Overcoming Obstacles to Collaboration

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# The Promise of Parallel Planning

- **Parallel Planning:** *Parallel planning is two or more echelons planning for the same operation nearly simultaneously. It is facilitated by* ***continuous information sharing*** *by the higher headquarters with subordinate units concerning future operations. Parallel planning requires* ***significant interaction*** *between echelons. With parallel planning, subordinate units do not wait for their higher headquarters to publish an operations order to begin their own planning and orders development process.*

- US Army Planning and Orders Production (FM 5-0)

Challenging Old Paradigms

Overcoming barriers in...
- **Space**: Physical co-location for collaboration
- **Hierarchy**: Integrity of command teams
- **Time**: Sequential planning
… to facilitate integrated planning!

Insight group:
Command Post comprising experts from different domains

Insight group

Insight group

Insight group
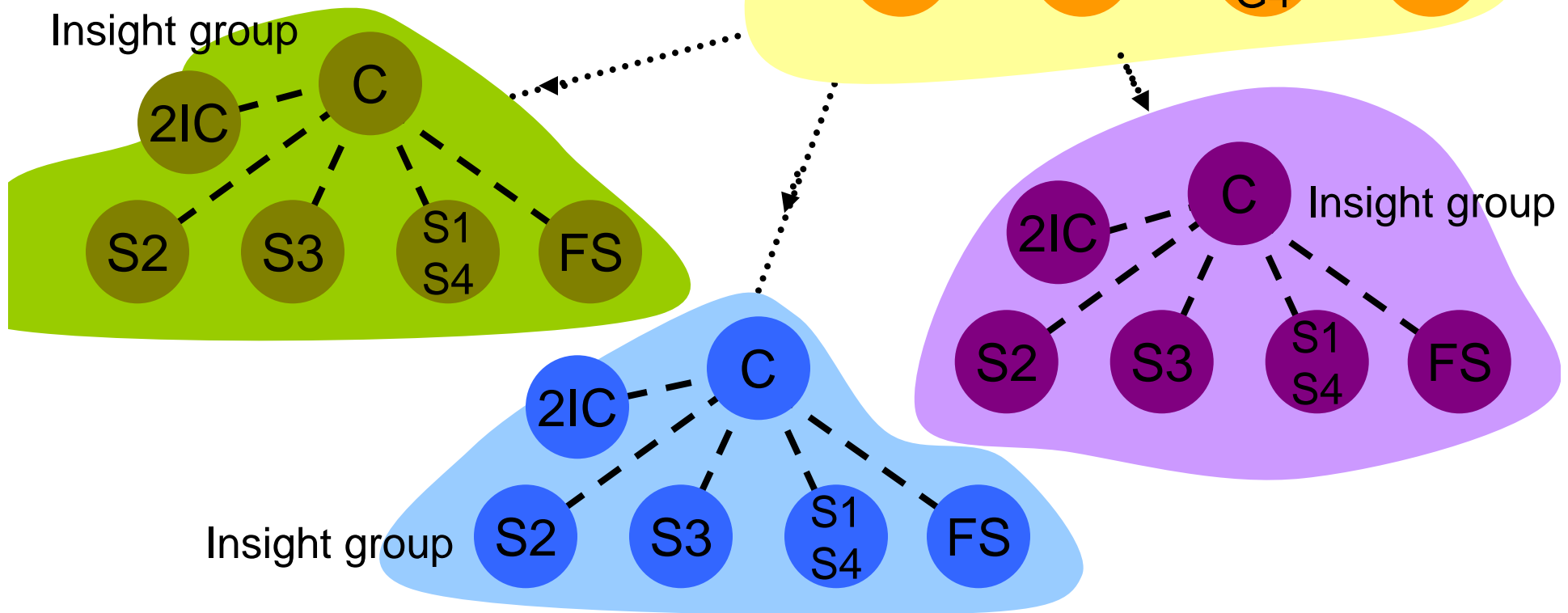
New Concept: TIM

Div Planning

Receipt Orders

Issue Orders

Bde Planning

Receipt W Orders

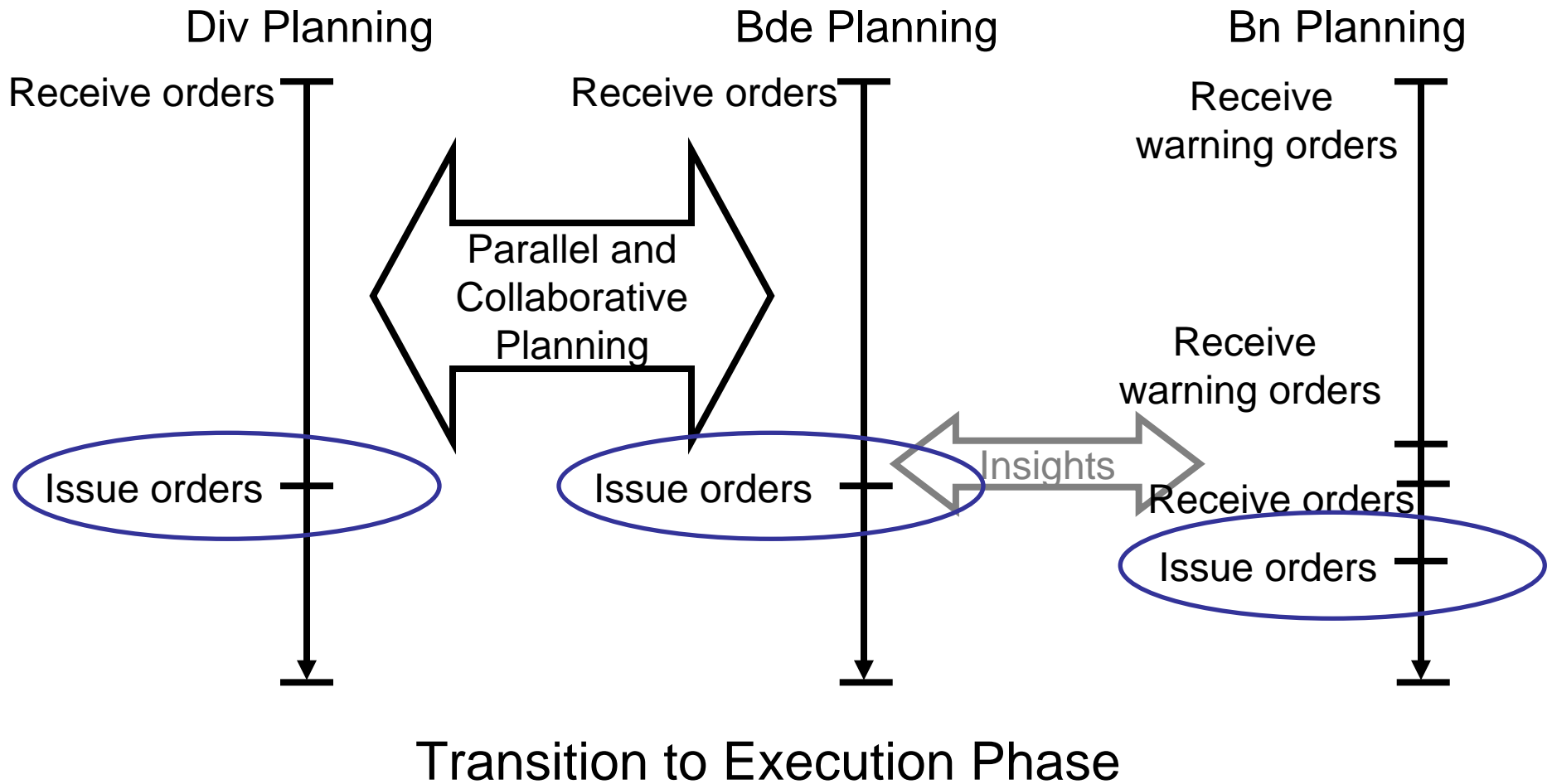Receipt Orders

Issue Orders

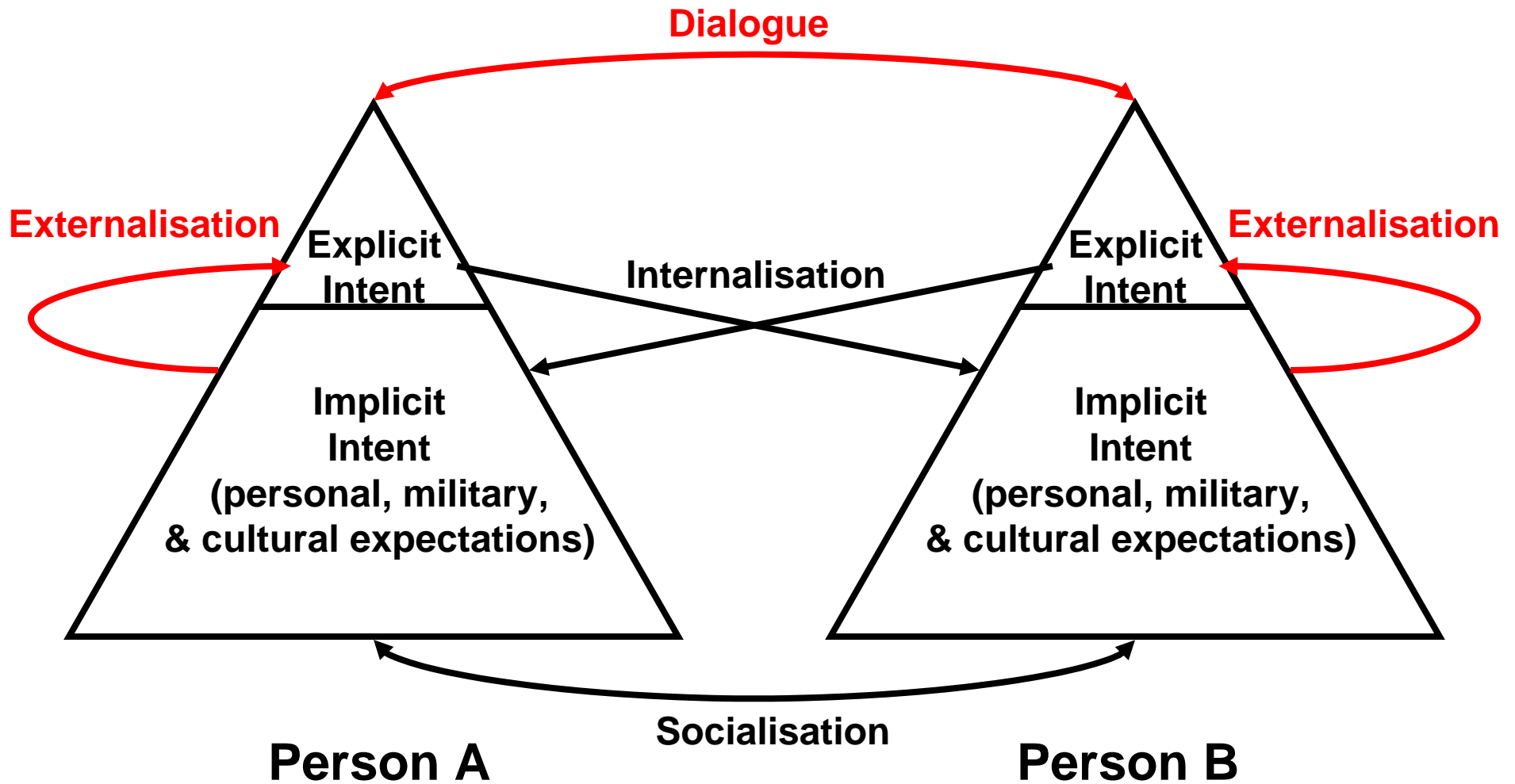**Bn Planning**

Receipt W Orders

Receipt W Orders

Receipt Orders

Issue Orders

Insights

Insights

New Concept: TCM

