County of San Diego

Geographic Information Systems Technology Platform

Geospatial Strategy Document-**GeoSD**

2014-2016 Strategic Plan

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Contents

1.) ENTEPRISE GIS STRATEGIC PLAN CONTENTS - SUMMARY

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 San Diego. Using the concept of an "electronic" or digital map… GIS presents, 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. In order for the County of San Diego to continually improve its use of Geospatial technologies, the County has examined how they are currently using GIS, what they want to change, and how they will do it.

VISION

As with many technologies, GIS supports strategic missions, but is not a strategic effort by itself. GIS is a *strategic platform* that County staff use to support the County's three strategic initiatives:

Safe Communities * Sustainable Environments * Healthy Families

To support these initiatives, the County needs an enterprise approach to GIS that will optimize the efficiency and effectiveness in the use, acquisition, and dissemination of GIS data and resources. Above all, it must embrace the County *required disciplines for excellence*. GIS must be a strategic platform upon which the County builds success stories. This effort to align GIS with our County's long-term mission vision and values *is the GIS **vision statement***:

To guide the increase, effectiveness, innovation, reliability, accuracy, and value of <u>geospatial information and tools;</u> while lowering costs for the organization as a whole.

The County pushes forward towards its goals with technology as a tool, knowing that GIS does not accomplish the County's overall strategic initiatives; it makes their acquisition easier. It is a technology that supports the fundamental mission: that the County, as a government, provides services to the public and that their wellbeing – the noblest motive is the public good – is the County's bottom line.

MISSION

From the County's vision, a list of mutually desired guiding principles or design maxims have been collected:

- **Develop** mutually accepted standards, policies, and business practices; and to make them self-referential, easily understood, and supported.
- **Communicate** the value of GIS to County departments and agencies. When good things happen, tell people and popularize the success stories and allow others to leverage the knowledge.
- **Encourage** collaborative GIS efforts among internal and external organizations. Collaboration is one of the things that makes the County of San Diego great.
- **Ensure** that GIS resources are available for day-to-day operations: look for high availability IT design, maintenance, and administration approaches that are both robust and flexible.
- **Maximize** the cost-effectiveness of GIS investments. Use functional threading and economies of scale to build partnerships within region.
- **Cultivate** the advanced use of GIS. County staff must not only stay current, they must also remain well-read and agile. Not all technological avenues produce fruit forever.
- **Pursue** the innovative use of GIS and related technologies. Look for research on practical applications and use pilot studies with the technology. Move technology quickly into practical tests.
- **Integrate** GIS technologies into County business operations. Where it is appropriate and timely, use it! Don't fear change; look for obvious returns on investments.
- **Support** emergency and disaster planning, response, and recovery. If there is one thing that must be done right, it is to help people when they need it most.

These mission principles can be distilled down into 7 goals, within which there were 36 Objectives initially identified. These objectives do not represent all that the County needs to do, but they do represent the immediate needs and first most logical steps based upon expert input from an operational perspective. These goals are all are significant and not in any order of importance.

The Seven GIS Goals

1. **Create, collect, maintain, and distribute high quality, up-to-date, and complete geospatial data**
2. **Ensure that the County's GIS systems and data are available for day-to-day County/regional purposes**
3. **Share the County's GIS data and services as widely as possible**
4. **Cultivate the advanced analytical use of GIS**
5. **Raise the awareness of GIS**
6. **Assist agencies to integrate spatial technology into their business processes and applications.**
7. **Support emergency planning, response, and recovery**

2.) THE APPROACH USED

The County's design on this strategic plan was to look for simplicity in the approach. The County focused on where it was currently, where it needs to be, and what it will take to get there. This resulted in a "NOW? - WHERE? - HOW?" process. This process required the stakeholders and subject matter experts to describe their challenges with the current GIS environment – the "**NOW**". Following this, they were asked to list off all the things that they would want to change, improve, remove, modify, or create new in our current system and additionally asked them to rate the importance of these changes. This effort was the "**WHERE**" cycle, where 36 objectives were detailed, debated, refined, and adopted. Finally, all users were asked to summarize the required actions to accomplish each objective. This summary of actions process was the "**HOW**" cycle. The strategic planning committee then evaluated the risks that would prevent the objective from being accomplished, and they looked for adaptive tactics that could be used to overcome the most obvious obstacles. In addition to the basic details, where a foreseeable date of completion could be set it was included. Where the objectives had obvious relevance to the County required *disciplines for excellence*, these were cross-referenced and noted. The basics of what will be needed to accomplish each objective is summarized in the HOW section.

3.) The NOW – THE TECHNOLOGY HAS EVOLVED

GIS has Evolved

Through much of the last decade, GIS has evolved as once being solely a planning and analysis tool, to now also being considered a robust, money-saving, tactical business tool. GIS facilitates the democratic process with voter district creation for the Registrar of Voters. It is used in Health & Human Services to track evolving diseases, and it is relied upon by Office of Emergency Services and Sheriff to respond to the evolving needs of our residents during a disaster. GIS dispatches law enforcement vehicles and documents public safety and building code compliance issues. GIS tracks our Public Works road infrastructure, and it maintains and enhances the quality of the data used to create our tax base at the County Assessor's office. GIS plans our urban and rural growth as a region with the Planning and Development Services Department, and it helps us conserve precious natural resources and parks. From the GPS units tracking individual patrol cars, to the air quality sensors tracking pollutants regionally, GIS supports our regional

mandate of serving the public good. However, despite our successes, there is still room for improvement. The County currently needs to adapt more of our older business practices to use modern, more efficient and effective technologies. GIS is one of these technologies.

The County use of Technology has Evolved

As technology in general has grown, so have geospatial applications in every-day use. For example, the common applications of hand-held GPS units and smartphones have made geospatial technology available at an unprecedented low price-point. Subsequently, the number of intended and serendipitous uses of geospatial technology has grown rapidly. One of the greatest challenges with this growth is adapting existing analog and hardcopy business practices to now rely upon digital information. One significant area of use is property address locations and customer locations. The quality of this input GIS address data determines the ultimate quality of many downstream government products and services that utilize GIS. The speed at which the County can update, maintain, and disseminate GIS data is critically tied to the success of many business decisions. Subsequently, there is a need to improve our GIS basemap addressing data.

In addition to the use and reliance on the GIS data for our basemaps and input process for analytics, the actual use of the IT system itself has grown. GIS is a large user of network and hardware resources. It requires terabytes of storage to keep imagery and basemaps. It requires considerable network bandwidth to support the desktop GIS user and their connections to the GIS servers and the data warehouse information. An adequately provisioned and supported IT network is absolutely necessary for the success of an operational and strategic GIS support element within a government. There is a need to improve our IT network configuration to make our desktop GIS software faster and more efficient.

The County's Methods and Policies have Evolved

With any large technological governmental program, policies and procedures must be implemented and maintained. These protocols must be current and relevant. The governance framework for these policies must serve the business objectives of the departments using them. Policies must be uncomplicated and focused on supporting operations, but they must also ensure our confidence in the quality and the reliability of the products made with GIS. Above all, they must grow from a desire of ensuring the public good. Communicating when GIS data is being changed and updated needs to be improved. Moreover, there is a need to modernize the process of our digital exchange of data in the County of San Diego GIS data warehouse.

