NECA SAFETY PROFESSIONALS CONFERENCE

Understand and Strengthen Your Company's Jobsite Safety Climate

Linda M. Goldenhar, PhD

Director, Research and Evaluation

CPWR – The Center for Construction Research and Training

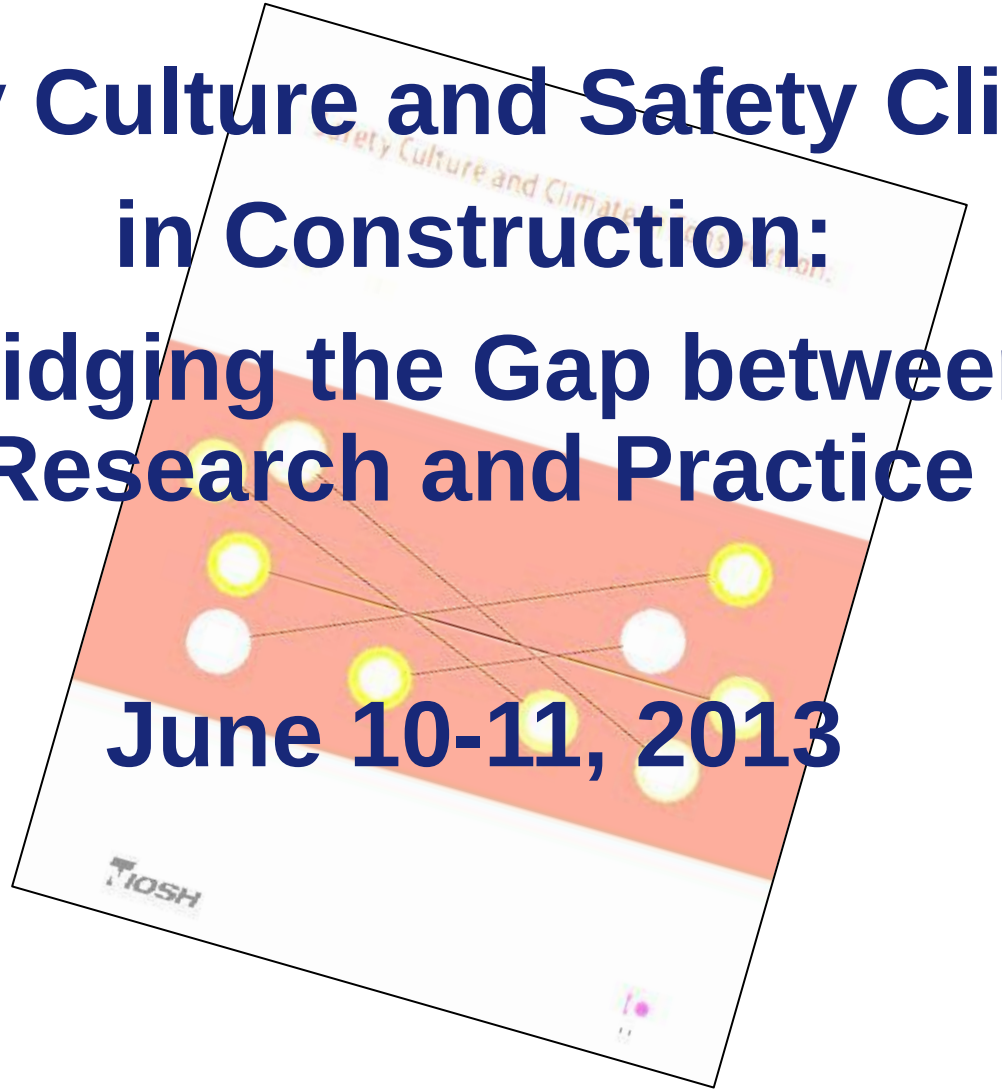
- Non-profit
- Founded in 1990
- Mission: High-quality and high-impact safety and health research, training & service
- NIOSH's National Construction Center
- Translate research into useful resources available to all at no cost

www.cpwr.com

Define – Measure – Improve

Photo courtesy of Miller and Long Co.

Safety Culture and Safety Climate in Construction: Bridging the Gap between Research and Practice



June 10-11, 2013

Report available at **www.cpwr.com**

Definitions

Safety Culture = Work as Imagined

Unspoken beliefs, attitudes and values that establish the norms about how safety is done in an organization.

Definitions

Safety Climate = Work as Done

Employees' perceptions of the consistency between what their company says or writes about safety and health (e.g., safety culture) and what is practiced on the job site.

Eight Leading Indicators of Jobsite Safety Climate

1. Demonstrate management commitment
2. Align and integrate safety as a value
3. Ensure accountability at all levels
4. Improve supervisory leadership
5. Empower and involve employees
6. Improve communication
7. Train at all levels
8. Encourage owner/client involvement

Safety Climate Assessment Tool (S-CAT)

Indicator-specific safety management activities

Rubric Scale: Measures safety climate maturity for each activity

Safety Climate Assessment Tool (S-CAT)

S-CAT #1

Demonstrating Management Commitment

Management demonstrates commitment by engaging in the following activities:

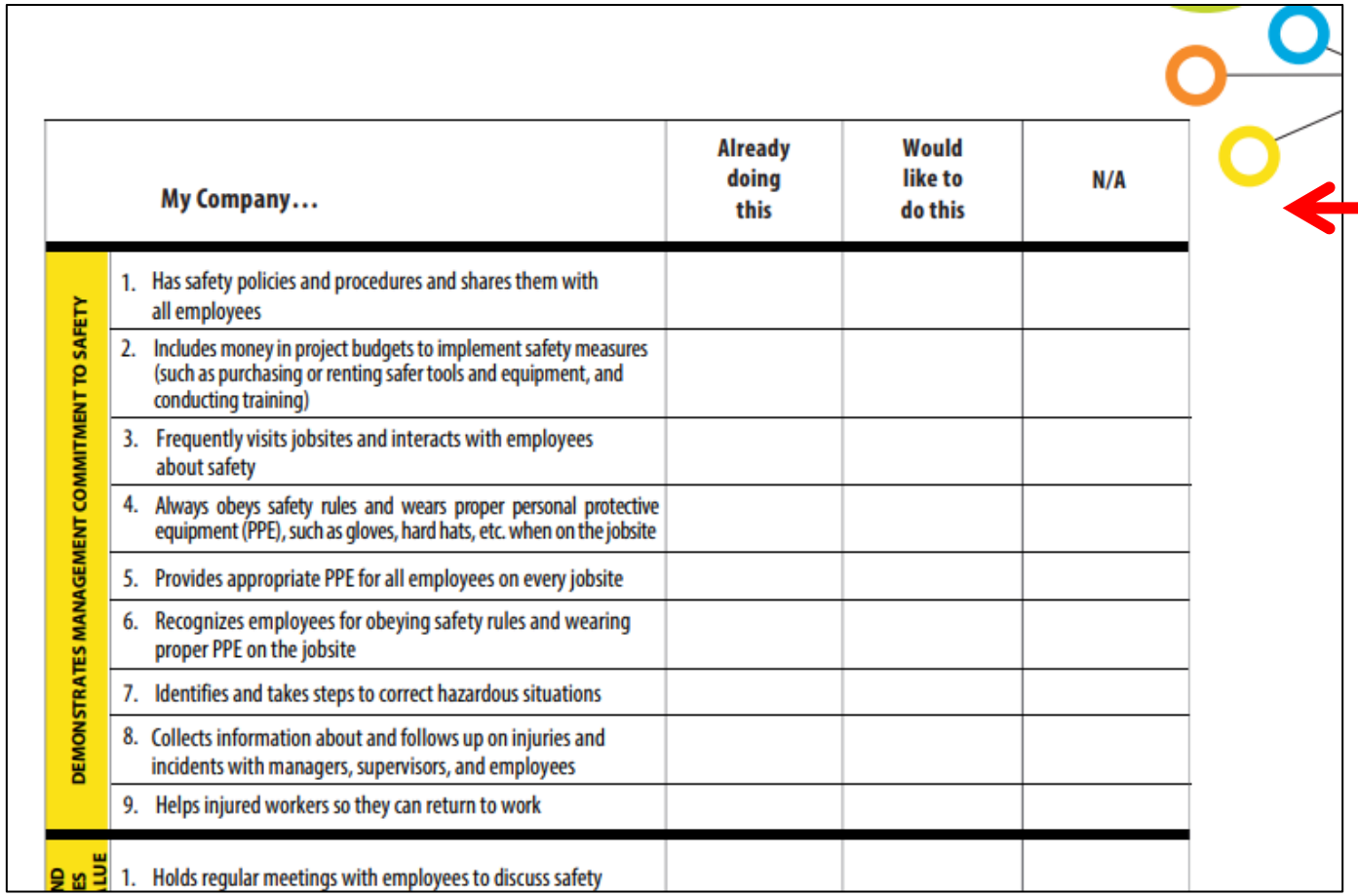
1. Being present and visible on the jobsite.
2. Always using safety behaviors and safety practices on the jobsite.
3. Identifying and reducing job hazards.
4. Having processes for corrective action following a safety incident.
5. Compassionately reacting to employee injuries.
6. Reviewing and analyzing safety policies, procedures and trends.

For each item below, carefully read the descriptions in each box going from inattentive all the way to exemplary. Circle the one that best describes management's commitment to that activity.

