



Conservative Estimates of Potential Available Market(s)

SECURE Program provides a conservative estimate of the potential available market (PAM) for a given product, technology or service.

**Thomas A. Cellucci, Ph.D., MBA
Chief Commercialization Officer
U.S. Department of Homeland Security**

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While volumes have been written¹ on effective market sizing and segmentation, the SECURE Program provides a conservative estimate of the potential available market (PAM) for a given system (product or service) which needs to be verified through independent research by a potential commercialization partner.

The DHS commercialization process relies on providing two key pieces of information to potential solution providers in order for them to devote their valuable time, money and resources to develop products and services for use by DHS operating components, first responder communities, critical infrastructure and key resources (CIKR) owner/operators and other stakeholders: 1) a clear and detailed delineation and explanation of the operational requirements, and 2) a conservative estimate of the potential available market for a potential commercialization partner to offer potential solution(s). We have forged the development of Operational Requirements Documents (ORDs) through the publication of several books, training materials and articles to address the first half of this equation, and the following pages of a comprehensive market potential template address the latter.

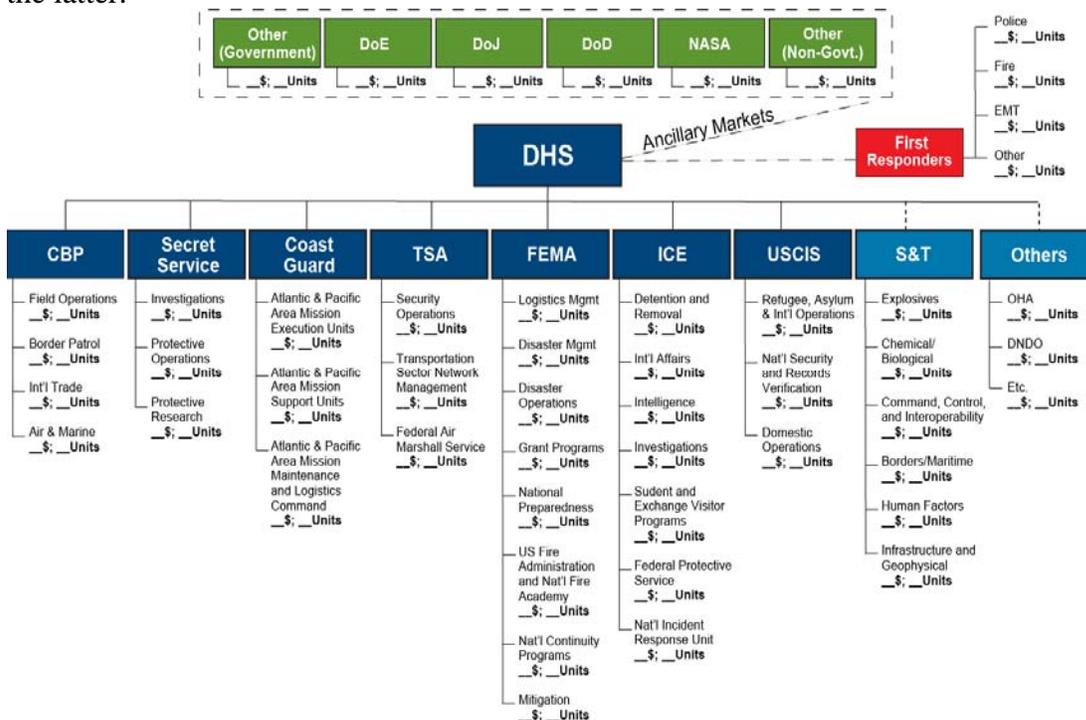
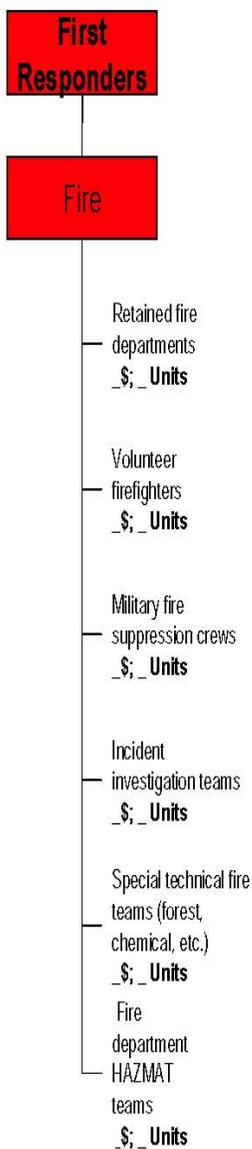


