



# U.S. Army Research Institute for the Behavioral and Social Sciences (ARI)

## Tools to Measure and Improve Team Cognition During Live Training

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# Disclaimer



- The research described herein was sponsored by the U.S. Army Research Institute for the Behavioral and Social Sciences, Department of the Army (Contract No. W911NF-17-F-0002). The views expressed in this presentation are those of the author and do not reflect the official policy or position of the Department of the Army, DOD, or the U.S. Government.



# Background: Small Teams in the Future Operational Environment (FOE)



- FOE will be cognitively demanding, teams will need to:
  - Maintain awareness of environment
    - Members must contribute unique perspectives to ensure common awareness
  - Interpret meaning of events as they pertain to the team and its goals
    - Ensure all team members have shared understanding of environment and team
  - Adapt to changing conditions and emerging problems
    - Members contribute unique knowledge, experiences and perspectives to determine best course of action

## VUCA FOE

- Volatile:** Rapidly changing conditions and missions
- Uncertain:** Disrupted, degraded or denied communications. A2AD means timely combat support not guaranteed
- Complex:** Operations unfolding across multiple domains. Fluid mission sets and changing environments
- Ambiguous:** Hostile state and non-state actors among non-combatants



# Research Need and Application



- Current training performance assessments focus on direct outcomes (i.e., did the individual and/or team succeed at the tasks, or not).
- Army teams (i.e., squads) could benefit from additional layers of information that provide a more robust picture of their ability to think collectively and communicate effectively as a team.
- Such information can help trainers and teams understand how teams' task performance is being influenced by *team cognition*.
- Propose that *effective* team cognition can lead to better team states and ultimately, better task performance.



1. Develop a conceptual model of team cognition, drawing from multiple literatures (Cognitive Science, Judgment and Decision Making and Industrial/Organizational).
2. Identify measurable variables of team cognition that trainers can use in a live training environment.
3. Devise tools that:
  - Allow for the intersection of experiential knowledge (OCT judgment) with theoretically derived concepts (team cognition)
  - Provide teams and trainers with a more nuanced understanding of performance
  - Help OCTs assess and provide feedback regarding team cognition during collective training