	INATTENTIVE →	REACTIVE →	COMPLIANT →	PROACTIVE →	EXEMPLARY	
1. In my company, management…						
	Rarely comes to the actual jobsite.	Only comes to the jobsite after an incident has occurred.	Only comes to the jobsite when required, or makes infrequent visits.	Makes regular visits to the jobsite. Interacts mostly with management.	Frequently visits the jobsite; seeks out interactions with employees	NA
2. When management is present on the jobsite, they…						
	Typically act as poor safety role models by breaking regulatory and organizational safety policies and procedures.	Are only concerned with adhering to OSHA regulations and organizational policies and procedures after an employee injury has occurred.	Strictly conform to required OSHA regulations and organizational safety policies and procedures, never more or less.	Demonstrate safety behaviors above and beyond what is required.	Consistently model safety behaviors above and beyond what is required and recognize employees who do the same.	NA
3. In my company, management…						
	Does not participate in safety audits.	Only participates in safety audits in response to an employee injury or adverse safety event.	Participates in safety audits only when required.	Initiates and actively participates in internal safety audits.	Actively participates in internal safety audits and uses the information for management performance evaluation.	NA
4. In my company, management…						
	Does not want to know about any safety incident, unless it's a fatality. There are no investigations into incidents or close calls.	Resists taking steps to correct or prevent future incidents. Investigations into incidents or close calls result in punitive action toward employees.	Investigates incidents but not in a "blame-free" manner. Initiates corrective actions that comply with owner or regulatory directives.	Includes employees in both a root cause analysis and helping to come up with solutions to prevent future incidents and foster continued improvements.	Relies on a formalized process for conducting a detailed root cause analysis that reviews both processes and behaviors. Findings are discussed with everyone and preventive solutions are implemented.	NA

Safety Climate Assessment Tool for Small Contractors (S-CAT^{sc})

Indicator-specific safety management activities (same as in S-CAT)



	My Company…	Already doing this	Would like to do this	N/A
DEMONSTRATES MANAGEMENT COMMITMENT TO SAFETY	1. Has safety policies and procedures and shares them with all employees			
	2. Includes money in project budgets to implement safety measures (such as purchasing or renting safer tools and equipment, and conducting training)			
	3. Frequently visits jobsites and interacts with employees about safety			
	4. Always obeys safety rules and wears proper personal protective equipment (PPE), such as gloves, hard hats, etc. when on the jobsite			
	5. Provides appropriate PPE for all employees on every jobsite			
	6. Recognizes employees for obeying safety rules and wearing proper PPE on the jobsite			
	7. Identifies and takes steps to correct hazardous situations			
	8. Collects information about and follows up on injuries and incidents with managers, supervisors, and employees			
	9. Helps injured workers so they can return to work			
ND ES LUE	1. Holds regular meetings with employees to discuss safety			

For each activity:
Already doing it
or
Would like to do it

Eight Leading Indicators of Jobsite Safety Climate

1. Demonstrate management commitment
2. Align and integrate safety as a value
3. Ensure accountability at all levels
4. **Improve supervisory leadership**
5. Empower and involve employees
6. Improve communication
7. Train at all levels
8. Encourage owner/client involvement

Foundations for Safety Leadership

Leadership Skills

- Lead by example
- Engage & empower team members
- Actively listen
- Practice 3-way communication
- Develop team members through teaching, coaching and feedback
- Recognize team members for a job well done

FSL Use to Date

Training Material Downloads

Type	Downloads
Primary Training Materials (PPT, instructor guide, student handout)	> 30,000
Trian the Trainer materials	> 3,245

Feedback

"In order to be an effective supervisor, skills must be in place to lead the workforce. We are committed to providing those leadership skills to our supervisory staff. This 'Foundations of Safety Leadership Program' is an excellent method to do just that. The FSL Program will be made a requirement for all supervision to attend." ***Environmental Safety and Health Director, Roy Anderson Corp***

"The leadership training has broadened my way of thinking and my way of reacting to issues/ problems. We have really gotten these guys into shape. I would say a lot of it has come from this program opening your eyes about how to deal with people… they're all buying into it. It took some of them a little bit of bucking but they're buying into it very well." ***Foreman***

"I've been a safety and health trainer for over 33 years, and I really enjoy teaching the FSL. I think the developers put together a well-designed curriculum including a complete PowerPoint presentation and an excellent, easy-to-follow instructor guide. Students I've had in FSL classes have reported enjoying and benefitting from the class, and they say they are looking forward to using the skills when they get back to their jobsites." ***OSHA Master Trainer***

Foundations for Safety Leadership

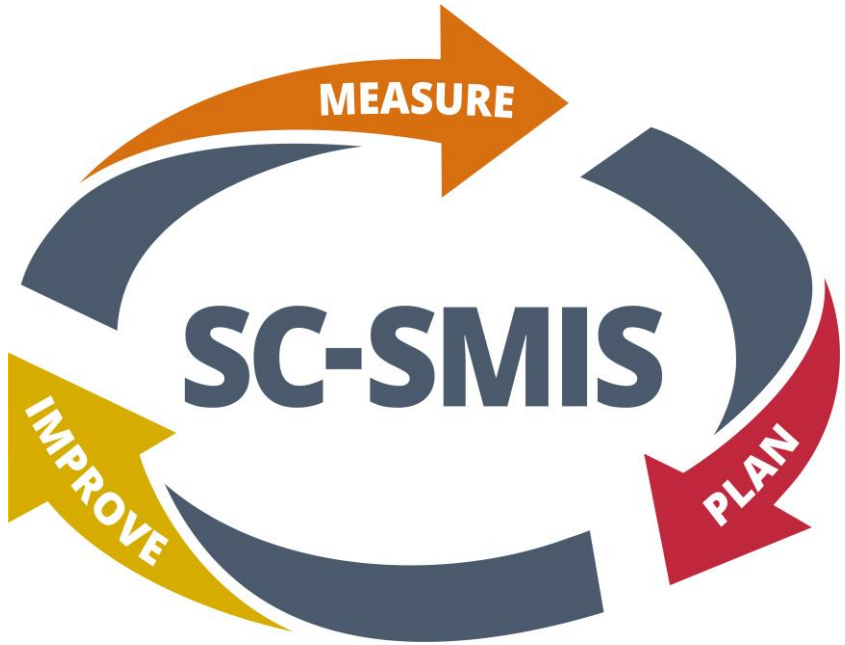
www.cpwr.com

Search FSL

But What About the Other Seven Indicators?

- ? Demonstrate management commitment
- ? Align and integrate safety as a value
- ? Ensure accountability at all levels
- ✓ Improve supervisory leadership
- ? Empower and involve employees
- ? Improve communication
- ? Train at all levels
- ? Encourage owner/client involvement

Safety Climate – Safety Management Information System (SC-SMIS)

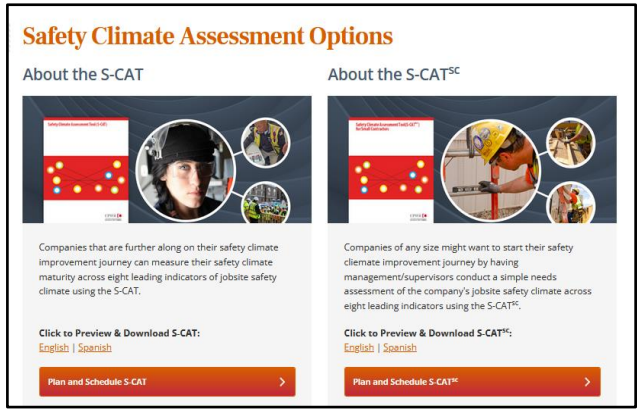


Why We Created the SC-SMIS

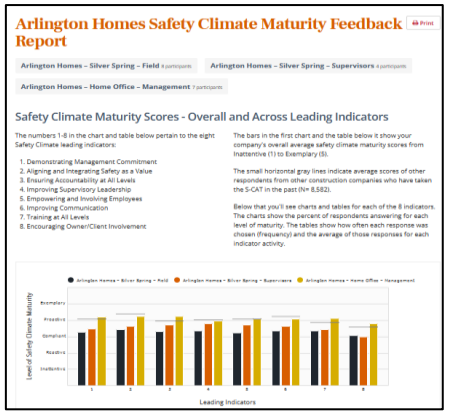
Make available an easy-to-use, interactive, web-based system that construction companies, regardless of size or available resources, can use – **at no cost** – to engage in continuous Safety Climate and Safety Management improvement.

