
California Wildfire Safety
Advisory Board
Wildfire Safety Advisory Board
Quarterly Meeting
August 18, 2022, 1:00 pm – 4:00 pm
Live Broadcast from: Courtyard Room,
California Public Utilities Commission
505 Van Ness Avenue, San Francisco
California Wildfire Safety
Advisory Board

Participation Information

Using more than one participation option may create feedback.

Please begin your comment by stating your name and organization

- **In Person:** Courtyard Room, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, 94102. Sign-in sheet at entry.
- **WebEx:**
  - https://cpuc.webex.com/cpuc/j.php?MTID=m623eb013414776cc77c81953bd4369a2
  - **Password**: 2022 (2022 from phones)
  - **Webinar number**: 2492 377 0485
- **Phone:** For public comment call**1-855-282-6330** (US Toll-free) Access code: **249 23 70485.** Participants may dial *3 (star three) to be placed in a queue when they wish to speak. The hosting team will unmute callers in order of request.
- **Email:** Written comments may be emailed to WSAB@energysafety.ca.gov.
- **Tech Issues:** For technical issues, please e-mail WSAB@energysafety.ca.gov or call Mary Ann Aguayo at 279-336-1731.

Locating Meeting Materials

California Wildfire Safety Advisory Board



Meeting Materials Available at:

https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/wsab-events-and-meetings/

Public Comments Available at:

https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/public-comments-received-by-the-wildfire-safety-advisory-board/

About the Wildfire Safety Board

Members:

- **Jessica Block, Chair**
- **Diane Fellman, Vice Chair**
- **Ralph M. Armstrong Jr., Board Member**
- **John Mader, Board Member**
- **Christopher Porter, Board Member**
- **Alexandra Syphard, Board Member**

Information about the Board and its Members available at: **energysafety.ca.gov/WSAB.**

California Wildfire Safety Advisory Board

Pledge of Allegiance



Safety Moment

readyforwildfire.org



Defensible Space is your property's front line defense against wildfire. Creating and maintaining defensible space around your home can dramatically increase your home's chance of surviving a wildfire and improves the safety of firefighters defending your property. 100 feet of defensible space is required by law.*

ONE LESS SPARK ONE LESS WILDFIRE

*For more information on creating defensible space and legal requirements visit READYFORWILDFIRE.ORG

TWO ZONES MAKE UP THE REQUIRED 100 FEET OF DEFENSIBLE SPACE:

ZONE 1: 30 feet of Lean, Clean & Green

1. Remove all dead plants, grass and weeds.
2. Remove dead or dry leaves and pine needles from your yard, roof and rain gutters.
3. Keep tree branches 10 feet away from your chimney and other trees.

ZONE 2: 30–100 feet of Reduced Fuel

4. Cut or mow annual grass down to a maximum height of 4 inches.
5. Create horizontal spacing between shrubs and trees.
6. Create vertical spacing between grass, shrubs and trees.

Use Equipment Properly to Keep from Sparking a Wildfire

7. Mow before 10 a.m., and never on a hot or windy day. String trimmers are a safer option (vs. lawnmowers) for clearing vegetation.



VERTICAL SPACING

Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."



HORIZONTAL SPACING

Create horizontal and vertical spacing between plants, the amount of spacing will depend on how steep the slope is and the size of the plants.

California Wildfire Safety Advisory Board

Agenda

1) Public Comments
2) Discussion/Vote on April 26, 2022 Meeting Minutes
3) Energy Safety (OEIS) General Update - Suzie Rose
4) Update on Publicly Owned Utility WMP Status - Tim Tutt
5) CPUC Update on Safety Culture - Richard White
6) Safety Culture Assessment Recommendations - Discussion and Adoption
7) Potential Stakeholder Updates
8) Closed Session
9) Adjournment



1 - Public Comments



Please begin your comments by stating your name and organization (if applicable).

