



Bowne Management Systems, Inc.



GIS Needs Assessment

Key Findings

Presented to:
City of Newburgh, NY
May 22, 2008

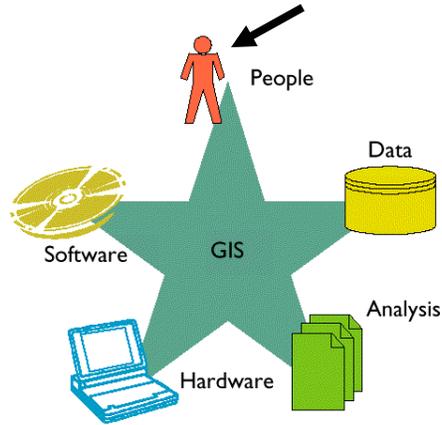
May 22, 2008

Agenda

- GIS: an overview
- NYSARA LGRMIF
- Implementation Approach 1, 2, 3
- Questions

What is a GIS?

- An integration of five basic components



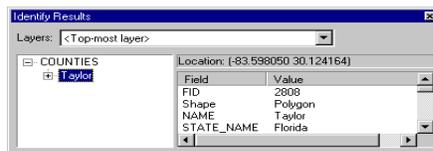
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Query

- Identifying specific features



- Identifying features based on conditions

Florida counties with a population greater than 300,000

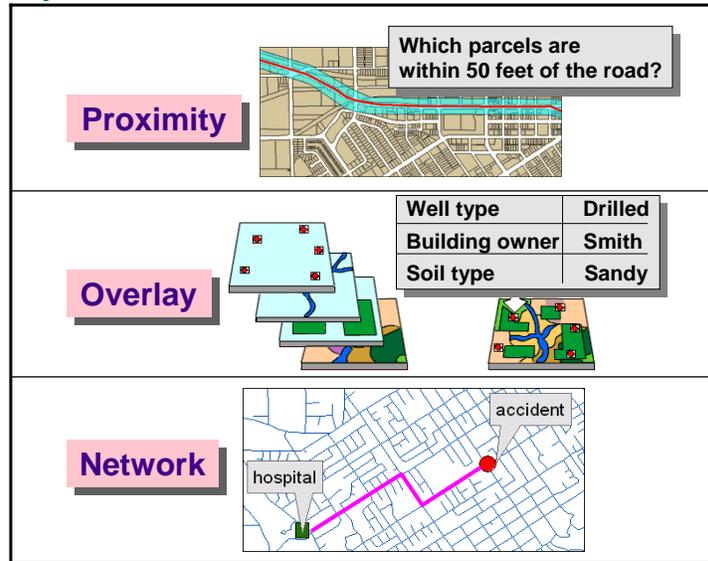


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Analysis

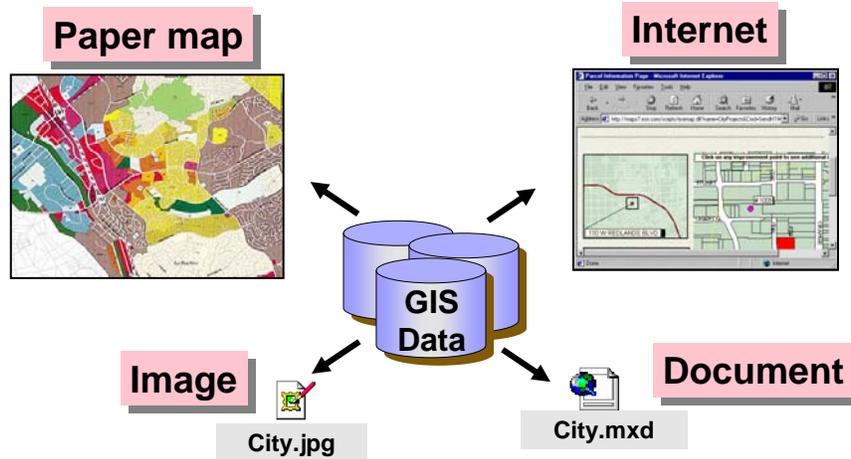


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Output



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NYSARA LGRMIF

- *New York State Archives and Records Administration, Local Government Records Management Improvement Fund*
 - LGRMIF purpose is to help local gov't *establish* records management programs, *not to support* local gov't records management programs indefinitely.
- 1st step: Conduct a GIS Needs Assessment
- 2nd step: Submit Grant application based on recommendation in the Needs Assessment

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NYSARA LGRMIF

Timetable for 2008-2009 Grant Project

Feb 1, 2008	Grant applications due.
June 25, 2008	Anticipated date that notification letters will be mailed to all applicants.
July 1, 2008	Grant project may start.
June 30, 2009	All work on grant project must be completed.
July 31, 2008	Final narrative and expenditures must be submitted to NYSARA.