Continuous Safety Management & Safety Climate Improvement

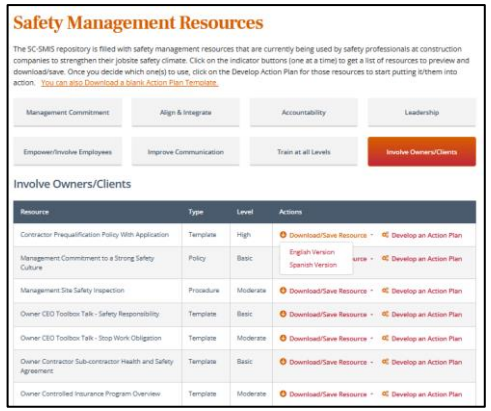
Conduct safety climate assessments



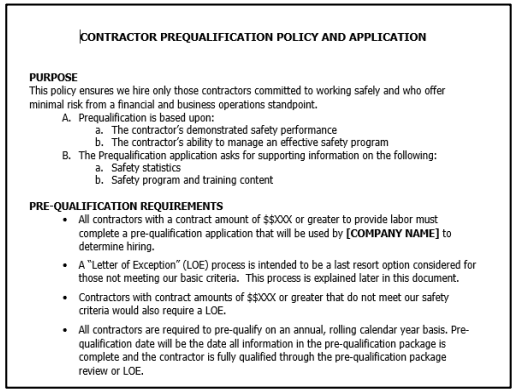
Run reports



Safety management resource repository



Download/tailor resources



CONTRACTOR PREQUALIFICATION POLICY AND APPLICATION

PURPOSE

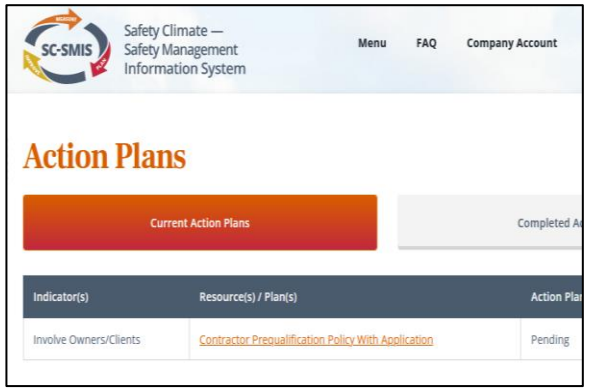
This policy ensures we hire only those contractors committed to working safely and who offer minimal risk from a financial and business operations standpoint.

A. Prequalification is based upon:
   a. The contractor's demonstrated safety performance
   b. The contractor's ability to manage an effective safety program
B. The Prequalification application asks for supporting information on the following:
   a. Safety statistics
   b. Safety program and training content

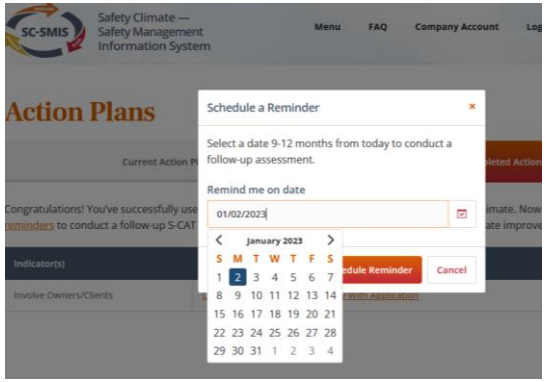
PRE-QUALIFICATION REQUIREMENTS

- All contractors with a contract amount of $$XXX or greater to provide labor must complete a pre-qualification application that will be used by **[COMPANY NAME]** to determine hiring.
- A "Letter of Exception" (LOE) process is intended to be a last resort option considered for those not meeting our basic criteria. This process is explained later in this document.
- Contractors with contract amounts of $$XXX or greater that do not meet our safety criteria would also require a LOE.
- All contractors are required to pre-qualify on an annual, rolling calendar year basis. Pre-qualification date will be the date all information in the pre-qualification package is complete and the contractor is fully qualified through the pre-qualification package review or LOE.

Plan implementation



Schedule annual assessment



Project Team

CPWR

Linda M. Goldenhar, MS, PhD

Babak Memarian, PhD, CSP, CHST

Jean Christopher Le, MPH

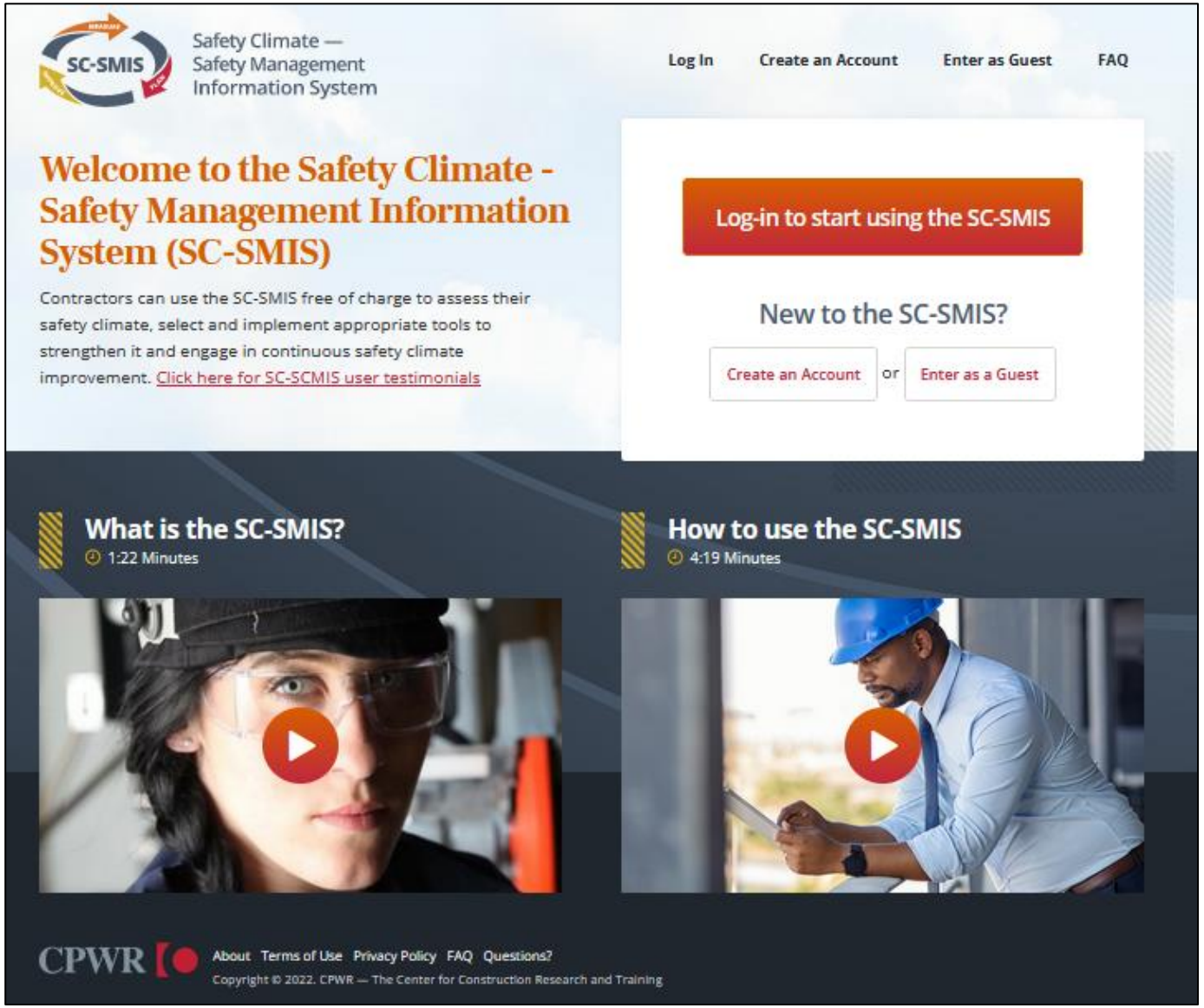
Sherri Wilson

Web Design/Developer

Wood Street, Inc www.woodst.com

User Development Team (UDT)

- Bruce & Merrilees Electric Company
- Christenson Electric
- Choate Construction
- Jamerson-Lewis Construction
- Keller - North America
- Leopardo Companies, Inc.
- Manafort-Precision, LLC
- Metcon, Ltd
- NTD Mechanical
- Phase 2 Construction Company
- Wildcat Construction



