

Leveraging GIS to Eliminate Data Silos in Governmental Business Systems

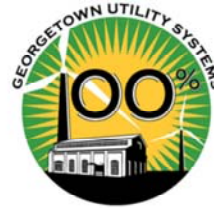
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Georgetown, Texas

- What
- Who
- Where
- Technology



City with a population of about 70,000 residents
20 miles north of Austin, TX
Utility service area of over 300 sq miles
45,000 customer utility accounts
Using ArcGIS 10.4.1
GIS Staff of 7
EEAP Member

Challenge

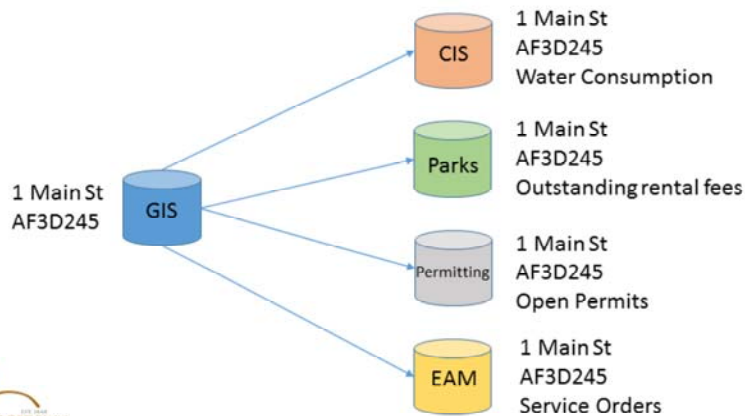
- Data Silos
- Analysis/Reporting Challenges



- Business System Data Silos
- Customer cross-system transactions cannot be executed without a common reference and any cross-system analysis requires significant manual data manipulation.
- No common framework for resolving this problem in a consistent way for location data across multiple systems.

Solution

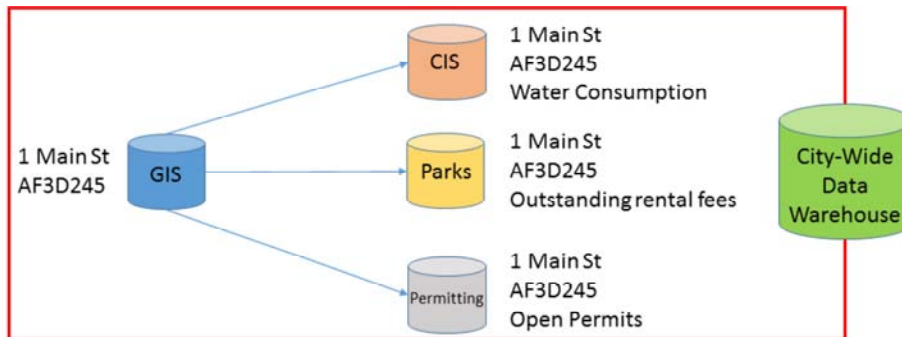
- Unique/common ID in each system



- Build a framework that allows a unique location-based GIS ID to serve as a common attribute that is shared and integrated into other systems.
- GIS addressing serves as the system of record for location across off city business systems
- Each system record can be related to other business systems by leveraging the common GIS ID
- Business systems are required to have integrated GIS address validation functionality using Esri's geocoding web services
 - Each business system must validate an address using an integrated Esri geocoding web service

Solution

- Leverage a data warehouse for reporting



- Each system record can be related to other business systems by leveraging the common GIS ID
- The data warehouse can be queried by unique ID to obtain property information across all business systems
- Performing analysis in each individual business system is no longer required

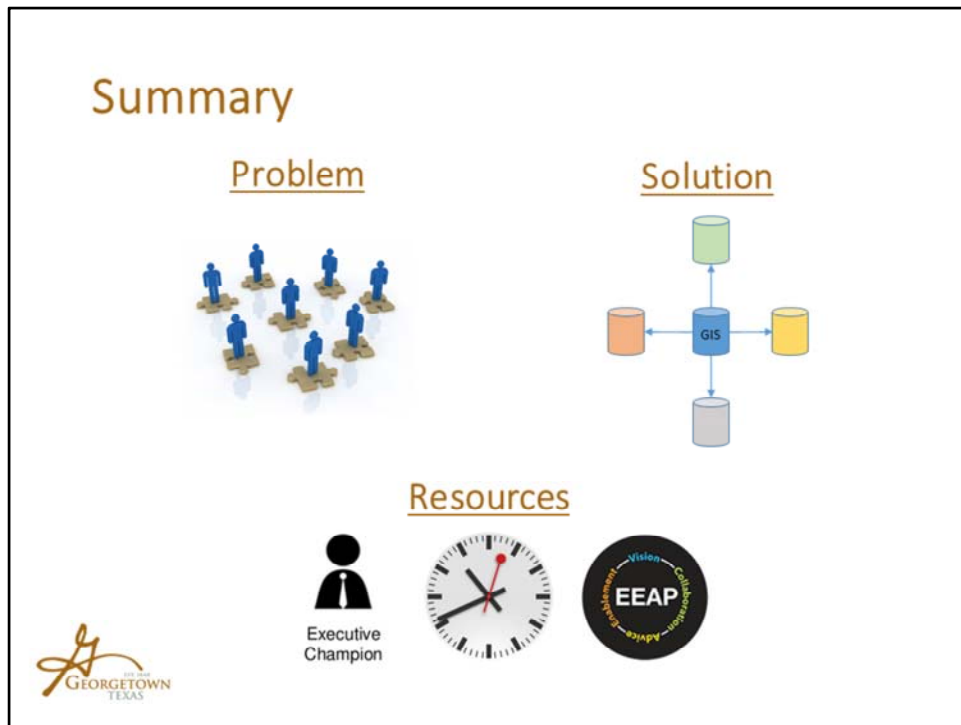
Data Analytics

- GIS attributes trigger system transactions



Using Esri's web services, when an address is validated, a spatial intersect is performed to populate GIS data into business systems.

For example, the address 123 Main St is validated in the city's Customer Information System. When 123 Main is validated, the impervious cover, inside/outside city limits, and subdivision is populated automatically. These GIS attributes drive billing determinates.



Problem

- Cross-system transactions could not be executed without a common reference
- Cross-system analysis requires significant manual data manipulation.

Solution

- Build a framework that allows a unique location-based GIS ID to serve as a common attribute that is shared and integrated into other systems.
- Each system record can be related to other business systems by leveraging the common GIS ID

Resources

- Leverage the Esri Enterprise Advantage program (EEAP)
- Subject matter experts
- Initial project to integrate systems took nearly 1.5 years



Perception if GIS has changed. Reliable data. Not just maps.
 Executive staff support
 GIS has increased its value city-wide. Each business system is reliant on GIS
 Maximize value of GIS investment. Increased Esri Enterprise Advantage
 program. More funding
 Forced our GIS staff to be more strategic due to the number of integrations

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