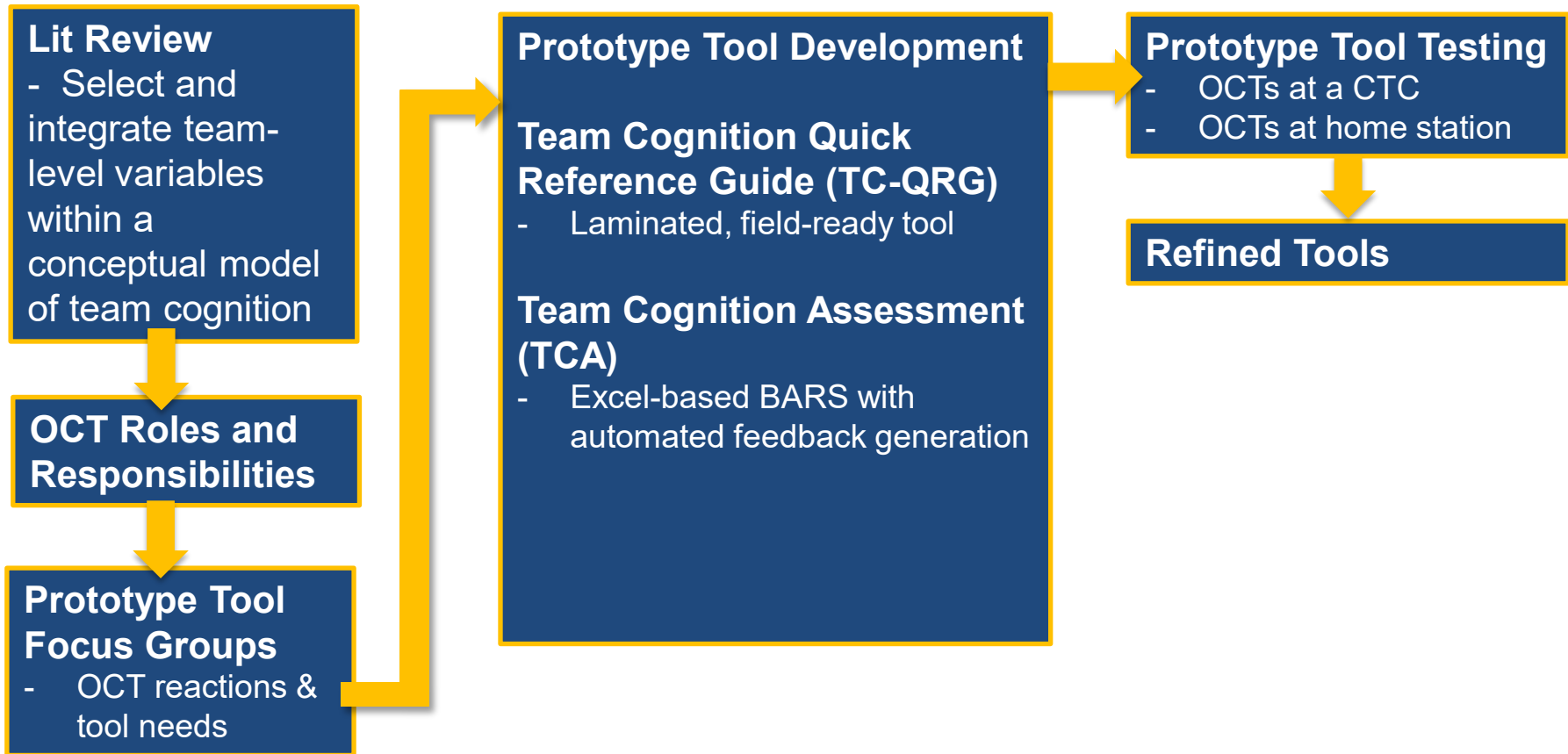
# Research Challenges



- Integrating different literatures/schools of thought
- Developing a measurement tool for use in a *live* environment
- Incorporating the judges' (trainer's) experiential understanding into the development process
- Building a measurement tool to help assess team-level variables as dynamic processes forces the judge to examine behaviors at a finer level.



# Research and Tool Development: Glide Path





- Collective Cognition
  - Interactive Team Cognition
  - Transactive Memory
  - Distributed Cognition
  - Shared Mental Models
  - (Shared) Situation Awareness
- Judgment & Decision Making
  - Expert Judgment
  - Naturalistic Decision Making
  - Critical Thinking
- Frameworks for Team Processes
  - IMOJ models
  - I-P-O models



# What is Team Cognition?



- How knowledge important to team functioning is mentally organized, represented, and distributed among team members
  - Kozlowski & Ilgen (2006)
- Shared understanding among team members' roles and responsibilities, team mission objectives and norms, and familiarity with teammate knowledge, skills and abilities
  - Cannon-Bowers et al., 1993
- An emergent team state that develops within teams over time
  - DeChurch & Mesmer-Magnus (2010)
- A dynamic construct that varies as a function of team context, inputs, processes, and outcomes
  - Marks, Mathieu, & Zaccaro (2001); Mohammed, Ferzandi, & Hamilton (2010)
- Shared effort to interpret, process and represent information
  - Hutchins, 1995
- Goal-directed interactions among teammates that are tied to context
  - Cooke, 2015
- Structured understanding and awareness of the knowledge uniquely held specific team members
  - Hollingshead, 1998



# Working Definition of Team Cognition



Team cognition is a purposeful and evolving *process* within which team members *interact* to:

- Share perceptions and information and *critically examine* existing knowledge to form integrated judgments and solve problems
- Maintain a shared *awareness* and *understanding* of factors that are relevant to the state of the team and to the team's tasks



