



County of Los Angeles

# Enterprise Geographic Information Systems (eGIS) **2016-2019 Strategic Plan**



January 2016

ADOPTED

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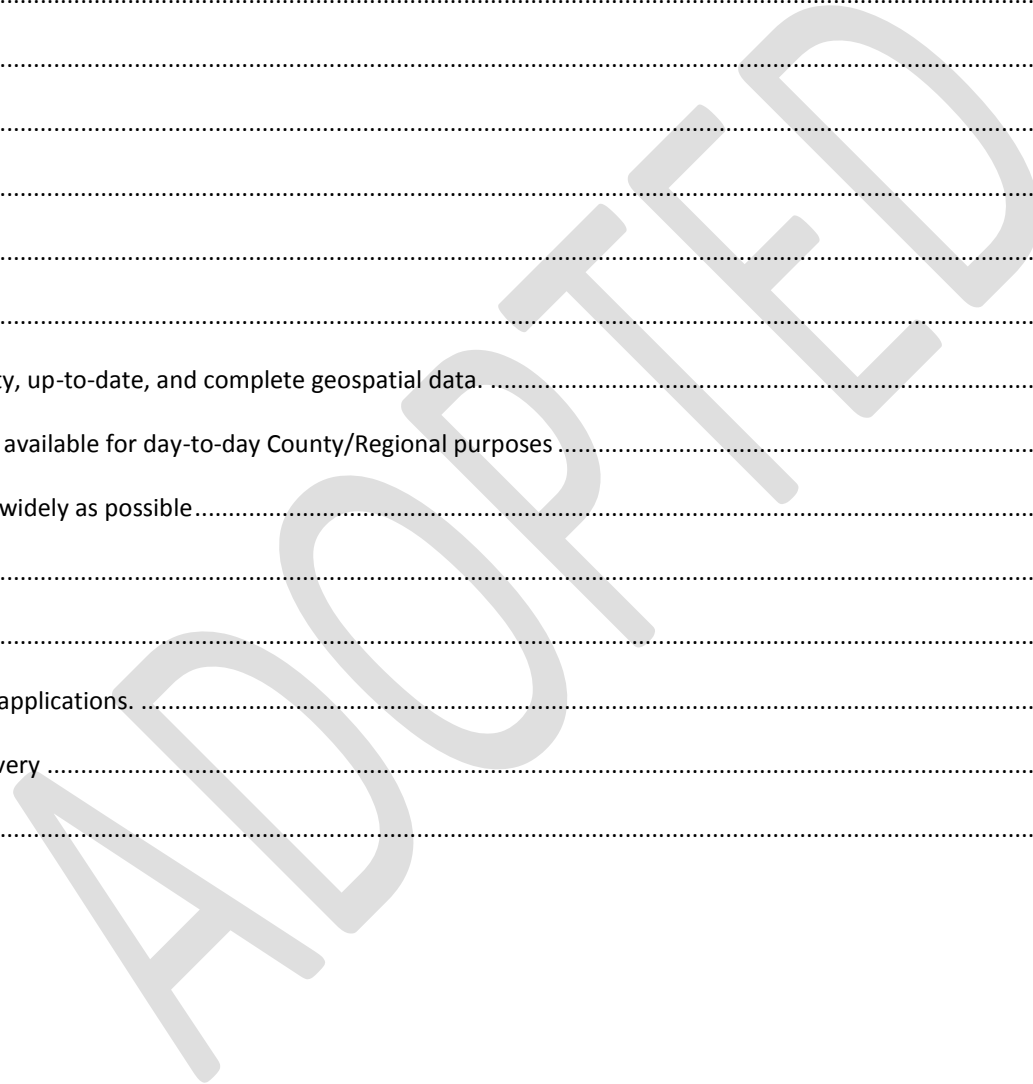
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## BACKGROUND

Geographic Information Systems (GIS) technologies are critical tools for improving the quality, accuracy, efficiency, and responsiveness of government services provided by the County of Los Angeles. Using the concept of an “electronic” or digital map, GIS records, stores, and analyzes multiple layers of spatial data and relates this data to locations of interest (e.g., communities, neighborhoods and people that live there). These layers contain data in the form of points (e.g., addresses, locations, etc.), lines (e.g., streets, highways, etc.), polygons (e.g., areas, political jurisdictions, etc.) and images that can be viewed in various combinations to identify and display underlying spatial relationships.

## VISION

A countywide enterprise approach to GIS will optimize the efficiency and effectiveness in the use, acquisition, and dissemination of GIS data and resources. This will increase the cost-effectiveness, innovation, reliability, accuracy, and value of geospatial information and tools, leading to improved outcomes and enhanced services to the public.

## MISSION

- Develop mutually accepted standards, policies, and business practices;
- Communicate the value of GIS to County departments and agencies;
- Encourage collaborative GIS efforts among County, government, and related organizations;
- Ensure that GIS resources are available for day-to-day operations;
- Maximize the cost-effectiveness of GIS investments;
- Cultivate the advanced use of GIS;
- Pursue the innovative use of GIS and related technologies;
- Integrate GIS technologies into County business operations;
- Support emergency and disaster planning, response, and recovery.

## PRIORITIZATION

A Survey of departments to determine priorities for action was completed in 2015. The number at the beginning of each row summarizes the responses. Numbers could range between 20 and 60, with a higher number denoting higher priority.

## UPDATES SINCE 2012-2015 STRATEGIC PLAN

Strategies and Tactics that have changed or moved since the last strategic plan are highlighted in green.

