San Diego Regional GIS Council

MARK GRENINGER

California GIS Council

WHERE WE ARE, WHERE WE ARE GOING

CA GIS Council Background

Established in 2005

Mission is to enable governments to work together to maintain and share GIS data.

Composition

- Federal Agency representatives
- State Agency Representatives
- Local Government representatives (Regional Collaboratives)

Geospatial Framework Data Plan

Partnered with the California Geographic Information Association (CGIA) to develop plans.

Draft Data Plan

- http://cgia.org/cgia-collaboration/gis-data-sharing/california-geospatial-framework-data-draft-plan/
- Identified and prioritized 7 framework data themes and 11 California-centric data themes.

Creating a Spatial Data Infrastructure

- http://cgia.org/cgia-collaboration/gis-data-sharing/the-ca-gis-phase-2-strategic-planning-project/

Dataset Availability

Table 1: Dataset Availability

	Bay Area Regional	Central Coast	Channel Islands	Eastern Sierra	Far North Regional	Gold Country Regional	Humboldt Area	Mendocino-Lake Regional	North Valley Regional	Sacramento Regional	San Diego Regional	San Joaquin Valley Regional	San Luis Obispo Regional	Sierra Nevada Regional	SoCalGIS	SE California
Cadastral			■				■			■	■					
Ortho Imagery		■	■							■	■		■	■		■
Transportation			■				■			■	■					
Elevation									■		■	■	■	■		
Hydrography										■	■					
Geodetic Control											■					
Governmental Units			■			■	■			■	■			■		
Street Addressing			■				■			■	■					
Utilities																
Public Land Conveyance Records																
Buildings and Facilities			■													
Flood Hazards							■				■			■		
Vegetation											■					
Biological Resources																
Cultural and Demographic Statistics											■			■		
Soils											■					
Wetlands											■					
Earth Cover											■					

GIS Council issues

Membership not aligned with actual data provision

- Cities and Counties lumped together (have you been on the calls?)
- Led to internal state focus of meetings

Did not account for the new State GIO position

No work got done (where is the data)?

Re-charter of the GIS Council

Effort began July 2014

Approved January 2015 (last week)

Mission remains the same, but changes approach.

- *"Support collection, acquisition, sharing, and dissemination of GIS data"*
- *"Advises members of the Council and the State GIO"*
- Membership is voluntary (motivated people will get things done).
- Progress is made in Work Groups, where interested people can inform recommendations.

Executive committee is established to support the work groups and ensure work is done.

Council Goals

1. **Planning and Strategy:** To identify and prioritize California's geographic information needs and priorities, and develop and maintain a Strategic Plan to guide the implementation and completion of the goals and associated objectives expressed in this Charter.
2. **Advisory**: To serve as a trusted advisor to members of its constituencies by reviewing, analyzing, and responding to public policy issues that affect GIS and GIS Professionals.
3. **Collaborative policy development:** To serve as a forum for members to seek input, guidance, and consensus on policies and best practices that support the development of GIS in California and advocating for their adoption.
4. **California Spatial Data Access**: To support the development, maintenance, and access to comprehensive statewide geospatial data for Council constituencies and the general public.
5. **Collaboration:** To promote cooperation and create opportunities for various levels of government to meet identified needs and priorities.
6. **Communication:** To provide a forum where GIS professionals and governments can discuss best practices, identify technology trends, and benefit from others in the GIS field.

Next steps

1. Identify and establish membership
2. Elect Executive Committee
3. Deploy website with forums, reporting etc.
4. Write a strategic plan.
5. Establish work groups and begin work.

LA County GIS

DATA, DATA, DATA

LA County Geographic Information Officer

My position was established in 2006

Three main focus areas

GIS Management and Leadership

Support the countywide deployment of Geographic Information Systems (GIS) technologies to improve departmental operations, service delivery, and emergency response.

Enterprise GIS Program Management

Partner with Operational arm to establish and maintain an Enterprise GIS Program that will be a center of excellence for GIS in the County, supporting the cost-effective deployment of GIS by reducing duplication through shared GIS service delivery.

Enterprise GIS Data Management

Ensure that County departments have access to authoritative, current, and complete GIS data that will support decision making, analysis, and business operations. Distribute County GIS data as widely as possible to ensure reduced duplication of effort.

GIS Service Delivery

GIS Data Maintenance

- Maintain GIS data and existing map products (e.g., parcel maps)

GIS Infrastructure

- Administer the County's hardware, software, database administration and security.

GIS Application Development

- Develop customized and packaged GIS software and systems that support department business needs.

GIS Analysis

- GIS analysis and reporting and is most closely integrated to department programs.