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GIS Needs Assessment Recommendations

- Phase I – lasting 1 year
 - More powerful GIS Database software to link City Departments' Operational Data with GIS for use in Online GIS Viewer
 - Enhance GIS Viewer & create central repository of usable operational data
- Phase II
 - Online Work Order System
 - Water Department to Pilot - then expand to other Departments
- Phase III
 - Online Map Library
 - GIS Viewer Enhancement

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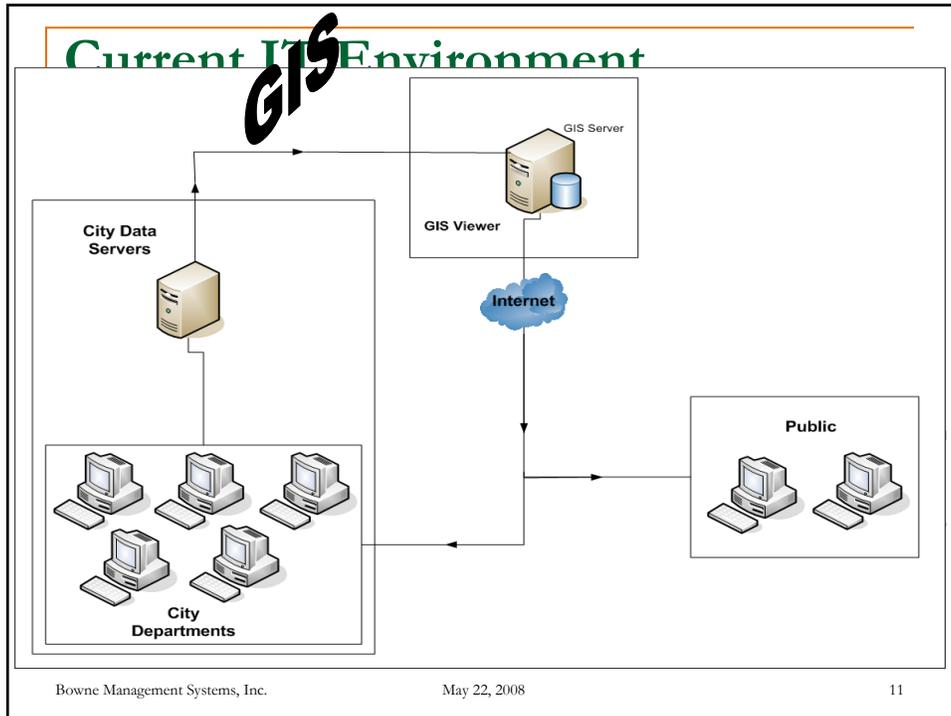
GIS Implementation: Phase I

- Phase I is:
 - Based on needs identified during interviews with City Departments
 - Included in Grant Application for funding cycle 2008-2009

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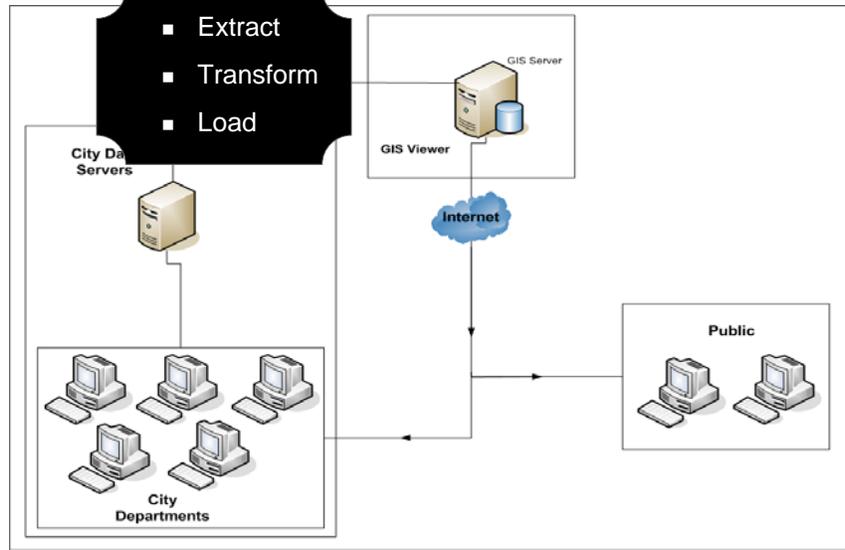
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Effects of IT Environment

- Departments have access to data on network
- GIS Viewer
 - GIS data used/shared
 - Some operational data linkage