Objectives		Strategies and Tactics	Status/Notes
<b>1. CREATE, COLLECT, MAINTAIN, AND DISTRIBUTE HIGH QUALITY, UP-TO-DATE, AND COMPLETE GEOSPATIAL DATA.</b>			
45	A. Identify and implement data collection, metadata, and spatial accuracy standards and policies.	<ol style="list-style-type: none"> <li>1. Implement metadata standards.</li> <li>2. Implement Field Survey Data Standards (horizontal and vertical) for street based, parcel based, or survey [cadastral] based GIS data layers.</li> <li>3. Implement Address standard</li> </ol>	<p><b>DONE</b>-eGIS Data Maintenance Policies and Procedures</p> <p>For LAR-IAC and for cadastral data. Need to publish these standards and validate.</p> <p><b>DONE</b>-CAMS (FGDC) – add to the new Service Catalog entry for Address Coordination.</p>
44	B. Develop and Implement quality assurance procedures for GIS data to ensure standards identified in 1A are followed.	<ol style="list-style-type: none"> <li>1. Develop and implement quality assurance mechanisms to test and ensure that GIS data follows standards and that metadata is complete and accurate.</li> <li>2. Create and host data editor meetings regularly (to discuss best practices and to discuss common issues)</li> </ol>	<p><b>DONE</b>-eGIS Data Maintenance Policies and Procedures</p> <p>DONE-GIS Data Committee – ongoing</p>
53	C. Build a common repository for authoritative GIS data. Collect, create, and/or acquire datasets as necessary.	<ol style="list-style-type: none"> <li>1. Develop and approve directive about loading data layers into the GIS Data Repository</li> <li>2. Create and maintain a catalog of layers stored in the eGIS Repository and maintained/licensed by County departments.</li> <li>3. Develop a method for searching for and/or finding data layers in the eGIS Repository</li> <li>4. Identify stewards for all layers in the common GIS Repository and ensure required resources are available to maintain the layers.</li> <li>5. Identify additional GIS data layers that should be available in the eGIS Repository, from surveys or from federal and state framework data layer listings.</li> <li>6. Undertake projects to purchase, enhance, create, and/or update GIS data identified by departments as critical need. Determine if grants can pay for this.</li> <li>7. Identify partners for data acquisition or other stewards (LARIAC, USGS-NHD, etc)</li> </ol>	<p>DONE-TD 12-02 EGIS Central Repository</p> <p>In progress – need to develop an online/easier method to manage than the Excel File.</p> <p>Layer Loader tool</p> <p>In progress</p> <p>Develop a bi-annual survey of layers that should be added, or add a form on the Data Portal where people can request new layers.</p> <p>Address Points moved to buildings, 3D Buildings with draped imagery, Pervious/Impervious – Land Use/Land Cover</p> <p>National Hydrography Dataset (NHD) is one example</p>
	D. Develop an authoritative dataset of County assets and services.	<ol style="list-style-type: none"> <li>1. Develop and approve directive that all County services and facilities are stored in a central location (currently LMS)</li> <li>2. Determine authoritative owners and train them to use LMS, or identify data sources and owners and develop data import mechanisms where</li> <li>3. Work with stakeholders to ensure that the Land Types dataset, showing the boundaries of county data, is up to date.</li> </ol>	<p>Ongoing with Kimberly Jo</p> <p>Determine a lead for this.</p>
42	E. Ensure data layers are based on public, common, accurate base layer(s) – for cartographic and analytical purposes	<ol style="list-style-type: none"> <li>1. Improve the accuracy of the parcel dataset to near survey grade.</li> <li>2. Identify layers that need to be updated and determine priority and order in which to migrate data layers to parcel level</li> <li>3. Move GIS data to the parcel level for increased accuracy based upon their priority.</li> </ol>	

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<b>1. CREATE, COLLECT, MAINTAIN, AND DISTRIBUTE HIGH QUALITY, UP-TO-DATE, AND COMPLETE GEOSPATIAL DATA.</b>		
	4. Help support multi-user editing for projects involving more than one department.	DONE-Ongoing with the LandBase and CAMS
	5. Investigate the feasibility of the ESRI Local Government Information Model as a way to manage all data on a single basemap and single system.	Not sure we have discussed this in our meetings. Great idea. Just need to hear more about it.
	6. Eliminate dependence upon Thomas Brothers data, including TB Page and Grid.	
45 F. Develop and implement processes and procedures to minimize spatial data redundancy	1. Identify and implement all attributes and geographies (admin, city and service boundaries) necessary to support GIS applications and agencies.	
	2. Consolidate redundant GIS datasets (e.g, political jurisdictions) where possible.	
	3. Create Clearinghouse for GIS related support materials (RFPs, contracts, grants, Statements of Work, etc)	eGIS Website – for external. Create new website for internal GIS sharing.
	4. Work to eliminate the duplicate update of street centerlines and addresses by Fire and CAMS.	
G. Maintain single, authoritative source of Countywide address information.	1. Develop a Needs Assessment for a Central Addressing Unit/Coordinator	DONE-See “A Central Addressing Unit for LA County”
	2. Develop requirements and governance for the Central Addressing Unit based upon identified needs.	DONE-See the CAMS Coordinator Task Details
	3. Establish a stakeholder group for countywide addresses.	DONE-CAMS Steering Committee
	4. Develop maintenance models for ensuring address and other attribute information is up to date.	Work with staff from several departments to provide updates to address data from the field. Perhaps use the Collector app and tie to our CAMS Work Order System.
	5. Initiate project to capture all address points, and move address point locations to the most application location (building center, front door, etc)	
	6. Determine how to eliminate the duplicate address maintenance done by Fire and CAMS.	
	7. Develop geocoder that can handle suites, apts, etc.	
	8. Develop a method for government entities to update Parcel Attribute information in the Assessor Database to ensure that these addresses can be found in the parcels, which will support CAMS.	
	9. Create a USPS Address Validation service	
H. Provide the capability for routing.	1. Investigate the need for the creation of a routable network dataset for the County.	
	2. Identify and acquire a routable dataset, or convert CAMS to a routable network as necessary.	
	3. Provide access to a routing service	ArcGIS Online, Google

