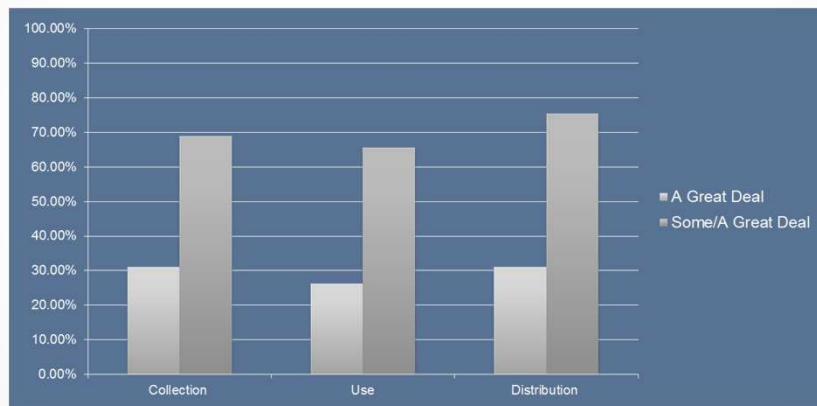


UN-GGIM Survey Impact of Privacy Concerns



• 13

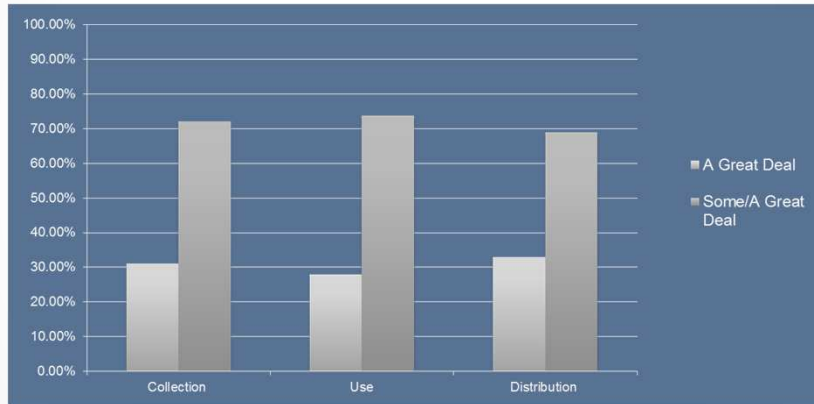
UN-GGIM Survey Impact of Liability Concerns



• 14

UN-GGIM Survey

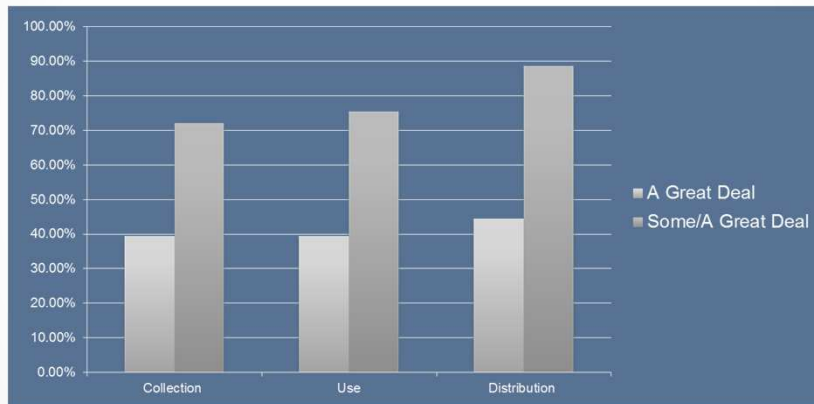
Impact of National Security Concerns



• 15

UN-GGIM Survey

Impact of Licensing/Data Sharing Concerns



• 16

Legal Issues Impact All Stakeholders in Geospatial Community

- **Government Agencies**
 - Law Enforcement, Homeland Security, FEMA, Census
- **Mapping, Navigation, Remote Sensing**
 - Garmin, Digital Globe, Pictometry
- **Internet and Social Media**
 - Google, Facebook, Twitter
- **Future Technologies**
 - Augmented Reality, Smart Grid, Autonomous Vehicles

• 17

Conclusions

- Geospatial Information Management Undergoing Tremendous Change
- Increased Awareness of Value of Geospatial Information by Governments, Industry and Individuals
- As a result, geospatial information is becoming common
- Creating a Geospatial Ecosystem where government, industry and the "crowd" (citizens, NGO's, research organizations, etc.) are both collectors and users of geospatial information, often simultaneously.
- Many unique aspects of geospatial information from operational and legal/policy standpoint.
- Having an impact on use across entire geospatial community