



**ALLIED COMMAND TRANSFORMATION**

# ***JOINT WARFARE CENTRE***



# ***Computer Assisted Exercises in JWC***

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Special Adviser to Commander, JWC**



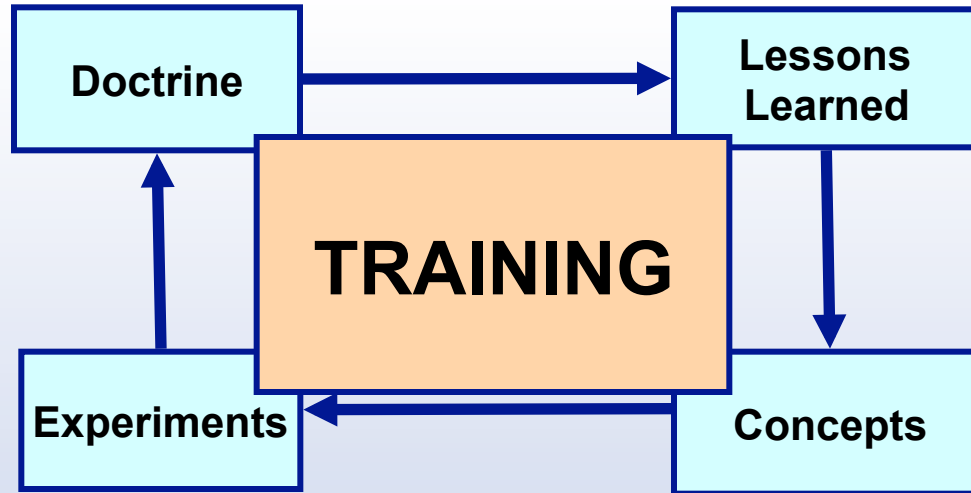
# JWC Mission

- Provide operational level joint training in support of ongoing operations
- Conduct and support collective training of the staff of the NATO Command and Force Structures
- Provide key leader training
- Support maintenance of joint operational warfare doctrine and standards
- Assist the developmental and experimental work of ACT on new concepts, technologies, modeling and simulation
- Perform joint analysis, collect lessons learned and feed them back into the transformational network through the JALLC





# JWC Mission



**Joint Warfare Centre**  
*provides*  
**NATO's training focal point**  
*for*  
**full spectrum joint operational level warfare.**



