Homeland Security Advisory Council

Artificial Intelligence – Mission Focused Subcommittee

Homeland Security Advisory Council
September 14th, 2023

Homeland Security

This publication is presented on behalf of the Homeland Security Advisory Council (HSAC) Artificial Intelligence – Mission Focused Subcommittee for the Secretary of the Department of Homeland Security, Alejandro N. Mayorkas.

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SUBCOMMITTEE MEMBERS

Marc Andreessen	Co-founder & General Partner, Andreessen Horowitz
Tarika Barrett	Chief Executive Officer, Girls Who Code
Michael Chertoff	Co-founder, The Chertoff Group
Robert Isom	Chief Executive Officer, American Airlines
Matt Shortal	Chief of Staff, Operating Partner, Andreessen Horowitz
Craig Stephen	Executive Vice President, Research & Development, Oracle
Gary Tomasulo	Vice President, Corporate Security & Chief Security Officer, American Airlines
Daniel Voloch	Chief Program Officer, Girls Who Code

HSAC STAFF

Rebecca Kagan Sternhell	Executive Director
Joseph Chilbert	Senior Director
Alexander Jacobs	Senior Director
Cori Dawson	HSAC Contractor
Rachel Kaufman	HSAC Contractor
Jaden Sissem	HSAC Intern

EXECUTIVE SUMMARY

On March 27, 2023, Secretary Mayorkas requested that the Homeland Security Advisory Council (HSAC) form two subcommittees to develop Artificial Intelligence (AI) Strategy.[1] The Secretary asked our subcommittee to focus on mission enhancing use cases of AI and recognized the rapid development and introduction of artificial intelligence and machine learning (AI/ML) programs into the workforce, markets, and daily life. In December 2020, the Department of Homeland Security published a comprehensive plan on addressing the implications of AI parallel to the rise of its prevalence. The *Artificial Intelligence Strategy* highlighted AI/ML programs and their innumerous effects on workforce development, the value of investing in their optimization capabilities, and how to bolster the public's trust and understanding of their functioning.[2]

While defending against threats posed by this technology, it is the Department's intention to explore avenues by which these programs can be leveraged to improve its mission. Utilized in an ethical, informed, and responsible manner, AI/ML systems have the ability to improve transportation security, accelerate migrant processing timelines, bolster the functioning of supply chains, intercept illicit contraband, and more. To assess the opportunities created by artificial intelligence, the Secretary tasked this subcommittee to produce the following:

- An assessment of current and emerging AI uses in private sector enterprises and other government agencies.
- An assessment of which DHS missions and operations could be most positively impacted by leveraging AI.
- Recommendations on how DHS can ensure robust governance and oversight of AI use to prevent disparate impacts and algorithmic bias, and how DHS can most effectively communicate with the public, oversight entities, and other stakeholders to clearly explain its use of AI and build trust in it.

The subcommittee was briefed by DHS stakeholders, subject matter experts, and critical leaders from the Science and Technology Directorate (S&T), the Office of the Chief Information Officer (OCIO), U.S. Customs & Border Protection (CBP), Homeland Security Investigations (HSI), and U.S. Citizenship and Immigration Services (USCIS), as well as from private sector companies American Airlines, Microsoft, Oracle, and Andreessen Horowitz.[3] Members heard consistent themes relative to the rapid advancement of AI and the government's current capacity and ability to keep pace with changes, absent of clear policy and guidance.

It is important to note that the subcommittee did not undertake a wholesale review of all potential AI/ML mission use cases for the Department. We outlined who we met with, but a more formal review internally is suggested and being undertaken by the newly created DHS

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[1] See Appendix 1.
[2] https://www.dhs.gov/publication/us-department-homeland-security-artificial-intelligence-strategy
[3] See Appendix 2 for a list of the Subject Matter Experts with whom we met.

AI Taskforce.[4] We understand that there are several steps involved with IT application deployment within the government that this report does not explore. However, we acknowledge those areas and understand the current procurement processes may impact the Department's ability to acquire the latest AI/ML technology on the market due to the rapid advances of the industry.

