

“Envisioning a Coordinated National Effort for  
Building a Comprehensive, Collaborative, and Cohesive  
Federal Language Capacity in the United States”

By

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on

*“Closing the Language Gap: Improving the Federal Government’s Foreign Language  
Capabilities.”*

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**WRITTEN TESTIMONY**

Senator Akaka, Senator Voinovich and Members of the Subcommittee: Thank you for the invitation to appear here with my distinguished colleagues, Drs. Chu and Davidson. It is a privilege to offer my testimony on enhancing federal language and culture capacity, which I do in my personal capacity, based on my half century career in academe and government service.

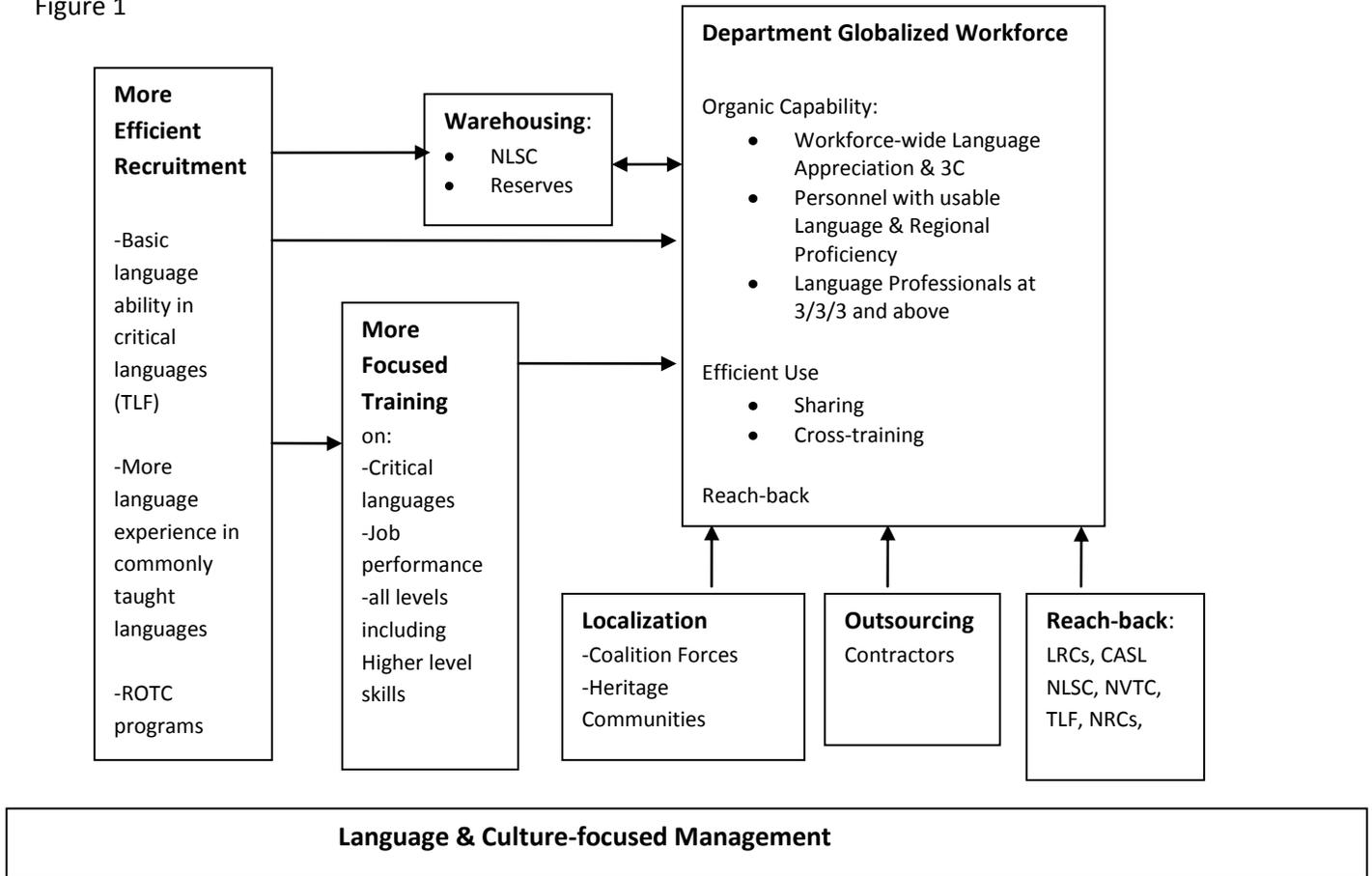
### **Introduction**

“It’s too hard for a government organization with critical language requirements to fully succeed in its mission in a world with thousands of languages.” This testimony is aimed at disproving this all too ready assumption.

