



# Welcome to the ICT Regional Industry Advisory





## Today's Guest Speakers:

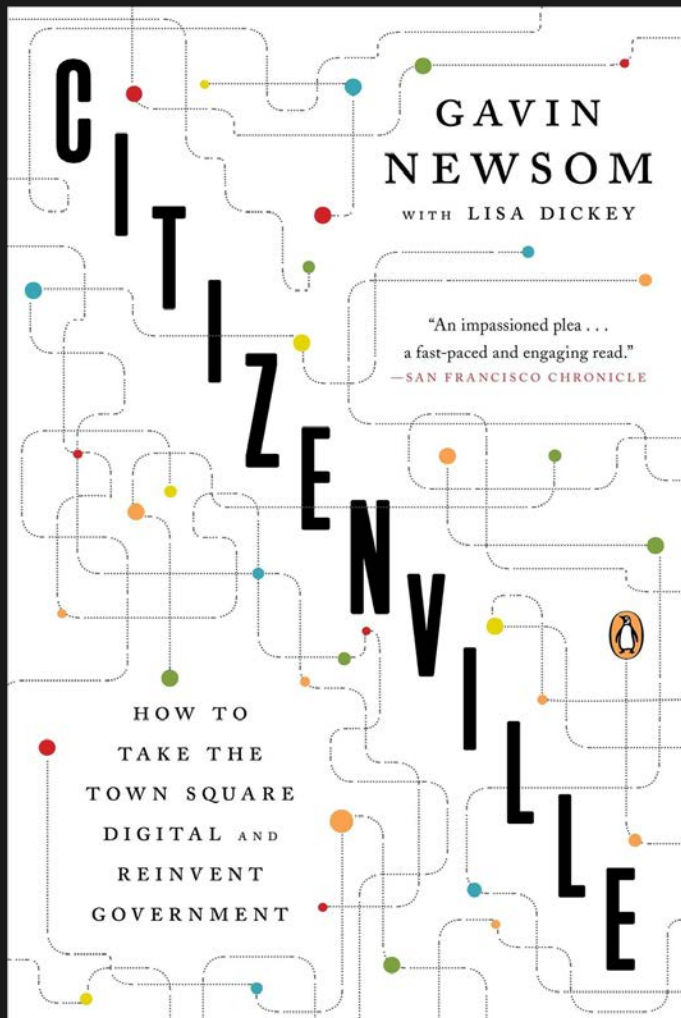
- **Ash Roghani**, Innovation Program Manager, Office of Innovation & Economic Development, City of Sacramento
- **Nicholaus Helwig**, Owner, Pinpoint Aerial Solutions
- **Hank Preston III**, Developer Advocate, Cisco DevNet



# ICT Enabled Public Sector + Community Innovation

Ash Roughani, Innovation Specialist

City of Sacramento Office of Innovation & Economic Development



“There is huge potential to use technology to transform the way government and citizens interact, communicate and solve problems. We are challenging local leaders across the country to push the boundaries of innovation to advance government to work for the citizenry of the 21st century.”

-Lt. Gov. Gavin Newsom (2013)

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Voting, community participation, life in the UK, international projects

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Visas, asylum and sponsorship

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Includes holidays and finding a job

# Do you sell goods in the UK, import or do business abroad?

Doing business abroad includes exporting and going for meetings or taking goods to a trade fair.

Yes

Select all that apply.

Sell products or goods in the UK

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Sell products or goods abroad

Do other types of business in the EU

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No

# Find EU Exit guidance for your organisation

This is the information that has been published so far for your organisation to prepare for EU exit. You can change what information you get using the checkboxes. Come back to this page regularly or sign up to receive emails when new information is published.

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## Sector / Organisation Area

1 selected

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52 publications

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Parent link

**Current page**

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**Grandchild link**

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# Page heading (h1)

The page heading communicates the main focus of the page. Make your page heading descriptive and keep it succinct.

## Section heading (h2)

These headings introduce, respectively, sections and subsections within your body copy. As you create these headings, follow the same guidelines that you use when writing section headings: Be succinct, descriptive, and precise.

### Subsection heading (h3)

The particulars of your body copy will be determined by the topic of your page. Regardless of topic, it's a good practice to follow the inverted pyramid structure when writing copy: Begin with the information that's most important to your users and then present information of less importance.

Keep each section and subsection focused — a good approach is to include one theme (topic) per section.

