



# **CBDP Decision Support Tools and Methodologies**

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# CB Decision Support Tools and Methodologies – In the Beginning



# CB Decision Support Tools and Methodologies – The IDA Epoch



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# CB Decision Support Tools and Methodologies – The IDA Study Recommendations



- **Proactive consumers of CB analysis**
- **Cadre of trained military and civilian analysts who are prepared to address the issues**
- **Center of this activity must reside in centralized location**
- **Technical CB library dealing with weapon effects technology, common models, community communications**
- **Spectrum of enhanced analytical capabilities to address evolving CB issues**



# CB Decision Support Tools and Methodologies – The Roadmap

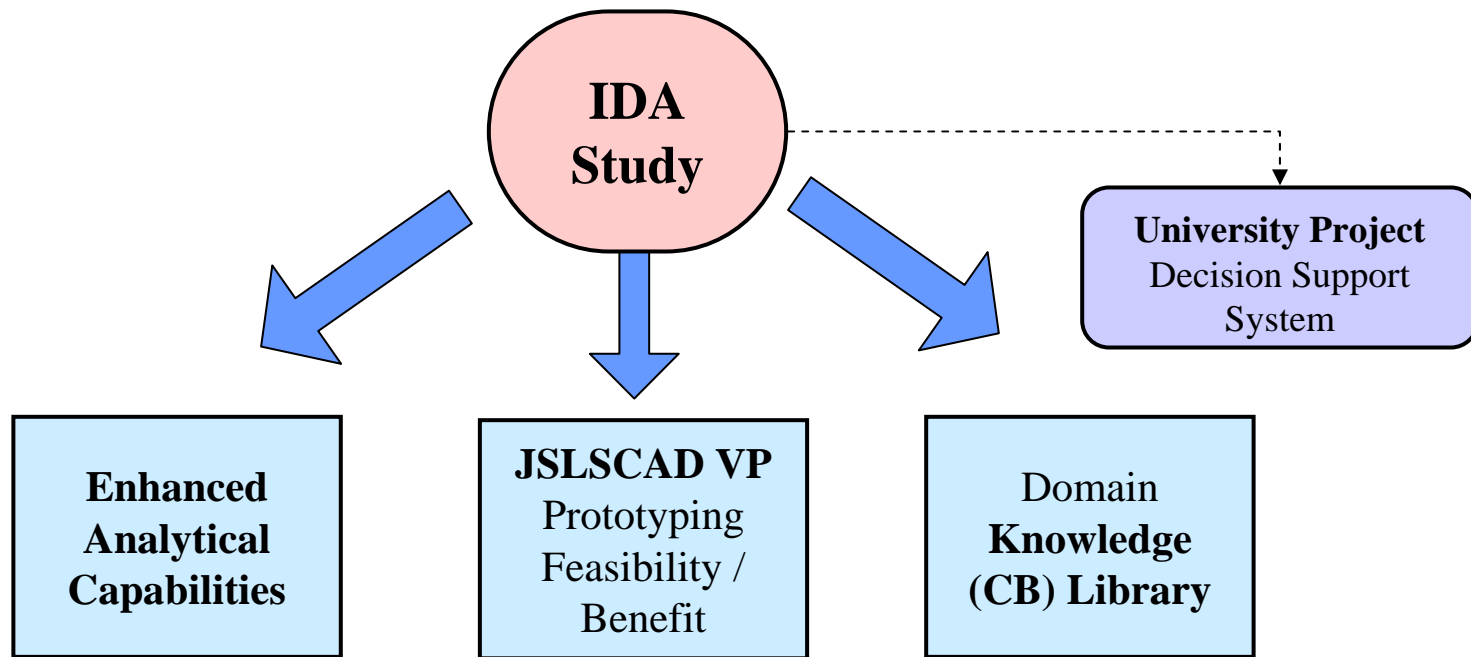


- **Formulate a program of studies**
- **Define/explore options to develop a technical CB library that captures environmental and CBD system performance models**
- **Initiate efforts to enhance analytical capabilities**