Objectives		Strategies and Tactics	Status/Notes
<b>2. ENSURE THAT THE COUNTY’S GIS SYSTEMS AND DATA ARE AVAILABLE FOR DAY-TO-DAY COUNTY/REGIONAL PURPOSES</b>			
47	A. Develop a standard level of service at the Enterprise GIS to ensure availability of GIS data and systems	<ol style="list-style-type: none"> <li>1. Develop a standard eGIS “Service Level Agreement” between ISD and departments.</li> <li>2. Develop and implement plan to have development, test, and production environments for Enterprise GIS services and applications.</li> <li>3. Meet with GIS System Administrators and relevant ISD sections on a regular basis to ensure ISD understands GIS system requirements.</li> <li>4. Define &amp; document requirements for security, technical support, response time, uptime, help desk support, backup and disaster recovery.</li> <li>5. Document GIS System configuration/hardware.</li> <li>6. Publish and maintain list of internal FAQ’s that detail problems and resolutions.</li> <li>7. Establish notification system for system outages (planned or otherwise) – for applications and underlying databases (or servers)</li> <li>8. Review the Service Level Agreement and documentation to ensure it continues to support business operations.</li> </ol>	<p>DONE-eGIS Service Level Agreement</p> <p>Ongoing</p> <p>Review the Service Level Agreement</p> <p>DONE – add to service catalog</p> <p>Create and add to new Internal Website.</p> <p>Ongoing</p> <p>Do this every two years?</p>
43	B. Work to move the County’s GIS systems to a higher maturity level based upon the URISA GIS Maturity Model	<ol style="list-style-type: none"> <li>1. Do a regular review of the County’s GIS Capability Maturity using the URISA GIS Capability Maturity Model questionnaire: <a href="http://www.urisa.org/clientuploads/directory/GMI/GISCMM-Final201309(Endorsed%20for%20Publication).pdf">http://www.urisa.org/clientuploads/directory/GMI/GISCMM-Final201309(Endorsed%20for%20Publication).pdf</a></li> <li>2. Develop a countywide GIS architecture that balances price with departmental needs for control and access.</li> <li>3. Develop a GIS architecture that is scalable in times of high volume (disasters, elections, tax roll)</li> <li>4. Monitor system response time, capacity, and stability and track against metrics identified in the Service Level Agreement. Provide departmental access to these tools.</li> <li>5. Conduct regular system load testing to quantify metrics for system capacity.</li> <li>6. Plan and support growth by working with vendors and departments to plan and anticipate future growth based upon new projects.</li> <li>7. Ensure staff availability to accommodate the anticipated growth, support the users in timely manner, and provide excellent user support.</li> </ol>	<p>New architecture in place - adding Departmental Database capabilities</p> <p>DONE- re-architected the Infrastructure.</p> <p>Leveraging Optimizer – testing Insight.</p> <p>ISD needs to develop a test plan.</p>
40	C. Identify Data Storage Standards	<ol style="list-style-type: none"> <li>1. Identify spatial database technology standards for data storage.</li> <li>2. Maintain a centralized data storage mechanism for the County GIS Repository.</li> </ol>	<p>DONE –updated to SQL Spatial – see Preferred Technologies</p> <p>DONE – part of eCloud</p>
44	D. Develop security and access control mechanisms.	<ol style="list-style-type: none"> <li>1. Password enable servers, map services, etc</li> <li>2. Determine security for each data layer in the eGIS Repository</li> <li>3. Ensure security compliance for sensitive GIS data layers.</li> </ol>	<p>DONE-Implemented SSL &amp; ArcGIS Server security</p> <p>DONE-Ensure licensed data is only available to licensees.</p> <p>Need to determine what those are (HIPAA, CJIS, etc)</p>

Objectives	Strategies and Tactics	Status/Notes
<b>2. ENSURE THAT THE COUNTY’S GIS SYSTEMS AND DATA ARE AVAILABLE FOR DAY-TO-DAY COUNTY/REGIONAL PURPOSES</b>		
38 E. Monitor usage of GIS software, hardware and applications to ensure allocation of sufficient resources for current and planned usage	4. Ensure that departments have appropriate control over their own applications and services. 1. Monitor ArcGIS license consumption to optimizer license utilization. Transfer licenses between departments instead of acquiring new licenses where possible. 2. Consolidate departmental licenses into a single license pool to reduce licensing costs where possible while ensuring license availability at all times. 3. Design metrics to evaluate usage of GIS infrastructure to support system design and budgeting. 4. Regularly monitor and report on Web and application statistics 5. Design GIS applications so that metrics exist for availability/usage of apps and user information capture (if possible).	DONE – acquired OpenLM DONE-TD 12-03 EGIS Centralized Software Management Recommend eliminating DONE-Geocortex Optimizer/Insight & ESRI tools. DONE-optimizer, google analytics, webtrends
27 F. Develop processing on demand and virtual desktops	1. Develop a method where departments can request additional GIS processing capabilities as needed. 2. Investigate the new hosted desktop solution to determine the feasibility of creating virtual GIS machines that will reduce the hardware and software costs for departments. 3. Investigate the ability to use virtual desktops to “rent” GIS machinery (departments don’t need to buy dedicated hardware and licenses).	
42 G. Create and implement a maintenance strategy for GIS applications. Ensure that applications do not end up using outdated technology.	1. Review existing applications, data content, and functionality before developing new applications. 2. Develop strategy for application ensuring GIS applications leverage current software versions. 3. Maintain list of applications and related hardware and data dependencies. 4. Develop application upgrade schedules to ensure applications remain at current software levels.	Department (application) specific really Should we develop some kind of tracking sheet?