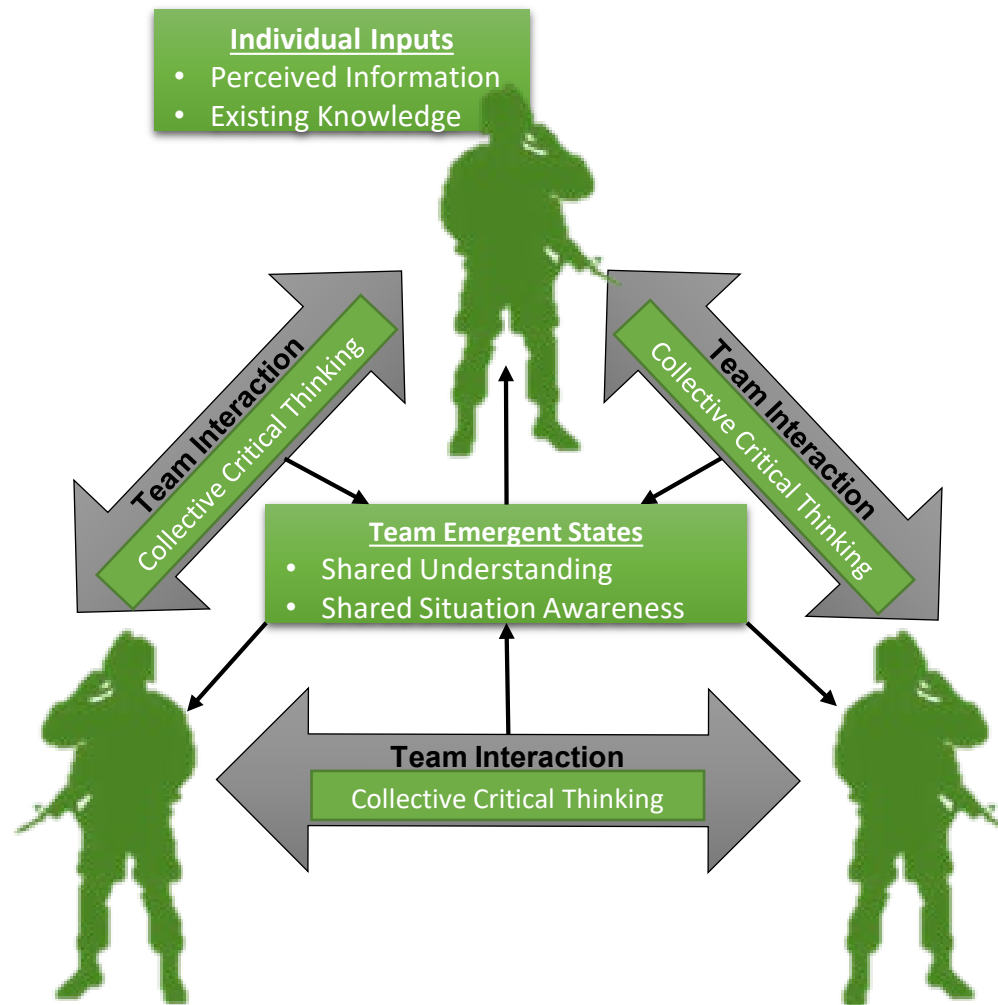
# Key Components of Team Cognition



- We conceptualized team cognition as encompassing three team-level variables
  - Shared Understanding (SU)
    - Similar comprehension of team-relevant factors in relation to a dynamic environment (e.g., the team's tasks and the team's emerging state)
  - Shared Situational Awareness (SSA)
    - Joint knowledge team members have about ongoing and future events relevant to team goals
  - Collective Critical Thinking (CCT)
    - Team's collaborative use and evaluation of available information to determine the best course of action

# Conceptual Model of Team Cognition

*An active process that evolves across situations.*





# Team Cognition Occurs When:



- Team members
  - Recognize when changes to the environment are meaningful and relevant to the task and purpose.
  - Judge the relevance of information and communicate what is most relevant.
  - Know when to adapt plans and work together to generate alternative courses of action.
  - Think critically as a group to evaluate existing knowledge.
  - Continually update one another to ensure common understanding of environments and situations as they change.
  - Interact with one another to reduce uncertainty and clarify the meaning of events and information.