MARCH 10, 2014

Ukraine's Future/Minimum-Wage Wars/Wes Anderson

# TIME

## CODE RED\_

Inside the nightmare launch of HealthCare.gov  
and the team that figured out how to fix it

BY STEVEN BRILL



THE STATE WORKER

The State Worker

## California's failed tech projects come in late and over budget. Gavin Newsom wants to fix them

BY WES VENTEICHER

MARCH 07, 2019 12:01 AM



## California Governor Wants \$208M to fix DMV Problems

Newsom has requested \$46 million be appropriated in the next three months and the remaining \$162 to be included in the next state budget, starting July 1.

By [Associated Press](#)

Published Mar 30, 2019 at 5:10 AM | Updated at 3:03 PM PDT on Mar 30, 2019

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## OFFICE OF DIGITAL INNOVATION

A primary goal of government is the efficient delivery of government services. To further this goal, California must change the way it approaches service delivery and technology investments. Millions of Californians interact with government services every day: residents apply for drivers' licenses, students compare financial aid options, and small business owners apply for licenses or pay business taxes. Too often, outdated tools and complex systems make these interactions cumbersome and frustrating. Additionally, manual processes and the lack of digital service delivery often require individuals to take time off work and go to a physical office to interact directly with government staff.

The state must transform from a passive governance model that largely responds to individual statutory and policy mandates to one that actively establishes measurable customer service benchmarks and leading digital service delivery from a programmatic and statewide perspective.



# Coding California government

Code California is an open collaboration between agencies, industry technology partners and civic technologists working to code a more innovative, collaborative and effective government that best serves the people of California.

**Policy**



**Playbook**



**Platform**



CITY HALL

CODE *for*  
AMERICA

CODE *for*  
AMERICA



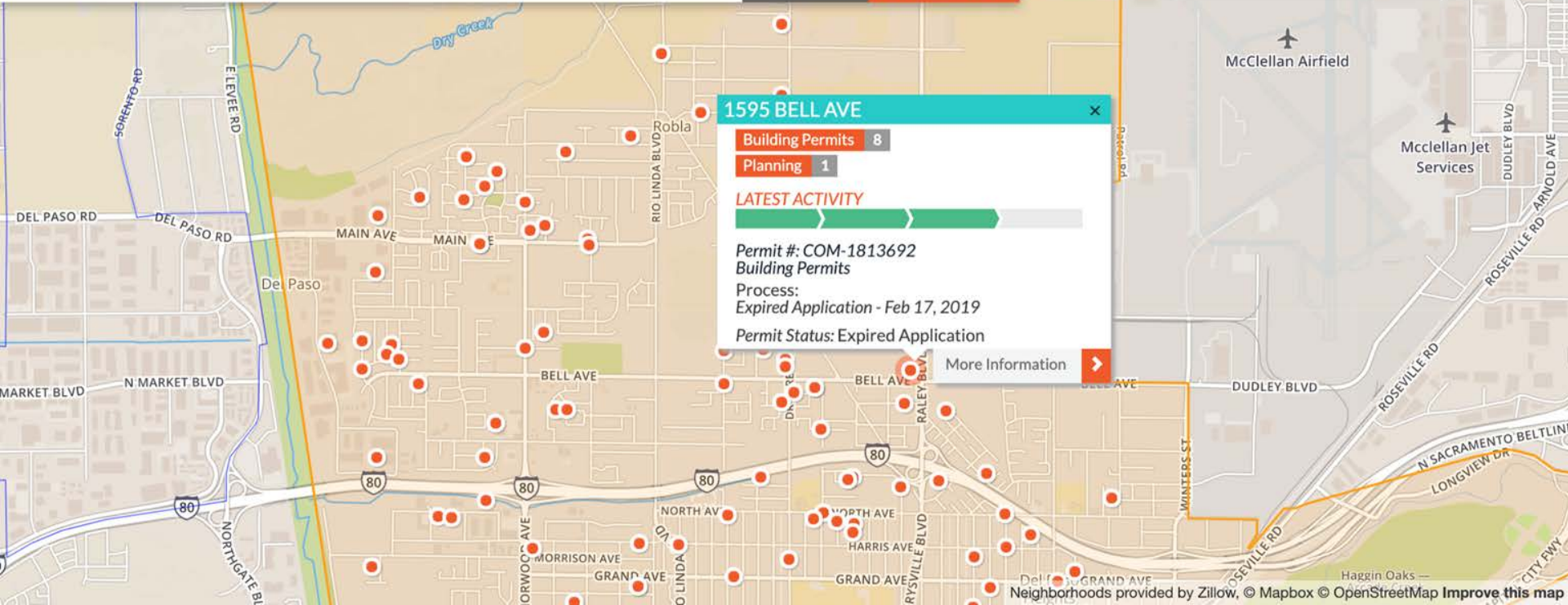


Search addresses for records  
Enter exact address, record number, neighborhood, or street name.