www.scsmis.com

Create an SC-SMIS Account

Company Information

Company Name *: Arlington Homes

Zip/Postal Code *: 25505

Is this a construction company? * : (•) Yes ( ) No

Primary SC-SMIS Administrator

First Name *: Linda

Last Name *: Goldenhar

Email Address *: lgoldenhar@cpwr.com

Alternate SC-SMIS Administrator

First Name *: Sherri

Last Name *: Wilson

Email Address *: swilson@cpwr.com

Delete

Account Credentials

User ID *: lgoldenhar@cpwr.com

Password *: •••••••

Confirm Password *: •••••••

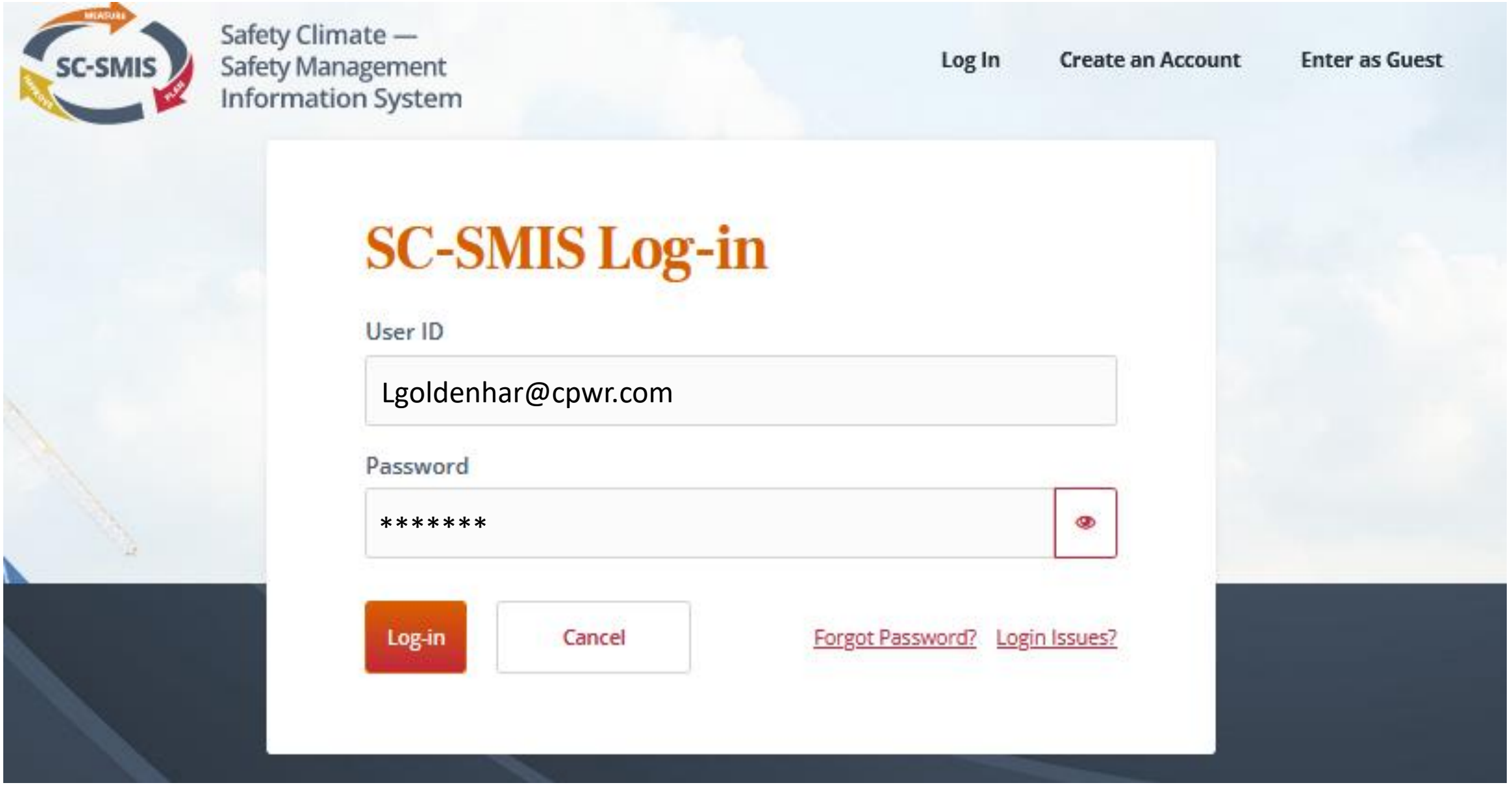
Password must contain at least one upper case letter, one number, and one symbol

Confirm you're not a robot by sliding the arrow over →

I'm not a robot ✓

Create Account

Cancel


SC-SMIS
Safety Climate —
Safety Management
Information System
Log In
Create an Account
Enter as Guest
SC-SMIS Log-in
User ID
Lgoldenhar@cpwr.com
Password
****
Log-in
Cancel
Forgot Password?
Login Issues?

SC-SMIS
Safety Climate — Safety Management Information System
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FAQ
Company Account
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Quick Links
Welcome to the Safety Climate - Safety Management Information System (SC-SMIS)
The Safety Climate Assessment Tool (S-CAT)
Learn More About the S-CAT
Schedule S-CAT Assessment
S-CAT Results & Reports
Small Contractor Safety Climate Assessment Tool (S-CATSC)
Learn More About the S-CATSC
Schedule S-CATSC Assessment
S-CATSC Results & Reports
Safety Management Resources
Current and Completed Action Plans

Safety Climate Assessment Options

About the S-CAT

Companies that are further along on their safety climate improvement journey can measure their safety climate maturity across eight leading indicators of jobsite safety climate using the S-CAT.

Click to Preview & Download S-CAT:
English | Spanish

Plan and Schedule S-CAT ›

About the S-CAT^{SC}

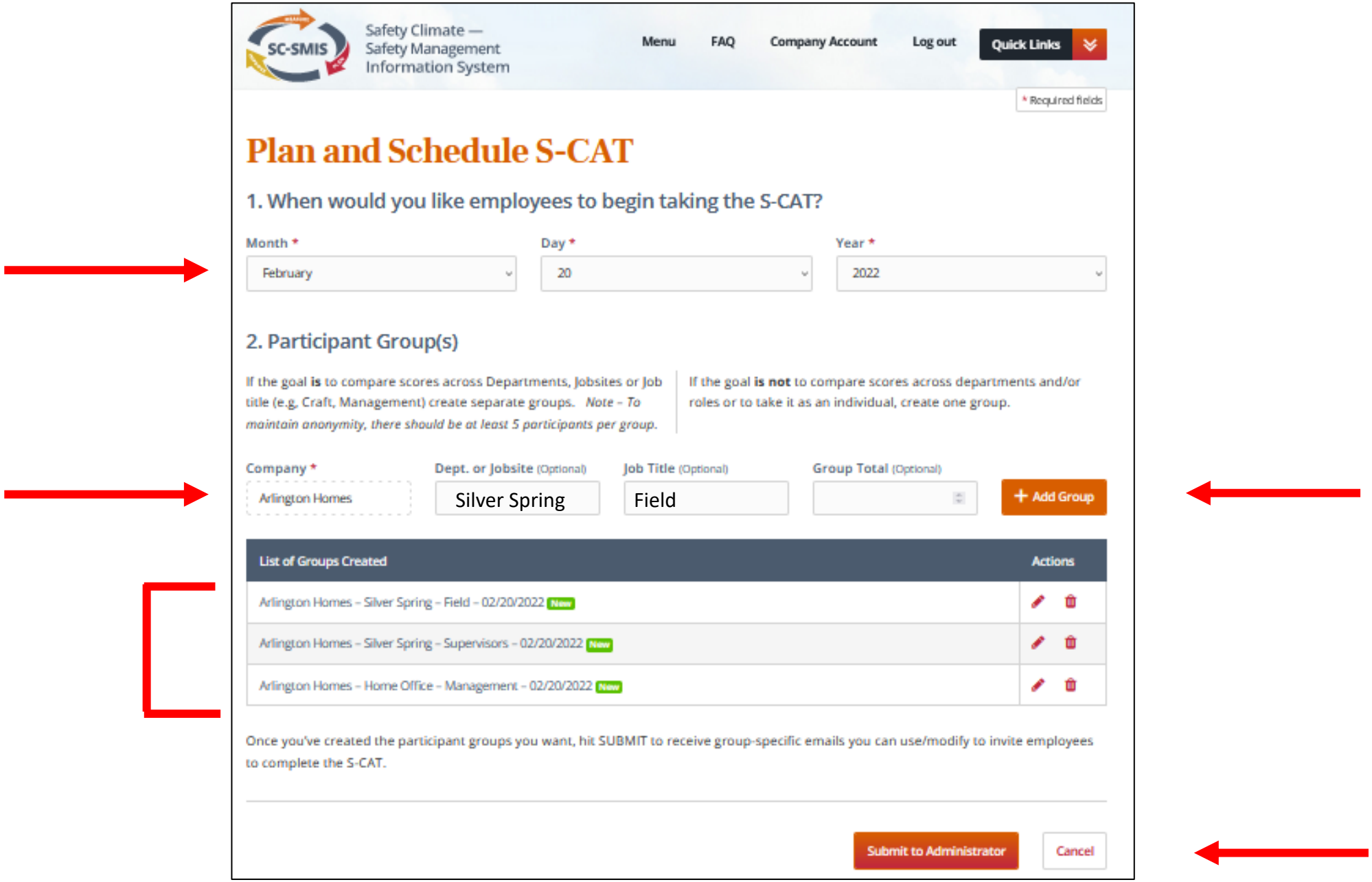
Companies of any size might want to start their safety cliemate improvement journey by having management/supervisors conduct a simple needs assessment of the company's jobsite safety climate across eight leading indicators using the S-CAT^{SC}.

Click to Preview & Download S-CAT^{SC}:
English | Spanish

Plan and Schedule S-CAT^{SC} ›

Safety Climate Leading Indicators

- Demonstrate management commitment
- Align safety as a value
- Ensure accountability
- Improve supervisory leadership
- Empower and involve employees
- Improve communication
- Train at all levels
- Involve owner/client in safety


SC-SMIS
Safety Climate — Safety Management Information System
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* Required fields
Plan and Schedule S-CAT
1. When would you like employees to begin taking the S-CAT?
Month *
February
Day *
20
Year *
2022
2. Participant Group(s)
If the goal is to compare scores across Departments, Jobsites or Job title (e.g, Craft, Management) create separate groups. Note – To maintain anonymity, there should be at least 5 participants per group.
If the goal is not to compare scores across departments and/or roles or to take it as an individual, create one group.
Company *
Arlington Homes
Dept. or Jobsite (Optional)
Silver Spring
Job Title (Optional)
Field
Group Total (Optional)
+ Add Group
List of Groups Created
Actions
Arlington Homes – Silver Spring – Field – 02/20/2022 New
Arlington Homes – Silver Spring – Supervisors – 02/20/2022 New
Arlington Homes – Home Office – Management – 02/20/2022 New
Once you've created the participant groups you want, hit SUBMIT to receive group-specific emails you can use/modify to invite employees to complete the S-CAT.
Submit to Administrator
Cancel

Instructions for Admin

Email text to tailor and forward

Safety Climate — Safety Management Information System

Here is a sample email you can use/modify inviting employees to participate in the S-CAT. Remember to keep the unique URL as is.