The County's Long Term Vision for GIS has Evolved

GIS has changed from its beginnings. It is no longer just a specialized complicated analytical tool. GIS now has broad application and utility to both complex business process, such as tracking land use or crime over space and time in a web-based dashboard, to technologically simple functions such as finding a County facility or a County park trail on a smartphone. Most County business functions have some geospatial element involved with it. Because of space and time mattering in our decisions, there is often a means to leverage geospatial technology to help change our data into information and information into knowledge and wisdom. To serve the public good, the County must make the best decisions. To make the best decisions, the County must have the best knowledge and decision support processes available to it.

To service this current need requires a strategic vision. The County reaches out towards a future where the GIS hardware and our software used in government are in a continually optimized state. The County seeks to lessen the financial and technical challenges of acquiring high quality knowledge for its decision makers. The County strives to optimize GIS process and product creation with automation and simplified governance. The County moves to a future where our geospatial technology services our immediate needs, and provides us with the GIS tools to tackle complex and seemingly intractable public problems that

loom on our horizon. The County understands that in a future of diminishing resources and increasing organizational complexity, they must use tools that allow users to make faster, better, and less expensive decisions. The County of San Diego does this - with better GIS.

4.) The WHERE – OUR CUSTOMERS' NEEDS HAVE EXPANDED

The County's has identified Changes

This strategic planning process has identified what needs to change. The process did not dwell upon whether project level details were plausible, probable, or possible. It focused on the broad vision of what it was that was really needed to change in our current system. From this vision sprang 36 objectives that are aligned with our 7 goals. These objectives range from the easily accomplishable and straight forward; to complex, organizationally challenging reformations on the use of GIS. The County asked its users not to initially rank their objectives, but rather to each have its merit and let each be discussed. In a round table format the County's GIS Strategic Plan Committee discussed, refined, debated, and polished each objective so that it was clear and tractable. At certain stages there were more than 36, and at times less. In the end 7 goals for our County of San Diego Enterprise GIS platform were created, and these goals are supported by the 36 initial objectives.

Once our strategic map of where the County needs to go was built, rankings were conducted on the objectives. Within each goal, there was voting on the objectives with an online survey tool. This voting allowed the most popular or necessary objectives to be ranked by everyone. Not surprisingly there were clear winners, some common themes, and interests that cross between the goals depending on the objectives. Address quality, enterprise system capability, continual education and training, having a core GIS staff, refining the emergency map, quality assurance systems and testing were among the top objectives.

Benefits of the Changes are present in current and future projects

Much of what a strategic vision is intended for, is to look forward and address issues that are likely to be encountered at a future date. With technology, the future is often taking shape in the present. Strategic long-term designs are often initially addressed with short-term tactical solutions: What is a minor annoyance today for prototype users will scale into a department crippling outage in the future - *if not addressed in testing*. In following these principles, many of our strategic goals have a clear present-day operational focus. The County wishes to "Make it work now for those that matter" – and to provide them a roadmap to a sustained future of successful technological uses and growth.

The County wishes to guide its customers through these Changes

The variety and scope of the 36 objectives are great. Some are easy to accomplish and others more difficult. Specifically, if all the supporting conditions are achieved in this document, some objectives will take more than a year to accomplish. Above all, they are often the means to a solution, but not always the primary solution in and of itself. The goals address critical weakness to the Enterprise GIS system in general, and the objectives address our specific needs for change. The goals and objectives are specifically designed to ensure the enterprise system's continued success and growth – by ensuring our customers' continued success and growth. For example, where the objectives suggest training and workshops for line staff, the authors seek to promote the County's IT IQ in GIS and support necessary

disciplines for excellence in the County. Where the objectives recommend improvements in GIS infrastructure, they do so because they foresee future dependencies on GIS where critical shortfalls can be avoided with GIS system improvements in capacity, scalability, and design. The goals are our principles to strive for, the objectives are the specific waypoints on the journey.

5.) The HOW – THE COUNTY WILL EXECUTE THE OBJECTIVES

The Objectives

The list of the 36 objectives are effectively a list of projects and tasks that must be accomplished, or continually maintained, as necessary business functions in order for the goals to be accomplished. They are not owned by any one group as a whole, but are detailed to have specific departmental or group leads individually. Each objective has details on its required actions, risks, tentative timelines, adaptive tactics, and status. The list is both a list of desired strategic endpoints, as well as a continuing report on our status with them as they are accomplished. It is presumed that GIS projects should be scoped in relation to the GIS strategic plan, and that when it comes time to research, promote, prepare, fund, resource, and eventually celebrate a project's success, it can be done in the perspective of an accomplishment on the strategic plan's mission.

The creation of an objective can be seen as a long term and continuing process. The County has begun with 36 objectives, but they expect more will be added. The initial timeline in this plan is to look at a two year period for these objectives to be accomplished in, but it is an ongoing and evolving register of objectives. A semi-annual review will be scheduled to evaluate the progress on these objectives, and consider what new objectives need to be added. The objectives will be grouped into a road map that is live and available in the County's GIS SharePoint site. This tool will show the links and timing of objectives.

Above all, each time a GIS project and application is evaluated for County use; the first question should be, "How does it relate to the COSD Geospatial Strategic Document?" The following lists are the 36 objectives organized by their 7 goals. They are not in order of importance, but within each goal the objectives are ranked. These objectives all have designated leads that may span multiple groups and departments. These groups designated as leads in the objectives on following pages are:

- ARCC – Assessor Recorder County Clerk
- CFA – County Fire Authority
- County GIS – Office of the County GIS Manager
- CTO – County Technology Office
- DPW – Department of Public Works
- DPR – Department of Parks and Recreation
- HHSA – Health and Human Services Agency
- HHSA (CWS) – Child Welfare Services
- HHSA (EMS) – Emergency Medical Services
- HHSA (OBI) - Office of Business Intelligence
- HP – Hewlett Packard (Outsourced County IT Contractor)
- LUEG Exec – Land Use and Environment Group Executive Office of the DCAO
- LUEG-GIS – Land Use and Environment Group - Geographical Information Service
- OES – Office of Emergency Services
- PDS – Planning and Development Services
- ROV – Registrar of Voters
- SanGIS – San Diego Geographic Information Source (JPA)
- Sheriff (Data Services)– San Diego Sheriff's Office Data Services
- Sheriff (Geofile Office) - San Diego Sheriff's Office Public Safety CAD, MSAG for 911 and CENS

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The Executive Steering Committee (Alphabetical Order):

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The Steering Committee (Alphabetical Order):

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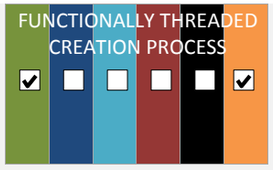
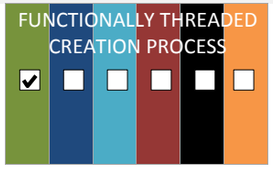
The County GIS Manager and Project manager for GeoSD
Ross Paul Martin