Hide Options

Every Building Permit Issuance in Council District 2 between 10/2018 and 04/2019

Copy Link Showing 400 of an estimated 13,031 results Load more Clear Results



Return to Search

# 1595 Bell Ave

Email Me Updates

All 9 Building Permits 8 Planning 1

Permit: #COM-1814623  
ARCO CENTER REROOF OF 4,500SQFT: REMOVE BUR AND REPLACE WITH TPO (Commercial Minor)

Finaled

Application

Inspection  
Dec 21, 2018

Jul  
31  
2018



**Description:**  
ARCO CENTER REROOF OF 4,500SQFT: REMOVE BUR AND REPLACE WITH TPO

Last Updated: Jul 31, 2018

Less Information

Inspection

Aug  
7



17 Bldg-Roof Plywood Nailing  
Approved



Flag map for inaccuracies

## Neighborhoods & Districts

- Raley Industrial Park (Zillow)
- Robla (School Impact Fee)
- Council District 2 (Council District)
- Sacramento (City)
- Raley Industrial Park (Neighborhood)

An aerial photograph of a city street grid, overlaid with a blue-to-purple gradient. A white rectangular box with a notch on the bottom right corner is centered on the image. Inside the box, the text 'S.U.T.L.' is written in a white, sans-serif font, with a small dot between each letter.

•S•U•T•L•



SUTL  
SACRAMENTO URBAN TECHNOLOGY LAB



verizon<sup>v</sup>

asurion  
Asurion is an independent business  
and an authorized Verizon reseller

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5G



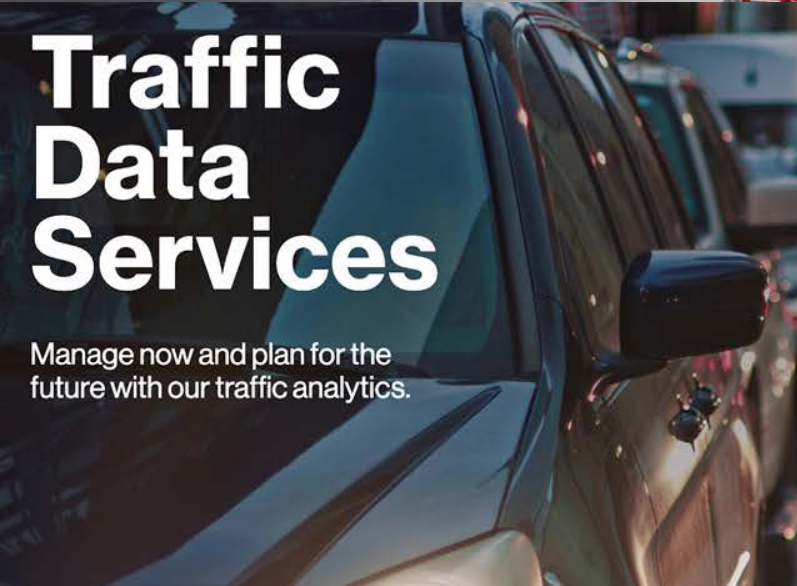
# Intelligent Traffic Management

M2M technology can help reduce traffic delays and related harmful emissions.



# Real Time Response System

Enhance situational awareness to help you improve decision making with a comprehensive view of your city.