Figure 1 The market potential template maps out many potential available markets to which DHS has direct control and responsibility or acts as a conduit.

It is important to understand not only the detailed operational requirements necessary to provide DHS stakeholders with mission-critical capabilities, but also understand the volume of potential users of these solutions. DHS itself can represent a substantial potential available market; in many instances requiring hundreds, if not thousands of product or service units to address unsatisfied needs. Couple to this the fact that DHS has responsibility for so many ancillary markets (e.g. first responders, critical infrastructure and key resources, etc.) representing large potential available markets, it is evident that substantial business opportunities exist for the private sector as these large pools of potential customers and users represent the “lifeblood” for businesses (see Figure 1). We outline the top level of key players in the public and private sectors. In turn, each “branch” of the template has been further segmented to hone in on detailed opportunities.



For example, in Figure 2 we’re interested in demonstrating the number and scope of various fire fighting sub-segments or applications within the fire fighting market segment. While these groups confront the same basic threat, each sub-segment represents and responds to specific threat profiles requiring different tactics. Similarly, another part of this market revolves around special technical fire teams, which encounter very unique challenges that most fire departments are not expected or ill-equipped to confront, such as widespread forest fires. HAZMAT-capable fire teams may deal with material disposal, incident investigators might not require the same heavy-duty tools that fire crews need, and military fire suppression crews frequently have to battle an inferno that is driven by special propellants (i.e. jet fuel).

The wide variety of requirements within the fire protection and suppression market shows the keen observer just how potentially large this market may be for a given product or service, or demonstrates potential new unsatisfied needs/wants. In addition, rather than limiting a solution provider to offering a given solution to a very specific sub-segment of a given market, this comprehensive template demonstrates the wide variety of market users of a requirements-driven fire fighting solution *platform* that can be potentially tailored to meet the individual and unique needs among the various fire fighting sub-segments. Instead of limiting the solution provider, we hope that our market analysis encourages innovative thinking on the part of the private sector to market a valuable solution because a given need may be shared across both public and private sector communities.

Figure 2 – The chart maps various fire fighting segments.



Thomas A. Cellucci, Ph.D., MBA is the U.S. Department of Homeland Security's first Chief Commercialization Officer. In his role, he recently published two comprehensive guides: *Requirements Development Guide* and *Developing Operational Requirements* to aid in effective requirements development and communication for the department. He possesses extensive experience as a senior executive and Board Member in high-technology firms in the private sector.

1. See for example:

- a. Myers, James H. Segmentation & Positioning for Strategic Marketing Decisions. Ohio: South-Western Educational Pub, 1996.
- b. Meer, David, and Daniel Yankelovich. Rediscovering Market Segmentation. Boston: Harvard Business Review, 2006.
- c. Mcquarrie, Edward F. The Market Research Toolbox: A Concise Guide for Beginners. Thousand Oaks: Sage Publications, Inc, 2005

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- **Commercialization:** The mission of S&T's commercialization efforts is to identify, evaluate, and commercialize technologies that meet the specific operational requirements of DHS operating components and first responder communities. The commercialization efforts actively reach out to the private sector to establish mutually beneficial working relationships to facilitate cost-effective and efficient product development efforts. Please contact Chief Commercialization Officer Tom Cellucci at S&T-Commercialization@dhs.gov.



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