***Note – Click here to see options for employees who don't have access to email.**

Target Group: Arlington Homes – Silver Spring – Field

Dear valued employee,

Arlington Homes needs your valuable input and feedback so we can continue to improve the safety climate on your jobsites.

We're asking our employees to spend approximately 20 minutes taking the S-CAT survey that was developed by CPWR – The Center for Construction Research and Training (www.cpwr.com). You can answer the questions using a mobile device, tablet, or desktop computer.

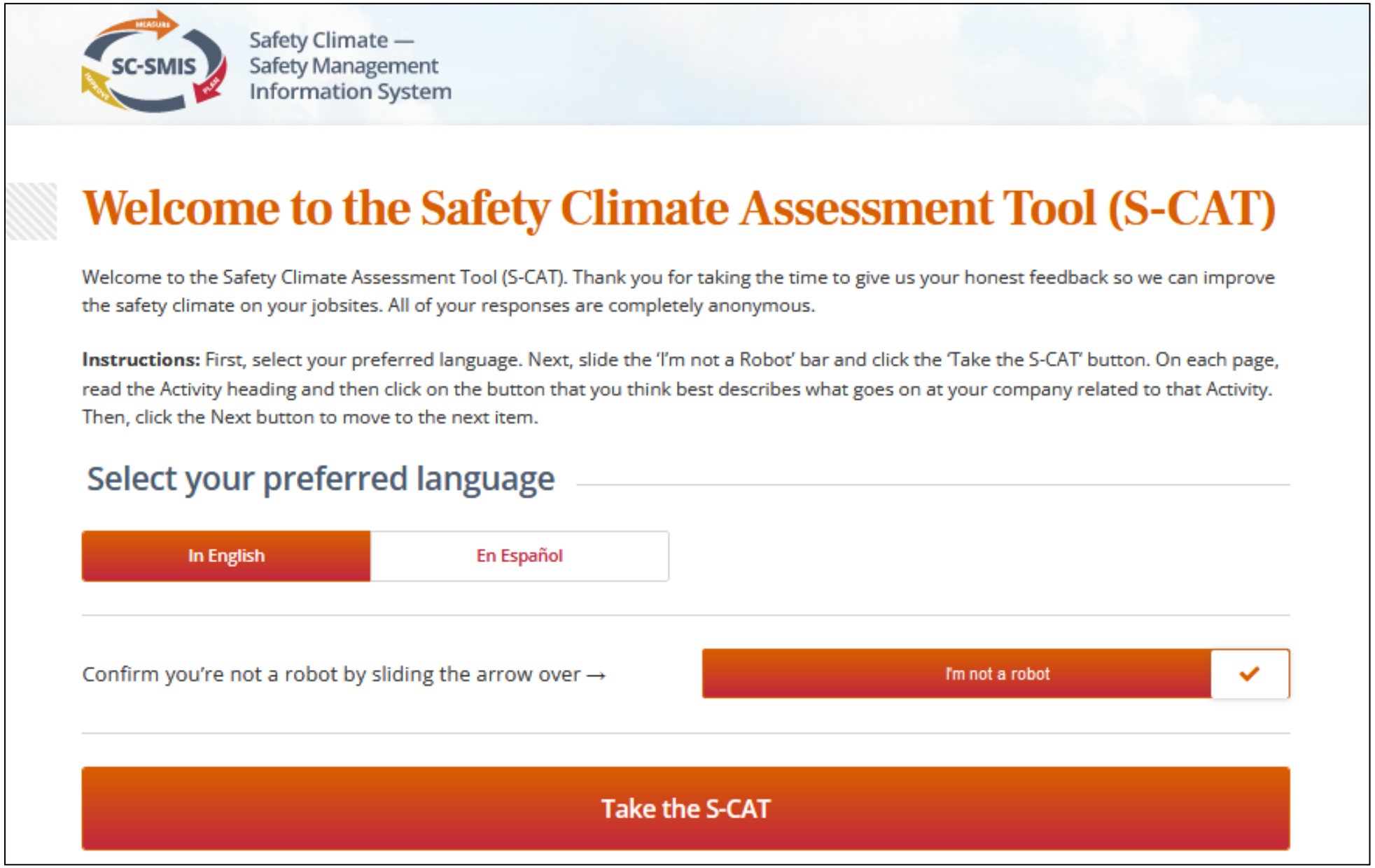
Employee answers are completely anonymous and cannot be linked back to an individual. The computer program will combine all of the responses together in a large database and no one at Arlington Homes will have access to the database.

To take the S-CAT please click on this link https://www.scsmis.com/survey/take/PeXD6v0q13PElrmj before [END DATE].

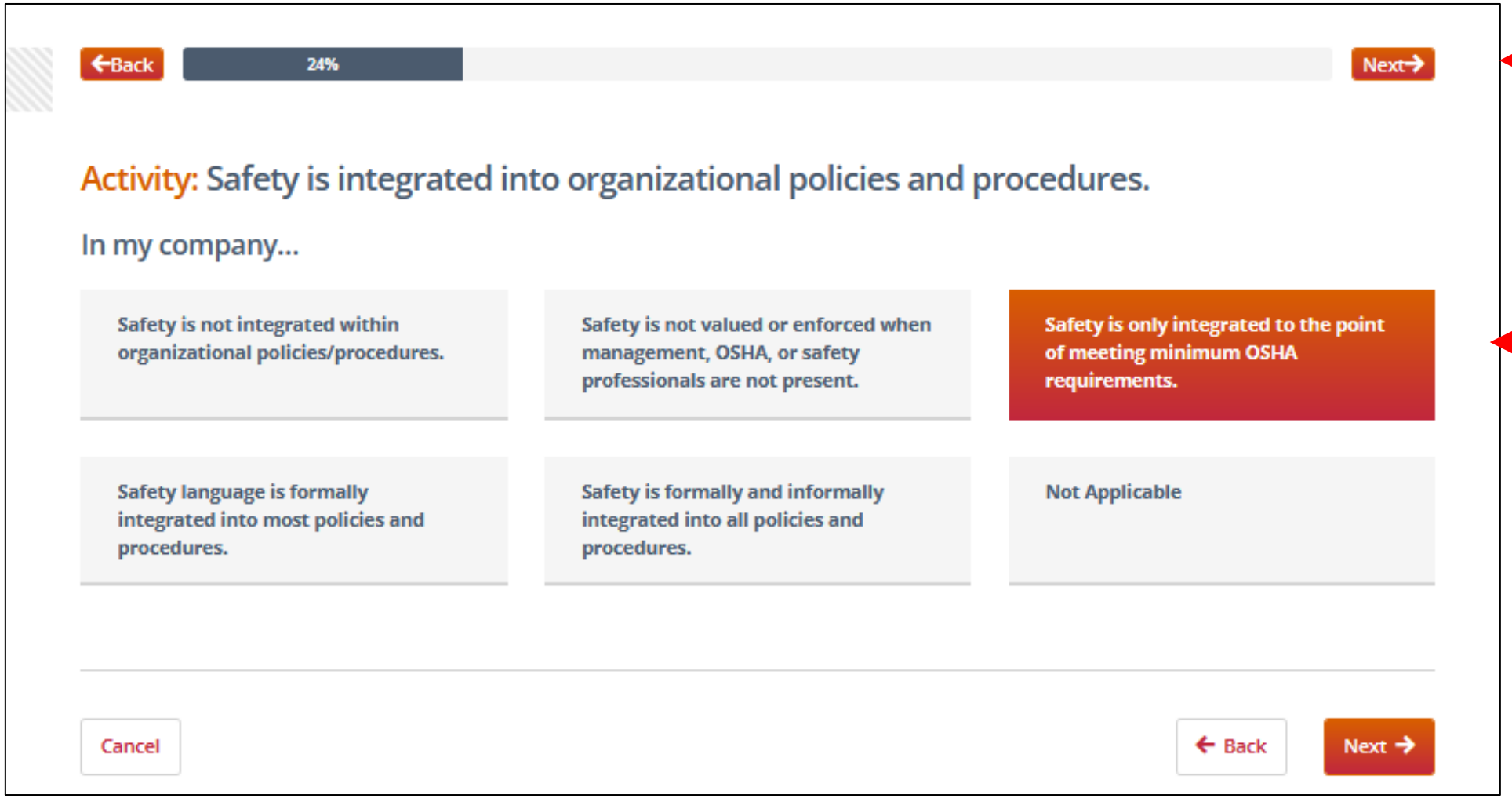
Thank you for taking the time to help keep your jobsites safe!