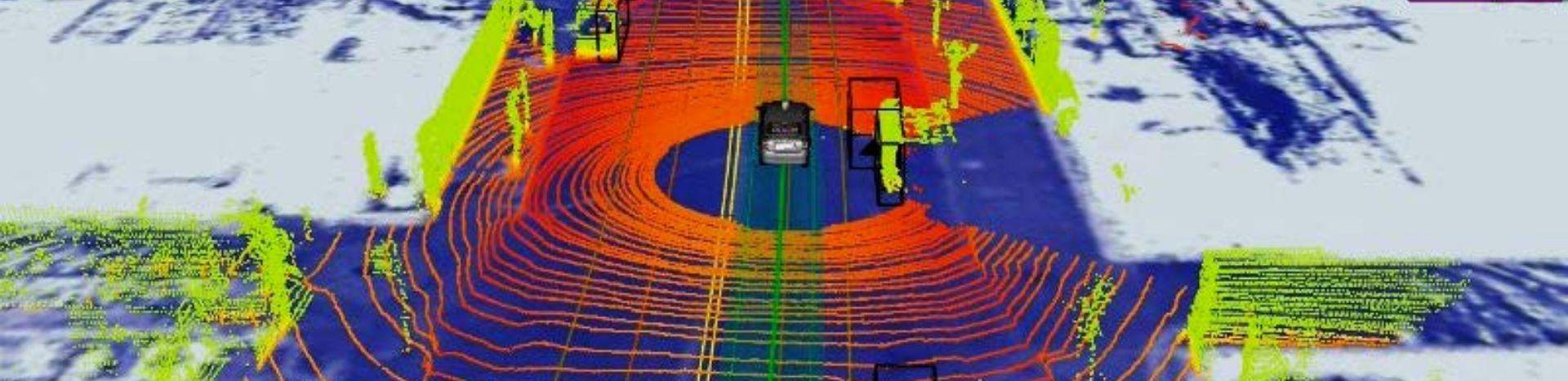
# Traffic Data Services

Manage now and plan for the future with our traffic analytics.



# Intersection Safety Analytics

Helps maintain safety for pedestrians, cyclists and drivers with Intersection Safety Analytics.



## Pilot Activity



### Rapid detection of water contamination

Optiqua

Tracking

#### Pilot Manager

Nancy Parker

#### Budget

\$12,700

#### Status

Delayed

3rd sensor installation r  
delayed due to changes  
updated two weeks ago

#### Strategic Initiatives

Public Safety

#### Timeline

FEB 2018 MAR 2020

#### Team Members



## Public Safety

Protect and promote commun  
achieve a high quality of life fo

### Strategic Initiative Targets

10%

Reduction in crime rate in the Market District

### Total Budgeted

\$16,480

### Active Pilots

- Accident prevention & early detection
- Rapid detection of water contamination
- Neighborhood vulnerability insights

### Completed Pilots

- Drones for traffic accident footage

## Resident Survey

Met

Measure residents' satisfaction through an online survey

TARGET SATISFACTION:

4.0

MEASURED SATISFACTION:

4.2

## Transit Ridership

Met

Measure if connecting riders to transit stations with AVs increases transit ridership

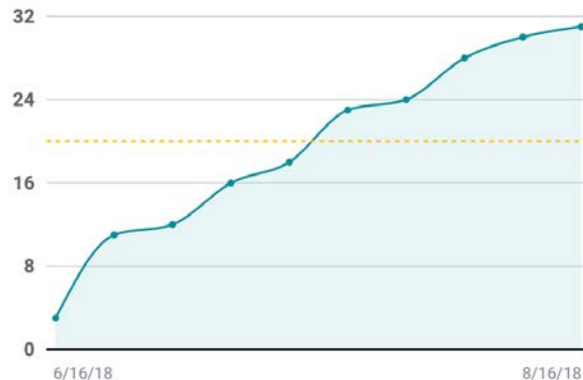
TARGET SAVINGS:

20%

MEASURED SAVINGS:

31%

Cumulative Results Target



### Planning

#### Affordable Housing

UrbanSim

NEW - Form submitted 12/11/18

### Contracting

#### Analyze Social Media

ZenCity

Contract in progress

### Tracking

#### AV Public Transportation

Waymo

Next milestone: 2/9/18

### Evaluating

#### Public WiFi

Internal

Awaiting final evaluation

#### Smart Irrigation

HydroEpsilon

Awaiting final decision

#### Predictive Traffic Management

WayCare

Contract in progress

Improving Transportation

#### 5G Wireless

Internal

Surveys in progress

#### Procurement Chatbot

Yeti

Determining goal outcomes

#### Public Records Requests

NextRequest

3 more reviews needed

#### Civic Engagement

OpenGov

Awaiting final evaluation



# RAILS-

RAPID ACCELERATION  
INNOVATION & LEADERSHIP  
IN SACRAMENTO



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<  / > **CODE4SAC**

# Lessons

It's about people,  
process, and culture

# Four Ingredients

To build better technology

1. API First

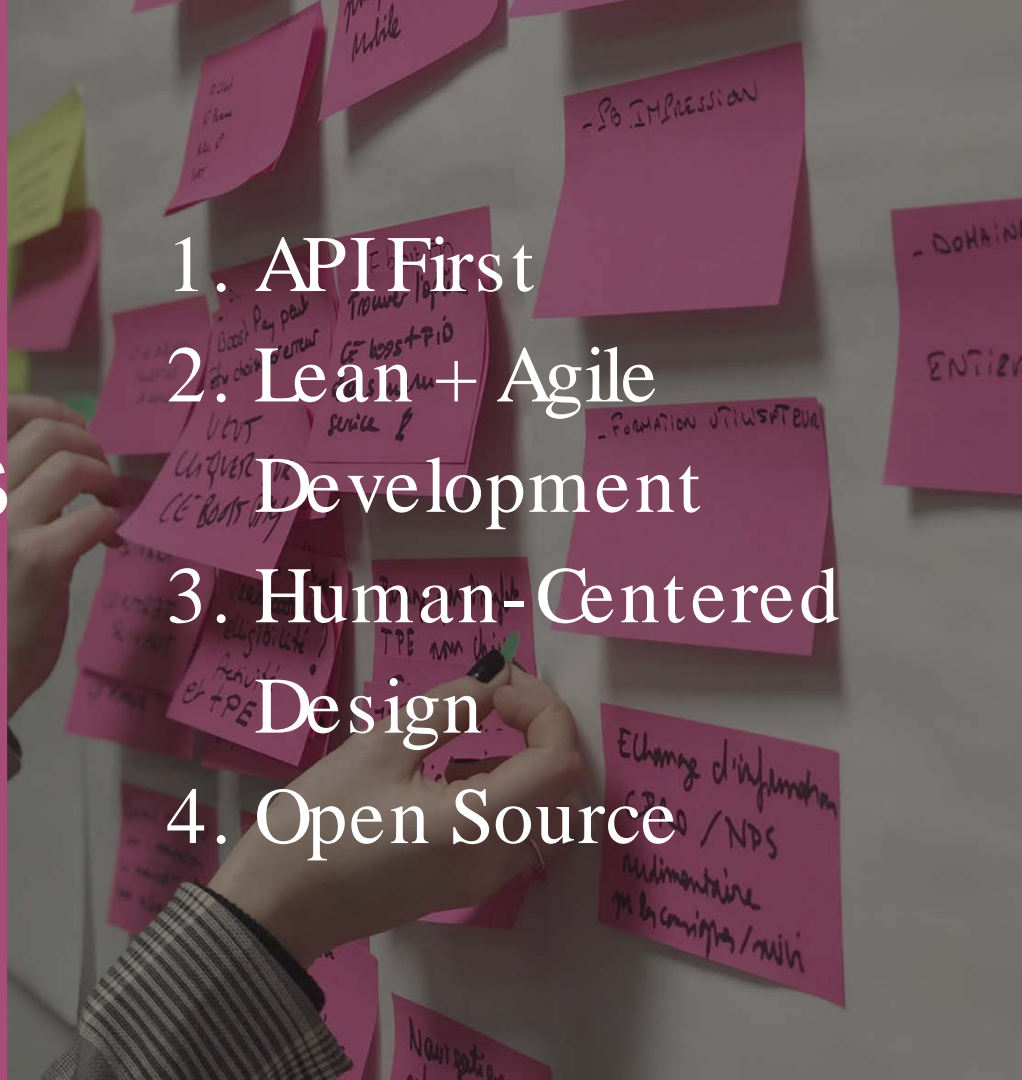
2. Lean + Agile

Development

3. Human-Centered

Design

4. Open Source



# Questions

@Roughani  
aroughani@cityofsacramento.org



## **Pinpoint Aerial Solutions**

Nicholaus Helwig

Owner

# Agenda

- Introductions
- Staffing Overview
- Technology overview
- Case studies
- Q&A

A landscape of rolling green hills under a teal sky. The hills are covered in a vibrant green color, and the sky is a gradient of teal. In the distance, three small trees stand on a ridge. The word "Introductions" is written in white, bold, sans-serif font in the center of the image.