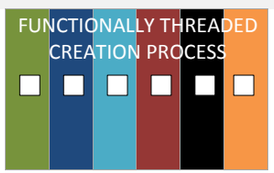
The Objectives

Functional Threading Chart and Benefits

Benefits

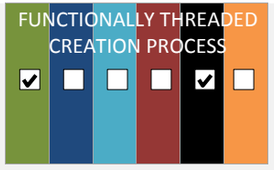
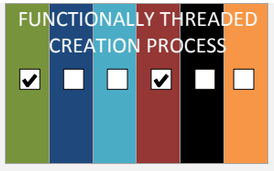
Goals/Obj 1 1 Objective ID 1 Description	Adopt a County of San Diego address standard and document the address correction life-cycle. (Goal 1)	 Addresses affect all customer processes. Having them standardized, comparable, and testable between business units is critical if we are to move towards a customer relations management solution. General Services would save considerable money if the postal service certifies their bulk mailing rate.
Goals/Obj 1 2 Objective ID 2 Description	Develop a plan for resuming the previous user group meetings on a regular basis. (Goals 1, 3, and 4)	 GIS Users will create a GIS market place for ideas and the sharing of information. Directly supports a skilled adaptable workforce.
Goals/Obj 1 3 Objective ID 3 Description	Develop and implement a quality assurance mechanism to test and ensure that GIS data follows standards and that the metadata is complete and accurate (Goal 1)	 Metadata (information about data) is important to document the GIS data's origins, limitations, and appropriate applications. This is a shared goal for quality control and process improvement. SanGIS needs this information to be maintained by the data's authors so that the public can understand it.
Goals/Obj 1 4 Objective ID 4 Description	To have one comprehensive vegetation model that covers the entire County, that also is in line with the State. (Goal 1)	 A current vegetation model is required for regulatory purposes with MSCP and resource conservation. The existing model using the Holland code is no longer accepted by the State of California.
Goals/Obj 1 5 Objective ID 5 Description	To have asset management fully in place. To have every asset (Parks, DPW, etc.) in GIS and integrated into an enterprise system (Goal 1)	 Management Controls Initiatives (MCI) requires assets management to determine the County liabilities. GASB 51 reporting standards now require more accurate accounting of the assets we own. These asset GIS data will feed the asset management system and make reporting and tracking of costs, maintenance, and locations of assets easier.

Functional Threading Chart and Benefits

		Benefits
Goals/Obj 1 6 Objective ID 6 Description	Develop and adopt a standard for how GIS data is collected, how often it is collected or renewed, and how it is distributed (Goal 1)	 The idea of a data lifecycle is important to ensure reliability an quality of the data and avoid redundancy. This objective will publish a maintenance schedule and lifecycle describing how the County owned data will be maintained.
Goals/Obj 1 7 Objective ID 7 Description	Have a comprehensive metadata tool for everyday GIS users that describe the basics of the layer (e.g., the “Meta-cube”) (Goal 1)	 The existing FDGC metadata format is robust but not friendly to someone not familiar to GIS software. We will leverage existing metadata and its maintenance process and deliver a simplified "at a glance" description of the data and its origins. It is intended to be used with customer orientated web applications and services. One click from a mapping app, should give you the basic information about a GIS layer.
Goals/Obj 1 8 Objective ID 8 Description	Establish governance practices for Enterprise GIS Data and ArcGIS Services Management (Goal 1, 3, 4, and 6)	 Part of an Enterprise approach is shared governance. Users of the County's IT system are expected to coordinate activities, share costs, and derive benefits from the geospatial program. To effectively do this, the program must be administered with a steering committee or board whose members are drawn from the stakeholders also benefiting from the program.
Goals/Obj 2 1 Objective ID 9 Description	Develop or refine digital map products that are file-based maps, but that also allow direct hyperlinks to services, so that people who don’t map or use desktop GIS, can view and interact with map file documents and jump out to the services. (Goal 2)	 This simple technique, technology, and solution will further the utility of hardcopy maps and products. Links or codes that can be scanned and directly linked to online versions. This approach can be used by one department or all departments, depending on need.
Goals/Obj 2 2 Objective ID 10 Description	Develop a robust enterprise GIS infrastructure to support all County online services. (Goal 2)	 The new enterprise GIS system will be able to accommodate the load of the enterprise systems dependant upon GIS. Faster more reliable systems mean greater productivity from staff.

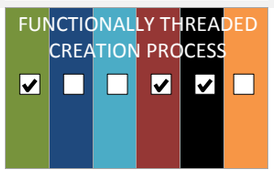
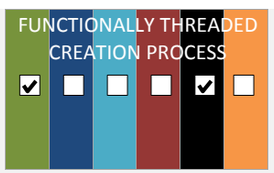
Functional Threading Chart and Benefits

Benefits

Goals/Obj 2 3 Objective ID 11 Description	Take ownership and the responsibility of day forward updates of the parcel layer (which currently resides with SanGIS) (Goal 2 and 6).	 There are redundant efforts to maintain both a CAD based tax parcel map and a GIS based tax parcel map. By moving towards a GIS tax parcel map in the ARCC office, this effort will save money and improve the timeliness of the information that is in the land base and tax parcels.
Goals/Obj 2 4 Objective ID 12 Description	Ensure that the adopted architecture and design for the COSD Enterprise GIS system is sufficient to support robust mobile applications and mobile technology (Goals 2, 4, and 7)	 Phone apps are the technology of today, but mobility is the technology of tomorrow. The County must support users outside of an office setting and more associated with multiple work; with this, mobile GIS will be a requirement. Customers will expect more frequent and diverse information to be returned from the field via computers. The architecture to support this workstyle is necessary.
Goals/Obj 2 5 Objective ID 13 Description	Develop GIS software and SDE performance standards. Implement a performance review mechanism or script to ensure that all of the County's GIS users have access to an effective GIS platform that meets those minimum standards. (Goals 2, 3, and 6)	 To manage something you must be able to monitor it. This objective will enable the monitoring of the of the County GIS Users desktop software and their backend enterprise servers and systems.
Goals/Obj 2 6 Objective ID 14 Description	Create a self-service mapping infrastructure such as ArcGIS Online or ArcGIS Portal™. (Goal 2)	 This will allow the sheriff's network to create GIS data and products and share them easily among their users, but with robust security.
Goals/Obj 3 1 Objective ID 15 Description	Establish comparable pricing for data and maps (fee-based data) throughout the County. (Goal 3)	 Currently there is a disparity amoung costs for GIS products within the county, this objective allows public customers to pay the same price for a similar GIS product throughout the County.
Goals/Obj 3 2 Objective ID 16 Description	Provide an online web mapping & query system that entry-level users can use to query and extract GIS data from our COSD GIS Data Warehouse (Goal 3)	 GIS users can extract data from the GIS data system without needing extensive knowledge of the data or where to find it.

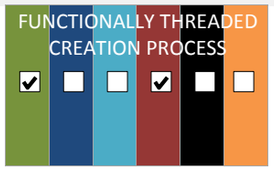
Functional Threading Chart and Benefits

Benefits

Goals/Obj 4 1 Objective ID 17 Description	Pursue and evaluate new technologies and data formats to enhance GIS use-ability and value throughout the County. Would include applications, usages, cloud, and mobile GIS. Publish for County departmental use (e.g., ArcGIS Collector Maps). (Goal 4)	 This objective will eliminate researching the same information or solutions by different users in isolation, by using functional threading.
Goals/Obj 4 2 Objective ID 18 Description	Develop a system for training and continuous learning for County GIS users using a training plan, orientation materials, and in-person resources such as regular hands-on educational workshops to share new skills. (Goal 4, 5, and 6)	 Training that is purchased from consultants is very expensive and not always specific to our governmental and technological situations. This training would have an almost immediate ROI based upon the costs of the training from ESRI. Many more County GIS users would benefit.
Goals/Obj 4 3 Objective ID 19 Description	Incorporate geospatial data into emergency planning, response, and recovery activities. (Goal 4 and 7)	 During disasters, simpler technology is best because of the stress and strain of limited time to respond and the urgency of action. This technology approach will be the most user friendly for first responders. We will be able to clearly communicate the geographic story of an evolving event to the public with the least amount of technological effort.
Goals/Obj 4 4 Objective ID 20 Description	Investigate process for incorporating more GIS data from the field and sensors. Use real-time geographic information to visualize and coordinate multi-agency emergency response through a common operational picture (Goal 4 and 7)	 The ability to answer questions with data and information feeds that we already own, but do not have in a single place or framework. Weather stations, traffic cameras, county fleet vehicle tracking, road sensors, air pollution sensors, etc., we have many of these but we don't incorporated them into a GIS viewer. If we did we could use them on our desktops to answer questions in real time.
Goals/Obj 4 5 Objective ID 21 Description	Enable better access to technical assistance from contracted GIS vendors and suppliers. (Goal 4)	 More users will have a smooth transition between County assistance, HP assistance, and eventually ESRI assistance (if needed). We need to have a workflow that identifies a path to resolve trouble with GIS software. A workflow that is built for users not fully aware of the issue resolution process.

