

Appendix P

Industry Research Questionnaires



**Baltimore County GIS Strategic Business Plan
Industry Research Questionnaire
Mecklenburg County, NC**

GIS Organization Structure and GIS Utilization

1. What is the role and responsibility of your department?

GIS Technology Solutions: To provide GIS application development and database management services to the County Enterprise.

2. Does your department have a GIS/IT Strategic Plan? If so, how is it being implemented within your organization? Has it been effective in promoting enterprise GIS?

Yes, it is a living strategic plan. GIS Technology need requests from departments are addressed each year and are appended to the overall strategic plan document. The plan will be reviewed every three years. We are an consolidated service group, so most departments are aware of how we are organized and the services that are available to them. Consolidation of GIS Services has helped more internally from a delivery standpoint to our customers.

3. Is the GIS implementation at your organization set up as:

- A. The Information Technology group.**
- B. In a specific Department.**
- C. Standalone under the administration**
- D. Other, please describe.**

Standalone: We are a consolidated service group that sits at an enterprise level. We have an executive stakeholder group made up 3 primary stakeholders: Land Use and Environmental Services Agency, Information Services & Technology Department, and the County Manager's Office (E-Gov Services)

4. Please describe the organization of your department. Do you have an org chart?

We have 3 primary divisions and two focus areas:
Mapping and Project Services (Div)
GIS Technology Solutions (Div)
Land Records and Addressing (Div)
Program Support Services
Strategic Planning

5. Does your organization have a dedicated GIS Manager? If so, please describe their general role in the organization.

Each division has a dedicated GIS Manager or Supervisor

6. Does your organization have dedicated GIS staff in the Agencies / Departments? If so, are their typical duties (primary role) to provide mapping support and database maintenance, or analytical processing and analysis? There is very few GIS staff in the other



departments. Most all GIS staff is centralized within GIS. The ones that are in the departments provide mapping support and data maintenance.

7. Does your organization have an oversight GIS Committee? A GIS Users group?

We have an Executive Steering Committee made up of representatives from various directors and high level managers from various departments (Park and Rec, Library, Sheriff's Office, E-Gov, LUESA, IST, DSS, and CMS). We also participate in a GIS User's Group with the City of Charlotte and their GIS Program.

8. How does your organization justify expenses for database development, database maintenance and applications development?

Based on the needs of the departmental GIS project.

9. Does your organization receive funding for GIS from operating or capital budgets? How much funding, on average, do you receive annually?

10. On a scale of 100%, rate your organization's type of GIS Utilization on the following criteria:

% of mapping vs. % of analytical processing & analysis? (Ex. 75% map-making vs. 25% analytical processing)

40% mapping and 60% analytical and application development

11. Do you support and field activities with mobile GIS software or hardware? Please explain. We provide support for ArcPad GIS for department needs utilizing GPS in the field to locate and inventory asset management.

Enterprise Databases

1. What enterprise databases does your organization provide to all users of the system? Do you provide the following from a centralized GIS core:

- A. Orthophotography/Imagery
- B. Planimetric / Topographic
- C. LiDAR
- D. Street Centerline / Addresses
- E. Cadastral (Property)
- F. Census
- G. Other, please describe

YES! Through our enterprise SDE Server.

2. For the enterprise databases identified above, what department / agency is responsible for the accuracy and maintenance of the databases? GIS Land Records and Addressing including Mapping and Project Services.



- 3. Does your organization have any other layers that are considered part of the Enterprise GIS? If so, please identify these layers. Send Geodatabase Listing**
- 4. If your organization has Orthophotography/Imagery and a Planimetric/Topographic database, how often do you update these data layers? Defer to MAPS**

Database Development (geodatabase technology)

- 1. What is your database software vendor?**
ESRI SDE and Microsoft SQL Server
- 2. How does your organization handle multi-user editing and versioning in the geodatabases? Yes. Limited to three applications. EDMS, BOE, and Setbacks. The new Integrated Parcel Maintenance System will run in a multi-user editing environment.**
- 3. Does your organization have other agency staff (outside the enterprise) maintaining feature classes inside a versioned, multi-user geodatabase that has a topology? For example, if you have a cadastral geodatabase with an Easement Restriction layer, would you have the subject-matter experts in the agency/department responsible for the easements to edit in the cadastral geodatabase and allow both datasets to participate in a topology?**
Only the Board of Elections is an external editor of SDE data. Most all editing is handled within the GIS Service Group.