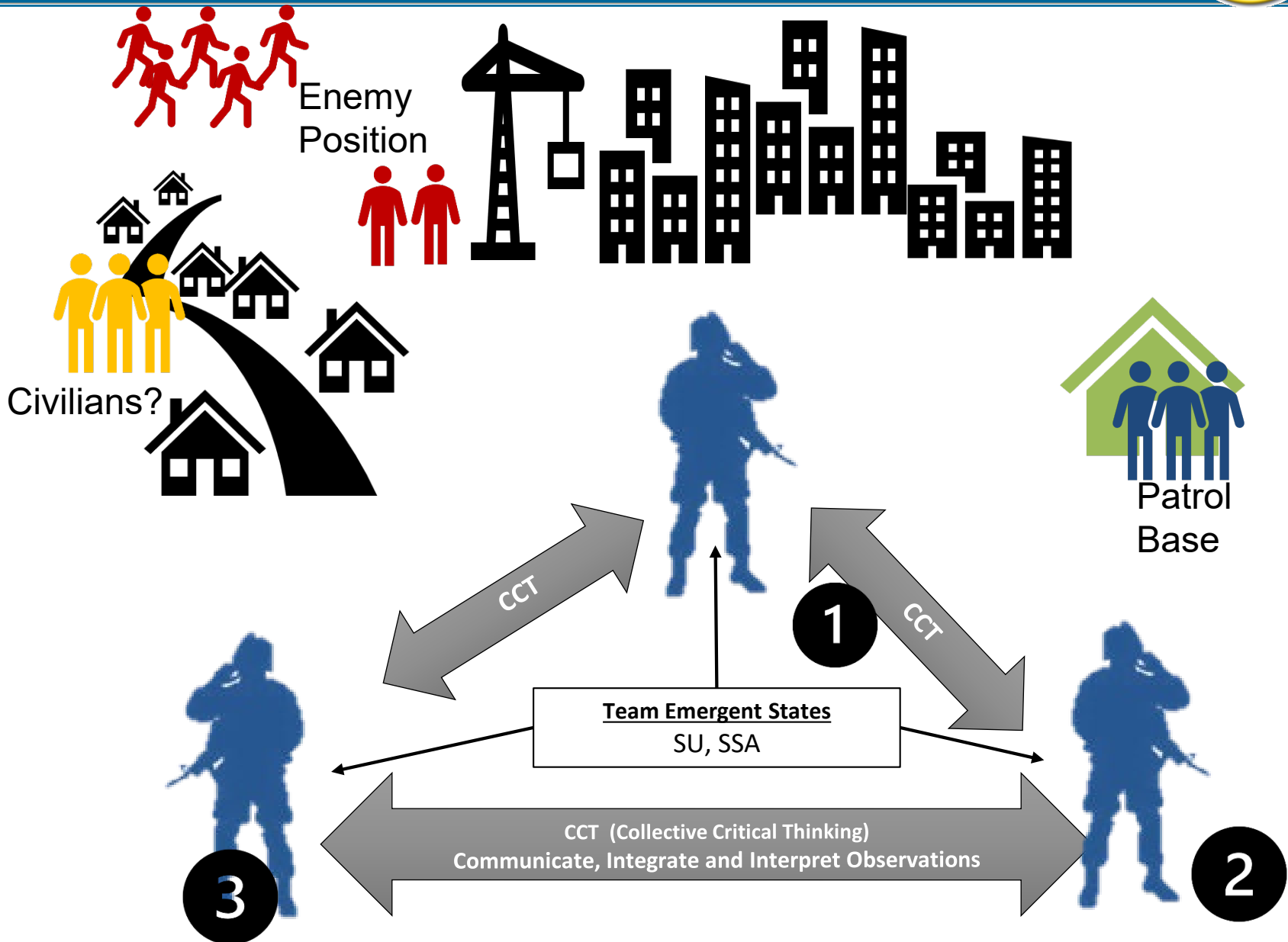
# Team Cognition Allows:



- Teams to
  - Align and coordinate individual and collective actions in support of commonly understood objectives.
  - Maintain shared situation awareness in rapidly changing environments.
  - Leverage the collective expertise to think critically as a team, and make better decisions.
  - Perform better during decentralized operations in dispersed environments.



# Team Cognition in Action: Example





# Understanding OCT Roles and Responsibilities



- OCTs have a responsibility to assess task performance, at different echelons, of multiple units across a calendar year.
  - Each unit has its own command team and training priorities.
  - OCTs have a limited time with each unit during a rotation.
  - OCTs must also act as coaches and mentors for each group they are evaluating.
  - OCTs can take different approaches assessing performance and providing feedback, though their perceptions may differ.



# Team Cognition-Quick Reference Guide



- Pocket-sized, durable and reusable
- Contents
  - Overview of Team Cognition
  - Observation card
  - Note pages



# Team Cognition-Quick Reference Guide



## Overview

### Purpose

This quick-reference guide can be used to:

- ◆ Assist Observer, Coach/Trainers (OCTs) in forming judgments of small Army teams' ability to think effectively as a group during execution of training tasks (i.e., team cognition).
- ◆ Help incorporate feedback regarding teams' cognition to enhance the feedback OCTs are already providing to units.
- ◆ Supplement, not replace, the expertise and invaluable experience that OCTs bring to increasing teams' readiness.
- ◆ Ensure OCTs and teams get the most from training events that are already taking place.

### Observation Card

- ◆ This guide includes an observation card that lists cues OCTs can look for to form judgments of small Army teams' ability to think effectively as a group during execution of training tasks. This is not an exhaustive list of cues. Other evidence of team cognition can be documented in your notes.
- ◆ Review the cues listed in the observation card before reading the summary information contained in this guide.

*The card mirrors the Team Cognition Assessment and can help you complete the Team Cognition Assessment at a later time.*

### Team Cognition Assessment

- ◆ This guide should be used in conjunction with the Team Cognition Assessment (TCA) that details what team cognition looks like at each proficiency level.

