

Presentation to:



Thunder Bay, Ontario, Canada

*Geospatial Data Cooperation in the
Minneapolis-St Paul Metropolitan Region*

MetroGIS



May 13, 2015

Seven Brief Points

- 1) What is MetroGIS?**
- 2) Minneapolis-St Paul region**
- 3) Metropolitan Council**
- 4) Origin of/Reason for MetroGIS**
- 5) Recent Successes**
- 6) Challenges**
- 7) Benefits**



1) What is MetroGIS?



*A **voluntary collaborative** of interests...*

- Governments at all levels
- Academia
- Non-Profit Organizations
- Private Sector

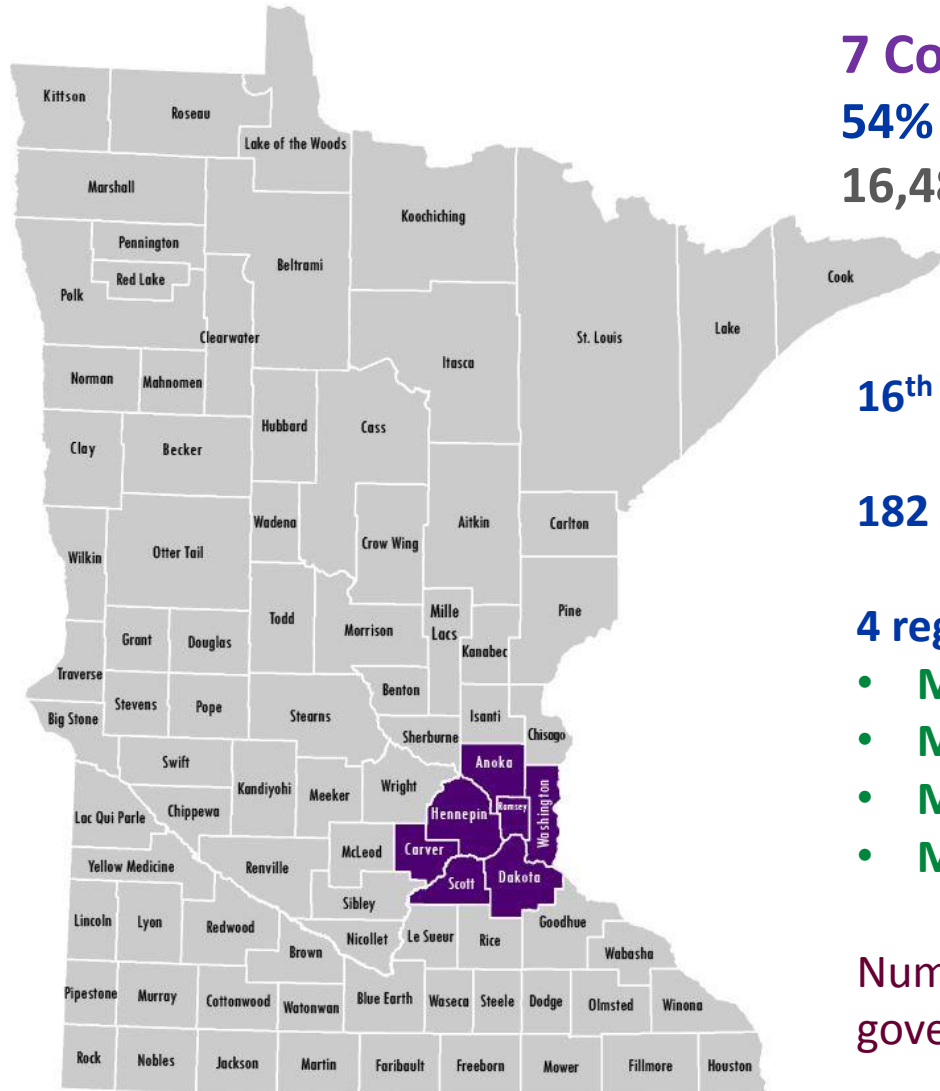


*...who **produce, consume and share** GIS data in the*
Minneapolis-St Paul Metropolitan Region

Focus on:

- > Shared problems
- > Business needs of the partners
- > Maximizing agency investment in GIS *by working together*

2) Minneapolis-St. Paul Metropolitan Region



7 Counties: 3.2 Million People
54% of Minnesota's population
16,483 sq. km (6,364 sq. mi.)

16th Largest Urban Area in the U.S.