a. In-person
b. On WebEx
c. On the Phone
d. Via Email

2 - Minutes from April 26, 2022 Meeting

Discussion
&
Vote



3 - Energy Safety Update



Suzie Rose

Office of Energy Infrastructure Safety

California Natural Resources Agency

4 – Update on Publicly Owned Utility WMP Status

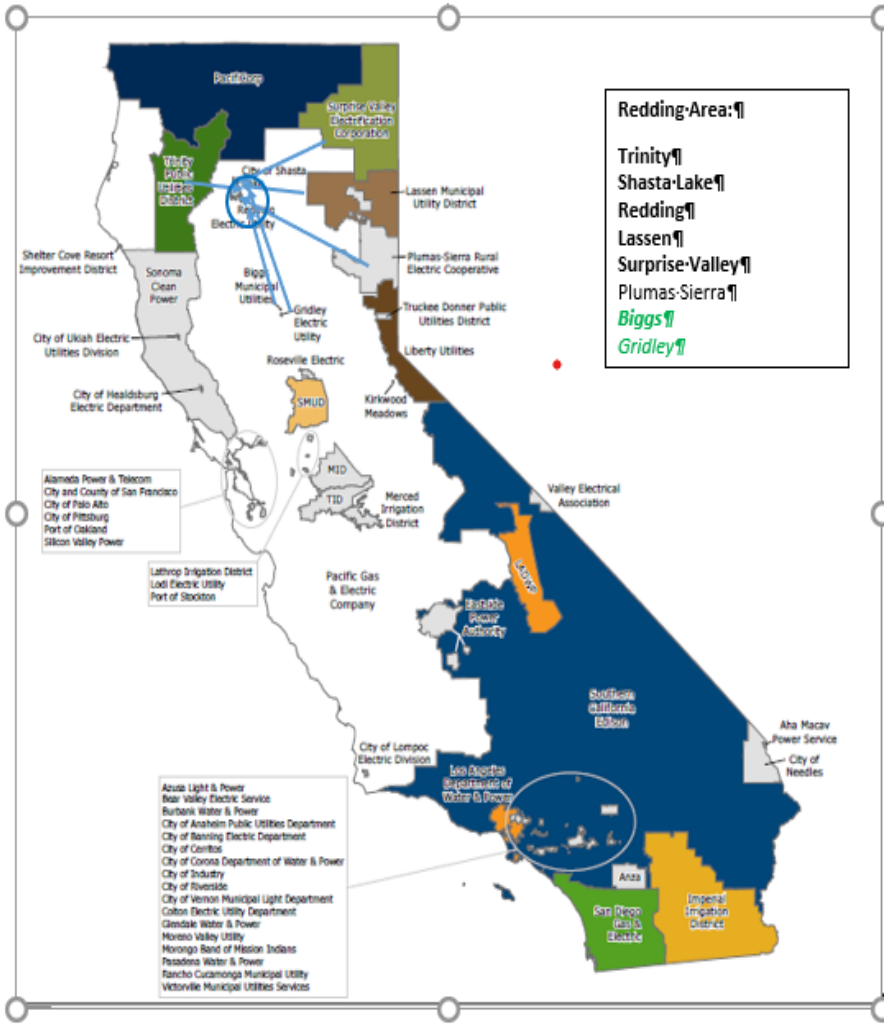
Tim Tutt

WSAB Advisor



California Wildfire Safety Advisory Board

Publicly Owned Utility WMP Status and Plans



- Joint Associations' Comments on 2022 WMPs
  - Comprehensive revisions in 2023
  - Limited info on topics thought to be out of scope
    - Emergency communication, wildfire spread, resource planning
- Nearly all 50 WMPs have been docketed – remainder coming
- WSAB plans to interact with POUs in regional groupings:
  - Redding, Sacramento, SF, Central Valley, three LA area groups
  - Expect to schedule site visits



Break

California Wildfire Safety Advisory Board

Click to add text

WE ARE BACK!

5 - CPUC Safety Culture Update

Richard White

CPUC

Duncan Hassell

Motive Power

Regulating Safety Culture?
A Framework for Promoting Healthy Safety Cultures in California IOUs

Wildfire Safety Advisory Board Meeting

San Francisco Aug 18th , 2022

Richard White, CPUC

Duncan Hassall, Motive Power

California Public Utilities Commission

R.21-10-001 Background: Order Instituting Rulemaking to Develop Safety Culture Assessments for Electric and Natural Gas Utilities

October 13, 2021:
Commission opens Rulemaking (R.) 21-10-001

November 29, 2022:
Opening Comments filed to the OIR

December 29, 2021:
Reply Comments filed to the OIR

March 11, 2022:
Initial kickoff workshop for the proceeding

June/July 2022:
Technical working group meetings

Goal of proceeding: To develop and adopt a safety culture assessment framework and process for regulated investor-owned electric and natural gas utilities and gas storage operators, in fulfillment of Senate Bill 901 and other Commissions oversight responsibilities

SPD took a two-prong approach to developing a safety culture regulatory framework

Culture Model track

- Development of Safety Culture Maturity Model
  - Hired Motive Power and B-Safe Management Solutions (BSMS)S to develop a Safety Culture Maturity Model (PURE)
  - Model Requirements
  - Calibration

Culture Regulation track

- Engagement with safety culture regulators in other industries to learn from their experience.
  - INPO
  - Canada Energy Regulator
  - Canada Nuclear Energy Commission
  - Contra Costa County Health Services
  - FAA

Lessons learned: Safety Culture Modeling.

- There are multiple methods and strategies to modeling, measuring, and assessing safety culture e.g. Functionalist vs interpretative approach
- Performance in specific safety culture "functional domains" are known to be related to catastrophic events
- Actions taken to improve safety culture can have an impact on safety performance
- Safety Culture is not homogenous
- Safety Culture Models have strengths and weakness

Safety culture modeling is an evolving science

Lessons learned: Safety Culture Regulators

- A shared understanding and language of safety culture is important for effective communication between parties
- Each company is the owner of its own safety culture
- A flexible and non- prescriptive approach is preferred by most regulators.
- Regulators use both self-assessments by a company and independent monitoring and direct observation to build a comprehensive view of safety culture

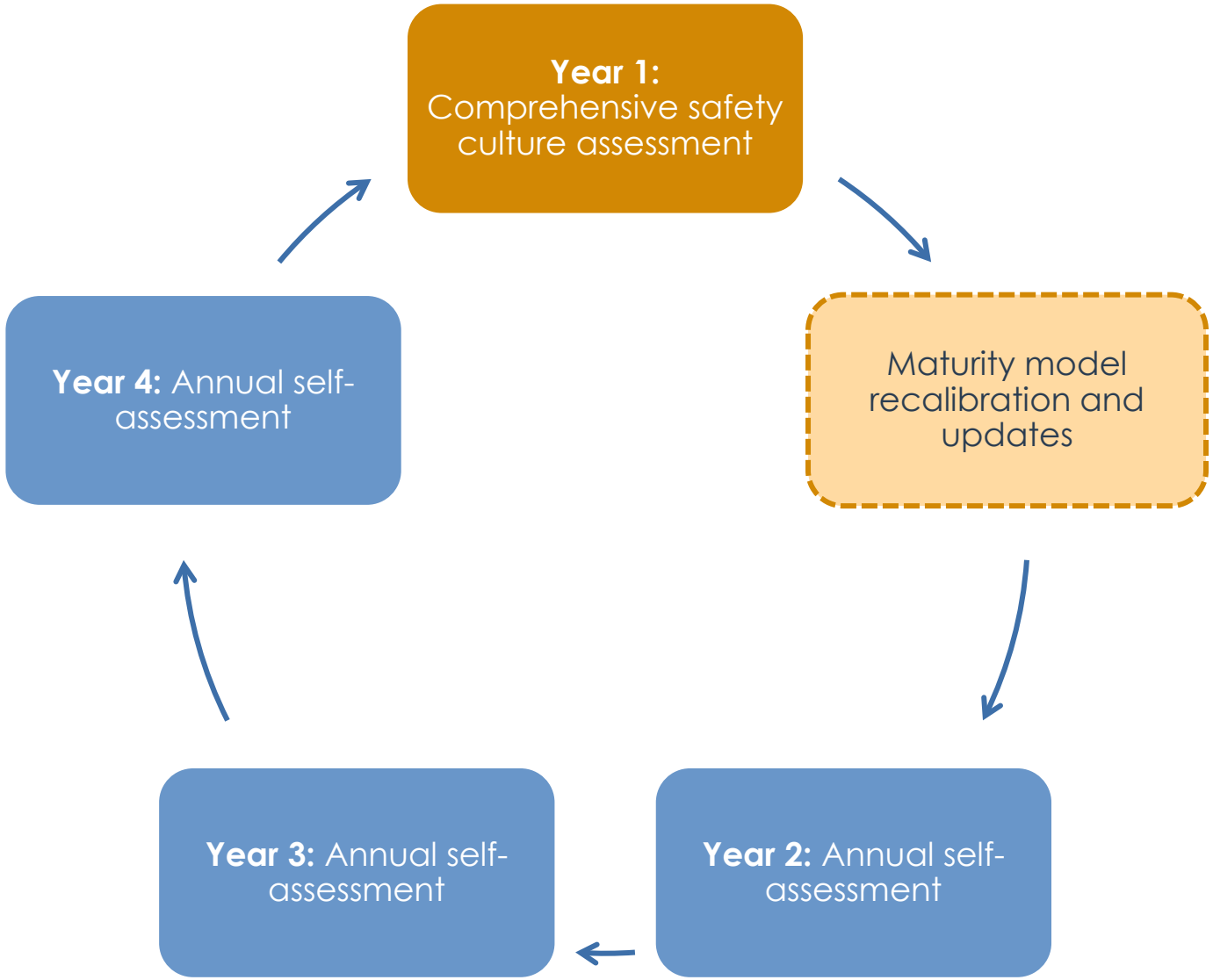
Safety culture regulation is an evolving practice