The language needs of the U.S. are massive and growing, critical, and complex. While various parts of the federal government are making significant strides in addressing this need, the efforts can be improved by broader policies that seek comprehensive, collaborative, and cohesive solutions. The capacity required far outstrips the capabilities of any one agency to meet, and the costs entailed call for a more coordinated approach.

More specifically, building the government’s language capacity should be guided by policies that require a permanent workforce assembled by targeted recruitment, professionalized through cutting-edge training, strategically maintained by consistent warehousing, and made maximally effective through informed management. In addition, however, this core capability has to be buttressed by force multipliers in the form of shared, outsourced, localized, and reach-back capabilities. An overview of this USG capacity is given in Figure 1.

Figure 1



In the Defense Language Transformation Roadmap, the Department of Defense (DoD) has laid out an unprecedented, comprehensive plan to meet the language needs of the nation's military and has made impressive progress in implementing that plan. The Department of State (DoS), likewise, has a strategic plan for advancing the language capabilities of the department ("Beyond Three"). Intelligence Community (IC) components have been aggressive in laying out plans and policies to address language and cultural needs. It must be added, however, that while DoD and DoS have made significant progress, recent Government Accountability Office (GAO) reports make it clear that there is still much to be done.<sup>1</sup>

While these departments are tasked primarily with meeting global threats, a recent GAO report, *Language Access: Selected Agencies Can Improve Services to Limited English Proficient Persons*, has highlighted the domestic side of federal language requirements addressing the need for other elements of the federal government to meet domestic threats to a major part of the US population, citizens and residents whose native language is not English.

This situation provokes several questions that I will attempt to respond to in this testimony. First, what is the envisioned end state for language capacity across the USG to address responsibilities toward these communities as well as towards the USG's global mission? Second, how can it be built in the most effective and cost-efficient manner? Third, how would this capacity be effectively deployed in time of need?

### **Envisioned Future Scenario**

A "perfect storm" of natural disaster, terrorist threat, and criminal behavior endangers hundreds of thousands of urban residents. Charged with providing relief and protection are dozens of USG civilian and military departments, agencies, offices, services, directorates, components, and centers. And between them and their mission are hundreds of linguistic and cultural challenges.

A major earthquake rocks San Francisco and the surrounding area. Buildings are destroyed, power and water supply systems are damaged, people are panicked, and emergency responders are able to function only at a minimum. Massive state and federal assistance is deployed; DHS (FEMA, TSA, CBP, etc.), DoD (National Guard & Military Reserves), Justice (ATF, FBI), and other federal and state assets are responding. Assistance is offered by other states and cities (e.g. NYPD, LAPD), as well as by disaster

relief elements from Asian, European, and Latin American countries. Adding to the crisis is the fact that intelligence sources have uncovered recent communications indicating a terrorist plan linked either to the Abu Sayyaf or Jemaah Islamiyah group in the Philippines to attack major transportation and communication channels, while at the San Francisco and Oakland docks are recently arrived cargo ships and tankers from the Philippines, Liberia, and Mexico. In addition, major drug traffickers, taking advantage of the situation, have dramatically increased activity along the nation's southwest border.

Communication challenges arise on all sides and are met by the following Coordination capabilities:

- A National Foreign Language Coordinating Office: An office in the nation's capital has direct contact virtually with all senior language authorities of the federal government, and now alerts all elements to stand by for support and deployment. The office receives requirements from California state and local centers and identifies resources across the USG, as well as academe and industry, to ensure that all necessary resources are mustered and deploys on-demand, whether organic, shared, warehoused, outsourced, or reach-back.
- Organic language capabilities: DHS, DoD, DoJ, IC and other USG components, under comprehensive department- and agency-wide strategic plans, have identified their language requirements and have built core capabilities in languages and cultures of expected high demand (e.g., FEMA has designated the San Andreas Fault line as one of the areas eminently prone to natural disasters and identified the languages that populations in the San Francisco areas speak, among them Chinese, Spanish, Vietnamese, etc.) Permanent employees of the relevant DHS components (e.g., USCG, FEMA, OHA, OIA, OOC), for example, have been trained and certified to proficiency levels required by the professional tasks they perform.
- Shared capabilities: Each department's and agency's strategic plan and language office has specific procedures to share resources within and across departments and agencies. FEMA, SBA, and IRS share language resources and information in concerted recovery efforts in San Francisco. The DoD is able to direct the DLI to provide cadres of its student to the area to assist speakers of Mandarin and any of the other two dozen languages taught at the institution. Watch List and other IC elements are capable of coordinating with TSA and CBP and sharing language capabilities in Tausug and Yakan, in efforts to determine identities and track communications of new arrivals in San Francisco who are possible Abu Sayyaf or Jemaah Islamiyah members.
- Warehoused capabilities: The National Language Service Corps provides professionals across a range of disciplines with languages of San Francisco's smaller populations, like Hindi, Russian,