Objectives		Strategies and Tactics	Status/Notes
<b>3. DISSEMINATE THE COUNTY’S GIS DATA AND SERVICES AS WIDELY AS POSSIBLE</b>			
47	A. Distribute County GIS data as widely as possible to ensure reduced duplication of effort	1. Create a central web-based location where GIS data can be made available for download.	DONE – LA County GIS Data Portal (Data Portal)
		2. Where possible, make data available for free. Continue to build common repository for authoritative data from all departments	ONGOINGONGOING
		3. Where possible, use publicly available information (e.g. Tiger data instead of Thomas Bros., for example)	DONE-transitioning to TIGER.
		4. Establish procedures for data dissemination and create disclaimer language for GIS data downloads.	Add language about Indemnification.
		5. Establish procedures and mechanisms for automating data loading from the Enterprise GIS repository to the County Open Data Portal (data.lacounty.gov).	Investigate FME?
		6. Develop a method to securely provide licensed and/or confidential data to contractors for County departments.	
		7. Develop automated methods to update cached map services when changed to source data have been made.	
47	B. Identify GIS development standards and best practices to support dissemination of LA County GIS data.	1. Develop GIS web services and applications utilizing standards where relevant.	DONE-ESRI REST endpoints, WMS, WFS standards – see Preferred Technologies
		2. Sign countywide licenses for commercial mapping services to reduce costs where possible.	DONE – signed agreements with Google, and Bing
		3. Develop a mobile GIS development standard, and ensure platform independence where possible.	DONE-see Preferred Technologies
		4. Identify a web GIS development standard where possible.	DONE- see Preferred Technologies
		5. Develop best practices for application development methodologies and configurations.	Reconvene the Application Developer Working Group – We are moving toward HTML5 – from Silverlight/Flash
		6. Develop best practices for ensuring that the County GIS infrastructure is upgraded to take advantage of new capabilities while supporting legacy applications.	
45	C. Identify mechanisms to view and access GIS Data	1. Identify Desktop GIS, Web-based GIS, Mobile GIS, Developer APIs and frameworks (SDKs)	DONE - ESRI is an ad-hoc county standard
		2. Investigate the feasibility of using free and Open Source GIS desktop and server software.	DONE – CIO Recommended Technologies for GIS
		3. Develop mechanism to access GIS files (internal and external)	DONE – GIS Data Portal and Shared folder.
		4. Develop and document Web Services that provide access to GIS capabilities.	See Services Catalog – but needs updating.
		5. Create GeorSS feeds of County GIS data for wider distribution.	DONE – LA County GIS Data Portal
		6. Make sure the system architecture supports internal and external applications.	DONE – eGIS has intranet and internet servers
		7. Establish a repository of documents, resources, and guides that assist departmental GIS managers with leveraging eGIS resources.	DONE-See eGIS Services Catalog.
		8. Establish a Working Group to create use cases and best practices around ArcGIS Online	ONGOING

Objectives		Strategies and Tactics	Status/Notes
<b>3. DISSEMINATE THE COUNTY’S GIS DATA AND SERVICES AS WIDELY AS POSSIBLE</b>			
39	D. Establish LA county Enterprise GIS website	1. Create a central external entry point to county GIS	DONE -The eGIS Website handles this ( <a href="http://gis.lacounty.gov/egis">http://gis.lacounty.gov/egis</a> )
		2. Create an internal GIS site for sharing information	Coming soon
		3. Implement access control on the websites.	DONE – Part of the LA County GIS Data Portal
		4. Maintain Link(s) to GIS sites and projects of all County departments	eGIS Website – how do we keep this up to date?
		5. Maintain Link(s) to training - resources for County GIS users and professionals	eGIS Website
		6. Maintain Link(s) to data and software download locations.	eGIS Website link to the LA County GIS Data Portal
38	E. Ensure cost effectiveness of all GIS usage and solutions (e.g. - obtain least expensive license)	1. Leverage collaborative purchasing agreements where possible to achieve cost savings.	LARIAC
		2. Implement web-based GIS toolsets for Countywide use.	Latitude Geographics products. ArcGIS Online
		3. Complete ESRI Master Purchase Agreement to reduce software purchasing costs.	DONE - ESRI MPA
		4. Upgrade unused licenses instead of purchasing new licenses.	Ongoing
		5. Investigate the feasibility of an ESRI Enterprise License Agreement.	Should we do this?
35	F. Where possible, make County GIS resources available to external agencies	1. Develop a method and pricing structure for making GIS services available to external agencies where possible.	DONE- eGIS City Services
		2. Develop a monitoring mechanism for tracking external use of the County systems.	Using Geocortex Optimizer/Insight or similar software.

