

S&T Campaign: Assessment and Analysis
Developing Tools, Techniques, and Methodologies
EW SLV

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Research Objective

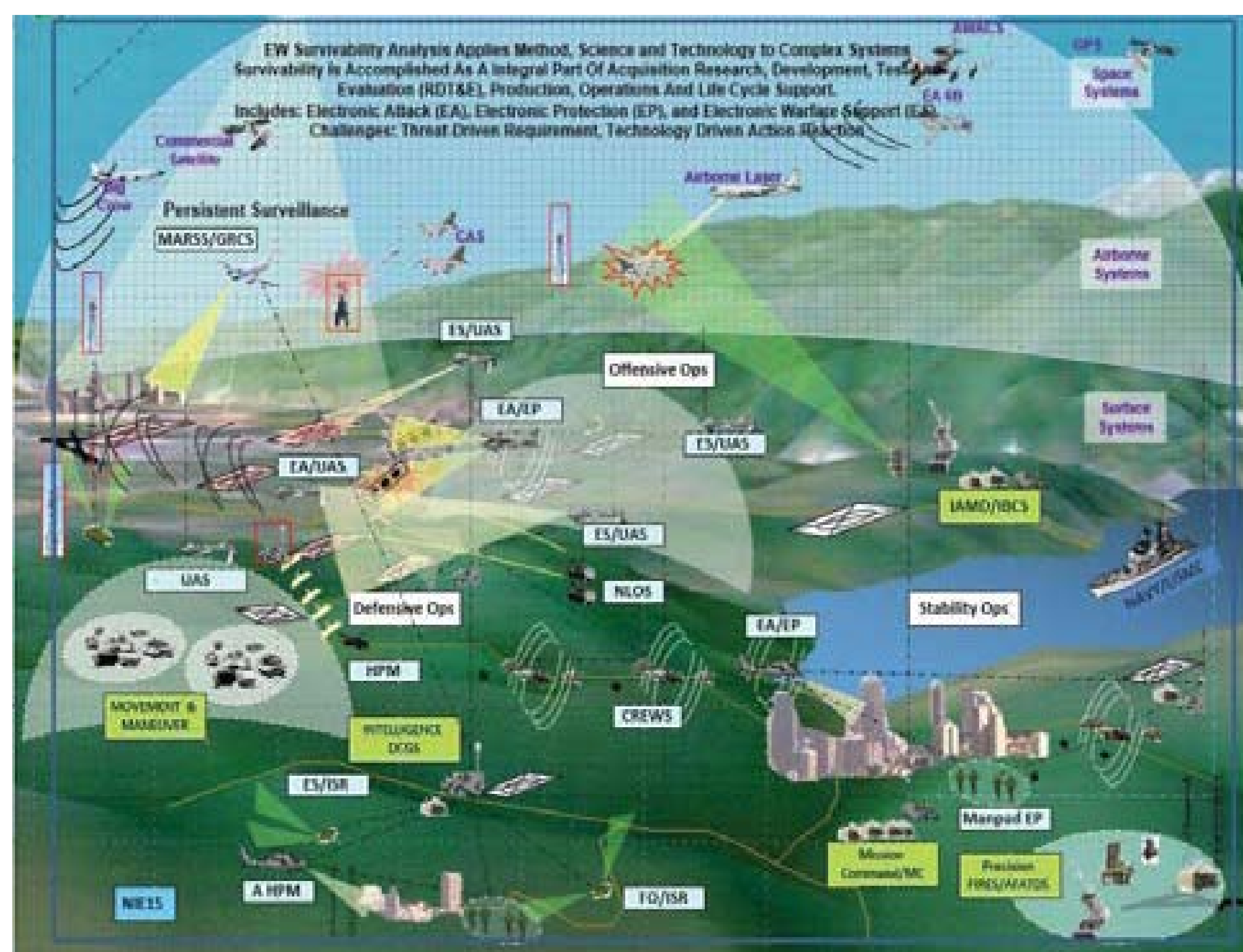
- Improve radio communication performance using:
 - Electronic warfare (EW) mitigation
 - Modeling and simulation
 - Digital signal processing
 - Radio frequency (RF) laboratory investigations

ARL Facilities and Capabilities to Support Collaborative Research

- Extensive RF laboratory equipment/facilities
- Sage – RF communication propagation analysis tool
- Subject matter expertise:
 - RF communication
 - Modulation techniques
 - Networking
 - EW Techniques