Filipino, Korean, Vietnamese, as well as even Samoan and Chamorro. The National Virtual Translation Center (NVTC) is tasked to provide translations of documents and announcements directed specifically at local non-English speaking populations in the San Francisco area who are in need of, or able to provide, assistance.

- Outsourced capabilities: Language Line Services, Inc., a private company based in Monterey, CA, is contracted to provide online interpretation to emergency hot lines in practically any language spoken in the city. In Annapolis, Maryland, Voxtec, Inc. provides to deployed guardsmen the third generation of the “Phraselator” programmed for the language of emergency response requirements and the local communities.
- Reach-back capabilities: The UC Berkeley National Heritage Language Resource Center (NHLRC) is contacted by the National Foreign Language Coordinating Office for advice on the heritage communities in the San Francisco area, their languages, available resources, and leadership. The NYPD provides assistance in establishing community contacts in order to protect against terrorist attacks during the emergency when other resources are sorely taxed. IC and DHS have contacted the University of Maryland Center for Advanced Study of Language (CASL) for language identification tool availability in South Eastern Asian, African, and Mexican Indian languages.

This scenario is fictional, but the capabilities it presupposes are within reach, if they can be brought to bear in case of emergency.

### **The Problem**

The problem of defining and implementing a major “transformation” in DoD doctrine and program was particularly “wicked,” given the fact that the 2006 *Quadrennial Defense Review Report* envisioned a future dominated by global “uncertainty” and “unpredictability” and focused on “capabilities and agility” more than specific threats from “specific countries.” In my view, the DoD has set an impressive example of how institutional change can be accomplished across a large organization on a difficult problem. While DoD’s work here is not done, DHS is now facing a similar challenge, as its language challenge is certainly one of criticality, unpredictability, and widening scope. DHS must provide a broad and disparate range of services to domestic populations numbering in the tens of millions across the U.S., while it addresses global language issues inherent in the mission of components like CBP, CIS, and ICE.<sup>ii</sup> (The same could be said, for example, of DoJ and other departments, agencies, and offices of the federal government.)

## **The End State: A “Globalized USG Workforce”**

The lessons learned over the past two decades by the DoD have made clear that language expertise and cultural competence must be a workforce-wide capability not limited to a specialized cadre for occasional missions. Accordingly, the end state we seek is a “globalized workforce” in which units and individuals across the federal government understand the linguistic and cultural challenges in dealing with political/military, social, and economic issues globally and domestically and are prepared to deal with them. Particularly in departments like DoD and DHS, a globalized workforce comprises: (1) a broad personnel base with cross-cultural competence (“3C” in DoD parlance) and an understanding of the role of language in their mission; (2) a sub-set of this total workforce with linguistic, cultural, and regional skills at appropriate proficiency levels and in all relevant occupations; (3) a cadre of language and regional specialists capable of performing at the highest levels; and, (4) a set of “force multipliers” available and accessible on demand. Targeting “capabilities and agility” to meet “uncertainty” and “unpredictability” assumes that all levels of the workforce have the globalized mindset, the prerequisite knowledge of what this means, and a language, culture, and region resource arsenal available both organic and on demand.

*A. Communications Resource Management Skills.* The Defense Language Transformation Roadmap has as one of its goals that “...the total force understands and values the tactical, operational, and strategic asset inherent in regional expertise and language.” It is not only the fact that “...the total force understand and value...,” but it must be able to *use* the “...tactical, operational, and strategic assets...” Whether or not the personnel on the ground themselves have the necessary language skills or adequate cultural knowledge, training must ensure that all personnel have basic “communications resource management,” which means that they have some basic knowledge of when human and/or technology-based language capabilities are needed and what value they bring, what resources are available and where they can be obtained, and whether the language and culture resources put against the problem are sufficient. Essentially, members of a globalized workforce must be armed with the ability to pose and answer the questions: Do we need language, culture, and regional capabilities (“3C”)? What specifically do we need? Where and how soon can we get the necessary resources, human or technological? Are they working, and how do we know?