# Introductions



## Nicholaus Helwig

Owner

- B.S degree in Soil and Crop Science with concentration in Precision Ag
- Grew up in Yuba City farming rice and walnuts
- US Veteran



## Jacob Holmes

Owner

- Masters degree from UC Davis
- Grew up in Yuba City, focusing of mentorship of todays youth
- Countless hours volunteering in community outreach programs

# Staffing Challenges

# Staffing Challenges:

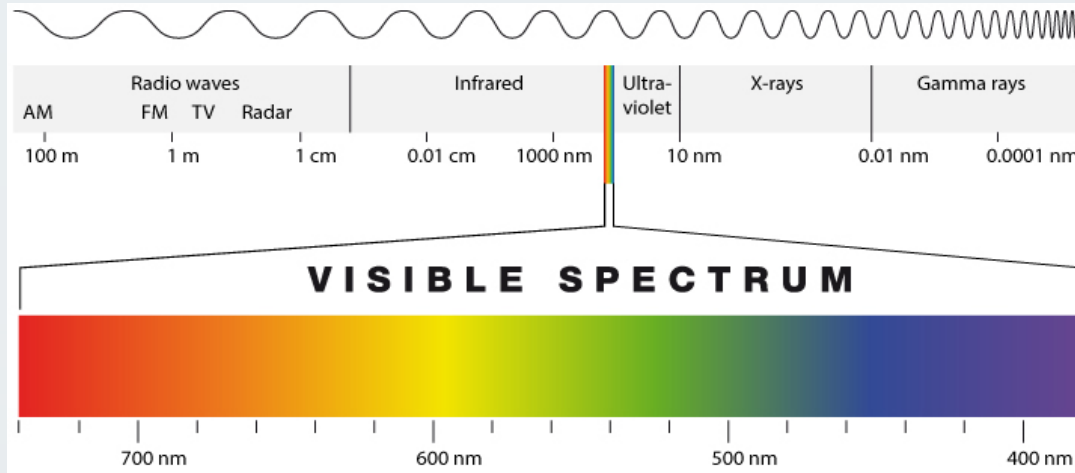
## Main Points of Concern:

- Technology understanding
- Troubleshooting skills
- Regulations

## How we overcome these challenges:

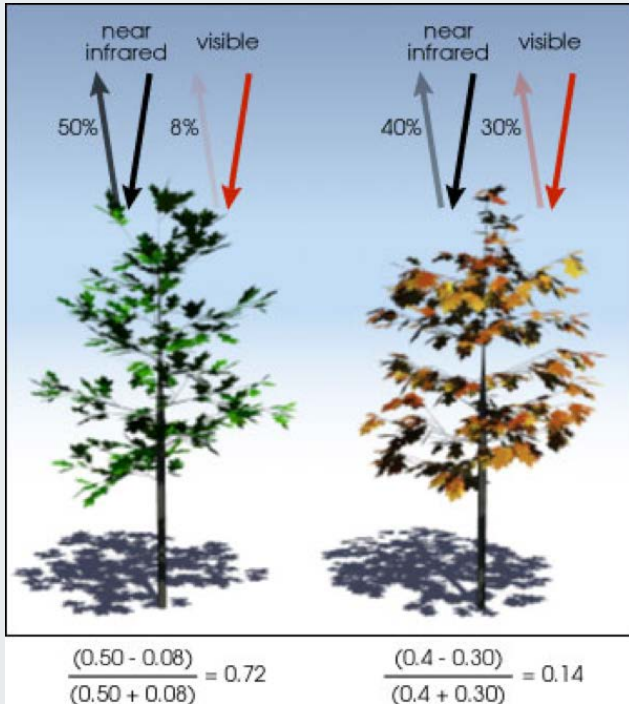
- Seek potential employees right after college or high school
- Must demonstrate basic knowledge of computer/hardware integration
- Must be able to take/pass tests to comply with FAA regulations

# Technology Overview: Multispectral Imaging



- Humans can only see in the Visible light Spectrum
- We lack the ability to break down the light spectrum (White Light) but able to see individual light bands when absorbed or reflected

