2011

STATE OF OHIO

FIFTY STATES INITIATIVE PLANNING GUIDE

Providing the Ohio Geographically Referenced Information Program Council with a strategic direction for the facilitation and coordination of programs, policies, technologies and resources for spatial information collection, documentation, discovery, distribution, exchange and maintenance in support of the Ohio Spatial Data infrastructure

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STATE OF OHIO
Geospatial Planning Document

2011-2016

Produced by the

Ohio Geographically Referenced Information Program Council
in
Cooperation with the Ohio GIS Stakeholder Community
with
Funding assistance from the Federal Geographic Data Committee

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PENDING OGRIP COUNCIL ADOPTION

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Executive Summary

At the heart of this document is the desire to better position the Ohio Geographically Referenced Information Program (OGRIP) to fulfill its mission to benefit the users of Geographic Information Systems (GIS) and spatial information at all levels of government. An opportunity exists for the State of Ohio to help the GIS community realize the benefits of partnership opportunities that allow the leveraging of a shared GIS services environment to support the Ohio Spatial Data Infrastructure (OSDI) as well as spatial data development and maintenance activities. The importance of communicating the benefits of the OSDI and the ability to dedicate the resources necessary to support the geospatial needs of the State are critical to the success of the geospatial community as a whole.

Drawing on the responses of hundreds of GIS Users throughout the state, this planning document provides a framework to guide OGRIP's spatial data coordination and development efforts for the next five (5) years. The plan confirms the critical role GIS technology as an enabler of success in achieving the five strategic mission goals of the Council, namely to,

- Encourage the creation of digital geographic data of value to multiple users
- Foster the ability to easily determine what geographic data exists
- Foster the ability to easily access data
- Encourage the informed use of geographic data.
- Leverage the partnerships that constitute OGRIP into network of resources to achieve its mission and goals

In developing this plan, OGRIP adopted an issue-based strategic decision making process that recognizes the critical contributions of the individual GIS stakeholder agencies within both State and Local government. This plan is the product of both a collaborative group effort and a formal strategy formulation procedure enacted over a period of nine months.

In seeking the best strategies for OGRIP several realities had to be considered:

- OGRIP exists within a heterogeneous environment where important differences in business goals must be supported.
- The OGRIP Office operates within a complex mission and business environment within the Department of Administrative Services Office of Information Technology (OIT) serving OGRIP's member organizations, all State agencies and supporting the State's eighty-eight Counties.
- OGRIP must be responsive to executive, legislative, administrative, information technology and other key stakeholder policies and directives in the development of the OSDI.
- OGRIP must constantly balance appropriate resources to achieve results.

This document blends the development of an OSDI strategic framework, with a State Owned Real Property (SORP) management strategy, and OGRIP's mission, to provide a practical guide and a scope within which the Council will focus its OSDI planning, development and management activities in years to come.

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1 PURPOSE AND METHODOLOGY

The Ohio Geographically Referenced Information Program Council (OGRIP) initiated this planning process in order to understand and address the needs and requirements of Ohio's GIS User community. OGRIP applied for and received funding assistance through the **Federal Geographic Data Committee (FGDC)** as part of the Fifty States Initiative to advance the National Spatial Data Infrastructure[1] (NSDI) to support Strategic Planning for Geographic Information Systems (GIS).

The process was begun so that OGRIP could assess how best to fulfill its mission of statewide GIS advocacy, communication, cooperation, coordination and collaboration, and to elevate the importance of spatial data sharing agreements among state and local government to support the missions of both the Ohio Spatial Data Infrastructure (OSDI) and the NSDI. In so doing, OGRIP will continue to ensure taxpayer funds are used wisely and spatial information, once captured, is used appropriately and to the benefit of as many users as possible.

This planning document, developed using guidelines set forth by the National States Geographic Information Council and the FGDC in support of the NDSI and the objectives of the Fifty States Initiative Action Plan, is intended to help OGRIP develop an understanding of needs within the GIS Community that can be used to assist in the facilitation and coordination of programs, policies, technologies, and resources for the collection, documentation, discovery, distribution, exchange and maintenance of geospatial information in support of the Ohio's contributions to the NSDI. The guidelines set forth by the FGDC require responses to a specific set of questions common to all Fifty States Initiative Strategic Plans. The process used SWOT analysis as the strategic planning method to evaluate OGRIP Strengths, Weaknesses, Opportunities, and Threats.

In developing this plan OGRIP engaged a diverse cross-section of stakeholder groups to participate in the planning process. These include representatives from municipal, county, state, federal and regional groups as well as the private sector, academia and non-profit organizations. Participants in the stakeholder outreach reflected all levels of professional or organizational roles, from policy and decision makers, technical managers and service providers and technical and support staff. Input was solicited via online survey and outreach meetings with strong stakeholder participation in both the survey and outreach meetings.

The results, participation, insights and discussions of these surveys and outreach meetings has helped OGRIP shape what it sees as the next evolutionary stage of Ohio's geospatial activities. OGRIP has identified 5 major areas to focus on in achieving its goals.

1) Improvement of the State Owned Real Property Management process
2) An evaluation of future development opportunities for OSDI Framework Layers
3) A reassessment of On-line Data hosting and discovery activities and structure
4) Pursuit of Statewide Geospatial Initiatives
5) A reexamination of OGRIPs roles, responsibilities and capacity with regard to its stated mission.

[1] Established in 1994, the National Spatial Data Infrastructure (NSDI) promotes the sharing of geospatial data and seeks to reduce duplication of effort among agencies, improve quality and reduce costs related to the development of spatial data, improve accessible to the public and increase the benefits of using spatial data by establishing key partnerships with states, counties, cities, tribal nations, academia and the private sector to increase data availability.

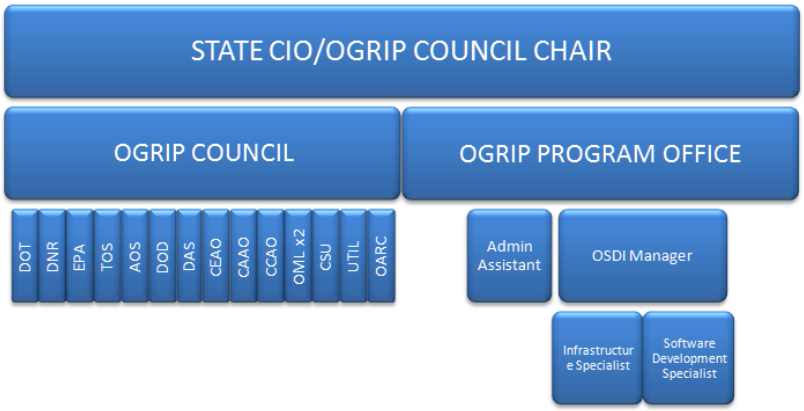
2 CURRENT SITUATION

Ohio has an active and knowledgeable stakeholder community of GIS professionals within every level of government working throughout the State to provide location based services supporting both citizens and decision-makers. While the public's understanding of location based services and spatial information is growing, it is primarily based on consumer oriented solutions like GPS enabled devices and internet mapping applications. Despite the significant investment required to develop these single-purpose tools for the presentation of generalized referential information, the ubiquitous nature of GIS has lead to an expectation that government services should perform in a similar fashion, often with limited appreciation for, or knowledge of, the level of effort, technical expertise and associated resources required to build and maintain multi-purpose authoritative public data sets.