AI/ML technology has the potential to impact every part of DHS and its workforce, from the frontline officers and agents, mission support functions, information technology specialists, procurement officials, intelligence officials, and many more. With proper guardrails in place and continual iteration to refine best practices, AI/ML technology will be a force multiplier for the Department. With almost all new technology comes fear but with AI the stakes are high, and the opportunities are profound.[5] The Department should embrace AI/ML technological advances to support the Homeland Security mission.

METHODOLOGY

The subcommittee compiled its recommendations over multiple collaborative group sessions throughout July and August 2023, following a briefing period that extended from April 2023 to August 2023. Over the 120-day period, the Subcommittee met with subject matter experts from DHS S&T, OCIO, CBP, HSI, and USCIS. The Subcommittee also heard from leaders in the private sector from companies with the goal of analyzing how the Department can leverage AI/ML systems to enhance its operations and mission of bolstering homeland security.

The subcommittee reviewed EO 13960 Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government, 2020 DHS *Artificial Intelligence Strategy,* S&T 2021 *Artificial Intelligence and Machine Learning Strategic Plan*, Stanford 2022 *Artificial Intelligence Index Report*, GAO *AI Accountability Framework for Federal Agencies*, and the Advanced Air Mobility Coordination and Leadership Act. Members tailored these recommendations to DHS by focusing on the unique capabilities and opportunities provided by AI. Based on expert and stakeholder input, supplemental research, and the experiential insight of its members, the subcommittee worked to identify substantive and meaningful recommendations to support and enhance the Department's AI mission focused strategy.

The methodology did not explore every DHS AI/ML use case,[6] as we were aware that the Secretary created the DHS AI Task Force to take a more robust DHS review of AI/ML. We are also aware that the DHS AI Task Force will be looking at our recommendations for potential implementation across the Department as part of that review. We worked parallel with the AI Task Force, but the subcommittee's recommendations were developed independent from their review and work.

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[4] https://www.dhs.gov/publication/memo-establishment-dhs-artificial-intelligence-task-force
[5] *See*, Marc Andreessen, *Why AI Will Save the World*, https://a16z.com/2023/06/06/ai-will-save-the-world/
[6] https://www.dhs.gov/publication/ai-use-case-inventory

KEY FINDINGS

An assessment of current and emerging AI uses in private sector enterprises and other government agencies.

The subcommittee found from this assessment that the private sector is using AI/ML and the technology could be applied to DHS mission sets. Some examples of those findings are below:

- The pace at which AI/ML technology is changing is so fast, even well-funded commercial entities can barely keep up. The challenge for government agencies to keep pace with rapid technological advances is not new but the Department should look for ways to mitigate barriers and promote change similar to how private industry is doing it.
- Federated machine learning models increase privacy protections with a high level of confidence in the overall accuracy of the output. This can be an important technology used by private industry that could be applied to DHS mission sets.
- Private industry is building a suite of tools that can be used as co-pilots on already existing enterprise products. The DHS mission would benefit from these co-pilots to increase efficiencies.
- We are seeing new AI/ML uses across multiple industries to bolster customer and employee experience while optimizing labor inputs.
- Generative AI brings the marginal cost of content creation to zero. Generative AI is advancing every day. It is a broad label that's used to describe any type of AI that can be used to create new text, images, video, audio, code, or synthetic data.[7]
- Although AI makes mistakes like humans, there is a high level of confidence in AI/ML efficiency, accuracy, and attention to detail. Human-in-the-loop design and use is important for building trust in AI/ML.
- DHS interacts with more people daily than any other government agency.[8] AI-enabled real time speech translations would assist DHS in various mission sets relative to their interactions with individuals who speak different languages.

An assessment of which DHS missions and operations could be most positively impacted by leveraging AI.

Although the use of AI/ML technology is not new at the Department or components, the subcommittee found from this assessment that DHS mission sets can be positively impacted using AI/ML technology. Some examples of those findings are below:

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[7] https://www.techopedia.com/definition/34633/generative-ai
[8] https://www.dhs.gov/priorities

