

The Purpose of the DOE/NNSA Nuclear Criticality Safety Program Technical Program Review

Douglas Bowen

NCSP Execution Manager
Oak Ridge National Laboratory

February 21, 2023
2023 NCSP Technical Program Review

Background / History–Mission Vision–Organization

Early history

- Defense Nuclear Facilities Safety Board (DNFSB) Recommendations:
 - 93-2 (3/23/1993): Need for a general-purpose critical experiment capability that will ensure safety in handling and storage of fissionable material.
 - 97-2 (5/19/1997): Need for improved criticality safety practices and programs to alleviate potential adverse impacts on safety and productivity of DOE operations.
- **DOE Implementation Plan for 93-2 and 97-2 recommendations resulted in establishment of the US NCSP**



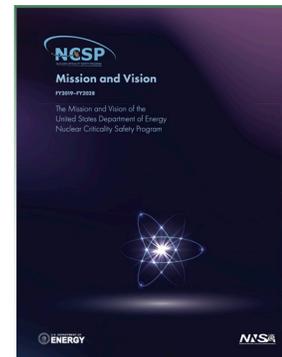
NCSP 5-year plan

Mission

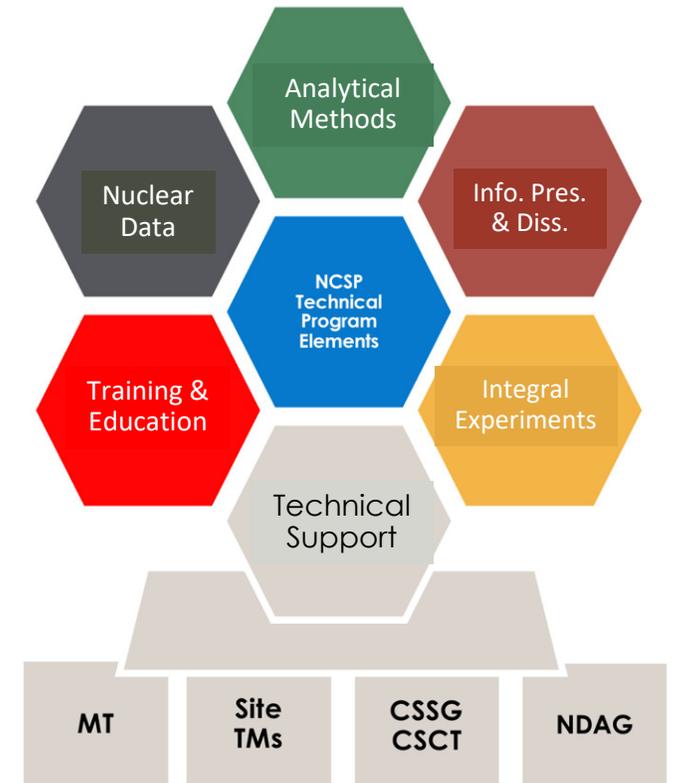
Provide sustainable expert leadership, direction and the technical infrastructure necessary to develop, maintain, and disseminate the essential technical tools, training, and data required to support safe, efficient fissionable material operations within DOE.

Vision

Continually improving, adaptable, and transparent program that communicates and collaborates globally to incorporate technology, practices, and programs to be responsive to the essential technical needs of those responsible for developing, implementing, and maintaining nuclear criticality safety.