Ohio is fortunate in that state and local governments have been developing and using GIS technology for several years with many mature GIS implementations providing ready access to vast amounts of spatially enabled information. As with any technology there are early adopters that set the bar for de facto standards and requirements, and more often than not these internal standards are developed to meet internal business requirements making the aggregation and integration of data with other agencies, jurisdictions, or levels of government difficult.

2.1 OGRIP COUNCIL

OGRIP is the authorized GIS coordinating body for the State[2]. Promoting effective use and sharing of geographic data of value to multiple users, OGRIP fosters the ability to easily determine what geographic data exists and to assure easy access to and use of spatial data —data that includes a reference to place, such as street address, voting district, or coordinate position. In 2010 the OGRIP Council was codified in the Ohio Revised Code[3] and expanded to its present configuration within the Department of Administrative Services and tasked with the coordination of an inventory of property owned by the State.



OGRIP consists of a 15 member Governor appointed Council and is served by a program office staff housed under the Department of Administrative Services within the Office of Information Technology.

[2] Created in 1988 as a mechanism for communication among State agencies and local government, OGRIP was officially established through an Executive Order by Governor Voinovich (93-010-V) and was re-established by Governor Taft (99-10T and 2000-05T).

[3] O.R.C. Section 125.901 Geographically referenced information program council.

OGRIP COUNCIL REPRESENTATION

Ohio Department of Natural Resources
Ohio Department of Transportation
Ohio Environmental Protection Agency
Ohio Department of Development
Ohio Treasurer of State
Ohio Attorney General
Ohio Department of Administrative Services
County Auditor's Association of Ohio
County Engineers Association of Ohio
County Commissioners Association of Ohio
Ohio Association of Regional Councils
Ohio Municipal League (Cities over 100,000)
Ohio Municipal League (Cities under 100,000)
Institutions of Higher Learning
Public Utilities

During its 23 years in existence OGRIP has provided State and local government agencies with strong guidance and leadership by encouraging GIS activities that enhance the development and use of reliable digital geospatial data through communication, coordination, cooperation, and collaboration serving as a bridge for cooperation between federal, state and local government.

In addition to the Council membership, OGRIP has a program office responsible for daily program management activities, and an OGRIP Forum that consists of volunteers from all sectors across the state meets monthly. The Forum provides opportunities for users and creators of spatial information to meet and exchange ideas, learn about OGRIP initiatives and about other GIS activities around the state. In this way OGRIP reflects a truly multi-organizational approach to GIS coordination.

OGRIP strives to:

1. Coordinate GIS activities within the State that provide for the efficient collection, management and use of spatial data

2. Assist in the coordination of GIS activities and to encourage access and consistency with other GIS systems to the maximum extent possible

3. Represent the interests and concerns of State and Local government agencies with regard to spatial data development, discovery and distribution.

4. Provide leadership in the establishment and maintenance of a system for the collection and dissemination of spatial data

Through OGRIP's efforts the State of Ohio has successfully implemented several key GIS initiatives to develop key framework layers for the Ohio Spatial Data Infrastructure, established GIServOhio as a spatial data discovery and distribution portal for state and local government, hosted online data and mapping services, developed mapping applications for state agencies, established partnerships with federal, state and local government to support data development activities, and provided education and outreach services. By leveraging Federal, State and local tax-payer dollars OGRIP has effectively reduced both costs and redundant data development activities, improved the quality and accuracy of Ohio's spatial data and improved the accessibility of the data.

The following is a summary of enterprise level projects OGRIP has undertaken:

- Ohio Digital Orthophoto Program Study (ODOP) called for and defended the development of a comprehensive statewide program for imagery at local government resolutions in 1997. [completed]
- National Digital Orthophoto Program (NDOP) & DOQQ (Digital Ortho Quarter Quads) compression and enhancement [completed]
- Ohio County GIS Profiles provides a snapshot regarding spatial data assets in each county and their status. The purpose of the GIS Profiles is twofold – 1) to obtain an inventory of spatial assets and activities at the local level and 2) to create a mechanism for updates to this inventory as more counties and municipalities implement and manage GIS programs. [on-going]
- Ohio Department of Commerce/Bureau of Underground Storage Tank Regulations working with the GIS Support Center[4] (GISSC) is developing an application linking inventory, permitting and inspection data to site locations [on-going]
- The Location Based Response System (LBRS) is a program to develop highly accurate street centerlines with address ranges and field verified site address points through partnerships with local governments. OGRIP staff manages this program, negotiating of MOAs (memoranda of agreements) with Counties, coordinating funding from state and federal partners, and promoting the program to all counties through meetings with elected officials. All funding is earmarked for county participation and supports cross-agency data sharing for, among other things, emergency management and economic development. [on-going]
- GIServOhio is a data and services portal supporting the discovery, access, and delivery of raster and vector spatial data sets. There are nearly 5,000 data sets described and/or accessible through the GIServOhio portal today. They can be accessed at the following link; http://metadataexplorer.gis.state.oh.us/metadataexplorer/explorer.jsp.
- This implementation of server technology provides a convenient means of “discovering” the most current available data in Ohio. [on-going]
- Ohio Geodetic Densification Project (OGDP) was established in 2001 to provide monetary support for the monumentation, re-monumentation, densification and continued maintenance of geodetic control and geodetic reference framework development in state and local government. Densification of geodetic monumentation was an investment in state and county infrastructure to support new development, road improvements and surveys. [completed]
- In 2006 the Ohio Statewide Imagery Program (OSIP) was launched as a partnership between State, Local, and Federal government agencies to develop high-resolution imagery and elevation data to benefit GIS users at all levels. Standard OSIP products included 1-foot resolution Color Orthophotography, 2 Meter - Light Detection and Ranging (LiDAR) elevations and a 2.5-foot Digital Elevation Model (DEM). Imagery and elevation data created through OSIP has been provided to the USGS for incorporation into the NSDI through inclusion in the National Elevation Dataset (NED) and the National Map. [on-going]
- Working with the Ohio Department of Natural Resources, OGRIP developed mapping applications to support the Ohio Environmental Resources Information Network (ERIN). ERIN facilitates the inclusion of Ohio’s soil, water and natural resource data supporting private and public land use decisions. ERIN provides this data in a single location, with a simple format and in conjunction with powerful analysis tools primarily for Water Project Reports and Nutrient Management. [on-going]

[4] Housed within OIT, The GIS Support Center is the implementation arm of OGRIP providing system administration and software development to support OGRIP initiatives

2.1.1 Ohio GIS Stakeholder Participation

OGRIP enlisted the participation of two hundred eighty-five (285) GIS users representing a broad cross-section of stakeholder groups throughout Ohio. These interactions provided insight to the issues and challenges faced by GIS users and provided stakeholders with the opportunity to provide suggestions and opinions to help guide the development of the strategic planning process.

Stakeholder Group	Did They Participate? (Yes/No)	Participants
Government Sector:		
Municipal	Yes	39
County	Yes	115
State	Yes	36
Tribal	N/A	N/A
Federal Regional	Yes	14
Federal Headquarters	No	0
Regional	Yes	23
Other:		
Private Sector	Yes	30
Non-Profit Organizations	Yes	7
Academia	Yes	20
General Public	Yes	1

2.2 OHIO'S FRAMEWORK DATA STATUS

The following is a listing of the key data elements that make up both the National and Ohio Spatial Data Infrastructure and the development status of each within the State of Ohio.

