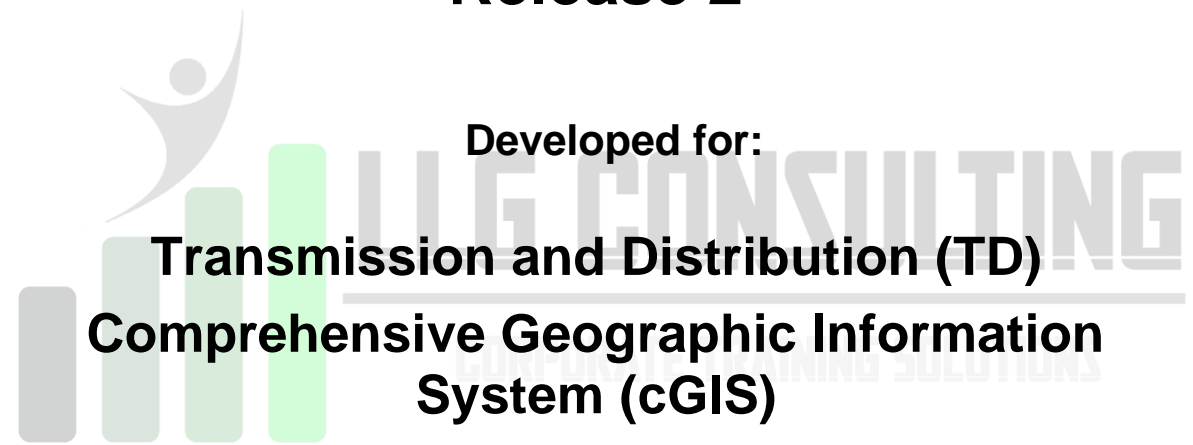


# **Geospatial Landbase Maintenance Training Needs Analysis Release 2**

Developed for:



**Transmission and Distribution (TD)  
Comprehensive Geographic Information  
System (cGIS)**

Date

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**4.0**

## Document Control

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1.0	6/2/16	<i>Initial Input</i>
2.0	6/14/16	<i>Added additional document content, updates to Audience, Training Strategies and Delivery.</i>
3.0	6/30/16	<i>Incorporate project team edits</i>
4.0	7/6/16	<i>Ready for 2<sup>nd</sup> review. Additional content will be added when dates are finalized by stakeholders.</i>



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# 1 Introduction

This Training Needs Assessment (TNA) provides a summary of the documentation and training analysis conducted for phase 2 of the T&D Comprehensive GIS project. This document provides specific details for the Geospatial Landbase Maintenance group under Real Properties within the Engineering and Tech Services (E&TS) Organization. This document is a work in progress and will continue to be updated as information becomes available. This section provides the background and purpose of the report. Section 2 describes the approach used to conduct the analysis, and Section 3 summarizes the findings and recommendations for updating and/or creating documentation and training courses. Section 4 describes the approach for project planning identifying resources, roles and responsibilities, deliverables and milestones. Finally, Section 5 documents the TNA approval required to proceed with updating and creating training materials, delivery of end-user training per outlined training strategy.

## 1.1 Background

The purpose of the TNA is to present the phase 2 documentation and training requirements for the Geospatial Landbase Maintenance organization outlining approach to update current GIS documentation, create new documentation, update current training courses, and in some cases, create new training courses. The following topics are presented:

- Current Release 1 (R1) GIS documentation that requires updating
- New GIS documentation that is required as a result of the implementation
- New functionality that requires training
- Training audiences
- Training development staff approach
- Technical writing staff approach
- Training materials review cycle and approval guidelines
- Training logistics and implementation guidelines

## 2 Approach

This section provides the approach used by GIS Training and Deployment to analyze training requirements for GIS Phase 2. This section presents the following topics:

- Gap analysis
- Training and document analysis
- Training media selection
- Design and development assumptions

## 2.1 GAP Analysis

During the planning and analysis phase, the cGIS project teamed with respective process owners to conduct a gap activity that identified the areas of business that are changing as a result of the implementation of GIS.