Objectives		Strategies and Tactics	Status/Notes
<b>4. CULTIVATE THE ADVANCED / ANALYTICAL USE OF GIS</b>			
39	A. Provide GIS training to ensure staff maintain appropriate skills and to foster advanced usage of GIS in activities	<ol style="list-style-type: none"> <li>1. Develop in-house GIS Training classes where possible</li> <li>2. Identify and provide relevant training for each GIS classification</li> <li>3. Purchase online GIS Computer Based Training for LA County Departments to share, and develop a cost sharing model.</li> <li>4. Provide ESRI training for County staff at GIS Day.</li> <li>5. Work with colleges and universities to align their GIS coursework to teach skills required by the County Departments.</li> <li>6. Provide support staff with training on custom and off the shelf applications and system functions (e.g: GIS-NET, PSRS, CAMS, PAIS, ViewLA, etc.)</li> <li>7. Encourage informal departmental GIS meetings (brown-bags) to spread GIS expertise.</li> </ol>	<p>Ongoing</p> <p>Ongoing</p> <p>eGIS does this for GISViewer, DRP for GIS-NET3 – identify other applications.</p> <p>See DPW and DPH. Get lessons learned document. Organize before eGIS Committee Meetings?</p>
39	B. Foster attendance at conferences and other outside training opportunities and resources to advance users skills	<ol style="list-style-type: none"> <li>1. Maintain list of GIS conferences and promote via email, websites, publications, and user groups.</li> <li>2. Develop language to communicate the value of conferences to management.</li> <li>3. Increase county GIS staff awareness of online GIS resources.</li> </ol>	<p>Identify steward</p> <p>ESRI has some language – place on website.</p> <p>eGIS Website, share links to online resources.</p>
43	C. Develop and maintain applications and services to simplify the advanced/analytical use of GIS	<ol style="list-style-type: none"> <li>1. Identify and develop commonly required web services for GIS application development.</li> <li>2. Develop models and procedures/scripts to automate GIS processes.</li> <li>3. Distribute and share models via ArcGIS Server or other technologies.</li> <li>4. Encourage the use of application development frameworks (APIs/SDKs/ESRI/Geocortex)</li> </ol>	<p>Use the Application Developer Working Group to find these</p> <p>Use the Internal Wordpress site.</p> <p>DONE-Preferred Technologies for GIS.</p>
51	D. Develop a GIS classification series to support the recruitment and retention of GIS expertise	<ol style="list-style-type: none"> <li>1. Work with CEO Compensation to create a single unified GIS series for countywide GIS staff.</li> <li>2. Develop supporting documents for department to justify hiring GIS staff from the GIS classification series.</li> <li>3. Develop GIS internship program and/or link to existing to county internship programs</li> <li>4. Ensure county GIS positions are promoted as widely as possible to ensure the best possible candidate pool.</li> </ol>	<p>DONE!</p> <p>Link this tactic into the creation of GIS Sections. Note item 10 in the notes.</p> <p>AIP – create a working group</p>
42	E. Pursue and evaluate new technologies and data formats to enhance GIS use-ability and value.	<ol style="list-style-type: none"> <li>1. Investigate approaches to moving to 3-D world (3D printer, 3D visualization, buildings, etc).</li> <li>2. Evaluate and integrate GIS technologies, web services, etc with different application development technologies to enable more dynamic features and capabilities (Cognos SpotOn, Qlikview, APEX, .NET, r, etc)</li> </ol>	<p>Get a grant to buy a 3D printer Create 3D models for some County Areas. What about ArcGIS Pro?</p> <p>Application Developer Working Group</p>
43		<ol style="list-style-type: none"> <li>1. Develop central GIS code base to promote re-use, sharing, efficiency, and collaboration.</li> </ol>	<p>New hub.gis.lacounty.gov site (Wordpress).</p>

Objectives	Strategies and Tactics	Status/Notes
<b>4. CULTIVATE THE ADVANCED / ANALYTICAL USE OF GIS</b>		
<p>F. Create and collect Countywide knowledge-base, geoprocessing models, code base, methods, etc (standards and procedures, tutorials, and “how-to” for certain GIS analyses and processes).</p>	<p>2. Develop cartographic and geodatabase standards (layer files, domains) and models.</p> <p>3. Maintain countywide GIS contact list that details their areas of expertise and interest to facilitate communication and sharing of knowledge and expertise.</p> <p>4. Develop tutorials and “how-to’s” for complex GIS analyses and processes</p> <p>5. Develop Countywide GIS User Groups to support informal exchange of GIS expertise (county and other agencies)</p> <p>6. Internal County Knowledge Exchange – Develop periodical “how-to” training sessions on GIS tools, data, and analysis, etc</p>	<p>Distribute .mxd,layer, representations, files that make the LA County Caches. Expand the layer loader tool?</p> <p>Ongoing - eGIS Training &amp; eGIS Website</p> <p>SoCalGIS, Regional GIS Forum, LARIAC user group</p> <p>eGIS Website – I have tips and tricks – does this work? Forums on new website.</p>
<p><b>G. Support the Countywide use of Location Analytics to improve countywide service delivery</b></p>	<p>1. Have subject matter experts from ESRI and other vendors present on different types of location analysis that can benefit County departments.</p> <p>2. Leverage Routing and Logistics to improve response time and service delivery</p> <p>3. Leverage Location Analysis to analyze the best location for new service centers – leverage expertise from the Fire department.</p> <p>4. Leverage the LARIAC LIDAR data to support advanced hydrologic modeling for storms, tsunamis, and inundation areas.</p> <p>5. Develop methods to use GIS with Big Data</p>	
<p>H. Support the Countywide use of Data Visualization tools</p>	<p>1. Investigate Tableau and other Data Visualization tools</p> <p>2. Align the data visualization with the Chief Data Officer</p> <p>3. Align with the Business Intelligence</p> <p>4. Investigate Infographic Tools</p> <p>5. Develop dashboards to support various business operations.</p>	<p>Get the RFP from York, Socrata, ArcGIS Open Data</p>