SPD has proposed a hybrid safety culture assessment process

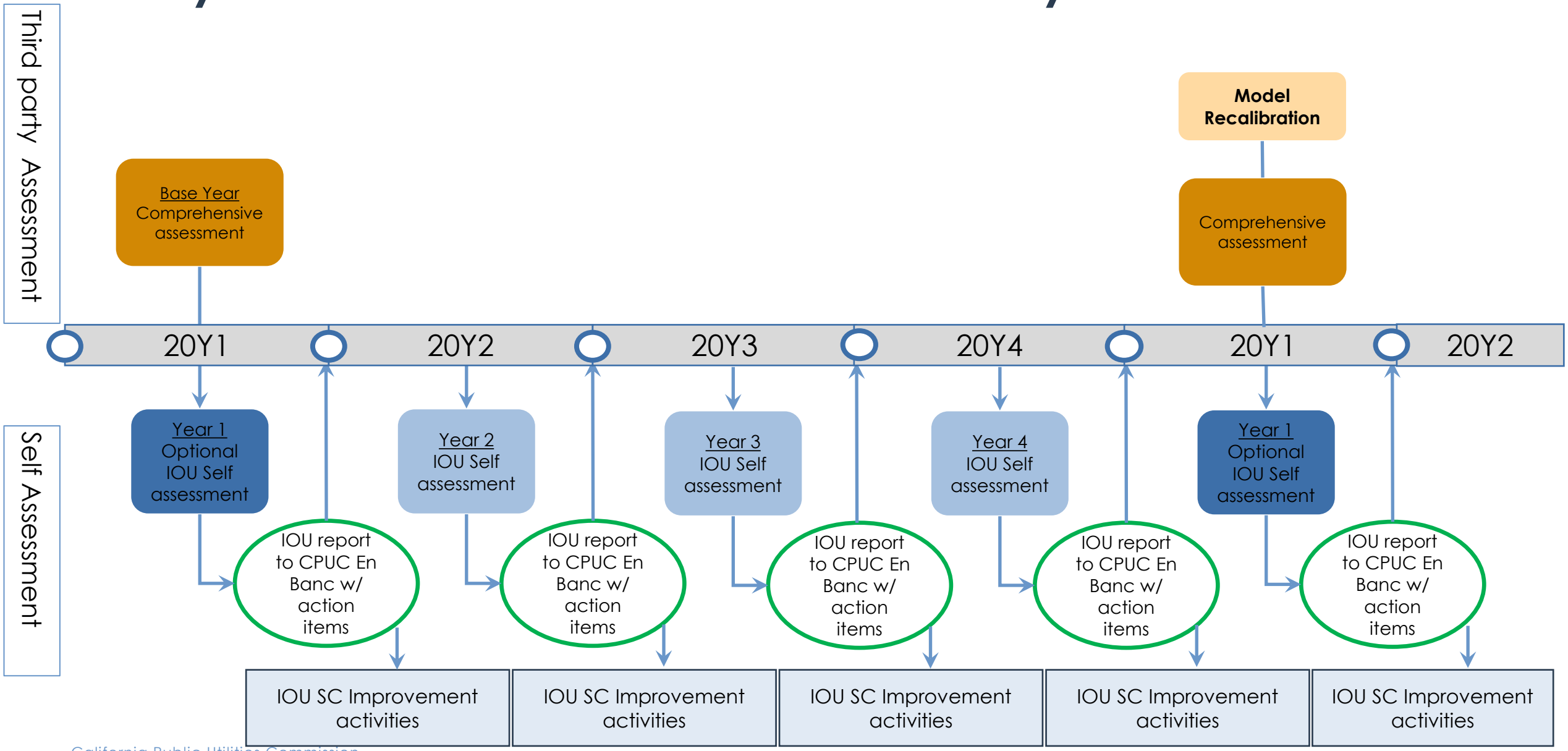
Assessment process includes

- A structure that respects that safety culture is owned by each IOU
- A common framework and tool set to be used in safety culture assessment
- IOU self assessments using the common framework
- Quadrennial ccomprehensive and independent assessments for each large IOU
- A focus on a learning and improvements in the IOUs and the SC Model
- A structure that allows for independent review of Safety Culture facts.