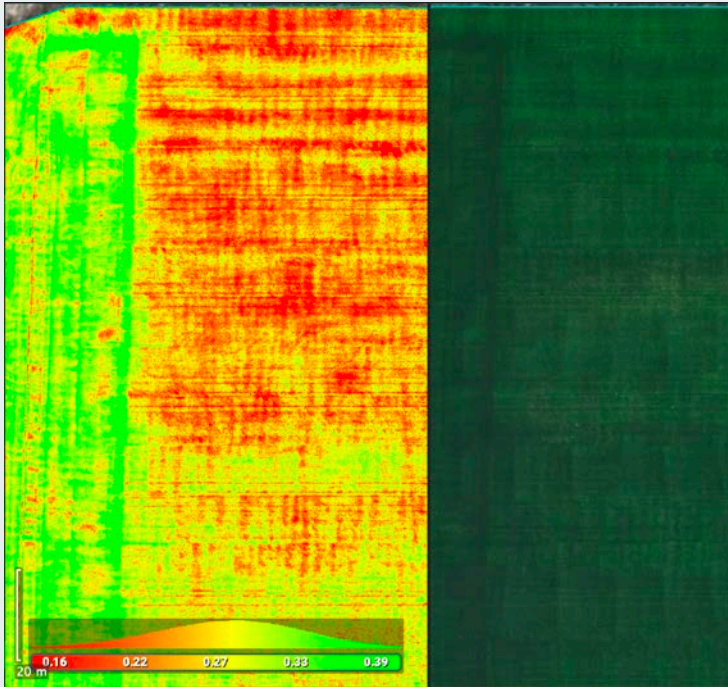
# Technology Overview: Multispectral Imaging



NDVI is calculated from the visible and near-infrared light reflected by vegetation. Healthy vegetation (left) absorbs most of the visible light that hits it, and reflects a large portion of the near-infrared light. Unhealthy or sparse vegetation (right) reflects more visible light and less near-infrared light. The numbers on the figure to the left are representative of actual values, but real vegetation is much more varied (Simmon).

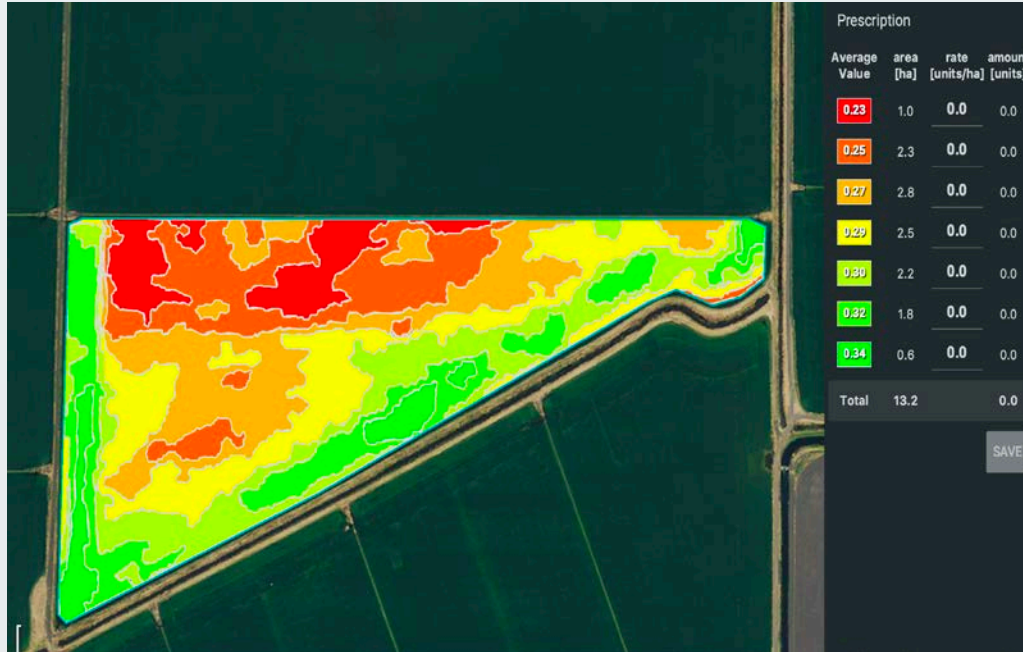
Take away: The plants ability to capture usable light for photosynthesis (energy production)