Functional Threading Chart and Benefits

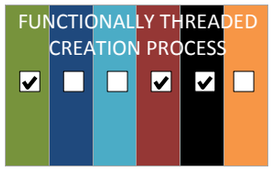
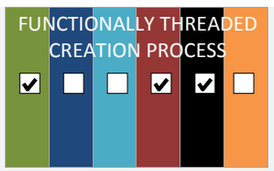
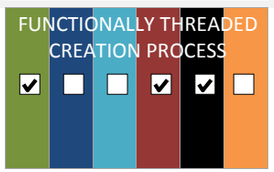
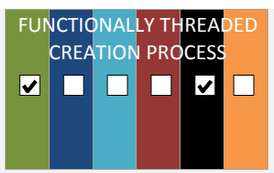
Benefits

Goals/Obj 4 6 Objective ID 22 Description	Access to training for advanced GIS, such as in a workshop setting, rather than a tutorial. (Goal 4)	 In order to have the best of classes IT/GIS systems, we will need the best of class staff using them. This master class series will allow advanced GIS users to interact with highly experienced staff in a seminar format. The outcome will be sharing knowledge on complex subjects with the Socratic method. This will build knowledge workers.
Goals/Obj 4 7 Objective ID 23 Description	Learn more about what our internal and external customers need in terms of information. Research what map and advanced analytical tools can we serve up on the web that will keep our customers out of the office and armed with the information they need. For PDS, use a public site that would provide the customer with a pre-application packet of information and simple maps. Arm them with "watch-out situations" based upon their proposed project and geographic location. (Goal 4)	 Expert systems have been used for decades to support decisions. This customer service tool will help potential land use applicants to be more aware of the potential regulatory issues associated with a give geography or regulated activity.
Goals/Obj 4 8 Objective ID 24 Description	Write a mobile or field-based GPS data collection white paper. (Goal 4 and 6)	 County GPS users will be armed with a best practices paper. Enable GPS users and buyers to better differentiate what is a good method for spatial data collection, versus what is a vendor suggested method that is aligned with their sales of proprietary equipment.
Goals/Obj 5 1 Objective ID 25 Description	Collaboration platform: Participate in a statewide/countywide GIS outreach program to promote communication, GIS knowledge, collaboration, sharing of resources, contacts etc. Should include membership of County agencies with current or planned use of GIS technology. (Goal 5)	 This objective builds upon professional development and networks. Membership participation with agencies like SDRGC, CGIA, CCISDA, URISA allows for valuable information sharing. CCISDA is a great opportunity in that they are much more interested in GIS now.
Goals/Obj 5 2 Objective ID 26 Description	Workshops and focused trainings on the use of applications we provide as well as use of commercially available apps and hardware. Offer short workshops that are highly focused. These don't necessarily have to be highly technical. Often when people are employing spatial technologies, they don't know it, and it is for personal/recreational purposes, e.g., Google Earth. The exposure to these technologies allows them to realize an opportunity to apply in their job. (Goal 5)	 Some users that are not experts in the GIS technology are still interested in its products or a specific operational application. This workshop format would enable general staff exposure to these projects. We will share our success stories for functional threading.

Functional Threading Chart and Benefits

		Benefits
Goals/Obj 5 3 Objective ID 27 Description	Convert current Assessor cadastral mapping staff to GIS staff through education. (Goal 5)	With this objective the County will modernize staff training model to current technology standards. Necessary to move toward a GIS based cadastral tax map.
Goals/Obj 6 1 Objective ID 28 Description	For larger planning projects, to have standard AGO apps (and perhaps 3D visualization) showing more community integration information (Goal 6)	This objective will lower costs associate with researching demographic information about a community, Immediate savings possible. Objective will create a standard representation of land use as a digital map available to the public. Improved transparency and applicability of GIS products to planning.
Goals/Obj 6 2 Objective ID 29 Description	Job shadowing. Embed GIS staff with subject-matter expert staff, so they can better learn their process, and from that glean business needs. It is not enough to just ask a SME what their business needs are. (Goal 6)	The best tools are built by individuals that fully understand their customer needs. This process will improve LUEG-GIS staff understanding of how operations work where GIS products are applied. Process can be scaled into any department using GIS.
Goals/Obj 6 3 Objective ID 30 Description	Develop a core GIS support staff to support County mapping and GIS services. (Goal 6)	Better integration of GIS Enterprise business process with regular IT Governance of County business.
Goals/Obj 6 4 Objective ID 31 Description	To move from paper presentation graphics to more digital presentation graphics that can be marked up in meetings, Board meetings, and PC hearings (Goal 6)	Objective expected to reduced or limited the number of transfers between digital to physical media and back. Modern interface with data allows for more current information to be use in planning meetings. Good for the environment reducing the use of printed materials.
Goals/Obj 6 5 Objective ID 32 Description	Convert the Assessor's nearly 30,000 parcel maps from raster and AutoCAD maps to GIS maps. (Goal 6)	Objective will improve the ARCC cadastral tax map product by converting thousands of unique maps into a single parcel fabric that is GIS data. Overall ease of maintenance of the parcels books will be improved.

Functional Threading Chart and Benefits

		Benefits
Goals/Obj 7 1 Objective ID 33 Description	Refine the Emergency Map to be a source of high quality, up-to-date, and complete emergency response and recovery geospatial data. (Goal 7)	 GIS edit process for OES duty staff will be simplified. Mapping interface used during disasters will be improved. This objective will create a better map and look for additional add-in details that can be gathered from sensors and crowd-sourced information.
Goals/Obj 7 2 Objective ID 34 Description	Use mobile technology, mapping apps, and key spatial data (medical/health and other) for emergency/disaster support in real time. (Goal 7).	 This objective will assess the need for mobile GIS tools and apps. It will look at current implementations and future operational needs/trends and suggest technological strategies.
Goals/Obj 7 3 Objective ID 35 Description	Participate in GIS-focused disaster drills or workshops. (Goal 7).	 We must training in the same manner in which we expect to respond to a disaster. More specifically, every day operations need to be maintained and augmented into emergency operations. The improved SOP that comes from this will seek to leverage the current technologies were are using into the GIS emrgency response functions so that they remain current and relevant.
Goals/Obj 7 4 Objective ID 36 Description	Create a batch geocoding service for the purpose of emergency notification systems. (Goal 7)	 911 dispatch for the sheriff's geofile office currently relies on AT&T data. These data often need corrections for geocoding since they do not include zipcodes. An automated process will improve the quality of results and reduce the effort that is currently spent correcting data with scripts and by hand.