The process is based on a continuous improvement design



Safety culture assessment timeline: Full cycle



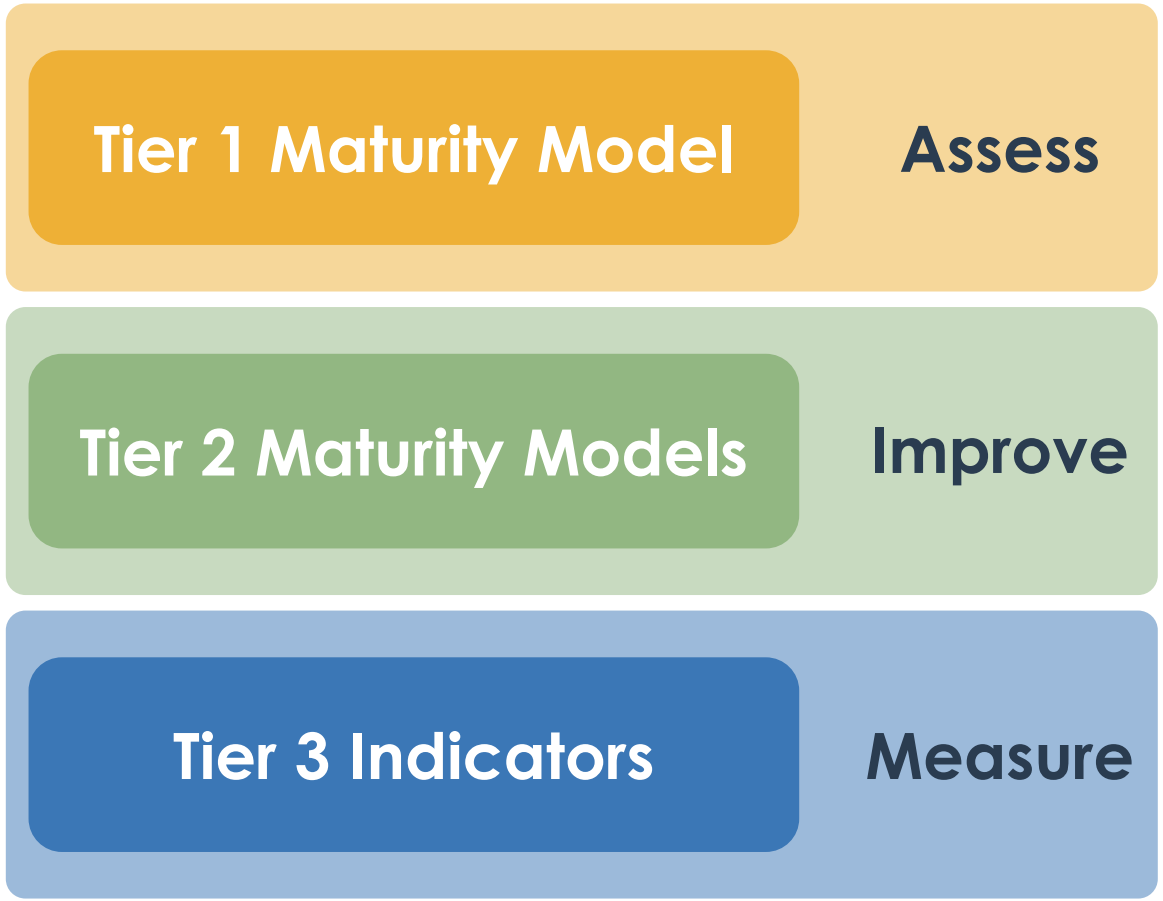
Safety culture maturity model: Public Utilities Risk Evaluation (PURE)

The safety culture assessment maturity model (PURE)- proposed framework establishes an anchor for prioritizing safety culture improvements in an IOU's portfolio

- Assumption: Safety culture is under the control of the Executive and senior management
- A set of actions represents a portfolio of options for the IOU
- Assessments create a measure to assess to prioritize to achieve results

Maturity model overview

The proposed maturity model will quantify improvements in, and define best practice for safety culture



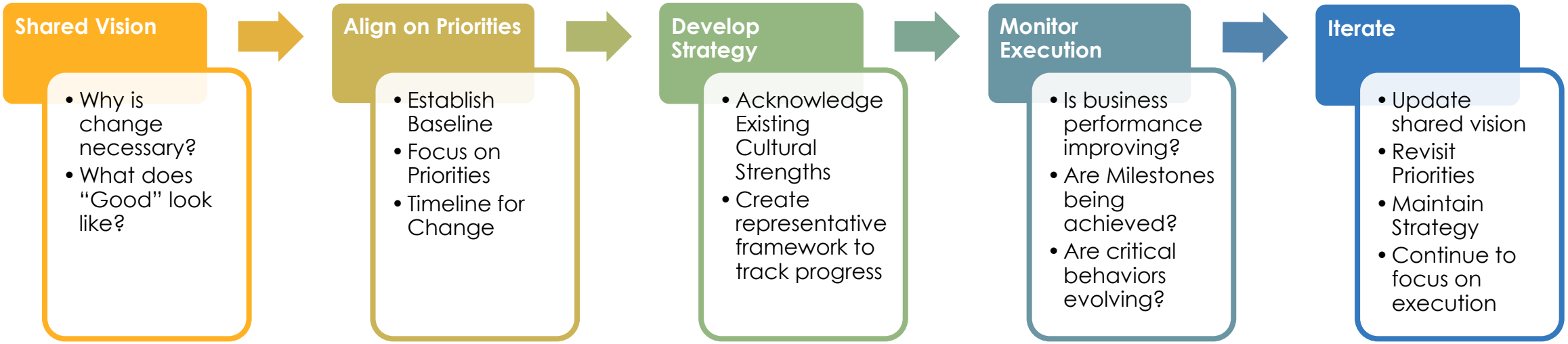
The Tier 1 model comprises 10 functional domains that describe the behaviors, actions and characteristics of 5 progressive levels of safety culture maturity.