Public Access & External Partnerships – USGS, NRCS and/or FEMA CTPs

- 1. Does your organization charge a fee for data and map products? If so, please provide any relevant details to about the fee structure.**
- 2. Does your organization participate in any external partnerships? If so, please define below:**
 - A. FEMA (for floodplains)**
 - B. NRCS (for soils)**
 - C. Regional partnerships (please name the partnership, identify the participants and identify the layers involved)**
 - D. State partnerships (please name the partnership, identify the participants and identify the layers involved)**
 - E. Federal partnerships (please name the partnership, identify the participants and identify the layers involved)**

GIS Software & Applications (Desktop and Web-based)

- 1. Do you have any general principals for software development? Open Source? Service-orientated architecture?!**
We have developers that have developed GIS applications using open source GIS including



php, Postgre Sql and Postgis. We also utilize a SOA and build web services utilizing SOAP to allow Non-GIS applications to utilize GIS capabilities within them.

2. Does your organization use the following software:

- A. ArcGIS? Yes
- B. ArcGIS Server? No. But will very soon!
- C. ArcSDE? Yes
- D. ArcIMS? Yes
- E. AVL? No
- F. ArcPad Yes
- G. Oracle Spatial No
- H. Other GIS software? Open-Source

3. What GIS applications have most improved business process for your County? Describe in general the type of application and the business that was impacted.

POLARIS- Parcel Ownership Land Records Information System. Provides everything under the sun that is needed to make land development decisions off of. Parcel mapping, ownership, property values, aerial maps, flood maps, watershed maps, sales analysis, etc.

Address Information Center – This applications provides one-stop information on the following information: property info and photos, traffic, garbage collection days, parks and libraries nearby, flood info, voting info, school assignment info, and crime info.

4. Does your organization generally provide custom applications that globally support programs/activities or do you provide custom applications that are business process specific? Yes, Most applications are developed in-house based on department needs and some interact with Non-GIS systems. Park and Recreation is a big user and Property Assessment is as well. 50% are global the other half would be business process specific.

5. Does your organization have enterprise applications that are integrated with GIS technology? If so, did the integration with GIS come from the vendor or by in-house staff and efforts?

- A. Customer Relationship Management (CRM)
- B. Infrastructure Management : EDMS (Environmental Database Management System)
- C. Land Management (Permitting, Inspections, Development Management)
GIS Mapping Extension to remote POSSE System
- D. Emergency Management



**Baltimore County GIS Strategic Business Plan
Industry Research Questionnaire
King County, WA**

GIS Organization Structure and GIS Utilization

- 1. What is the role and responsibility of your department?** - The role of the KCGIS Center is to provide enterprise GIS services to county agencies, to provide cost reimbursable GIS client services to internal and external customers, and to provide dedicated professional GIS staff services to agencies based on an agreed annual work plan.
- 2. Does your department have a GIS/IT Strategic Plan? If so, how is it being implemented within your organization? Has it been effective in promoting enterprise GIS?** - A GIS operation and maintenance plan is written annually. This document serves as the GIS strategic plan. All agencies on the GIS Technical Committee participate in development of the plan. It is an excellent tool for defining the roles, responsibilities, and priorities of the enterprise GIS group. The plan is on the Web at <http://www.metrokc.gov/gis/kb/Content/OandM.htm>.
- 3. Is the GIS implementation at your organization set up as:**
 - A. The Information Technology group.**
 - B. In a specific Department.**
 - C. Standalone under the administration**
 - D. Other, please describe.** - The KCGIS Center is set up as an internal service fund. This means it has a separate financial fund and a separate organizational structure. It is solely responsible for all its expenditures and revenues. The fund is administratively assigned to the Department of Natural Resources and Parks, but operates as an independent entity.
- 4. Please describe the organization of your department. Do you have an org chart?** - There are three business units within the KCGIS Center (Enterprise Services, Client Services, and Matrix Staff Services). A manager oversees the whole operation, and is assisted by a finance and marketing manager and an office manager. Project managers and GIS professionals are assigned to the business units, and in many cases across units through a pooled/shared staffing arrangement. A technical committee and an oversight committee provide a GIS governance structure. All of this is described in detail in the annual plan, which includes an org chart.
- 5. Does your organization have a dedicated GIS Manager? If so, please describe their general role in the organization.** - The KCGIS Center manager is responsible for the overall operation of the KCGIS Center, and is a member of the GIS Technical Committee.
- 6. Does your organization have dedicated GIS staff in the Agencies / Departments? If so, are their typical duties (primary role) to provide mapping support and database maintenance, or analytical processing and analysis?** - Yes there are dedicated GIS staff in



the agencies. They provide all manner of support including mapping, analysis, programming, data development, and consulting.