Goals and their Objectives

Goal 1 — Create, collect, maintain, and distribute high quality, up-to-date, and complete geospatial data

Objective 1

Rank 4.5

Required Discipline: 7 4 8 2 (More Related — Less Related)

Description **Adopt a County of San Diego address standard and document the address correction life-cycle. (Goal 1)**

Lead: ARCC / SanGIS / ROV / Sheriff (Geofile Office)

Actions An agreement needs to be made with the Assessor to look at standardizing the data in the Situs values in the parcel base, according to an address standard.

Risks Master Data Management (MDM) projects previously described address standards in relation to enterprise CRM. This can complicate the simple adoption of a data standard in preparation of CRM/MDM.

Adaptive Tactics Ensure Assessor and County Address Registrar for the County are well-informed of address corrections and methods.

Status: Wish List

Planned Completion Date: 6/30/2016

Percent Complete: 0

The County needs to adopt something like the FGDC address standard as the County's address standard.

Medium Term Objective

ID# 1

☑ Enterprise Consideration

Recommendation: Enterprise Policy Change Necessary

Objective 2

Rank 3.17

Required Discipline: 5 7 1 6 (More Related — Less Related)

Description **Develop a plan for resuming the previous user group meetings on a regular basis. (Goals 1, 3, and 4)**

Lead: HHSA (CWS)

Actions Utilize an online meeting place, the use of the existing COSD GIS forum can be leveraged as an online user group. Users will modify it to make information and resources more easily found. A dedicated staff person will take this on.

Risks GIS user apathy and low attendance is often associated with these events.

Adaptive Tactics Empower COSD users to make changes in COSD GIS SharePoint Site. Enable some funding for a dedicated staff person to conduct 2 meetings and gather user input on what makes the site more useable.

Status: Wish List

Planned Completion Date: 6/30/2016

Percent Complete: 0

Short Term Objective

ID# 2

☐ Enterprise Consideration

Recommendation: No Enterprise Effects

Objective **3**

Description **Develop and implement a quality assurance mechanism to test and ensure that GIS data follows standards and that the metadata is complete and accurate (Goal 1)**

Lead LUEG-GIS / HP

Rank 4.17

Required Discipline

7	3	8	1

More Related — Less Related

Actions We will update the ADR-Gx script. We will work with SanGIS to test the metadata. We will make changes at the metadata source and use this in the applications or metacube. Assign County group or SANGIS as data stewards for each feature class.

Risks Script can test for the presence of the information, but not the quality. This will need some independent testing by a human. Perhaps 133 hours per year to read the entire catalog one time and then 20 hours thereafter.

Adaptive Tactics Work will be done with crowdsourcing quality control. By allowing the actual metadata to be used in mapping applications, we will be able to verify the quality with multiple staff reading it often.

Status Budgeted and Planned

Planned Completion Date 4/30/2014

Percent Complete 20%

Implement a testing script on the COSD Data Warehouse that checks for metadata. Ensure that 98% of the COSD data warehouse data has metadata. Expose metadata to scrutiny through web-enabled services.

Short Term Objective

ID# **3**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **4**

Description **To have one comprehensive vegetation model that covers the entire County, that also is in line with the State. (Goal 1)**

Lead PDS / DPR / SANDAG

Rank 2.58

Required Discipline

3	4	7	8

More Related — Less Related

Actions Assemble a set of biologists to assess the eastern portion of San Diego County and format data using imagery and expert guidance.

Risks Cost to assess current vegetation model could be high. Requiring consultants and customers to adhere to using a new standard could be difficult.

Adaptive Tactics Work with SANDAG and be aware of funding opportunities to collaborate with them. Keith Grier is the lead at SANDAG.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 40%

The western portion of the County has been completed.

Short Term Objective

ID# **4**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **5**

Description **To have asset management fully in place. To have every asset (Parks, DPW, etc.) in GIS and integrated into an enterprise system (Goal 1)**

Lead PDS / DPW / DPR

Actions Inventory known sources of asset data, compile attributes necessary for assets, collect those that are missing, and import into asset management system.

Rank 3.25

Required Discipline

3	2	7	8

More Related — Less Related

Risks Not having assets inventoried can be a legal and public safety issue. Costs to populate an inventory could be prohibitive. Lessons from Hanson not understood.

Adaptive Tactics Ensure the data quality in the GIS is as high as possible before it goes into the system. Ensure the feedback mechanism for corrections is easily understood.

Status Budgeted and Planned

Planned Completion Date 6/30/2016

Percent Complete 20%

The County is in the process of selecting an enterprise asset management software.

Medium Term Objective

ID# **5**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **6**

Description **Develop and adopt a standard for how GIS data is collected, how often it is collected or renewed, and how it is distributed (Goal 1)**

Lead HHSA (CWS)

Actions Identify the data and where it is stored; decide on time frames for updating the data; identify who would have access to what data. Each group/dept. must identify public vs. protected datasets; each group assigns stewards to outline their data lifecycle.

Rank 4

Required Discipline

6	3	7	4

More Related — Less Related

Risks There could be data where the source is unknown. Deciding where the data will be stored (i.e. online repository, SharePoint, etc.), so that all users have access to the data.

Adaptive Tactics Perhaps existing policies can be used in conjunction with this objective.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Short Term Objective

ID# **6**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **7**

Description **Have a comprehensive metadata tool for everyday GIS users that describe the basics of the layer (e.g., the "Meta-cube") (Goal 1)**

Lead PDS / DPW

Actions A new and final version needs to be build with a clear HTML exposed output that can be linked directly to Silverlight mapping application layers.

Risks Lack of awareness of the service may make the utility of the database limited.

Adaptive Tactics Popularize in Enterprise group and then adapt in the most popular applications by default. Users will come to expect it, and departments that are building apps will ask for it.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 20%

Preliminary data was created. End users need to be able to find information about layers with no previous knowledge of GIS or the layers.

Rank **4.08**

Required Discipline

6	8	7	3

More Related — Less Related

Short Term Objective

ID# **7**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **8**

Description **Establish governance practices for Enterprise GIS Data and ArcGIS Services Management (Goal 1, 3, 4, and 6)**

Lead LUEG Exec / County GIS

Actions Establish life-cycle mgmt. for all data and services; establish change mgmt. process (training, awareness building) for all data and services; establish standards of use for data and services.

Risks Committee could cause an elongated governance and management processes.

Adaptive Tactics Establishment of a management committee similar to CTO management committees for Documentum and SharePoint that will feed up through the IT governance process.

Status In Work

Planned Completion Date 3/31/2015

Percent Complete 0

Rank **3.75**

Required Discipline

4	6	7	8

More Related — Less Related

Medium Term Objective

ID# **8**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Goal 2 Ensure that the County's GIS systems and data are available for day-to-day County/Regional purposes

Objective **1**

Description **Develop or refine digital map products that are file-based maps, but that also allow direct hyperlinks to services, so that people who don't map or use desktop GIS, can view and interact with map file documents and jump out to the services. (Goal 2)**

Lead HHSA

Rank 3.5

Required Discipline: 7 1 5 8 (More Related — Less Related)

Actions The idea is that static map files, such as a PDF, could be built with links in them that would open up to a web mapping application and an additional data link that would add value to the static map.

Risks Lack of resources & staff to create this type of product. End users (non-GIS people) might need training.

Adaptive Tactics The use of hyperlinks and QR Smart tags and ArcGIS Online has been, and is being done, by County departments. We can popularize the success of this.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

This may go along with an online query system. Research is needed into other governments that have done this.

