

CAX - Wargame Initiative

ODIN STRIKE

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Overall Classification of this brief is:
NATO UNCLASSIFIED releasable to Public



- **JTLS-GO is the main JWC Sim tool** to support Operational / Strategic Level CAX / CPX Exercise
- **JWC** supports 2 MJO+ CAX events per year (1200 pax Excon – Entire SACEUR AOR) , 2 SJO and several side Sim activities with JTLS-GO
- **JWC is the NATO Operational Authority** for JTLS GO
 - *Chairs the NATO JTLS Authority Board (yearly event)*
 - *NATO FMR's (ECP) are Agreed/Prioritized among NATO JTLS Official Users*
 - *JWC funds and follows up the FMRs development*
- **JWC** actively follows **JTLS-GO accreditation process** on NATO Classified Network
 - *Currently 6.3 is planned to be accredited on NS*

Exercise Current Status

JWC main mission is to deliver / design Strategic Operational JOINT Exercises

Since 2015 , NATO EX requirements have significantly evolved :

- **Higher fidelity, High complexity ,**
- **New Information concepts (i.e 5th gen fighters – C4i node)**
 - i.e No more “where” but “what it is” & “what it is doing” (Data Fusion)
 - Delegation of responsibility (Ops vs Tact) , “Speed of decision”
- **Multiple TA’s , Multiple Level of Training Audiences (TA) , Multiple Level of Training Obj (TO)**
- **Appetite to use Real Plan’s**

Exercise Current Status

In Such a dynamic environment , It is required to Synchronize :

TA's (Training Audiences) appetite to use Real plans with Semi Artificial Scenario's designed to fulfill Specific TO's (Training Objectives).

This is a substantial change :

- Our Scenario's now need to fit with TA's Real Plan and in the same time achieve Ex TO's
- JWC flexibility in driving Scenario's development is reduced (fairly dust not really the option)
 - Setting Startex Conditions become more important
 - Making strong assumptions introduce more risks.

JWC EX Challenge Framework

Ex window and Startex .. HOTO

identify the best Startex to match TA plan and to give Ex Designers the possibility to generate correct Dilemma's for TA to achieve desired TO's



The Prove of Concept : ODIN STRIKE

- Proof of concept for integrating Wargames and CAX
- Educational and Analytical Wargame construct
- JTLS utilized to aid in game turn adjudications and to facilitate discussion and execution.
- Results will aid Ex OPRs and TAs in determining PH3 STARTEX Timings.
- Game design may aid future exercise delivery
- Impact focused on the Air and Land domains to inform CAX, but touching on other domains to inform Road to War

B-03

Prioritize strikes on Integrated Air Defense Systems (IADS) targets in Sonneburg



0x Strikes on IADS in Industrigrad
1x Strike on IADS in GRI
1x Strike on IADS in West MUR
2x Strikes on IADS in SONNEBURG