182 municipal units

4 regional government agencies

- **Metropolitan Council**
- **Metro Emergency Services Board**
- **Metro Mosquito Control District**
- **Metropolitan Airports Commission**

Numerous State and Federal government agencies

3) Metropolitan Council



Created by the State Legislature in 1967

Public Transportation

- *Bus network*
- *Bus Rapid Transit/Express Bus*
- *Light Rail System*



Wastewater Treatment

Water Supply Coordination

Regional Planning

- *Urban Growth Boundary*
- *Infrastructure planning*



Affordable Housing Programs

Regional Park and Trail System

Metropolitan Planning Organization functions

(receivership of Federal funds for transportation)



3) Metropolitan Council



For MetroGIS:

*Since 1996, the **Metropolitan Council** has provided:*

- **Financial backing for the collaborative** (annual budget);
- **Administrative oversight** of its operation;
- **1 full-time staff person and resources;**

The **Metropolitan Council** is a *key stakeholder* and a *major beneficiary* of MetroGIS;

4) Origin of Metro-level data collaboration

Series of meetings in Winter 1994-95

Shared data needs at various levels of government



**Standardize the
parcel data!**



MetCouncil funded **Carver & Anoka Counties**
to complete their digital cadastres;

7 Metro Counties agree to allow the use of
their data by governments and academia with a
license agreement (for no fee)'



4) Origin of Metro-level data collaboration

Joint purchase and sharing of aerial imagery
(\$6,000,000 in mid-1990s);

Itemize the **full set of desired/needed datasets**;

Begin developing **data standards**;

Engage elected officials on the importance of investing in GIS data; →



metrogis.org

About MetroGIS >> History and Development

<http://metrogis.org/about-metrogis/history-development.aspx>



The screenshot shows the MetroGIS website with a navigation menu on the left and a main content area. The 'Origins of MetroGIS' section describes the project's start in 1995 as a concept for a regional GIS. The 'History and Development' section lists key milestones:

- 1995-1997:** Strategic planning and initial data sharing efforts.
- 1998-1999:** The Metropolitan Council formally becomes the primary sponsor of MetroGIS.
- 2000-2001:** The Council's Policy Board is formed.
- 2002-2003:** The Council's Policy Board is formed.
- 2004-2005:** The Council's Policy Board is formed.
- 2006-2007:** The Council's Policy Board is formed.
- 2008-2009:** The Council's Policy Board is formed.
- 2010-2011:** The Council's Policy Board is formed.
- 2012-2013:** The Council's Policy Board is formed.
- 2014-2015:** The Council's Policy Board is formed.
- 2016-2017:** The Council's Policy Board is formed.
- 2018-2019:** The Council's Policy Board is formed.
- 2020-2021:** The Council's Policy Board is formed.
- 2022-2023:** The Council's Policy Board is formed.
- 2024-2025:** The Council's Policy Board is formed.

5) Current Projects + Recent Successes

Address Point Editor Tool

- > Creation
- > Aggregation
- > Standardization of address points

Cities:

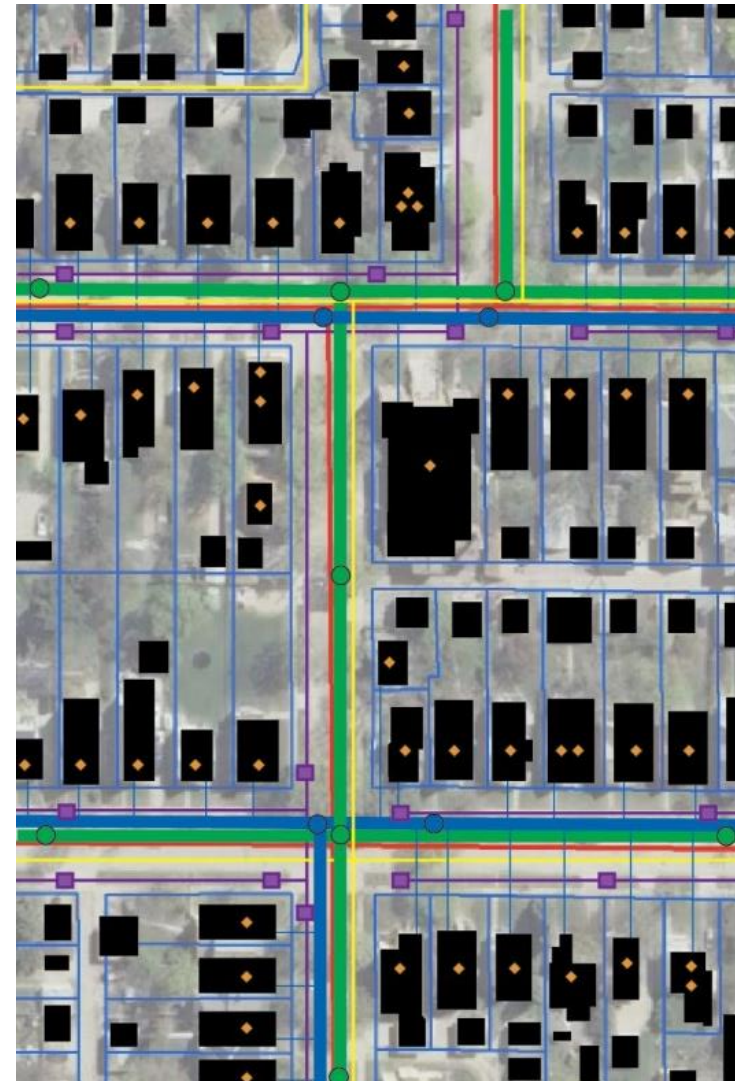
Authoritative source

Counties:

Aggregate and validate

Metropolitan Council:

Paid for the tool & publishes data



5) Current Projects + Recent Successes



5) Current Projects + Recent Successes

Metro Road Centerline Collaborative



Goals:

- > From the *Authoritative Source*
- > Support *Routing & Geocoding*
- > Support *Linear Referencing System*
- > Meet needs of *Emergency Services sector*
- > *Freely and publicly available*



Data producers and data consumers **working together**

5) Current Projects + Recent Successes

Metro Road Centerline Collaborative

Vendor data contract ending in 2015



2014:

*Document the various business needs;
Developed data standard;*

2015:

*Test, review and revise the standard
'First build' – Summer 2015*

MetroGIS
Sharing Information
Across Boundaries

Search MetroGIS

Metro Regional Centerline Collaborative

Overview
The Metro Regional Centerline Collaborative (MRCC) is a joint collaborative project involving the technical and managerial GIS staff from the **Seven Metropolitan Counties** (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington), the **Metropolitan Council** and the **Metropolitan Emergency Services Board** and the **Metropolitan Council** to develop a road centerline data model and dataset to meet the core business needs of local governments and regional interests. The MRCC has been in actively working since May 2014 to document core business needs among the partners. Hennepin County staff has provided project management, coordination and continuity to the collaborative.

Goal of the Project
The goal of the MRCC is to facilitate the creation and sustained maintenance of an authoritatively (locally) sourced road centerline dataset that can be used to meet the needs of local, regional and state partner agencies. Over the course of 2014, the MRCC has documented the specific business needs of the participating partners and developed a draft data model to meet those expressed needs.

