

MICHAEL BAKER JR., INC.

Executive Summary Comprehensive GIS Plan

McLean County Regional GIS Consortium

February 2011

Table of Contents

Overview 3

Needs Assessment 4

Strategic Plan 4

Implementation Plan 5

 Planning 5

 Governance and Coordination 5

 Data Management 5

 Technology Enhancements 6

 Staffing and Education 6

2011 Annual Work Plan 6

Conclusion 6

Overview

Local governments within the McLean County region have a long history of cooperation in many areas, including GIS, with their cooperative GIS initiatives starting in 1989. This comprehensive GIS Plan builds upon the successes of the past, evaluates present conditions, assesses industry trends and best practices, and prepares a road map for the future for the McLean County Regional GIS Consortium (Consortium). This Consortium includes the six governmental agencies consisting of the City of Bloomington, City of Bloomington Township, County of McLean, McLean County Emergency Telephone System Board, Town of Normal and McLean County Regional Planning Commission. For nearly two decades, the Consortium has worked to advance GIS technology, data, and applications for the benefit of the McLean County region, with the last strategic plan being prepared for the Consortium in 1997. The work described herein represents a comprehensive update to the GIS planning work completed in 1997.

In preparing this update, the following key questions were considered by the participants and stakeholders:

1. How can GIS technology aid in supporting core business needs efficiently and effectively?
2. What is our vision, mission, values, goals, objectives and measures of success with regards to implementing an integrated, multi-agency and cross departmental GIS?
3. What strategic and tactical actions are needed to gain an optimum return on GIS investments?
4. What are our users' needs: at the individual user, department, agency, Consortium and public or other levels?
5. What have we learned from our experiences and long GIS history? How can we improve?
6. What is the best form of governance and organizational structure for the Consortium?
7. What is an equitable and sustainable funding structure for continued growth and progress?
8. What are our constraints or institutional barriers to overcome?
9. What are our IT, hardware/software/systems, staffing, training and skill resources and needs?
10. How can we successfully navigate the rapidly changing technological landscape?
11. What are our priorities and timelines for GIS data, applications and services?
12. Who is responsible for maintenance of each data layer and monitoring cost, quality, currency, standards, etc.?
13. What are our data access, cost and distribution policies, among Consortium members or others?
14. What industry best practices may be considered for adopting or adapting to our situation?

This Executive Summary presents an overview of the findings and recommendations of this comprehensive GIS Plan, which is presented in four separate reports as follows:

- 1) ***Needs Assessment***
- 2) ***Strategic Plan***
- 3) ***Implementation Plan***
- 4) ***2011 Annual Work Plan***

Each of these reports is summarized below.

Needs Assessment

The Needs Assessment report analyzes the GIS needs, issues and gaps for the Consortium, member agencies and non-member agencies. This analysis is based on a review of the results of individual departmental interviews, which were carried out as a part of this planning process. The review of these results was done in context with larger, interdependent and complimentary frames of reference for the Consortium, individual member agency and non-member (external) agencies. The process resulted in approximately 50 Consortium-wide needs being identified. These needs can be generally classified into the following five major categories:

- 1) Planning (8)**
- 2) Governance and Coordination (10)**
- 3) Data (11)**
- 4) Technology (11)**
- 5) Staffing and Education (4)**

The Needs Assessment report also presents many additional needs that were identified for individual departments for consideration in departmental planning and budgeting as well as integration with the regional GIS.

Strategic Plan

The Strategic Plan report presents recommendations designed to address requirements identified in the Needs Assessment. These recommendations are to be implemented and sustained over a five year period (2011-2015). The Strategic Plan also identifies responsible parties, goal/s served and issue/s resolved. The consultant recommendations presented in the Strategic Plan follow the general theme of promoting closer collaboration and better communications among the Consortium members, specifically:

- Dedicating and focusing limited resources on satisfying the needs of members while making the Consortium data and resources accessible to the public and others (to the extent practical);
- Designating department liaisons & forming peer groups to identify common and divergent needs at department, agency and Consortium scales for annually coordinated agency work plans;
- Promoting closer coordination with IT departments of the City of Bloomington, the Town of Normal, and McLean County through quarterly meetings among the IT directors and the GIS Management and Technical Committees;
- Institutionalizing annual status reports (at minimum) to the agency executives by the GIS Management Committee members;
- Continuing use and refinement of current Consortium structure as outlined in the existing intergovernmental agreement;
- Utilizing GIS technology for providing effective, efficient, synchronized and integrated services to fulfill the responsibilities of government; and
- Maintaining an up-to-date, comprehensive, and living GIS Plan.