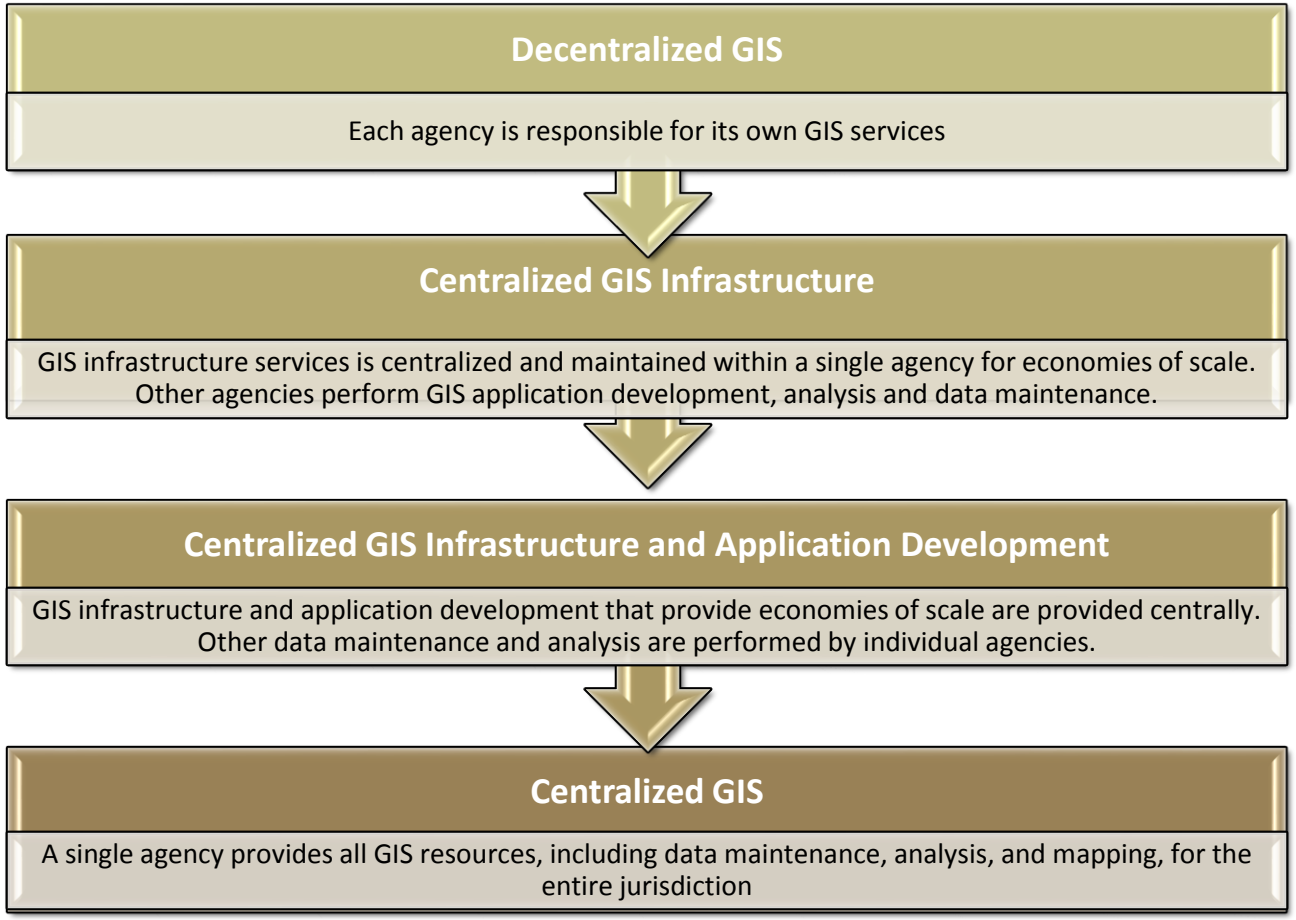
GIS Administration

- Day-to-day management of GIS services. It includes activities such as procurement, administration and management, and project management

GIS Management and Leadership

1. Maintain a Countywide Strategic Plan
   http://egis3.lacounty.gov/eGIS/egis-home/egis-strategic-plan/
2. Communicate the value of GIS to departments and agencies
   Case Studies
3. Establish standards, policies, and procedures
   1. Centralized GIS Repository
   2. Centralized ESRI license management & Master Purchase Agreement
   3. Centralized GIS Infrastructure
   4. Preferred GIS Technologies
4. Establish Countywide GIS classifications (link here)
5. Ensure GIS is available for disaster planning, response, and recovery

GIS Organizational Models



Enterprise GIS Program Management

- Ensure that the Enterprise GIS Program is aligned with CIO strategies and initiatives.
- With ISD, ensure that departments are familiar with the Enterprise GIS Program tools, capabilities, and service levels.
- Work with ISD to ensure that the Enterprise GIS Program is fiscally sustainable.
- Ensure the Enterprise GIS systems and applications are using current software and hardware to ensure capacity, stability, and growth.
- Ensure that County departments maximize the cost-effectiveness of GIS investments by using GIS software efficiently.
- Establish collaborative efforts between the County and related organizations to encourage cost-sharing and cost-effective use of GIS resources.

Enterprise GIS Data Management

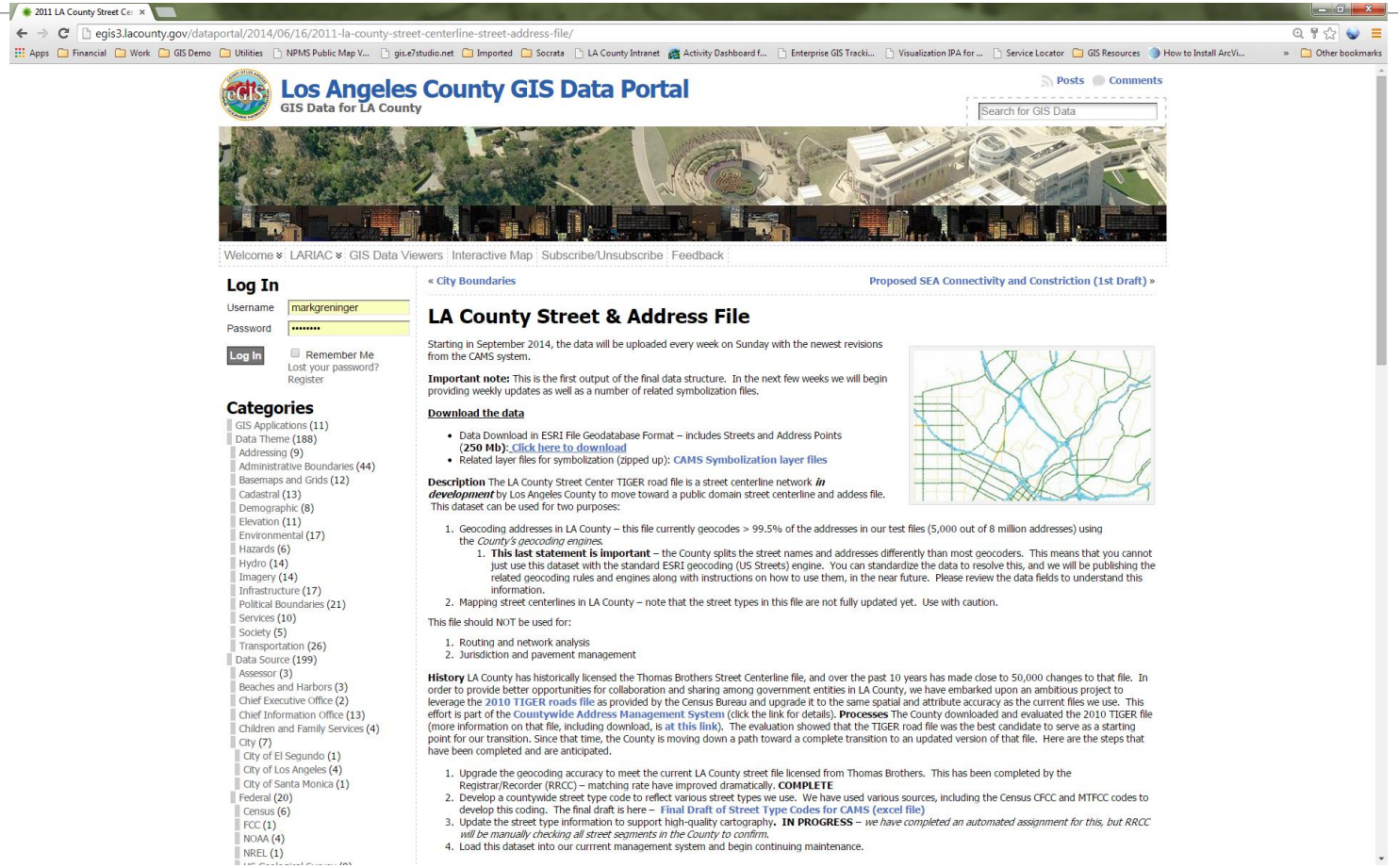
- With ISD, ensure that the LA County GIS Data Repository is authoritative, current, and catalogued.
- Direct the Los Angeles Regional Imagery Acquisition Consortium (LAR-IAC) to ensure that County departments have access to high resolution imagery and elevation data.
- Manage the Countywide Address Management System (CAMS) to ensure that County departments have access to authoritative address information in the County.
- Manage the Countywide Location Management System (LMS) to enable County departments to manage service locations.
- Develop consistent geographic names for reporting statistics to the Board of Supervisors.
- Ensure that the County's GIS data is available, where possible, for public access and use.

