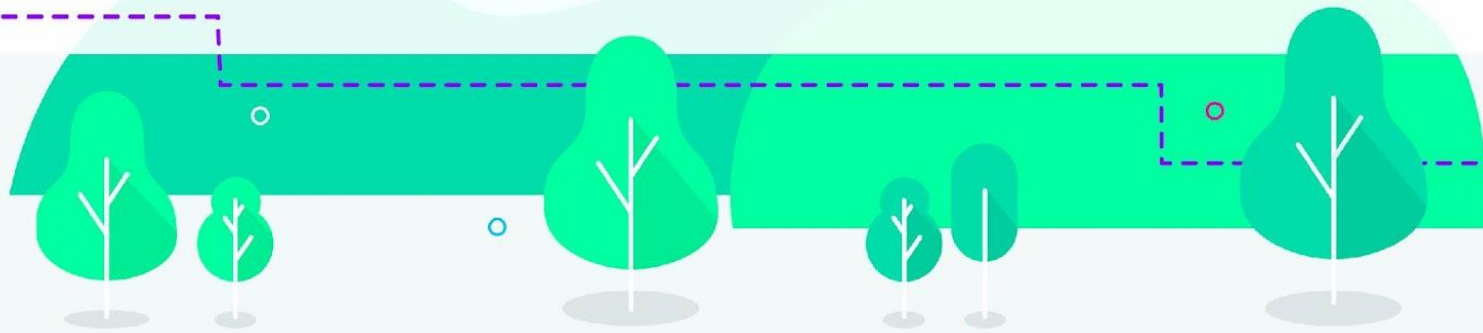




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**EDUCATION: FEBRUARY 26-29, 2024**

**EXHIBITION: FEBRUARY 27-29, 2024**

Orange County Convention Center  
Orlando, Florida, USA



# How Southern California Edison Is Reducing Wildfire Risk With Unified Lidar Analytics & Automations



**Deloitte.**



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# Agenda

## **01** SCE's Business Need

## **02** Unified Analytics Solution

Remote Sensing Capabilities Overview

Centralized Cloud

Digital Model & Vegetation Clearance Analysis

Vegetation Field Operations

## **03** What's Next





***RITESH KAPUR***

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A photograph of two women with curly hair, seen from behind, holding hands in a field at sunset. They are wearing white jumpsuits. The background is a soft, golden glow from the setting sun, with some blurred structures in the distance. The image has a semi-transparent white overlay on the left side where the text is located.

***SCE's  
Business Need***



# Business Need

Boots-on-ground



Digital model & AI enabled trim prescription & forecast



The image features a large, steel lattice power line tower in the foreground, with several high-voltage power lines stretching across the sky. In the background, two utility workers are standing on a lower structure, possibly another tower or a ground-level platform. One worker, wearing a white hard hat and a bright yellow-green safety vest, is pointing towards the right. The other worker, wearing a yellow hard hat and a red and blue jacket, is holding a laptop. The scene is set against a bright, hazy sky, suggesting a sunrise or sunset. The overall composition is clean and professional, with a semi-transparent white box on the left side containing the text.

# ***Unified Analytics Solution***

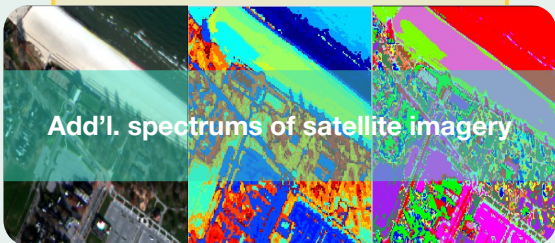
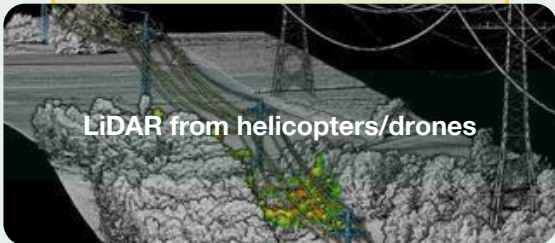


# SCE Remote Sensing Current Capabilities Overview

Overview of the current capabilities for vegetation management across the entire process – from data collection to field mitigation

1

## Remote Sensing Data Collections & Data Aggregation



Data Collection

2

## Build Digital Model



3

## Vegetation Trim Identification



4

## Vegetation Field Operations



Field Mitigation



# Datasets are Aggregated and Related within **SCE's Cloud Environment**

All the disparate datasets are aggregated in SCE's cloud environment for data conflation with Neara and for AI enabled trim prescription/forecast training

## LiDAR + SCE Asset Conflation



Conflate precise **LiDAR data** with **SCE Asset Data** captured from manned and unmanned platforms

