EGLIN AIR FORCE BASE AND PROPRICER PERCEPTIONS OF INTEGRATING ARTIFICIAL INTELLIGENCE INTO THE 12-STEP SOLE SOURCE CONTRACT NEGOTIATIONS PROCESS FOR ACQUISITION SYSTEMS

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Abstract

- The emergence of Artificial Intelligence (AI) offers several opportunities that can assist the Department of Defense (DoD) in alleviating bottlenecks in the acquisition process. Buyers and sellers are arguably in the best position to share insights on the applications of AI to modernize the acquisition process. This qualitative study explores potential opportunities where AI can be applied specifically to the 12-step sole source contract negotiations process aspect of defense acquisitions. The buyer organization (Eglin Air Force Base) and seller organization (ProPricer) provided feedback for this study to not only help explore where AI can be applied, but the willingness to adopt AI into their professions. Exploring these perceptions into the development and adoption of AI in the acquisitions and contracting process will contribute to furthering the academic conversation of AI implementation in the DoD, while also providing first-hand insights for policymakers, procurement officials, and defense contractors seeking to improve acquisition processes through technology solutions.

Step	Activity	Description
1	Requirements Planning	Define the needs and objectives of the program, ensuring alignment with mission goals and budget constraints
2	Release Draft Letter RFP	Issue a preliminary version of the RFP to potential contractors for feedback on the scope, terms, and requirements
3	Approve Program/Project	Obtain approval from relevant authorities to proceed with the acquisition program, ensuring all requirements and resources are validated
4	Release RFP	Issue the official RFP to solicit formal proposals from industry contractors, outlining specific technical and contractual requirements
5	Receive Proposal	Contractors submit their proposals, which include technical solutions, cost estimates, and contractual terms in response to the RFP
6	Conduct Fact-Finding and Develop Technical Evaluation	Review the proposals to gather detailed information, clarify uncertainties, and assess technical compliance and capabilities
7	Complete Pre–Price Negotiation Memorandum (Cost/Price Analysis)	Analyze the cost and price elements of the proposal, ensuring they are fair, reasonable, and aligned with the project's budget
8	Receive Business Clearance	Obtain authorization from senior officials to proceed with contract negotiations, based on cost, pricing, and technical evaluations
9	Conduct Contract Negotiations	Engage with the contractor to negotiate the final terms, conditions, and pricing of the contract
10	Complete Final Price Negotiation Memorandum	Document the results of the contract negotiations, including agreed-upon prices and terms
11	Receive Contract Clearance Approval	Obtain final approval from appropriate authorities to proceed with awarding the contract
12	Award Contract	Finalize and officially issue the contract to the selected contractor, authorizing the start of work