The communications resource management training that is called for here, to the best of my knowledge, is not available. At the most basic level, cultural and diversity training, cultural briefings, and short

targeted language courses and programs, while certainly needed, are not sufficient to equip the total workforce to deal with the range of language and culture issues USG employees will face in their professional lives unless they understand when and how these skills are to be deployed. (The proactive correlate of “every soldier a sensor” would be “all cohorts’ communicators,” i.e., able to employ the language and cultural capabilities they have or can call upon.) However, before such training can be developed and implemented, a picture of all language capabilities available to a unit must be drawn, an access network must be developed that is capable of deploying the appropriate resources on demand, and a coordinating capability has to bring all this effort together.

#### *B. Organic Linguistic, Cultural, and Regional Skills*

Strategic planning of the DoD as well as the IC, the DHS, and other relevant entities, must establish a “language readiness index”: which languages, levels of proficiency and performance (from basic to sophisticated), skills, and tasks missions require, the percentage of missions adequately resourced, and the number of language and culturally-competent personnel and technological assets that have to be developed and deployed.

Given the global involvement of DoD and DHS, as well as the number of languages spoken by millions of people in the U.S., the inevitable first question that arises is: Which languages and dialects are to be included in the core capabilities of the unit, in light of the fact that there are approximately 7,000 languages in the world, with tens of thousands of dialects? The current approach in some agencies of identifying and projecting “immediate investment” and future “stronghold” language needs is very reasonable, given the enormity of the task. The question, however, is: How can or should more languages, even dialects, be included in the end state? Clearly, building a workforce competent in hundreds, not to say, thousands of languages is not feasible.

The solution lies in a coordinated system of strategically planned, core language capabilities augmented with procedures and mechanisms for shared, outsourced, localized, and reach-back capabilities. The core language capabilities have to be carefully constructed against what might be called “language futures,” that is, an investment in language and culture future capabilities based on an analysis of issues projected to be critical to the well-being of the nation in the next decade, the geographical areas in the U.S. and around the globe that these issues imply, and which languages and dialects will be in use by

which populations in ten and twenty years in these areas, including *lingua franca* and pidgin as well as the multi-lingual capabilities widespread among relevant sub-populations and sub-regions?