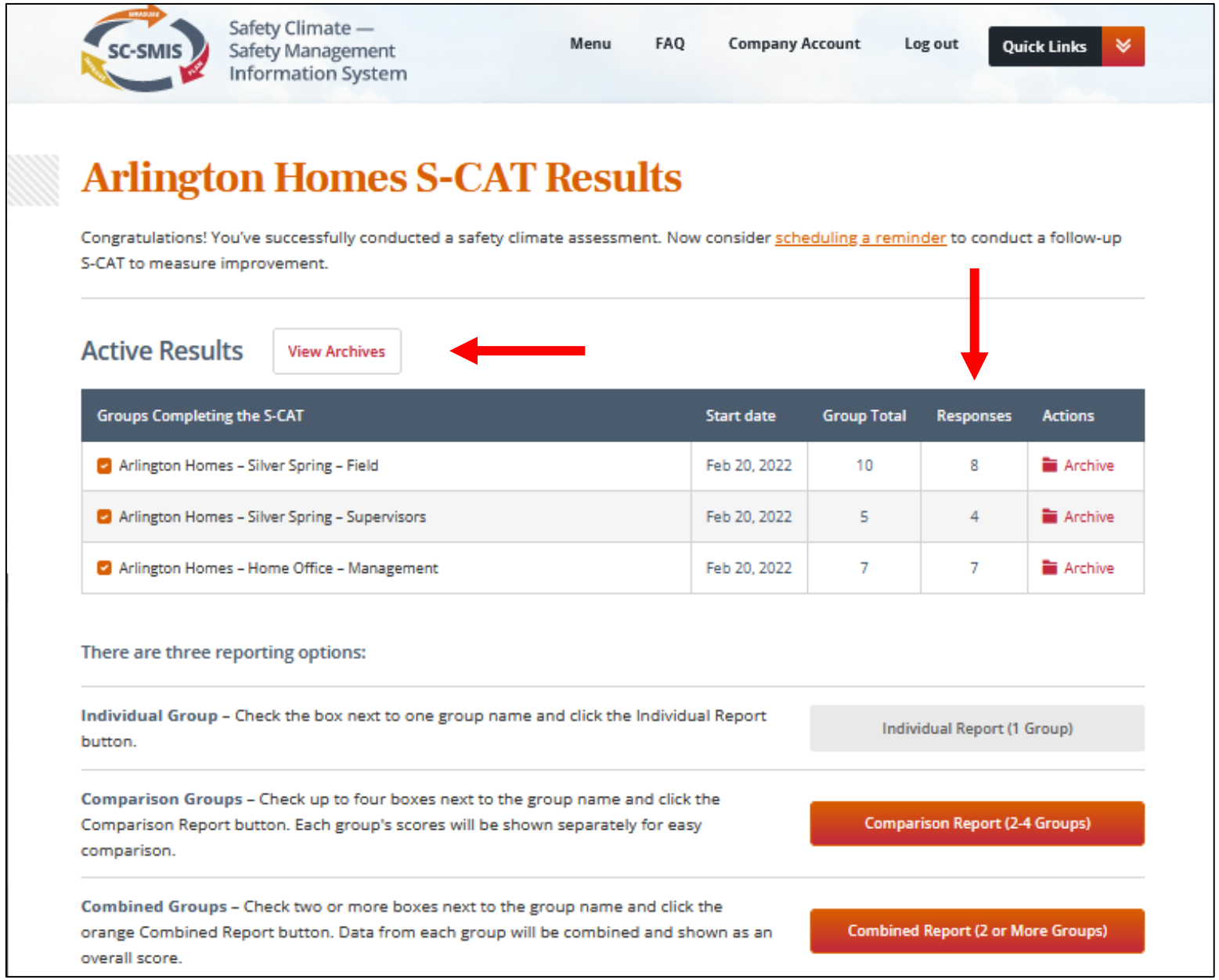
CEO, Safety Director, etc.

Group-specific URL that must not be changed


SC-SMIS
Safety Climate —
Safety Management
Information System
Welcome to the Safety Climate Assessment Tool (S-CAT)
Welcome to the Safety Climate Assessment Tool (S-CAT). Thank you for taking the time to give us your honest feedback so we can improve the safety climate on your jobsites. All of your responses are completely anonymous.
Instructions: First, select your preferred language. Next, slide the 'I'm not a Robot' bar and click the 'Take the S-CAT' button. On each page, read the Activity heading and then click on the button that you think best describes what goes on at your company related to that Activity. Then, click the Next button to move to the next item.
Select your preferred language
In English
En Español
Confirm you're not a robot by sliding the arrow over →
I'm not a robot
Take the S-CAT

Sample S-CAT Item




SC-SMIS
Safety Climate — Safety Management Information System
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Arlington Homes S-CAT Results
Congratulations! You've successfully conducted a safety climate assessment. Now consider scheduling a reminder to conduct a follow-up S-CAT to measure improvement.
Active Results
View Archives
Groups Completing the S-CAT
Start date
Group Total
Responses
Actions
Arlington Homes – Silver Spring – Field
Feb 20, 2022
10
8
Archive
Arlington Homes – Silver Spring – Supervisors
Feb 20, 2022
5
4
Archive
Arlington Homes – Home Office – Management
Feb 20, 2022
7
7
Archive
There are three reporting options:
Individual Group – Check the box next to one group name and click the Individual Report button.
Individual Report (1 Group)
Comparison Groups – Check up to four boxes next to the group name and click the Comparison Report button. Each group's scores will be shown separately for easy comparison.
Comparison Report (2-4 Groups)
Combined Groups – Check two or more boxes next to the group name and click the orange Combined Report button. Data from each group will be combined and shown as an overall score.
Combined Report (2 or More Groups)

Overall Safety Climate Maturity Score

Arlington Homes Safety Climate Maturity Feedback Report

Print

Arlington Homes – Silver Spring – Field 8 participants

Arlington Homes – Silver Spring – Supervisors 4 participants

Arlington Homes – Home Office – Management 7 participants

Safety Climate Maturity Scores - Overall and Across Leading Indicators

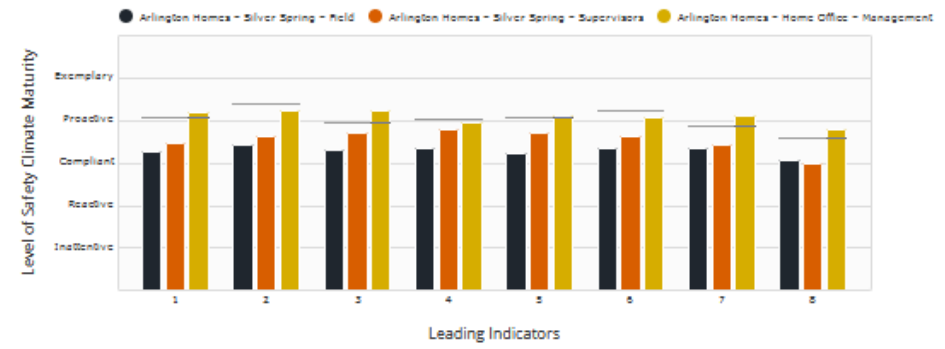
The numbers 1-8 in the chart and table below pertain to the eight Safety Climate leading indicators:

1. Demonstrating Management Commitment
2. Aligning and Integrating Safety as a Value
3. Ensuring Accountability at All Levels
4. Improving Supervisory Leadership
5. Empowering and Involving Employees
6. Improving Communication
7. Training at All Levels
8. Encouraging Owner/Client Involvement

The bars in the first chart and the table below it show your company's overall average safety climate maturity scores from Inattentive (1) to Exemplary (5).

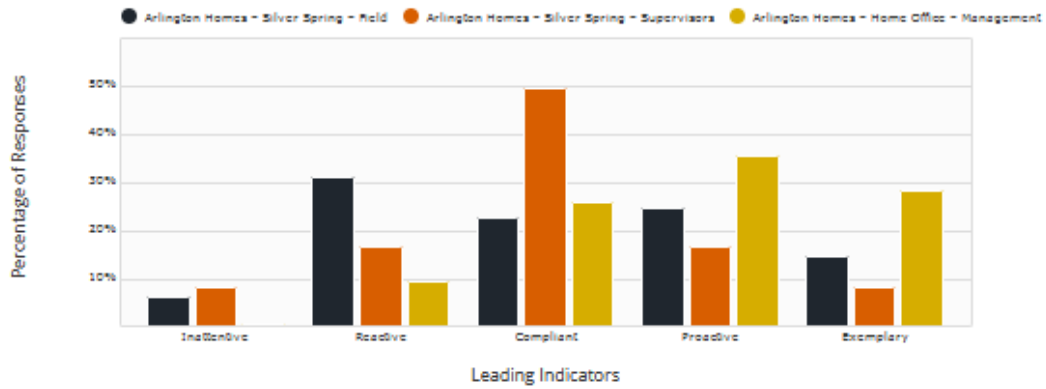
The small horizontal gray lines indicate average scores of other respondents from other construction companies who have taken the S-CAT in the past (N= 8,582).

Below that you'll see charts and tables for each of the 8 indicators. The charts show the percent of respondents answering for each level of maturity. The tables show how often each response was chosen (frequency) and the average of those responses for each indicator activity.