Can Switch to Defensive
Counter Air



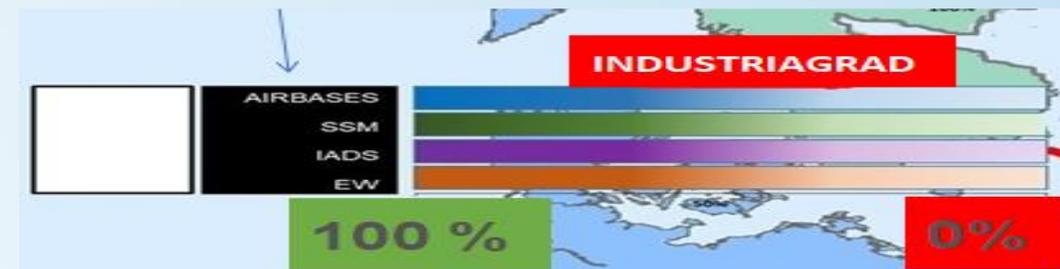
Escalation



Cost

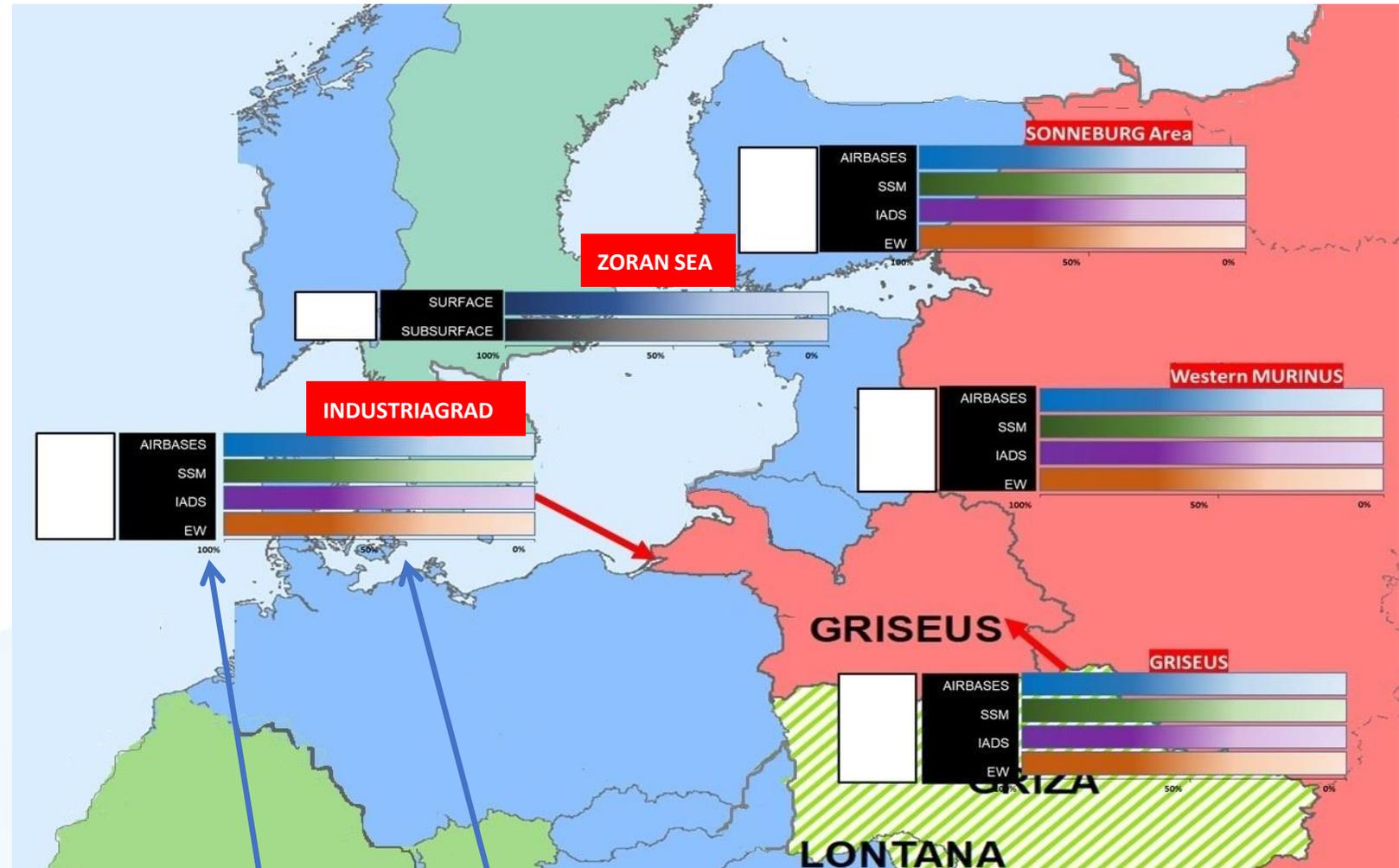
ODIN STRIKE – Design Concepts

- We Analyzed Real World Joint Force Command Plans and a specific Choose A Decisive condition was selected (*Explores various aspects of Anti-Access Area Denial Degradation*)
- Cards have been built based on Plan actions
- JTLS Orders have been pre built based on Cards (that are reflecting the RP Operational Actions)
- Several Assumptions for JTLS Orders Set definition (I.e. size of COMAO's , Weapon types , Ground Maneuvers etc)
- We had to define the main Features to link with JTLS results. (Sliders)
- Main metrics to represent features degradation have been identified



ODIN STRIKE Methods, Models and Tools

- Actual map as game board with Capability Sliders
- Problem set remains at the Operational level
- All actions will be within the **Brastic** region.
- **Blue objective is to degrade Red's A2AD capability**
- **Red objective is to defend their A2AD capability**

