

Accessing and Sharing: Facets of Addressing Information Overload

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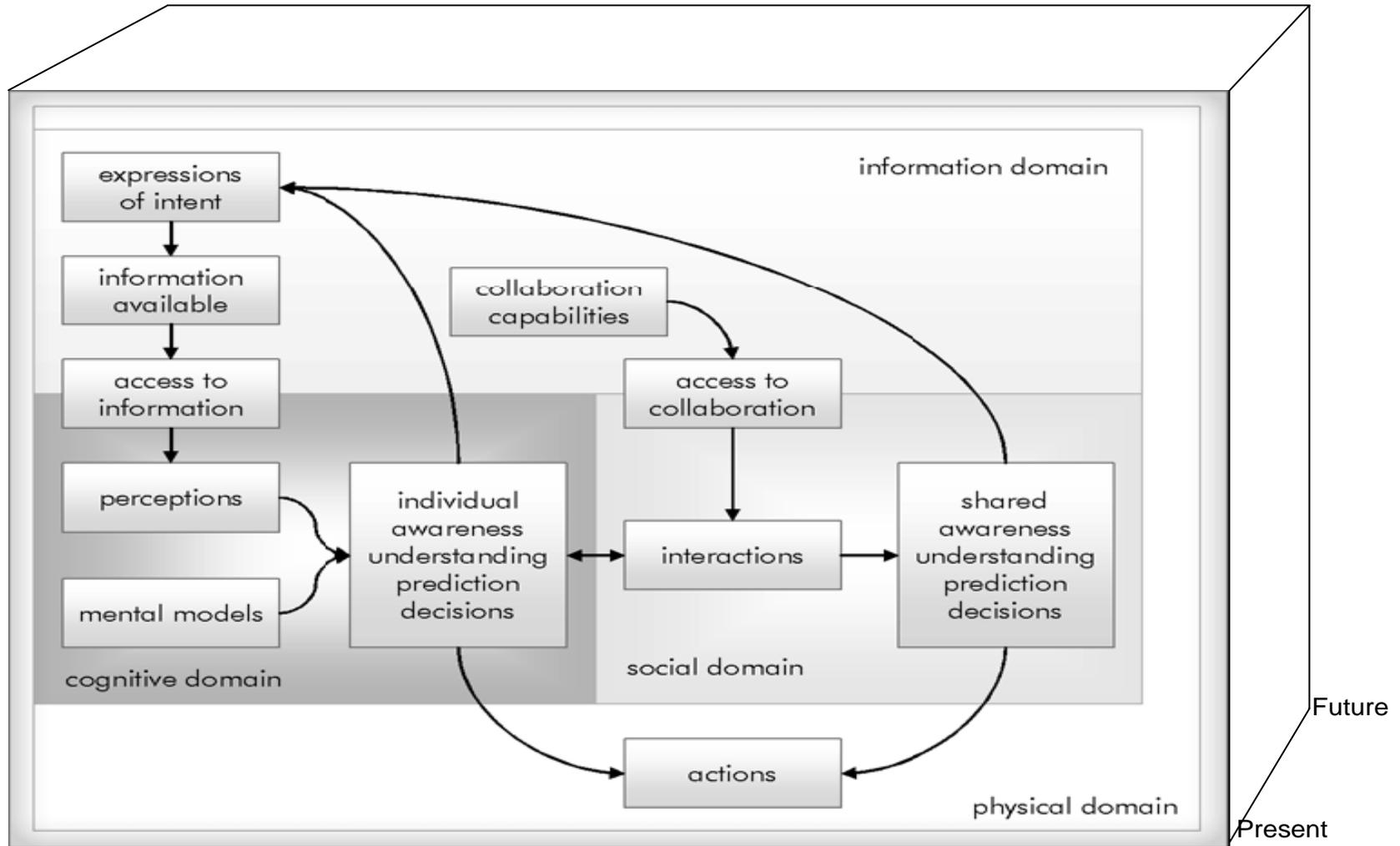
Problem



