

Practitioner Perspectives and **the Potential of AI in Emergency Management**

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Executive Summary

■ The Potential For AI In Emergency Management

Between 2000 and 2019, the average frequency of billion-dollar natural disasters in the United States doubled from roughly once every two months to once per month. Between 2020 and 2024, the nation experienced an average of two such disasters every month.¹ At the same time, most emergency management agencies remain small² and reliant on complex funding structures, including declining federal support.³ This gap between rising hazard risks and existing emergency management resources creates significant vulnerability for communities across the country.

Artificial intelligence (AI) could help communities reduce these vulnerabilities and strengthen resilience, but AI adoption in the emergency management field is latent. Challenges are clear: emergency managers do not know which products can meet their needs, lack confidence in the security and accuracy of underlying technology, worry about AI degrading the human knowledge and relationships that underpin their profession, and often lack the organizational capacity to implement new technology. AI advancement is also uneven. Models can solve complex problems but struggle with simple tasks, and AI transparency is decreasing.⁴

The AIDE Initiative

The AI for Disasters + Emergencies (AIDE) Initiative is a multi-sector, nonpartisan coalition committed to identifying AI approaches that help save lives, protect property, and enable communities to recover faster. The Markle Foundation, in collaboration with Aspen Digital and RAND, launched the AIDE Initiative to advance AI applications that serve the greatest needs of emergency managers and their nonprofit, industry, and academic partners. The AIDE Initiative aims to create the conditions under which affordable and practical approaches can be evaluated, refined, and scaled across the country. It will also show how responsibly deployed technologies can be a force for public good by enabling civil society to participate in the diffusion and democratization of AI. The AIDE Initiative will improve national security by strengthening infrastructure and community resilience and championing civic values in the development of AI.

AIDE A.I. for
Disasters +
Emergencies
The Markle Foundation

¹ NOAA, 2025.

² Argonne, 2025.

³ Pew Charitable Trusts, 2025.

⁴ Stanford HAI, 2025.

Setting the Foundation: Practitioner-Identified Needs

Between December 2025 and March 2026, Aspen Digital convened emergency managers, public officials, researchers, and nonprofit and intergovernmental leaders to identify the most promising opportunities for AI in emergency management. Through an initial workshop series, Aspen Digital asked emergency managers about their greatest priorities and challenges. Although needs varied by jurisdiction, emergency managers most frequently described public information and warning, planning, and operational coordination as critical to save lives, protect property, and enable communities to recover faster. They most frequently described challenges in situational awareness and planning as resource-intensive. Many emergency managers also said they spend significant time on administrative functions like grants and budget management, limiting their capacity for other critical activities such as preparedness work.

Leveraging these insights, Aspen Digital facilitated subsequent workshops with multi-sector experts to explore whether AI could augment critical emergency management functions and mitigate persistent challenges. Participants identified 40 use cases for AI in emergency management, describing needs related to planning and situational awareness as most pressing. Experts also saw potential for AI to support other core functions like operational coordination, public information and warning, training and exercises, logistics, and long-term vulnerability reduction. Emergency managers were particularly hopeful that AI could ease their administrative burdens and free up time for more strategic, mission-oriented work.

Reducing Barriers to Adoption: Guidance for Emergency Managers

Although emergency managers identified many use cases for AI, they also described significant concerns about how AI is used and considerable barriers to adoption. Officials expressed a lack of confidence in the accuracy and reliability of current AI models and how these models protect privacy. They are worried about the risks of AI misuse, a loss of oversight, and impaired human judgment. Experts described other barriers to adoption including cost, organizational capacity, procurement complexity, and readiness of existing systems and data. Overcoming these challenges will take sustained, multi-sector collaboration.

At the same time, emergency managers urgently need impartial guidance to navigate the AI landscape in front of them. Aspen Digital has translated insights from its foundational conversations with leading experts into practical guidance emergency managers can use now:

Guiding Principles:

A set of practitioner-informed, foundational principles to guide responsible, effective AI adoption in emergency management.

Conditions for Success:

Organizational conditions that support successful AI use cases and specific strategies to mitigate common barriers.

Decision Criteria for AI Approaches:

Questions to consider when evaluating specific AI approaches.

Preparing to Scale: Cross-Sector Collaboration for Enduring Solutions

Individual emergency management agencies should not have to navigate this complex technology landscape alone. For emergency managers to realize the potential benefits of AI, continued multi-sector collaboration is required to conduct pilots, facilitate learning networks, evolve guidance alongside technology, and pool resources where feasible to advance promising solutions. The emergency management community — meaning the many oversight, funding, research, intergovernmental, civic and voluntary organizations that are engaged in the discipline — must sustain the governance and financial structures required for progress. The AIDE Initiative offers pathways for this community to advance enduring solutions for some of the nation's greatest risks.

Introduction and Background

The Markle Foundation launched the AIDE Initiative in December 2025 to help communities address critical gaps in preparing for and responding to natural disasters. To support this work, Aspen Digital surveyed the emergency management field and convened leading experts to explore how AI solutions can help emergency managers save lives, protect property, and enable communities to recover faster.⁵

A Pivotal Moment For Emergency Management

Natural disasters are more frequent, intense, and costly. Since 2000, the frequency of billion-dollar natural disasters in the United States has increased rapidly (Table 1). Although tropical cyclones are responsible for the most destruction and loss of life, the frequency of severe storms, droughts, floods, wildfires, and winter storms has also increased.⁶ These natural hazards are also more intense. Tropical cyclones are strengthening more rapidly, extreme rainfall is more common, tornadoes are more powerful, wildfires are burning larger areas, and heatwaves are hotter and longer lasting.⁷ Disasters are causing more harm, not only because they are more frequent and intense, but also because more individuals are exposed to high risk. Freddie Mac found that between 2020 and 2022, net migration to communities with a high natural hazard risk more than doubled.⁸ The annual cost of natural disasters likewise rose from \$120.6 billion in 2020 to \$183.6 billion in 2022.⁹

Emergency managers who support communities in coping with their risks are facing an expanding mandate yet typically operate with limited staff and funding. More than half of local emergency management agencies have one or fewer full-time employees and nearly a quarter have no dedicated staff for emergency management.¹⁰ An emergency manager's job is complex — making decisions

with profound consequences in the face of uncertainty, managing operational priorities with unpredictable outcomes, and influencing people to collaborate effectively and quickly. Yet in recent years the degree of difficulty has only become greater. Emergency managers are responsible for rising natural hazards as well as novel threats like pandemics, mass shootings, and cyberattacks.¹¹ Communities are dealing with unpredictable funding while struggling to recruit and retain emergency management staff due to burnout, budget constraints, and a competitive job market.¹² The nation's emergency managers need new operating models to do more complex work, more often, with fewer resources.

Table 1:
U.S. Billion-Dollar Weather and Climate Disasters (NOAA, 2025)

Time Period	Avg. Billion-Dollar Disasters Per Year	Avg. Cost Per Year
2020-2024	23.0	\$149.3 Billion
2010-2019	13.1	\$99.5 Billion
2000-2009	6.7	\$62.2 Billion
1990-1999	5.7	\$33.5 Billion
1980-1989	3.3	\$22.0 Billion

⁵ AI is technology enabled by computational systems that replicates or augments human cognitive functions — such as reasoning, prediction, problem solving, learning, planning, perception, and communication.

⁶ NOAA, 2025.

⁷ USGCRP, 2023.

⁸ Federal Home Loan Mortgage Corporation, 2022.

⁹ NOAA, 2025.

¹⁰ Argonne, 2025.

¹¹ FEMA, 2025.

¹² Deloitte & NEMA, 2025.

A Pivotal Moment For Artificial Intelligence

Although AI has been around for decades, the accuracy, capability, and availability of AI have skyrocketed only recently — putting powerful technologies in the hands of the public. The Pew Research Center found that AI use is becoming more ubiquitous among American adults, with 62% interacting with AI at least several times a week and 46% at least once a day.¹³ While use of AI is rising, many Americans remain more concerned than excited about AI and perceive significant risks to human skills, connection, jobs, and education.¹⁴

This tension between Americans' excitement and wariness about AI extends to emergency managers and the use of AI for public good. Under the right conditions, AI can have a positive impact on public outcomes such as service delivery, efficiency, speed, and even trust in government.¹⁵ But low trust in how AI works and how it is used by public officials remains a barrier. Another important condition is the confidence public officials have in AI capabilities to meaningfully address their greatest needs. AI has the potential to help emergency managers close the gap between what they are expected to do and the resources they have, but they lack the time, funding, and guidance to get there. AI can also save time, reduce costs, and improve outcomes across the disaster lifecycle, but only if the most effective approaches reach people in a form they can actually use. This is where the AIDE Initiative comes in.