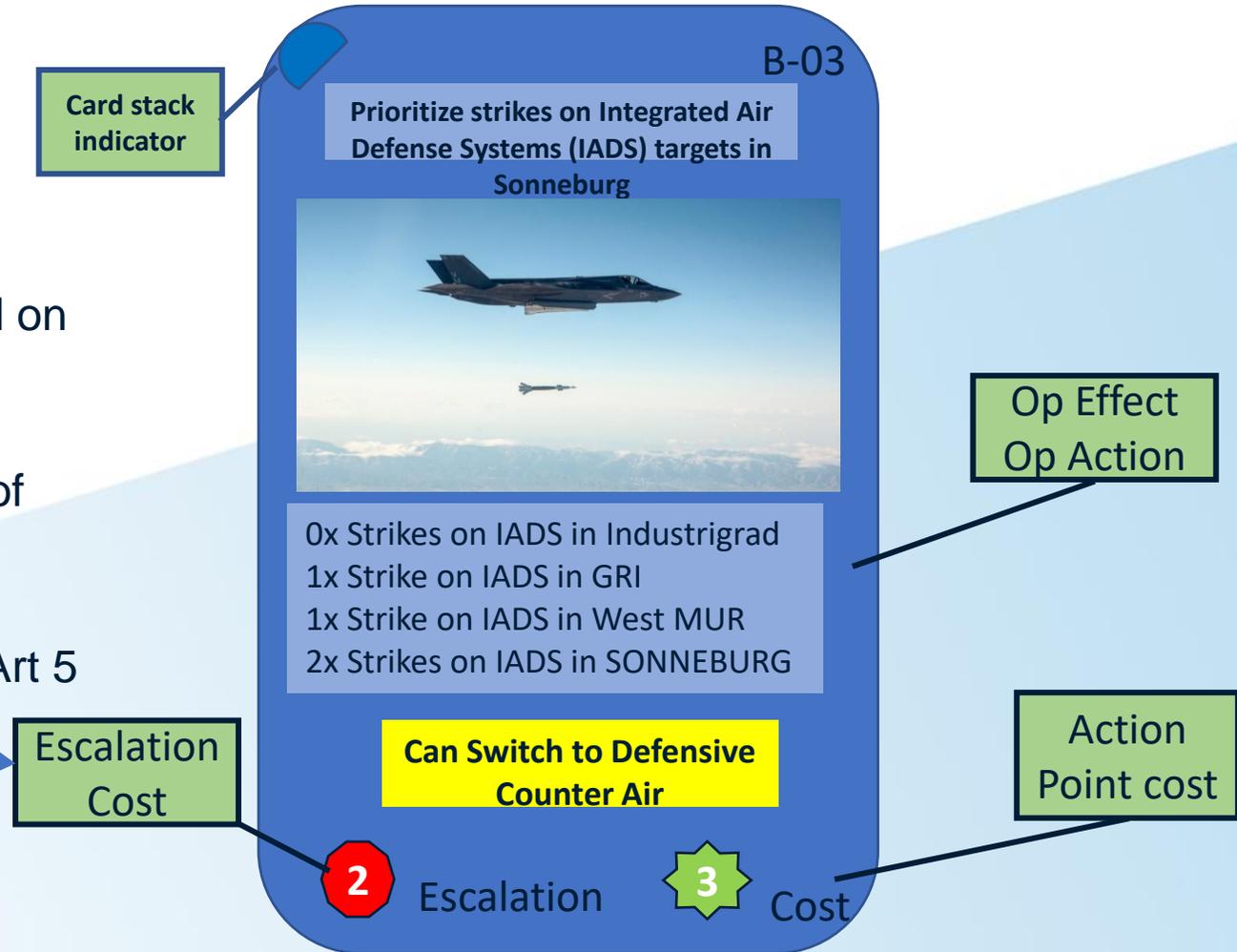


- Two Teams: One Red and One Blue with about 4-5 players per team
 - (OPS – INT – Air – Maritime as an example)
- One facilitator / Adjudicator
- CAX Team (4)
 - Analyst
 - Referee
 - One or two Scribes
- Game was designed to Run in 2 Phases
 - Pre Art V
 - Post Article V

ODIN STRIKE - The Game Play

PH1 Pre Article V (Escalation)