Short Term Objective

ID# **9**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **2**

Description **Develop a robust enterprise GIS infrastructure to support all County online services. (Goal 2)**

Lead LUEG Exec / County GIS

Rank 4.5

Required Discipline: 3 7 2 8 (More Related — Less Related)

Actions The LUEG-Exec office has sponsored the "Enterprise GIS Rebuild" for our system. The new hardware and software will provide a much improved infrastructure for enterprise applications such as BCMS, IPTS, Asset management, etc.

Risks Desktop users do not have an adequate connection speed to SDE because of network latency.

Adaptive Tactics We are looking at Steelhead 1360 EX and Granite 2.5 network accelerators on Riverbed technology.

Status In Work

Planned Completion Date 5/31/2014

Percent Complete 60%

This is part of project WR-11123

Long Term Objective

ID# **10**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **3**

Description **Take ownership and the responsibility of day forward updates of the parcel layer (which currently resides with SanGIS) (Goal 2 and 6).**

Lead ARCC / County GIS / SanGIS

Actions Develop an action plan which identifies the contributions and desired benefits of each shareholder.

Rank **3.42**

Required Discipline

2	5	7	4

More Related — Less Related

Risks Difficulty of technical hand off and/or joint edit environment. We need to fully communicate the entire land base is not moving.

Adaptive Tactics Ensure the right staff are involved. What internal resources can help us achieve our goals; LUEG-GIS, PDS, SANGIS, etc.? What external resources can help us achieve our goals; Sidwell, ESRI, etc.?

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

This objective will need to review the current parcel GIS mapping data. Identify issues, cleanup, and correct current maps and mapping data to avoid compounding errors through the conversion process to GIS. Projected start date 01/01/2016

Medium Term Objective

ID# **11**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Objective **4**

Description **Ensure that the adopted architecture and design for the COSD Enterprise GIS system is sufficient to support robust mobile applications and mobile technology (Goals 2, 4, and 7)**

Lead LUEG Exec / County GIS

Actions WR-11123 was planned, funded, and is now in work. It will provide for mobile apps with its service capability. Build a PA-ID for mobile GIS applications. Design a robust UAT process that includes user performance testing; ID enterprise staff for leads.

Rank **3.83**

Required Discipline

7	3	4	1

More Related — Less Related

Risks Lack of recurring funding at the enterprise level and engagement from the enterprise architecture group.

Adaptive Tactics Ensure the GIS architecture and strategy is routinely reviewed at the new IT governance strategic meeting for funding and direction approaches.

Status In Work

Planned Completion Date 5/30/2014

Percent Complete 40%

Medium Term Objective

ID# **12**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Objective **5**

Description **Develop GIS software and SDE performance standards. Implement a performance review mechanism or script to ensure that all of the County's GIS users have access to an effective GIS platform that meets those minimum standards. (Goals 2, 3, and 6)**

Lead HHSA (OBI)

Rank 4.67

Required Discipline

5	1	7	8

More Related — Less Related

Actions The existing ArcGIS desktop software platform has been difficult to manage as an MSI. Define MASLs; manage HP/ITO to MASLs; system needs to out perform user's needs define those performance needs in project.

Risks MASLs are meaningless if they are routinely violated. The system must only refer to MASLs as a last-resort solution to amend or mitigate a chronic issue. It cannot be the primary means of contract movement.

Adaptive Tactics Create dashboards with logs to produce the evidence of performance. Leverage the existing dashboard in SharePoint.

Status Budgeted and Planned

Planned Completion Date 6/30/2016

Percent Complete 0

Short Term Objective

ID# **13**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **6**

Description **Create a self-service mapping infrastructure such as ArcGIS Online or ArcGIS Portal™. (Goal 2)**

Lead Sheriff (Data Services) / County GIS

Rank 3.67

Required Discipline

1	8	3	7

More Related — Less Related

Actions ArcGIS Online has been implemented , however the Portal has not. Portal is a stand-alone device-based software that works in networks that are separated from the internet and therefore (highly secure).

Risks ArcGIS Portal implementation may require considerable resources to implement in a secure network.

Adaptive Tactics Use of ArcGIS Online for Organizations in the Sheriffs net can work as a near-term replacement. Portal is designed for a highly secure network without internet access.

Status In Work

Planned Completion Date 6/30/2016

Percent Complete 20%

Short Term Objective

ID# **14**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Goal 3 Share the County's GIS data and services as widely as possible

Objective 1

Rank 3.08

Required Discipline

6	1	2	4

More Related — Less Related

Short Term Objective

ID# 15

Description **Establish comparable pricing for data and maps (fee-based data) throughout the County. (Goal 3)**

Lead ROV / County GIS

Actions Adopt a County-wide fee schedule for departments participating, for administrative approval.

Risks Must avoid potential conflicts with the California Public Records Act. Careful compliance and transparency is required.

Adaptive Tactics Generate stats of costs and generated services per County departments.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Research map and data pricing throughout the County for comparable pricing.

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective 2

Rank 3.85

Required Discipline

8	5	3	7

More Related — Less Related

Medium Term Objective

ID# 16

Description **Provide an online web mapping & query system that entry-level users can use to query and extract GIS data from our COSD GIS Data Warehouse (Goal 3)**

Lead HHSA (EMS) / County GIS

Actions Review existing applications to identify what can/cannot be done (and time/work required.) Identify who can develop the system, who will support the application, and who will supply data; look at mapping app update for HHSA.

Risks May require dedicated staff and considerable maintenance. If multiple groups need multiple systems, it could take considerable resources. Security is also an issue.

Adaptive Tactics Current adaptation within EMS/CHSU is to rely on static maps. This is also true for some other units which have GIS users, but not GIS tool developers. Look to other successful departments.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

We currently provide maps/reports for general use, and to fill data requests. This system would help in it.

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Goal 4 Cultivate the Advanced / Analytical Use of GIS

Objective 1

Description **Pursue and evaluate new technologies and data formats to enhance GIS use-ability and value throughout the County. Would include applications, usages, cloud, and mobile GIS. Publish for County departmental use (e.g., ArcGIS Collector Maps). (Goal 4)**

Lead ROV / County GIS

Actions Create structure in GIS SharePoint for information research sharing and postings. Create a GIS Web Mapping/Services/Online working group that meets specifically to discuss and test scenario uses. Create as a Enterprise Group product or review.

Risks GIS staff may not post findings or research or have time to participate.

Adaptive Tactics Communications will need to clearly specify what others are doing and promote functional threading of subjects.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Use SharePoint for white papers or information regarding research on new technologies and data formats in GIS.

Rank 4

Required Discipline

7	5	4	8

More Related — Less Related

Short Term Objective

ID# **17**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective 2

Description **Develop a system for training and continuous learning for County GIS users using a training plan, orientation materials, and in-person resources such as regular hands-on educational workshops to share new skills. (Goal 4, 5, and 6)**

Lead LUEG-GIS

Actions Perform an enterprise needs assessment ; identify GIS use cases; identify short-term and long-term training goals for each use case; assign lead, and support staff, with accountability for completing this project; develop/design content; set schedule.

Risks Red tape for the training can be excessive. Time to create curriculum is expensive and not shared by multiple departments.

Adaptive Tactics Look for OTO monies to sponsor the creation of training that is available to all County GIS users. Conduct user feedback meetings to gather interests and needs. Work with DHR.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Rank 4.42

Required Discipline

5	7	4	1

More Related — Less Related

Medium Term Objective

ID# **18**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **3**

Description **Incorporate geospatial data into emergency planning, response, and recovery activities. (Goal 4 and 7)**

Lead OES

Rank 4.33

Required Discipline

4	3	7	8

More Related — Less Related

Actions This objective began with SanMAPS and has been extended with SD Emergency Site Map. It needs to come to fruition with the ArcGIS Online site tools being made available for OES to modify the emergency data from their web browsers during the disaster.