## Vegetation Inventory

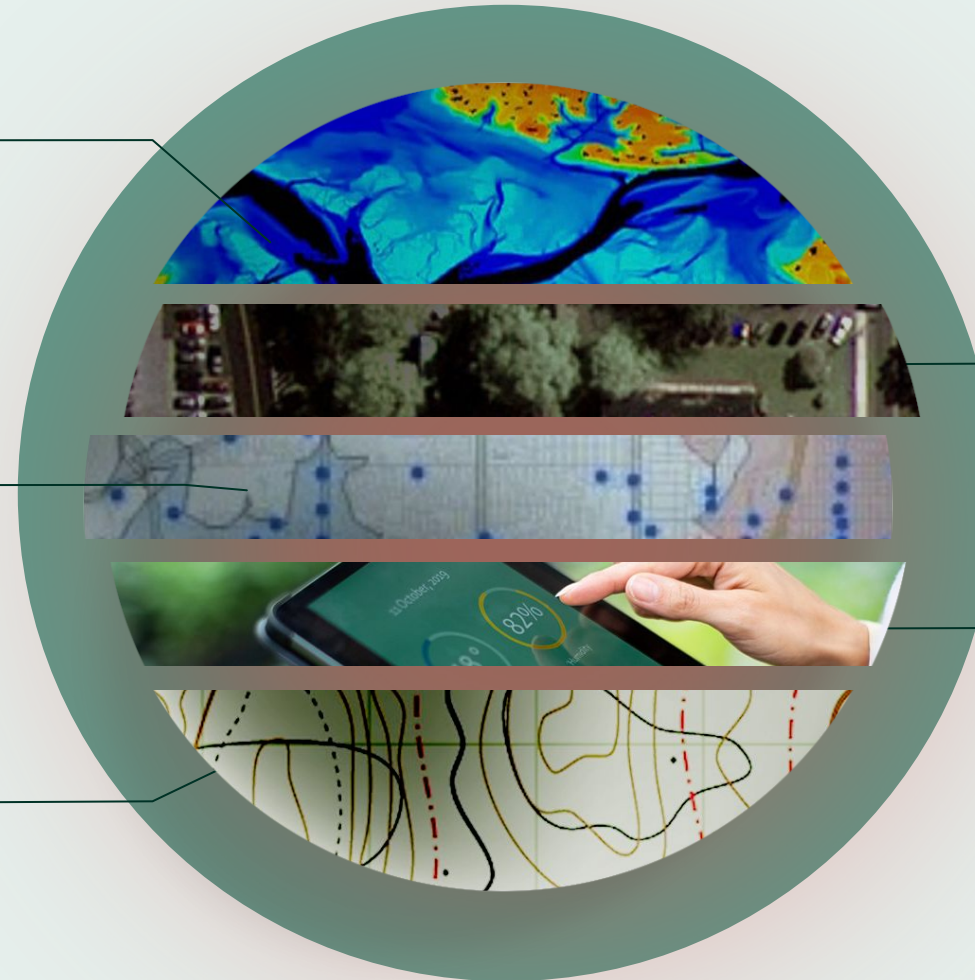


Associates SCE's vegetation inventory with **unique vegetation identifiers, tree crown polygons, and tree types**

## Environmental



Incorporates **environmental data that impact vegetation growth** such as soil, rainfall, terrain, and more



## Imagery

Integrate **combined multispectral / hyperspectral** satellite imagery for trim forecast models