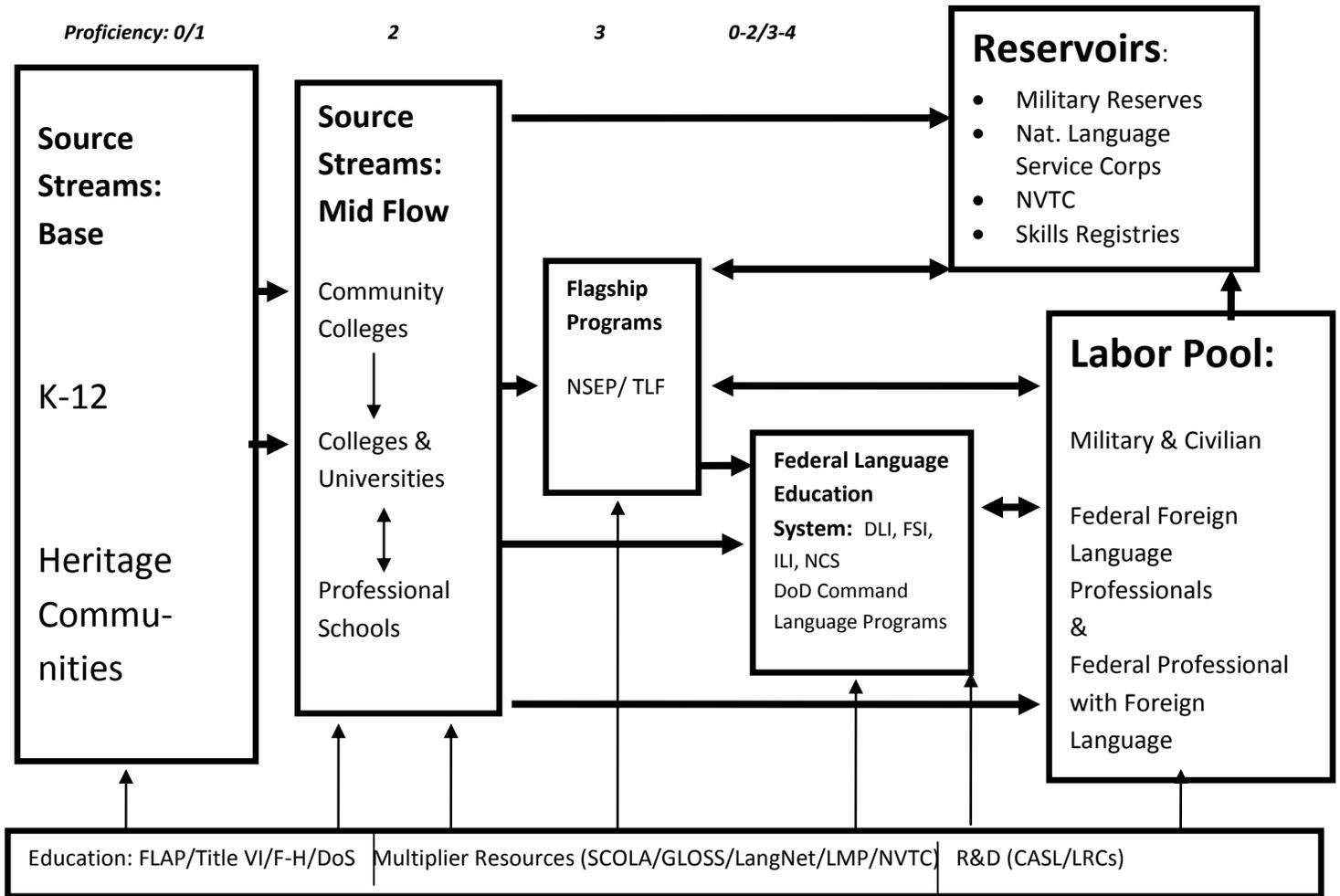
And how do we build this carefully projected organic capability? Clearly, the USG language training programs will remain the primary provider, with schools like the DLIFLC, FSI, NCS, and ILI in the lead. However, it is possible that, in the long term, these schoolhouses will be able to hone their on-campus mission to higher levels skills in critical languages by drawing from a recruitment pool enriched by better language programs in schools, community colleges and universities as well as in heritage community language schools. Figure 2 represents a map of the national pipelines in language education and training is sketched out.

Figure 2 Abbreviations:

CLPs: Command Language Programs; CASL: University of Maryland Center for Advanced Study of Language; DLIFLC: Defense Language Institute Foreign Language Center; DoS: Department of State; FLAP: Foreign Language Assistance Program; GLOSS: Global Language Online at the DLI; K-12: Kindergarten through twelfth grade; LangNet: The Language Network; UCLA's LMP: Language Materials Project; NLRCs: National Language Resource Centers; NSEP: National Security Education Program; TLF: The Language Flagship; NLSC: National Language Service Corps; NVTC: National Virtual Translation Center; SCOLA; Title VI/F-H: Title VI of the Higher Education Act, Fulbright-Hays.

Figure 2

**Government Language Talent Source Stream Architecture: Pipelines & Reservoirs:**



As a constant required investment in this capacity, language sustainment and enhancement is and will be more and more in demand across the USG for more sophisticated job performance. On-the-job training will have to be targeted to job performance with lifecycle language and culture education available across the workforce, through more effective and efficient programs informed by research in cognitive neuroscience research and supported by advances in technology. Lifecycle training means that language learning is an ever-present, career-long endeavor. Not to be lost sight of, in this system management must focus on employing these skills appropriately to keep them from atrophying.

Once these critical (language, culture, regional) skills and professional experience are acquired, they should be “warehoused” in data bases that are accessible on demand, in military reserve elements, and in the National Language Service Corps (NLSC), all to be available in time of need. The NSLC can and should draw upon the best academic language programs in the U.S., as documented in CASL’s *LinguaVista* system, to maintain and enhance its members’ language and culture skills, thereby supporting these programs that fight for existence in spite of low student demand. In fact, DoD personnel wishing to reach 3-level and above language skills should have access to these same program USG-sponsorship. All this constitutes the organic capability of departments like the DoD and DHS.

Human Language Technology (HLT), specifically machine translation (MT) came into its own when it acknowledged its limitations and targeted its strengths. To this observer, the ability of Human Language Technology to match human expertise in processing complex texts is in the distant future. Nevertheless, HLT has a definite role to play in the end state, in fact it is critical to it. Processing large volumes of information at relatively low levels of sophistication is its strength. In the field, hand-held language technology has a role in low level tasks, like traffic control and the like.<sup>iii</sup> However, the future globalized workforce must be armed with the knowledge of what the language task is, what the capabilities of available technology are, and how the delta, if it exists, has to be filled by human expertise. This has to be part of strategic planning and capacity building from the start.