Div Planning

Bde Planning

Bn Planning

Receive orders

Receive orders

Receive warning orders

Parallel and Collaborative Planning

Receive warning orders

Insights

Receive orders

Issue orders

Issue orders

Issue orders

Transition to Execution Phase

Mechanisms for sharing intent

New Concept: TCM

Division G3

Assistant G3

Bde S3
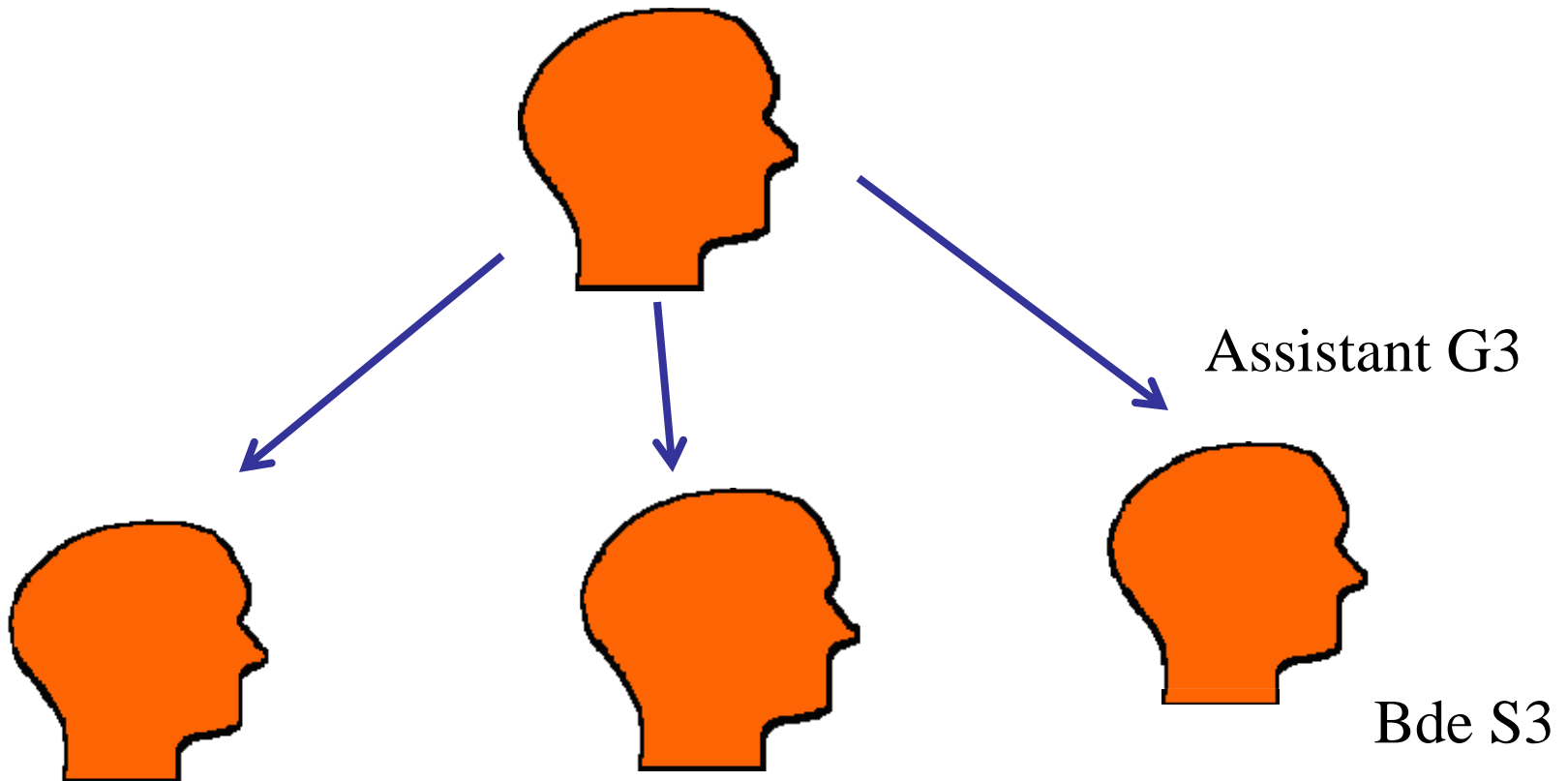
MissionMate
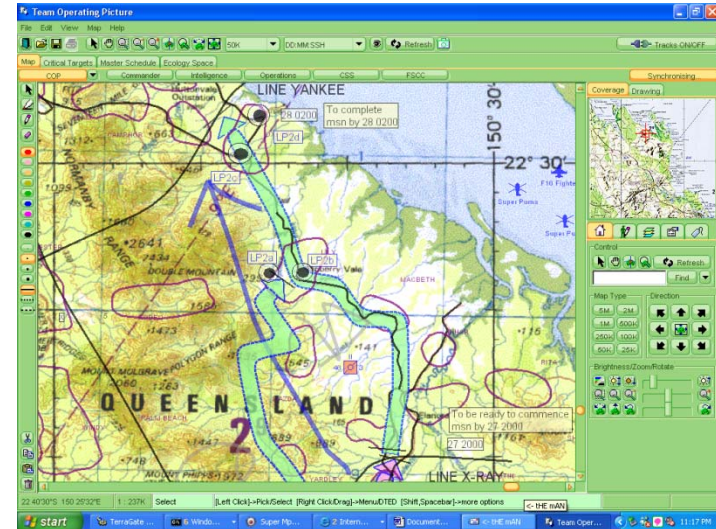
- PowerMap
- PowerMind
- PowerVC