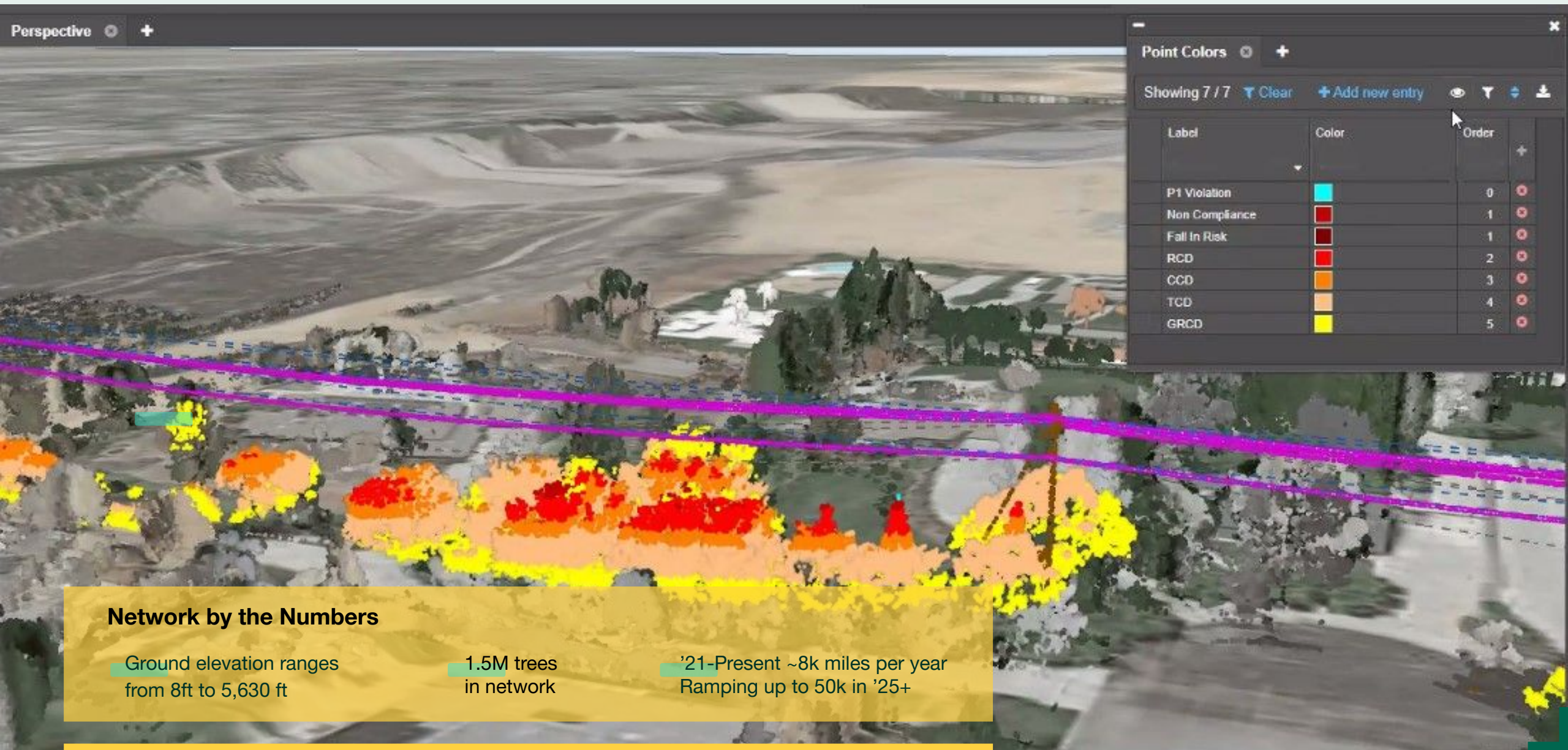


## Trim Histories

Associate **historical trimming activities** for **machine learning refinement** to AI models



# ***SCE's Neara Digital Network*** Model Produces Vegetation Clearance Reports at Scale



## Network by the Numbers

Ground elevation ranges from 8ft to 5,630 ft

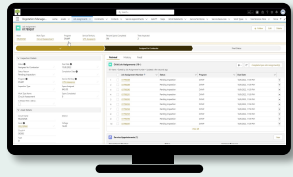
1.5M trees in network

'21-Present ~8k miles per year Ramping up to 50k in '25+



# Digital Applications Coordinate **Vegetation Field Operations**

## Coordinate Operations

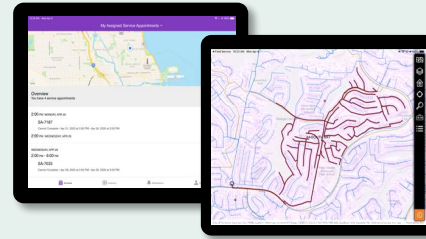


### **SCHEDULE OBJECTIVES**

Fast, accurate selection and assignment of new work to inspectors and mitigation crews

Helps maintain a strong and collaborative relationship with field crew.

## Execute Work



### **FIELD CREW OBJECTIVES**

Import identified trim work points (removal or prune) information efficiently, accurately, and consistently

Anticipate potential issues and plan accordingly

## Monitor Performance



### **QC OBJECTIVES**

Efficiently review and manage completed work orders

Effectively triage trees, confirm completed work and re-route work that needs to be revisited/refreshed

# ***What's Next***





## What's **Next**



### **Model the Remaining Service Territory**

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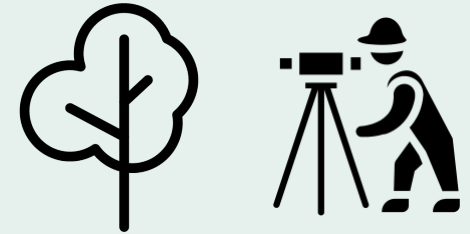
Capture 6" LiDAR remaining missing areas to complete the digital model. Then then conflate the data with SCE Asset GIS creating the digital vector models via the Neara Platform



### **Build & Refine Prescription Logic & AI Models**

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Build and refine automated trim prescription logic from aggregated datasets. Simultaneously build AI models to forecast future trim work points from aggregated data



### **Refresh the Inventory & Refine the AI Models**

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Through routine operations, validate the AI model prescriptions and forecasted work points through human ground truth verifications.

Update the core key attributes of the vegetation inventory such as species, health, and geospatial association with LiDAR/Satellite identified vegetation crowns

# ***Thank you! Q&A***

## **Contact Information**

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## **Booths & Demonstrations**

*Demonstrations will be running this week*

***Neara Booth: Booth #3751***

***Deloitte Booth: Booth #2063***

**Join us to continue the conversation  
at Neara's booth starting now!**

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