Framework Layer	Status	Available to NSDI
Geodetic Control	Complete	Yes
Cadastral	Incomplete	No
Orthoimagery	Complete	Yes
Elevation	Complete	Yes
Hydrography	Incomplete	Yes
Administrative Units	Incomplete	Yes
Transportation	In Process	Yes
Other Base Themes of Significance:		
Structures	Incomplete	Yes
Land Use	Complete	Yes

2.2.1 Ohio's Fifty States Initiative Coordination Criteria

The Fifty States Initiative Coordination Criteria developed by the National States Geographic Information Council[5] to summarize the status of GIS coordination activities across the nation.

NSGIC Criteria	Status	Status Description
1. A full-time, **paid coordinator** position is designated and has the authority to implement the state's business and strategic plans.	**Completely in Place**	The State CIO serves as the OGRIP Council Chair and oversees the activities of the OGRIP Program Office housed within the Department of Administrative Services.
2. A clearly **defined authority** exists for statewide coordination of geospatial information technologies and data production.	**Completely in Place**	OGRIP is the coordinating body for GIS activity in the State
3. The statewide coordination office has a **formal relationship with** the state's Chief Information Office (**CIO**).	**Completely in Place**	The State CIO serves as the OGRIP Council Chair and oversees the activities of the OGRIP Program Office housed within the Department of Administrative Services.
4. **A champion** (politician or executive decision-maker) is aware and involved in the process of geospatial coordination.	**Completely in Place**	The State CIO serves as the OGRIP Council Chair and oversees the activities of the OGRIP Program Office housed within the Department of Administrative Services.
5. **Responsibilities for developing** the National Spatial Data Infrastructure (**NSDI**) and a State Clearinghouse are assigned.	Partially In Place	OGRIP maintains the State's clearinghouse and administers statewide projects and initiative, however stewardship of some of the NSDI layers has not been established
6. The ability exists to work and **coordinate with local governments**, academia, and the private sector.	**Completely in Place**	OGRIP maintains strong relationships with local governments, academia, and the private sector through their participation on the Council, in the Forum, and through outreach to various representative organizations
7. **Sustainable funding** sources exist to meet project needs.	Partially in Place	OGRIP leverages partnerships and funds to establish nationally recognized programs like OSIP, LBRS, and OGDP.

[5] The National States Geographic Information Council (NSGIC) is an organization committed to efficient and effective government through the prudent adoption of geospatial information technologies. Members of NSGIC include senior state geographic information system (GIS) managers and coordinators. Other members include representatives from federal agencies, local government, the private sector, academia and other professional organizations. www.nsgic.org

NSGIC Criteria	Status	Status Description
8. GIS Coordinators have the **authority to enter into contracts** and become capable of receiving and expending funds.	Partially in Place	Only the Director of the Department of Administrative Services has the administrative authority to enter into contracts taking recommendations from the CIO.
9. The **Federal government** works through the statewide coordinating authority.	**Completely in Place**	OGRIP has a partnership agreement in place with the USGS and works closely with our USGS Liaison, Charles Hickman.

a. Metadata Clearinghouse for statewide data

OGRIP has developed a spatial data and services platform known as GIServOhio to promote information discovery, access and exchange in the digital environment. GIServOhio employs ArcGIS and ArcIMS server technology to provide a convenient means of "shopping" for the most current data under the custodianship of OGRIP's cooperating partners. The Ohio Metadata Explorer[6] draws from metadata for more than 5,000 spatial data sets maintained by OGRIP and its partners providing access to partner held data stores or, in some cases, from a storage location maintained by OGRIP on behalf of partners with limited resources to host metadata discovery or download capabilities.

2.3 STRENGTHS AND WEAKNESSES - The answers to the following SWOT sections represent the synthesized responses of the 285 stakeholders to the OGRIP Planning Survey and the regional outreach meetings.

a. What are OGRIP's top three strengths?

1. Centralized coordination of geospatial activities among the many agencies and stakeholders of Ohio.
2. Centralized location for Ohio GIS data and a focal point for data-sharing between agencies.
3. Pursuing and obtaining funding for large, statewide initiatives such as OSIP and LBRS.

Other strengths include experienced, well-regarded staff, a history of successful projects and initiatives, an excellent track record of collaboration across a variety of stakeholder groups to accomplish projects and initiatives and effective leadership and vision. Responses from the survey and outreach meetings confirm these strengths and point to OGRIP's ability to be a focal point of all things geospatial as a tremendous asset to the State.

b. What are OGRIP's top 3 weaknesses?

1. Under-staffing and Funding
2. Outreach and Marketing of GIS
3. Resources to develop and maintain data standards or best practices

While the OGRIP Program staff is very experienced, the small number of staff to meet the demands of all of the areas of need was perceived by stakeholders as the major weakness, one that can be directly attributed to other weaknesses identified by stakeholders. While OGRIP maintains strong ties with County, State and

[6] http://metadataexplorer.gis.state.oh.us/metadataexplorer/explorer.jsp

Federal partners, the small staff limits OGRIP's ability to provide the outreach and marketing of GIS to other sectors; this is especially evident in trying to reach municipal officials and stakeholders.

2.4 OPPORTUNITIES AND THREATS

a. What are OGRIP's top 3 opportunities?

1. Utilizing partnerships to accomplish goals and visions
2. Ability to centralize data warehousing and provide hosting support.
3. Facilitate the development and maintenance of data at the local level (including the development of standards and best practices) to support the goals for quality, consistent standards based on data at the State and Federal levels.

There is an opportunity for OGRIP to accomplish its goals and missions by channeling its strengths, emphasizing/deemphasizing various aspects of its roles and expanding into new services to benefit both the program and geospatial community. One of the great strengths of OGRIP is its constituent members. These groups have the ability to educate and advocate elected officials about the importance of GIS activities.

Additionally, by better utilizing these partnerships OGRIP may be able to deemphasize some aspects of its current roles with regard to education and training by leveraging capabilities of partner groups to assume responsibilities that will allow OGRIP to redirect its focus to other necessary functions as evidenced by the overwhelming support for OGRIP to expand its geospatial data hosting capabilities to support local and regional governments, potentially allowing OGRIP to develop a new model for its online presence.

Historically OGRIP has played a limited role in the development and maintenance of spatial data standards. Based on the responses of stakeholders it appears OGRIP may be called on to expand that role and provide guidance and structure to the development of data standards and best practices. Lastly, by implementing a plan consistent with NSDI, this will allow stakeholders to better leverage data sharing while at the same time enhancing their eligibility for future funding opportunities.

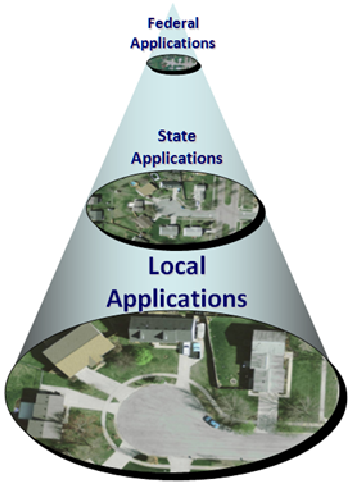
b. What is OGRIP's top threat?

Respondents voiced concerns that OGRIP may be overextended and staffing levels may not be adequate to support existing activities.

OGRIP must take care in allocating resources and investigate opportunities to maximize its ability to meet existing and future program requirements through partnerships, mutual agreements and staff augmentation.

3 VISION AND GOALS

Vertical Integration[7] of data is the underpinning of OGRIP's vision to facilitate data sharing among governmental groups, assure that taxpayer funds are used wisely and that spatial information, once captured, is leveraged to the benefit of multiple levels of government and the public.