Why The AIDE Initiative: The Potential Of AI For Emergency Managers

The challenges facing emergency management are urgent, national imperatives with consequences for Americans' lives and property. Although emergency managers are less likely than the general public to use AI to make decisions, their reluctance is driven by implementation concerns rather than general fear.¹⁶ To gain confidence in the potential of AI to help address their most pressing needs, emergency managers need impartial guidance that they can trust — including appropriate uses of AI, suitable AI solutions, and implementation recommendations grounded in real-world lessons.

Why the Markle Foundation

The Markle Foundation is uniquely suited to facilitate this guidance because of its track record in advancing tangible solutions to national challenges through neutral, bipartisan, and multi-sector approaches. Established in 1927, the Markle Foundation has worked for nearly 100 years to improve the economic well-being, health, and national security of all Americans. With its capacity to foster enduring outcomes in the public interest, the Markle Foundation can champion AI for public good, engage civil society in its use, and bolster national security. The Markle Foundation launched the AIDE Initiative in recognition of a critical window of opportunity to help align civic organizations and the technology industry around practitioner-centered AI solutions.

Why Aspen Digital

A program of the Aspen Institute, Aspen Digital brings together thinkers and doers from around the world to uncover new ideas and spark actions that empower communities and strengthen democracy. Aspen Digital turns insights into impact by identifying and amplifying a diversity of voices with actionable solutions. In collaboration with the Markle Foundation, Aspen Digital brings its unique convening power to engage dozens of practitioners, researchers, and technologists to accelerate the responsible adoption of AI for the emergency management profession and disaster survivors. By advancing perspectives from the frontlines of emergency management, Aspen Digital joins the Markle Foundation in engaging civil society to ensure advanced technologies can be a force for public good.

¹³ Pew, 2025.

¹⁴ Pew, 2025.

¹⁵ Tangi et al., 2023.

¹⁶ Shalini et al., 2024.

Stakeholder Engagement Approach

The emergency management community represents a wide and varied set of stakeholders across government, nonprofit and intergovernmental organizations, academia, and industry. Aspen Digital supports the AIDE Initiative by building and maintaining relationships with these partners to help emergency managers realize the potential of AI. In the tradition of the Markle Foundation's multi-sector approach to addressing complex public challenges, the AIDE Initiative includes participants from many communities, organizations, and areas of civil society and civic life. These stakeholders helped frame the scope of the AIDE Initiative at its outset. Their perspectives underpin the findings of this report, and their continued engagement will foster the multi-sector collaboration required to achieve meaningful progress. The AIDE Initiative's engagement model includes the following:

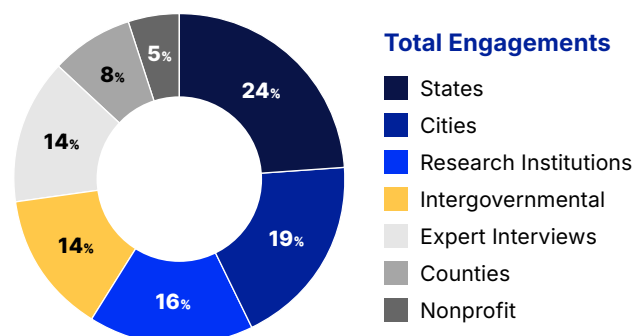
Advisory guidance to drive design and implementation. The Markle Foundation and Aspen Digital conducted 19 initial scoping interviews with emergency management thought leaders and organizations in the summer of 2025. These interviews confirmed the potential for AI to significantly improve emergency management outcomes, particularly in response and early recovery. This scope therefore became the focus of the AIDE Initiative's work. An **Advisory Group** composed of former emergency managers and current technologists continues to guide the AIDE Initiative, review its findings, and provide ongoing strategic guidance and support through implementation.

Stakeholder workshops and expert interviews to identify opportunities and challenges for AI to address emergency managers' most significant needs in saving lives, protecting property, and enabling early recovery. From December 2025 through March 2026, Aspen Digital facilitated workshops and expert interviews with 49 participants across 37 government, nonprofit, intergovernmental, and academic organizations. Feedback from early workshops informed the focus of subsequent conversations. The first set of workshops focused on understanding the current state of emergency management, including the functions emergency managers view as most critical for mission success and the challenges they most persistently face. Later workshops focused on understanding promising use cases within this context as well as conditions and barriers for successful adoption.¹⁷ In addition to official workshops, Aspen Digital

facilitated discussions with dozens of other practitioners at professional conferences and industry events.

An enduring alliance to transform findings from the AIDE Initiative into actual practice through a national coalition that gets proven AI approaches into emergency managers' hands. The AIDE Initiative will continue to engage key partners across public, private, and nonprofit organizations to provide operational validation, technical expertise, and a platform for piloting and scaling solutions. These partners will provide feedback for AIDE Initiative research and real-world implementation, ensuring the Initiative's efforts are driven by the needs of emergency managers and practitioners supported by private sector perspectives. Alliance partners bring energy, commitment, and resources for enduring impact, and continue to provide trusted guidance and peer learning for AI in emergency management.

Figure 1:
Stakeholder Engagements



¹⁷ See [Appendix](#) for driving questions from each workshop series.

Key Insights

The AIDE Initiative's goal is to foster responsible AI adoption and implementation to support emergency managers and practitioners in saving lives, protecting property, and enabling communities to recover faster. To support this goal, Aspen Digital asked current emergency managers about their most pressing challenges and how AI could best help them. Section 1 outlines what Aspen Digital heard from emergency managers — the functions they view as most critical, the challenges they persistently face, and how they are currently using technology to meet their needs. Building on this foundation, Section 2 presents 40 promising use cases for AI to support the functions emergency managers identify as either mission critical or a common challenge.

Using insights from current practitioners as well as experts from academia, nonprofit organizations, and industry, Aspen Digital also identified factors driving successful use cases in emergency management and mitigation strategies to overcome common barriers. Section 3 translates these insights into practical guidance for emergency managers considering AI — a set of guiding principles for responsible AI adoption, conditions for success with strategies to mitigate common barriers, and decision criteria to evaluate specific AI solutions. Finally, Section 4 describes implications for the wider emergency management community — including funding, research, intergovernmental, industry, civic, and voluntary organizations — to consider as they support emergency managers in realizing the potential of AI.

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Section 1:

Understanding The Current State Of Emergency Management

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Section 2:

Furthering AI Adoption In Emergency Management

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Section 3:

Considering AI: Guidance for Emergency Managers

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Section 4:

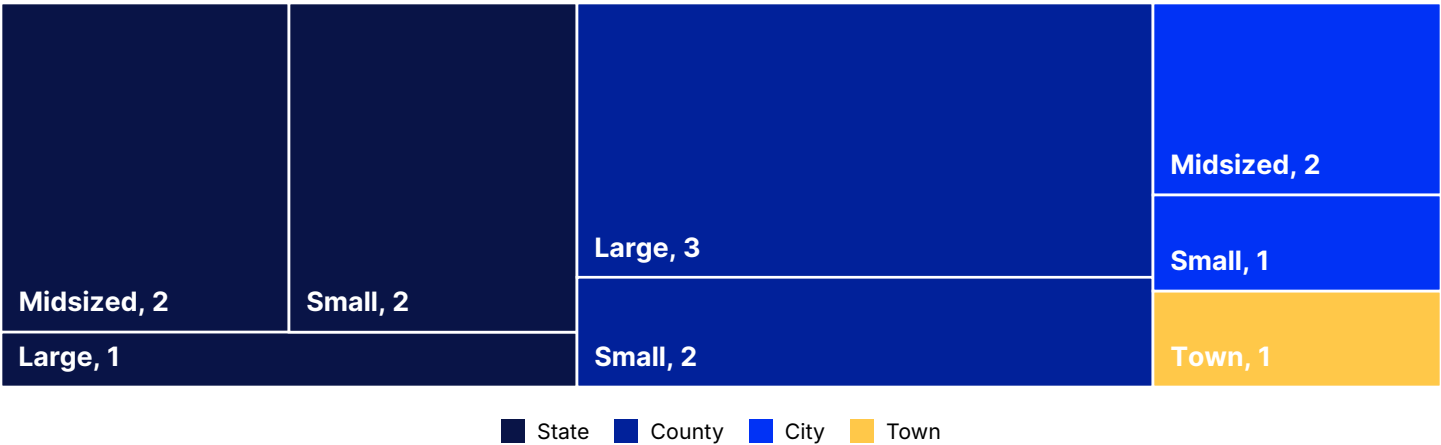
Scaling Progress: Implications For Implementation

Section 1

Understanding The Current State Of Emergency Management

Through an initial workshop series focused on the current state of emergency management, Aspen Digital consulted current officials from 14 jurisdictions across states, counties, and cities of varying hazard profiles and population sizes (Figure 2).¹⁸ This section describes the functions participants identified as most critical for mission success and their most persistent challenges. Participants most frequently identified public information and warning, planning, and operational coordination as most critical, followed by other response and personnel-related functions. When asked which functions are the most difficult to execute, officials said situational awareness and planning are more taxing than challenges in knowledge management, administrative tasks, and other response, recovery, and mitigation functions.

