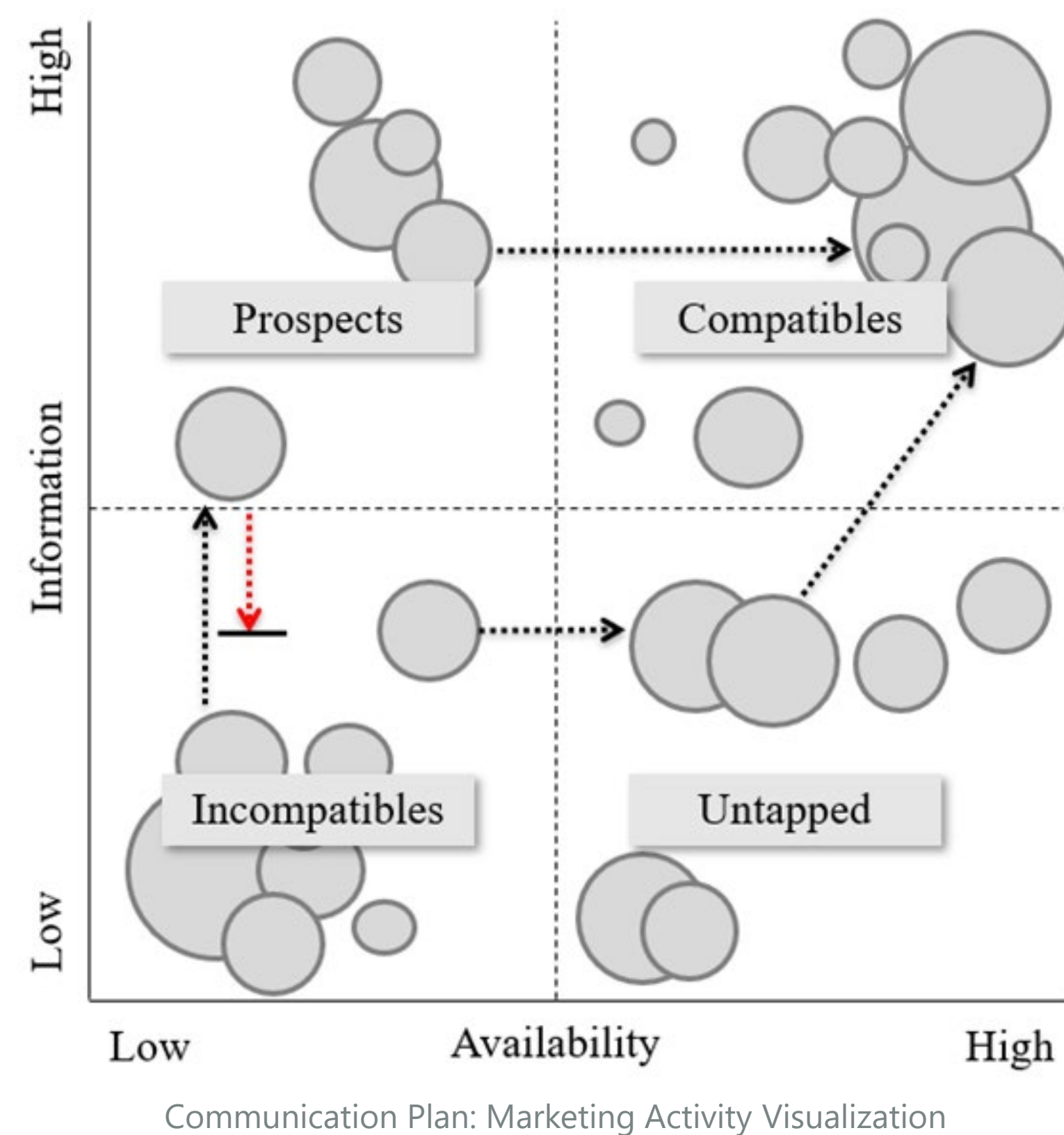


Abstract

This research supports U.S. Air Force and federal-level Category Management efforts under the government-wide working dog program. For the past several decades, the federal government has faced a chronic shortage of domestically bred working dogs qualified for use by both the Department of Defense and other federal agencies. As adversaries, both peer and near-peer, become more adept in circumventing detection systems, the need for working dogs has steadily increased to address security vulnerabilities. Unlike current technology, canines possess the ability to continuously adapt and provide a consistent detection capability. The lack of a robust domestic supply of working dogs creates increased supply chain risk and may threaten the ability of departments and agencies that utilize working dogs to maintain readiness if the supply from foreign markets is contested or interrupted for an extended period. This research draws on data from across the federal government and utilizes a mixed methods approach that applies both quantitative and qualitative techniques to obtain insight into the domestic working dog market. This paper provides some of the most comprehensive research on working dog procurement conducted in the last 15 years and provides a valuable methodology for uncovering and understanding opaque or emerging markets. The application of these concepts can lead to better outcomes for procurement decision makers and greater value for the taxpayer.