Objectives		Strategies and Tactics	Status/Notes
<b>5. RAISE THE AWARENESS OF GIS</b>			
39	A. Organize and conduct annual GIS Day event.	1. Organize and publicize annual GIS Day event.	ONGOING - Suggestion: Since we have had this for quite a few years, we could try and make this more like a conference – so more Dept. people can attend)  (Suggestion: Have Department-wide GIS Day during the GIS Week)
		2. Develop and provide special presentations to groups/agencies as requested	ONGOING
43	B. Regularly inform current and potential users of the value of GIS.	1. Write and publish articles showcasing the benefits of GIS and how it supports the County’s mission.	ArcNews, ArcUser
		2. Develop and publish case studies showing the benefits of GIS.	ONGOING - Case Studies!
		3. Publish information about GIS activities in the eGIS Website.	Done.
		4. Create “GIS Year in Review” publication and distribute to stakeholders	
		5. Publicize new applications in the eGIS Website	Develop a maintenance plan.
		6. Maintain library of resources and applications on eGIS portal.	
		7. Develop and publish GIS case studies showing the benefits of GIS.	Delete this – same as 2.
		8. Identify and present to senior level committees (i.e. TSAB, eGAC, Admin Deputies, Board Deputies) to educate members on GIS capabilities, strategies, and plans.	Try to get on the agenda.
		9. Encourage and assist County agencies to apply for productivity awards on GIS related projects.	
39	C. Coordinate/participate in regional GIS meetings and activities to maintain knowledge of GIS activities relevant to existing/future applications	1. Acquire information about GIS in other agencies around the County	Establishing the Regional GIS Forum and participate in the SoCalGIS
		2. Meet with Federal and State GIS representatives when appropriate.	Regional GIS Forum/FEMA, etc
		3. Work with other jurisdictions’ GIS staff on technical/data issues as appropriate (e.g., address points, centerlines).	CAMS/LARIAC.
		4. Monitor legislative and regulatory issues that could affect GIS.	Work with the CA GIS Council on this.
38	D. Provide training to non-GIS professionals on basic use of GIS its capabilities, and its benefits.	1. Develop “GIS 101” materials to help novice users use LA County GIS resources (e.g. why do you use GIS?)	ISD has something for the GIS Viewer – is that enough?
		2. Promote County GIS training classes for non-GIS professionals.	
		3. Develop 1 hour (“what is GIS”) training for managers and conduct regular manager trainings	Done for GIS Day 2011. Develop again for 2016.
40	E. Present papers and participate at conferences and events where they will share information with key local, regional, national audiences	1. Support participation in and travel to local, regional and national GIS conferences and events.	Develop specific language supporting conference attendance
		2. identify the key conferences in the document? Such as ESRI, CalGIS, etc	New addition per VJ.
		3. Write papers and/or make presentations at conferences.	Add these presentations to eGIS site
		4. Post papers written by county staff on websites.	eGIS Website – develop publication guidelines.
		5. Go for awards wherever possible!	

Objectives	Strategies and Tactics	Status/Notes
5. RAISE THE AWARENESS OF GIS		
43 F. Provide GIS tools for public and non-technical users.	1. Implement GIS tools on the County portal and other County department web sites.	DONE-GIS Viewer – Make a simple link to these from the LA County Portal (main County website) More Story Maps
	2. Develop and maintain a list of static maps (in electronic format) available for download and/or purchase.	Add to eGIS or Data Portal?
	3. Develop “Map-It” link for facilities to be mapped.	Should this be recreated?
	4. Develop a countywide Services Locator that supports departmental communication of services to the public.	This is a new item (overseen by the CIO and advisory committee)

Objectives	Strategies and Tactics	Status/Notes
<b>6. GEO-ENABLE DEPARTMENTAL BUSINESS PROCESSES AND APPLICATIONS.</b>		
<b>A.</b> Document and share the benefits of geo-enabling existing business processes and applications.	<ol style="list-style-type: none"> <li>1. Leverage Case Studies and Award documents (e.g. PQA) to document the benefits of GIS.</li> <li>2. Develop a methodology for determining Return on Investment (ROI) for GIS – cost savings, cost avoidance.</li> <li>3. Determine methods to track outcome measures (maps created, work requests completed, hits on websites, list projects that include maps, speed of access to data, etc.)</li> <li>4. Present the value of GIS to business stakeholders, including department heads, chief deputies, etc.</li> <li>5. Create Manager Track for GIS Day to share the benefits of GIS among managers.</li> <li>6. Partner with ESRI to meet department stakeholders to showcase the value of GIS.</li> </ol>	
<b>B.</b> Identify and prioritize departmental business processes and applications that can benefit from adding GIS capabilities.	<ol style="list-style-type: none"> <li>1. Coordinate with other County committees (EGAC, ISAB, CIO Council) to identify IT/Web initiatives that can be enhanced with GIS capabilities.</li> <li>2. Participate in departmental advisory committees as needed (selection and technical).</li> <li>3. Aid agencies in identifying workflow processes that currently do spatial analysis without the aid of GIS.</li> <li>4. Work with departmental staff to identify candidate projects and assist them in submitting proposals for funding.</li> </ol>	ITF fund could be used for this
<b>C.</b> Identify existing and new GIS tools and resources that can be used to geo-enable departmental processes and applications.	<ol style="list-style-type: none"> <li>1. Develop GIS application architecture that allows for easily integrating map services into existing Web pages.</li> <li>2. Support agency development of dynamic, interactive web maps as opposed to static maps provided the agency is taking the lead.</li> <li>3. Develop a service area locator function to support customer self service for finding service contact information.</li> <li>4. Support the implementation of address validation into business applications</li> <li>5. Involve other agency GIS and programming staff in the GIS application planning and design process.</li> <li>6. Review new technologies like ESRI Maps for office and ESRI Maps for Sharepoint to determine if they can benefit County business processes.</li> <li>7. Help departments use GIS to develop performance metrics/dashboards, and add maps to existing dashboards.</li> </ol>	
<b>D.</b> Develop new tools that have been identified as being needed integrate GIS into processes and applications.	<ol style="list-style-type: none"> <li>1. Work with departmental staff to identify small budget, high return projects</li> <li>2. Develop funding model to fund the development of these tools (ITF fund?)</li> <li>3.</li> </ol>	
<b>E.</b> Assist departments in, identifying and acquiring resources and staff to	<ol style="list-style-type: none"> <li>1. Participate in departmental advisory committees as needed (selection and technical).</li> <li>2. Assist departments in establishing GIS positions.</li> <li>3. Serve on interview panels as requested for GIS positions in other agencies.</li> </ol>	