## Case Studies: Foliar Nitrogen (Rice 2018)



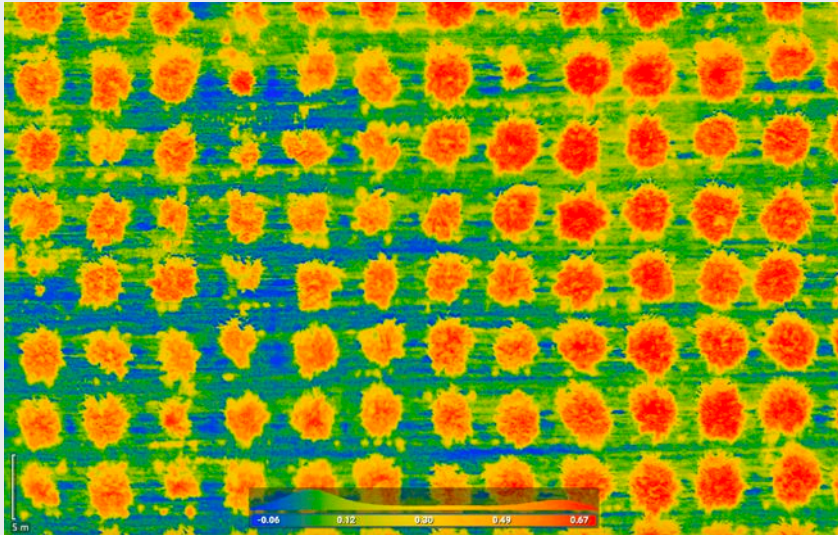
- Map created using NDRE, which allowed us to compare overall foliar nitrogen availability
- PAS and the farmer worked to create zones to adjust fertilizer rates
- Allowed us to gain insight on nitrogen leaching rates.

# Case Studies: Foliar Nitrogen (Rice 2018)



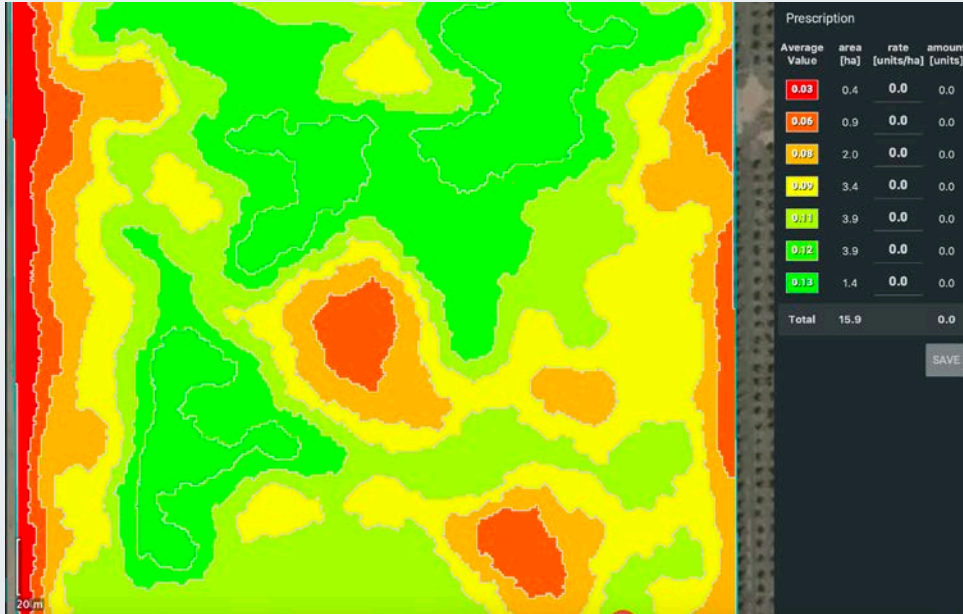
- Zonation map allows us to give each zone an average
- We use this to produce an “easy to read map” to create fertilizer plans
- These maps can be exported into variable rate sprayers if needed (Shapefile, Geojson)

## Case Studies – NDVI Prunes (2018)



- NDVI map found an area of poor growth in the middle of farmers orchard
- We were able to walk to the location in the field via GPS and conduct ground truthing
- Allowed the farmer to locate a zone that he wasn't aware of before

# Case Studies- NDVI Zonation Prunes (2018)



- Zonation map of the same field, we were able to locate pockets of poor growth
- Zonation maps create a field average of NDVI values of tree canopy
- Farmer was able to conduct soil sampling in the "poor growth" zones to get a better understanding what is happening in those specific zones

# 2019 Service Announcement

# AGRAS MG-1P SERIES

Innovative Insights. Increased Efficiency.

Watch video 



# Q&A



**Thank you**