Methods

- This research was conducted as an exploratory applied study using a mixed methods approach that included the following research activities.
 - Spend Analysis – We analyzed 6 years of government working dog procurement data to understand the yearly spend by department, vendor base/location, and small business utilization.
 - In-depth Interviews – We conducted interviews with subject matter experts to understand the factors influencing domestic producers.
 - Data Synthesis – We synthesized the data gathered through a formulation workshop, built a market segmentation model, and produced a communication plan for the government-wide working dog program.



Military Working Dog Azza and his handler, Staff Sgt. Leonard Anderson.

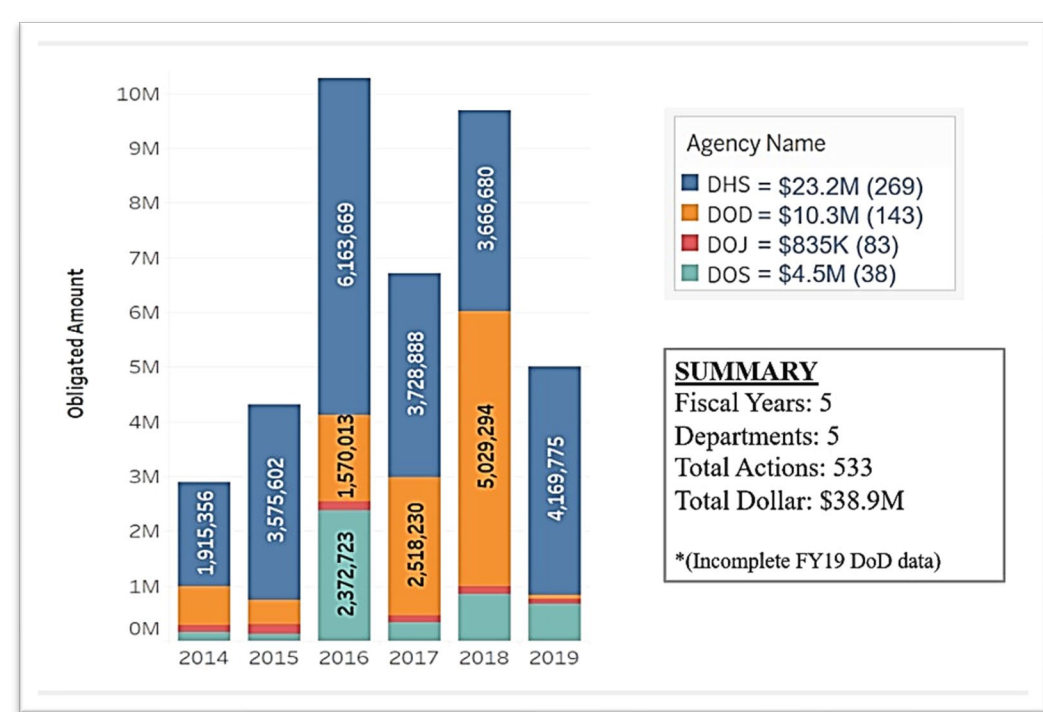
Source: <https://www.eielson.af.mil/News/Features/Display/Article/384732/an-iceman-and-his-best-friend/>

Results

- This research uncovered the existence of shadow inventory within the domestic market that cannot be easily observed through traditional government data collection techniques nor accessed through established government marketing efforts. The market segmentation model provides a means of categorizing suppliers in opaque or shadow markets.