In Ohio, implementing the Vertical Integration model is providing a broader view of data sharing positioning Ohio as a best practices model for cooperative data development activities and the informed use of spatial data. Ohio's collaborative efforts are being embraced by Federal, State and Local entities to create spatial data programs designed and implemented using vertical integration concepts and are being driven from an enterprise perspective.

The mission of the Ohio Geographically Referenced Information Program (OGRIP) is to encourage GIS activities that enhance the development and use of reliable digital geospatial data through communication, coordination, cooperation, and collaboration. OGRIP accomplishes its mission by: educating organizations about GIS and other related technologies; communicating the benefits of GIS and cooperative efforts; raising awareness regarding GIS initiatives in Ohio; identifying points of contact in organizations focused on the development and usage of geographic data; identifying data sources and resources for potential use for organizations; instilling appreciation for the benefits of partnerships among organizations for geographic data development, sharing, and GIS programs; and continuing to provide direction regarding enabling spatial technologies beneficial to Ohio.

Ohio will be a best practices model for spatial data sharing, cooperative data development activities and the informed use of spatial data.

Through the efforts of OGRIP, Ohio will be a best practices model for data sharing and informed use of spatial data. To ensure a continuing focus on data sharing, OGRIP must provide outspoken leadership and serve as the lead GIS promoter for Ohio. OGRIP must demonstrate and articulate the value of geographic information for effective decision making and continue to serve Ohio as a central point of GIS data distribution. OGRIP must communicate activities and initiatives across the state and identify potential areas for cooperative efforts. OGRIP's operating guidelines and principles are focused on communication, cooperation, coordination, and collaboration.

Communication is the cornerstone of OGRIP's existence. Only through open communication with stakeholder groups can OGRIP effectively create and provide mechanisms for cooperation and coordination. For OGRIP to fulfill the Governor's mandate for coordination of spatial data and spatial systems, as well as the sharing of

[7] The basic concepts of vertical integration as it is used in this document were developed by the FGDC in 1997 and articulated through the NSDI.

geographic data, partnerships and participation must be increased. Partnerships and participation are founded on communication.

Encouragement of cooperative efforts among entities (federal, state, and local government, academia and the private sector) is critical to meeting OGRIP's goals. Formal and informal agreements must be developed to support data collection within and among these entities. These agreements could be the forerunner of regional programs that view geographic data as a community resource.

Coordination of spatial data collection efforts can lower the costs of data capture, reduce data redundancies (where possible), and increase benefits associated with data usage. OGRIP needs to initiate the coordination and development of two levels or tiers of digital geographic data coverages within the next five years. One tier will be focused on the needs and requirements of state and regional agencies with an agreed upon framework for data sets and consistent coverages across the entire state, and the other on local government needs and requirements representing a patchwork quilt of more detailed data. Significant data on both levels exists today, but only through increased coordination can the development of these coverages be achieved.

Consistent with other statewide initiatives, OGRIP's efforts in this regard are geared toward assisting state and local officials involved in transportation; economic development; land use planning; environmental, cultural, and natural resource management; public service delivery; and other areas as necessary.

3.1 STRATEGIC GOALS

The goals of the organization are to:

- Encourage the creation of digital geographic data of value to multiple users
- Foster the ability to easily determine what geographic data exists
- Foster the ability to easily access data
- Encourage the informed use of geographic data.
- Leverage the partnerships that constitute OGRIP into network of resources to achieve its mission and goals

Using these strategic goals as a basis for justification, the Council has developed a comprehensive catalog of OSDI initiatives currently underway or planned. This catalog includes initiatives defined at OGRIP and by individual member agencies. These initiatives are described in terms that make clear their alignment with the mission of the Council, and the strategic program goals of the member agencies. This strategy will evolve and sharpen over time to improve business delivery through the use of spatial data technology.

3.2 PROGRAMMATIC GOALS

1) State Owned Real Property Management

a) Creation of SORP Management Plan and Maintenance Process - A SORP Management Plan will help ensure processes are developed to keep the SORP Inventory current by integrating county real property records with state real property records into a single statewide database. The plan will also address the creation of a comprehensive real property program that encourages and supports County and State Agency efforts to digitally capture, maintain and make accessible all real property holdings, develop

reporting guidelines, and as well as opportunities to coordinate the use and/or disposal of real property (in consultation) with local officials to ensure conformity with existing local land use policy and priorities.

2) Framework Layers

a) **Parcels** – OGRIP will coordinate with its stakeholders on how a statewide parcel layer could most effectively be achieved and maintained. These discussions would include a wide spectrum of interested participants and deal with the issues of feasibility, priority of this initiative and possible approaches available to a statewide parcel solution.

b) **Transportation –** OGRIP will continue to support ODOT with the administration of the LBRS program and establishing partnerships with counties to complete the build-out of the LBRS for all eighty-eight counties.

c) **Imagery –** As identified by respondents to the survey there is a need to establish OSIP as a perpetual program with data collection occurring on a regular cycle. OGRIP will continue to work with stakeholder groups to establish funding partnerships and promote the benefits of a regular imagery program.

d) **Elevation** – In Ohio the development of the statewide elevation data has been tied directly to the OSIP imagery acquisition. OGRIP will strive to provide opportunities to stakeholder groups to improve the accuracy of the elevation data overtime and in conjunction with the imagery program.

e) **Hydrography** - The Hydrography layer was identified during the recent survey as a priority layer. OGRIP will investigate the need, feasibility and development solutions with its stakeholders, including the identification of a data steward and the development of data maintenance agreements..

f) **Governmental Units** - Jurisdictional boundaries: i.e. counties, municipalities, school districts, special tax districts, economic development zones. Maintenance of many of these boundary layers, when they exist, is in many cases problematic. Without clearly defined responsibilities for stewardship many times the best available data was developed from data intended for purposes not suitable for integration with state or local data that is more positionally. OGRIP will coordinate with its stakeholders on the development of a plan for the stewardship and maintenance of boundary data

g) **Metadata –** The Ohio Metadata Server currently maintains entries for over 5,000 spatial data offerings primarily of state data stewards with a handful of records provided by local government. OGRIP will work to expand the offerings and make the metadata discovery service more available and accessible to local government data stewards.

h) **Land Use** - The Land Use layer was identified during the recent survey as not being adequate for the needs of Ohio. OGRIP will investigate the need, feasibility and development solutions with its stakeholders.

i) **Emergency Operations** - The Emergency Operations layer was identified during the recent survey as not being adequate for the needs of Ohio with structures cited as a valuable layer that is lacking in most counties. OGRIP will investigate the need, feasibility and development solutions with its stakeholders.

3) A reassessment of On-line Data hosting and discovery activities and structure

a) **Overhaul Metadata Explorer** - OGRIP recognizes that one of its strengths is serving as the centralized repository of GIS data for the State. As the geospatial landscape has changed in terms of available data

and usage patterns of the stakeholders, OGRIP will engage in a process to overhaul its Metadata Explorer into the premier one-stop source for GIS data for Ohio.

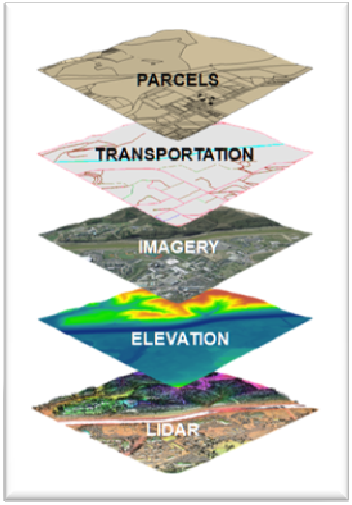
b) **OGRIP Hosting Solution** - There is overwhelming support from the stakeholders for OGRIP to investigate how it can become a hosting solution for GIS data and services. This could include providing hosting solutions for entities that do not have the resources to do this on their own and/or additionally providing service and support for other program's on-line initiatives. OGRIP will investigate the viability of providing hosting solutions to local government as well as the potential for establishing funding partnerships to help offset operational costs.