Figure 2:
Population of Participating Jurisdictions in “Current State of Emergency Management” Workshop Series



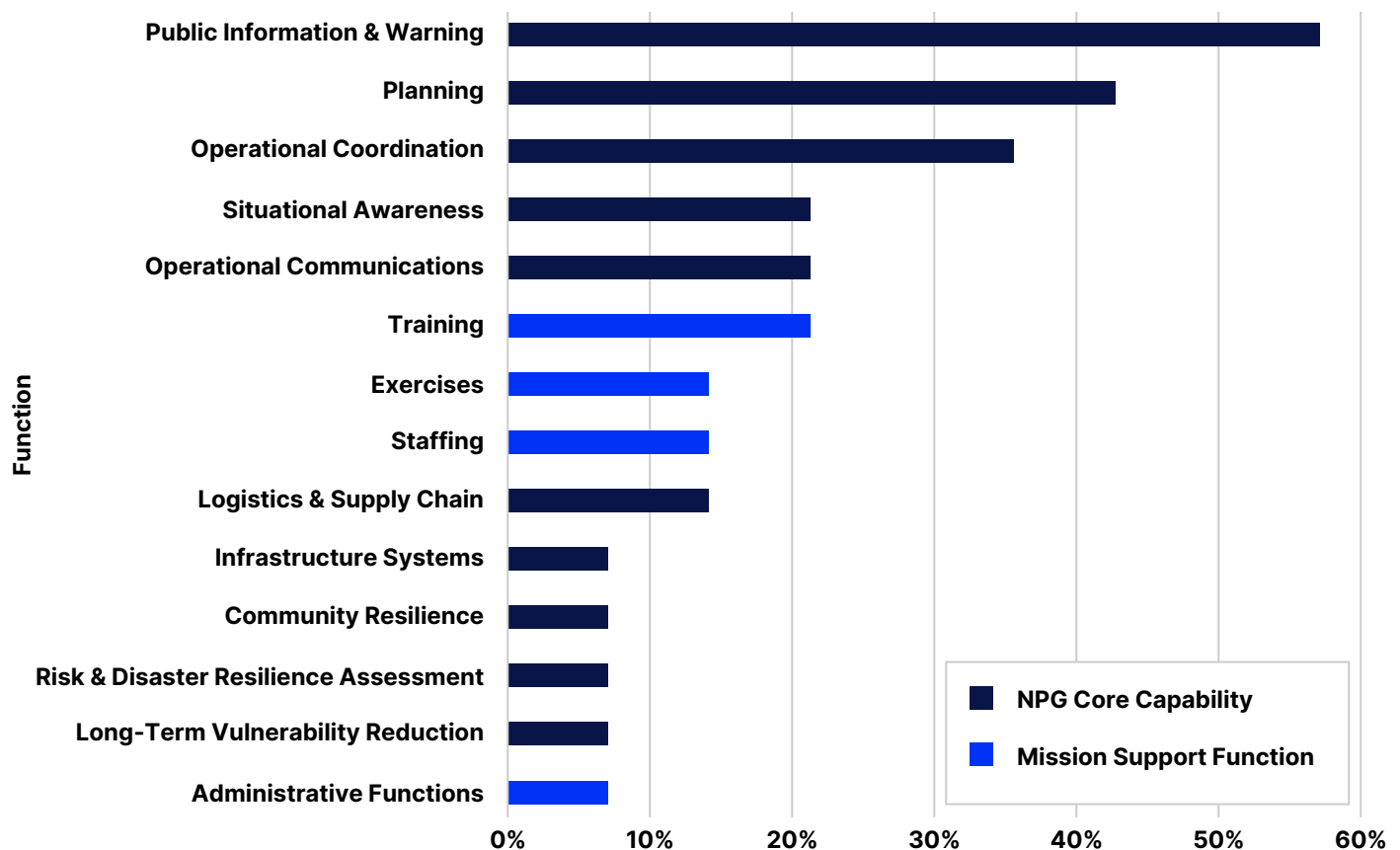
¹⁸ Categories of cities, suburbs, and towns are based on the [National Center for Education Statistics \(NCES\) Locale Framework](#). Categories of counties are based on the [National Association of Counties Standard](#). The AIDE Initiative categorized states as small, midsized, or large based on the US Census Bureau’s Population Estimates as follows: Large (>10 million), Midsized (3 - 10 million), Small (< 3 million). Population is used as the primary indicator of a jurisdiction’s size and resources given population size has the strongest correlation with an emergency management agency’s full-time employee count (Argonne, 2025).

Fourteen Functions Most Critical to Save Lives, Protect Property, and Enable Recovery

Participating emergency managers identified 14 functions as most critical to save lives, protect property, and enable communities to recover faster (Figure 3). In most cases, participants referred to critical functions using terms similar to the core capabilities of the National Preparedness Goal (NPG). The NPG defines a core capability as a “distinct critical element” necessary for execution of one or more mission areas¹⁹ used to cope with diverse hazards across all levels of government and sectors.²⁰ To identify patterns, Aspen Digital categorized participants’ input under the most relevant core capability or most relevant

mission support function.²¹ For this analysis, mission support was defined as the administrative infrastructure (e.g., staffing, training, budgeting) that enables all other critical functions. Because Aspen Digital asked emergency managers to identify functions they view as most critical to save lives, protect property, and enable community recovery in the early phases of a disaster, participants chose some functions over others. For example, while most emergency managers would say long-term vulnerability reduction is important, they more frequently identified functions like warning and planning as critical.

Figure 3:
Percent of Jurisdictions Identifying Function as Most Critical



¹⁹ The NPG describes five mission areas: prevention, protection, mitigation, response, and recovery.

²⁰ DHS, 2015.

²¹ The NPG uses the term situational assessment to refer to information for decision-makers about “the nature and extent of the hazard, any cascading effects, and the status of the response.” AIDE Initiative participants more commonly referred to this information as situational awareness and, therefore, this report uses the term situational awareness.

Emergency Managers Most Frequently Identified Warning, Planning, and Operational Coordination as Critical

Emergency managers most frequently said public information and warning is the most important function for mission success. They described how timely, accurate, and culturally appropriate information empowers individuals to understand their risks, take protective actions, and access assistance. As one emergency manager said, "If we can't do alert and warning correctly and warn our citizens, then we will always fail." Participants described disasters where failures in public information and warning led to significant loss of life, imperiled survivors, or delayed assistance. Lessons from these disasters have driven emergency managers to focus on reducing the time it takes to warn communities of imminent threats, improving the accuracy and clarity of public messaging, tailoring communications to meet specific community needs, and dispelling rumors or false information that may impede assistance. Notably, public information and warning is one of three core

capabilities within the National Preparedness Goal that support every mission area.

The other two cross-cutting capabilities, planning and operational coordination, were the second and third functions most frequently identified as critical. Participants discussed the significant interdependencies between these functions. For example, they noted how deliberate planning familiarizes partners with one another and the structures that underpin operational coordination. Participants described how they adapt deliberate plans when facing an actual threat to align on common priorities. "The plan is nothing, planning is everything," said one participant. "[In] our most recent example [of a] mass shooting, the planning and exercise and training that we had done for that really paid off ... in terms of our response."

Other Critical Functions

While multiple jurisdictions identified the following functions as most critical, they were not as frequently discussed as the cross-cutting functions described above.

Situational Awareness:

Several emergency managers described the critical role of accurate situational awareness in guiding their operational decisions and aligning partners through a common operating picture. Participants said their organizations' capacity to monitor and make sense of a large volume of information directly impacts their ability to make timely decisions and adjust strategies as conditions evolve.

Operational Communications:

Officials repeatedly emphasized the imperative of interoperable communications for collaborating across jurisdictions and agencies. One participant from a large urban jurisdiction described operational communications as the foundation for all other functions, especially planning and operational coordination.