Recommended ETL

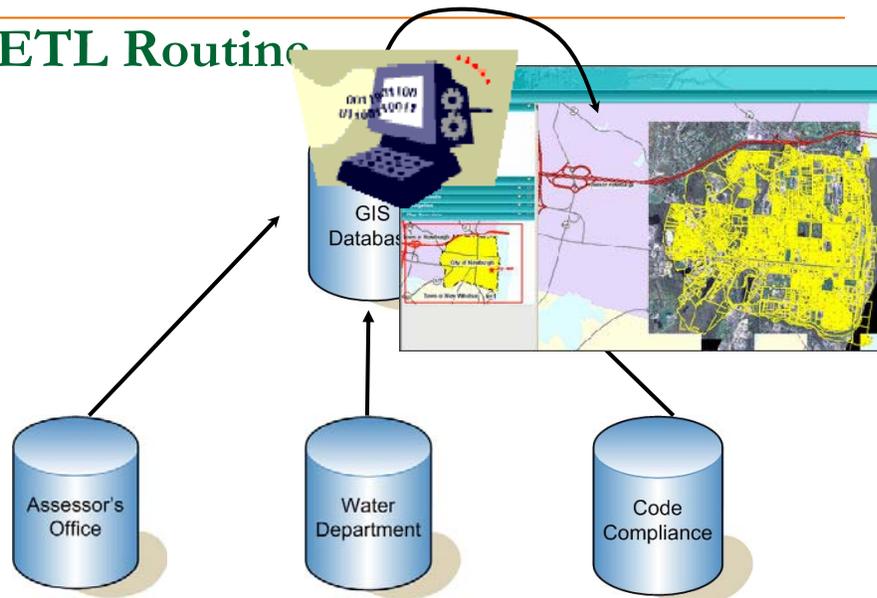


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ETL Routine



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Example Extraction

- Assessor (RPS)

ADDRESS

- Frontage
- Depth
- Neighborhood
- Zoning district
- Historic district
- Waterfront
- Number of rooms
- Year built
- Stories
- Style
- Heat
- Fuel



- Water (InHance)

ADDRESS

- Serial number
- MSU number
- Meter installation date
- Meter location (x,y)
- Reading
- Route
- Average consumption
- Meter size
- Inspection card
- Digital picture



- CODE (IPS)

- Building permits
- CO status
- Violation Status
- Applicant Name
- Issue date
- Location
- Permit number
- Permit type
- Permit status
- Description
- Complaint number
- Complaint type
- Comply date
- Fee
- Vacant registry



Sample use of ETL in Enhanced GIS Viewer

The screenshot shows a GIS application interface. On the right is a map of parcel boundaries with various parcel IDs (e.g., 159.1-2-22, 159.1-2-23, 159.1-2-25.1, 159.1-2-25.2, 159.1-2-25.3, 159.1-2-25.4, 159.1-2-25.5, 159.1-2-25.6, 159.1-67.2, 159.1-67.11). On the left, a 'Identify' window is open, displaying a table of 'Address Discrepancies' for a selected parcel. The table includes fields like FID, Shape, SWIS, MUNI, SBL, PRINT_KEY, GRID_EAST, GRID_NORTH, LOC_NUMBER, LOC_STREET, DEED_BOOK, DEED_PAGE, ROLL_YEAR, OWNER1, OWNER2, MAIL1_ADDR, MAIL2_ADDR, MAIL_CITY, MAIL_STATE, and MAIL_ZIP. The 'Identified 1 Feature' section at the bottom of the window shows the location coordinates: 618,952.925 4,720,528.787 Meters.

GIS Implementation: Phase II

- Phase II is:
 - Based on needs identified during interviews with City Departments
 - Not included in current Grant Application
 - Uses same Software/Hardware already in place from Phase I

Online Work Order System

- Online Work Order System – used first in Water Department
- System Requirements:
 - all water system assets be recorded as a layer in GIS with descriptive attributes, a unique identifier number, and an address where appropriate
 - an up-to-date list of all staff available to be assigned to a work order
 - a list of equipment resources which can be assigned to a work order

Online Work Order System

- Work orders will be associated with a geographic feature (asset or address) and will have a link to view the assets in a map view with other City layers
- A reporting tool that allows the System Admins to track work orders based on dates or Work Order Status (open/closed)

Online Work Order System

Description Jetting

Entity Type: SGRAVITYMAIN
 WO Number: 530
 Status: [Dropdown] Priority: 2 Medium High
 Requested By: [Dropdown]
 Initiated By: HILL, WAYNE 9/10/2002 3:55:01 PM
 Submit To: [Dropdown]
 Supervisor: [Dropdown]
 Projected Start/Finish: 09/10/2002 MM/DD/YYYY
 Opened By: [Dropdown]
 Completed By: Johnson, Keith L
 Actual Start/Finish: 09/10/2002 09/10/2002
[Close Work Order](#)