- Taking a prioritized risk-based approach centered on the greatest threats is key to getting the most out of AI/ML technology for the Department and its vast facilitation mission.
- FEMA could use AI/ML technology for climate resilience studies such as flood mapping, weather predictions, topography, or hurricane response.
- TSA and CBP could use advanced computer vision models for contraband screening whether in baggage, packages, vehicles, or cargo containers.
- Large Language Models (LLMs) trained on DHS component data can be secured from any outside data. The Department could leverage these LLMs to further DHS mission areas with a wide variety of use cases.
- Increased use of chatbots to enhance customer and employee experience is a finding that is being applied across multiple agencies and private industry sectors. AI will transform DHS customer experience by enabling faster and easier access to information and support.
- Off the shelf commercial products exist that can have a positive impact on the Department. CBP is already using multiple off the shelf products with great success.
- Using a conversational AI virtual assistant for enterprise level software to assist new users to a particular system or computer program would revolutionize training and familiarization efforts.
- For HSI it is critical to centralize and fuse information together. It's the fusion of information from different sources that ends up telling stories, building networks, and being able to prove that certain elements of a crime end up happening. AI/ML technology helps make this happen.
- Utilizing computer vision for exam findings and a repository for results to integrate targeting results with the machine learning models and other AI technology will provide for more refined targeting efforts to defend the homeland from threats.

RECOMMENDATIONS

The Secretary asked our subcommittee to provide recommendations on how DHS can ensure robust governance and oversight of AI use to prevent disparate impacts and algorithmic bias, and how DHS can most effectively communicate with the public, oversight entities, and other stakeholders to clearly explain its use of AI and build trust in it. These recommendations were guided by our assessments of both internal and external use cases of AI/ML technology.

The following recommendations were made to be adaptable, practical, and able to be implemented by the whole Department or by individual components. The subcommittee recognizes that there is not a one size fits all approach for AI/ML technology use and that the Department must be forward leaning in its AI/ML policies and use of this technology. This is a vital time to implement clear policy and guidance to avoid falling even further behind in AI/ML technology capabilities.

Recommendation #1: Create a centralized office or group within the Department to advance AI/ML policy and keep pace with the rapidly changing technology while respecting the federated model of DHS Offices and Components.

A centrally located Department view of AI/ML is critical to effectively harnessing these new technologies to positively impact multiple DHS mission spaces. The group should be inclusive of offices and components that represent operations, policy, procurement, research, and external engagement. Their structure could be modeled after the current DHS AI Task Force as the centrally located office or group within DHS that is tasked with developing policy, guidance, and charged with keeping pace with AI technology. One main feature of this new task force, group, or office is that it must be agile and responsive to the Department and component needs and AI use cases. It should be noted that nothing in this recommendation would prohibit an office or component from having their own AI working group but the more involvement and participation from across the agency should work as a force multiplier on one of the fastest growing technological advances of our lifetime.

The new group will ensure that requirements are in place to continuously check and vet the accuracy of data used by AI/ML across the Department. They will also set standards and policy developed in coordination with the DHS Privacy Office and the Office of Civil Rights and Civil Liberties to ensure that any AI/ML use case is free from algorithmic bias, protects individuals' civil rights and civil liberties, and alleviates privacy impact concerns. Preventing disparate impacts and algorithmic bias is critical. It is important to ensure that AI is employed in a way that minimizes harms due to bias learned from training data. Persistent monitoring and testing of algorithmic findings are important to mitigating bias, improper outputs, potential data poisoning, and many other potentiality negative impacts of AI.

The Department should explore use cases for LLMs for mission focused work but must review feasibility of building in house versus fine tuning an existing model on internal data. The Department can gain advantage from all the data that only the Department can access (and only the Department should access). DHS needs an LLM instance it can control, plus the wherewithal (including expertise, not just technical means) to fine-tune that instance, and it needs to be sure the weights won't leak out (e.g., to a vendor).

The Department must leverage its limited resources to deliver the highest impact for service and target the greatest threats to homeland security as a matter of foundational principle for this new group. As an example, if using more efficient chatbots is a better way to deliver on customer experience, then that should be explored further. On the threats side, if the greatest threat we are facing is coming from fentanyl or human trafficking then that AI use case should be accelerated and championed as one that needs prioritization from a whole-of-Department approach.

Recommendation #2: Integrate AI/ML into as many areas of the DHS mission as practicable and considering the Workforce Subcommittee report, recognizing that certain AI/ML outputs - like law enforcement or benefits decisions - will require a human to make final determinations.   Allow machines (chatbots) to make the recommendations for certain

labor-intensive task such as frequently asked questions regarding basic travel, import or export related items, and basic employee assistance services.