- **Scoping Commander's Predictive Environment:**
 - **Enhance the Joint Forces Commander (JFC), Joint Forces Air Component Commander (JFACC) and senior commanders' decision making process by supporting their ability to envision future battlespace options.**
 - **Very broad and blue sky**
 - **First step in Systems Engineering**
 - **Define Requirements!!**



Sensemaking Projected on the Future



Adapted from Leedom, 2004



AFRL Workshop Results



- **Understand the Battlespace**
 - **Basic information and the interactions**
 - **Political, military, economic, social, information, and infrastructure (PMESII)**
 - **Impacts on self (and allies), adversaries, or neutrals**
 - **Time epochs of past, present and the future.**



AFRL Workshop Results



- **Evaluate Courses of Action (COAs)**
 - Understand how our COAs alter plausible futures to achieve the commander's intent
 - Diplomatic, Informational, Military, and Economic (DIME) actions



AFRL Workshop Results



- **Access and Share Battlespace Information**

- This function can best be described in terms of four objectives that center around

- The sender, the recipient, and the media

- Used to gather, store, process, display, and disseminate



AFRL Workshop Results



- **Access and Share Battlespace Information, con't**
 - **Objective 1: Identify and access critical information relevant to pending decisions.**
 - **Objective 2: Perceive data with multiple sensory modes**
 - **Objective 3: Allow data sharing to be tailored to the style of communicator and recipients.**
 - **Objective 4: Communicate and share high quality, understandable, and credible information**

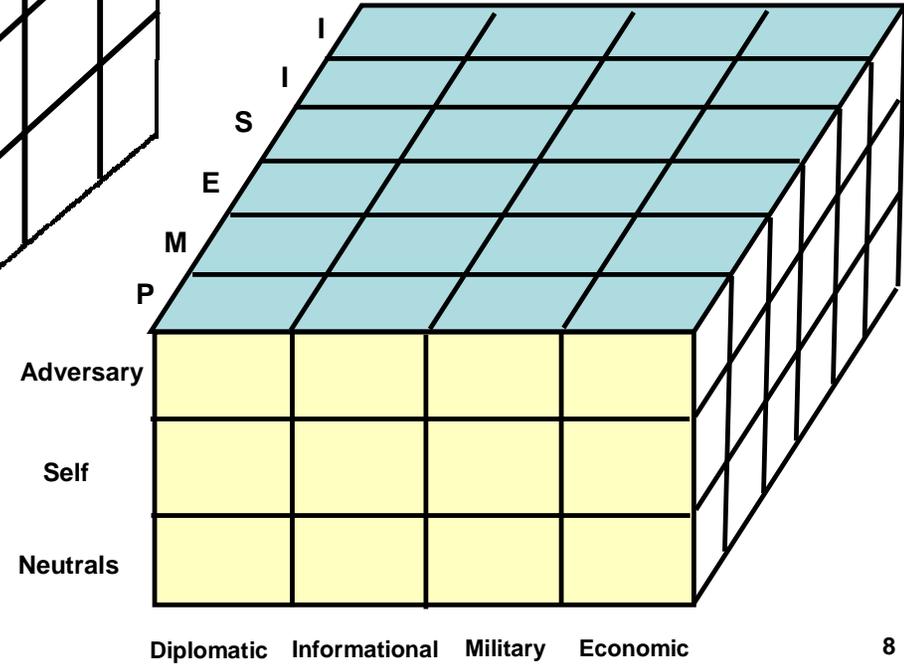
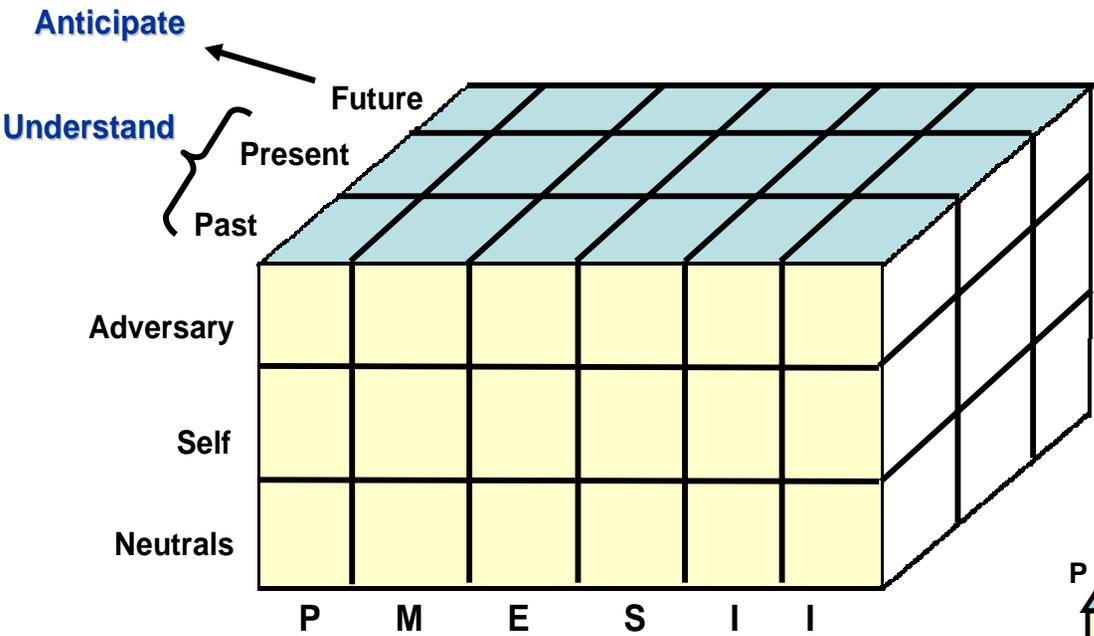