At Tier 2, each functional domain is described by a discrete maturity model, each containing a magnitude more attributes than the corresponding Tier 1 model.

Tier 3 contains an extensive suite of leading, current and lagging indicators to quantify past performance and predict future performance.

Driving cultural change

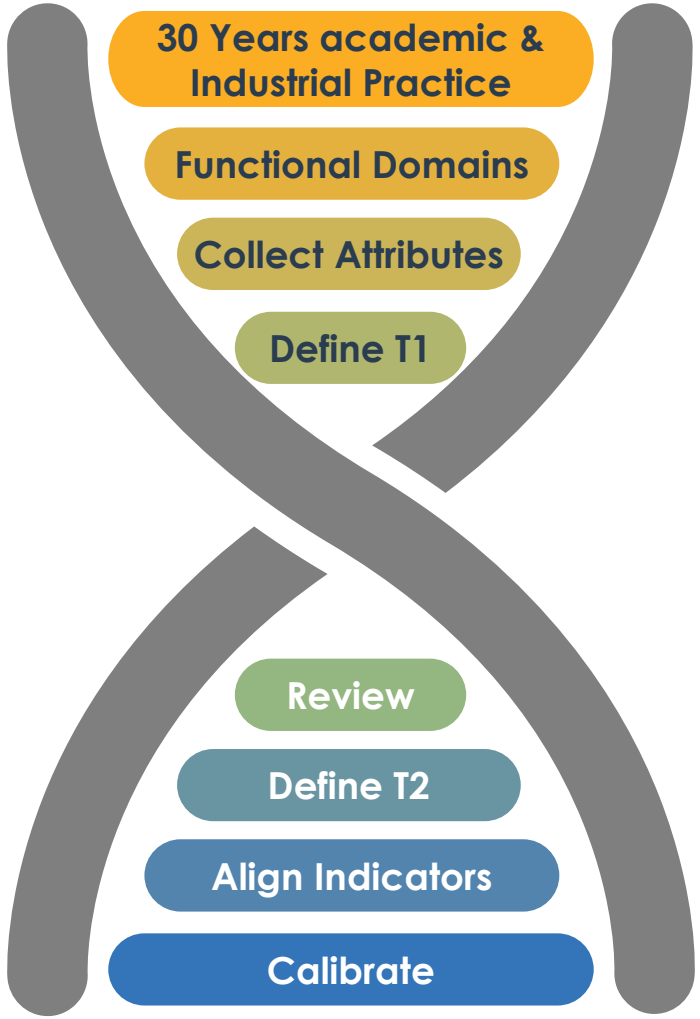
- The proposed maturity model will support each step of California IOUs journey to improve their safety culture.



Maturity model development process

1. Literature Review

1. Thorough and detailed review of ~30 years Safety Culture of academic & industrial practice
2. Defined functional domains



2. Define Attributes

1. Identify attributes based on evidence from academia and industry
2. Filter attributes to identify most representative attributes for Tier 1
3. Refine Focus Areas
4. Review alignment of attributes to Utility industry and practices
5. Collect feedback from CPUC Core Team

3. Develop Tier 2 & 3

1. Identify attributes that represent best practice for Tier 2
2. Categorize attributes into T2 Focus Areas
3. Align industrially proven indicators to T1 & T2 Focus Areas

4. Calibrate Model

1. Analyze Safety Performance Metrics
2. Interview Utility Staff
3. Calculate correlation between outcome metrics and Model

Within each domain, there are five levels of maturity

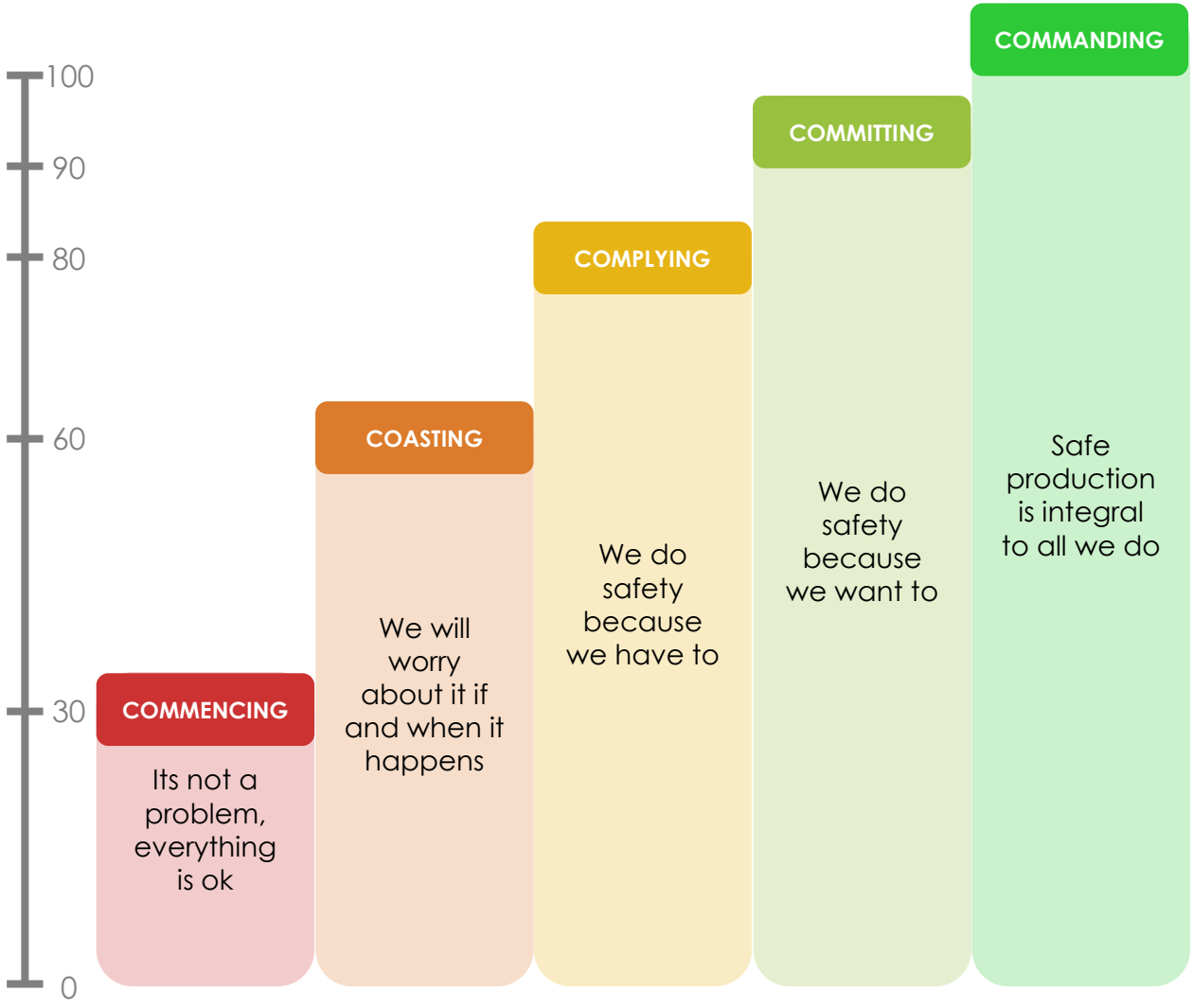
Commanding
Continual safety culture improvement is in the entities DNA at all levels. Safe-production is a mantra and the horizon is scanned for potential safety issues a routine part of everyday activities.