This recommendation will be a balance of the use of AI/ML technology to help an officer or agent come to a decision more efficiently but also recognize that there are use cases where human involvement is not required. This will enable greater productivity for employees, who will be able to make informed decisions based on machine review to go over a vast amount of data relatively quickly. The Department has an opportunity to use AI as a resource management tool to free up time for front line and mission support staff to focus efforts on more complex assignments. Based on private sector examples, there is the potential to reduce processing back logs and have the additional capacity to conduct more targeted enforcement to secure the homeland, as well as, facilitate more efficient and secure movement of people and goods in the various modes of transportation including aviation and maritime. By leveraging AI/ML CBP, TSA, and other key agencies will be able to take a prioritized risk-based approach based on the greatest threats facing the homeland.

The subcommittee does not recommend wholesale reliance on AI/ML determinations for all situations. Rather, AI/ML derived findings that directly impact a person's benefits - whether immigration benefits, disaster aid, or the ability to enter the country - must have a DHS official review prior to any final decision-making action. This additional review ensures that final decisions are made by personnel who can make inferences and incorporate data and nuances that a machine cannot.

With the advancement in chatbot technology many of the FAQs can be handled quickly and efficiently by a chatbot. In agencies such as USCIS, CBP, TSA, and FEMA that handle a high volume of external requests this would be a great place to start or modernize current efforts. Customer experience is probably the first and best place where the American public can come to trust AI at the Department and help alleviate some of the burdens, by helping to provide information to those seeking updates on application status and helping to advance the DHS mission. These tools can be deployed to answer frequently asked questions would not require human decision making unless the customer requests to speak with a live agent or officer. DHS use of such chatbots would align the Department with a number of private sectors, like banking and travel, that already rely on such tools.

This can result in tremendous time savings for multiple agencies within the Department. This is not an all-inclusive list, but some examples which include both human in the loop decision making and machine processing are outlined below:

- FEMA - Climate resiliency efforts, disaster benefits *processing*, and federal flood insurance or storm modeling
- USCIS – Immigration benefits *processing*, frequently asked questions
- TSA – Person, baggage screening, traveler frequently asked questions

- CBP – Person, baggage, cargo screening, traveler / importer frequently asked questions

Also, increased use of chatbots internally for DHS employees to enhance their experience. We are seeing internal chatbots that are Q/A (question/answer) oriented where it can easily answer Human Resources questions around 401k, benefits, where to find information, and other areas of employee assistance.

Recommendation #3: Build robust private/public/academic alliances focused on mission centered AI use cases designed to keep pace with technological advances and working together to incentivize responsible and impactful AI for the Department.

It is important to incentivize innovation across the Department and tap into a network of experts, companies, and academics that truly want to make our nation safer. The Department can potentially leverage volunteers from industry and academia to advise and work on specific programs or problem sets. The alliances must remain collaborative, voluntary, and conditioned on advancing the use of AI/ML technology without locking DHS into contractual obligations.

Work with the private sector and academia to explore use cases for generative AI within DHS should be prioritized with emphasis on using pre-existing, outside of government foundational models that can be responsibly trained on Department data. We are not aware of any current generative AI use cases at DHS, and this is an area of specific benefit for the Department to explore further without committing its limited human and financial capital. At the same time, this would be an area that may be of significant interest for academia and the private sector to test their technology on real world problem sets.

Recommendation #4: Assess and encourage the purchasing of off-the-shelf commercial solutions versus building everything in-house.

DHS should explore ways to encourage procurement and budget flexibility to uncouple large hardware and software acquisitions to drive funding toward AI/ML algorithmic efforts that will enhance existing IT infrastructure. Service and maintenance of hardware are important, but with the speed at which AI is developing, it is critical that an equal amount of that funding be allocated to manage AI/ML upgrades that require specialized technical subject matter experts.

It is important that the Department establish standards for performance but not let that be a limiting factor when making decisions to purchase off the shelf technology, especially in research and development. The National Institute of Standards and Technology (NIST) and International Organization for Standardization (ISO) / International Electrotechnical Commission (IEC) are tasked with providing standards for private industry and government entities. Those agencies are also struggling to keep up with pace of change which could put DHS further behind if waiting on other agency standards. As standards are developed by

NIST and across the U.S. Government, the Department can pivot, if needed, its procurement to align with compliant systems. However, as noted, given the pace of technology and the relative pace of government standards development, DHS will need to acquire tools to advance its missions before broader standards are set.