*The TCA uses a 0-3 rating scale like the observation card. See descriptions of each indicator in the TCA before using this guide during observations of unit training.*



## Observation Card

Shared Understanding	0	1	2	3
Team members understand the unit's task and purpose.				
Communication is relevant to team's task and purpose.				
Task-relevant communication is timely.				
Team members are utilized in accordance with their strengths.				
Team members compensate for others' weaknesses.				
<b>Notes:</b>				
Shared Situation Awareness	0	1	2	3
Team members communicate their observations of the environment with each other.				
Team members communicate with each other as their understanding of the situation evolves.				
Team members collaborate to make sense of changes observed in the environment.				
Team members communicate to each other what they expect to happen next.				
<b>Notes:</b>				
Collective Critical Thinking	0	1	2	3
Team verbalizes and defines a problem or situation as a group.				
Team develops alternative courses of action as a group.				
Team verbalizes the pros and cons of alternatives as a group.				
Team picks relatively best alternative as a group.				
Team discusses possible outcomes as a group.				
<b>Notes:</b>				





# Team Cognition-Quick Reference Guide



- Overview of Team Cognition
  - Importance
  - Key Components
  - Team Cognition in Action



# Team Cognition-Quick Reference Guide



- Observation card
  - Cues to look for to assess Team Cognition
  - Aligns with Team Cognition Assessment (TCA)
    - TCA details facilitate field notes ↔ Field notes facilitate TCA inputs



# Team Cognition-Quick Reference Guide



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## The Importance of Team Cognition

Consider your past experiences observing teams' execution of training tasks and the extent to which unit members worked together to understand situations and solve problems.

Did you notice if the higher-performing teams were the ones who more readily interacted to share information and ideas? In general, performance is better in teams where members share their experience and knowledge to help shape the team's courses of action.

Did you notice if lower-performing teams were the ones that struggled to communicate openly, were slow to share information, and left the problem solving to a single or small set of individuals? Typically, performance suffers in teams that fail to use the diverse experiences and knowledge of team members when solving problems.

Given the importance of effective team cognition to teams' performance, this guide can be used by OCTs to help them incorporate feedback about team cognition into the feedback OCTs are already providing about teams' tactical and technical performance.

### The 3 key components of Team Cognition are:

- ◆ Shared Understanding
- ◆ Shared Situation Awareness
- ◆ Collective Critical Thinking

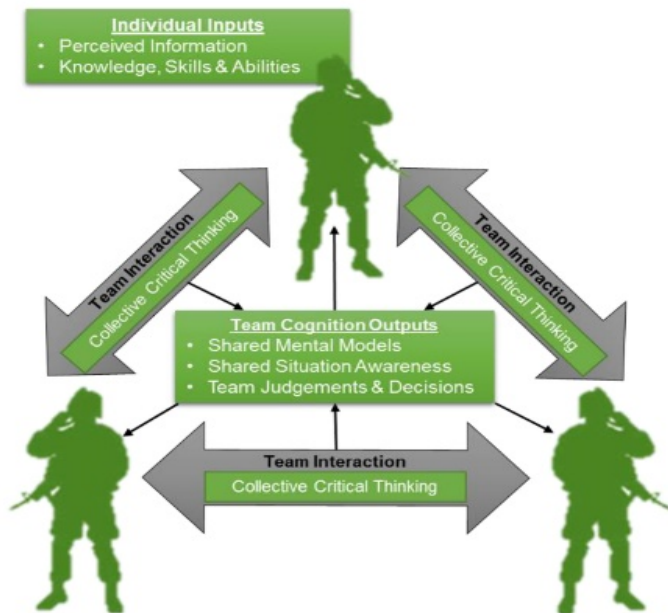
*Each of these 3 key components is described in the following sections.*



# Team Cognition-Quick Reference Guide



## The Team Cognition Concept



- ◆ Team members share individual inputs via team interaction.
- ◆ Team works together to make sense of information as it pertains to the situation and their task and purpose.
- ◆ Team achieves shared understanding and awareness of the issues and environment.
- ◆ Team uses shared understanding and awareness to generate viable alternative courses of action as a group.
- ◆ Team collectively evaluates alternatives to enable the leader to pick the best from the available options.
- ◆ *Process is continual, iterative and ongoing as situations change.*

## Team Cognition in Action

### When team cognition occurs, team members:

- ◆ Recognize when changes to the environment and/or situation are meaningful and relevant to the team's task and purpose.
- ◆ Judge the relevance of information and communicate what is relevant.
- ◆ Know when to adapt plans and work together to generate alternative courses of action.
- ◆ Think critically as a group to evaluate alternative courses of action.
- ◆ Continually update one another to ensure a common understanding of environments and situations as things change.
- ◆ Interact with one another to reduce uncertainty and clarify the meaning of events and information.

### Team cognition allows teams to:

- ◆ Align and coordinate individual and collective actions in support of commonly understood objectives.
- ◆ Maintain shared situation awareness in rapidly changing environments.
- ◆ Leverage the collective expertise in the unit to think critically about issues as a group.
- ◆ Make better decisions.
- ◆ Perform better during decentralized operations in dispersed environments.