Theoretical Model

Team Performance

improves ⟶ *Team Performance*

Shared Mental Model

enables

Mental Capacity

Quality of plans <SME>
Team Subjective Rating (Participants + Observers)

enables

increases

Probes into Mental Model & understanding of Command Intent <Participants + SME>

decreases

NASA-TLX <participants>

increases

Ideas Exchange

allows for

Time Resource

creates

Active Info Sharing

Questionnaires <Observers + Participants>
Objective count <communication logs>
Time Profile

TIM

TCM

increases

decreases

Independent variable

Facilitated by TeamSight

KBP Process <Participants + Observers>

Hypotheses

1) TCM augmented with TeamSight would allow Parallel Teams to compress the planning cycle thereby increasing the operational tempo

2) TCM would result in a greater amount of collaborative communication (idea exchange) – key focus in this presentation

3) TCM compared with TIM will result in no loss in plan quality

4) TCM compared with TIM will result in greater level of shared mental models

5 Experiments Conducted

- Singapore and Swedish Armed Forces

- Mainly Majors

- Between 30 to 40 years old Officers

- TIM and TCM Experimented

Discussion of findings (1)

- Did TIM/TCM-KBP compress the planning cycle?
  - YES! Notwithstanding that support plans not fully developed
  - Savings in time due to:
    - Process
    - Technology
  - Whether this translates to enhanced operational tempo remains to be tested…
    - Test against a scenario where the units have to plan, execute, re-plan, execute…

Discussion of findings (2)

- Did TCM and TIM give rise to a greater amount of collaborative communication (idea exchange)?

  - TCM did not see a marked increase in <u>idea exchange</u>

Problems with Collaboration

Obstacles	Description	Effects
High workload	When the general workload is high	Reduce the interest to collaborate between echelons and Staffs
Hierarchical mindset	When each staff think of itself as primary belonging to a specific hierarchical unit	Collaboration with other echelons of command not well accepted during the planning process, except for issuing/receiving orders.
Primary group vs. Secondary group thinking	When only the members of the own section/staff is viewed as the primary group	Physical presence of own staff team members overrides the secondary group, leading to pre-planning among the members of the primary group
Traditional flow of orders	Orders traditionally flow from higher to lower units and higher staffs "direct" lower staffs, they don't "collaborate"	No real incentive to (true) collaboration

Problems with Collaboration

Obstacles	Description	Effects
tem resistance	Collaboration through C2 systems is not trained or not a habit.	Staffs have a tendency to avoid using the computer-based tools for collaboration
em limitations	For example limited connectivity in time or bandwith, low resolution video/audio, etc	Technical problems makes network collaboration between physically distributed staffs more difficult than face-to-face-collaboration. If difficulties are frequent, the system is less and less used for collaboration.
to-Face mindset	When staff members believe that face-to-face communication is the best means to collaborate and elicit understanding from the group instead of using the C2	Staffs have a tendency to avoid using the Computer-based tools for collaboration