- AutoCAD Map 3D 2014 is the new tool that will be used to maintain GIS data. Base Mapping and Support Users were trained during R1 but will require additional training. Landbase functionality was designated for Release 2 (R2) and users will need to be trained in new functionality and processes.
- Workflow manager is a new process and tool that will be used to manage work. Base Mapping users were trained during R1 but will require additional training. A dashboard will be created and is run in the background through SAP Business Process Management (BPM) model. Users will need to be trained on new processes and functionality.
- Change Detection Tool (CDT) is a new tool that will be used to detect differences between Michael Baker (MB) Landbase and SCE Landbase. This tool will be used to compare data, see results, aggregate by geography and report out to a spreadsheet file report.
- GeoView is the tool used to view GIS data in a webviewer. Landbase Mapping and Support are current users of this tool. This tool will be new to additional landbase users and will be trained through Web Based Training (WBT).
- Standard operating procedures will need to be updated to support new functionality and tools. Implementation of Release 2 of GIS will change how the Geospatial Landbase Maintenance organization executes their work. New processes and procedures need to be updated to reflect changes.

The Organization Change Management (OCM) Team will log the changes and the impacts to the business. Once logged, the project team will identify the impacts of each change to decide the best approach to mitigate the impacts of these changes.

**Note that a detailed GAP Analysis document outlining the changes and impacts will be created and delivered once all business procedures have been documented and process flows approved. This deliverable will provide input into the training deliverables. (Placeholder Appendix A).**

## 2.2 Training and Documentation Analysis

This analysis involves focusing on the change and impacts affecting the Geospatial Landbase Maintenance Organization. The cGIS project team conducted shadowing sessions in GO3 to observe current day-to-day activities and review Geospatial Landbase Maintenance department procedures and training materials. Users shadowed included long term mappers and new mappers. This effort involved the following categories:

- People: Have all potential GIS users within the Geospatial Landbase Maintenance Organization been identified? What is their skill level?
- Existing Training Materials: What training materials can be leveraged or need updating from R1 deployment (AutoCAD Map 3D, Workflow Manager, GeoViewer). What new materials need to be created (Workflow Manager, Change Detection Tool, GeoViewer)?

## 2.3 Media Selection and Timing

This activity involved verifying the instructional media for cGIS training and estimating the time to train each topic, taking into consideration the following attributes:

- Training content and strategies – the media selected for training must be appropriate for the course goals and training tasks.
- Training audience – the media must be appropriate for the audience, and accommodate learning styles and trainee availability.
- Training locations – the ability to distribute training to central location is a factor.
- Training resources – the availability of training support resources influences media options.
- Cost/time constraints – media options may be limited by budget/development time restrictions

## 2.4 Design and Development Assumptions

Estimates for Geospatial Landbase Maintenance cGIS training design and development were based on the following assumptions:

- Users have completed AutoCAD Map 3D prerequisite and Release 1 training. Users are proficient in navigating, searching, filtering and creating data within AutoCAD Map 3D and require no initial basic training.
- Change Detection Tool is a new course and requires design and development. OJT materials will need to be created.
- AutoCAD Map 3D and Workflow Manager course materials can be modified from R1 with additional content specific to landbase maintenance users.
- GeoViewer Release 1 quick reference materials can be reused or modified if necessary.

# 3 Findings and Recommendations

This section documents the results of the Training & Documentation training analysis. It includes the recommended training solution for Geospatial Landbase Maintenance department, which provides optimum instructional methods and media that conform to identified media constraints, schedule limitations, and available personnel and resources.

## 3.1 End User Training Findings

The cGIS project team reviewed the findings from the Geospatial Landbase Maintenance shadowing sessions. The majority of users received trained during Release 1 and will not require any prerequisite training prior to end user training. Training will be conducted as On-The-Job Training (OJT) for landbase and asset mapping users. The remaining Real Property users will receive training through Web Based (WBT) for Geo View.

## 3.2 Documentation Findings

cGIS documentation currently fits into one or more of the following categories:

- Business Process Flows
- Quick Reference Cards (QRCs)
- Instructor Guide
- Participant Guide

- Training Materials (presentations, Web Ex)

Detailed document descriptions are listed in the following sections.

### 3.2.1 Business Process Flows

The business process flows are created in Visio. The cGIS project team collaborated with process owners and SMEs to develop and validate the processes. The process flows will be referenced for establishing and updating Geospatial Landbase Maintenance department process and procedure documentation, and will be incorporated in the instructor led training (ILT). The process flows will be accessible through the portal on the BP&TI cGIS Project Web Page under resources.

### 3.2.2 Quick Reference Cards (QRCs)

Release 1 QRCs will be leveraged for Release 2. The QRCs will be updated to reflect any changes from Release 1 and created to document new functionality. The QRCs are developed in Microsoft Word and converted to Adobe PDF format. QRCs will be included and distributed during instructor led classroom training and will also be accessible through the portal on the BP&TI Project Web Page under resources.