# Team Cognition-Quick Reference Guide



Rating Scale on the Observation Card is linked to Proficiency statements in the Team Cognition Assessment

Observation Card				
<b>Shared Understanding</b>	0	1	2	3
Team members understand the unit's task and purpose.				
Communication is relevant to team's task and purpose.				
Task-relevant communication is timely.				
Team members are utilized in accordance with their strengths.				
Team members compensate for others' weaknesses.				
<b>Notes:</b>				
<b>Shared Situation Awareness</b>	0	1	2	3
Team members communicate their observations of the environment with each other.				
Team members communicate with each other as their understanding of the situation evolves.				
Team members collaborate to make sense of changes observed in the environment.				
Team members communicate to each other what they expect to happen next.				
<b>Notes:</b>				
<b>Collective Critical Thinking</b>	0	1	2	3
Team verbalizes and defines a problem or situation as a group.				
Team develops alternative courses of action as a group.				
Team verbalizes the pros and cons of alternatives as a group.				
Team picks relatively best alternative as a group.				
Team discusses possible outcomes as a group.				
<b>Notes:</b>				

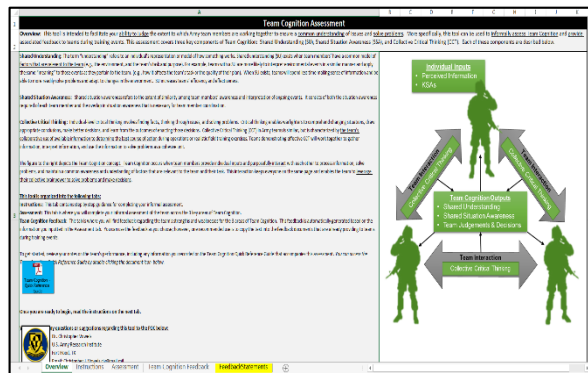
**Shared Situation Awareness:** Shared situation awareness is the joint knowledge that team members have about ongoing events. Army teams develop SSA by gathering information from each other. When teams have SSA, they can more effectively coordinate, and anticipate and adapt to changes.

	0	1	2
<b>Current Situation</b>	Team members <u>lack individual and team awareness</u> of their surroundings or ongoing events. They <u>struggle to understand the relevance</u> , meaning, or implications of those things for them or the team. They generally <u>do not share their observations</u> with each other.	Team members <u>have individual situation awareness</u> , but <u>do not relay</u> that information to other members. They do not ask other members about their observations. Team members <u>interpret and apply their individual situation awareness</u> to their own tasks, but <u>they do not work together to interpret</u> the situation or how it <u>impacts</u> the team.	Team members have both <u>individual and team awareness</u> . They <u>communicate their observations</u> in a timely manner. They talk through how their observations <u>impact</u> their own and each other's roles in the immediate team task. Team members, <u>apply or interpret</u> how the current situation <u>impacts</u> the team's higher-level mission or purpose.
<b>Evolving Situation</b>	Team members <u>do not detect changes</u> in the situation or environment in which they are operating. They <u>do not make necessary adjustments</u> or coordinate effectively with each other.	Team members <u>detect changes</u> in their situation or environment, but they <u>do not always communicate</u> the changes to others. When they do, it is too late or does not include all critical information.	Team members <u>detect and communicate</u> their situation or environment. They <u>work together</u> to make sense of the changes and their <u>impact</u> for the team's task, mission or purpose.
<b>Future Situation</b>	Team members <u>do not anticipate</u> what will happen next or what their situation may be in the near-future. They also <u>do not consider the higher-order effects</u> of changes in their situation or environment.	Team members appear to <u>anticipate what may happen</u> in the near future, but they <u>do not discuss that proactively</u> as a group. If they do discuss their expectations for the future, they <u>do not include all critical information</u> . They also base their expectations loosely on current and past experiences.	Team members use current and past experiences to <u>anticipate</u> the state of their situation or environment in the <u>long-term future</u> . They <u>communicate their expectations</u> to other team members; however, they <u>do not fully understand</u> the needs to <u>adapt</u> to be ready for those anticipated future events.





# Team Cognition Assessment (TCA)



computers or earlier versions of MS Excel.

of each proficiency level for each subcomponent of the components of training tasks.

ence Guide to take notes on that team's performance during the team in this step.

Team Cognition Quick Reference

Observations you made during the training event.

of the assessment tab. Be sure you are considering if blank will be treated as "0". All areas are deemed.

overall score. The component level scores are used

Feedback into a document of your choosing.