Implementation Plan

The Implementation Plan report details the specific actions recommended by the consultant to carry out the strategic initiatives of the Consortium. These actions were prioritized according to immediate, medium and long term actions. Following is a summary outline of the recommendations for each of the five categories of identified needs:

Planning

- Update and revise departmental and peer group needs on an annual basis
- Update short term and long term priorities of member agencies
- Develop and update GIS work plans for the Consortium and each member agency
- Update the comprehensive GIS Plan for the Consortium every 5 years

Governance and Coordination

- Provide periodic updates to member agency executives about regional GIS vision, activities and progress
- Promote open communications to proactively identify issues and avoid potential conflicts
- Continue the present organizational structure using the Matrix GIS Model with distributed responsibilities
- Form an Information Technology (IT) Committee for improving communications with GIS Management
- Appoint department liaisons to facilitate active stakeholder participation and provide on-going review of business needs
- Form peer groups to focus on common needs among similar functional groups
- Form other focus groups as needed to address specific issues or tasks
- Clarify roles and responsibilities of Consortium members to achieve greater understanding and support of GIS initiatives

Data Management

- Develop and maintain a comprehensive list of data and functional needs pertaining to data, workflows, technology, applications and GIS Integration with other systems and databases
- Document data stewardship responsibilities
- Improve documentation of standards, workflows, editing procedures, metadata, etc.
- Monitor and revise data distribution process and policy as and when needed
- Cooperate with individual member agencies and departments in monitoring and addressing the approximately 300 separate data needs, 263 of which impact multiple agencies and departments with most in need of constant maintenance (253) and completion (169)
- Review, improve and expand the existing GIS database model
- Coordinate annual agency data plans
- Develop consistent standards to facilitate a seamless regional dataset and to reduce duplication
- Provide access to property ownership/tax information to all Consortium member employees in need of such data
- Develop further and improve the master address/streets and public safety data

- Work towards a seamless parcel layer and resolve pending cadastral issues
- Review, prioritize and cooperatively address the thirty six (36) specific application needs, many of which could be subcontracted with appropriate cost sharing

Technology Enhancements

- Explore 'Cloud Computing Models': Keep current on technological advancements and opportunities
- Build a framework for and expand deployment of 'GIS Web Services'
- Increase live mobile technology/GPS deployments for field data
- Explore and standardize 'Commercial Off The Shelf Solutions' (COTS) for municipal functions throughout the various Consortium member departments
- Ten (10) focused IT initiatives are identified and thirty four (34) recommendations for specific GIS integration & interoperability with existing IT systems & database needs are presented

Staffing and Education

- Develop a comprehensive, tiered and needs focused staff GIS training plan
- Pursue optimal staff levels & capabilities to implement the GIS initiatives recommended in this plan
- Promote informal training such as GIS library, free online classes, tutorials, and internal demonstrations
- Encourage participation in formal training to keep pace with rapid changes in technology
- Promote workflow automation for frequently performed and repetitive tasks
- Provide a central GIS helpdesk for technical support of Consortium members
- Enhance Internet/Intranet portal to facilitate updates and improve functionality
- Utilize 'Content Management Systems' for website management

2011 Annual Work Plan

The Annual Work Plan identifies the tasks associated with completing each initiative of the GIS Implementation Plan for the current year, and will therefore need to be updated annually. The 2011 Work Plan identifies responsibilities for completing each task and estimates Consortium-level human resource requirements. These estimates include approximately 1,400 hours of staff time, plus approximately 1,800 hours of consultant time to complete all tasks identified for 2011. A task completion schedule is also included in this Annual Work Plan. It is anticipated this implementation schedule will be adjusted as necessary to reflect available resources.

Conclusion

The actions recommended in this comprehensive GIS Plan are intended to result in the provision of timely, accurate & consistent geographic information to citizens and tax payers of the McLean County region across administrative and jurisdictional boundaries. Achieving this presents significant challenges but immense opportunities for enhanced inter-agency collaboration and cooperation.