- Blue & Red build a play deck
 - Cards have a **point cost** and effect
 - Players chose cards (they see all options) based on discussion/plan
 - By the end of this phase each side has number of capabilities (Cards)
 - Card choices move escalation slider towards Art 5** trigger
 - Players do not decide on Art 5 it is automatic**
 - Random World Event Cards impact play



ODIN STRIKE The Game Play

PH2 Post Article V

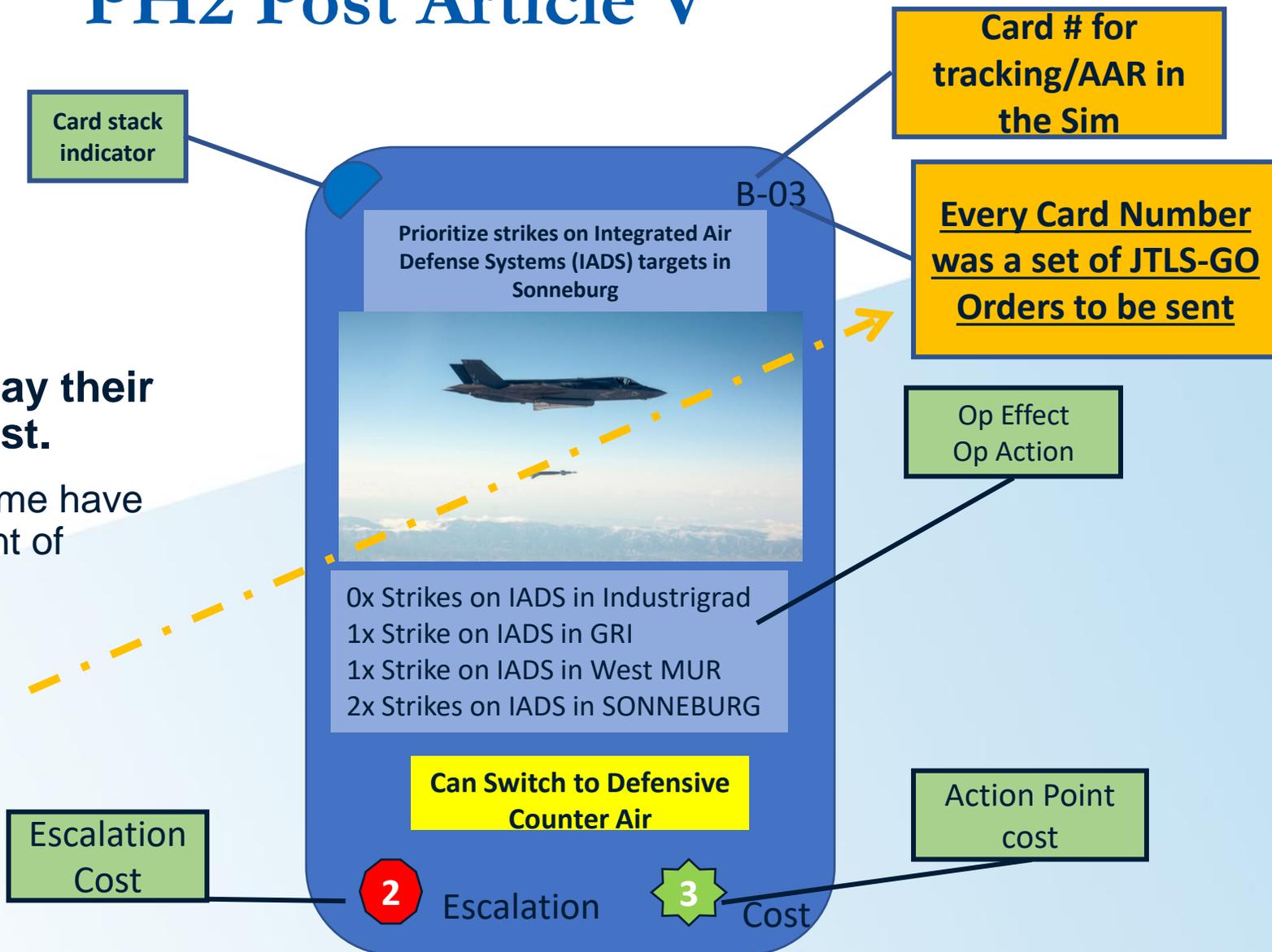
• Players have 5 Action Points to:

- Spend on cards
- Save for future turns (max 9)

• Blue (offense) and red (defense) play their active cards one at a time . Blue first.