Data Organization - Themes

FGDC Data Themes

- Addressing
- Base maps & Grids
- Administrative Boundaries
- Political Boundaries
- Cadastral
- Demographics
- Elevation
- Environmental
- Hazards
- Hydrology
- Imagery
- Infrastructure
- Services
- Society
- Transportation

LA County GIS Data Portal



Where is the Data Portal

Simple!

- Search for “LA County GIS Data”
- http://gis.lacounty.gov/dataportal

LA County GIS Data Portal

Find and Search for Data

Download data

Learn about the data

View/Map the data

View training videos

Subscribe to updates

Comment and ask questions

Provide Feedback

LA County Enterprise GIS

Strategy

1. Data Themes
2. Data Programs
3. Data Repository
4. Maps
5. Map and Web Services
6. Applications

Data Programs

- **Addressing – Countywide Address Management System (CAMS)**
- Base maps & Grids
- Administrative Boundaries
- **Political Boundaries – Registrar/Recorder County Clerk**
- **Cadastral – Public Works and Assessor**
- Demographics
- Elevation **– LARIAC**
- Environmental
- Hazards
- Hydrology – **Public Works and USGS**
- **Imagery - LARIAC**
- Infrastructure **– LARIAC and Location Management System (LMS)**
- Services
- Society
- **Transportation – Countywide Address Management System (CAMS)**

Enterprise Data Programs

1. **Los Angeles Regional Imagery Acquisition Consortium (LAR-IAC)**

   "LAR-IAC is multi-jurisdictional purchasing arrangement that enables participating local governments and agencies to benefit from combined economies of scale to efficiently and cost-effectively acquire high definition aerial data."

   Established in 2005 by LA County Regional Planning and Chief Information Office.

   http://egis3.lacounty.gov/dataportal/lariac/

2. **Countywide Address Management System (CAMS)**

   Multi-jurisdictional management system for addresses

   http://egis3.lacounty.gov/eGIS/county-gis-projects/address-management-cams/

3. **Location Management System (LMS)**

   Collaborative approach to maintaining a single, comprehensive geographic database of locations countywide.

   http://egis3.lacounty.gov/lms/

LAR-IAC

LOS ANGELES REGIONAL IMAGERY ACQUISITION CONSORTIUM

Products

Data Types	LARIAC1 2006	LARIAC2 2008	LARIAC3 2011	LARIAC4 2014
Orthogonal Imagery (4-inch) 	X (including Infrared)	X	X	X (including Infrared and 1-foot imagery from 2012 and 2013)
Oblique Imagery 	X	X	X	X
Building Outlines 		X		X
Elevation Data  	X			X
Derived Data • Tree Canopy • Solar Insolation • NDVI (Permeability) • Slope • Hillshade • Height	X			X

Members

#	Cities	LARIAC1	LARIAC2	LARIAC3	LARIAC4
1	City of Agoura Hills	X		X	
2	City of Arcadia				X
3	City of Azusa	X	X		
4	City of Bellflower			X	
5	City of Beverly Hills	X	X	X	X
6	City of Burbank	X	X	X	X
7	City of Carson	X	X	X	X
8	City of Cerritos	X	X		X
9	City of Claremont		X	X	X
10	City of Covina	X	X		X
11	City of Culver City	X	X	X	X
12	City of Diamond Bar	X	X		
13	City of Downey	X		X	X
14	City of El Segundo	X	X	X	X
15	City of Gardena				X
16	City of Glendale	X	X	X	X
17	City of Hermosa Beach	X	X	X	X
18	City of Industry	X	X	X	X
19	City of Inglewood	X	X	X	X
20	City of Irwindale	X	X		
21	City of La Canada Flintridge	X	X	X	X
22	City of La Habra Heights	X	X		
23	City of Lakewood	X	X	X	X
24	City of Lancaster	X			
25	City of Long Beach	X		X	X
26	City of Los Angeles	X	X	X	X
27	City of Manhattan Beach	X	X	X	X
28	City of Monrovia	X			
29	City of Monterey Park	X	X		
30	City of Norwalk				X
31	City of Palmdale	X			
32	City of Pasadena	X	X	X	X
33	City of Redondo Beach	X	X		X
34	City of San Dimas			X	X
35	City of Santa Clarita	X	X	X	X
36	City of Santa Fe Springs	X		X	
37	City of Santa Monica	X	X	X	X
38	City of South El Monte	X	X		
39	City of South Pasadena			X	
40	City of Torrance	X	X	X	X
41	City of Westlake Village	X			X
42	City of Whittier	X	X	X	X

How it works

1. County works with cities and agencies to determine products to acquire.
2. County establishes a contract and assumes financial risk.
3. County estimates and establishes costs for governmental entities (cities, agencies, etc) to join.
4. Cities and agencies join through a “Participant Agreement”
5. County runs the contract.
6. Cities and agencies get hard disks with the data
7. Cities and agencies get access to applications and services that enable use of the data.
    1. Pictometry Online
    2. Web Services from the County