Recommendation #5: Build internal-to-DHS data lakes that span components, with protections built in to mitigate privacy concerns and to provide a sense of trust, but also allow for more cross-component data usage to further the missions of DHS.

In order for the Department to maximize the utility of every data set available to it, data must be shared across components so that each component can benefit from machine learning models trained on every other component's data. To address cases where statutory restrictions or other concerns prevent elements of such data sets from being shared outside of a given component, the Department should employ federated learning techniques, including differentially-private federated learning, wherever applicable.

Differentially Private Federated Learning with Domain Adaptation:

- A federated machine learning model allows multiple parties to collectively train a model by keeping the data completely decentralized. The raw data never leaves each of the component's sites which provides very strong privacy.
- Only the model parameters that are derived from the data are shared with a "federation server", which aggregates them across users and sends back updated model weights to each local model, each of which could be maintained by different components.
- Differentially private federated learning adds additional protection from potential attacks (e.g. "membership inference attacks") against the privacy of a federated machine learning model, at the cost of some loss of model accuracy.
- Personalizing the global model to adapt to each component's data can help regain accuracy lost to differential privacy.
- It is possible to measure risk of potential privacy leakage from differentially private federated learning systems quantitatively, enabling the Department to balance risk and model accuracy for each such model.
- In many situations, each organization has only a subset of features required to build the ML model, e.g., different components knowing different pieces of information about the same person. We recommend using Vertical Federated Learning to take advantage of the data across components in such scenarios.

Applying these concepts across the Department's data sets can help each component benefit from the aggregate data available to the Department as a whole while limiting sharing where statutorily required and providing measurable privacy/accuracy tradeoffs.

CONCLUSION

The Department should devote resources to the development of mission enhancing technologies that use AI/ML. AI/ML technology can impact every part of DHS. With proper guardrails in place and continual iteration to refine best practices, AI/ML technology will be a force multiplier for the Department.

APPENDIX 1: TASKING LETTER

Homeland
Security

March 27, 2023

MEMORANDUM FOR: William J. Bratton and Jamie Gorelick
Co-Chairs, Homeland Security Advisory Council

CC: Karen Tandy
Vice Chair, Homeland Security Advisory Council

FROM: Alejandro N. Mayorkas
Secretary

SUBJECT: **New Homeland Security Advisory Council Subcommittees**

I greatly appreciate the recently submitted HSAC reports on Intelligence and Information Sharing, Technology and Innovation Network, Supply Chain Security, and Openness and Transparency. The reports present thoughtful recommendations that we are looking forward to implementing with deliberate speed.

As signaled in our March 16, 2023 meeting, I respectfully request that the HSAC form new subcommittees to study and provide recommendations in four critical areas for our Department:

1. Development of the Department's Artificial Intelligence (AI) Strategy. This effort will be divided into two subcommittees. One will be focused on how the Department can best use AI to advance critical missions, and the other will be focused on how the Department should be building defenses to the nefarious use of AI in the control of an adversary.

2. Potential revisions to the homeland security grant programs, including the risk methodology that is applied, to ensure the Department is operating the programs optimally in light of the changed threat landscape over the past 20 years.

3. A wholesale review of the immigration Alternatives to Detention (ATD) programs, and recommendations to modernize programs and make them more effective.

4. Potential revisions to the DHS workplace and workforce skill set. This effort will be divided into two subcommittees. One will review the Department's current diverse work environments from - secure spaces and ports of entry to remote offices - and make recommendations for the workplace of the future. The second subcommittee will assess the alignment of workforce skills with work responsibilities in discrete, critical mission areas.

These subjects are described in more detail below. I will follow up with you shortly regarding formation of the subcommittees.

I request that the HSAC submit its findings and key recommendations to me no later than 120 days from the date of this memorandum, consistent with applicable rules and regulations.

Thank you for your work on these important matters, your service on the HSAC, and your dedication to securing our homeland.