4) Pursuing Statewide Geospatial Initiatives

a) **The Ohio Statewide Imagery Program** - OSIP is a partnership between State, Local and Federal government agencies to develop high-resolution imagery and elevation data for the State of Ohio to benefit Geographic Information System users at all levels of government. Accurate imagery and elevation data serve as the backbone for the development of additional data sets that are currently maintained and accessed by government decision makers and the public. A key aspect to OSIP is the opportunity for local government to obtain enhanced data products and services through the State's negotiated contract. This provides a significant cost savings to local government through the economy of scale realized through a statewide program and provides GIS users with access to higher resolution imagery and elevation data.

b) **The Location Based Response Program** - The LBRS is an OGRIP initiative that establishes partnerships between State and County government for the creation of spatially accurate street centerlines with address ranges and field verified site-specific address locations. The LBRS supports a multi-jurisdictional approach to protecting the health, safety and welfare of the state's constituents. LBRS will serve as a continuation of the highly successful and regarded initiative. A key component of the LBRS is the collection of field verified address locations used for the development of the centerline address ranges. The integration of address location updates from the counties into the State's Master Address File for use in the Enterprise Geocoding Service will be ongoing.

c) **Next Gen 911** - The New and Emerging Technologies 911 Improvement Act of 2008 (NET 911 Act) requires that the Commission work with public safety organizations, industry participants and others to promote consistency in the deployment and operation of IP-enabled 911 and E911 services through development of standards concerning geographic coverage areas for Public Safety Answering Points (PSAPs); PSAP certification and testing requirements; network diversity requirements for delivery of IP-enabled 911 and enhanced 911 calls; call-handling in the event of call overflow or network outages; validation procedures for processing location information; and the format for delivering address information to PSAPs.



With Next Gen 911 the ability to locate an address on an accurate map is a key component to its effectiveness. Rather than relying strictly on a database of addresses, Next Gen 911 will rely on

a data stack of location based information. It is no coincidence that this data stack aligns with the OSDI framework data being created for Ohio. With Elevation and Imagery providing the foundational elements to this stack, roads, addresses, parcels and structures are all layered to provide as near a true representation of location as can currently be achieved. Next Gen 911 offers the opportunity for OGRIP to pilot the integration of several of its strategic and programmatic goals. By harnessing the LBRS initiative OGRIP will be able extend its mapping capacity into Emergency Operation Framework Layers. OGRIP can explore the regionalization of mapping and hosting solutions (with particular emphasis on emergency management capabilities) and further realize the health and safety benefits of the State's GIS investments. It is anticipated that OGRIP will be ideally positioned to seek funding opportunities at the State and Federal level that are designed to maximize public welfare, efficiency in operation in conjunction with the core mission, vision and values of the organization.

5) A reexamination of OGRIPs roles, responsibilities and capacity with regard to its stated mission of:

a) **Advocacy** - OGRIP will look to utilize its constituent partners to create a better mechanism for advocating GIS to key decision makers. This will utilize a similar principle of vertical integration by fostering an advocacy network that transcends a multitude of stakeholder positions and spheres of influence.

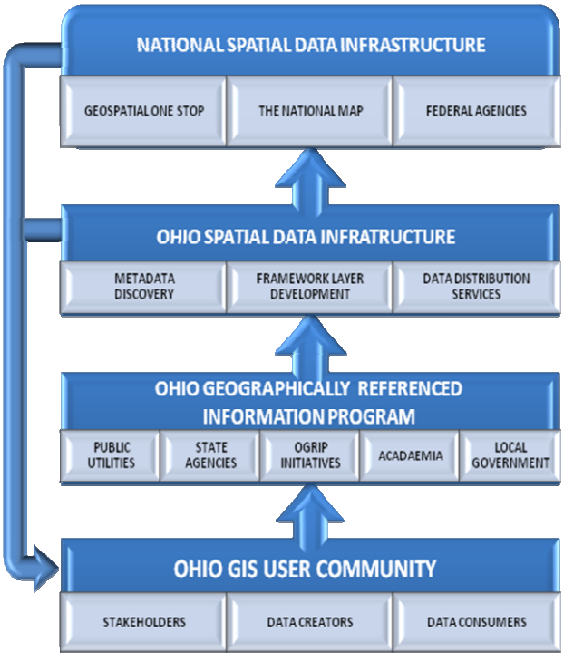
b) **Standards and Best Practices** - OGRIP has been requested by the stakeholder base to serve as the catalyst for standards and best practice development in the state. By leveraging its partnerships, OGRIP can serve as a focal point for initiating the discussions and advising on the necessary frameworks for standards compliance at multiple levels.

c) **Education and Outreach** - OGRIP envisions a future where its role in the direct education of its stakeholders is reduced and where partner organizations will take the lead in providing educational opportunities such as workshops, conference arrangements and forum discussions.

d) **Promotion and marketing of GIS** - Coupled with the Advocacy initiative, OGRIP will look to develop a cohesive plan with its partners on the promotion and marketing of GIS activities in the State. The majority of stakeholders have commented that their operations could not function without GIS and there is a tangible benefit, both in terms of ROI and cost savings with GIS implementation.

PROCESS FLOW

The graphic illustrates the flow of information from data stewards to the state where the data is integrated into a seamless framework data layer for the OSDI, and in turn provided to the federal level for incorporation into the NSDI.



This process follows the logic of the programmatic goals of this strategic plan where each of the goals compliments the other and builds a more integrated GIS framework. The operational flow reflects the vision and direction that the both Stakeholders and the OGRIP Council identified as key for OGRIP to consider when planning and coordinating future spatial data infrastructure activities.

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Examining OGRIPs Roles, Responsibilities and Capacity

While coordinated through OGRIP, the OGRIP Council and Stakeholders become much more involved in advocating GIS for Ohio, providing educational opportunities for the public, legislature and Geospatial community; working with OGRIP on developing best practices and standards and promoting GIS successes and uses to a variety of audiences.

GIS advocacy is a key function of OGRIP. Much of OGRIP's efforts in this regard have been geared toward building relationships with county government and encouraging cooperative data sharing and development efforts. With regard to subdivisions of county government and to some degree within state agencies, advocacy has been more limited in scope. More often than not programmatic responsibilities have prevailed over effective outreach to these constituent groups. As the GIS user community has grown in both size and expertise, regional groups have stepped in to fill this void with only loose coordination with OGRIP. By acknowledging the limited capacity for effective outreach to a broader community and accepting the realization that in order to reach the largest number of stakeholders and achieve its goals OGRIP must enlist and embrace the active and motivated stakeholder community and the members of the OGRIP council, OGRIP will be able to more effectively convey its goals and objectives to build the OSDI.

Pursuing Statewide Geospatial Initiatives

The process allows for the interaction of OGRIP and the Stakeholders with regard to the OSDI and the Online Services, in particular the Metadata server. OGRIP serves as the driving force for securing the funding for many large-scale, Statewide Geospatial Initiatives. OGRIP also serves as the clearinghouse for this information. The Stakeholders are involved in the process as producers, consumers and users of the data.