Some changes

1. Greater focus on access rather than just data disks
   1. Pictometry Online
   2. Provision of web services for inclusion in web applications (ESRI REST endpoints)
   3. Addition of applications for including parcel access, etc.
2. Extend contract to other State groups
   1. Pricing established for other entities
   2. Reduce contract overhead (No RFP needed)

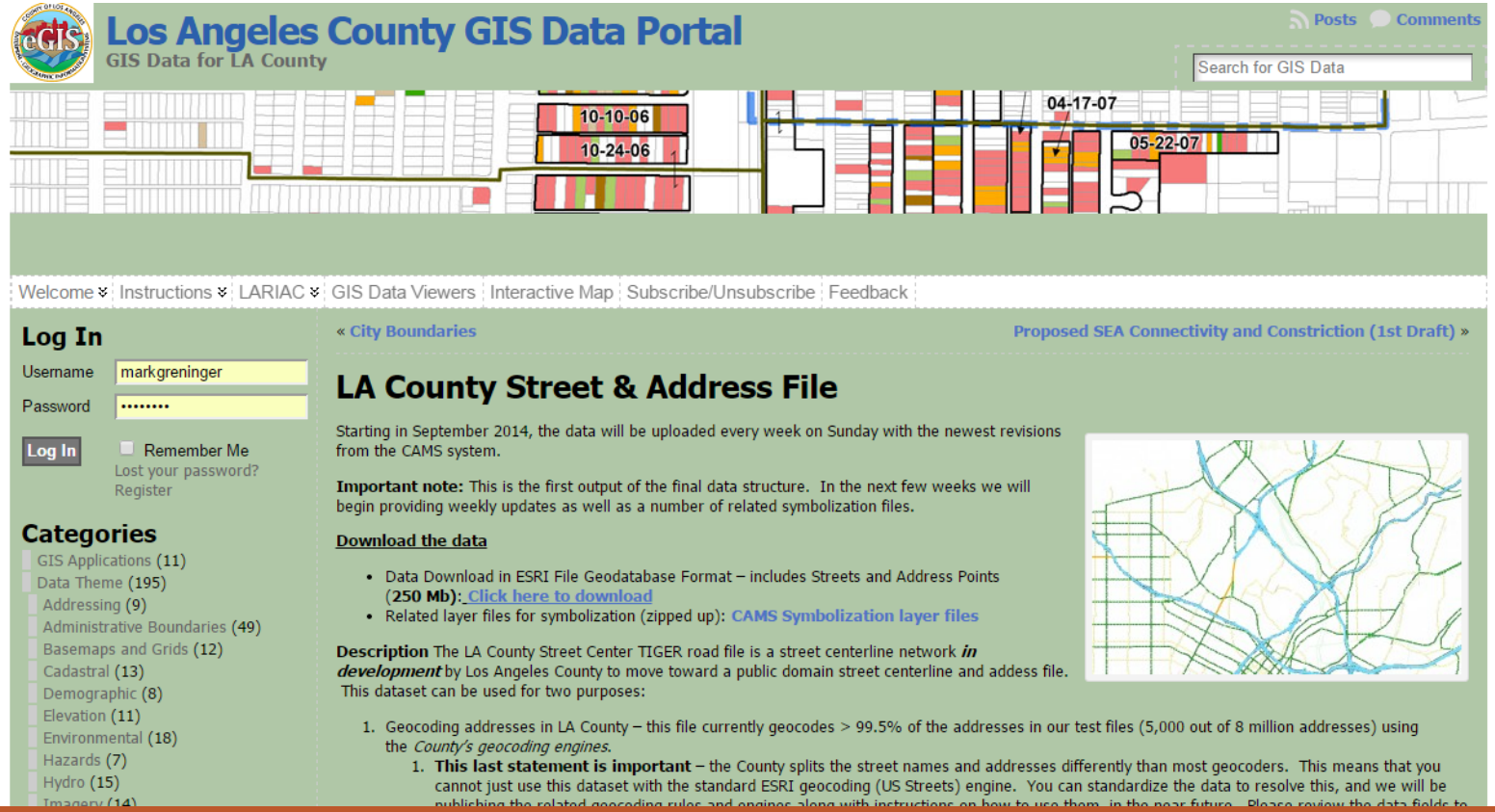
Product Family	Product	Units							
		<25	25-49	50-99	100-299	300-599	600-1499	1500-2999	3000+
Oblique Imagery*	Pictometry Connect - Enterprise	$50,000/year/1,500 users							
	Pictometry Connect - Basic Access	$3,000/year/100 users							
	3" GSD Oblique Imagery	$ 585.50	$ 472.50	$ 405.00	$ 405.00	$ 405.00	$ 405.00	$ 400.50	$ 390.00
	4" GSD Oblique Imagery	$ 427.50	$ 400.50	$ 360.00	$ 360.00	$ 360.00	$ 360.00	$ 320.00	$ 300.00
	6" GSD Oblique Imagery	$ 345.00	$ 295.00	$ 250.00	$ 250.00	$ 250.00	$ 250.00	$ 250.00	$ 250.00
	9" GSD Oblique Imagery w/6" standard nadir upgrade	$ 225.00	$ 225.00	$ 180.00	$ 135.00	$ 112.50	$ 112.50	$ 110.00	$ 110.00
	9" GSD Oblique Imagery	$ 180.00	$ 180.00	$ 135.00	$ 90.00	$ 67.50	$ 67.50	$ 67.50	$ 67.50
*Includes standard orthogonal frame imagery									
Orthogonal Imagery**	3" GSD AccuPlus	$504.75	$ 377.75	$ 350.25	$ 255.25	$ 236.25	$ 236.25	$ 236.25	$ 236.25
	4" GSD AccuPlus	$ 288.00	$ 270.00	$ 265.50	$ 220.50	$ 220.50	$ 220.50	$ 210.00	$ 200.95
	6" GSD AccuPlus	$ 150.00	$ 150.00	$ 145.00	$ 145.00	$ 145.00	$ 145.00	$ 145.00	$ 145.00
	6" GSD AccuPlus (w/9" Obliques)	$ 130.50	$ 130.50	$ 112.50	$ 112.50	$ 108.00	$ 108.00	$ 108.00	$ 108.00
	9" GSD AccuPlus	$ 130.50	$ 130.50	$ 112.50	$ 112.50	$ 108.00	$ 108.00	$ 98.00	$ 88.00
	4" or 6" Standard Ortho Tiles	$20.00/sq mi							
	6" Standard Ortho Tiles	$20.00/sq mi							
	4" or 6" Area Wide Mosaics	$2.00/sq mi							
	9" Standard Ortho Tiles	$10.00/sq mi							
	9" Area Wide Mosaics	$0.50/sq mi							
**requires corresponding oblique imagery purchase, customer DEM requires Pictometry review and may qualify for additional discount									
Corridor Imagery	Visualization Grade	Price by Linear miles - 1-499: $95.00; 500-999: $85.00; >1000: $75.00							
	Mapping Grade	Price by Linear miles - 1-499: $175.00; 500-999: $165.00; >1000: $155.00							
	Survey Grade***	Price by Linear miles - 1-499: $250.00; 500-999: $240.00; >1000: $230.00							
*** Survey Grade product requires ground control survey and possible LiDAR flight at additional cost									
Building Representations	Building Outlines	Price by Parcel Count: 1-50000: 0.35; 50001-75000: 0.32; 75001-100000: 0.30; 100001-200000: 0.27; 200001-300000: 0.25; 300001-400000: 0.24; 400001-1000000: 0.23; >1000001: 0.22							
	Change Detection	Price by Parcel Count: 1-25000: 0.40; 25001-50000: 0.37; 50001-75000: 0.35; 75001-100000: 0.32; 100001-200000: 0.30; 200001-300000: 0.25; 300001-400000: 0.24; 400001-1000000: 0.23; >1000001: 0.22							
	Planimetrics - Structures	custom - based on scope of work							
	Planimetrics - NSF	custom - based on scope of work							
Terrain Data	LiDAR Data 0.7m	custom		$490	$350	$315	$280	custom	
	LiDAR Data 1.0m	custom		$305	$220	$195	$170	custom	
	DEM	$50	$40	$35	$35	$35	$35	custom	
	DEM & 1-foot contours	$75	$65	$55	$55	$55	$55	custom	
	DEM & 2-foot contours	$65	$60	$50	$50	$50	$50	custom	
	DSM	$50	$40	$35	$35	$35	$35	custom	
	LARIAC - Option 1	custom		$560	$420	$385	$350	custom	
	LARIAC - Option 2	custom		$390	$305	$280	$255	custom	
	FEMA Accuracy Assessment	$150	$150	$100	$75	$50	$40	$30	
	FEMA Compliant Ground Survey	custom							
Terms and Conditions Apply to All Prices - customer data may be required in some cases. Most products available with specifications modifications. These are priced based on scope of work.									