Committing
The organization goes beyond minimal compliance in safety and is striving to achieve its safety culture mission and goals to greatly reduce the potential for harm in the workplace and the community.

Complying
The goal of an organization is to just meet the minimum requirements which satisfy the regulators, auditors, customers, and stakeholders that things are being done to protect people, assets, and the environment.

Coasting
A minimal effort being invested in improving safety strategy and processes, no clear direction, or systematic attempt, to improve safety.

Commencing
Rudimentary, ad-hoc and chaotic safety processes, lacking structure and largely depending upon the knowledge, skills, and abilities of those doing the work.



The PURE framework has 10 functional domains that describe safety culture

The 10 functional domains are based on Seven Broken Safety Cultures, which are consistent root cause themes from major safety catastrophes. To reinforce the role of leadership in the creation of a positive safety culture, we also introduce three core business tools

7 Broken Safety Cultures

- Profit Before Safety
- Just Culture
- Safety Leadership
- Managerial Compliance
- Safety Communication
- Safety Competence
- Lessons Learned

3 Core Business Tools

- Strategy
- Risk Assessment
- Corrective and Preventative Actions (CAPA)

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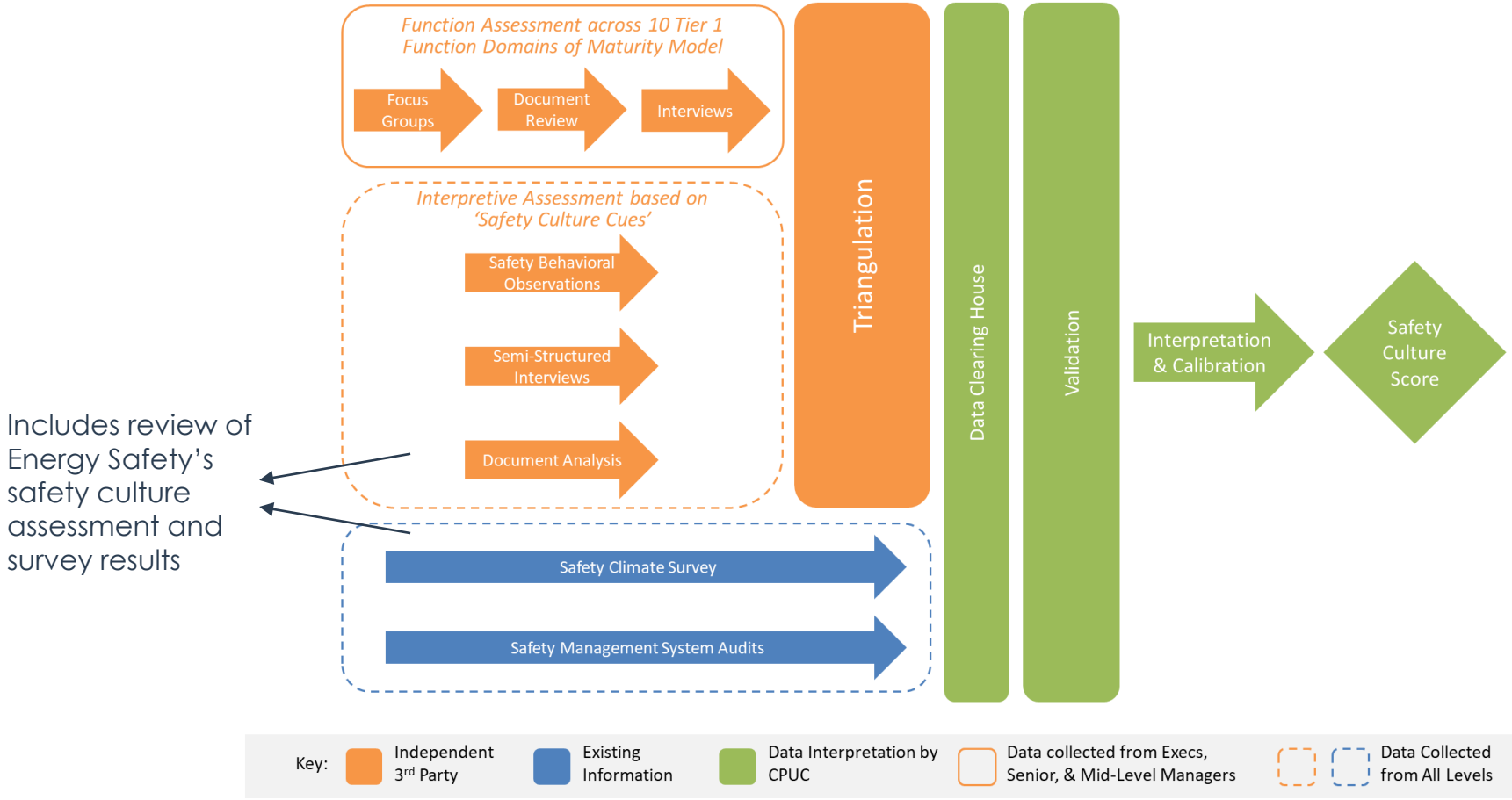