CPE Capabilities and Objectives



CPE Vision

Provide a decision support environment that enables the JFC/JFACC to anticipate and shape the future battlespace.





Customer Relationship



- **Warfighter Analysis Workshop (WAW)**
 - 3-6 April in Pensacola
 - 8-10 USAF subject matter experts (AOC strategy cell)
- **JFACC Senior Mentor Review**



WAW Results

Access and Share Focus



- **Must accept & process data from many sources.**
- **Capability for advanced searches and queries**
- **Subscriber-based push and pull for access to data from all intelligence (INT) sources**
- **Management of data, information, and finished intelligence**
- **Use use common standards for data exchange**
- **Must be done with minimal loss**
- **Tailorable to user preferences**
- **Traceability to source data**
- **Continuous update to ensure persistence in data / information**



Informal Ranking of Importance: Access and Share



- **Warfighters asked:**
 - **How well do we do today?**
 - **Access and share sub-cats in bottom 25%**
 - **Where do we need to do better?**
 - **Access and share sub-cats in top 25%**



Results



WAW Results	AFRL Workshop Results
Must accept & process data from many sources	Receive sensor information
Capability for advanced searches/queries Single query access	Provide smart queries Add prioritization to queries
Subscriber-based push and pull for access Continuous update to ensure persistence	Enable intelligent subscription Push updates and similar products Conduct limited advertising
Management of data	Format for use Synthesize data information Manage data aggregation and security issues Display meta information Manage context Control/access security Maintain usage history
Traceability to source	Provide semantic understanding Qualify data Provide contextual framing Add temporal frame
Tailorable to user preferences	Provide flexible interfaces Tailor products



Results



- **Understand Access and Share Battlespace Information as an absolute critical area to address**
- **Recognize that the Air Operations Center has an Information Management Cell**
 - **Need to understand roles, responsibilities, challenges, needs**
 - **Not the ‘sexy’ part of an AOC but may have huge returns on support**
- **Challenge to identify needs for 2015 and beyond when today’s warfighter has today’s problems**