CAMS

COUNTYWIDE ADDRESS MANAGEMENT SYSTEM

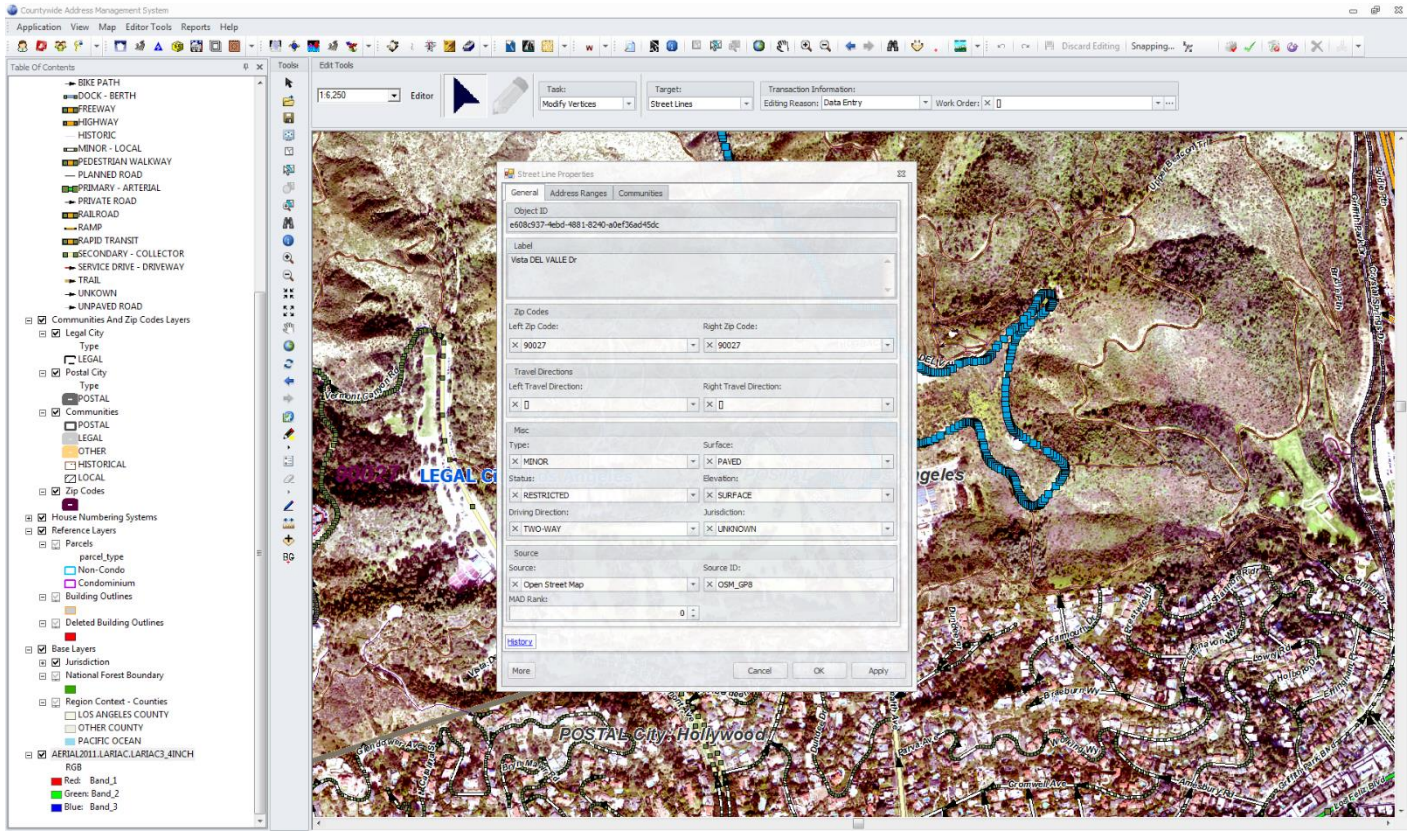
What is CAMS? - DATA

1. A database and data download
    1. Based on the FGDC Address standard
    2. Street and Address File
    3. For address matching
    4. For cartography
    5. Geocoding Services



CAMS is an application

1. A maintenance application
    1. Application requires direct access to County's GIS database
    2. Enforces rules from the address standard
    3. Enables work orders to be entered and revision rights limited to jurisdictions



CAMS is a program

1. A GIS Data Program
    1. Includes governance
    2. Steering committee
    3. Membership
    4. Participant Agreement
2. LA County is looking to hire an address coordinator to own this program

LMS

LOCATION MANAGEMENT SYSTEM

Why LMS

Many agencies maintain service locations and other locations (points of interest) but are not consistent – different data structures, different categorization.