Staffing, Training, and Exercises:

Multiple participants said personnel-related functions like staffing, training, and exercises are mission-critical. Not surprisingly, officials from jurisdictions with a large personnel footprint said staffing is paramount. Jurisdictions of varying sizes and hazards described the impact of effective training and exercising on operational outcomes. "Emergency management is a team sport, a people sport," said a state official. "And that's got to be our focus, first and foremost."

Logistics and Supply Chain:

A few jurisdictions described logistics functions as most critical to save lives and protect property through the allocation and tracking of life-saving resources such as search and rescue teams.

Infrastructure Systems and Pre-Disaster Recovery Planning:

One state official explained his office's priority to build long-term recovery capacity by developing strategies in advance of a disaster to integrate traditional federal programs with more comprehensive resources.

Pre-Disaster Mitigation:

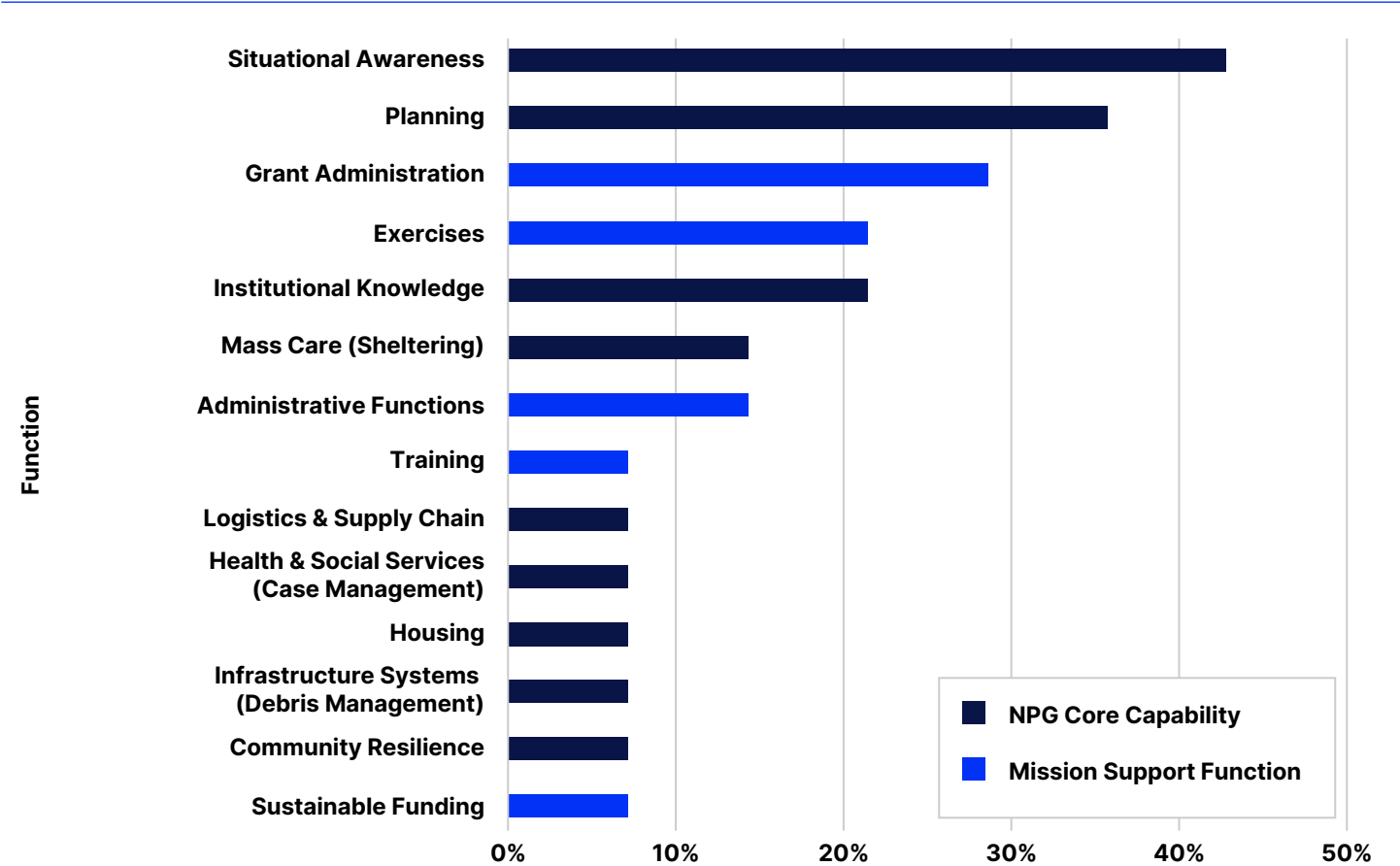
A few officials described how, especially for small communities, reducing vulnerability and building community resilience in advance of disasters are critical for saving lives, protecting property, and enabling recovery during an incident. "[I'm] working for a very rural area with very limited resources," said one local official, describing how public education empowers individuals to take action. Another local official identified mitigation as the most cost-effective way to save lives and property.

Emergency Managers' Most Persistent Challenges

During the initial workshops, Aspen Digital also asked emergency managers about their most persistent challenges in terms of functions that require the most resources (e.g., time or other capital). Consistent with existing research, participants described how they do not have enough time or funding for all the activities they believe are necessary to protect their communities. There is a chronic and systemic gap between what emergency managers are asked to do and the resources they have. This theme is just as important as specific functional challenges when considering how AI can best help emergency managers.

Beyond capacity and resource limitations, participants identified 14 distinct functional challenges. They most frequently described the functions of planning and situational awareness as onerous (Figure 4). Multiple jurisdictions also discussed persistent challenges in grants administration, exercises, knowledge retention, immediate response activities like mass care and logistics, and other administrative tasks.

Figure 4:
Percentage of Jurisdictions Identifying Function as One of Their Most Persistent Challenges



Situational Awareness for Decision-Making Is the Top Challenge

Emergency managers most frequently identified situational awareness to support decision-making as their greatest challenge, and this challenge was consistent regardless of jurisdiction size or hazard profile. Officials described how their teams are challenged to monitor vast amounts of data from multiple sources, analyze data to extract salient information, and integrate disparate information into a common operating picture. "We're still hand jamming that information and it's 2026," said one county official. This frustration was echoed by many others. An emergency manager from a large city described situational awareness as "so time intensive." A small-town official described using "multiple platforms to monitor different things." And a rural emergency manager said, "I'm just constantly having to filter through a lot of white noise to pick out what's important and then relay that to the partners in my community that need to know." Participants described fears of failing to act or taking the wrong action, because they misjudge key indicators amid this white noise.

"I'm just constantly having to filter through a lot of white noise to pick out what's important and then relay that to the partners in my community that need to know."

Emergency Managers Experience a Number of Planning Challenges

Participants also frequently identified planning as one of their greatest challenges. Smaller jurisdictions described the nature of their challenge as not having the time and resources to develop the plans they need. For example, one local emergency manager spends a significant amount of time developing plans his city requires for accreditation. For larger jurisdictions, this challenge includes keeping track of the sheer number of planning efforts and their complexity. For example, one official described how her city has more than 100 plans that address different hazards and requirements. Jurisdictions of all sizes described difficulty in turning planning outputs into useful guidance. "It's not ideal to be trying to flip through a 120-page plan [during an incident]," said one participant. Others described challenges in translating deliberate plans and evolving hazard information into incident action plans for an actual threat.

"It's not ideal to be trying to flip through a 120-page plan [during an incident]"...

Administrative Functions Cost Emergency Managers Time for More Valued Work

While not as frequently discussed as situational awareness or planning, administrative functions were identified by several participants as costing significant time that could be spent on more valued work. Several officials lamented the effort required to distribute grant funding and report grant information. Similarly, participants described substantial time spent on administrative activities like managing a budget and answering emails. "We're never going to get [more administrative staff]," said one official, "but that's what we need so that we can do our jobs better at a higher level, at a strategic level."

"We're never going to get [more administrative staff], but that's what we need so that we can do our jobs better at a higher level, at a strategic level."

Challenges in Exercise Design and Institutional Knowledge Impede Readiness

A few participants described persistent challenges in exercising and retaining the knowledge they need to address evolving risks. In terms of exercises, several county and city officials described the challenge of designing scenarios that simulate the dynamics of a real incident and provide valuable experience for personnel who are new to their roles. "I want to be putting people in a position where [they're] going to face [an] unwinnable scenario," said one emergency manager. Participants also described the challenge of translating findings from exercises into institutional change. One state official described working "against the clock" to produce after-action reports following an exercise before the risk environment evolved. A county manager said, if given a new resource, she would ask for a full-time person not only to design exercises but also to conduct the follow-up required to implement lessons learned.