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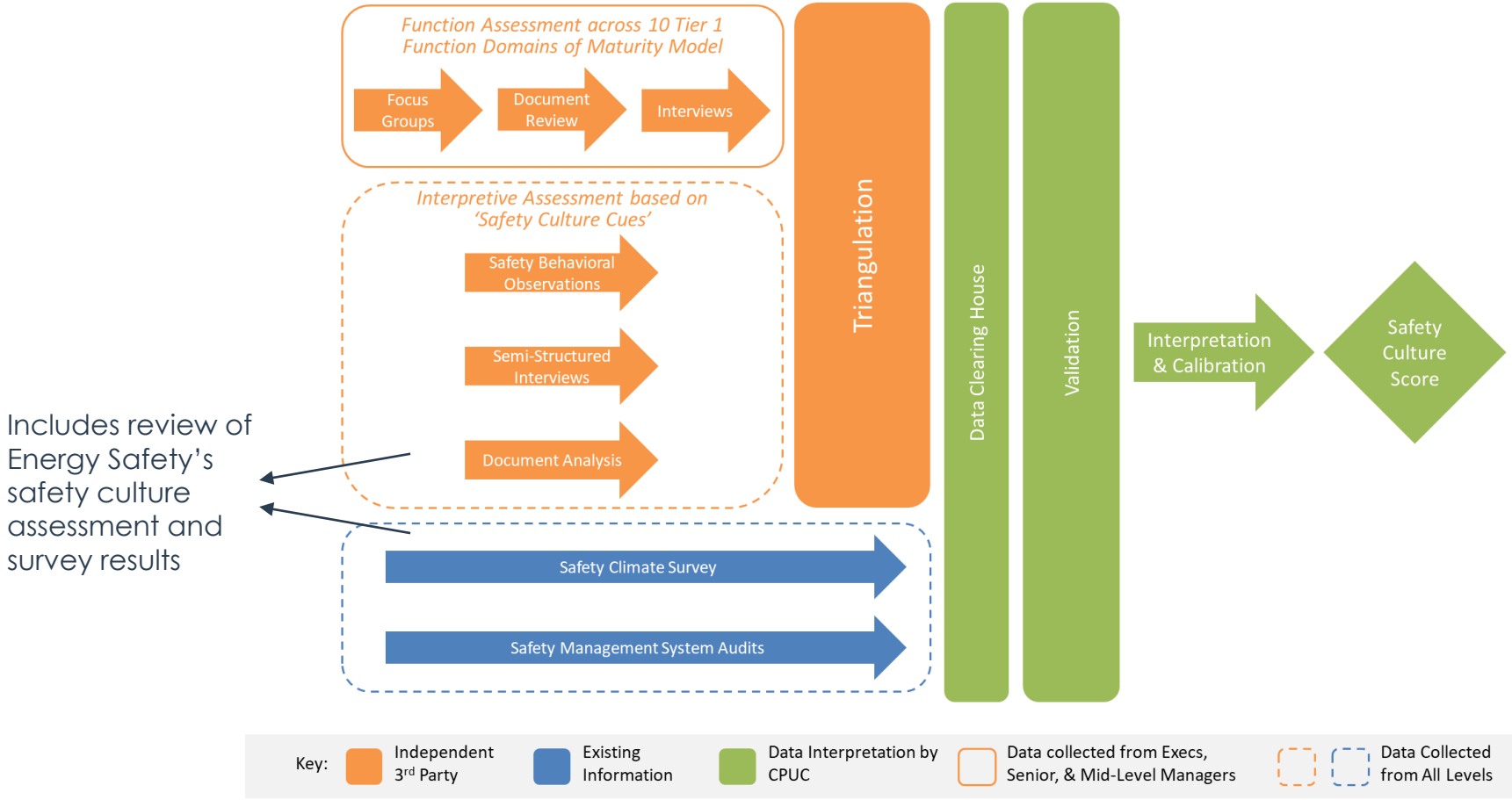
Proposed safety culture assessment process

The proposed assessment process will establish a transparent and auditable trail of the process to measure Safety Culture, while integrating existing data streams to ensure assessments are reliable and valid.



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Model scope and reliability

The proposed 10 functional domains comprehensively cover the known causes of all safety catastrophes in the last 30 years. Further, we have demonstrated the model to be the first known safety culture maturity model with concurrent validity (actionable conclusions may be drawn from the data).

Safety Performance Metrics

- Data cleaned and anchored to region
- Regions Ranks by Performance

Identify Utility Staff to Interview

- Priority 1: Inspection & Maintenance, Asset Owners, Construction Managers
- Priority 2: Regional H&S Managers, Asset Management, Operations

Score Region's Safety Culture

- Based on 10 questions derived from Maturity Model Functional Domains

Calculate Reliability

- Statistically "Adequate" reliability for IOS Safety Metrics & Interview Data
- Negative Correlation (Good!) of -0.72 for Personal Safety Metrics
- Complex findings for Process Safety, creates opportunity for CPUC to lead Globally

Complementing existing initiatives

The proposed safety culture maturity model and assessment process completement and reinforce ongoing work by OEIS.