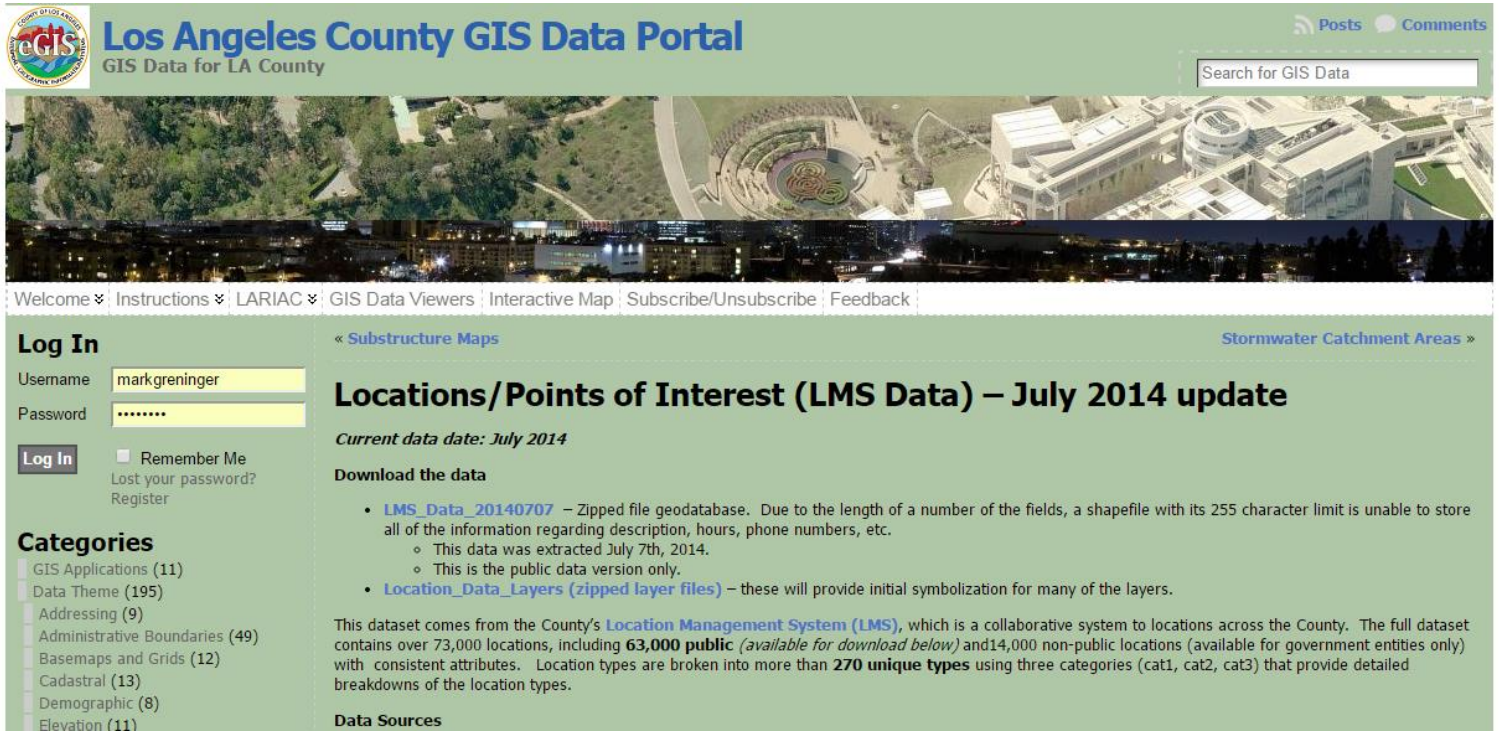
LMS maintains both the location and basic information about that location:

1. Location Name
2. Type of service(s) offered at the location (e.g. the service categories).
3. Description of the location, including programs and services offered at the location.
4. Geo-location (x, y coordinates) for showing services on maps.
5. Name of the agency/jurisdiction that provides services at the location.
6. Location Address.
7. Contact Phone number(s).
8. Service Hours.
9. Email contact information.
10. Web site URL.
11. Additional Information as applicable
12. The External Identification number if the location came from another system
13. The Source of the Information