- Excel-based Tool
- 5 tabs

- Overview
- Instructions
- Assessment
- Team Cognition Feedback
- Feedback Statements

Step 1 Review the feedback statement and edit it as necessary to fit the content of the rotation and your observations. This feedback statement is intentionally generic and is recommended that you supplement this statement with your own observations and examples. You may also emphasize key terms or phrases (e.g., by bolding or underlining text) to focus the recipient's attention on your key points.

Step 2 There is no requirement that you provide the actual assessment results to the team. However, you may do so if you believe it will benefit the development of the team. If providing the assessment to the team it should be accompanied with justifications to justify each score as well as suggestions for what the team can do to gain proficiency in each area.

Team	Shared Understanding	Shared Situation Awareness	Collective Critical Thinking
Team 1	2	3	4
Team 2	6	7	8
Team 3	3	4	7



Comprehension	Shared Situation Awareness	Current Situation	Evolving Situation
Team members struggle to communicate in any way with each other... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...

Communication	Comprehension	Shared Situation Awareness	Current Situation	Evolving Situation
Team members struggle to communicate in any way with each other... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...

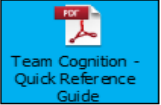
Communication	Comprehension	Shared Situation Awareness	Current Situation	Evolving Situation
Team members struggle to communicate in any way with each other... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...	Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose... Team members do not have a shared understanding of the team's role or purpose...





# TCA – Instructions Tab



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>This tool has been developed to run on PCs and with MS Excel 2010 or later. It is not compatible with Mac computers or earlier versions of MS Excel.</b>													
2	<b>Team Cognition Assessment</b>													
3	<b>Complete the steps below to familiarize yourself with the Team Cognition Assessment and the mechanics of this tool.</b>													
4	<b>Step 1</b>	Read the information provided on the overview tab.												
5	<b>Step 2</b>	On the "Assessment" tab, read the definition for each component of Team Cognition. Review the descriptions at each proficiency level for each subcomponent of the assessment. You should review and understand these components BEFORE conducting observations of a team's execution of training tasks.												
6	<b>Step 3</b>	Observe the team's performance during the execution of training tasks and use the Team Cognition Quick Reference Guide to take notes on that team's performance of the components of Team Cognition. The Team Cognition Quick Reference Guide can be accessed by double-clicking the icon in this step.												
7	<b>Step 4</b>	After observing a team's execution of training tasks, review your notes to refresh your memory of the relevant observations you made during the training event.												
8	<b>Step 5</b>	Indicate your judgement of the team's proficiency in each area by entering the numeric value (0-3) in column F of the assessment tab. Be sure you are considering the COLLECTIVE performance of the team rather than the performance of select individuals. NOTE: Leaving a cell blank will be treated as "0." All areas are deemed important to Team Cognition and therefore there is no N/A option.												
9	<b>Step 6</b>	Once you have entered values for each area, you will see scores calculated at the component level as well as an overall score. The component level scores are used to generate the feedback statement on the "Team Cognition Feedback" tab.												
10	<b>Step 7</b>	Navigate to the "Team Cognition Feedback" tab and copy the feedback statement text. You can now paste this feedback into a document of your choosing.												
11	<b>Step 8</b>	Review the feedback statement and edit it as necessary to fit the context of the rotation and your observations. This feedback statement is intentionally generic and it is recommended that you supplement this statement with your own observations and examples. You may also emphasize key terms or phrases (e.g., by bolding or underlining text) to focus the recipient's attention on your key points.												
12	<b>Step 9</b>	There is no requirement that you provide the actual assessment results to the team. However, you may do so if you believe it will benefit the development of the unit. If providing the assessment to the team it should be accompanied with examples to justify each score as well as suggestions for what the team can do to gain proficiency in each area.												
13														
14														
15														
16														
17														
18														



- Team Cognition Assessment Tab
  - Describes proficiency levels
  - Captures OCT ratings and notes on Team Cognition
    - Allows for assessment at multiple time points
  - Calculates final scores



# TCA – Assessment Tab



## Proficiency Levels (Example shown for: Shared Situation Awareness, *Current Situation*)

**Shared Situation Awareness:** Shared situation awareness is the joint knowledge that team members have about ongoing events. Army teams develop SSA by gathering information from the environment and communicating that information with each other. When teams have SSA, they can more effectively coordinate, and anticipate and adapt to changes.