### 3.2.3 Instructor Guide

The Instructor Guide will be created by the Instructional Designer (ID) with collaboration and review by the SME and Stakeholder for their training audiences. This guide is a word document used by the instructor to teach the class. The instructor guide contains the following:

- Checklists of necessary materials and equipment
- Instructions for facilitating each activity
- Optional approaches to some activities
- Debriefs and transitions to help you move the class through the material smoothly
- Icons that highlight the actions to take and include references to corresponding reference guide and skill practice guide

### 3.2.4 Participant Guide

The Participant Guide will be created by the Instructional Designer. It serves as an on-the-job reference guide as well as a learning tool. The participant guide contains:

- Step by step procedures for activities
- New terms and definitions

### 3.2.5 Training Materials

Additional training materials will also be created to support the above referenced documents. These materials include but are not limited to:

- PowerPoint Presentations
- Training Data for the training environment to be used during classroom activities
- Narrations for WebEx recordings

These materials will be created by the Instructional Designer, cGIS Project Team Members, and Business SMEs.

### 3.3 Target Training Audience

Training and Deployment identified 4 audiences for training. Table 3.1 provides an overview of each audience's characteristics. The audience characteristics shaped the recommended training solutions and affected the selection of delivery method.

**Table 3.1 – Summary of Audience Characteristics**

Target Audience	Characteristics
Base Mapping – Tech Specs & Supervisor	Users who will be responsible for performing; creating, editing and maintaining data functions. The Tech Specs have been identified as users of AutoCAD Map 3D, Workflow Manager, Change Detection Tool, and Geo Viewer (Web Viewer).
Landbase Mapping – Tech Specs & Manager	Users who will be responsible for performing analysis, creating, editing maintaining survey maps have been identified as of Web Viewer. A portion of these users will be participants in a class designed for landbase maintenance using AutoCAD Map 3D.
Valuation, Rights Analysis – Tech Specs, LSA's, Analysts, Managers & Supervisors	Users who will be responsible for performing analysis. These users have been identified as users Geo Viewer (Web Viewer).
GEDM	Users who will be responsible for performing; creating, editing and maintaining asset data functions. The Tech Specs have been identified as users of AutoCAD Map 3D, Workflow Manager, and Geo Viewer (Web Viewer).

### 3.4 Training Delivery

A preliminary training schedule for training will be provided in Appendix B once deployment has been finalized.

### 3.5 Training Tasks

The Training Task Worksheet will be provided by T&D Instructional Designer containing a list of tasks identified for each audience.

### 3.6 Course Outline

Geospatial Landbase Maintenance organization's Tech Specs who will be responsible for maintaining Landbase GIS data will receive OJT prior to Release 2 of GIS Landbase deployment. The training will focus on the work scenarios specific the Change Detection Tool and new functionality specific to Landbase Maintenance in AutoCAD Map 3D and Workflow Manager to the employee's daily work.

A majority of their training will focus on the Change Detection Tool to prepare users for the transition of ownership from Cyient to SCE.

Preliminary course outlines for the classroom training and WebEx sessions are provided. **Note that a detailed course outline will be provided in the Design Document.**



### 3.7 Training Strategies and Deliverables

**Table 3.2 – Recommended End-User Training Strategies and Deliverables for GIS**

Audience	Tool	Media	Training Strategy	Deliverables
SMEs	Train-The-Trainer-Facilitation	ILT	24 Hours to train SMEs how to facilitate classroom training by building a foundation, understanding adult learning styles, facilitation skills, practicing facilitation and providing feedback. (Hours per SME)	Participant Guide
SMEs	Train-The-Trainer-Course Materials	ILT	80 Hours to train SMEs how to effectively use the course materials (Instructor & Participant Guides, SPW). Instructional Designer will walk SMEs through materials and classroom activities. SMEs will then deliver the class to other SMEs and GIS project team members to validate course understanding prior to delivering end-user training. (Hours per SME)	Course Materials
Base Mapping & Support Landbase Mapping Tech Specs	AutoCAD Map 3D BMS – Tech Specs & LM – Tech Specs (2)	ILT	16 hours: 8 hours for Map 3D functionality training incorporating 8 hours on business and maintenance process changes.	Instructor Guide Participant Guide Job Aids Presentation
	Workflow Manager BMS – Tech Specs & LM Tech Specs (2)	ILT	8 hours for Workflow Manager Training.	Instructor Guide Participant Guide Job Aids Presentation
	Change Detection Tool BMS – Tech Specs & LM – Tech Specs (2)	ILT	16 hours for Change Detection Tool Training.	Instructor Guide Participant Guide Job Aids Presentation
	Geo Viewer Web Viewer	WBT	Web Based Training. Topics include: Navigation, Query and View, Export and Print.	Job Aids
GEDM	AutoCAD Map 3D	ILT	16 hours: 8 hours for Map 3D functionality training incorporating 8 hours on business and maintenance process changes.	Instructor Guide Participant Guide Job Aids Presentation
	Workflow Manager	ILT	8 hours for Workflow Manager Training.	Instructor Guide Participant Guide Job Aids