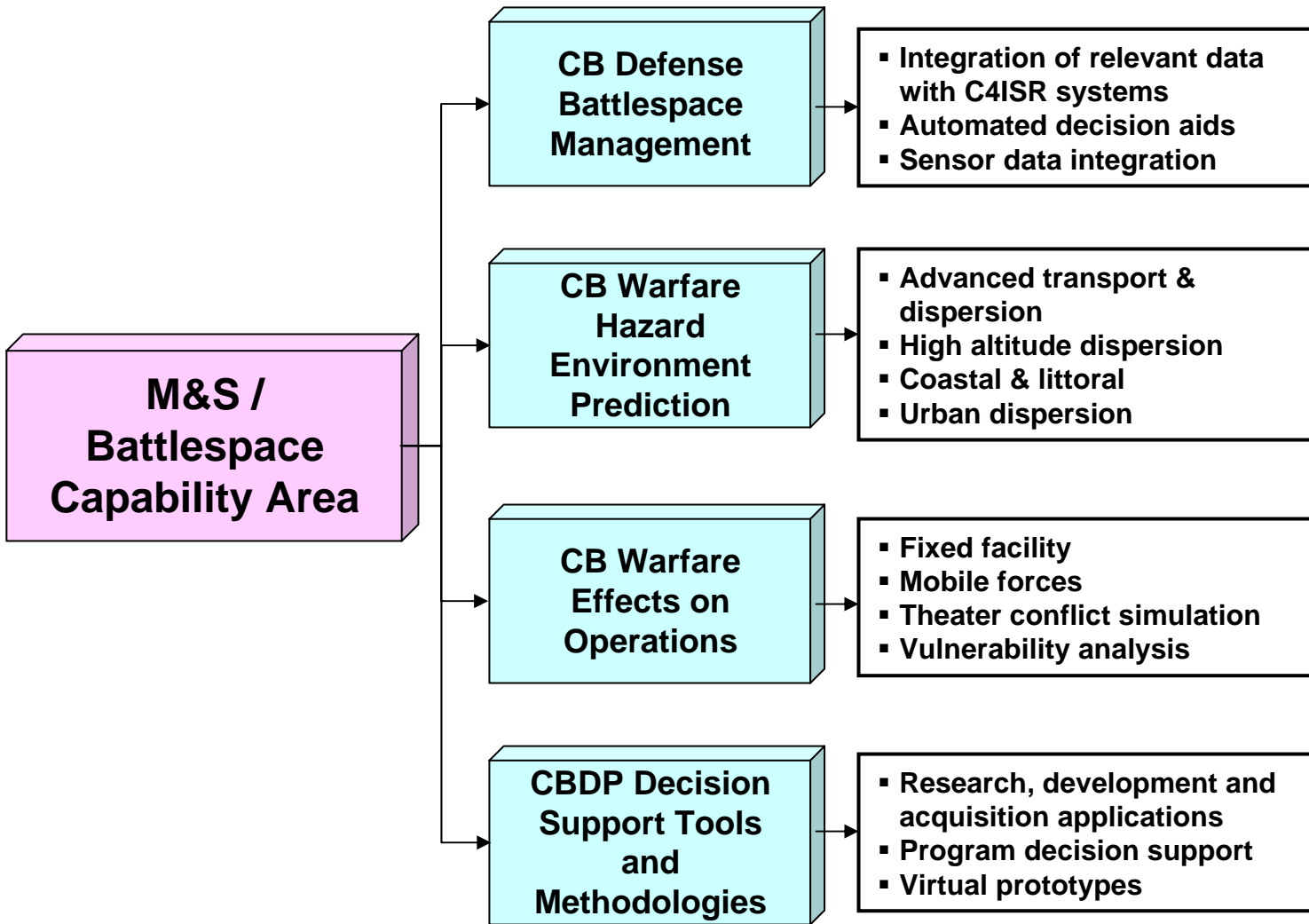




# CB Decision Support Tools and Methodologies Thrust Area Assessment



# Modeling & Simulation / Battlespace Capability Area Breakdown



**CB Defense Battlespace Management**

- Integration of relevant data with C4ISR systems
- Automated decision aids
- Sensor data integration

**CB Warfare Hazard Environment Prediction**

- Advanced transport & dispersion
- High altitude dispersion
- Coastal & littoral
- Urban dispersion