RF Battlefield Environment



Challenges

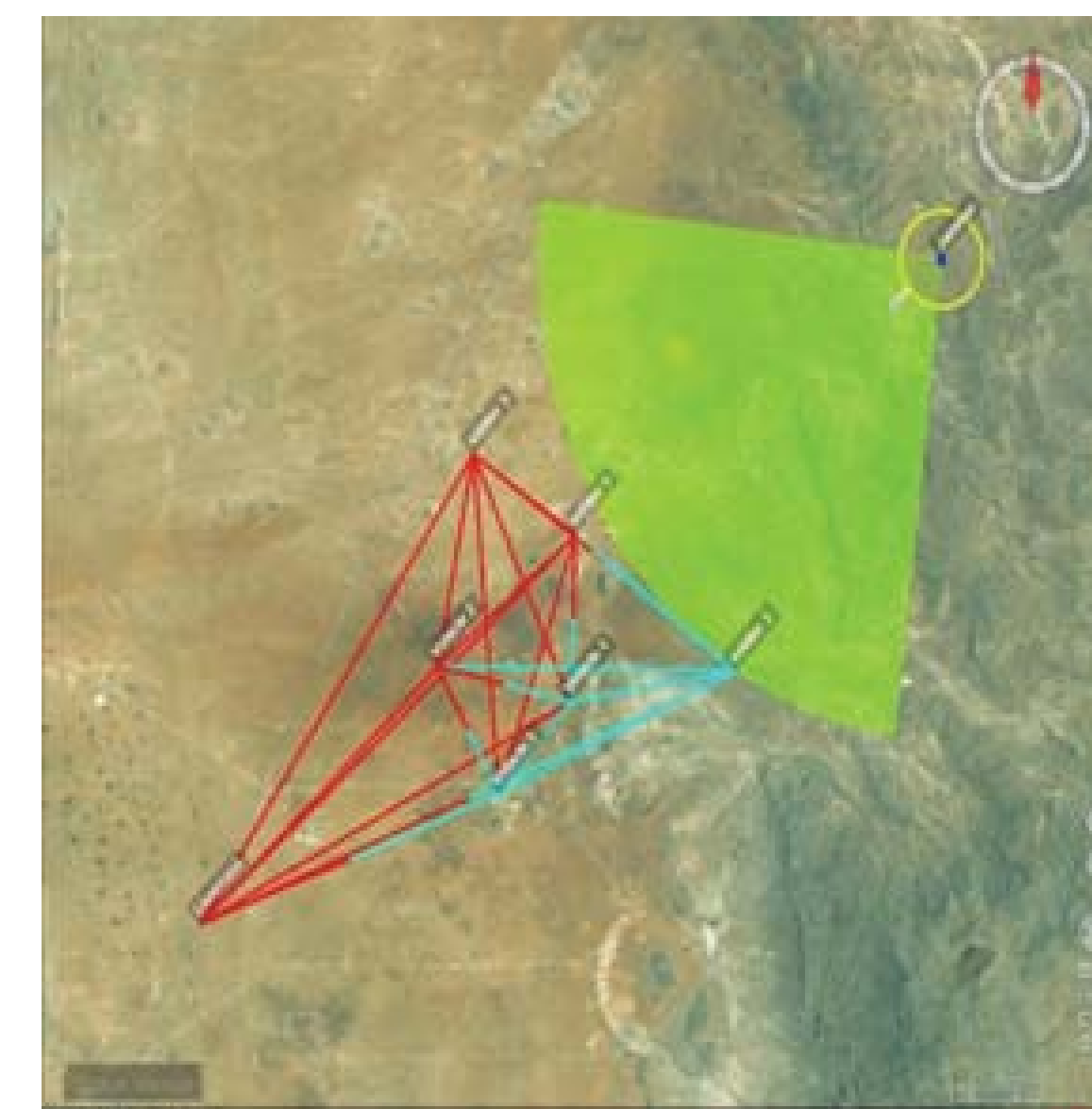
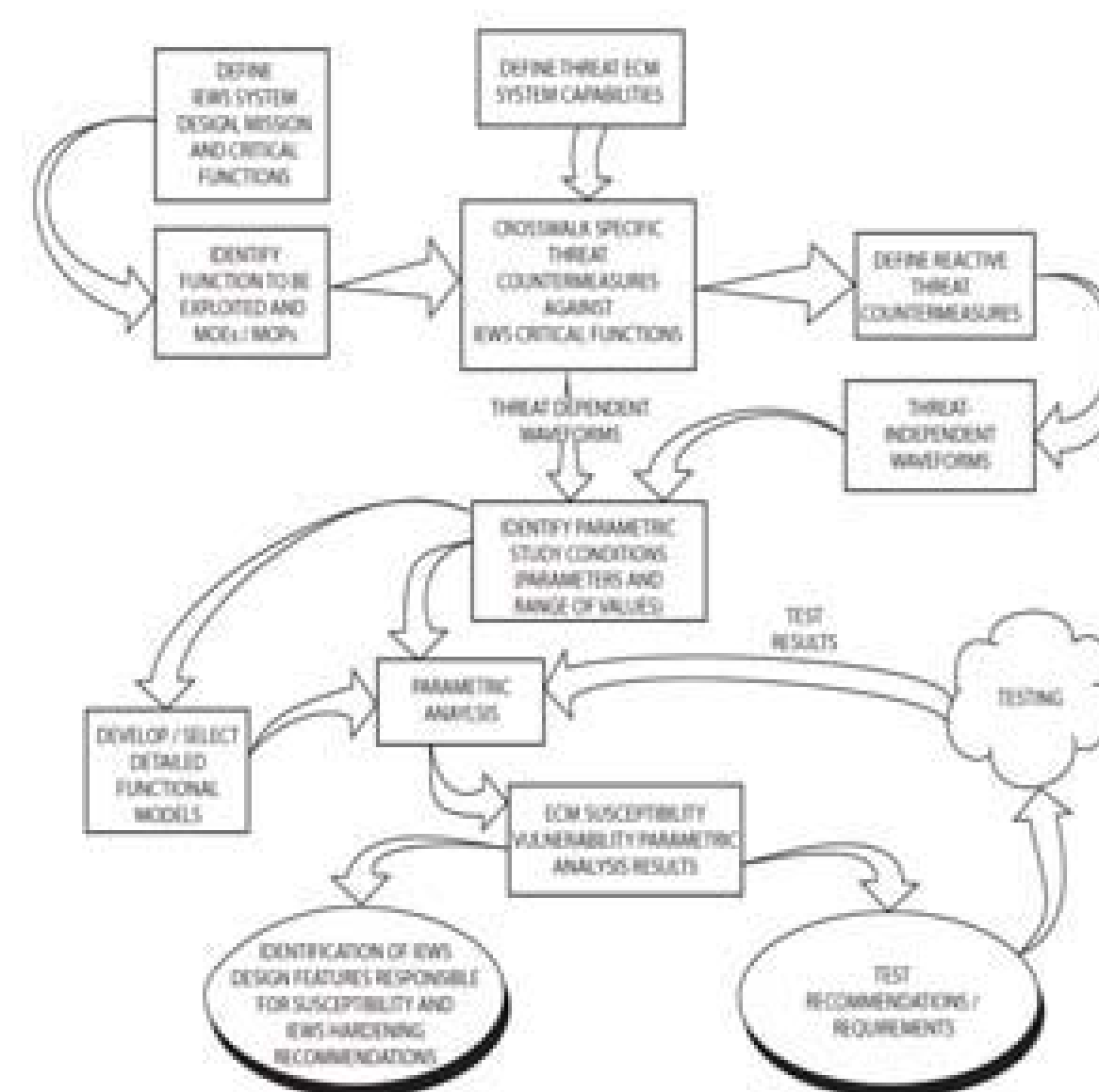
- New radio communication techniques allowing unencumbered communication in the congested and contested electromagnetic spectrum
- Conduct EW and RF analysis earlier in the development cycle



Electromagnetic Vulnerability Assessment Facility (EMVAF)

SLAD performs investigations, simulations, assessments, experiments & analysis.

EMVAF allows the conduct of sensitive tests while avoiding open air



Experience & expertise to create validated EW threats.

SAGE – RF Communication Propagation Model

Complementary Expertise / Capabilities Sought in Collaboration

- Knowledge of potential new/novel RF communication techniques
- Expansion of current EW laboratory investigation methods
- Knowledge of new/novel modeling techniques for open air RF propagation