The survey identified that the stakeholders were very pleased and active users of products created by these Statewide Geospatial initiatives. In turn, the Stakeholders are in a position to advocate and promote the successes of the Statewide Geospatial initiatives in a way not possible by OGRIP. They can relate first-hand the utility of the data, the time and cost savings, how the data has been used as a public service and how the data drives upkeep of the localized datasets (including Framework Layers) they maintain. These Statewide initiatives also serve as infrastructure layers for OGRIP projects such as SORP. Developing programs like NextGen-911 can readily leverage

the investments in the OSDI and the LBRS and in a coordinated effort can expand the public welfare capabilities of the State of Ohio with regard to it's emergency management capacity.

Framework Layers

The process illustrates the relationship between the OSDI and the coordination between OGRIP and the Stakeholders. The Stakeholders are primarily responsible for much of the Framework layer creation of the OSDI, while OGRIP is the primary mechanism for distributing OSDI data sets. Several framework layers have been identified by the Stakeholders as needing greater attention and under this model, OGRIP will be in a position to address these needs in a coordinated manner and is consistent with the "create once, use many" philosophy that has proven successful in the past for OGRIP.

The SORP project represents a mandate by the State of Ohio for OGRIP to serve as the lead for the development and maintenance of a Real Property inventory. SORP Inventory activities can leverage the Framework layers and Statewide Geospatial Initiatives to serve as a critical resource for developing this inventory.

Reshape On-line Activities and Structure

OGRIP's metadata "Discovery" service and the GIServOhio spatial data services platform is the primary mechanism for the distribution of the OSDI to the Stakeholders.

There was an overwhelming demand by the Stakeholder community for OGRIP to serve as a hosting solution for Stakeholder GIS data. Serving as a data host, OGRIP could assist in providing a solution to those who do not have the resources to get their data online, serve as a resource to assist those already hosting, and serve as a resource during times of emergency by providing data delivery or recovery services.

In order to meet that demand OGRIP will reshape the metadata server into a more effective tool for the various audiences who use the data, build the capacity and awareness among the stakeholder community to encourage their use of the service as a mechanism for discovery of their data and provide a mechanism to for the distribution of stakeholder data to the GIS user community through various means.

As the metadata server is overhauled to take advantage of new technologies and user experience options, the ability for the Stakeholder community to ensure they are using the most up-to-date and relevant data possible will be manifested in the new system.

Summary

The Programmatic goals identified by OGRIP should not be considered in isolation. While ambitious in scope, each of these goals is interconnected and supports the other. Additionally, these goals allow OGRIP to transform itself and position its operation to better succeed in its Mission and Vision while simultaneously recognizing the needs and directions identified by the OGRIP Council and Stakeholder communities.

This planning process has confirmed that in order for OGRIP to achieve its mission, it does not need to do everything; rather it should focus its efforts on making sure everything gets done. While this will not entail a major operational restructuring, it will require a shift in how OGRIP's Vision and Mission are communicated and realized within the GIS user community.

4 REQUIREMENTS

4.1 ORGANIZATIONAL NEEDS

One of the near-term objectives for OGRIP will be navigating the path to more effective and streamlined organizational relationships envisioned in this plan without adversely affecting current working relationships with partner agencies and organizations.

The USGS has an active interest in the OSDI and in how Ohio will carry out its commitment to foster and develop data sharing agreements with Ohio's GIS community to carry out the stewardship of their respective data. This plan would be remiss if it did not state OGRIP's indebtedness and appreciation for the guidance and support it has received through its relationship with the U. S. Geological Survey Liaison Program. The guidance provided to the State of Ohio and in-turn the advocacy of Ohio's vision back to the USGS and other federal agencies has proven to be invaluable over the years.

In order to proceed with the plan's implementation, some committees and working groups will need to be formalized. Similarly, some of the informal organizational relationships and partnerships that have been explored will need to be formalized as agreements and commitments. The following describes several of these organizational requirements and opportunities.

It is critical that OGRIP remain committed to the development of a single, consolidated, statewide implementation of the Ohio Spatial Data Infrastructure. This means that all member organizations within OGRIP need to be informed of the state's initiatives and have an opportunity to participate in shaping the development data for Ohio and pursue planning activities to that end.

There is a need to establish committees and workgroups to focus on several key issues:

1. Cadastral Steering Committee: A good deal of the return on investment of OSDI will originate from State agencies using local cadastral data as a resource, both as end-users and as stewards in maintaining state owned real property information. At a minimum the ODOT, ODNR, ODAS, CAAO and CEAO each have a vested interest in the development of parcel, and address data. Other State agencies, such as ODOD and ODPS have been identified as potentially being key, active participants in creating a statewide cadastral data set. This means that State and local agencies need to be informed of the initiative and have an opportunity to participate in shaping the product. This initiative literally hinges on the ability of state and local agencies to effectively collaborate with one another and a steering committee will be an important tool towards meeting that goal.

2. Educational Outreach Workgroup: One of the key issues cited by stakeholders as an area for potential change is a need to re-evaluate the educational and outreach activities of OGRIP to better take advantage of partner agency strengths with regard to planning and hosting workshops, conferences, training opportunities and advocacy of Ohio's spatial data initiatives.

   The Council will need to establish a workgroup consisting of stakeholders groups with an interest in promoting GIS at state, regional and local meetings and conferences in order to craft the necessary agreements with member groups to carry out the educational mission of OGRIP.

3. OSDI Metadata Workgroup: An OSDI metadata workgroup should be tasked to evaluate the effectiveness of current data discovery and distribution activities and provide guidance for next steps

required to meet the needs of the GIS user community. The data discovery component encompasses metadata; its creation and maintenance, and the ability for partner agencies to easily publish this information to the State's metadata clearinghouse and by extension to the USGS Geospatial One-Stop and the National Map.

4.2 EXECUTIVE SUPPORT

The Strategic Plan will not result in a fundamental alteration in how the OGRIP approaches the coordination of GIS activities; however it will require OGRIP to objectively examine its overall role in the coordination process with an eye toward engaging active participation from its constituent members, both on the Council and through its working relationships with local user groups and the OGRIP Forum.

Supporting change resulting from this critical evaluation and any subsequent recommendations generated by this examination will require senior level executive support. Indeed, this strategic planning effort is largely aimed at generating the information necessary to explain the initiative, and its benefits to an executive audience. Specific examples of key executive support to be solicited and garnered include:

Within OGRIP:

1. The OGRIP Council can make the determination that statewide real property information be required in a specific format to facilitate its incorporation into a statewide inventory through the promulgation of reporting standards.

2. The OGRIP Council can make determinations to partner with member to facilitate educational outreach, training, advocacy, standards development, conference planning, etc.

Within other State agencies:

3. The Department of Transportation: As the program sponsor of the Location Based Response System and primary integrator of LBRS data into the roadway inventory for the State, ODOT's continued support for OSDI development, from roads and parcels to imagery, elevation and geodetic control, is critical to the success of any statewide GIS initiative. The value of ODOT's relationships with other state agencies, local government and the OGRIP Council cannot be overstated.

4. ODNR and OEPA: Currently stewards of vast amounts of information specific to environmental and natural resource related spatial data, each department has a vested interest in OSDI development. Having executives understand the OSDI and the critical role of state in supporting local government activities and partnerships will be integral to identifying and crafting stewardship responsibilities for layers like the Ohio Hydrography Dataset.