- OEIS Engaged Boston Consulting Group (BCG) in 2020. 5 tools were created:
    1. Wildfire Mitigation Plan Guidelines
    2. Utility Wildfire Maturity Model & Assessment
    3. Utility Survey
    4. Wildfire Mitigation Plan Metrics
    5. Supplemental Data Request
- The OEIS Wildfire Maturity Model had been developed to assess the maturity of very technical aspects of wildfire mitigation
- The Utility survey comprises an employee survey and a Utility Self Assessment. The Employee survey is a measure of safety climate (indicated by the use of a Likert Scale), which measures sentiment in the moment, and is known to be highly variable. A mapping of the employees survey and Self Assessment to the proposed functional domains is adjacent (click through Animation).

Mapping of Employee Survey to Proposed Maturity Model Domains

	Strategy	Risk Assessment	Profit Before Safety	Just Culture	Safety Leadership	Managerial Compliance	Safety Comms	Safety Competence	Lessons Learned	CAPA
Primary Relationship	1	0	4	11	6	2	0	3	3	0
Secondary Relationship	0	7	2	0	4	0	10	0	0	0

Mapping of Utility Self Assessment to Proposed Maturity Model Domains

	Strategy	Risk Assessment	Profit Before Safety	Just Culture	Safety Leadership	Managerial Compliance	Safety Comms	Safety Competence	Lessons Learned	CAPA
Primary Relationship	0	6	1	0	2	1	2	6	2	2
Secondary Relationship	1	2	0	2	2	2	2	0	1	0

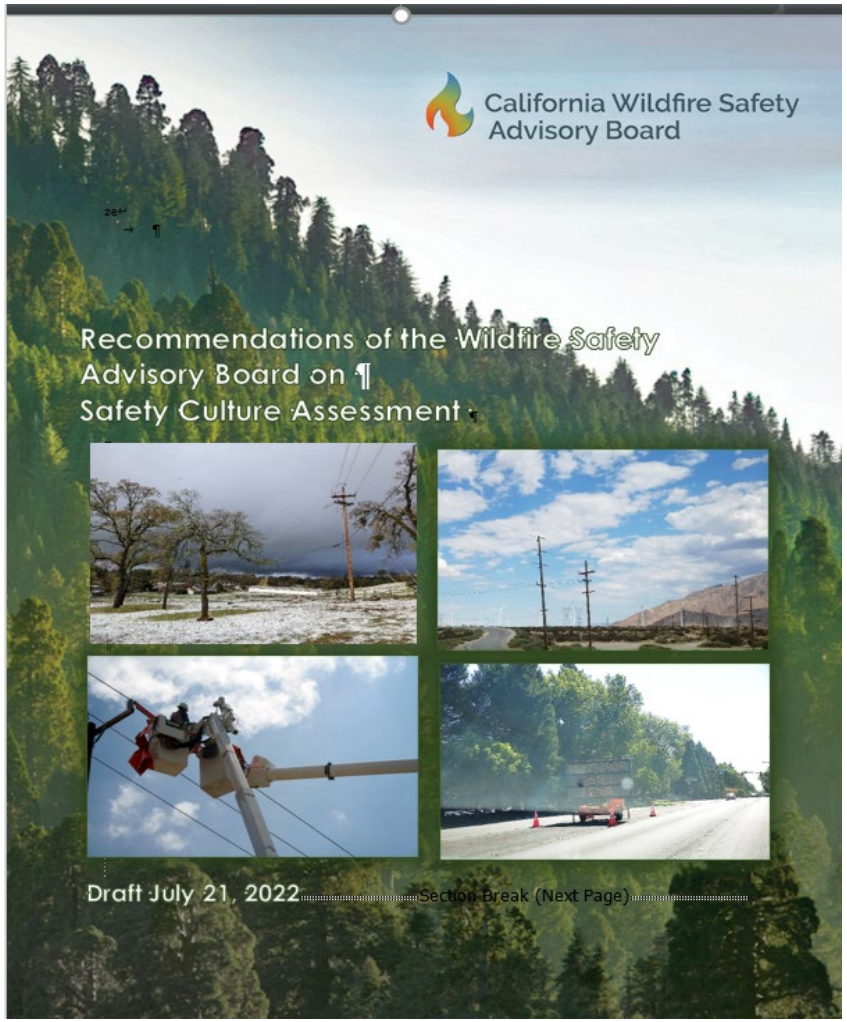
OEIS Maturity Model

Questions?

Please raise hand, use chat, or use Q&A feature



6 - WSAB SAFETY CULTURE ASSESSMENT RECOMENDATIONS



- General Enhancements to Safety Culture
- Including Innovation and Change in Safety Culture
- Including Customers and Community in Safety Culture

Enhancements To Safety Culture

- "Going Beyond Compliance" Safety Culture
- Safety Culture Surveys Should Include a Broad Workforce Template – Designer to Troubleshooter
- Safety Culture Assessment Should Cover Workforce Training – Proper Worker for Task – Well Trained



Including Innovation and Change

- Include Innovation and Change to Keep Safety Culture Current
- Safety Protocols Keep Pace With Technological Change
- Consider CyberAttack Issues During Wildfire
- Include Climate Change Impacts on Safety



Including Customers and Community



- Include Community Engagement in Assessment
- Include Utility Partners in Safety Culture
- Customer Interactions on Vegetation Management
- Consider General Customer Survey in Assessment
- Safety Culture Should Be Aware of Safety Issues During PSPS and Similar Events

Comments Received



- Public Advocates Office
  - Generally supportive of WSAB Recommendations
- Joint Utilities (PG&E, SCE, SDG&E)
  - Clarification requested on Safety Certificate wording
  - Suggested removal of most WSAB recommendations

Changes and Clarifications

- Timing -- For 2023 and Beyond Safety Culture Assessment
- Clarified Some Descriptions of Energy Safety Products and Work
- Removed any mention of Safety Certificates
- Clarified some but did not delete any of the twelve recommendations



Safety Culture Assessment Recommendations

Discussion, Public Comment

&

Vote



8 – Closed Session

Recess into
Closed Session





9 - Adjourn Board Meeting

- For more information:
  - Website: www.energysafety.ca.gov/wsab
  - Email: WSAB@energysafety.ca.gov