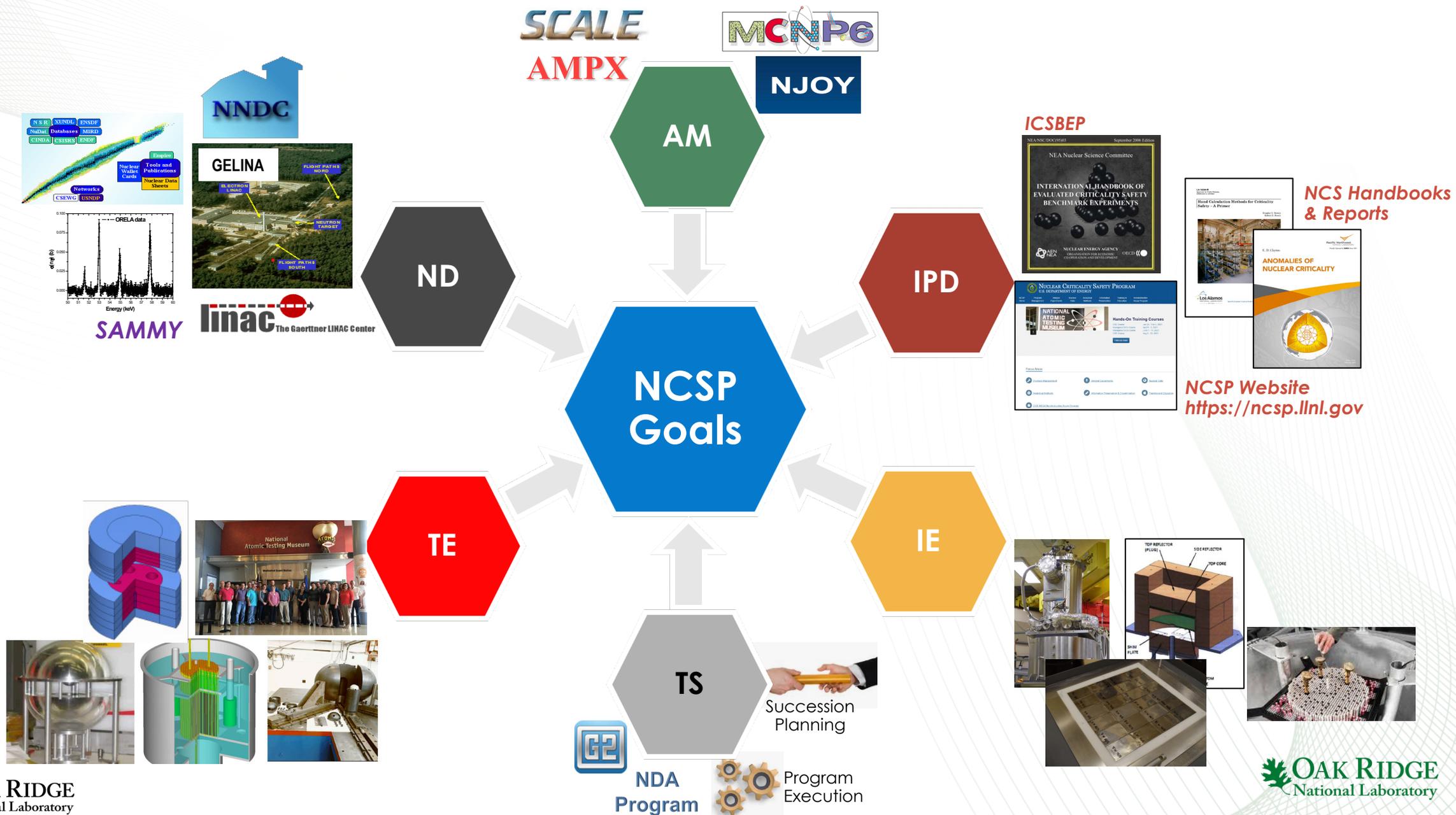


NCSP organization

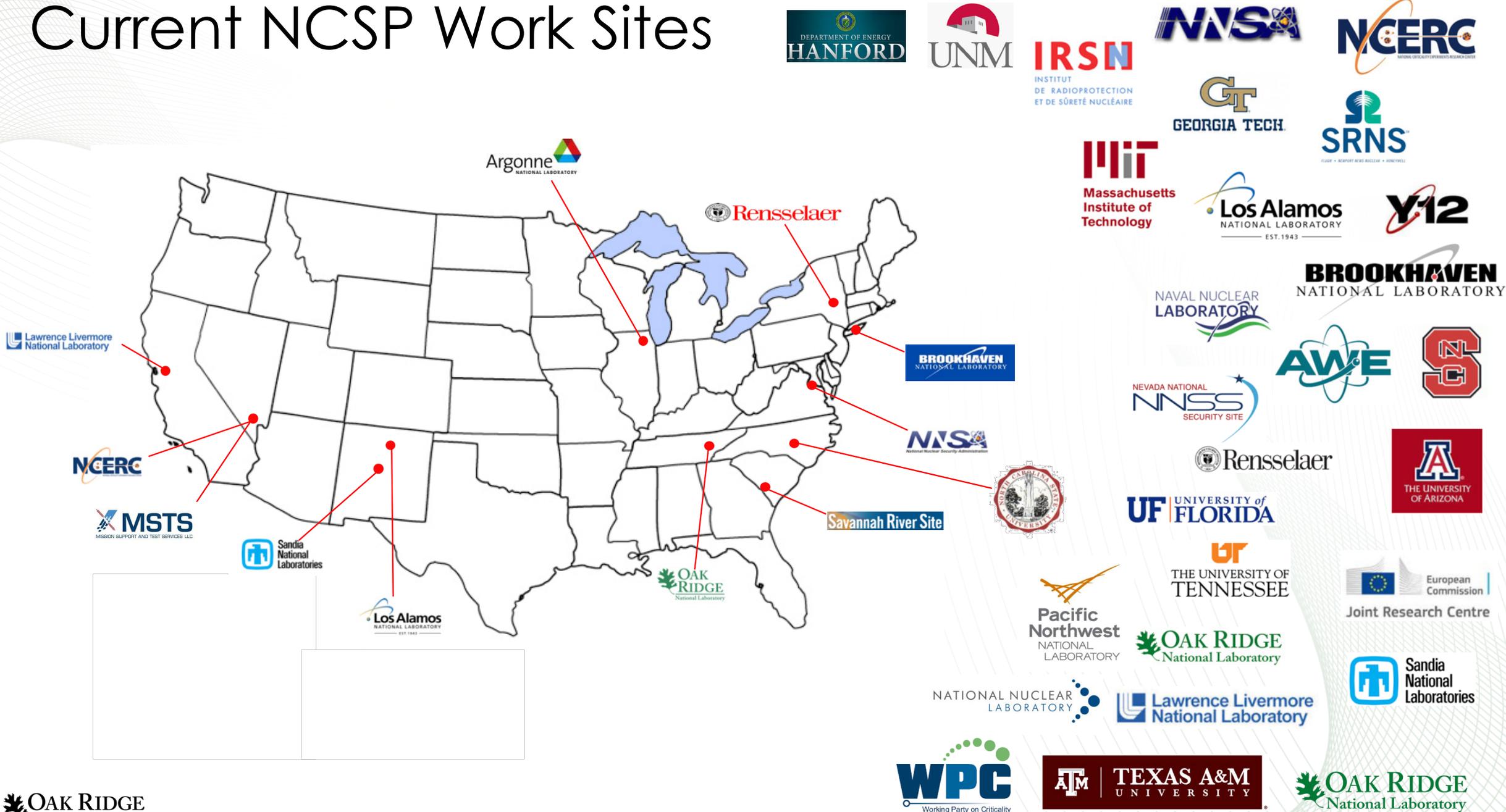


- TS** – Technical Support
- MT** – Management team
- TMs** – Task managers
- CSSG** – Criticality Safety Support Group
- CSCT** – Criticality Safety Coordinating Team
- NDAG** – Nuclear Data Advisory Group

Technical Program Element Activities



Current NCSP Work Sites



FY2022 DOE/NNSA Nuclear Criticality Safety Program (NCSP) Technical Program Review (TPR)

- TPR Agenda

- FY 2022 CSSG Summary
- Site Program Managers report FY22 budget, status report, and highlights to NCSP Manager Dr. Angela Chambers
- International collaboration discussions: AWE, IRSN, CEA
- Technical presentations by NCSP sites by technical program element
 - Invited talks (non-NCSP)

- Collaborations

- Nuclear Data Advisory Group – Mike Zerkle (NNL), Chair

**NCSP Technical Program Review Meeting and Joint Meetings
PRELIMINARY AGENDA
Sandia National Laboratory
February 21-24, 2023**

Meeting agenda subject to change.