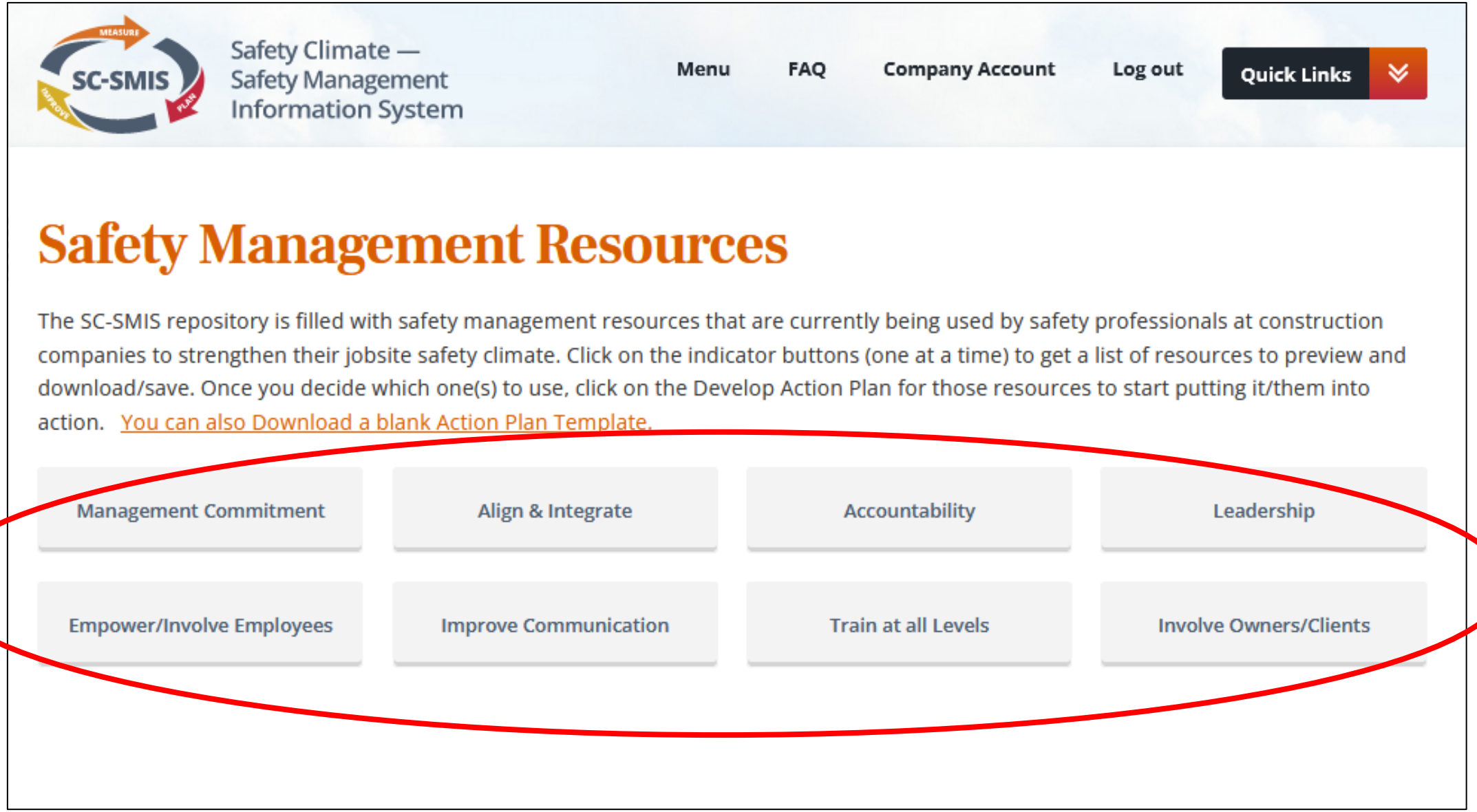


Maturity Scores for Each Indicator

8. Encouraging Owner/Client Involvement



Safety Climate Maturity Levels - Percent Totals	○	●	●
Inattentive	6.2%	8.3%	0.0%
Reactive	31.2%	16.7%	9.5%
Compliant	22.9%	50.0%	26.2%
Proactive	25.0%	16.7%	35.7%
Exemplary	14.6%	8.3%	28.6%


SC-SMIS
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Safety Management Resources
The SC-SMIS repository is filled with safety management resources that are currently being used by safety professionals at construction companies to strengthen their jobsite safety climate. Click on the indicator buttons (one at a time) to get a list of resources to preview and download/save. Once you decide which one(s) to use, click on the Develop Action Plan for those resources to start putting it/them into action. You can also Download a blank Action Plan Template.
Management Commitment
Align & Integrate
Accountability
Leadership
Empower/Involve Employees
Improve Communication
Train at all Levels
Involve Owners/Clients

Safety Management Resources

The SC-SMIS repository is filled with safety management resources that are currently being used by safety professionals at construction companies to strengthen their jobsite safety climate. Click on the indicator buttons (one at a time) to get a list of resources to preview and download/save. Once you decide which one(s) to use, click on the Develop Action Plan for those resources to start putting it/them into action. You can also Download a blank Action Plan Template.

Management Commitment	Align & Integrate	Accountability	Leadership
Empower/Involve Employees	Improve Communication	Train at all Levels	Involve Owners/Clients

Involve Owners/Clients

Resource	Type	Level	Actions
Contractor Prequalification Policy With Application	Template	High	Download/Save Resource · Develop an Action Plan
Management Commitment to a Strong Safety Culture	Policy	Basic	English Version · Spanish Version · Develop an Action Plan
Management Site Safety Inspection	Procedure	Moderate	Download/Save Resource · Develop an Action Plan
Owner CEO Toolbox Talk - Safety Responsibility	Template	Basic	Download/Save Resource · Develop an Action Plan
Owner CEO Toolbox Talk - Stop Work Obligation	Template	Moderate	Download/Save Resource · Develop an Action Plan
Owner Contractor Sub-contractor Health and Safety Agreement	Template	Basic	Download/Save Resource · Develop an Action Plan
Owner Controlled Insurance Program Overview	Template	Moderate	Download/Save Resource · Develop an Action Plan

Develop a Plan to Put the Resources into Action

Indicator: Involve Owners/Clients

Resource: Contractor Prequalification Policy With Application

Target Group

Client

What do you want to accomplish by using this resource? (Goal[s])

Ask her to use this procedure when hiring contractors

What action steps will be taken to accomplish the goal?

Action Step 1	Lead Person	Start Date
Tailor the doc for Arlington Homes	Linda	03/01/2022
Action Step 2	**Lead Person**	**Start Date**
ake a presentation at monthly meeting	Linda	03/14/2022

+ Add Another Action Step

What information will be collected to know if the goal was accomplished?

For example – Did the desired change happen (Y/N), How often did it happen? (frequency or time-duration), How was the uptake? (# of participants), Are employees pleased with the change? (pre- and post- satisfaction surveys)

Notes

Optional

Once saved, you can open, access, and edit/update this plan on the CURRENT Action Plan page

Save/Create Plan

Cancel

Safety Climate — Safety Management Information System

Menu FAQ Company Account Log out Quick Links

Action Plans

Current Action Plans | Completed Action Plans

Indicator(s)	Resource(s) / Plan(s)	Action Plan(s) Status	Action(s)
Involve Owners/Clients	Contractor Prequalification Policy With Application	Pending	View/Edit Plan

SC-SMIS Safety Climate — Safety Management Information System

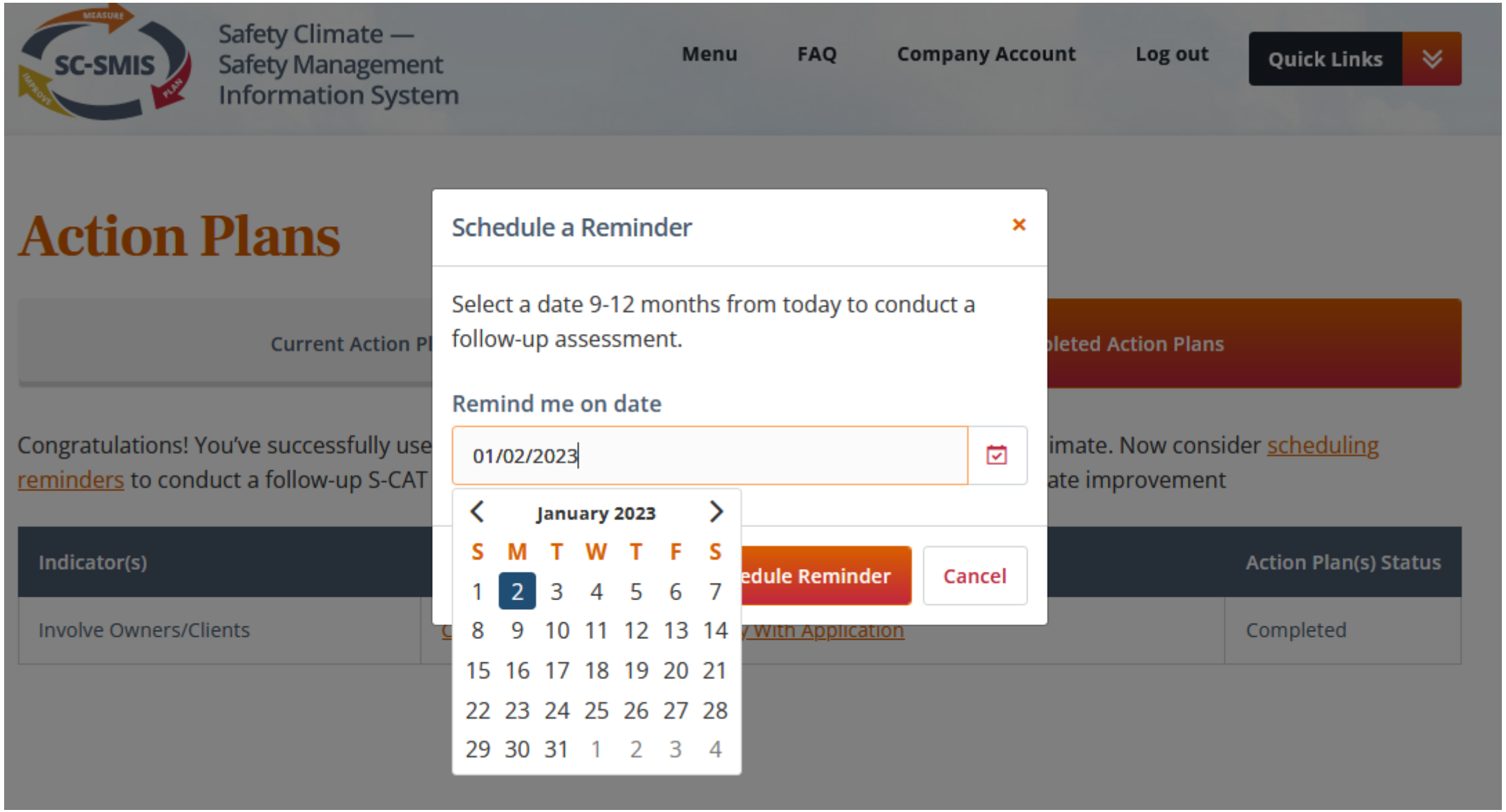
Menu FAQ Company Account Log out Quick Links