### *C. Force Multipliers*

Given the number of languages, the multiple levels of linguistic, cultural, and regional proficiencies, and the range of missions and professional tasks involved, such an organic capacity has to be supplemented by force multipliers, including the following:

*Sharing.* The ability to share language resources among USG components depends upon strategic planning and policy, common standards for human resources and technology, and coordinating bodies. For example, if, in a surge situation, such as the scenario described above, the DHS needed speakers of Mandarin, Cantonese, and probably other languages of China, it must know where available resources are and who has the authority to make travel assignments on its behalf. Each department and agency should plan for such a contingency, but a USG coordinating focal point could ensure that all relevant components participate and that uniform standards apply that would make collaboration and sharing possible and effective.<sup>iv</sup>

*Outsourcing.* Clearly, some reliance on contractors for language services across the board will continue, even as each department or agency builds core staff. However, the varying nature of these outsourced capabilities requires standards and evaluation procedures and processes to be developed that ensure the quality of their performance. Again, such standards, at some level, could be the responsibility of a USG-wide coordinating body that would take advantage of the various accrediting organizations working in the language field, like the American Society for Testing and Materials (ASTM) and the International Standards Organization (ISO).<sup>v</sup>

*Localization.* The advantages and challenges of hiring local populace translators and interpreters are not universally well known or appreciated. The language abilities of our coalition partners for DoD, or of heritage communities for DHS, are an important source of rare linguistic and cultural expertise in surge or operational situations. Here again, standards must be brought to bear, as part of the communications resource management of all personnel deployed abroad or serving domestic heritage communities. As in outsourcing, the importance of standards in localization efforts cannot be overestimated and again could be the responsibility of a USG-wide coordinating body.<sup>vi</sup>

*Reach-back.* There are many language and culture capabilities that cannot be deployed in the field but can be accessed on demand in time of need, but only if their availability and usefulness are known across the USG and procedures for coordinating usage are developed. Such *reach-back* may be seen to comprise a number of services, including translation, interpretation, cultural behavior advising and training, as well as research on immediate and long-term problems in language training, performance, and assessment. Many of these assets are supported by the USG and, as such, are directly relevant to security, social, and economic concerns. For example, the NLSC and the NVTC—staffed by professionals

including many academics and graduate students—can provide just-in-time active field services as well as translation and interpretation. Similarly, the reach-back capabilities of Human Terrain Teams in the field might be extended to include experts in regions and areas of the world from Title VI National Resource Centers.

A critical reach-back capability is research and development. I would be remiss if I neglected to stress the role that research can, does, and must play in building, deploying, and evaluating the linguistic, cultural, and regional capabilities put against the challenges facing the nation. For example, the cognitive and neuroscience research being conducted at the DoD-sponsored University of Maryland Center for Advanced Study of Language has the potential to dramatically improve the ability to acquire language as well as to assist language analysts to “connect the dots” and avoid the “garden path.” Research in human language technology can greatly expand our ability to process the exponentially expanding information requirements across government. The National Language Resource Centers and the National Resource Centers of Title VI of the Higher Education Act have much to contribute to linguistic, cultural, and particularly to regional expertise.

## **COORDINATION**

### *At the Agency Level*

Such a comprehensive, collaborative, and cohesive system described here depends critically on coordination and planning. Each department and agency must have a strategic plan for current and future needs assessment and capacity building, to include organic capacity (HR & HLT) and force multipliers. We note that a series of GAO reports on DoD, DoS, and DHS calls for just such a strategic plan.<sup>vii</sup> Each department plan should be the responsibility of a departmental senior language authority, who has the responsibility and authority to ensure that the plan is developed and implemented through core workforce recruitment, training, warehousing, and management, as well as through resource sharing, outsourcing, localization, and reach-back. Each department should have explicit requirements and targeted capabilities, as well as a set of incentives (cf. foreign language incentive pay and promotions in part based on regional proficiency). Leadership should be liable to the same incentives and requirements, leading by example rather than by *fiat*. And management should be such that the language and culture skills developed be deployed and used rather than be left to atrophy.