Need for Project
At present, there is no authoritatively-sourced, inter-jurisdictional, publicly available road data solution that meets the core business needs of local, regional and state agencies. This project represents an effort to develop and sustain this much needed geospatial data resource.

What are the core uses of this dataset?
The needs that this data model/dataset are intended to satisfy include:

- Vehicle routing;
- Address geocoding (the model will contain both assigned and theoretical ranges);
- Next Generation 911 call routing and location validation;
- Emergency services dispatching;
- Support of linear referencing system use;
- Cartographic representation of road features;

Downloads & Survey

Thanks for your input!
The MRCC Project Team solicited comment on the draft data standard from February 27 through April 3, 2015 from the statewide community of road data consumers.

A report with stakeholder comments, ideas and critique is available in the links below. The sample data and documentation remain available as well.

Get the Sample Dataset
Download the **Sample Dataset** (includes metadata and disclaimer)

Get the Documentation
Download the **MRCC Project Summary Document** (6 page PDF Document)
Download the **Draft MRCC Local Road Data Model Document** (47 page PDF Document)
Provide Feedback
Provide Feedback (via email)

Survey Results Document
Download the **MRCC Stakeholder Feedback Report** (16 page PDF Document)

5) Current Projects + Recent Successes

Joint Agency Aerial Imagery Collection: 2016

Metropolitan Council: Spring 2016 (leaf off)

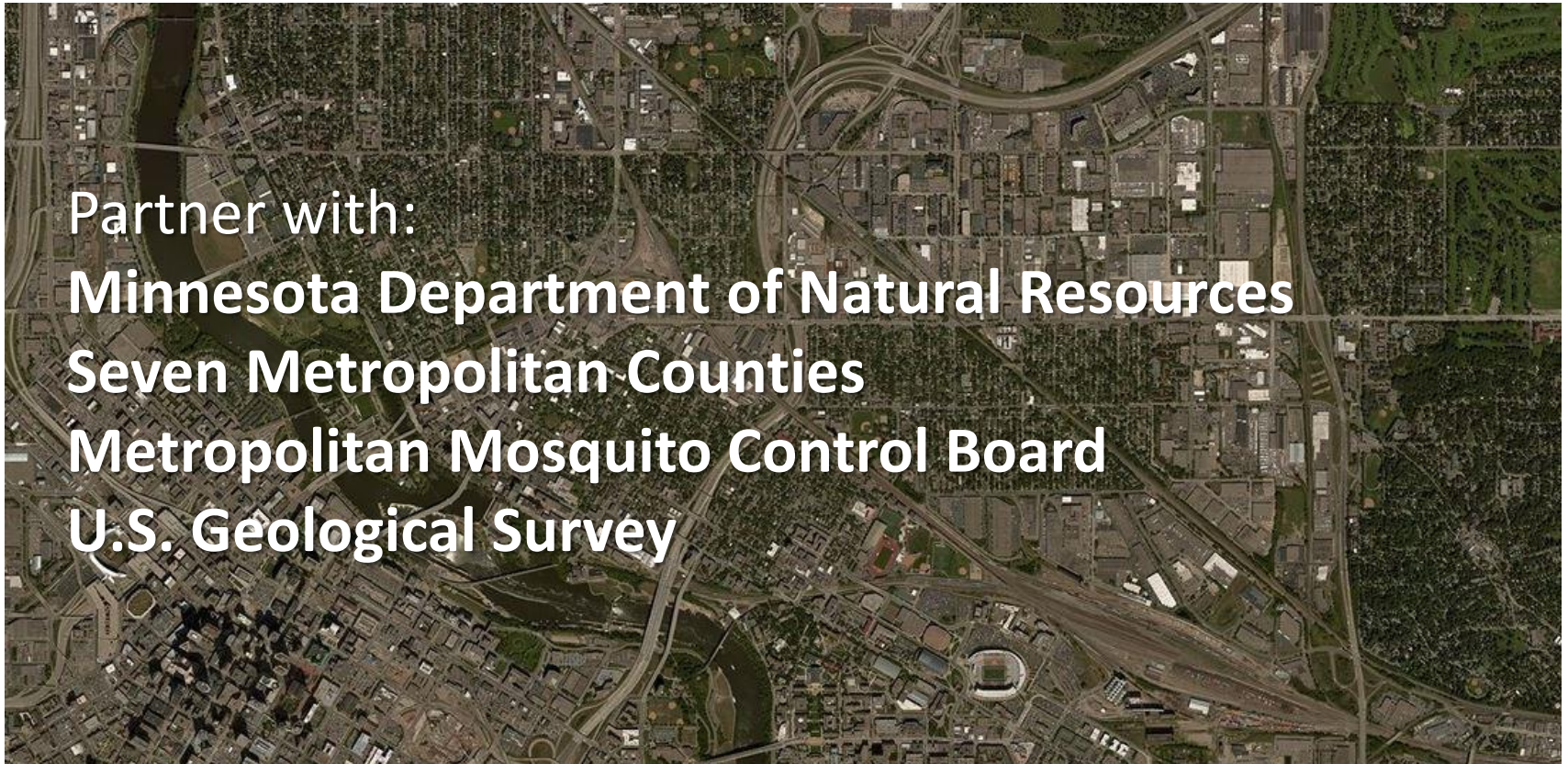
Partner with:

Minnesota Department of Natural Resources

Seven Metropolitan Counties

Metropolitan Mosquito Control Board

U.S. Geological Survey





5) Current Projects + Recent Successes

Free + Open Data Policy Adoption

Ramsey County	February 11, 2014
Hennepin County	February 11, 2014
Dakota County	March 25, 2014
Carver County	April 1, 2014
Anoka County	April 22, 2014
City of Minneapolis	July 30, 2014
Washington County	November 18, 2014
Scott County	<i>(Expected mid-2015)</i>

Free and Open Public Data

As of January 2019

The map shows Minnesota's counties color-coded as follows:

- Dark Green:** Data is Freely Available (Clay 1999, Becker 2008, Otter Tail 2009, Chisago 2007)
- Orange:** Sale and Licensure Data (Most counties)
- Light Gray:** No Data / Limited Data (Marshall, Pennington, Red Lake, Polk, Norman, Mahanomen, Wilkin, Grant, Douglas, Pope, Stevens, Swift, Lac Qui Parle, Chippewa, Kandiyohi, Meeker, McLeod, Sibley, Nicollet, Le Sueur, Goodhue, Wabasha, Mower, Fillmore, Houston, Rock, Nobles, Jackson, Martin, Faribault, Freeborn, Steele, Dodge, Olmsted, Winona, Pipestone, Murray, Cottonwood, Watonwan, Brown, Renville, Lincoln, Lyon, Redwood, Seward, Wright, Hennepin, Ramsey, Washington, Anoka, Isanti, Kanabec, Milne Lacs, Morrison, Todd, Wadena, Hubbard, Cass, Itasca, Aitkin, Carlton, Pine, St. Louis, Lake, Cook, Lake of the Woods, Beltrami, Clearwater, Koochiching, Kittson, Roseau)

Sources:

- Boundary Solution
- Phone interviews
- Minutes of County

Note: This map is for informational purposes only.