Several officials from jurisdictions of varying size and hazard profiles described challenges in retaining institutional knowledge due to personnel turnover from retirements, private sector competition, and burnout. They explained how this turnover causes cascading challenges in training requirements and operational readiness. One emergency manager argued the need for a "living knowledge base that new people can be trained against" to avoid such impacts. He said his jurisdiction was prepared for a particular incident because someone built relevant capabilities years prior. "But we have not ... been training on it, or exercising against it, the way we used to," he explained. "So the people who really know how that works were the people who were around two or three cycles of preparedness ago. ... And the problem with that, in my mind, is that makes us limiting reagents in these equations."

Sheltering Is a Challenge for Jurisdictions With Large, Urban Populations

A few urban jurisdictions with large populations described sheltering as one of their most significant challenges for two reasons. First, participants noted the large resource and coordination demands of activating a sheltering program that includes hundreds of staff, augmentation contracts, and distribution of supplies. Second, the activation of a sheltering program is often linked to decisions on evacuation timing and the deployment of evacuation resources.

Other Challenges

Each of the following functions was identified by only one jurisdiction as a major challenge:

Negotiation for Resources During an Incident Can Make Response Difficult:

One official described how, during an incident, there is no shared emergency fund, so departments must cover the cost of resources they deploy in response. That results in a lot of negotiations and difficulty in identifying available resources.

Case Management and Housing Functions Are Time-Intensive:

A large, urban jurisdiction described how disaster case management and housing functions are two of his most persistent challenges because they are staff-intensive. These functions "either necessitate or improve by social interaction," he said.

Expectations for Rapid Debris Removal Require Additional Resources:

One participant explained how once disaster survivors are safe, their needs often shift to removing debris that is impeding recovery. She described how her county recently hired a full-time employee to focus on debris management based on lessons from prior disasters.

Finding Time for Community Resilience Prevents Catastrophic Consequences:

An emergency manager representing a small jurisdiction described challenges in finding the time for public outreach and education. Reflecting on catastrophic flooding in her area of responsibility, she described the importance of the public understanding what to do in an emergency and the criticality of public officials understanding their roles.

Educating the public on what to do in an emergency is both an operational challenge and an imperative.

Unsustainable Grant Funding Necessitates More Reliable Models:

An official from a small city described one of her greatest challenges as finding a more reliable funding model than unsustainable grant funding. She described a goal of moving to an entirely locally funded emergency management program.

Current Technology:

Emergency Managers Use Non-AI and AI-Supported Approaches

“Participants from all types of jurisdictions said current systems interoperability is a significant challenge.”

AIDE Initiative participants are currently using non-AI and AI-supported technologies to carry out critical functions and address challenges. Among non-AI-supported technologies, participants described using alert and notification systems, information management platforms, geospatial information software, communications platforms, resource management technology, and even Microsoft Access and Excel files. Several participants from small jurisdictions said cost primarily drives their technology decisions, noting that many of the systems they use are low-cost or free. A few large jurisdictions shared examples of technology they have customized. In some cases, participants valued customization to meet a specific need and had the capacity to maintain it. In other circumstances, participants described customized products as missing out on best practices.

Participants from all types of jurisdictions said current systems interoperability is a significant challenge. Many existing systems cannot communicate with each other or with new technologies. They often use different software, rely on inconsistent data standards and structures, and — in some cases — are still housed locally, limiting access and capacity. System incompatibility and fragmentation make it more difficult for emergency managers to make timely, appropriate decisions. If systems containing evolving hazard and community information cannot communicate, emergency managers waste time navigating separate interfaces and synthesizing data manually. They are forced to make high-stakes decisions based on analysis that often overwhelms cognitive ability and is inherently prone to error.

Although adoption of sophisticated AI is not widespread among emergency managers, AIDE Initiative participants described numerous examples where they are using AI to augment their work. The most frequently cited example was the use of large language models (LLMs) for tasks such as research, note taking, information synthesis, translation, incident action planning, exercise scenario development, evaluation, and analytics in concert with visualization software. Some participants are using an LLM approved by their jurisdiction or organization, while others (or their staff) are using LLMs through personal accounts. Participants who use LLMs unofficially said they submit only public information because they do not fully understand how their data is stored. However, participants from organizations that have yet to sanction an LLM expressed concerns about how their teams may be using the models. Without guidance and training, emergency managers are concerned their staff, particularly less experienced team members, will not catch errors in LLM outputs and make recommendations or decisions based on flawed results.

“Although adoption of sophisticated AI is not widespread among emergency managers, AIDE Initiative participants described numerous examples where they are using AI to augment their work.”

Beyond LLMs, several participants described significant progress in using advanced AI to meet their needs. These AI-enabled technologies include design software, social media dashboards, computer vision, incident detection platforms, automation software, data visualization, and social networking apps that augment public information and warning. In most cases, large organizations like state agencies, national nonprofits, or populous counties and cities are using these approaches.

Section 2

Furthering AI Adoption In Emergency Management

In the initial workshop series, emergency managers identified their most critical functions and persistent challenges. In subsequent workshops, Aspen Digital explored promising use cases for AI to meet emergency managers' needs by convening practitioners, academic institutions, nonprofit and intergovernmental organizations, and experts representing some of the nation's most experienced emergency managers. Collectively, these participants described their views about the opportunities and risks of AI and identified 40 promising use cases for AI to augment their work.

■ Perceptions: Emergency Managers Are Optimistic and Skeptical About AI

Participants expressed optimism about the promise of AI and uncertainty about which approaches can deliver results without creating unacceptable risks. Many participants said they are concerned about the accuracy of current models; AI's potential to degrade the human knowledge, experience, and empathy that are critical for their profession; and the technology industry's ability to mitigate any unintended, adverse consequences of widespread AI use. These sentiments are consistent with Pew research demonstrating Americans' concern with AI's impact on creative thinking and relationships.²²

Participants' optimism about the potential of AI, however, is also reflected in research that demonstrates a strong

interest among emergency managers to leverage advanced technology.²³ Most participants did not express significant fear about the potential for AI to displace human workers; rather, officials noted that most emergency management offices have very few staff and described AI as a force multiplier to augment their existing capacity. Additionally, several participants acknowledged that "AI is happening to people," as one said. "They woke up one day and iOS was updated with Apple Intelligence, Microsoft 365 came with Copilot, and Gmail now has Gemini." Some participants expressed concern about falling behind the private sector and the public in AI adoption and being unable to understand, coordinate, or challenge actions based on AI.

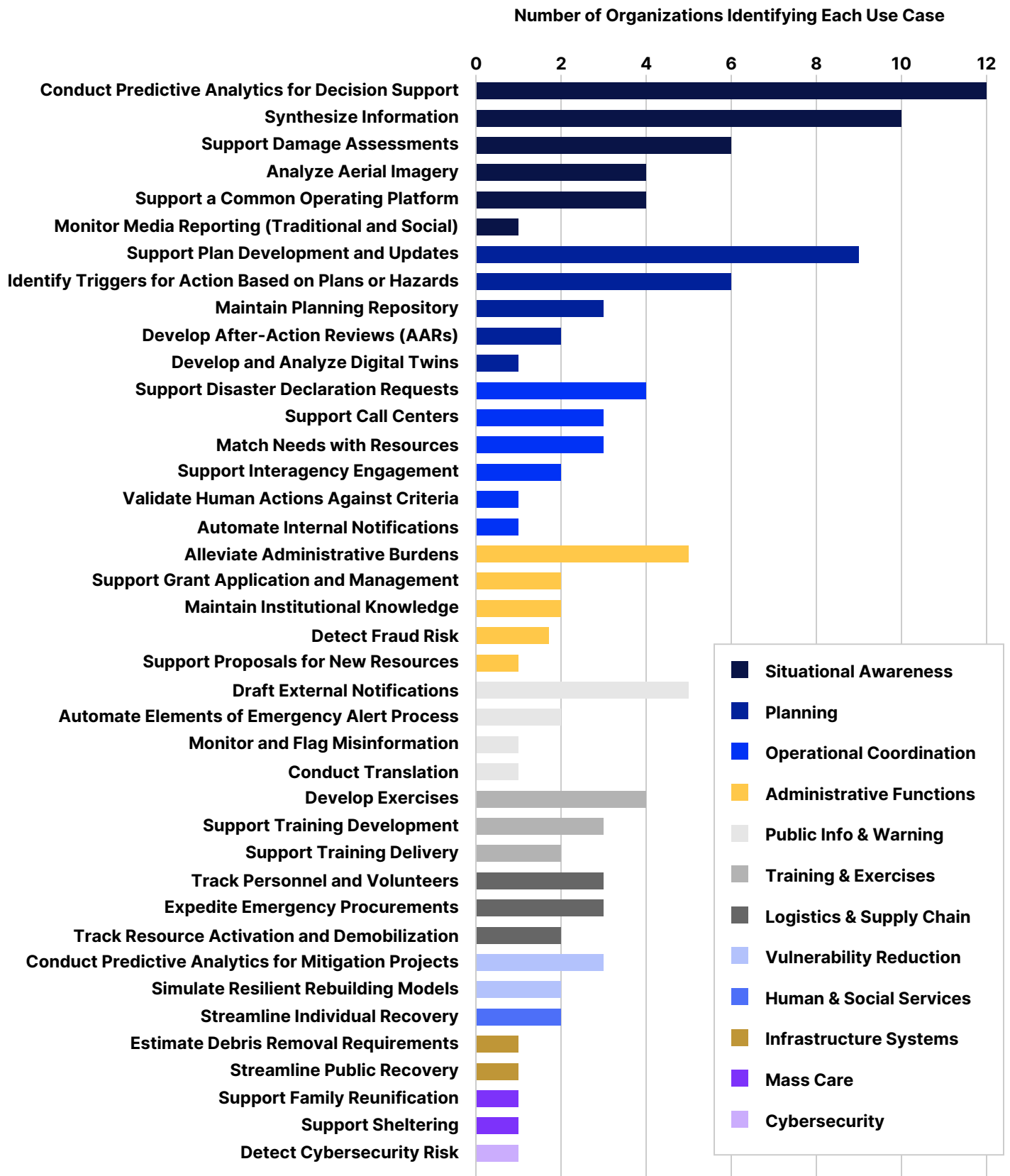
■ Promising Use Cases for AI to Augment Emergency Management