Artificial Intelligence (AI) Strategy

In November 2019, the HSAC issued a report titled *Emerging Technologies Final Report on AI and ML*, which outlined threats to the homeland from artificial intelligence and machine learning and provided recommendations to the Department. In December 2020, DHS issued the *DHS Artificial Intelligence Strategy*, which outlined the potential impacts of AI and addressed investments in AI capabilities, the mitigation of AI risks, its implications for workforce development, and how to improve public trust and engagement. The complex threat environment continues to evolve, as reflected in the rapid advances in AI over just the past few years. The Department must be equipped to leverage and address the advances with the nimbleness that the pace of advance requires.

DHS intends to ethically and responsibly leverage the potential of AI to transform its operations, and also recognizes that AI technology presents new risks and threats. AI technology can be used in innumerable ways, such as to identify and target inbound cargo that may present a potential risk to the U.S., and to create bots that increase employee efficiency. As the Department moves forward, AI must be embraced as a force multiplier and task facilitator; AI offers rich opportunities to improve the ways in which we accomplish our mission across DHS agencies and offices. The Department is currently working on congressionally mandated policy guidance, to be issued later this year, for our use of AI.

In light of the 2020 AI Strategy, the robust work underway to develop guidance, and the increased use of AI by adversaries who wish to cause harm, the HSAC will form two subcommittees. One will examine the use of AI to advance DHS's missions, and the other will examine threats AI poses to the security of our homeland and develop corresponding defense strategies.

The first subcommittee's review should include, but need not be limited to, the following:

1. An assessment of current and emerging AI uses in private sector enterprises and other government agencies.

2. An assessment of which DHS missions and operations could be most positively impacted by leveraging AI.

3. Recommendations on how DHS can ensure robust governance and oversight of AI use to prevent disparate impacts and algorithmic bias, and how DHS can most effectively communicate with the public, oversight entities, and other stakeholders to clearly explain its use of AI and build trust in it.

The second subcommittee's review should include, but need not be limited to, the following:

1. An assessment of ways in which our adversaries are already leveraging and could leverage AI in the future.

2. Recommendations on how DHS can best develop, including by investing in research and development, a forward-looking defensive strategy against adversarial AI.

Homeland Security Grant Program Review

In 2003, Congress established the Homeland Security Grant Program (HSGP), which includes three individual grant programs – the State Homeland Security Program (SHSP), the Urban Area Security Initiative (UASI), and Operation Stonegarden – to help bolster the nation's capabilities to prevent terrorist attacks. In the decades since, the grant programs have undergone only slight legislative revision despite the dramatically changed and evolving threat landscape. The Department has made modest changes to the risk methodology and the number of jurisdictions awarded UASI grants has fluctuated, but otherwise the HSGP has remained fairly static. Now, at the 20th Anniversary of the HSGP, a thorough review is warranted.

The Department has increasingly received feedback from stakeholders that the programs have become less transparent and collaborative. This feedback also surfaced underlying tensions between stakeholder groups, which contribute to frustrations with the grant programs. There is the tension between states and localities, and a tension between emergency management and law enforcement. Driving these tensions are scarce dollars, state and local funding allocation decisions, and shifting national priorities.

The HSAC will form a subcommittee to engage with subject matter experts and provide recommendations for the reform of the HSGP, with consideration of stakeholder feedback and inclusive of potential legislative reforms. Specifically, the review and recommendations should include, but need not be limited to, the following:

1. How the Department should assess and rank terrorism risk at the national, state, and local levels.

2. Whether current congressional direction that Metropolitan Statistical Areas (MSAs) that comprise 85% of the national risk threshold eligible to receive UASI funding reflects the current threat environment.

3. How the Department should provide funding to States and MSAs.

    a. Whether funding should be distributed to recipients through State Administrative Agencies (SAAs) or directly.
    b. How SAAs can reduce the administrative burdens of the application process within their states.
    c. The appropriate State and local allocations, including allowable administration percentages.

4. Whether funding should be annual or multi-year awards, and what the respective performance periods should be.

5. Whether grant programs should be bifurcated or new grant programs should be created to account for:

    a. large, heavily-funded and smaller, seldom-funded jurisdictions;
    b. sustainment of existing capabilities and capacity building; and
    c. funding distributed among emergency management, law enforcement, and fire fighters.