- Each card has effects and a cost, some have options which are decided at the point of playing the card.

• Once all cards are played, CAX will conduct a 5 day sim run.



ODIN STRIKE The Game Play

PH2 Post Article V

- **Players re-assemble their hand and conduct reinforcement**
 - Draw 4 random cards. Chose 1 of the 4 to add to their had, remainder go back in the deck
- **World Event cards drawn, player hands are adjusted**
- **CAX results are assessed by analyst and adjudicator**
- **Results are presented to players**
 - Cards are adjusted (casualties)
 - Capability sliders are adjusted

E-11

Attempted coup in



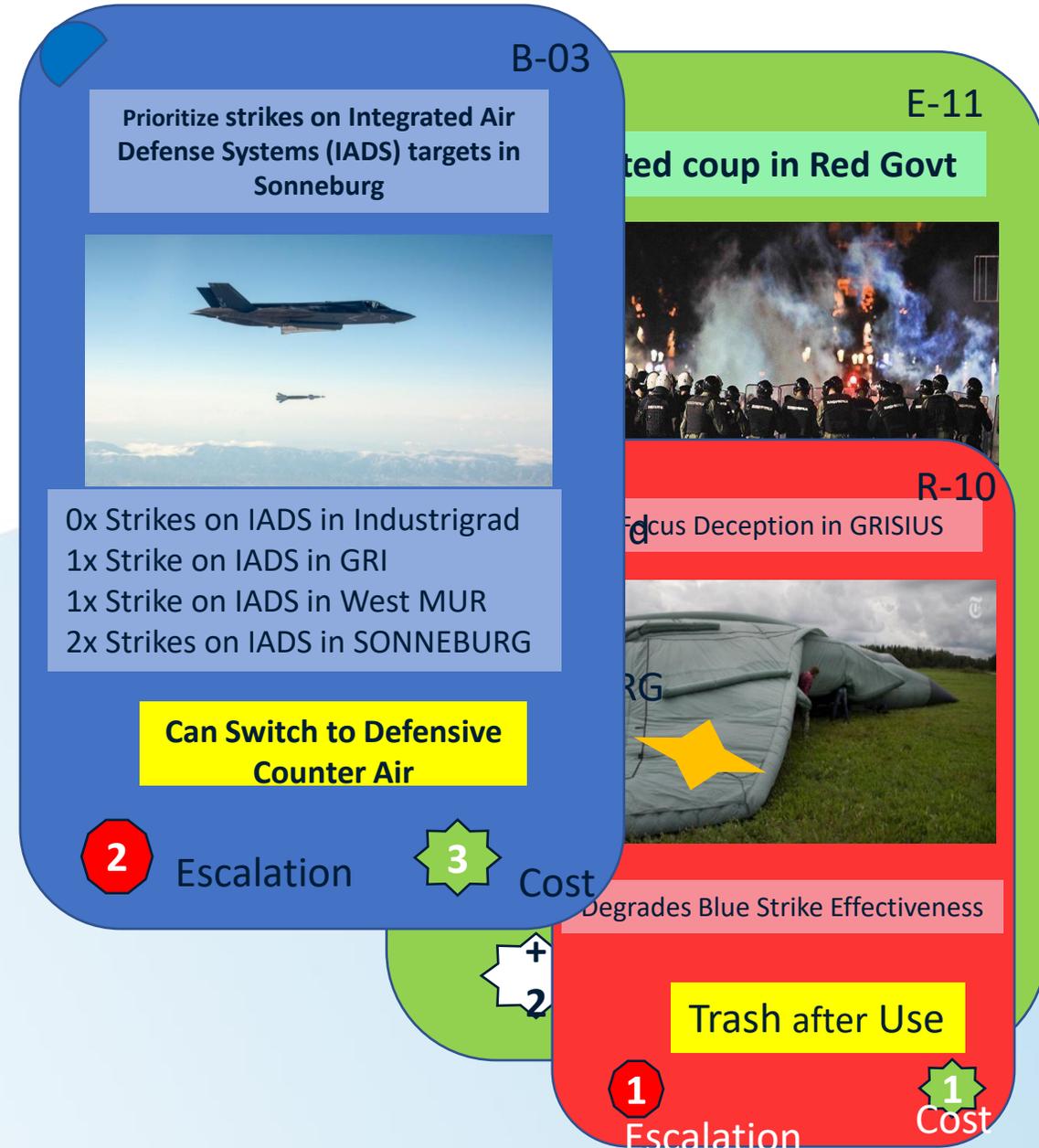
Red discard 1 card
(Random)