12-Step Major Weapon Systems Cost/Price Analysis and Contract Negotiations Process. Adapted from Medium Altitude UAS Division & General Atomics Aeronautical Systems (2020)
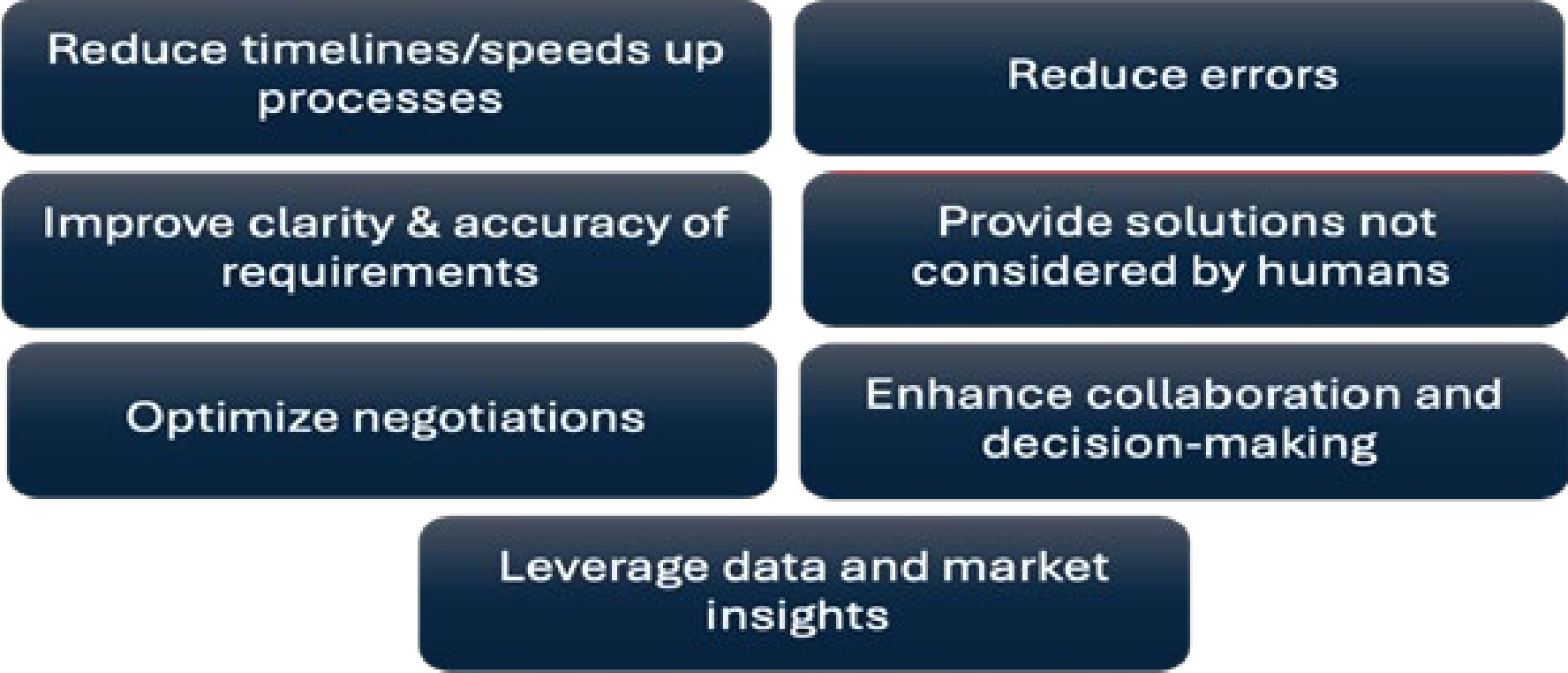
Methods