Problems with Collaboration

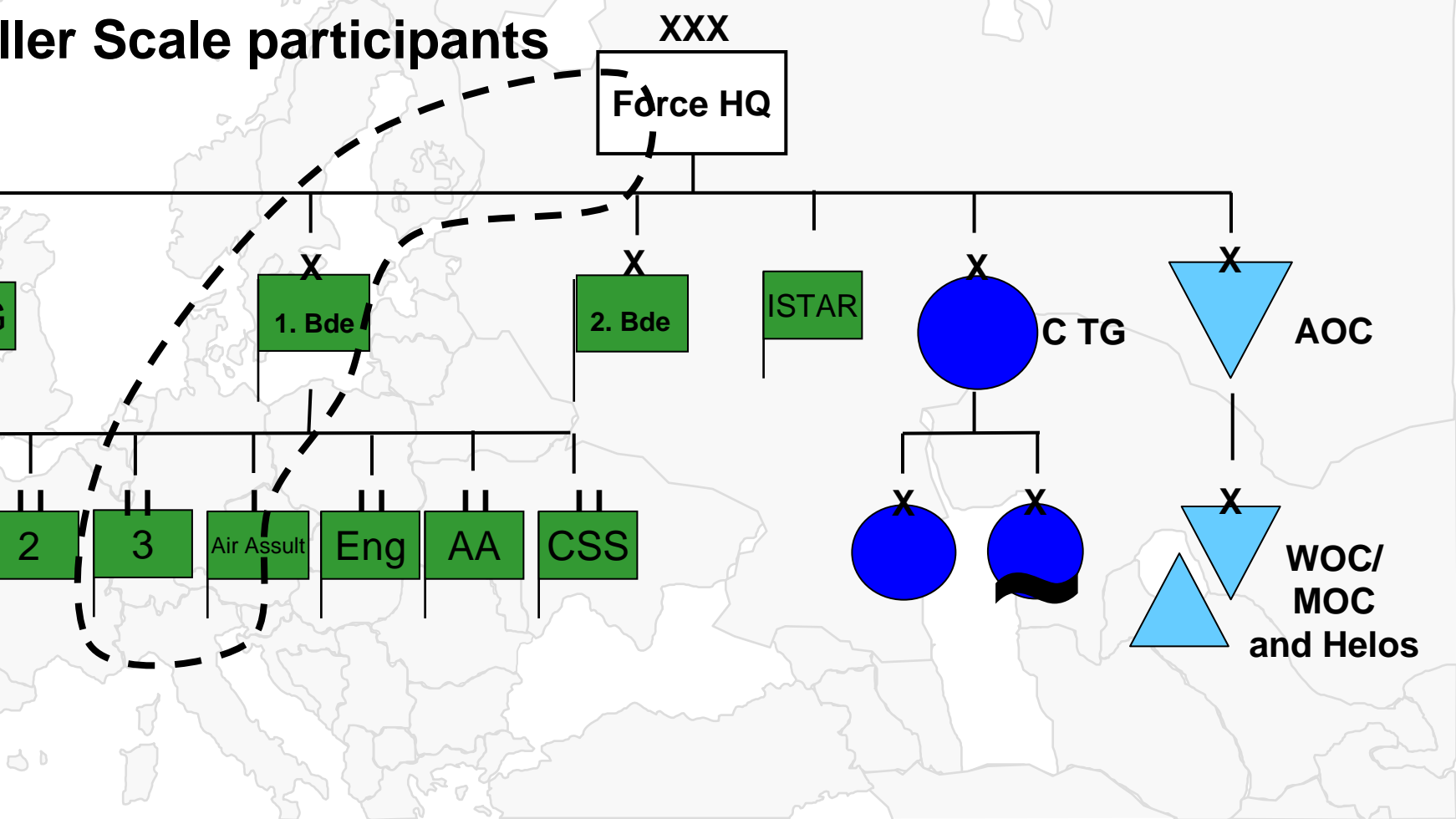| Obstacles	Description	Effects
d to think first	Higher HQ/staff think that collaboration with lower staff too early in the planning cycle would create difficulties, because they themselves don't get enough time to think things over before they have to engage subordinates	Higher HQ/staff issue planning guidance to lower echelon HQ/staff instead of true collaboration with them
clear directives from HHQ	When subordinated HQ/Staff prefers clear guidance from HHQ	True collaboration between echelons is reduced because it disrupts the process of the subordinated staffs as they prefer clear guidance from HHQ

Overcoming Problems to Collaboration

Our Experiments had too many team members.
Thus, tendency for most team members not to
share and be passive:

– Establish Smaller Scale Points of Collaboration
  (about 5 to 10 in an experiment)