 Escalation Tracker

Some of them can still be played in
JTLS-GO

ODIN STRIKE Summary

- **Integration of Wargame and CAX to determine how long A2AD degradation might take & FACILITATE Startex Conditions Definitions**
- Card based game in 2 parts
 - Part 1 – Card Building – Capability deployment before Art 5
 - Part 2 – Action Phase – Use capabilities to degrade/defend A2AD
- Integration
 - Card play determines inputs into CAX
 - CAX output impacts next turn's card play and A2AD capabilities
 - Combined Analysis of Game input and CAX output throughout
 - Turn results measured in game terms from CAX results



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Can Switch to Defensive Counter Air

2 Escalation 3 Cost

E-11

...ted coup in Red Govt



R-10

...ocus Deception in GRISIUS



Degrades Blue Strike Effectiveness

1 Escalation 1 Cost

Trash after Use

The 2 World can Coexist , Key Factors

- **Performance** of Sim environment
- **Flexibility** (Players decisions need to be implemented every turn)
 - *Quick Sim Orders generation capability (required)*
- **Data Mining capability**
 - *User friendly*
- **Harmonic Data representation** : for Analysts to gather information's and translate metrics in features assessment
 - *(Dashboard concept – At today man in the loop)*



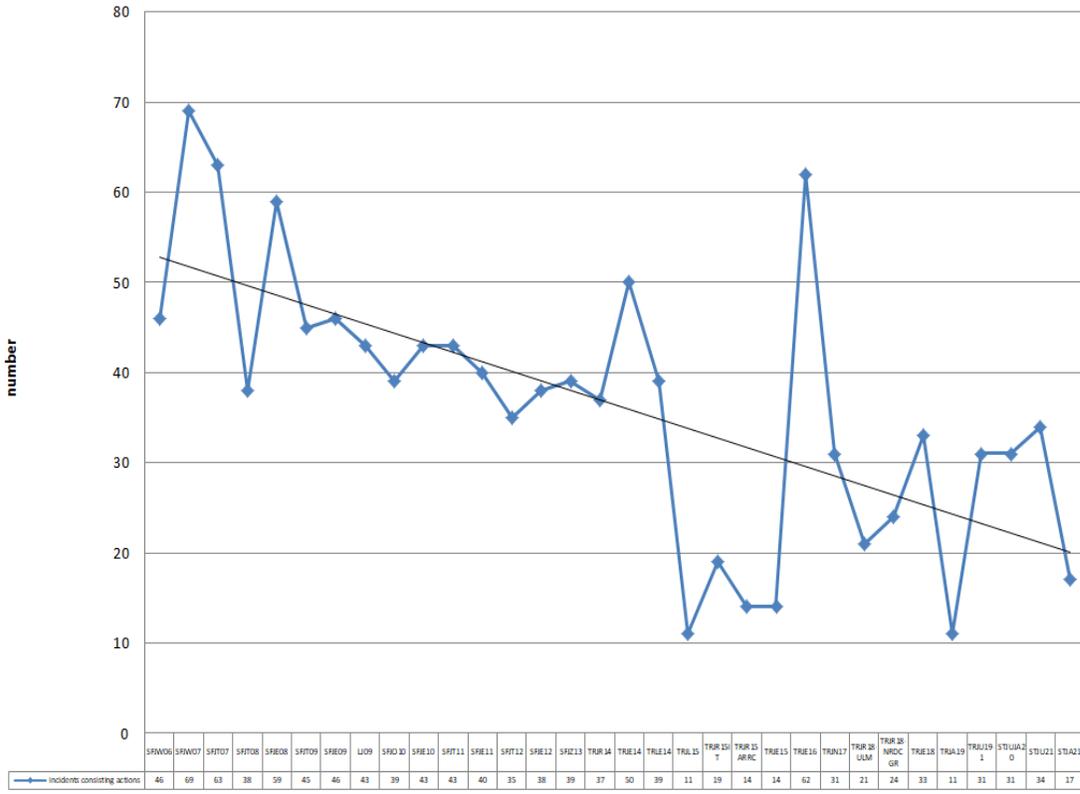
Possibility to design Bigger Games (“Mega game”) with sub games (Wargame format or CAX supported)