Impacts

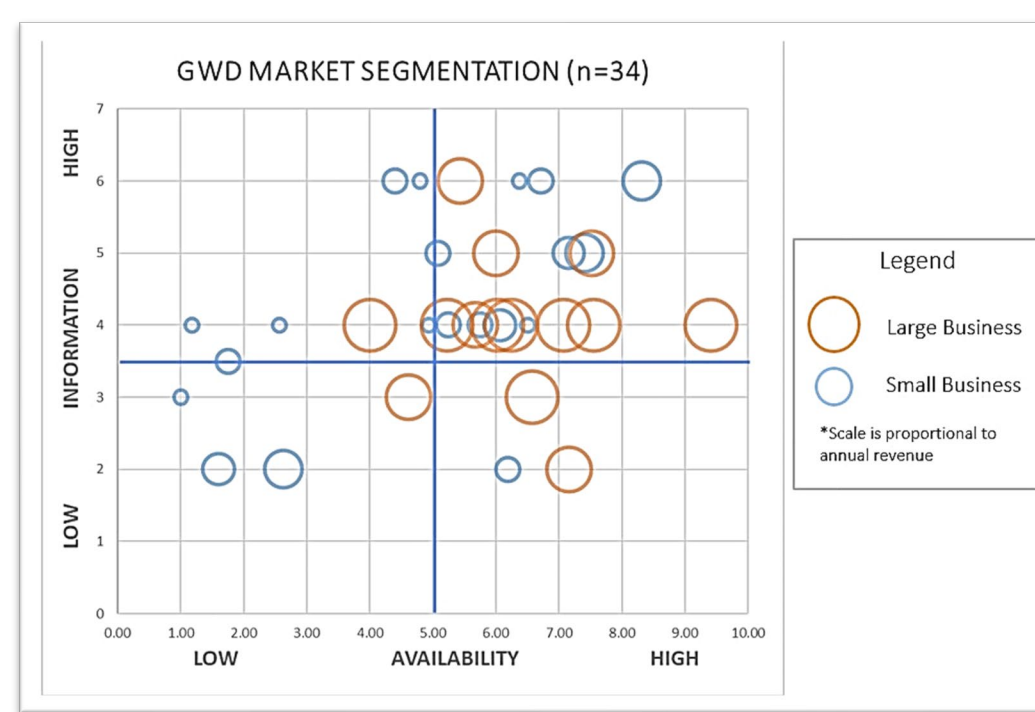
- This research assisted the Government-wide Working Dog Category Management Team (GWD CMT) in bolstering the domestic working dog market's readiness to be able to react to supply chain disruptions within foreign markets. This research produced a communication plan to be utilized by the GWD CMT to influence suppliers within the domestic working dog market.



Spend Analysis:
Contract Spend on Government Working Dogs, by Agency and Year

Areas of Influence	Drivers
1 Purpose (Tool/Family)	<ul style="list-style-type: none"> Culture Philosophical disagreement Misinformation about MWD care/lifestyle Patriotism Government -> industry revolving door
2 Need for Certainty	<ul style="list-style-type: none"> Return on Investment Loyalty Terms of commitment Lack of forecasted demand
3 Production Capacity	<ul style="list-style-type: none"> Funding Price Land & equipment Time Human Resources Contract arrangement
4 Geography, Proximity, Distance	<ul style="list-style-type: none"> Cost of transportation Price Buy American Act Information network Evaluation resources are limited Impacts to dog selection rate (fatigue)
5 Dog Breed	<ul style="list-style-type: none"> Pedigree & traits Performance Potential profit
6 Capability	<ul style="list-style-type: none"> Costs to raise/train to maturity Experience Relationships

Formulation Workshop:
Areas of Influence and Drivers Affecting Domestic Suppliers



Market Segmentation Model Proof of Concept

Marketing Activity	Description
Print/Digital Media	<ul style="list-style-type: none"> GWD Program representatives and GWD Marketing Team Members should participate regularly in interviews for news organizations, industry magazines or periodicals, websites, and other news sources. To facilitate a centralized repository of standardized information across all departments a single "one-stop-shop" website should be deployed and maintained.
Attendance at Industry Events	<ul style="list-style-type: none"> Representatives from the GWD Program as well as the GWD Marketing Team should regularly attend industry events such as conferences sponsored by AKC, trade shows organized by specific breeding clubs, and webinars led by various canine organizations to raise awareness and improve relationships with the working dog industry. The GWD Team should team up with industry associations such as the AKC to lead events like the detector and patrol dog competition.
Tools and Resources	<ul style="list-style-type: none"> Tools should be made available through the proposed GWD Program website which covers the acquisition process for working dogs, information for firms on becoming registered to do business with the government. Resources, such as monetary assistance and expertise, should be made available in several forms to interested firms.
Consistency of Message	<ul style="list-style-type: none"> To be able to ensure consistency of message and synergy of effort the execution of the activities described above should be planned, coordinated, and conducted to address a government-wide marketing approach.

Communication Plan: Marketing Activities