6. Qualified uses of grant funding, including percentages of Law Enforcement Terrorism Prevention Activities (LETPA).

Immigration Alternatives to Detention (ATD)

Individuals arriving at the border who are placed in removal proceedings should have their cases decided in an orderly, efficient, and fair manner. Certain individuals at the border can be detained while they are in removal proceedings. DHS's Alternatives to Detention (ATD) programs provide oversight of certain individuals who are released from DHS custody during the pendency of their removal proceedings. The ATD programs were developed to ensure compliance with release conditions, provide important case management services for non-detained noncitizens, and alleviate stress on detention facilities. ATD consists of multiple distinct subprograms, such as the Intensive Supervision Appearance Program (ISAP), Young Adult Case Management Program (YACMP), and the Case Management Pilot Program (CMPP). Each ATD program utilizes certain tools, such as technology and case management, to support noncitizens' compliance with release conditions while on ICE's non-detained docket and to increase court appearance rates. ATD has become an important tool to ensure non-detained individuals understand and comply with their obligations while they are in removal proceedings.

The HSAC will form a subcommittee to conduct a wholesale review of the ATD programs. The review should include, but need not be limited to, the development of recommendations on the following:

1. How the Department can more effectively ensure that individuals in removal proceedings remain in contact with ICE and accessible as required.

2. The identification of new ATD programs and areas of improvement for existing ATD programs.

3. Steps the Department should take to broaden ATD, improve the reach of ATD programs, and ensure that processes are in place to monitor the effectiveness of the ATD programs.

DHS Workforce and Development

Since the creation of DHS 20 years ago, the Department has confronted challenges of unprecedented breadth, ranging from global terrorism, ransomware, a rise in targeted violence, emergent humanitarian crises abroad, natural disasters, and much more. The Department has responded to the dynamic landscape with leadership, skilled personnel, cross-component collaboration, and new programs. The workplace model has also changed in dramatic ways, from allowing for more flexible work schedules to enabling remote work, including, for example, remote interviews of individuals seeking benefits that DHS administers. The Department looks to improve the current work environment and ensure it is adaptable and ready to meet future challenges. This aligns with the DHS 2023 priority to transform the Department's infrastructure to ensure it is a more productive and flexible workplace responsive to the needs of the workforce and the public.

The HSAC will form two subcommittees:

1. The first subcommittee will review the Department's current diverse work environments, from secure spaces and ports of entry to remote offices. The subcommittee is to provide recommendations on, among other things:

   a. Models for the next generation work environment that may be employed in different mission areas, to enable the DHS workforce to be prepared for a wide range of changes ahead.

   b. How DHS can leverage existing and emerging technology to enable mobile learning, cross-training, and services to develop a well-informed, skilled, and agile workforce that effectively meets evolving stakeholder needs.

2. The second subcommittee will assess the alignment of workforce skills with work responsibilities. The subcommittee is to provide recommendations on, among other things:

   a. How the Department can effectively upskill and reskill certain elements of its workforce to expand their capabilities and enable them to more ably fulfill their evolving job responsibilities.

b. How the Department can, where necessary, effect workforce composition changes to ensure the alignment of skills with new or evolving work responsibilities.

APPENDIX 2: SUBJECT MATTER EXPERTS AND OTHER WITNESSES

Mark Barrineau	Software Developer	U.S. Customs and Border Protection (CBP) Office of Information Technology
Sonny Bhagowalia	Assistant Commissioner	CBP Office of Information Technology
Erika Botts	Acting Chief Technology Officer	U.S. Citizenship and Immigration Services
Martin Casado	General Partner	Andreessen Horowitz
Adam Cox	Director, Strategy and Policy	DHS Office of Science and Technology
Anil Dewan	Senior Advisor	DHS Office of Chief Information Officer (DHS OCIO)
Maryann Duffy	Supervisory IT Specialist	U,S, Immigration and Customs Enforcement (ICE) Office of the Chief Information Officer
Christopher Havrilla	Supervisory IT Specialist	CBP Office of Information Technology
Dr. Amy Henninger	Senior Advisor and Branch Chief	DHS Office of Science and Technology
Eric Hysen	Chief Information Officer	DHS OCIO
Ganesh Jayaram	Chief Digital and Information Officer	American Airlines
Ethan Jin	IT Specialist	CBP Office of Information Technology
David Larrimore	Chief Technology Officer	DHS OCIO
Ben Teed	Unit Chief	Homeland Security Investigations