Audience	Tool	Media	Training Strategy	Deliverables
				Presentation
	Geo Viewer Web Viewer	WBT	Web Based Training. Topics include: Navigation, Query and View, Export and Print.	Job Aids
Valuation, Rights Analysis, Survey, Geospatial Analysis	Geo Viewer Web Viewer	WBT	Web Based Training. Topics include: Navigation, Query and View, Export and Print.	Job Aids
Supervisors	Change Detection Tool (Release 3)	ILT	16 Hours for Change Detection Tool Training.	Instructor Guide Participant Guide Job Aids Presentation
	Geo Viewer Web Viewer	WBT	Web Based Training. Topics include: Navigation, Query and View, Export and Print.	Job Aids

### 3.8 Training Locations

The OJT training will be conducted in the following locations:

- AutoCAD Map 3D RCRO
- Workflow Manager RCRO
- Change Detection Tool RCRO
- Map Guide (Web Viewer) Online training (Pre-recorded Web Ex)

### 3.9 Design and Development Hours

For a detailed analysis of each course design and development estimate, the instructional designer will need to work with the respective SMEs and cGIS R2 Landbase Lead to determine the level of effort for each course.

The following assumptions have been made at this higher level of analysis:

- Instructional designers will develop a detailed Landbase design document providing course overview, program structure and module content outline.
- Instructional designers will design, develop and reproduce material for train-the-trainer and regular end-user courses.

- Instructional designers and R2 Landbase Project Lead will coordinate with TD Training and appropriate IT personnel for training logistics and scheduling.
- Stakeholders will provide qualified SMEs and reviewers for training materials, process updates, in addition to qualified stand-up trainers to lead training sessions.

**Table 3.6 – Design and Development Hours**

**Note:** These hours will be revised once deployment has been finalized.

ISD Phase	Release 2 Estimated Hours by Resource		
	Inst. Designer	SMEs	cGIS Project Team
Design (5/18/14 – 8/26/14) Learning Objectives, knowledge assessments, exercises, presentations			
Development (8/14/14 – 9/12/14)			
Implementation (7/18/14 – 10/7/14)			
<b>Total Hours</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>

## 4 Project Planning Information

Planning information for cGIS training design and development is described in this section. It details activities performed by team members and preliminary delivery milestones.

### 4.1 Resources and Responsibilities

Table 4.1 provides a summary of the resources/roles required to design and develop training for cGIS. It also includes a description of the responsibilities for each resource, organized by training activity.

**Table 4.1 – Design and Development Resources and Responsibilities**

Resource	Role	Responsibilities
<i>Daniel Gomez</i> <i>Chuck Coker</i>	Stakeholder	<p><b>Course Design</b></p> <ul style="list-style-type: none"> <li>• Provide input to support development of training goals and objectives</li> </ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• Identify qualified instructors</li> <li>• Confirm number of training sessions by location</li> <li>• Coordinate selection and notification of training participants</li> </ul>
<i>Ernesto Raygoza</i> <i>Jose Isturiz</i> <i>Ryan Waddell</i> <i>Tim Lowry</i> <i>Charles Thomas</i>	Subject Matter Experts	<p><b>Course Design</b></p> <ul style="list-style-type: none"> <li>• Assist with development of training goals and objectives</li> <li>• Participate in design activities; including course structure and organization, media assignments,</li> <li>• Conduct reviews of course design</li> <li>• Review and approve Design Document and</li> </ul>