JWC main focus area for upcoming Challenges

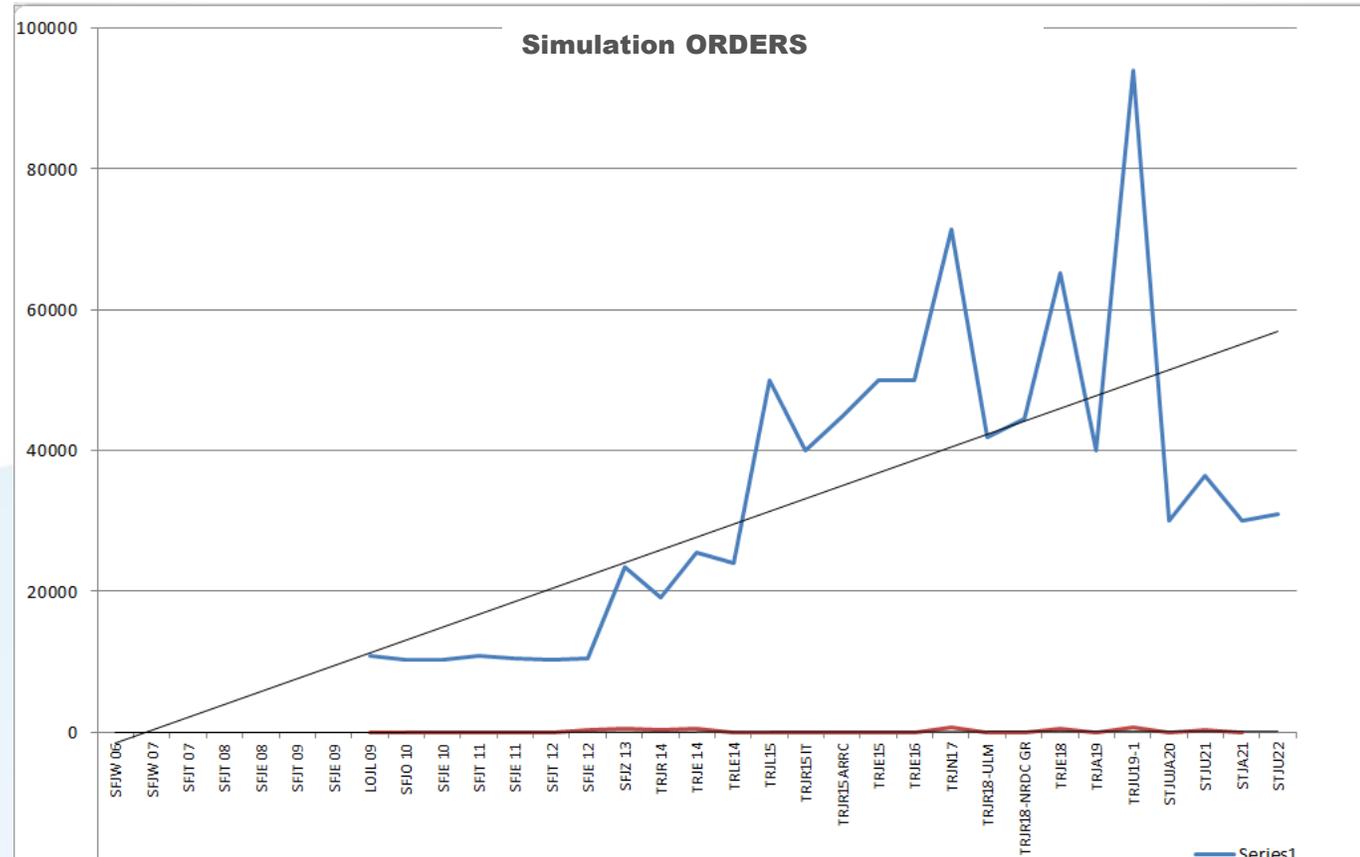
- Cesium Project
 - Maps
- C4i
- Expand / standardize AAR reporting
- **Orders Automatization for background activities**
 - From MSEL/MEL MIL to Sim and feedback on current Msel Status
 - Reduce Number of Operator requirements (80+)
 - Better control of Exercise Flow
- **Excon data aggregation based on specific domains (next Slide)**