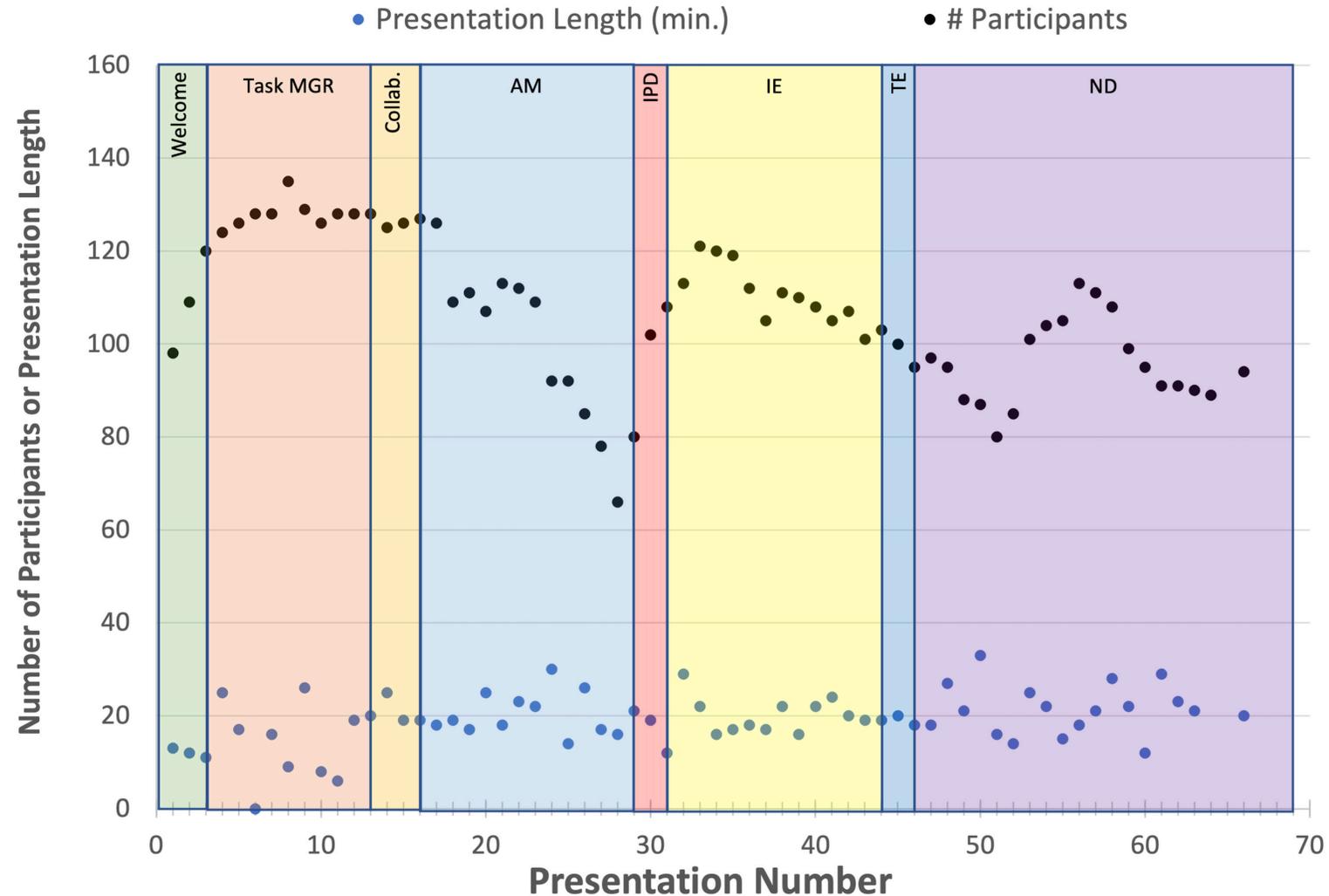
Meeting	Date/Time (All times are Mountain Time)	Lead
Tuesday, February 21, 2023		
TECHNICAL PROGRAM REVIEW MEETING	8:00am – 5:00pm	Angela Chambers (NNSA) Doug Bowen (ORNL)
Wednesday, February 22, 2023		
TECHNICAL PROGRAM REVIEW MEETING	8:00am	
Thursday, February 23, 2023		
TECHNICAL PROGRAM REVIEW MEETING	8:00am	
NDAG Meeting	3:30pm	
Friday, February 24, 2023		
CSSG Meeting Proposal Review (CSSG members only)	8:00am	

No.	Time (Mountain)	NCSF SITE	TOPIC/PRESENTATION TITLE	PRESENTER	DURATION (Mins.)
Tuesday, February 21, 2023					
1	8:00	NCSP	Welcome from NCSP	Angela Chambers	0:10
2	8:10	SNL	Welcome from Sandia National Laboratory Management	Dr. David Ego, Senior Manager, Nuclear Facilities and Applied Technologies	0:10
3	8:20	NCSP	The DOE/NNSA Nuclear Criticality Safety Program and the Purpose of the Technical Program Review	Doug Bowen	0:10
4	8:30	NCSP	Presentation on CSSG	David Hayes	0:15
NCSP MANAGER INVITED SITE REPORTS					
5	8:45	LANL		Joetta Goda	0:15
6	9:00	LNL		Catherine Percher	0:15
7	9:15	MSTS	Site Program Manager Discussions on the Following Topics: 1. FY22 Budget and Spending	Sylvia Wright-Reeder	0:15
8	9:30	ORNL	2. Provide 8 Highlights for FY22 including MTR items, 3. Highlights for the technical talks to be given at this TPR	Doug Bowen	0:15
9	9:45	PNNL		Travis Zipperer	0:10
10	9:55	RP		Yaron Danon	0:15
Break (Refreshments)					
11	10:25	SNL		Gary Harms	0:15
12	10:40	SRS	Site Program Manager Discussions (Continued)	David Erickson	0:10
13	10:50	Y-12		Kevin Reynolds	0:10
14	11:00	INR		Gustavo Nobre	0:15
INTERNATIONAL COLLABORATIONS					