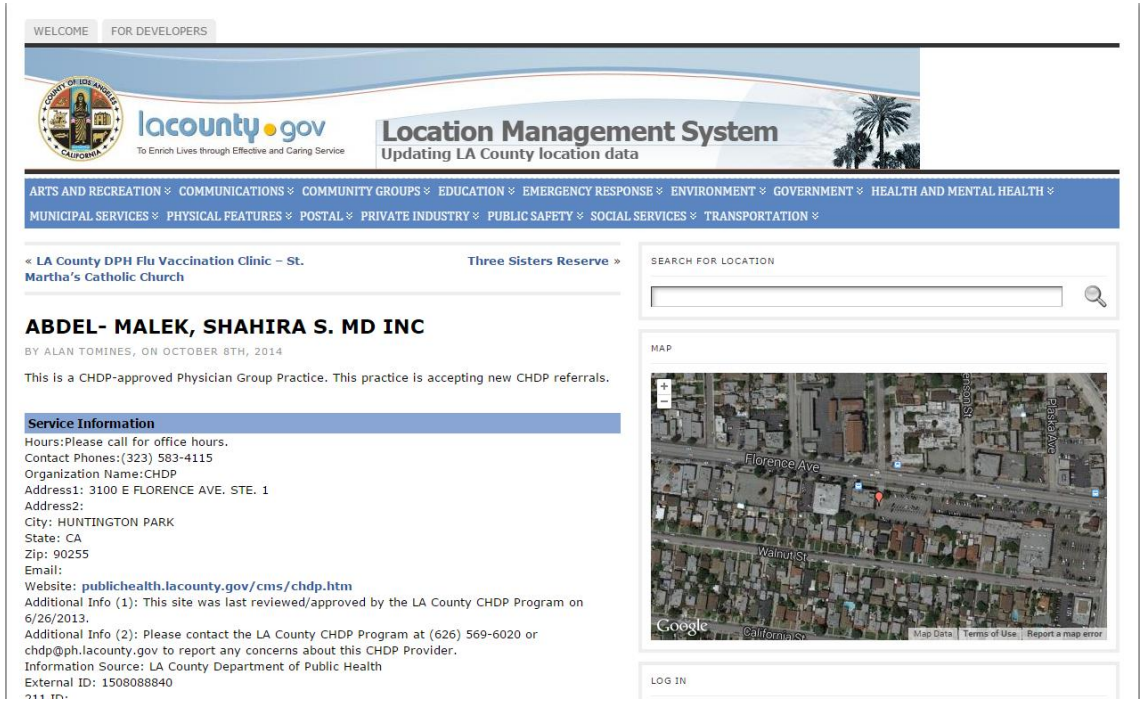
LMS Data

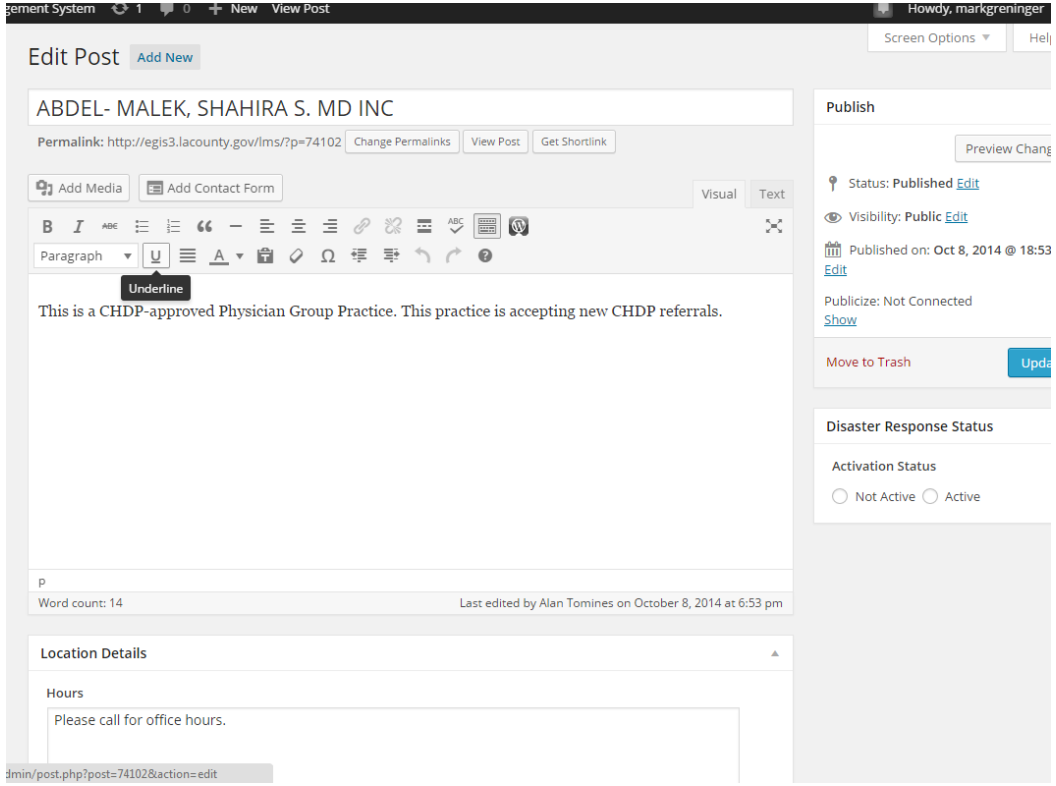
Points of Interest File

- Downloadable
- Over 300 categories of information
  - Schools
  - Service Locations
  - Etc.