5. The Department of Public Safety – Department of Homeland Security and the Emergency Management Agency: Each are envisioned to be important partners in the development of OSDI layers supporting Emergency Operations (imagery, parcels, addresses, structures, transportation) providing significant benefit to state and local emergency management, public safety, and 911 programs which are all key stakeholders and users of OSDI framework data sets.

Within County and Municipal Organizations

6. In Ohio, local government is responsible for the creation of the lion's share of spatial data that exists. By establishing data sharing partnerships with regional and state entities, local government can ensure their efforts reach the largest possible audience and generate the most benefit for tax payer dollars.

7. Partnering with state and federal agencies, local government spatial data development and maintenance activities provide an opportunity for the state and by extension the federal government, to realize significant benefits.

8. Having executives understand the OSDI and its associated initiatives for layers like parcels and hydrography, and the critical role of partnerships in their development will be integral to establishing those partnerships and the funding that is necessary for the overall success of the OSDI development.

4.3 COORDINATION AND OVERSIGHT PROCEDURES

The Governor-appointed Council serves as a policy body for OGRIP, overseeing the bylaws, rules, procedures and financial affairs. The OGRIP Council is chaired by the State CIO/Assistant Director of the Office of Information Technology (OIT) within the Department of Administrative Service (DAS) reporting directly to the Director of DAS.

4.4 POLICY

The State CIO serves under the direction of the Director of the Department of Administrative Services[8]. The CIO, having the authority to establish administrative rules, policies, standards, procedures, as they relate to state agencies' acquisition and use of information technology, leads, oversees, and directs state agency activities related to information technology development and use.

On December 30, 2008 HB420 established the Ohio Geographically Referenced Information Council within the Department of Administrative Services. Section 125.901 of the Ohio Revised Code[9] provides for ongoing administrative support through DAS, establishes the makeup of the Council, provides for appointments to the Council by the Governor and establishes the State CIO or named designee as the OGRIP Council Chair. The 15 members appointed by the Governor serve two-year terms with the possibility of re-appointment.

4.5 STAFFING

A great deal of the effort involved in planning and administering the development of the OSDI and the implementation of OGRIP initiatives will be carried out by existing OGRIP program staff and those of other state agencies through existing programs, such as ODOT's roadway inventory. In addition, the largest amount of data

[8] http://codes.ohio.gov/orc/125.18
[9] http://codes.ohio.gov/orc/125.901

development for many of the data layers will occur within County agencies and/or private sector partners that physically produce or maintain local data in the context of statewide inventories.

At present, the OGRIP OSDI Manager serves as the project manager for OGRIP initiatives like the LBRS and OSIP as well as overseeing day-to-day operations and application development and services maintained by the System Administrator and Software Developer. As additional OSDI framework layers gain traction and transition from planning into development, there will be a need to reevaluate staffing responsibilities for additional project support, either within the OGRIP program office or delegated to other program areas within the State, and later, during implementation there may be a need to identify additional tasks that may be carried out by existing personnel within OGRIP or by augmenting staff.

4.6 COSTS

It is not possible to determine the overall costs for implementing the OSDI, however as with most other Ohio framework development activities, funding is, in most cases, the result of partnership agreements with state, federal and local government agencies. Thus, the major near term costs outlined below are to fund the OGRIP program office, its staff and that of the GIS Support Center.

1. The Department of Administrative Services provides office space for OGRIP program staff. Staff salaries for an Administrative Assistant, Project Manager and a Student Intern are funded through the General Revenue Fund (GRF).

2. Salaries for a GIS Support Center Infrastructure Specialist and a Software Development Specialist are generated through hourly chargeback and application and data hosting service delivery to other state agencies as well as GRF.

3. Positions for a GIS Support Center Manager and an additional Software Development Specialist are currently unfilled.

4.7 OUTREACH AND COMMUNITY DEVELOPMENT

The outreach component of OGRIP's activities are perhaps the primary factor in the success of Ohio's statewide data development activities and plays a key role in OGRIP's ability to initiate effective statewide programs and policies. It is directly due to the success of these efforts that OGRIP must look to partner agencies and constituent members to bear a portion of the responsibility for communicating OGRIP's vision, mission, and goals. In that regard OGRIP should look to establishing a more federated model for outreach; leveraging Council representative's positions within their respective organizations to carry the OGRIP message, and; engaging partner organizations to assist with the planning and sponsorship of educational outreach, seminars, forums, user groups and conference planning activities.

4.8 ASSESSING RISK

There are three significant risks that will need to be considered and managed in forming an effective Strategic Plan:

1. Inadequate interagency collaboration: In many ways, this strategic plan hinges on the ability of independent governmental programs being able to work together for increased efficiencies. This includes collaboration both for independent programs within OGRIP as well as for OGRIP working in association with other state and local government entities. Such collaborations are not always easy to achieve. If such collaboration is not possible, then the proposed model for OSDI will have a difficult time succeeding. However, it is fair to observe that collaboration and cooperation on geospatial matters is one of the core principles in the historic success of OGRIP initiatives. If the collaboration that is envisioned for OSDI does not materialize, then it is reasonable to assume that the development of spatial data in Ohio would fail to realize the economies of scale inherent in the development of large scale statewide projects, that significant amounts of tax dollars would be expended to develop redundant data sets to varying levels of detail and accuracy, and that the benefits inherent in an agency's ability to create, share and manage data to the benefit of all GIS users across the state would suffer.

2. Inadequate Resources: Another key factor in the success of OGRIP programs is the availability of sufficient resources to meet their goals. Staff levels, the broad diversity of activities and the sheer number of initiatives and activities OGRIP is involved in at the state, local and national level have a direct impact on both the quality and quantity of time that can be directed to programs and limits the effectiveness of staff. Expansion of programs or services without an equivalent reduction in roles and responsibilities in other areas may adversely impact OGRIP's ability to maintain the level of performance necessary to accomplish its goals.

3. It is difficult to identify a single product that meets a wide diversity of needs: The data within the OSDI are envisioned to be a common framework of shared geometry and basic attributes that are intended to provide the information necessary to meet a wide variety of product and user needs. There is some risk that it will be too difficult for a diversity of stakeholders to reach agreement on what should be included in the common framework for layers like parcels, structures or hydrography. Absent such agreement, there is a risk that certain stakeholders may conclude that OSDI will not be useful to them. As such, identifying common content is one of the key questions that need to be addressed when developing standards for framework data sets.

5 IMPLEMENTATION

5.1 IMPLEMENTATION OF PROGRAMMATIC GOALS

Developing the OSDI will involve the coordinated efforts of a number of organizations and the establishment of new partnerships necessary to insure the continued success of OGRIP's mission. The programmatic goals described below identify the stakeholders that will have integral roles in the core elements of producing and maintaining the OSDI:

1. Nurturing and expanding relationships with state and local partner agencies to maintain and enhance data sharing and development activities.
2. Continuing the collection of imagery to support state and local data needs, and supporting the development of elevation products through the Ohio Statewide Imagery Program
3. Completing the development of standardized road centerline and address data through the Location Based Response System
4. Establishing a statewide parcel strategy that builds upon the efforts of local government to develop and maintain accurate and current parcel tax maps
5. Enhancing the ability of state and local partners to develop, maintain and serve metadata
6. Aggregating and publishing OSDI data as a statewide data set

5.1.1 Nurturing and expanding relationships with state and local partners

OGRIP works with several state agencies, all 88 counties, regional GIS user groups and various professional organizations with a vested interest in spatial data development activities within the state. OGRIP staff regularly attends meetings, provides updates on OGRIP initiatives, and discusses program participation opportunities available to local government. While statewide programs like OSIP provide opportunities for local government to purchase data and services through a Cooperative Purchase Agreement with the State and programs like the LBRS require the execution of a Memorandum of Agreement, there is a need to establish data sharing agreements to support the needs of GIS users for the discovery and dissemination of additional data maintained by these groups.