AIDE Initiative participants ultimately identified 40 promising use cases for AI to augment their work across functions they described as critical for mission success and/or one of their most persistent challenges (Figure 5). Participants most frequently described use cases associated with situational awareness as the most valuable (e.g., predictive analytics, information synthesis). Participants prioritized use cases associated with planning (e.g., plan development, triggers for action) about half as frequently as situational awareness, but more frequently than other functions. Additional use cases included support for operational coordination, administrative functions, public information and warning, training and exercises, and logistics and vulnerability reduction, among others, as described below.

²² Pew, 2025.

²³ Deloitte & NEMA, 2025.

Figure 5:
Promising Use Cases for AI to Augment Emergency Management



Synthesize Information and Analysis for Decision Support

Participants representing all types of jurisdictions and organizations saw the most promise for AI in conducting predictive analytics for decision support. Officials described how they could use AI-supported projections of direct and cascading disaster impacts to sequence response actions, make notifications, allocate resources, and “speed up sensemaking,” as one individual said. Similarly, participants repeatedly described the potential for AI to augment their staff in analyzing extensive data and translating information into relevant insights. Several participants expressed hope for AI to go beyond information synthesis to integrate disparate systems and data in a single, common operating platform based on indicators emergency managers want to see.

“Participants repeatedly described the potential for AI to augment their staff in analyzing extensive data and translating information into relevant insights.”

Facilitate Effective Planning

Officials from government, nonprofit, and intergovernmental organizations described their hope for AI to augment the development of emergency management plans. One official, who serves as the only emergency manager in his jurisdiction, uses LLMs to conduct research at night for plans he works on during the day. Several officials who are or have been responsible for large jurisdictions discussed AI’s value as a repository for large numbers of complex plans. And multiple participants believed AI could help them connect planning assumptions with situational awareness to quickly identify triggers for action. As one expert said, “If you plug in the deliberate plan, and you present the situation report and key questions, you can ask an AI tool, ‘What are the critical tasks and actions for me today? What are the critical tasks and actions for this operational period, or the next operational period?’ It’s going to help you do that.”

“Multiple participants believed AI could help them connect planning assumptions with situational awareness to quickly identify triggers for action.”

Improve Operational Coordination

Several participants described use cases for AI to improve operational coordination by fostering interagency engagement, aligning needs with resources, requesting federal disaster declarations, and augmenting call centers. A few officials imagined a potential for AI to clarify interagency responsibilities and capabilities. For example, a nonprofit executive described his desire for AI approaches that help match operational needs with interagency resources more efficiently. He described working to depopulate shelters by connecting survivors’ needs for home repair with interorganizational resources. Several state participants also saw utility in AI’s ability to prepare data for federal disaster declaration requests, with one official already using an internal LLM to reduce the request development process from multiple days to hours. Officials from all sectors described AI’s potential to augment call centers that serve survivors or clients.

“A few officials imagined a potential for AI to clarify interagency responsibilities and capabilities.”

Create More Time for Critical Work by Reducing Administrative Burdens

A number of participants described one of AI's greatest value propositions as allowing emergency managers more time for strategic work by alleviating the administrative burdens of responding to emails, developing presentations, reviewing procurement actions, managing budgets, and administering grants. "The amount of administrative and management stuff that takes up my time, as opposed to ... core emergency management functions, I still find to be relatively disproportionate," said one city official. These participants did not believe AI would replace humans in these functions, but rather suggested AI could develop initial drafts, complete preliminary analysis, or take on repetitive tasks that require little managerial judgment. Some officials said they are already using AI approaches like LLMs for these purposes.

"AI could take on repetitive tasks that require little managerial judgment."

Speed Public Information and Warning

Several officials described how AI could assist them in drafting messages and automating certain elements of public information and warning, which participants identified as the most critical function for mission success during the initial workshop series. Participants envisioned AI could draft initial messages based on triggers, edit for brevity and clarity, provide speech-to-text capabilities, conduct translation, leverage agents programmed with unique perspectives for different audiences, and generally speed the timeline for message development. One official described how her city's public safety organizations are currently building AI-integrated dispatch software to automate human-approved notifications when an emergency occurs.

"One official described how her city's public safety organizations are currently building AI-integrated dispatch software."

Strengthen Training and Exercises

Representatives from city, state, and nonprofit organizations also identified multiple use cases for AI to augment training and exercises. A nonprofit executive described how AI support for training was critical for her organization to maintain currency among an episodic workforce. An emergency manager from a small jurisdiction similarly reflected, "Wouldn't it be nice if we could just plug [our guide for new emergency managers] into AI and have it pop out a training course for us?" Another official described how her jurisdiction ran out of time to exercise potential cascading impacts of COVID-19. If her team had access to AI-supported technology at that time, she said, it might have accelerated development of those scenarios.

"AI helps support training for organizations to maintain currency among an episodic workforce."

Augment Logistics Capabilities

A few large cities and nonprofit organizations with a significant logistics or personnel footprint described the potential for AI to help them allocate and track resources, including monitoring personnel deployments, reconstituting critical resources, and accelerating emergency procurements. One executive explained how his nonprofit organization is building AI approaches to track its volunteer mobilization and demobilization process. Another nonprofit executive described wanting to leverage AI-supported predictive analytics early in emergencies to deploy resources to hotspots requiring immediate assistance. Other participants described their vision for AI to augment their organizations' emergency procurement by automating steps within the process, validating standards, or identifying anomalies.

"Organizations with a significant logistics or personnel footprint described the potential for AI to help them allocate and track resources."

Streamline Individual Recovery

A few participants noted the potential for AI to improve the experience of survivors seeking assistance following a disaster. "It feels very convoluted and very heavy for somebody who has just lost their whole house or lost loved ones to try to navigate that process," said one county official. Another expert noted the potential of AI to speed up the registration and assistance determination process.

"Emergency managers hope AI can improve the experience of survivors seeking assistance following a disaster."

Reduce Long-Term Vulnerability and Strengthen Resilience

Two small jurisdictions and several experts described the potential of AI to help prioritize mitigation investments before and after disasters. One state official said he would "like to use [predictive analytics] for mitigation projects [because] that's an area where there's such a great return on investment." Another emergency manager described wanting to use AI to simulate models for rebuilding infrastructure more resiliently. This is notable because, in the initial set of workshops, only one small jurisdiction identified community resilience as one of their most critical functions to save lives, protect property, and enable recovery early in a disaster. Subsequent workshops also demonstrated that jurisdictions with fewer resources more frequently identify resilience-building activities before and after disasters as critical functions.

"Small jurisdictions said AI could help them prioritize mitigation projects by estimating returns on investment."

Section 3

Considering AI: Guidance For Emergency Managers

AIDE Initiative participants described an urgent need for assistance in navigating the AI landscape, including impartial guidance on how to evaluate AI solutions and approaches to support implementation. Leveraging insights from the AIDE Initiative coalition, this section includes a set of guiding principles for responsible, effective AI adoption; conditions for success and strategies to address common barriers; and decision criteria to evaluate specific AI models.