LMS Application





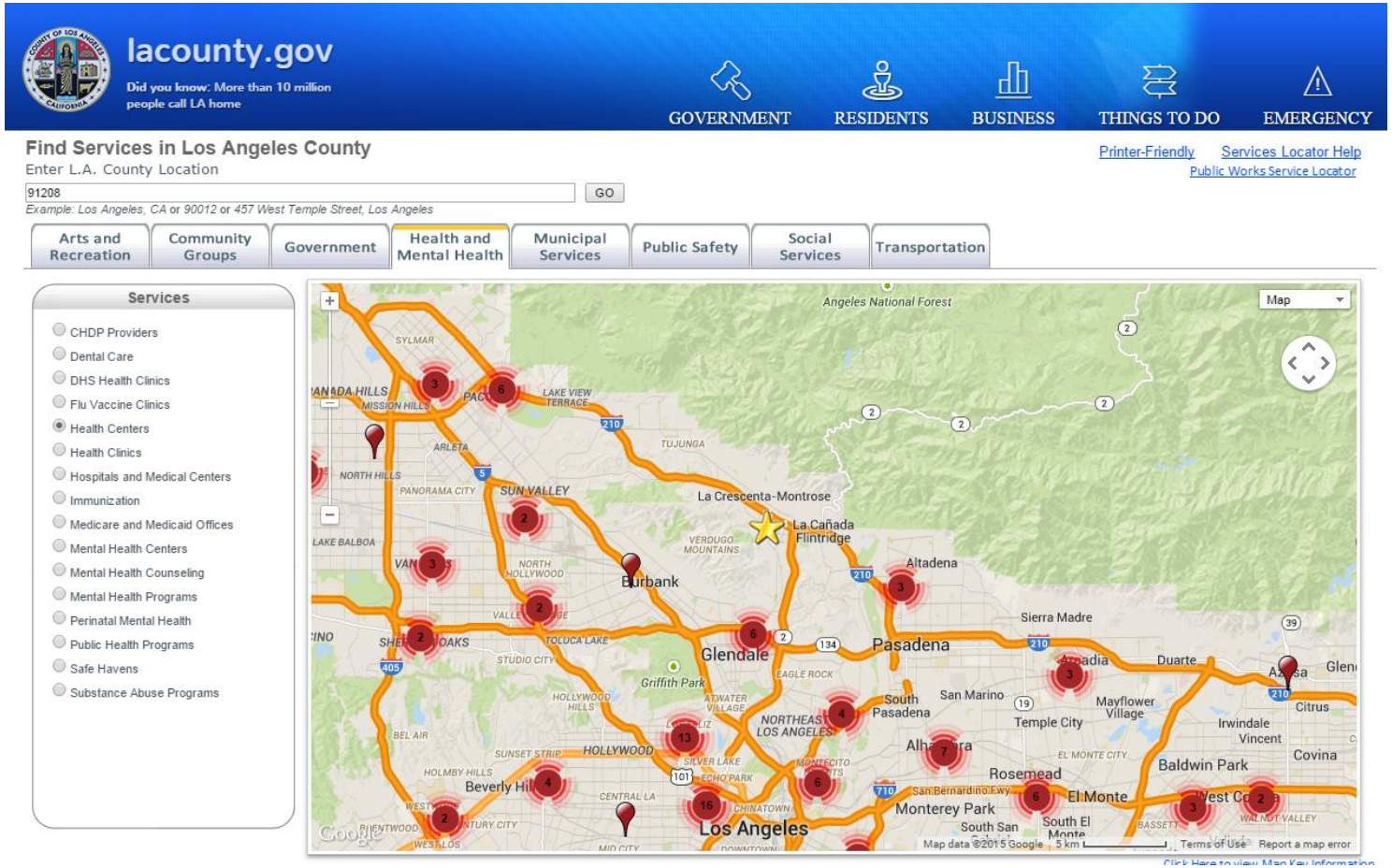
Services Locator

One application that is driving LMS

Public Locator for County services

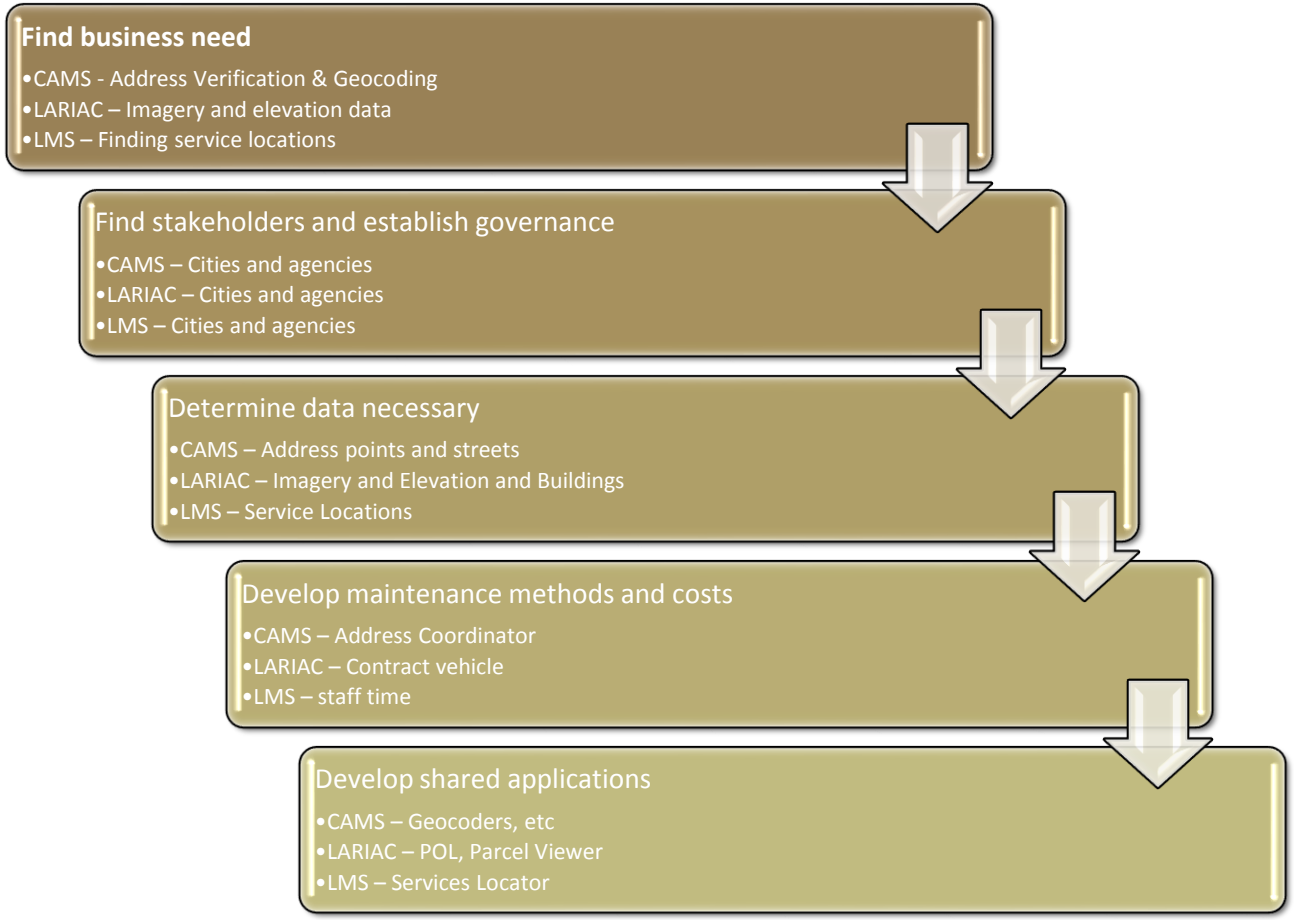
http://maps.lacounty.gov

Embeddable



Lessons learned

GIS Collaboration Models



From LAR-IAC to LAR-GIS

THE NEXT PHASE IN COLLABORATION

Current issues

1. Many different initiatives
2. Not a clearly coherent GIS structure
3. Small cities are not involved and do not benefit/don’t share costs
4. Doesn’t answer the question: What is GIS?

From LAR-IAC to LAR-GIS

1. From an Imagery Consortium to a GIS Consortium (like SanGIS)
    1. Provide access to ALL of the GIS data and systems that we maintain.
    2. Single Participation mechanism covering
        1. Governance
        2. Data and Data Maintenance
        3. Cost sharing
        4. Data access, web services, applications
2. Moving from data to applications
    1. Faster data deployment, greater business benefit, clearer understanding of “What is GIS?”
    2. LAR-IAC has moved this way with Pictometry Online
    3. LA County will provide access to its Parcel Viewer application to participants
    4. Members get direct access to our GIS Data Repository

Open data

LA County is joining the open data movement

Establishing “data.lacounty.gov” and publishing data through the Socrata platform

GIS has led the way.

Questions?

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