



## CSIAC Success Story

### Headquarters Air Force Space Command (HQ AFSPC) Unified Platform Analysis of Alternatives (UP AoA)

<https://www.csiac.org>

<b>Customer:</b>	Headquarters Air Force Space Command (HQ AFSPC) /United States Cyber Command (USCYBERCOM)
<b>Challenge:</b>	CSIAC was chartered to conduct a cyber defense focused Military Utility Analysis (MUA) on the cyber-physical system (CPS) aspects of several operational model vignettes in support of the UP AoA Effectiveness Analysis Working Group (EAWG). The UP AoA will provide an analytical comparison of Unified Platform architectures and concepts in terms of effectiveness, suitability, risk, and life cycle cost that will satisfy validated capability needs.
<b>Approach:</b>	<p>CSIAC partnered with the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, as well as National and Service Laboratories, to understand key CPS cyber defense issues and develop a plan to support metric development, model selection and modeling data input to assess the materiel solutions. Under the UP AoA, CSIAC supported AFSPC/A5/8/9's EAWG to discover, characterize, and document cybersecurity impacts to critical infrastructure that result in impacts to Department of Defense (DoD) warfighting capabilities.</p> <p>Specific activities included:</p> <ul style="list-style-type: none"> <li>- Planned, scheduled and executed CPS security research and analysis</li> <li>- Researched existing CPS cybersecurity defense issues and methods</li> <li>- Visited research and operational sites to obtain ground truth</li> <li>- Provided a CPS perspective at EAWG technical exchanges/summits</li> <li>- Developed model graphics to illustrate concepts to senior leadership</li> <li>- Established representative data to be used in analysis models</li> <li>- Performed analysis of results of modeling against given alternatives</li> <li>- Recommended CPS defense cybersecurity strategies and approaches</li> </ul>

<b>Value:</b>	Critical Infrastructure Protection is one of the Nation's highest priorities. For the DoD, the cybersecurity of CPS controlled infrastructures such as power, cooling, and data processing/storage is necessary to deliver military capabilities/effects. Given the alternatives presented, CSIAC provided a unique CPS cybersecurity perspective to the UP AoA to discover key cyber-physical needs and issues early in this major acquisition process. This is vital to effectively deliver tools and systems to Cyber Protection Teams (CPTs) and ensure DoD capabilities are ready when needed to meet national objectives.
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