■ Guiding Principles for AI Adoption

The nature and pace of AI adoption across emergency management will continue to vary, but emergency managers face many common opportunities and challenges related to AI adoption. The following principles are foundational beliefs that experts viewed as essential to responsible, effective AI adoption in emergency management. These principles apply regardless of specific needs or technologies. They can be used by any official involved in emergency management when making decisions or developing strategies related to AI. Each principle includes real-world examples of how AIDE Initiative participants are applying the principle in practice.

Human-Centered:

AI advancements focus on improving the experience of disaster survivors and the work of emergency management personnel.

Examples in Practice:

- A company is developing an AI approach with appropriate privacy safeguards to reduce how frequently a disaster survivor has to recount their story while seeking assistance.
- A state agency is prioritizing its AI investments to improve work-life balance for staff.

Human-in-the-Loop (also referred to as human-driven):

AI augments human judgment and public officials retain accountability for decisions based on AI outputs.

Examples in Practice:

- A jurisdiction has a “trust but verify” approach to using an LLM when assessing plans against established criteria by having an experienced planner validate AI output.

Transparent:

People who are affected by AI have opportunities to understand how it works and how it is used.

Examples in Practice:

- A jurisdiction issued a public report on how it is using AI.

Adaptable:

Emergency managers prioritize AI approaches that can adapt to meet current needs as well as mature alongside other systems and data.

Examples in Practice:

- An organization worked with a vendor to reduce the programming and computing requirements of a pilot model to create a more user-friendly approach for operators.
- A jurisdiction is working to better integrate its existing systems within a cloud-based environment with the goal of eventually integrating AI-supported analytics.

Scalable:

AI approaches must have the technical infrastructure and capacity to scale rapidly in an organization or jurisdiction based on demonstrated performance in pilot environments without requiring significant reengineering.

Examples in Practice:

- A jurisdiction hosts a public innovation challenge to identify, pilot, and scale solutions for its emergency management needs.

Resource-Conscious:

AI approaches narrow the gap between what emergency managers are expected to do and the resources they have by saving time and money in the long term.

Examples in Practice:

- A jurisdiction reduced contract support costs by more than 90% using an LLM to support a document-heavy, labor-intensive administrative process.

■ Conditions for Success, Barriers, and Mitigation Strategies

To help emergency managers leverage AI to address their needs, Aspen Digital asked experts to identify factors they observe driving effective AI adoption. Based on this insight, Aspen Digital defined **five interdependent conditions for successful AI implementation**. This section defines each success factor and offers strategies to mitigate common barriers.

Strong Leadership and Accountability

An organization's senior leaders assume responsibility for AI adoption and establish structures to determine AI priorities and oversee implementation.

Barriers

- **Lack of Awareness:** Leaders are not aware of AI opportunities and risks.
- **Cybersecurity Risk Posture:** Opportunities are not explored because cybersecurity risk analysis is not nuanced.
- **Lack of Guidance for AI Use:** Personnel lack clear guidance on AI, leading to missed opportunities and/or risks from unofficial use.

Mitigation Strategies

- **Accountability Structures:** The chief executive or designee oversees AI accountability structures that include operations, IT, and acquisitions leaders.
- **Risk Assessment:** Senior leaders facilitate cross-organization risk assessment conversations.
- **Policy:** The organization issues policy on AI adoption and use, even if interim or iterative.

Organizational Culture and Capacity

Leaders actively foster the culture and personnel capacity required to implement AI approaches.

Barriers

- **Fear and Mistrust:** Some personnel and public stakeholders do not trust AI to secure and responsibly use information.
- **Lack of Familiarity:** Some staff are overwhelmed by AI and/or do not know how to use it.
- **Lack of Capacity:** Supporting elements of the organization (e.g., IT, training) do not have the capacity to take on new initiatives.

Mitigation Strategies

- **Change Management:** Leaders manage a deliberate approach to build trust and capacity.
- **User Training:** The organization has vendor support for initial and ongoing training.
- **Communities of Interest:** Experienced users help test, educate, and drive adoption.
- **Mentoring Network:** The organization learns from peers and intergovernmental organizations.

High Value Proposition Through Iterative Development

Leaders and staff have confidence in AI's ability to solve an important problem related to saving lives, protecting property, or enabling communities to recover. They believe the cost and risks are worth the outcome and convince relevant funding authorities of the same.

Barriers

- **Cost of Technology:** An organization cannot or will not increase present costs.
- **Performance of AI:** Approaches deployed without planning or testing fail.
- **Risks of Error or Misuse:** Mistakes or misuse risk unacceptable consequences.
- **Pet Projects:** AI approaches are championed by transient leaders with individual interests.

Mitigation Strategies

- **Value:** AI adoption is aligned with priorities and can demonstrate long-term savings.
- **Iterative Development:** Adoption includes piloting before full implementation.
- **Human Oversight:** Processes include human validation prior to action based on AI.
- **Day-to-Day Use:** Prioritized AI approaches become part of daily business.

Agile Procurement Approach

An agency's procurement approach can clearly articulate needs and keep pace with technology.

Barriers

- **Length of Procurement:** Cycles requiring months or years lag behind the pace at which AI is evolving.
- **Requirements Translation:** Vendors do not understand the need because operational requirements are not clearly articulated.
- **Complex Procedures:** Staff spend more time on administrative requirements than strategy; some vendors will not participate.

Mitigation Strategies

- **Expectations through Governance:** Leaders gain visibility of and establish expectations for procurement timeliness.
- **Cross-Agency Procurement Teams:** Operational and technical leaders develop requirements.
- **Agile Procurement Approach:** An organization uses flexible contracting approaches to support iterative development.

Integration of AI Adoption With IT and Data Maturity

An organization's AI adoption strategy is integrated with its IT and data maturity efforts.

Barriers

- **Lack of Interoperability:** Systems cannot readily share information or coordinate.
- **Readiness of Existing Data:** Data is not organized in standard ways and/or is not readily accessible.

Mitigation Strategies

- **Expectations through Accountability:** Leaders align IT, data, and AI modernization priorities.
- **Iterative Data Readiness:** An organization sequences its data readiness efforts based on a prioritization of AI use cases.

Decision Criteria for AI Approaches

Aspen Digital asked participating experts what criteria are most important to consider when evaluating whether to adopt a specific AI approach. The criteria shown below are listed in order of frequency, from most to least commonly cited, starting with performance.

Decision Criteria	Example Questions
Performance	- Has the approach performed well in meeting a need important to my organization? - Has the approach performed well in the real world or only in simulations? - Is the vendor transparent about lessons learned and/or shortcomings?
Cost	- What does the supporting technology cost to procure? What does it cost to sustain? Do these costs change based on the number or type of users? - What procurement/payment structures are available (i.e., license versus purchase)? - In the long term, will the approach result in a total cost increase or savings?
User Support	- What user support does the vendor provide, at what cost, and for how long? - Does my organization have the infrastructure to support users longer-term?
Benefit to Survivors	How will this approach improve disaster survivors' experience?
Benefit to Staff	- How difficult is the approach to use? - Can staff use this approach to augment their daily work? - Will the approach free up time for staff to spend on more meaningful work? - Will the approach make work activities less cumbersome?
Pilot Opportunities	Are there opportunities to test the approach before full implementation?
Data Security	- How does the approach safeguard data and information? - Can the approach operate in closed and open data environments? - Can the approach comply with my organization's security requirements?
Data Availability	- Is the data required by the approach readily accessible? - Is there a sufficient amount of the required data? - Is the available data high quality?
Interoperability	- How well can the approach integrate with existing systems and processes? - What effort is required for my organization's systems to be ready?
Sustainment	- What maintenance does the approach require and at what level of effort? - Does the approach create a long-term commitment or dependency? - How easily can my organization pivot from the approach if conditions change?
Risks of Error/Misuse	- How susceptible is the approach to error or misuse? - Are the risks of error or misuse acceptable to my organization?
Reliability	- Does the vendor offer local server support to maintain critical data? - If technology goes down, can my organization continue its functions?
Ease of Implementation	- Is this approach an add-on to an existing system or an entirely new system? - Is the approach an "off-the-shelf" product or does it require customization?
Adaptability	How does the approach adapt over time based on lessons learned?