OGRIP must look to expand its reach to include more state, regional and municipal government participation and begin to establish relationships that foster an environment of data sharing.

As noted previously, some of the educational and outreach activities of OGRIP may be enhanced through leveraging partnerships with constituent groups with regard to planning and hosting activities for workshops, conferences, and training opportunities. However OGRIP must continue its hands-on approach to working with local government partners to assure it remains engaged, available and effective.

5.1.2 Continuing the collection of imagery to support state and local data needs, and supporting the development of elevation products through the Ohio Statewide Imagery Program

With over 40% of counties taking advantage of the OSIP CPA to obtain services and data, the benefits of a statewide program for imagery and elevation collection are evident. The economy of scale realized by a statewide program and the offsetting of administrative and procurement costs is providing counties with opportunities many

may not have had the resources to obtain individually. The benefits of having higher resolution authoritative imagery and elevation data developed through OSIP available in the "Public Domain" with the ability to freely share and distribute this data to all levels of government as well as private entities is invaluable.

OGRIP will work with partner agencies in an effort to establish agreements to support collection activities on a regular basis and establish OSIP as a perpetual program.

5.1.3 Completing the development of standardized road centerline and address data through the Location Based Response System

The overarching goal of the LBRS program is the establishment of sustainable maintenance processes and capabilities within local government to provide regular access to a seamless statewide transportation network that meets the needs of both state and local government entities. Inherent in the LBRS program is the development of field verified site specific address locations and address ranges to support activities like Crash Analysis, Bridge Inventory, E-911 and NG-911.

Working closely with ODOT, OGRIP will continue its promotion of the LBRS through the creation of partnerships and the administration of agreements among participating entities to ensure to timely completion of the project and the transition from development into full maintenance mode.

5.1.4 Establishing a statewide parcel strategy that builds upon the efforts of local government to develop and maintain accurate and current parcel tax maps

Similar to the LBRS, the development of parcels and cadastral information is inherently a local function, with incalculable benefits to regional, state and federal agencies. OGRIP will pursue the creation of a parcel development strategy that will allow for the incorporation of existing data from Counties with established parcel and cadastral programs and provide guidelines for the creation and maintenance of cadastral data for those counties that have yet to embark on parcel conversion projects.

Working with local and regional stakeholder groups, OGRIP will develop a strategy to move parcel development in Ohio forward by endorsing cadastral standards and identifying potential funding mechanisms to support local government.

5.1.5 Enhancing the ability of state and local partners to develop, maintain and serve metadata

Key to OGRIP's efforts to promote the appropriate and suitable use of spatial data is the ability for GIS users to search spatial data holdings and resources through the Ohio Metadata Discovery Service. While OGRIP maintains several thousand metadata records for spatial data maintained primarily by state agencies, only a handful of local entities have taken advantage of this service to host their metadata. OGRIP understands that the creation, maintenance and publishing of metadata can be burdensome and that a need exists to enhance the ability of data creators to easily maintain and publish their metadata.

OGRIP will expand current metadata discovery services and capabilities to better serve regional and local partners with an OSDI geo-portal for posting, discovering, and exchanging spatial resources in support of the OSDI to reduce the time users spend finding relevant geospatial resources that meet their needs and help ensure that they only use approved, high–quality datasets

5.1.6 Aggregating and publishing OSDI data as a statewide data set

Identification of State departments and personnel willing and capable of serving in the role of data steward with the responsibility for aggregating locally developed data is a challenge. Data aggregation poses several challenges that will entail several steps in order to assure the integrity of the statewide data set. The following describes he basic steps that will need to be followed:

- Individual county or regional contributions will need to be assessed for quality and conformance to a set of well-defined data submittal guidelines and standards
- Each individual data set will need to be compared to the data sets from its neighboring counties to identify potential edge-matching issues. Edge-matching issues need to be communicated to data providers for resolution so that features that cross or abut county lines properly match on both side of a boundary.
- It is possible that local data may initially be missing certain attributes deemed desirable for a statewide coverage. If necessary, and for an interim period, the entity that is aggregating and assembling OSDI data would need to work with the data providers on standards questions so that the best available data can be integrated into the OSDI and over time, can be improved through routine maintenance to meet the requirements for full acceptance into the OSDI.

There are three main options for identifying entities to do this work:

1. Agencies with direct jurisdiction over spatial data inventories that have existing expertise and capacity in performing this type of data aggregation and integration as part of their mandated functions make them a logical choice (i.e. ODOT and LBRS roads and DAS and LBRS Addresses) .
2. Agencies with a vested interest in the development of spatial data inventories to support their mandated functions that may have existing expertise and capacity in either performing this type of data aggregation and integration, or overseeing the process in an administrative role in a distributed or federated data integration environment (i.e. in the case of hydrography, ODNR or OEPA, or in the case of emergency operations and critical infrastructure, OEMA or ODHS)
3. OGRIP could develop this function within the GIS Support Center or through partnerships with sister agencies to potentially build the capacity to integrate OSDI layers (i.e. parcels, imagery, elevation, boundaries)

To fulfill the vision and full potential of the OSDI, once the statewide data set is assembled it needs to be published and made available to governmental agencies, industry and the general public. In this manner, these entities can begin utilizing and building upon the OSDI. The OSDI products will be discoverable on the Ohio Metadata Explorer and made available through a variety of media, including:

- Web services (basemap and framework layers in WMS, WFS, WCS, and AGS services as appropriate)
- Data downloads (http and ftp)
- Physical media (user supplied portable hard drive or DVD)

5.2 PROPOSED PHASES AND TIMELINE WITH MAJOR MILESTONES

Planned Activities	Timeframe
Foster and expand relationships	Ongoing
Continuing the Ohio Statewide Imagery Program	2011-2015
Completing the Location Based Response System	2013
Establishing a statewide parcel strategy	2012
Enhancing metadata services	2012
Aggregating and publishing OSDI data	Ongoing

Many of the programs OGRIP initiates require the active participation of state and local government entities. OGRIP does not have the authority or the inclination to mandate participation in many of these initiatives; as a result it is difficult to identify a timeframe for the completion of voluntary projects like the LBRS which rely on the ability and willingness of a county to participate. Given the dynamic nature of spatial information it is OGRIP's goal to establish partnerships within Ohio that leverage existing data maintenance activities and populate the OSDI with current and authoritative information while placing the least amount of burden on local government.

5.3 Mechanisms for cost-sharing or cooperative funding with Federal agencies doing geospatial data collection

Working closely with our USGS Liaison, Charles Hickman, OGRIP routinely enters into partnerships with federal agencies through agreements with the USGS to support mutually beneficial data collection activities. These partnerships allow Ohio to pursue programs that would otherwise not be possible or would otherwise need to be postponed. OGRIP has received support in this manner from the National Geospatial-Intelligence Agency, Natural Resources Conservation Service, and the U.S. Geological Survey in support of Imagery, Elevation, Monumentation, Transportation, Addressing and Metadata development initiatives.

OGRIP looks forward to continuing this collaborative relationship with the USGS and recognizes the importance of maintaining strong data partnerships as key to the creation and continued success of the Spatial Data Infrastructure for Ohio and the Nation.