Action Plans

Current Action Plans | Completed Action Plans

Congratulations! You've successfully use the SC-SMIS to strengthen your company's job site safety climate. Now consider scheduling reminders to conduct a follow-up S-CAT or to begin using a new resource for continuous safety climate improvement

Indicator(s)	Resource(s) / Plan(s)	Action Plan(s) Status
Management Commitment	Company Safety and Health Policy	Completed


SC-SMIS
Safety Climate — Safety Management Information System
Menu
FAQ
Company Account
Log out
Quick Links
Action Plans
Current Action Pl
leted Action Plans
Congratulations! You've successfully use
imate. Now consider scheduling
reminders to conduct a follow-up S-CAT
ate improvement
Indicator(s)
Action Plan(s) Status
Involve Owners/Clients
With Application
Completed
Schedule a Reminder
Select a date 9-12 months from today to conduct a follow-up assessment.
Remind me on date
01/02/2023
January 2023
S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
edule Reminder
Cancel

SC-SMIS Use (Jan 1- May 6)

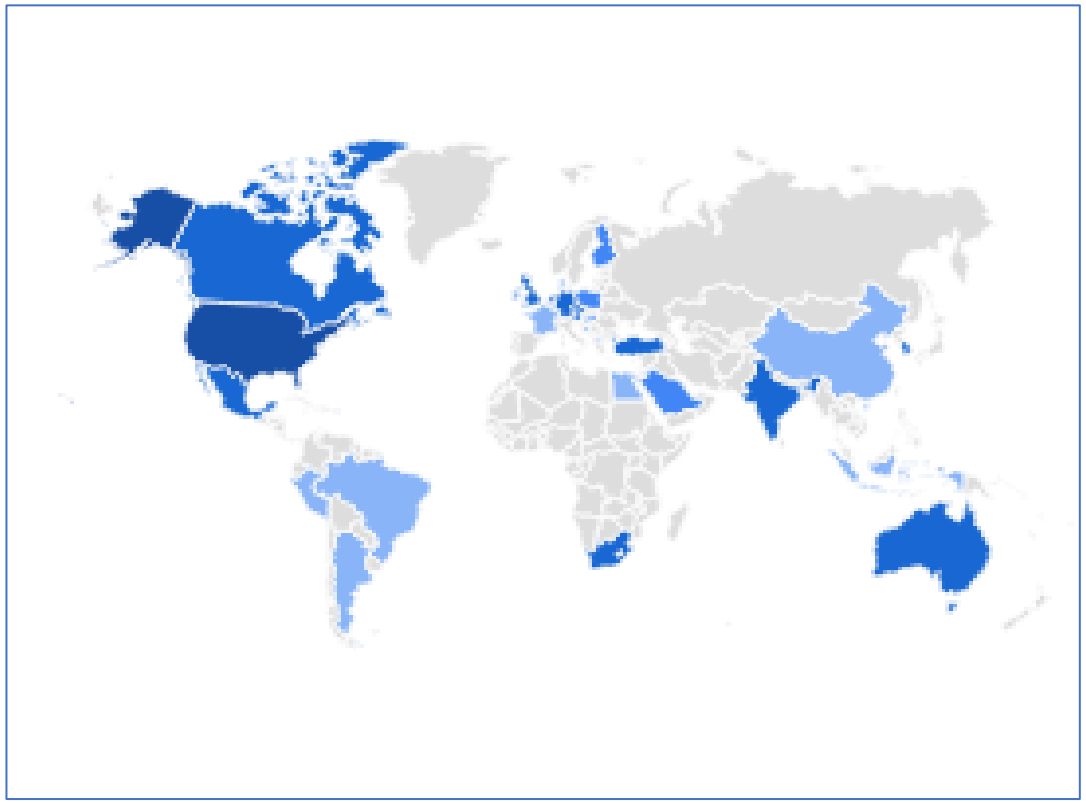
How’s it going so far?

- Pilot test
- CPWR announcement
- CPWR Webinar
- Presentations

SC-SMIS Use (Jan 1- May 6)

Where are Users From?

4,500 new user visits



Top 10

United States (85%)

Canada

China

Czechia

Germany

UK

Hong Kong

South Korea

India

South Africa

SC-SMIS Use (Jan 1- May 6)

Company Users

Type	Number
Guests	110
Accounts Created	138 Construction
	81 Non-construction
Total	**219**

SC-SMIS Use (Jan 1- May 6)

Safety Climate Assessments

	# Companies Conducting an Assessment	Total # of Responses
S-CAT	49 (49/219 = 22%)	1,874
S-CAT^{sc}	21 (21/219 10%)	371

* Benchmark database – 9,404 responses (includes prior S-CAT data)

SC-SMIS Use (Jan 1- May 6)

Safety Management Resources Downloaded

Indicator (Number of Resources)	# Downloaded
Accountability (13)	3,660
Align and Integrate (9)	2,229
Empower and Involve (11)	1,455
Improve Communication (10)	2,060
Involve Owners/Clients (11)	594
Supervisor Leadership (9)	2,859
Management Commitment (14)	2,369
Train at All Levels (12)	2,039
Total = 89	**17,265**

SC-SMIS Use (Jan 1- May 6)

Top 10 Resources Downloaded

Indicator	Resource
Leadership	Foundations for Safety Leadership Handbook
Leadership	Foundations for Safety Leadership Course Description
Leadership	Foundations for Safety Leadership Self-Assessment & Action Plan
Align & Integrate	Site Safety Audit
Accountability	Good Catch - Near Miss Reporting Program with sample templates
Accountability	Safety Recognition Program Guidelines
Accountability	Near Miss - Good Catch Program with sample reporting templates
Improve Communication	New Hire Identification
Management Commitment	Management Site Safety Inspection
Empower/Involve	Report Unsafe Condition - Stand Up Moment

Testimonials

“For what a contractor would expect to pay for a comprehensive safety climate evaluation and mitigation plan, the ‘Safety Climate-Safety Management Information System’ is a valuable tool available for all. As a mid-size general contractor, we have been able to supplement our own systems and approaches with industry-tested, scientifically-backed resources and enhance our organization’s overall safety program.” *(Medium-sized General Contractor, Washington State)*

Testimonials

"… I showed the graphs and stats to our project managers and supervisors to help decide which areas to work on and then downloaded many of the excellent safety management resources in the repository to target them. What's great about the resources is we didn't have to start from scratch or reinvent the wheel and can just tailor them for our company. I plan to use the SC-SMIS on an on-going basis to keep us on track." *(Small Specialty Subcontractor, Connecticut)*

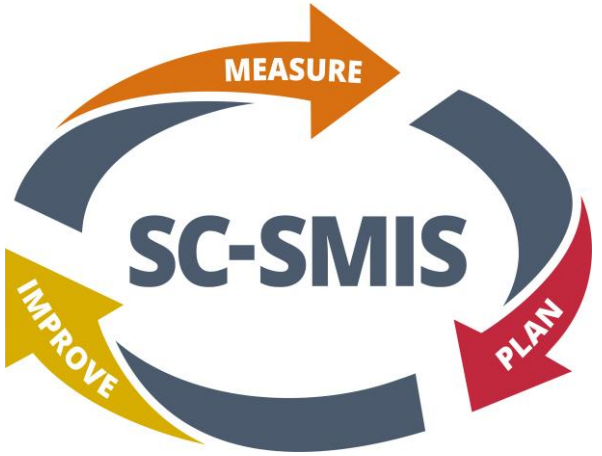
Testimonials

“I think the SC-SMIS is a great resource, and I have found great information in the S-CAT to help formulate FY strategic and tactical objectives. I think that the Action Planning feature would be a great tool for companies that currently do not develop annual strategic goals and objectives.” *(Medium-size General Contractor, Ohio)*

Testimonials

"I feel that the SC-SMIS tool provides valuable comparative data to help hone safety culture growth regardless of company size, and I will continue to advocate for [*it's*] use within our company. I do firmly feel that the tool will be very useful, particularly to companies without well-developed internal resources." *(Medium-size Specialty Subcontractor, Indiana)*

Check it out!



www.scsmis.org

Questions?
Lgoldenhar@cpwr.com

Complete the Online Evaluation