  • Independently

  • Dependently on larger Exercise Context and Force
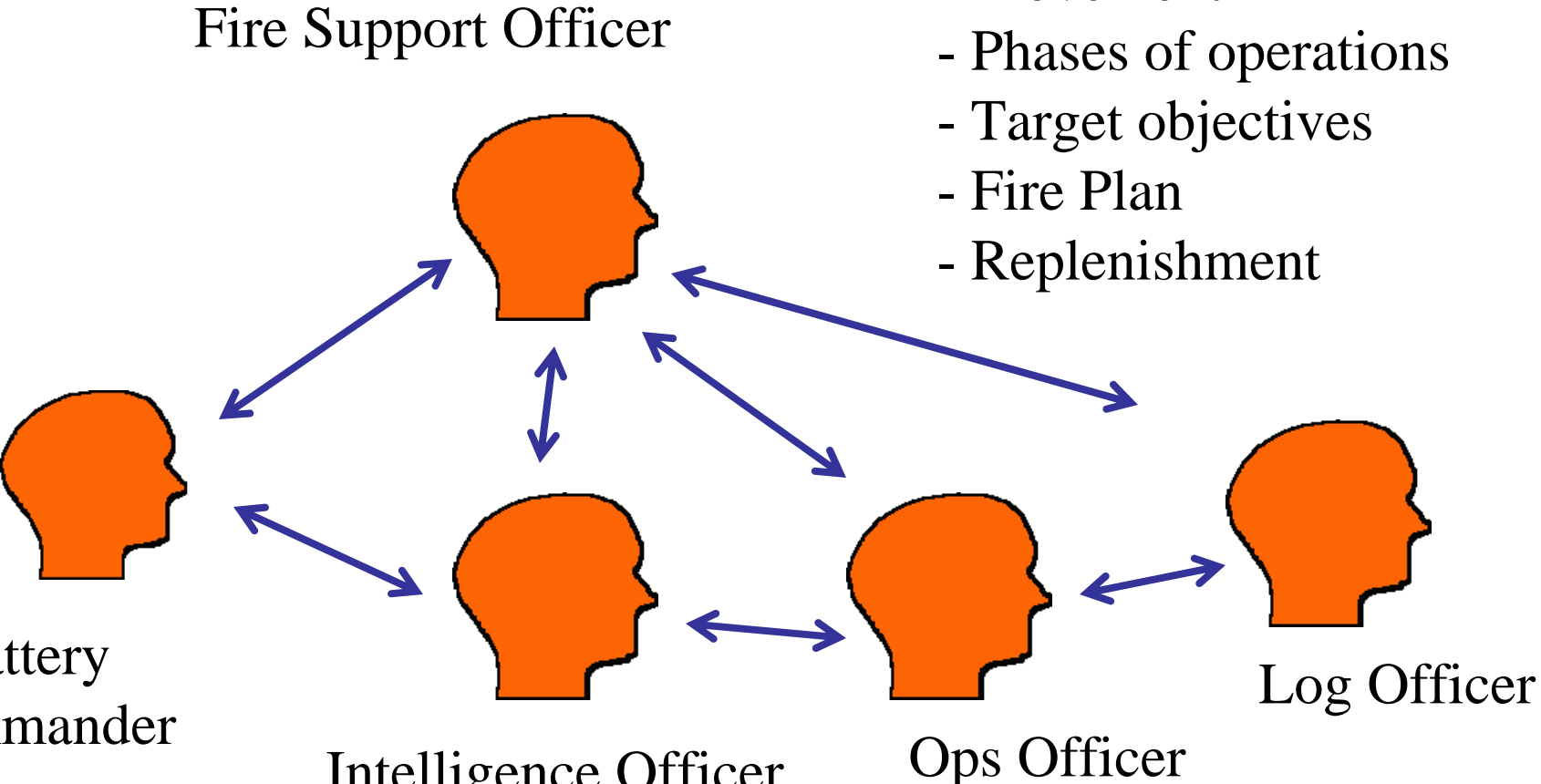
Establish Points of Collaboration (POC)

ller Scale participants

XXX

Force HQ

X 1. Bde	**X** 2. Bde	ISTAR	**X** C TG	**X** AOC

2	3	Air Assult	Eng	AA	CSS

X **X**

X WOC/ MOC and Helos

Team Edge Collaboration (TEM)

Points of Collaboration:
- Movement
- Phases of operations
- Target objectives
- Fire Plan
- Replenishment

Fire Support Officer

ttery
mander

Intelligence Officer

Ops Officer

Log Officer

Overcoming Problems to Collaboration

Inculcating Collaboration process with C2 systems early in Military Schools

- Establish Processes to collaborate

- Blur the line between Primary Group and Secondary Group

- Create Incentives

Thank You

Questions?

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