



ACQUISITION INNOVATION  
RESEARCH CENTER

# Pilot Program Design to Test Innovative Approaches in Negotiating Intellectual Property

EXECUTIVE SUMMARY  
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## EXECUTIVE SUMMARY

Intellectual property (IP) rights play a critical role in defense acquisitions, ensuring operational sustainability, adaptability, and cost-effectiveness of government defense systems. Acquiring the correct IP and technical data rights is essential for their effective operation, maintenance, and long-term sustainability. Insufficient IP rights can lead to vendor lock, limited competitive sourcing for upgrades or repairs, and increased sustainment costs. Conversely, defense contractors view their IP as valuable assets requiring protection to safeguard investments and future income. These differing perspectives between the government (seeking access) and defense contractors (seeking protection) necessitate careful management.

Another significant consideration is the rapid advancement of additive manufacturing (AM) and part scanning technology. AM enables decentralized manufacturing, while part scanning technology facilitates the creation of digital models from physical components. However, these advancements complicate IP rights protection and the determination of fair compensation for IP holders. Therefore, incorporating these considerations into contractual agreements is crucial for effective IP management in defense acquisitions and competitiveness in the evolving technological landscape.

This report introduces a decision framework tailored to navigate IP complexities in AM applications for defense acquisition. The framework starts with comprehensive scenario screening and scoping, outlines the AM lifecycle, identifies critical IP assets, and explores strategic considerations while presenting diverse options. Key drivers of AM IP acquisition strategies include: 1. rationale for IP acquisition; 2. identification of essential IP assets; and 3. structuring of IP acquisition. Inspiration from real options theory is employed in the latter portions of the framework. The report illustrates the framework's application by developing three fictitious vignettes under different mission scenarios: 1. limited access to original equipment manufacturers; 2. demand surge; and 3. maintenance, repair, and operations. Each vignette includes specific assumptions to aid analysis, influencing the recommended acquisition strategy. Additionally, sensitivity analysis evaluates the impact of key assumptions on these strategies, presenting recommended acquisition options as a checklist intended for contractual inclusion with appropriate legal language.

The report also addresses complexities such as alignment with existing defense acquisition rules, portfolio-level decision-making, and quantifying uncertainty and risk using IP valuation based on real options theory. The report suggests avenues for future research and refinement to enhance IP strategies for AM in defense acquisitions. In conclusion, this report emphasizes IP considerations in AM applications, contributing to fair compensation for IP holders and promoting sustainable and effective defense acquisitions for the government.

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