Section 4

Scaling Progress: Implications For Implementation

■ Capacity-Building Is Required to Advance AI in Emergency Management

AIDE Initiative participants said capacity-related barriers present one of the greatest challenges to AI adoption in their organizations. For jurisdictions of all sizes, these barriers include cultural challenges like trust in AI as well as education and training. For smaller jurisdictions, these capacity challenges extend to a lack of in-house IT capacity to provide guidance on AI opportunities and challenges. Several universities described similar challenges in partnering with emergency management agencies to test conceptual use cases, citing the small size of most agencies and frequent misalignment between research and practitioner needs.

The AIDE Initiative seeks to expand the capacity of emergency managers to responsibly adopt AI in several ways. First, this report and the accompanying AIDE and RAND reports include high-level guidance that emergency managers can immediately use to ready their own organizations. In the coming months, the AIDE Initiative will supplement this guidance with a playbook for emergency managers to assess how AI can help them; make decisions about AI adoption and use; and test, scale, and integrate proven use

cases. Second, AIDE partners are creating an AI education program for the emergency management community with topics on AI basics, output review, data handling, use case selection, common risks, and more. Practitioners will be able to use learning modules virtually or in person. Third, the AIDE Initiative will launch high-potential pilot assessments with training and capacity building for participating jurisdictions. These pilots will result in models that communities across the country can replicate.

Cross-Sector Partners and Investors Must Remain at the Table

It will take sustained, multi-sector partnerships to support emergency management organizations in expanding their capacity to realize the potential of AI. These partnerships must include technology companies building AI-enabled capabilities; nonprofit and industry partners testing AI approaches; research institutions studying how AI can improve public services; and representatives from federal, state, and local governments who know their communities well. Investors must also be at the table. AIDE Initiative participants described how translating conceptually promising use cases into real-world practice is impeded by gaps in funding, noting that much of the investment in AI for emergency management is occurring in the insurance industry. The emergency management community must find ways to collaborate with investors to “accelerate the ideation and adoption of these technologies ... in a way that waiting for the market to bring to us will not do,” as one participant said.

The AIDE Initiative has already begun engaging these partners and will continue to do so through a major convening event and an enduring network. This September, the AIDE Initiative will bring together emergency management leaders and multi-sector partners for a Summit focused on developing shared commitments and planning for collaborative action. The AIDE Summit will explore what emergency managers need and how multi-sector partners can help. The AIDE Initiative will also launch an AIDE Alliance to sustain momentum by providing an ongoing, nonpartisan forum for emergency managers, practitioners, and partners to learn from one another, advance best practices and new ways of working together, and address challenges.

“The emergency management community should not wait for the market to bring it solutions.”

Emergency Management Can Be a Testing Ground for Wider Public Sector AI Adoption

AI approaches developed in the emergency management space have significant potential to apply to a wider set of public sector challenges, and the demand signal from emergency managers may represent a larger return for funders and investors than currently assumed. First, emergency management agencies are often small, pivot quickly, and have a continuous learning orientation. Such agencies offer a favorable testing ground for new ideas through low-risk scenarios, such as exercises or shadow testing. Second, the most promising use cases for AI in emergency management — such as predictive analytics for decision support — are transferable to a wider set of public sector challenges. The introduction of this report describes how emergency managers are increasingly tasked with addressing novel threats not typically associated with their profession. This is because emergency managers bring knowledge and frameworks for managing disruptions in complex, unpredictable systems. The relationships between human, technological, economic, and environmental systems are growing more complex and the disruptions to those systems more consequential. AI-supported approaches that help leaders foresee and more effectively respond to a crisis are therefore valuable to many organizations beyond emergency managers.

“The relationships between human, technological, economic, and environmental systems are growing more complex and the disruptions to those systems more consequential.”

Responsible, Human-Centered AI Adoption Can Improve Trust in Public Institutions

The emergency management community has an opportunity to demonstrate how responsible, human-centered AI adoption can improve trust in public institutions. The social contract depends on this trust: if governments serve their citizens well, citizens willingly cooperate with the requirements of civic and social life. Research shows that trust in public institutions is built through respecting communities' values and interests; improving institutional performance, efficiency, and responsiveness; and enabling individuals to participate in solving societal problems.²⁴ And although trust in many public institutions in the United States is low, most Americans believe rebuilding this trust is important.²⁵ Most Americans also want government to regulate AI, industry partners to establish common standards, and independent experts to evaluate AI safety and security.²⁶ This mandate is an opportunity for public institutions to simultaneously support AI development and rebuild trust and legitimacy. The emergency management community can serve as a model by committing to and communicating principles for AI development and diffusion; validating the safety and security of AI through pilot assessments before wider use; and championing AI approaches that have demonstrated the ability to improve outcomes across the disaster lifecycle.

Americans' expectations for AI governance represent an opportunity to improve trust in public institutions.

²⁴ Brady, 2022.

²⁵ Deane, 2024.

²⁶ Vigers, 2025.

Conclusion

To facilitate enduring change, the AIDE Initiative is centering the needs and insights of emergency managers and their many partners across the emergency management community. This report provides that community with a foundation by outlining some of the most promising opportunities for AI to augment emergency management functions and principles for responsible AI adoption. The practitioner-driven insights presented in these pages will serve as a foundation of much more work to come, including follow-on resources such as pilots and training.

In the meantime, emergency managers and others can make immediate use of the insights and guidance contained in this report. Many workshop participants said their jurisdictions or agencies are still in the early phases of developing AI guidance and governance. Organizations can use this report's [Guiding Principles for AI Adoption](#) as a starting template for policy on AI adoption; [Conditions for Success](#) as a playbook for AI capacity-building; and [Decision Criteria](#) as a framework to evaluate whether an AI approach is a good fit for their organization. Along with RAND's AI landscape assessment, this report lays a foundation for the AIDE Initiative's next phase, which, as outlined in the AIDE Report, is focused on building the emergency management community's capacity and fostering multi-sector collaboration. This will include additional guidance and educational resources, capacity-building pilots, an agenda for further research, and the 2026 AIDE Summit and ongoing AIDE Alliance.

In the United States, emergency management has developed alongside innovations in natural hazards research, engineering, meteorology, geospatial information systems, and other fields. While imperfect, emergency management is more sophisticated today than at any other time in its history because of its multidisciplinary orientation. This community's ability to evolve is reason for optimism amid Americans' rising vulnerability to natural disasters. With sufficient support, emergency managers and their partners can leverage innovations in AI to improve outcomes for communities and disaster survivors. The coalition of multi-sector partners represented by the AIDE Initiative — including Aspen Digital — intends to mobilize this support.

Want to stay involved?

[Sign up](#) to receive updates, research, and other opportunities.

■ Appendix

Driving questions from stakeholder workshops

Workshop Focus: Current State of Emergency Management

1. What functions of emergency management are most critical for mission success? Why those?
2. Identify the single most persistent function or challenge that consistently requires the most time, resources, or other capital. What makes it so resource-consuming to complete?
3. Regarding each challenging function, what technologies are you currently using to support it? What is the single biggest gap or point of friction in these technologies?
4. If you were given an unlimited resource (personnel, technology, or funding) for one year, where would you assign it to achieve maximum impact? What is the return on investment you expect?
5. Are there specific areas where your organization would benefit from integration of AI technologies?

Workshop Focus: Use Case Validation - Technology

1. Which AI use cases would have the most impactful and visible outcomes for your organization?
2. What AI technologies, if any, is your organization currently using, implementing, or considering? What are you using it for? What is the biggest gap or point of friction with using these technologies?
3. Beyond technical feasibility, what organizational barriers could prevent or delay implementation of your highest-priority AI use cases?
4. What are the most important considerations to you when thinking about procuring AI technologies?
5. If you are presented with two solutions that both address the same task and provide similar outcomes, what criteria would you use to decide between the two?

Workshop Focus: Sector-Specific Perspectives

Sector: Academia

1. Based on your research, what are the most significant findings about AI implementation in emergency management or the public sector that practitioners often overlook or misunderstand?
2. What critical gaps exist between current research on AI in emergency management and real-world practice? Where is the research lacking, and where are practitioners not applying what we know?
3. Are you aware of any pilot programs, case studies, or experimental implementations that offer valuable lessons for AI adoption in emergency management? What are the key takeaways?
4. From a research perspective, how should we measure the effectiveness of AI implementations in emergency management? What metrics or evaluation frameworks does the literature support?

Sector: Intergovernmental Organizations

1. What are the most pressing technology-related challenges your members face and how do these challenges differ across your membership?
2. When your members talk about AI, what are they most excited about? Worried about?
3. Do you see differences in readiness/appetite for AI between elected officials and employees?
4. Beyond funding, what do you see as the biggest barriers to technology adoption (workforce capacity, procurement, leadership buy-in, data access)?
5. Are your members actively looking for AI solutions? What about AI solutions specifically for emergency management?

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