General Location
 1809 GODHANIA RD
 Locate
 Locate With Streets
 Locate With Parcels

Comments **Entities** **Instructions** **Map Layers**

EntityID: [Input] Type: [Input]
[Get From Theme](#) [Add](#) [Remove](#)

Entity Type	Entity ID	Legacy ID	Location	Warrant Date
<input type="checkbox"/> SGRAVITYMAIN	1718			

Search By: GROUP NAME SEWER CREW

Name	Title	Employee SID
GREENFIELD, DAN R	Sewer Maintenance W...	4033
LARSEN, FREDERICK J	Sewer Supervisor	5759
MESSER, TOM A	Sewer Maintenance W...	4035

Start Date: 06/19/2003 Actual
 Finish Date: 06/19/2003 Estimated
 Description: [Input] Hours: 0
 Account: [Input] Employee
 Contractor
 Regular
 Overtime
 Holiday
 Benefit
 Stand By
[Add](#) [Remove](#) [Switch Entities/Tasks](#)

Name	Group	Rate Type	Hours/Units	Start Date	Finish I
GREENFIELD, DAN R	SEWER CREW	Hourly	3.00	2003-06-19 00:00:00	2003-0
LARSEN, FREDERICK J	SEWER CREW	Hourly	3.00	2003-06-19 00:00:00	2003-0
MESSER, TOM A	SEWER CREW	Hourly	3.00	2003-06-19 00:00:00	2003-0

GIS Implementation: Phase III

- Phase III is:
 - Based on needs identified during interviews with City Departments
 - Not included in current Grant Application
 - Uses same Software/Hardware already in place from Phase I
 - Quick access to GIS data relevant to City business processes

Online Map Library

- Pre-defined views in GIS Viewer that display data that is directly pertinent the intended audience.



OML Views

- Code Compliance View
- Asset Tracking View
- Planning View
- Vacant Lot and Abandoned Building View
- Capital Project Locations View
- City Facility/Staff Locations View
- Recreation Facilities Tracking View

OML View Compositions

- **Code Compliance View** (Code Compliance, Assessor's Office, Fire Department): Focus will be on the Code Compliance and Assessor related GIS layers and Basemap layers with different symbology assigned to Permits, Violations, COs, and Building Inspection status.
- **Asset Tracking View** (All Departments): Automatically adjusts the View to all City assets with Basemap layers. All assets will be presented with different symbology.
- **Planning View** (Planning and Development Department): In addition to the Basemap layers, this View will turn on Environmentally Sensitive Areas, Public Transportation, Zoning Boundaries, and Land Use GIS layers.
- **Vacant Lot and Abandoned Building View** (Assessor's Office, Comptroller's Office, Code Compliance, and Tax Collector's Office): All Basemap layers with Tax Parcels and Building Footprints will be presented. The vacant lots in the Tax Parcels will be shown with a different color than all other parcel. Similarly, Building Footprints layer will be modified to show abandoned buildings with a different color.
- **Capital Project Locations View** (Comptroller's Office): This View will show the Basemap layers and Capital Project locations only. The project locations can be created as a point layer and utilize different symbology for different project types.
- **City Facility/Staff Locations View** (Fire Department, Civil Service Department): The facility locations will be presented to the users in this View. The users will be able to view all City facility locations (Parcels and Building Footprints) with staff assigned to each building.
- **Recreation Facilities Tracking View** (Human Services): All recreation facilities such as parks and their corresponding facilities will be turned on as a layer in addition to Basemap layers. Appropriate symbology should be used for the corresponding facilities.

Phase I Costs

Funding requested from NYS Archives Grant!

■ Hardware.....	\$ 0
■ Software.....	\$14,500
■ System Development...	\$56,200
■ Training Documentation	\$12,000
■ Training.....	\$ 6,000
■ <i>Total</i>	<i>\$88,700</i>

Ongoing Operational Costs

- Yearly GIS software maintenance
- Additional GIS software licenses (as needed)
- Application development (as needed)
- Application integration (as needed)
- Data conversion (as needed)
- Data integration (as needed)
- Additional hardware (as needed)

There is a reason for GIS...

- 80% of government data is location based
- By implementing a Enterprise GIS, the City can...
 - Reduce time to obtain information
 - Reduce time to deliver constituent services
 - Reduce overall operation costs
 - Provide presentation quality maps
 - Provide real-time maps for analysis
- This will not happen overnight
 - Phase 1 is your starting point

Questions