**CB Warfare Effects on Operations**

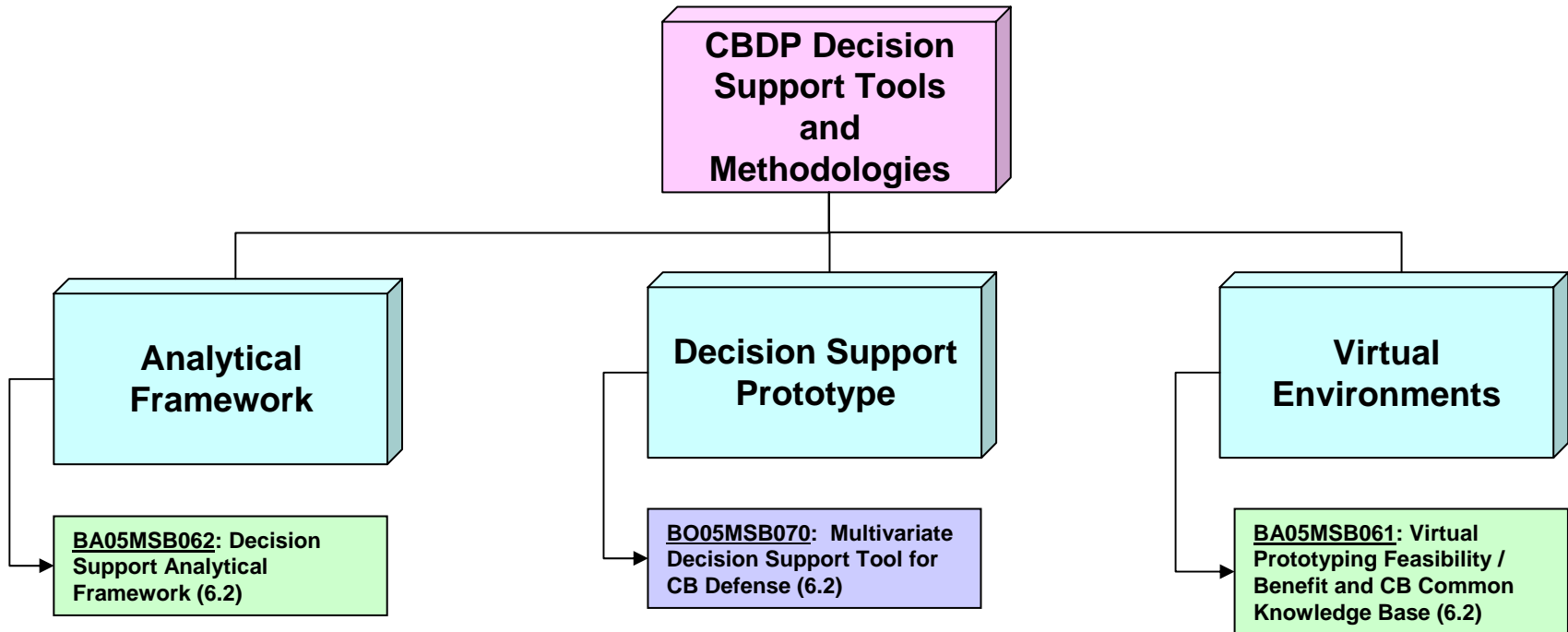
- Fixed facility
- Mobile forces
- Theater conflict simulation
- Vulnerability analysis

**CBDP Decision Support Tools and Methodologies**

- Research, development and acquisition applications
- Program decision support
- Virtual prototypes

**M&S / Battlespace Capability Area**

# CB Decision Support Tools and Methodologies Thrust Area Taxonomy





# CB Decision Support Tools and Methodologies Thrust Area Highlights



- **Rapid analysis capability**
  - Dial-in threat scenario
  - Gather and input data
  - Rapid baselining
  - Identify gap you are addressing
  - Multi-variate analysis tool
- **Common methodology and metrics for determining success and/or failure of CBDP tools and systems**
- **CBDP knowledge management**
- **Role of virtual prototyping / virtual environments**
- **Transition of simulation tools**





# Questions?



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# Back-up Slides



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# Acronyms and Definitions

- **CBDP (CB)** – Chemical Biological Defense Program
- **C4ISR** - Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance
- **CBR** – Chemical, Biological, Radiological
- **COTS** – Commercial Off-The-Shelf
- **DTRA/ASCO** – Defense Threat Reduction Agency / Advanced Systems Concepts Office
- **ECBC** – Edgewood Chemical Biological Center
- **IDA** – Institute for Defense Analyses
- **JPM-IS** – Joint Program Manager – Information Systems
- **JSLSCAD** – Joint Service Lightweight Stand-off Chemical Agent Detector
- **MSB (M&S/Battlespace)** – Modeling and Simulation / Battlespace
- **RDA** – Research Development and Acquisition
- **RDT&E** – Research, Development Testing and Evaluation
- **T&E** – Testing and Evaluation
- **S&T** – Science and Technology
- **UNM/NMSU** – University of New Mexico / New Mexico State University
- **VP** – Virtual Prototypes; Virtual Prototyping