Objectives	Strategies and Tactics	Status/Notes
<b>6. GEO-ENABLE DEPARTMENTAL BUSINESS PROCESSES AND APPLICATIONS.</b>		
implement or enhance spatial capabilities.	4. Work with County departments that are consistently using large amount of GIS project support and do not have their own GIS staff – to internalize that work and create GIS Sections that can support those projects. 5. Work with departments to ensure that work that can be done internally is not outsourced to departments.	Formerly 5.H
F. Develop Countywide policies that will support the integration of GIS into departmental business processes and applications	1. Develop standard language to incorporate into Requests for Proposal that includes maps. 2. Develop an address policy to ensure that all systems that capture addresses also validate the address and capture the coordinates for future mapping and analysis 3. Develop methods to ensure that agencies preparing proposals that include GIS related work have those proposals reviewed by GIS experts.	
G. Enable mobile access to GIS resources to support field force automation and County staff access to geospatial tools in the field.	1. Develop the business case for the benefits of mobile GIS. 2. Identify and acquire tools to support access to GIS from mobile devices 3. Ensure that web applications are mobile friendly 4. Identify tools and mechanisms for field data collection, including GIS data collection.	
H. Advocate for centralized funding for GIS infrastructure.	1. Work with the CEO to identify mechanisms for centralized funding for GIS infrastructure	



Objectives		Strategies and Tactics	Status/Notes
<b>7. SUPPORT EMERGENCY PLANNING, RESPONSE, AND RECOVERY</b>			
50	A. Develop standard operating procedures for GIS in emergency response.	1. Develop policies and procedures to provide GIS support to the County in the event of a disaster.	Ongoing-updating the NAPSG operating procedures to reflect LA County’s environment. Common Grid System (LACoFD). See section E.
		2. Develop procedures for non-emergency support departments to provide GIS expertise to LA County CEOC/Emergency Operations Bureau (EOB)/Lead Departments in times of disaster.	LACoFD would like to expand our GISS staff from outside the Department. These people would be used in our EOC and mobile sites in case of a major disaster.
		3. Develop lists of staff in each department capable of using GIS and GIS related equipment, their expertise, their work locations, and optionally their home locations (Leverage Office contact list to maintain)	Add question to DSW survey. We need to have everyone who wants to participate take the required ICS courses ASAP.
		4. Maintain master resource guide of GIS data, servers, software, and equipment countywide and at emergency response and operations locations.	OEM to manage
		5. Compile user guides and how-to documents for existing software, equipment (plotter, scanner, GPS units), and applications.	OEM to manage
		6. Train staff on Incident Command System (ICS) – for use by staff that will support emergency operations.	County Fire can assist with this.
		7. Advocate for a dedicated emergency management GIS Coordinator.	Issue is that the current coordinator is not dedicated and their scope is too limited.
51	B. Ensure availability of GIS data and resources during disasters and emergencies.	1. Identify disaster recovery locations to provide access to GIS data and resources during disasters.	LRC (Local Recovery Center), County Emergency Operations Center (CEOC). Offsite in a region not prone to earthquakes. Cloud based?
		2. Coordinate with ISD’s Disaster Recovery Section to ensure the Enterprise GIS Repository is included in their policies and procedures.	DONE
		3. Ensure that GIS software, data, services, and applications are the same version at disaster recovery locations. (Geocortex, CAMS, other web applications, license manager).	Establish data maintenance procedures
		4. Establish schedule for system replication to the disaster recovery locations.	Ongoing
		5. Test the eGIS Disaster Recovery systems to make sure that data and applications are available from the Local Recovery Center in the event of a large disaster.	Need to develop schedule.
		6. Inform Emergency GIS staff of alternate access mechanisms.	
46	C. Keep all Department Emergency Coordinators abreast of county GIS capabilities.	1. Maintain a list of Department Emergency Coordinators. 2. Schedule periodic meetings with departmental emergency coordinators to inform them of GIS capabilities in emergencies.	
43	D. Participate in Emergency Exercises and Trainings to ensure staff are up to date. On GIS resources for responding to disasters.	1. Participate in Emergency Response Exercises and Trainings, as available.	