Buyer and Seller participants

- **Literature Review**-Synthesized existing research on AI integration in acquisition processes
- **Interviews**- Conducted with buyers (e.g., Eglin AFB) and sellers (e.g., Deltek/ProPricer).
- **Comparative Analysis**- Identified shared perspectives and differences between buyer and seller organizations.
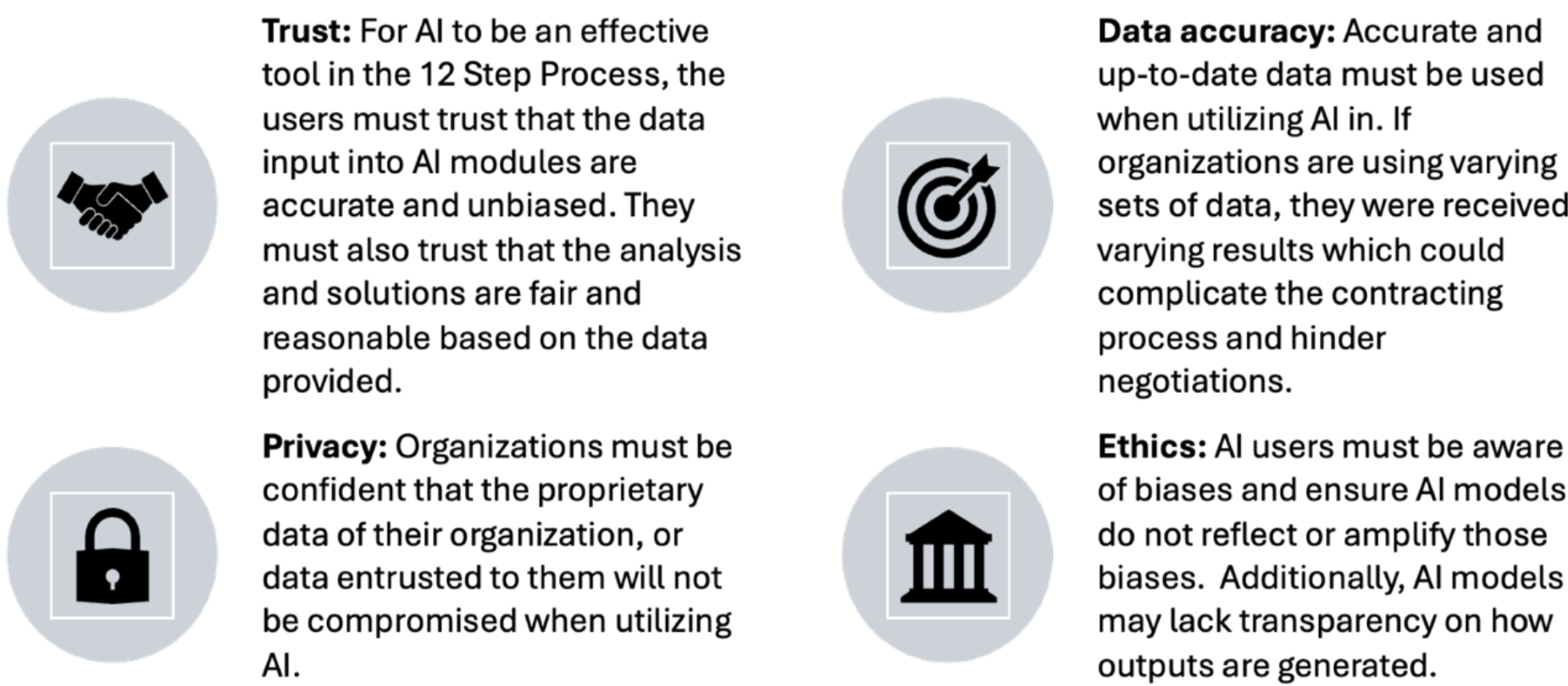
Results & Their Impact

- Relevant and clean databases
- Transparency between buyers and sellers
- Collaboration between buyers and sellers

- Administration and role-playing
- Keep the human involved

Reduce timelines/speeds up processes

Reduce errors

Improve clarity & accuracy of requirements

Provide solutions not considered by humans

Optimize negotiations

Enhance collaboration and decision-making

Leverage data and market insights

Perceived Benefits of Integrating AI Into the 12-Step Sole Source Acquisition Process

Trust: For AI to be an effective tool in the 12 Step Process, the users must trust that the data input into AI modules are accurate and unbiased. They must also trust that the analysis and solutions are fair and reasonable based on the data provided.

Privacy: Organizations must be confident that the proprietary data of their organization, or data entrusted to them will not be compromised when utilizing AI.

Data accuracy: Accurate and up-to-date data must be used when utilizing AI in. If organizations are using varying sets of data, they were received varying results which could complicate the contracting process and hinder negotiations.

Ethics: AI users must be aware of biases and ensure AI models do not reflect or amplify those biases. Additionally, AI models may lack transparency on how outputs are generated.

Caution Areas of Integrating AI Into Acquisition Process

Christa Luckenbach, MAJ, USA
Adam Heilig, Capt., USAF
Tiffany Turner, CPT, USA

Advisors: Kelley Poree
Dr. Robert Mortlock