2022 Virtual NCSP TPR

- Second virtual TPR for the NCSP to present status of FY2021 NCSP tasks – conducted over 3-days in Feb. 2022
- Presentation summary
 - 65 presentations
 - non-technical presentations
 - Status reports from international collaborators – AWE, IRSN, JRC/GEEL, OECD/NEA, & CEA
 - Technical presentation and task manager status reports

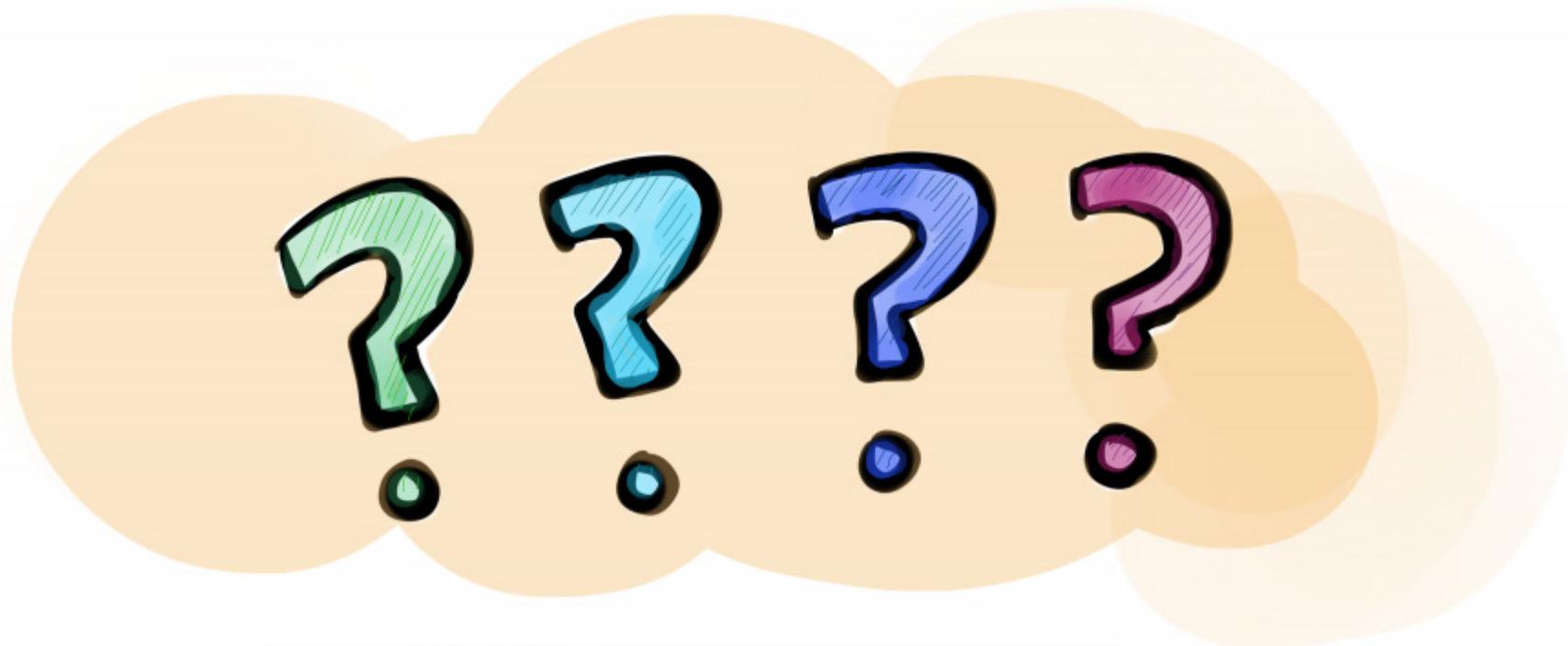
2022 TPR Summary Chart



Last, but not least...

- Thank you!
 - Sandia National Laboratory for hosting this year's TPR
 - Trish St. John, Primary TPR organizer for Sandia
 - Marsha Henley, NCSP Management Team POC for the TPR
 - Pam Williams, LLNL – NCSP website POC
- TPR “rules”
 - TPR scheduled 8am - 5pm each day
 - Most presentations are 15 min. long; a few are shorter
 - The purpose provide the NCSP Manager, Dr. Angela Chambers, a status report of FY22 work
 - Dr. Chambers will select the top 5 or 6 papers as “best papers”
 - Those chosen will be invited to submit a paper summary at the 2023 Winter ANS meeting for the “NCSP Technical Accomplishments” NCSD Session at NCSP expense
- Doug or Marsha can assist with side-bar meetings with the NCSP manager

Questions



WIFI PASSWORD

1922@TheClyde