Objectives		Strategies and Tactics	Status/Notes
<b>7. SUPPORT EMERGENCY PLANNING, RESPONSE, AND RECOVERY</b>			
42	E. Coordinate planning and response strategies with other local, state, and federal agencies	<ol style="list-style-type: none"> <li>1. Develop relationships with FEMA, Cal EMA, Federal DHS, JRIC, CEO Office of Emergency Management, Sheriff Emergency Operations Bureau, and other relevant Federal, State, Regional, or local groups.</li> </ol>	We need to have a seminar or regional meeting. Come up with a two or three day conference with all the players in the room. NAPSG as the lead? Come up with a regional strategy for the region. We will probably not be running the show in case of a large disaster. Need to do more with all of these groups.
		<ol style="list-style-type: none"> <li>2. Align GIS procedures, structures, and data with Federal and/or State Standards</li> </ol>	
40	F. Develop a Regional GIS Framework for sharing GIS resources and tools with the Emergency Response Community.	<ol style="list-style-type: none"> <li>1. Develop standardized map templates and tools</li> </ol>	*Part of ICS training (and operating procedures document)
		<ol style="list-style-type: none"> <li>2. Train emergency coordinators and Disaster Management Area Coordinators (DMACS) on how to use GIS tools (or at least GIS web resources)</li> </ol>	
	G. Identify critical emergency response systems and ensure that GIS is aligned and can support them	<ol style="list-style-type: none"> <li>1. Add GIS to with Continuity of Operations (COOP) and other Emergency apps like WebEOC and PSAP integration with GIS and LARIAC</li> </ol>	
		<ol style="list-style-type: none"> <li>2. Integrate with existing emergency departmental plans and Departmental Disaster Operations Centers (DOCs)</li> </ol>	
		<ol style="list-style-type: none"> <li>3. Support the implementation of GIS-based Computer Aided Dispatch (CAD) systems into Fire and Sheriff (e911).</li> </ol>	

LIST OF UPDATES TO THE STRATEGIC PLAN	
Original Comment/Note	Where this has been added
Addressing/CAMS We have two address updating systems (CAMS & Fire) Moving toward address points Move points onto buildings. Develop geocoder that can handle suites, apts, etc.	ADDED – 1.G
Dependent upon Thomas Brothers Grid	ADDED – 1.E.6
Need to leverage GIS at a strategic level	ADDED – This is now Strategy 6 (geo-enable departments)
We use contractors too much to do work that we can do - Parks. ?Figure out how to leverage the RRCC election assistant positions for data creation/cheap GIS folks ...?	ADDED - 6.E.5
Tim Smith had discussed routing at some point. Advanced/Analytical – add section about advanced routing/logistics into that section.	ADDED – 1.H ADDED – 4.H
Upgrades happening at a consistent pace.	ADDED - 3.B.6
Partnering with cities and other agencies.	ADDED – 1.C.6 and 3.F.1
Advocate for the creation of GIS sections in departments when necessary.	ADDED - see 6.C.4
Mobile & Field Force Automation – Mobile Workforce and Mobile GIS Create a dedicated Mobile Objective somewhere – perhaps “ensure that our GIS tools are mobile friendly and aware”	ADDED – 6.G Need to fill out.
Big Data & using GIS	ADDED – 4.H.5
Updating Assessor information for government owned parcels.	ADDED – 1.G.8
Advocate for centralized funding for GIS infrastructure.	ADDED – 6.H – should we do this?
Get a grant to have someone develop the emergency management GIS Coordinator.	ADDED – 7.A.8
Framework for Location Analysis & Analytics – perhaps get a presentation from an expert on how this works – talk to Jan Cunningham	ADDED – 4.H
Leverage Office 365 (Outlook) to create shared contacts lists.	ADDED - 4.G.3
Develop an authoritative source for County facilities/services/infrastructure, etc.	ADDED – 1.D
For item 2 – work on the procedures around maintaining uptime and notification	Exists - 2.A.4
Help departments use GIS to develop performance metrics/dashboards, etc.	ADDED – 6.C.7
Connect to the Open Data Portal	ADDED – 3.A.5
Develop a method to provide licensed and/or confidential data to contractors for County departments.	ADDED – 3.A.6
Develop a method for searching for and/or finding data layers in the eGIS Repository	ADDED - 1.C.3
Strategy 7 – identify critical emergency response systems and ensure that GIS is aligned and can support them.	ADDED – 7.I
Stress Test with staff and system	EXISTING – 2.B.4

Add GIS to with Continuity of Operations (COOP) and other Emergency apps like WebEOC and PSAP integration with GIS and LARIAC	ADDED – 7.G.1
Get new Dispatching systems into Fire and Sheriff	ADDED – 7.G.3
Integrate with existing emergency departmental plans and Departmental Disaster Operations Centers (DOCs)	ADDED – 7.G.2
Test the eGIS Disaster Recovery systems to make sure that data and applications are available from the Local Recovery Center in the event of a large disaster.	ADDED - 7.B.5
For Strategy 7 – add alignment with Federal and/or State Standards	7.E.3
Rewrite Strategy 6 – it’s a mess	DONE
Best Practices for ArcGIS Online	ADDED – 3.C.8
Develop a Single Map Grid for the County?	ADDED – 1.F.5
Identify sources for County facility and service locations (e.g. 211 LA)	Added – 1.D.2
Automatically update caches when data changes.	Added – 3.A.7
Do the “GIS Capability Maturity Model”	Added – 2.B.1
Create a US Postal Service Address Validation Service	Added – 1.G.9
Add a section for Data Visualization – e.g. adding Tableau, etc.	Added – 4.H