7. **Does your organization have an oversight GIS Committee? A GIS Users group?** - Yes to both.
8. **How does your organization justify expenses for database development, database maintenance and applications development?** - Each is a special case that stands on its own merits for justification.
9. **Does your organization receive funding for GIS from operating or capital budgets? How much funding, on average, do you receive annually?** - The budget for the KCGIS Center in 2007 is 4.2 million. Funds come from over 35 sources, including operating budgets. Very little if any comes from capital budgets.
10. **On a scale of 100%, rate your organization's type of GIS Utilization on the following criteria:**
 - A. **% of mapping vs. % of analytical processing & analysis? (Ex. 75% map-making vs. 25% analytical processing)** - Hard to say, but overall mapping is only a small portion of our work. Probably less than 10%.
11. **Do you support and field activities with mobile GIS software or hardware? Please explain.** - No.

Enterprise Databases

1. **What enterprise databases does your organization provide to all users of the system? Do you provide the following from a centralized GIS core:**
 - A. **Orthophotography/Imagery** – Yes
 - B. **Planimetric / Topographic** - Yes for topo, planimetric is not systematically collected.
 - C. **LiDAR** – Yes
 - D. **Street Centerline / Addresses** – Yes
 - E. **Cadastral (Property)** – Yes
 - F. **Census** – Yes
 - G. **Other, please describe** - There are over 200 layers in the central data warehouse.
2. **For the enterprise databases identified above, what department / agency is responsible for the accuracy and maintenance of the databases?** - Data responsibilities are assigned throughout the organization. For example parcels are maintained by Assessments, street centerlines by Transit.
3. **Does your organization have any other layers that are considered part of the Enterprise GIS? If so, please identify these layers.** - Too many to list. See the plan or look at our data catalog on the Web at <http://www.metrokc.gov/gis/sdc/index.htm>.



- 4. If your organization has Orthophotography/Imagery and a Planimetric/Topographic database, how often do you update these data layers?** - The last aerial photo acquisition was 2002. Beginning in 2007 the county intends to acquire imagery at least every other year.

Database Development (geodatabase technology)

- 1. What is your database software vendor?** - We use ESRI products and MS SQL Server.
- 2. How does your organization handle multi-user editing and versioning in the geodatabases?** - We use it for parcel layer editing and we are starting to implement it for other layers, such as hydrography and street centerlines.
- 3. Does your organization have other agency staff (outside the enterprise) maintaining feature classes inside a versioned, multi-user geodatabase that has a topology? For example, if you have a cadastral geodatabase with an Easement Restriction layer, would you have the subject-matter experts in the agency/department responsible for the easements to edit in the cadastral geodatabase and allow both datasets to participate in a topology?** - Yes, Assessments works in just the manner described in your question.

Public Access & External Partnerships – USGS, NRCS and/or FEMA CTPs

- 1. Does your organization charge a fee for data and map products? If so, please provide any relevant details to about the fee structure.** - Cost to copy only. Currently standard data disks cost \$220. Custom data orders are subject to a three hour minimum labor charge (\$255) plus materials cost.
- 2. Does your organization participate in any external partnerships? If so, please define below:**
 - A. FEMA (for floodplains)** - King County works in coordination with FEMA to remap floodplains.
 - B. NRCS (for soils)** - No.
 - C. Regional partnerships (please name the partnership, identify the participants and identify the layers involved)** - No.
 - D. State partnerships (please name the partnership, identify the participants and identify the layers involved)** - No.
 - E. Federal partnerships (please name the partnership, identify the participants and identify the layers involved)** - Currently working with USGS to jointly acquire aerial imagery.

GIS Software & Applications (Desktop and Web-based)

- 1. Do you have any general principals for software development? Open Source? Service-orientated architecture?** - We base our software development on the skills and knowledge of our programming staff.
- 2. Does your organization use the following software:**



- A. ArcGIS? – Yes
 - B. ArcGIS Server? - Just now implementing
 - C. ArcSDE? – Yes
 - D. ArcIMS? – Yes
 - E. AVL? – No
 - F. ArcPad - There are a couple of licenses in use, but little activity.
 - G. Oracle Spatial – No
 - H. Other GIS software?
3. **What GIS applications have most improved business process for your County? Describe in general the type of application and the business that was impacted.** - The web-based mapping tools we have provided known as iMap and Parcel Viewer have had the greatest impact. Each application is used hundreds of times a day by county staff throughout the organization. Permitting, appraisal, natural resources, and planning have gained the most benefit from these tools.
4. **Does your organization generally provide custom applications that globally support programs/activities or do you provide custom applications that are business process specific?** - Both.
5. **Does your organization have enterprise applications that are integrated with GIS technology? If so, did the integration with GIS come from the vendor or by in-house staff and efforts?** All integration has been done by in-house staff.
- A. Customer Relationship Management (CRM) – No
 - B. Infrastructure Management – No
 - C. Land Management (Permitting, Inspections, Development Management) – Yes
 - D. Emergency Management - Partially