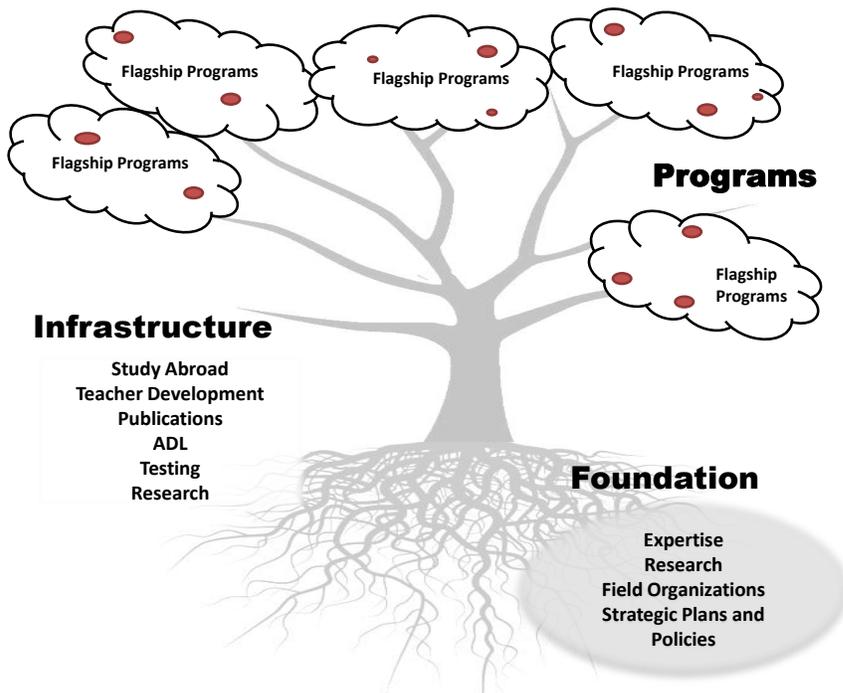
### *At the National Level*

While each department and agency has this responsibility within its domain, it is clear that effectiveness, efficiency, and cost management can be greatly facilitated if these departments and agencies could affect the same synergies among themselves as they demand of their components. To support this kind of collaboration, a vehicle for government-wide coordination is required like that proposed by Senator Akaka in Senate Bill 1010, which establishes a National Foreign Language Coordinating Council in the Executive Office of the President, chaired by the National Language Advisor. This council could be a major force in building a national capacity for the USG. The coordination called for here will not be easy, but it likely will never happen without a mechanism of this kind.

However, as I hope I have made clear to this point, it is imperative that its coordination effort involve not only federal programs. Essentially, the national capacity in language comprises four principal sectors: academic, federal, heritage, and industry. As can be seen from the envisioned scenario above, in addition to the federal, the other three sectors (academe, industry, and heritage) are critical players in outsourcing, localization, and reach-back and should be included in every capacity roadmap. In particular, it should be clear that much of federal language capacity depends on the academic sector maintaining the infrastructure that produces the expertise, programs, and teachers in languages of all regions of the world. (See Figure 2.) In fact, academe, as opposed to government and industry, is best positioned to address unforeseen requirements by extending and maintaining expertise in all areas of the world without having to justify its practical application. Indeed, the strength of academe lies in its “knowledge for knowledge sake” approach.

Because of its importance, it is necessary to appreciate the nature of the academic infrastructure underlying the nation’s language capacity. Essentially, the core of our ability to develop and maintain expertise is the *language field*, which can be analyzed as comprising, for any given language or language area, foundational elements (expertise base, research, national organization, strategic planning, national resource centers), infrastructure (teacher training programs, in-country immersion programs, publications outlets, assessment instruments, etc.), as well as exemplary national programs. (See Figure 3.)

Figure 3



This field architecture, supported principally on the federal side by Title VI/Fulbright-Hays of the Higher Education Act, The Language Flagship program of the NSEP, and the DoD UARC program (CASL), is critical to all aspects of the federal language enterprise. This is particularly true given the fact that academic language fields as a rule pay attention to a broad range of languages in their area, devoting graduate and undergraduate education to critical linguistic and cultural aspects of the discipline unavailable anywhere else.