# Simulation in Action



## ISAF

## NATO Response Force





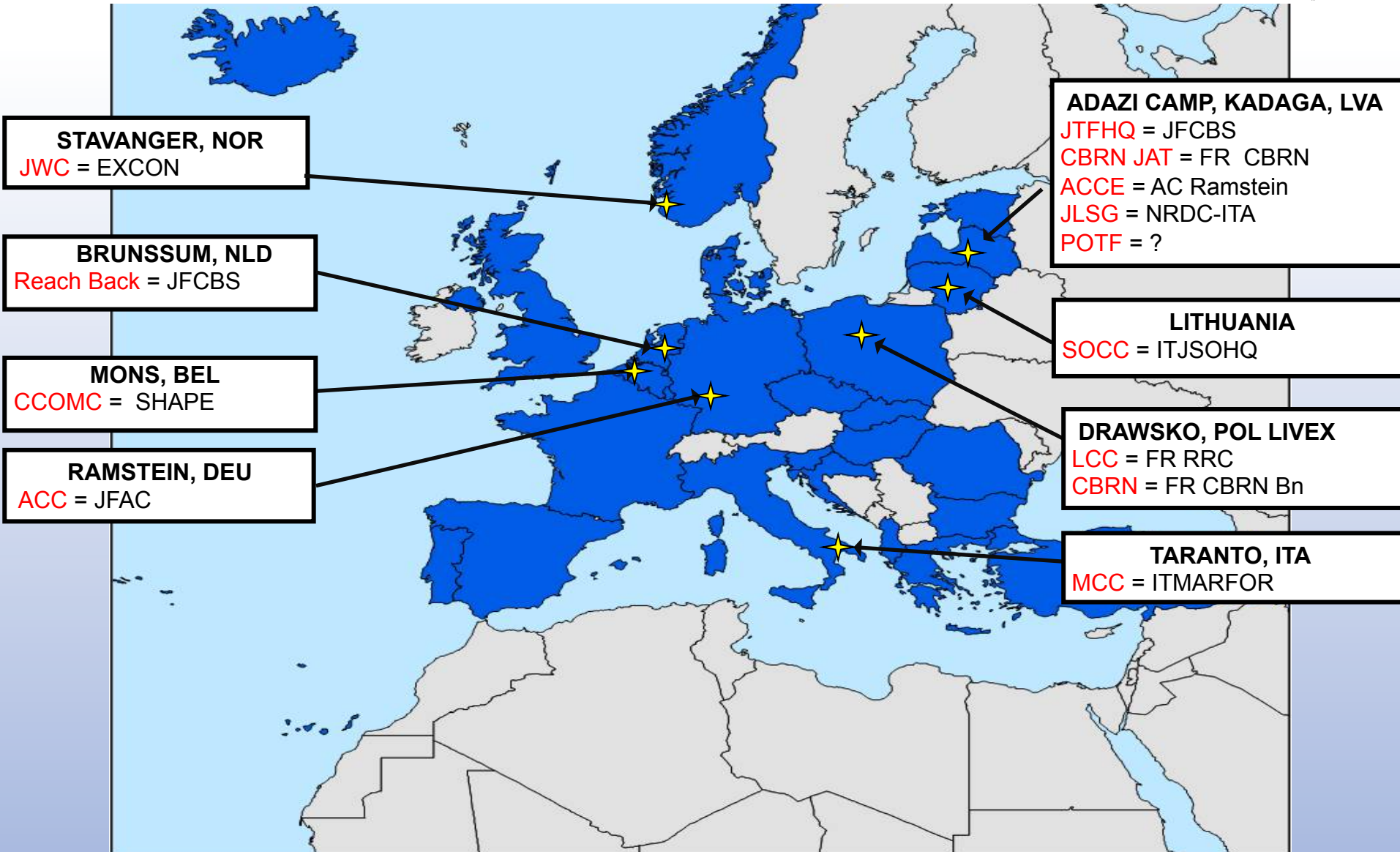
# Exercise Characteristics



- Training objectives are key to exercise design.
- Simulation creates the virtual theater.
- Our exercise flow is preplanned through a MEL/MIL.
- The execution of MEL/MIL is synchronized with the simulation and treated dynamically.
- Training audience use their operational C2 stimulated directly by simulation.
- NRF exercises are both distributed and multi-level.



# Steadfast Jazz 2013



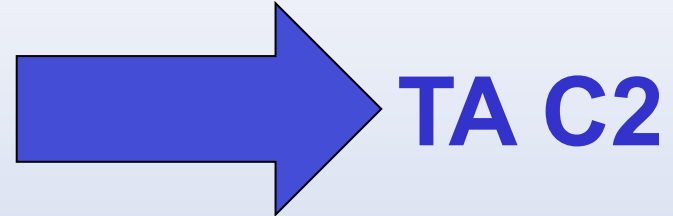
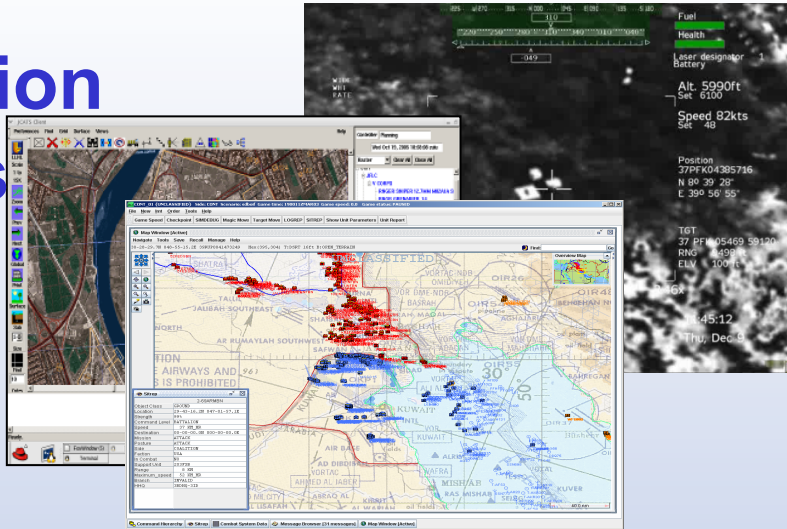


# Added Value of CAX Support



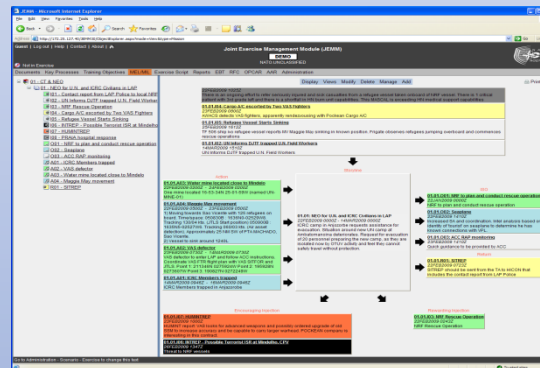
-Immerses the training audience in a realistic environment