Risks Technology could change, requiring us to adopt a different toolset, other than Silverlight Geocortex and ArcGIS Online (AGO). Users may not wish to change to new toolset.

Adaptive Tactics Train users in the AGO and Silverlight web map tools and involve them in the development process of future tools. Change is the only thing we can expect now.

Status In Work

Planned Completion Date 5/30/2014

Percent Complete 0

Medium Term Objective

ID# **19**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **4**

Description **Investigate process for incorporating more GIS data from the field and sensors. Use real-time geographic information to visualize and coordinate multi-agency emergency response through a common operational picture (Goal 4 and 7)**

Lead Sheriff (Data Services) / OES / CFA / County GIS

Rank 3.83

Required Discipline

7	3	4	8

More Related — Less Related

Actions Potential to use AVL or sensor data from field, such as weather stations, shot spotters, etc.

Risks Perception of privacy issues. Field sensors often mean cameras.

Adaptive Tactics If the public safety case is made and individual privacy is preserved, there are rarely objections to using sensors to keep the public safe and well-informed.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Short Term Objective

ID# **20**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **5**

Description **Enable better access to technical assistance from contracted GIS vendors and suppliers. (Goal 4)**

Lead County GIS

Actions Conduct a needs assessment; ACTION 1: Create documentation when to call HP Help Desk and what information to provide, when to solicit the assistance of core enterprise GIS staff, when to use the GIS discussion board.

Risks ESRI contract costs

Adaptive Tactics If there was increased use of the SharePoint forum (or use of some other venue), we might be better equipped to help each other.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Only a few people have access at the moment, and it is not efficient for getting technical assistance. There is also no good way to contact other GIS people within COSD for help.

Rank **3.75**

Required Discipline

1	5	7	8

More Related — Less Related

Short Term Objective

ID# **21**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **6**

Description **Access to training for advanced GIS, such as in a workshop setting, rather than a tutorial. (Goal 4)**

Lead HHSA (EMS) / County GIS

Actions Conduct a focus group or meeting to find out what is needed, and how broadly are those needs. Use seminars to help more GIS users become GIS technical people who can build tools, databases, mapping systems. Create master classes. Use case studies.

Risks Cost. Number of participants for any particular training might be small.

Adaptive Tactics Current use of training / tutorials is available. Would it be possible to identify certain GIS-technical staff to answer questions? Work with DHR.

Status Budgeted and Planned

Planned Completion Date 6/30/2016

Percent Complete 0

Current tutorials/online classes are good, but working with a live person would be a welcome addition. It can be really hard to find technical assistance.

Rank **3.67**

Required Discipline

5	7	1	8

More Related — Less Related

Medium Term Objective

ID# **22**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **7**

Description **Learn more about what our internal and external customers need in terms of information. Research what map and advanced analytical tools can we serve up on the web that will keep our customers out of the office and armed with the information they need. For PDS, use a public site that would provide the customer with a pre-application packet of information and simple maps. Arm them with "watch-out situations" based upon their proposed project and geographic location. (Goal 4)**

Lead LUEG-GIS

Rank 3.83

Required Discipline

1	2	4	7

More Related — Less Related

Actions Perhaps similar to the CEQA exemptions area data that was once developed. Identify users, both internal and external, assess needs and use cases and how expert information is used.

Risks Cost to develop the site or to automate a process.

Adaptive Tactics Reach out to the technical leads within a group or those charged with leading process improvement efforts.

Status Budgeted and Planned

Planned Completion Date 6/30/2014

Percent Complete 20%

Worked with PDS Process Improvement Team. Identified a report appropriate for automation. Possibly move from an internal staff task, to a publicly available automated report, thus retiring associated staff costs. HHSA woud like to functionally thread

Short Term Objective

ID# **23**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **8**

Description **Write a mobile or field-based GPS data collection white paper. (Goal 4 and 6)**

Lead County GIS/DPW (Field Surveys)

Rank 2.67

Required Discipline

5	7	1	8

More Related — Less Related

Actions Publish a County-wide GPS informational that describes what type of devices are suited for specific data collection applications: a best practices guide.

Risks Technology changes so fast that there is no utility in adopting hardware standards.

Adaptive Tactics Awareness of the accuracy and precision capabilities of a device in relation to the intended use of the data will inform the user on what device to implement. Expert feedback from regular GIS/GPS practitioners is advisable.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Most (90%) GIS data does not need to be survey grade data.

Short Term Objective

ID# **24**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Goal 5 Raise the Awareness of GIS

Objective **1**

Description **Collaboration platform: Participate in a statewide/countywide GIS outreach program to promote communication, GIS knowledge, collaboration, sharing of resources, contacts etc. Should include membership of County agencies with current or planned use of GIS technology. (Goal 5)**

Lead ROV / County GIS

Actions Implement software to create open communication, collaboration, gather and share GIS information, opportunities, etc.; look at State or USGS forums and exchanges.

Risks GIS staff may not be interested or have time to participate.

Adaptive Tactics Contact all County and statewide GIS Staff for contact information and importance of participation.

Rank **3.33**

Required Discipline

4	5	7	6

More Related — Less Related

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

To reach out to other County agencies, including statewide GIS staff to create potential contacts, and participation. Example: http://cgia.org/cgia-collaboration/regional-gis-collaboratives/map-of-collaboratives-and-county-contacts/

Short Term Objective

ID# **25**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **2**

Description **Workshops and focused trainings on the use of applications we provide as well as use of commercially available apps and hardware. Offer short workshops that are highly focused. These don't necessarily have to be highly technical. Often when people are employing spatial technologies, they don't know it, and it is for personal/recreational purposes, e.g., Google Earth. The exposure to these technologies allows them to realize an opportunity to apply in their job. (Goal 5)**

Lead LUEG-GIS

Rank 3.67

Required Discipline

5	7	8	4

More Related — Less Related

Actions Create training slide decks that are accessible for staff to work on independently. Create generalized training to attract entry-level audience.

Risks Limited time, staff availability. Develop trainings and set aside time, but staff do not show.

Adaptive Tactics Hold a drop-in session, same time and day at some appropriate frequency so that staff become used to you being there to answer questions or walk them through a process. Hold train-the-trainer classes.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Held several general and business-focused trainings with PDS and DPW staff. Holding smaller and even one-on-one trainings with some groups/departments.

Short Term Objective

ID# **26**

☑ Enterprise Consideration

Recommendation Existing Policies Adequate

Objective **3**

Description **Convert current Assessor cadastral mapping staff to GIS staff through education. (Goal 5)**

Lead ARCC / County GIS

Rank 3

Required Discipline

7	5	3	4

More Related — Less Related

Actions Work with HR to determine appropriate job classifications for staff (perform job study) and change classifications/job specs as needed. Job specs will need to be updated.

Risks How do we handle those that do not welcome the "Big Change"? Is a re-class necessary? Need to work with Human Resources.

Adaptive Tactics Identify personnel with motivation and capacity for learning GIS and focus education on those individuals.

Status Wish List

Planned Completion Date 12/31/2016

Percent Complete 0

Educate staff. Identify educational needs of current staff in the area of GIS. Enroll staff in formal education classes (community college for example), and informal in-house classes.