## **Conclusion**

The departments and agencies responsible for national security across the federal government have made significant improvements in language, culture, and regional skills along common lines: a Senior Language Authority office, defined requirements, clear incentives, improved management, and focused leadership. As now departments and agencies responsible for homeland security are joining these efforts, they need to profit from this experience. As recent GAO studies have made clear, a comprehensive strategic plan must guide procedures and structures in order to ensure that each unit can operate at maximum effectiveness and efficiency. However, this kind of planning and implementation requires an integration and coordination that has thus far eluded most efforts. We have argued here that plans, processes and structures be coordinated and integrated both within and across departments, agencies, and sectors. This is, no doubt, a significant challenge burdened by inevitable skepticism drawn from past experience. However, for such vital coordination to happen on its own is an even more obvious fool's errand. Without question, the ideal solution to the nation's language needs is integration of language study into all levels of education, ultimately answering the government's need for a "globalized total workforce." Given that this end state is a long way off, we have little choice but to take the middle ground advocated here.

## **Recommendations:**

### *At the National Level*

- Establish a national coordinating entity- one entity would ensure that language capacity building and deployment across the federal government are comprehensive, coordinated, collaborative, and cohesive. Senator Akaka's Senate Bill S-1010 attempts to establish such an entity. It is, however, recommended that academe be represented in this coordination effort, so that much of the capacity described above will be properly and systematically incorporated into the blended language capacity described above.

- Improve language education at the K-12 level- the strategic success of federal language policies depends in the long run on the education system of the United States, where efforts at the higher education and, especially, at the K-12 level have to be strengthened.
- Adopt standards across all organic, outsourced, localized, and reach-back capabilities - so that resources can be freely shared and brought in from outside.
- Develop a network-based language, culture, and region resource access system - that is capable of identifying, locating and providing needed human and technological resources anytime and anywhere, leveraging the extensive USG investments in language and culture as well the resources of academe, industry, and the nation’s heritage communities.
- Develop a network-based resource - documenting the latest research on problems challenging the USG in the area of language and culture should be developed as well, with the goal of fostering innovation, collaboration, and elimination of costly duplication.

*At the Agency-level*

- DoD: Hard won ground must not be lost; the significant investment made by the Department in language and culture must be protected and built upon. The end state for the DoD is a “globalized total force,” The Defense Language Transformation Roadmap must be fully implemented, and its funding and programs must be maintained as the core to this capability. At least in part, the way forward in part is outlined in the recent GAO report: *Military Training: DoD Needs a Strategic Plan and Better Inventory and Requirements Data to Guide Development of Language Skills and Regional Proficiency*. Washington, D.C.: June 2009.
- DHS: Should establish an office of the Senior Language Authority, where standards, requirements, incentives, and policies on language are coordinated department-wide. The first task would be to develop a comprehensive strategic plan for the department that covers language and culture needs and capacity, both domestically and globally.

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<sup>i</sup> Department of State: *Comprehensive Plan Needed o Address Persistent Foreign Language Shortfalls*. Washington, D.C.. September 2009; *Military Training: DOD Needs a Strategic Plan and Better Inventory and Requirements Data to Guide Development of Language Skills and Regional Proficiency*. Washington, D.C. June 2009.

<sup>ii</sup> Cf. Medha Tare. 2006. Assessing the Foreign Language Needs of the Department of Homeland Security. *Journal of Homeland Security and Emergency Management*, Vol. 3, Issue 1, Article 5.

<sup>iii</sup> Cf. the Army’s Sequoyah Foreign Language Translation System.

<sup>iv</sup> The 2010 GAO report: *Language Access: Selected Agencies Can Improve Services to Limited English Proficient Persons cites several instances of sharing among DHS components*. There are instances of this type of behavior, but resource sharing is hardly common among USG institutions.

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<sup>v</sup> Existing ASTM language standards: F15.34 on Language Interpreting F2089-01(2007) Standard Guide for Language Interpretation Services; F15.35 on Use Oriented Foreign Language Instruction F1562-95(2005) Standard Guide for Use-Oriented Foreign Language Instruction; F15.48 on Translation Services ASTM F2575 - 06 Standard Guide for Quality Assurance in Translation; F15.64 on Proficiency Assessment Standard Practice under development; Main ASTM Committee on FL Services & Products pending final approval. Currently the International Organization for Standardization (ISO) has begun an initiative on language training in non-formal environments.

<sup>vi</sup> It is particularly noteworthy that industry is very involved in standards for the effective conduct of global business. One of the principal industry organizations in this area is the Localization Industry Standards Association (LISA.)

<sup>vii</sup> Department of State: Comprehensive Plan Needed to Address Persistent Foreign Language Shortfalls. Washington, D.C. September 2009; Military Training: DOD Needs a Strategic Plan and Better Inventory and Requirements Data to Guide Development of Language Skills and Regional Proficiency. Washington, D.C. June 2009.