Sale and Licensure of Data

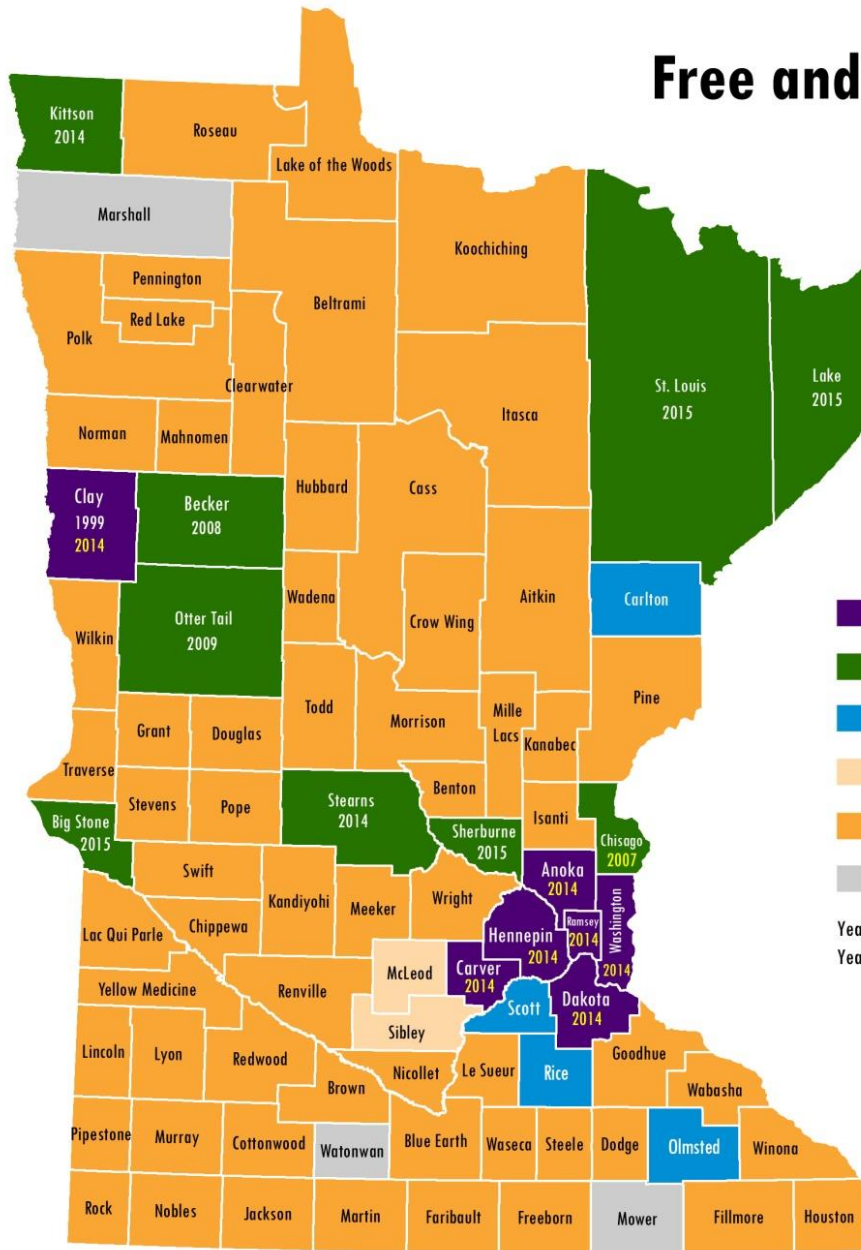
No Data / Limited Data Available

- Boundary Solutions, Inc. (2014 data)
- Phone interviews with staff in counties in Minnesota (2014)
- Minutes of County Board Proceedings (2014)



Free and Open Public Geospatial Data

As of April 17, 2015



- Data Freely Available, Adoption of Policy
- Data Freely Available, No Policy Adopted
- Free and Open Data Under Consideration
- Geospatial Data In Development
- Sale and Licensure of Data
- Geospatial Data Status Unknown

Year in gold indicates the year a free and open public geospatial data policy was adopted
 Year in white indicates the year the data became freely and openly available

Sources:

Phone interviews with county staff, 2014-2015
 Minutes of County Board Meetings, 2014-2015
 Web searches of county websites/data portals, 2014-2015

Note: This map is subject to frequent updates



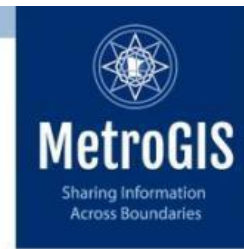
MetroGIS™
 Sharing Information Across Boundaries

Map: G. Maas, MetroGIS

Free + Open Geospatial Data Research Available...