Sim and Mel Mil /Msel an EXCON SA

incidents consisting actions

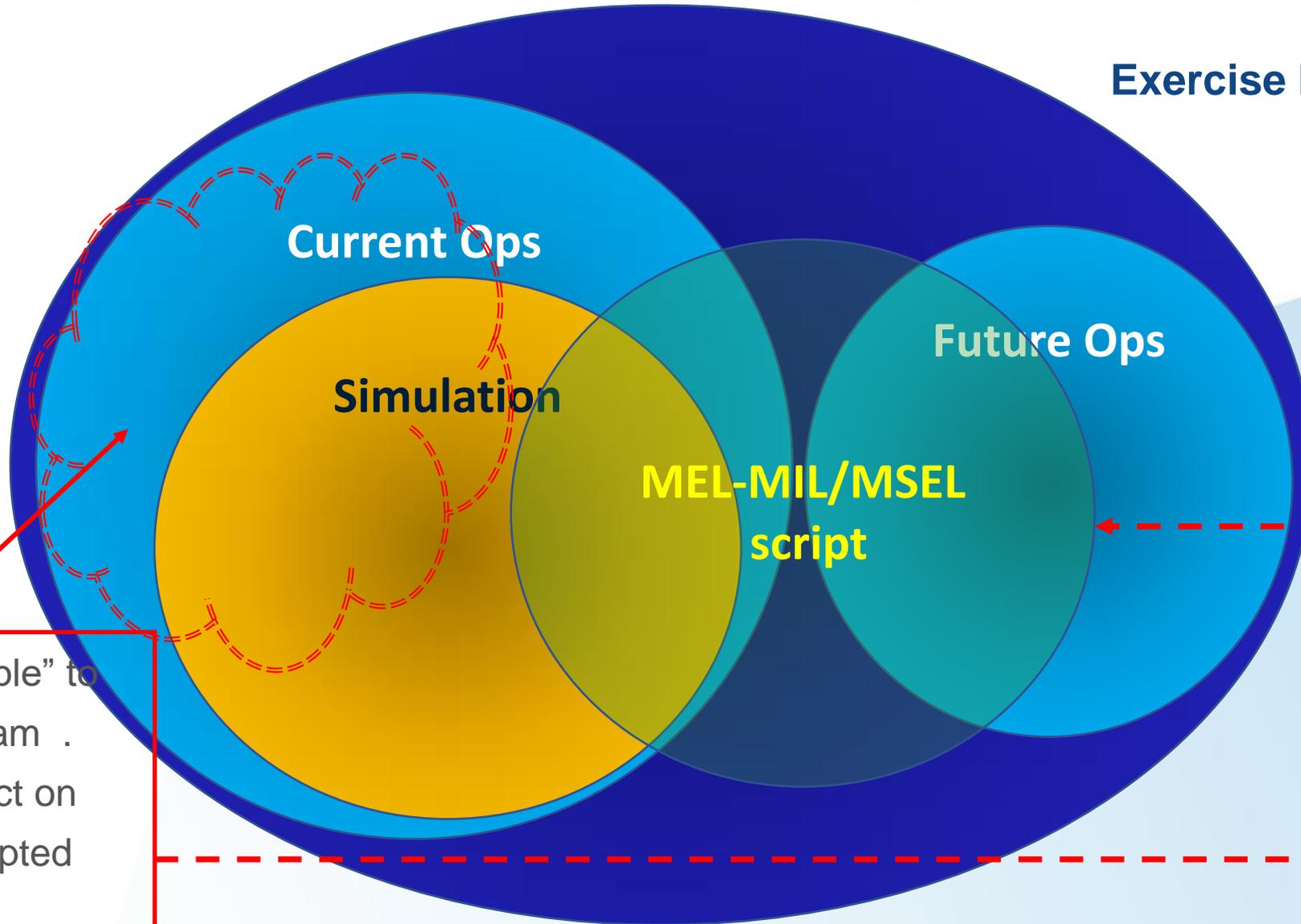


Simulation ORDERS



What is happening is ..

Exercise Framework



This Area is “invisible” to MEL MIL/Msel Team . Still it has an impact on future ops and scripted injects



JOINT WARFARE CENTRE

Question?

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