Long Term Objective

ID# **27**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Goal 6 Assist agencies to integrate spatial technology into their business processes and applications

Objective 1

Rank 2.92

Required Discipline

1	7	6	4

More Related — Less Related

Description **For larger planning projects, to have standard AGO apps (and perhaps 3D visualization) showing more community integration information (Goal 6)**

Lead PDS

Actions Obtain Community Analyst; show use of AGO; document what works; refine business needs and products from GIS for meetings, formulate templates for presentation; fix IT issues w/mobility.

Risks AGO has limitations

Adaptive Tactics Keep minds open to other competing formats and sources of information. Census GIS data may be available to also support mission.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 60%

We've started this initiative by obtaining Community Analyst. HHSA would like to functionally thread.

Short Term Objective

ID# 28

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective 2

Rank 3.08

Required Discipline

5	7	8	1

More Related — Less Related

Description **Job shadowing. Embed GIS staff with subject-matter expert staff, so they can better learn their process, and from that glean business needs. It is not enough to just ask a SME what their business needs are. (Goal 6)**

Lead LUEG-GIS

Actions Reach out to front-line managers (mid-level managers).

Risks Limited time available for training with SME.

Adaptive Tactics Ask managers about how best to engage with their staff. Attend their staff meetings regularly. Identify individuals who can champion process improvement approaches. Identify someone to be a technical liaison.

Status Budgeted and Planned

Planned Completion Date 6/30/2016

Percent Complete 0

Short Term Objective

ID# 29

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **3**

Description **Develop a core GIS support staff to support County mapping and GIS services. (Goal 6)**

Lead LUEG-Exec / CTO

Rank 4.08

Required Discipline

5	7	1	4

More Related — Less Related

Actions This needs to be a critical function of the GIS management committee under the new IT governance model. We need to make a recommendation that GIS becomes a part of the overall IT governance meeting. The ITGG and Enterprise GIS needs to adopt the above.

Risks Lack of support from internal departments outsourcing work and using external consultants on GIS projects where LUEG-GIS is the most logical fit.

Adaptive Tactics This needs to be a critical function of the GIS management committee under the new IT governance model. We need to make a recommendation that GIS becomes a part of the overall IT governance meeting.

Status

Planned Completion Date 8/18/2014

Percent Complete 0

This was started with creating the LUEG-GIS Service in PDS. It has grown and become very successful. HHSA would like to functionally thread.

Short Term Objective

ID# **30**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Objective **4**

Description **To move from paper presentation graphics to more digital presentation graphics that can be marked up in meetings, Board meetings, and PC hearings (Goal 6)**

Lead PDS

Rank 3.17

Required Discipline

1	6	7	4

More Related — Less Related

Actions Research regarding smart board-type of technology, price necessary components, research GIS compatibilities, and promote to management. Conduct trial support and actual support for Planning Commission work. Document what works.

Risks Resistance to technology and change as a standard response. The cost to keep and maintain such technology. Having monitors/tablets and smart boards installed could be cost prohibitive.

Adaptive Tactics Demonstrate success stories. Have users want it by seeing others use it with ease.

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 20%

Short Term Objective

ID# **31**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **5**

Description **Convert the Assessor's nearly 30,000 parcel maps from raster and AutoCAD maps to GIS maps. (Goal 6)**

Lead ARCC

Actions Establish business rules to govern the conversion of current mapping data elements.

Risks Some obscure old map elements, notes and miscellaneous information may be omitted in the conversion process.

Adaptive Tactics Establish priorities of what is most important to limit data loss of critical information.

Rank **3.42**

Required Discipline

7	5	3	4

More Related — Less Related

Status Wish List

Planned Completion Date 6/30/2018

Percent Complete 0

This will be a multi-year project to be accomplished using day forward and back file approaches to conversion. Running AutoCAD/GIS parallel for the interim period. Projected start date 01/01/2016.

Long Term Objective

ID# **32**

☑ Enterprise Consideration

Recommendation Enterprise Policy Change Necessary

Goal 7 Support Emergency Planning, Response, and Recovery

Objective 1

Description **Refine the Emergency Map to be a source of high quality, up-to-date, and complete emergency response and recovery geospatial data. (Goal 7)**

Lead OES / LUEG-GIS

Actions Build an edit process that is easy for OES duty staff to update the ArcGIS Online SD Emergency map. Update SanMAPS to Silverlight. Look to incorporate more automated and crowd-sourced datasets.

Rank 4.75

Required Discipline

3	7	5	4

More Related — Less Related

Risks Not supporting the technology so that it has 24/7/365 support and reliability. This is not an inexpensive proposition.

Adaptive Tactics Communicate the limitations of the technology as we encounter them. Leverage as much of the native HP infrastructure as we can, so that contract support and MASLs apply to equipment we own.

Status In Work

Planned Completion Date 3/30/2014

Percent Complete 60%

HHSA would like to functionally thread.

Short Term Objective

ID# **33**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective 2

Description **Use mobile technology, mapping apps, and key spatial data (medical/health and other) for emergency/disaster support in real time. (Goal 7).**

Lead HHSA (EMS) / County GIS

Actions Identify what items people have, and how they use them, to see whether this is really an issue.

Rank 4

Required Discipline

4	7	8	3

More Related — Less Related

Risks Expense. Some technology might need a lot of maintenance or upgrades. Might be outdated quickly.

Adaptive Tactics This is something that can be pursued by a department. But if there is a group of Emergency GIS people, would it make sense to have a standard package of items, devices & apps available to them?

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Not everyone has mobile devices.

Short Term Objective

ID# **34**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **3**

Description **Participate in GIS-focused disaster drills or workshops. (Goal 7).**

Lead HHSA (EMS) / PDS/ OES

Actions This task is underway with HHSA and LUEG-GIS to update and maintain the GIS SOP and refine the Emergency GIS response to the EOC when needed. SONGS power plant drill was conducted 09/18/2013 with GIS staff present.

Risks Funding for GIS staff participation is an issue. Often problems or organizational issues are solved during the disaster.

Adaptive Tactics Ask for funding to build a curriculum for 1 workshop / training. Conduct this training and continue using it in subsequent years. Provide simple info about resources, trouble-shooting (accessing a license or SDE) for use prior to &

Status In Work

Planned Completion Date 6/18/2014

Percent Complete 20%

Recommendations about staff participation in the SONGS drill expected and refinements to be delivered to OES.

Rank 4

Required Discipline

5	7	6	4

More Related — Less Related

Short Term Objective

ID# **35**

☐ Enterprise Consideration

Recommendation No Enterprise Effects

Objective **4**

Description **Create a batch geocoding service for the purpose of emergency notification systems. (Goal 7)**

Lead Sheriff (Data Services) / HP / LUEG-GIS

Actions Automate custom locator creation process, publish it as batch geocoding service.

Risks Changes in either extract or base reference data may cause lower success rates. AT&T data does not include zip codes so for geocoding purposes a custom area attribute based on law enforcement beats has been defined in

Adaptive Tactics An adaptive tactic we can employ to minimize the risks would be to also automate the reference data creation process, which consists of two regularly maintained feature classes and is joined by the line overlay tool

Status Wish List

Planned Completion Date 6/30/2016

Percent Complete 0

Existing batch geocode is being upgraded to 10.1 code and XML backend process

Rank 4.25

Required Discipline

8	3	7	2

More Related — Less Related

Short Term Objective

ID# **36**

☐ Enterprise Consideration

Recommendation No Enterprise Effects