“MetroGIS free and open data”



- About MetroGIS
- Get Data
- How Do I Get...?
- Projects**
- Project Templates
- Work Plan & Budget
- Statewide Centerlines
- Free + Open Data**
- Address Point Aggregation
- Address Point Editor
- Public-Private Data Sharing
- Stormsewers
- Teams + Governance
- Why MetroGIS Matters
- Affiliations
- Archives

Free and Open Data Research

The MetroGIS Data Producers Work Group and Policy Board have been actively engaged in research, deliberation and review of the benefits of freely and openly available public geospatial data in the Seven County Metropolitan region.

The following resource materials, research and articles have been prepared and assembled over the course of 2013 in service of that discussion.

On October 23, 2013, the MetroGIS Policy Board adopted a Resolution of Support for Free and Open Public Geospatial Data and are advancing their recommendation and supporting research to the governments in the Seven County Metropolitan region.



MetroGIS Documents and Research

- Single-Page Fact Sheet on Free and Open Geospatial Data
- MetroGIS: Free & Open Access to Data: Research & Reference Documents
- MetroGIS Policy Board Resolution of Support for Free and Open Public Geospatial Data
- Sample Resolution Resource Document for City and County Governments
- Sample Letter of Support from MetroGIS Policy Board Chair to County Board Chairs and County Administrators

Articles and Publications

- NSGIC: Geospatial Data Sharing Guidelines for Best Practices
- NSGIC: This Isn't Private Information
- NSGIC: Economic Studies for GIS Operations
- Brian Timoney: The Flawed Economics of Closed Government Data

Metro County Policy Resolutions

- Ramsey County, February 11, 2014
- Hennepin County, February 11, 2014
- Dakota County, March 25, 2014
- Carver County, April 1, 2014
- Anoka County, April 22, 2014

Presentations

- Free and Open Data: History and Recap of the Issue – Randy Knippel, Dakota County
- Free and Open Data: Context – Geoff Maas, MetroGIS

www.metrogis.org/projects/free-open-data.aspx

6) Challenges



1) Challenge in finding ‘champions’ for specific initiatives;

Consistent, on-going support from senior agency management is crucial;

2) Volunteer organization: *limited resources & engagement;*

Limited and varying personnel capacity for efficient execution of projects;

3) Multi-agency nature of the work = slower process;

Multi-agency efforts, while more thorough, are more time consuming;

4) Inter-agency fiscal arrangements are challenging

Government accounting and procurement aren’t set up for inter-agency work

5) Limited capacity to address all the needs;

Constant need to prioritize most urgent/most needed



7) Benefits

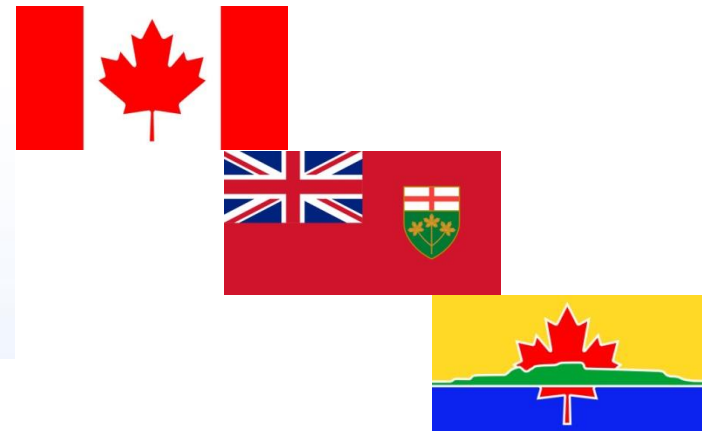
#1) Relationships & professional network;

#2) Trust between agencies and individuals;

**#3) Cost savings to the taxpayer;
Maximizing efficiencies of shared work;**

#4) *Eliminates* redundant work;

#5) *Forum for participation of* smaller agencies;



Thank you!

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