Resource	Role	Responsibilities
		<p>Training Materials</p> <p><b>Course Development</b></p> <ul style="list-style-type: none"> <li>• Provide technical content for training materials</li> <li>• Help Instructional Designer (ID) integrate business process requirements into training materials</li> <li>• Provide scenario content used as the basis for hands-on activities and practice exercises</li> <li>• Conduct reviews of training materials and provide feedback and/or change recommendations</li> </ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• Coordinate selection and notification of training participants</li> <li>• Assist with coordination of training</li> <li>• Deliver Training</li> </ul>
Mario Guerrero	cGIS Project Team Member	<p><b>Course Design</b></p> <ul style="list-style-type: none"> <li>• Assist in design activities when necessary.</li> </ul> <p><b>Course Development</b></p> <ul style="list-style-type: none"> <li>• Assist in development of training materials when necessary</li> <li>• Assist in development of training data for course exercises.</li> <li>• Conduct reviews of training materials and provide feedback and/or change recommendations</li> </ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• Support post implementation activities (Lab, job aids, onsite)</li> </ul>
TDBU Training	Lead Instructional Designer	<p><b>Course Design</b></p> <ul style="list-style-type: none"> <li>• Participate in design activities; including course structure and organization, media assignments,</li> <li>• Conduct QC reviews of course design</li> <li>• Develop Design Document</li> </ul> <p><b>Course Development</b></p> <ul style="list-style-type: none"> <li>• Develop training materials</li> <li>• Conduct QC reviews of training materials</li> <li>• Perform development activities to adhere to the approved processes, formats and deliverables</li> <li>• Develop training data for course exercises.</li> </ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• Support scheduling of events</li> </ul>
Denise Geary	R2 Landbase cGIS Project Lead	<p><b>Project Management</b></p> <ul style="list-style-type: none"> <li>• Develop and maintain Project Plan</li> <li>• Schedule and coordinate design and development meetings with Stakeholder and SMEs</li> </ul>

Resource	Role	Responsibilities
		<ul style="list-style-type: none"> <li>• Provide Status Reports to Stakeholder</li> <li>• Supervise Instructional Designers assigned to project</li> <li>• Conduct quality control (QC) reviews of all design and development products</li> </ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"> <li>• Identify Deployment support requirements for training implementation</li> <li>• Support training activities</li> <li>• Support activities to select and notify training participants</li> <li>• Support activities to develop training environment</li> </ul>
TBD	IT Resource	<ul style="list-style-type: none"> <li>• Coordinate installation of software and other applications</li> <li>• Assist post implementation activities</li> </ul>

## 4.2 Deliverables and Milestones

Training deliverables and preliminary delivery dates are provided in Table 4.2, which lists each product, the date the draft will be submitted to the Stakeholder and SMEs for review, and the date the final product will be delivered for approval. Preliminary milestone dates are subject to change, dependent upon availability of the Process Owner and SMEs for input, reviews, and approval. Training Materials development and implementation milestones will be updated at the completion of course design to reflect changes in the scope of training and confirmed training dates.

**Table 4.2 – Design and Development Deliverables and Milestones**

Deliverables	Preliminary Milestones	
	Draft	Final
Course Outline	7/9/16	7/16/16
Design Document	8/7/16	8/13/16
Participant Guide - Update to current materials	8/14/16	9/19/16
Instructor Guide – Update to current materials	8/14/16	9/23/16
Training Materials Ready	9/23/16	9/24/16
* Corresponds to the date that classroom and WebEx materials will be ready for the training dry run.		

## 5 Training Analysis Approval

The undersigned approve this Training Analysis Report, including findings and recommendations, resources and responsibilities, and deliverables and preliminary delivery dates. Training and Deployment is authorized to proceed to course design.

### Business Advisor

---

Janine Lynch

(Date)

### Stakeholder

---

Joe Goizueta

(Date)

---

Daniel Gomez

(Date)

### Subject Matter Experts

---

Ernesto Raygoza

(Date)

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Jose Isturiz

(Date)

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Ryan Waddell

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Charles Thomas

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Timothy Lowry

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### T&D Training

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Kevin Hwang, T&D Training Manager

(Date)

### Program Management

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Paul Joseph, IT Program Manager

(Date)

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Vasumathi Madhavan, IT Program Manager

(Date)

### Project Management

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Denise Geary, IT Project Manager

(Date)

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Rob Raman, IT Project Manager

(Date)



## Appendix A: Change Impact GAP Analysis

The Change Impact GAP Analysis cannot be completed until the detailed process flows are completed. Detailing the process flows activity is scheduled to start in April and will conclude in September. Once this activity has been completed OCM team will log the changes and impacts to the business. This deliverable will provide the following:

- Content for test scripts
- Content for training materials
- Resource requirements





## Appendix B: Training Schedule

### End User Training:

The area below will provide a preliminary end user training schedule. A formal training schedule will be provided once deployment has been finalized.