## JWC Simulation Tools



## TA C2

- Supports the exercise planning group and the exercise control staff for controlling the exercise process so that it achieves the objectives effectively





# Settings for NATO Exercises

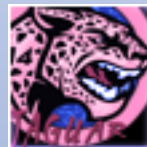
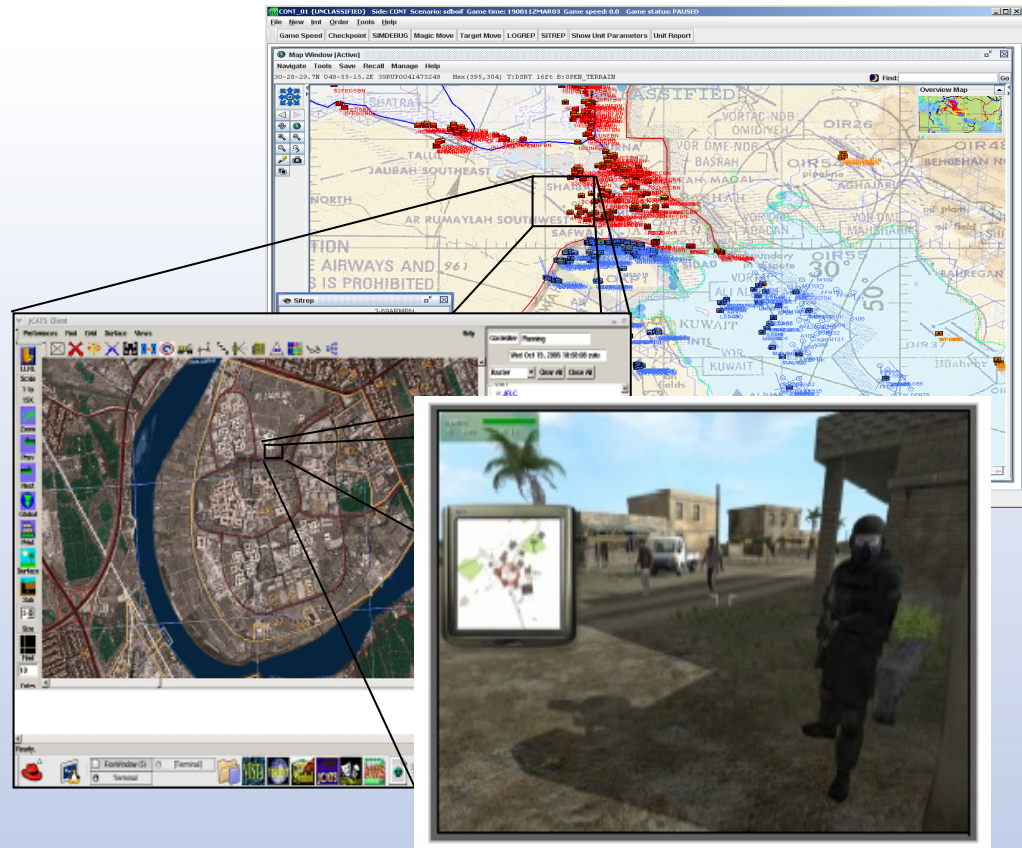






# Challenges

- Kinetic scenarios
  - Larger databases
  - Model and data validation
  - Higher number of orders
  - More complex orders
  - Dynamic theater
  - More proactive audience
- Wider resolution scope
- Program of work





# Connected Forces Initiative

- **Wider community to participate in JWC exercises**
- **Building Block Exercises**  
(i.e., Trident and Noble Series)
- **High Visibility CAX with Live Portion**  
(i.e., Steadfast Jazz 2013 and Trident Juncture 2015)





# M&S as a Cloud Service

- **Pioneering academical work published in International Conferences and Journals (e.g., CloudCom, WinterSim, Simulation: Transactions of SCS)**
- **The first fully virtualized CAX Support delivered in 2009**
- **Long term solution for NATO's future M&S by HQ-SACT**
- **Preparations for the implications of the long term solution**
- **Operational authority for the long term solution at the operational level**
- **NATO JTLS CCB as a short and mid term solution for the operational level**



# Joint Warfare Centre

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