	0	1	2	3
Current Situation	Team members <u>lack individual and team awareness</u> of their surroundings or ongoing events. They <u>struggle to understand the relevance, meaning, or implications</u> of those things for them or the team. They generally <u>do not share their observations</u> with each other.	Team members <u>have individual situation awareness</u> , but <u>do not relay that information</u> to other members. They do not ask other members about their observations. Team members <u>interpret and apply their individual situation awareness</u> to their own tasks, but <u>they do not work together to interpret the situation</u> or how it <u>impacts the team</u> .	Team members have both individual and shared situation awareness. They <u>communicate their observations</u> to each other in a timely manner. They talk through <u>how the observations impact their own and each other's roles</u> , as well as the immediate team task. Team members, however, <u>do not always apply or interpret</u> how the current situation or event <u>impacts the team's higher-level mission or purpose</u> .	Team members have both individual and shared situation awareness. They <u>communicate their observations</u> to each other in a timely manner. They talk through <u>how those observations impact the immediate team task</u> and the team's <u>mission</u> .

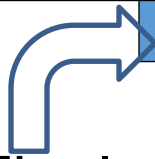


# TCA – Assessment Tab



– Shows input scores from TC-QRG for each OCT rating of a component (Example shown for: *Shared Situation Awareness*)

Shared Situation Awareness	Time 1_Rating (Enter Value)	Notes	Time 2_Rating (Enter Value)	Notes	Time 3_Rating (Enter Value)	Notes
Current Situation	1		2		2	
Evolving Situation	0		2		3	
Future Situation	1		2		3	
	2		6		8	



Final scores for each Time a component is rated (Final scores are automatically graphed in the Feedback Tab)



- Team Cognition Feedback Tab
  - Provides feedback statements and graph's the final scores for each component (over time)
  - Both the feedback statements and the graphed final scores depend on input entered in the Assessment



## Feedback Statements for Shared Situation Awareness

Shared Situation Awareness	
Current Situation	Team members lack individual and team awareness of surroundings and/or ongoing events and struggle to understand the relevance, meaning, or implications of those things for them or the team. They generally do not share their observations with each other, which prevents the team from developing shared situation awareness, and from understanding how ongoing events pertain to the team's task or purpose. Leaders should continually ask team members to assess and then share their observations with each other.
Evolving Situation	Team members do not detect changes in the situation or environment in which they are operating; therefore, they are unable to make necessary adjustments or coordinate effectively with each other. Leaders should frequently remind team members to look for, be aware of, and communicate any changes in their surroundings.
Future Situation	Team members do not think about what they anticipate will happen next. They do not anticipate what their situation may be in the near-future or the higher-order effects of changes in their situation environment; therefore, they are unable to build situation awareness for future events. Leaders should practice doing "what if" scenarios with the team.



# TCA - Feedback Tab



Graphed Final Scores (from Assessment Tab)





# TCA – Feedback Statements Tab



- Feedback Statements tab
  - Provides a bank feedback statements
  - *As input changes in the Assessment Tab, these statements are automatically pulled into the Feedback Tab*
  - These statements can also be customized/tailored by OCTs



# TCA – Feedback Statements



## Shared Situation Awareness

	0	1	2	3
<b>Current Situation</b>	<p>Team members lack individual and team awareness of surroundings and/or ongoing events and struggle to understand the relevance, meaning, or implications of those things for them or the team. They generally do not share their observations with each other, which prevents the team from developing shared situation awareness, and from understanding how ongoing events pertain to the team's task or purpose. Leaders should continually ask team members to assess and then share their observations with each other.</p>	<p>Team members have individual situation awareness, but do not always relay that information to other members or ask other members about their observations, preventing the team from developing a shared situation awareness. When team members do share their observations, it may be delayed or minimal. Team members are able to interpret and apply their individual situation awareness to their individual tasks, but do not have a shared awareness or interpretation of the situation or event and how it impacts other team members or the team as a whole. Leaders should facilitate team communications that allow team members to share their interpretations and experiences with each other.</p>	<p>Team members have both individual and shared situation awareness. They communicate their observations to each other in a timely manner and talk through how that impacts their own and each team member's roles and the immediate team task. Team members, however, do not always apply or interpret how the current situation or event impacts the team's higher-level mission or purpose. Leaders should actively work to help team members interpret and understand situations and events in the context of the team's mission and purpose.</p>	<p>Team members have both individual and shared situation awareness. They communicate their observations to each other in a timely manner and talk through how those observations impact the immediate team task and the team's mission. This is a key strength observed in the team's performance and should be sustained.</p>



- Objectives
  - Develop a conceptual model of team cognition,
  - Identify measurable variables of team cognition, and
  - Develop tools for use in a live training environment.
- Challenges
  - Integrating ideas from multiple literatures.
  - Developing tools that can be used in a live training environment.
- Outcomes
  - Conceptual model of team cognition.
  - Multiple tools to help trainers better understand and assess team cognition.



Thank you!



Questions?

# REPORT DOCUMENTATION PAGE

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