



GRAND CHALLENGES

IN PUBLIC ADMINISTRATION

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Over the course of 2017, the National Academy of Public Administration (the Academy) hosted a series of “Governing Across the Divide” interactive summits across the country that addressed the future of governance. In 2018, we built on this effort by launching the Grand Challenges in Public Administration campaign to identify the biggest challenges that government will face during the 2020s. This document conveys the results of that year-long effort.

We believe that close consideration will reveal that every one of the twelve Grand Challenges represents a critical issue facing our nation today, and that effective and innovative public administration forms the core of every solution set. While the Academy intends to play a coordinating and convening role, we do not envision that these Grand Challenges belong only to the Academy for action. We intend for this set of Grand Challenges to set a decade-long agenda for the entire field of Public Administration, and through that agenda, we hope to integrate the efforts of the academic, practitioner, and partner communities so that we can collectively develop and advance new models of governance that meet these challenges and ultimately increase the public’s trust in government.

The development of the final list of Grand Challenges in Public Administration would not have been possible without the dedicated support of our Steering Committee. I am most grateful to the following individuals who brought their expertise, perspectives, and tireless energy to this effort:

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As you consider the Grand Challenges presented here, I hope that you will see compelling concepts to which you personally can contribute, and that you will bring your own thoughts and research, your organizations, and your energy to this agenda. The Academy looks forward to working with all of you to “make government work, and work for all.”



Teresa W. Gerton
President and CEO
National Academy of Public Administration

OVERVIEW

For the first 20 years of the twenty-first century, the United States has been in a state of near constant change. As new challenges have arisen and demands on government have increased, however, the public sector has often been in a reactive mode—struggling to adapt to a rapidly evolving international, economic, social, technological, and cultural environment. And, over the next decade, it will be even more important for governments at all levels to improve their operations so that they can tackle new problems in new ways and earn the public’s trust.



In 2017, the National Academy of Public Administration (the Academy) hosted a series of interactive summits across the country focused on “Governing Across the Divide.” A year later, we launched the Grand Challenges in Public Administration campaign to identify the biggest challenges that government will face during the 2020s. This document conveys the results of this year-long effort. It is no secret that trust in government has declined significantly over the past several decades. By addressing these challenges, governments at all levels have the opportunity to rebuild trust in their operations and capabilities. During the next ten years, we look forward to working with stakeholders from across the public administration community to begin taking actions to address these issues.

What Does It Mean to Be a Grand Challenge?

For the public administration field, these are the biggest issues that government must address over the next decade, both from a programmatic and an operational standpoint:

- Grand Challenges are *large in scope* (inter-agency, inter-sectoral, intergovernmental, and multi-disciplinary).
- They require *significant innovation and long-term commitment* (a decade or more).
- They seek to achieve *worthwhile, ambitious goals* that we know will be difficult to successfully address for a variety of reasons, including their complexity and interconnectedness.
- They require *paradigm shifts* in thinking and/or significant change in government functioning.
- They have significant *individual, governmental, and societal impacts*.

How Did We Identify the Grand Challenges in Public Administration?

To lead this effort, we formed a Steering Committee of 14 members who represented the diversity of the public administration field. The Steering Committee received research support from our professional staff. Soon after launching this effort, we sought and received a wide array of invaluable public input on two key questions:

- *What Must Government Do?* Over the next decade, what is a grand challenge that government (federal, state, and/or local) must address in order for American society to reach its full potential?
- *How Government Should Do It?* Over the next decade, what must the field of public administration do to ensure that government has the managerial, operational, and leadership capacity required to deal with the most important challenges facing the United States?

Over the past year, our Steering Committee held multiple facilitated sessions to both analyze the public input and to bring their own expertise to bear in identifying Grand

Challenges. Our professional staff conducted considerable independent research on a broad range of potential topics. Our Board was actively engaged in vetting ideas, offering its expertise, and making final decisions on the Grand Challenges list.

What Are the Grand Challenges in Public Administration?

We identified 12 Grand Challenges in Public Administration within 4 focus areas.

FOCUS AREA	GRAND CHALLENGE
<i>Protecting and Advancing Democracy</i>	<ol style="list-style-type: none"> 1. Protect Electoral Integrity and Enhance Voter Participation 2. Modernize and Reinvigorate the Public Service 3. Develop New Approaches to Public Governance and Engagement 4. Advance National Interests in a Changing Global Context
<i>Strengthening Social and Economic Development</i>	<ol style="list-style-type: none"> 5. Foster Social Equity 6. Connect Individuals to Meaningful Work 7. Build Resilient Communities 8. Advance the Nation's Long-Term Fiscal Health
<i>Ensuring Environmental Sustainability</i>	<ol style="list-style-type: none"> 9. Steward Natural Resources and Address Climate Change 10. Create Modern Water Systems for Safe and Sustainable Use
<i>Managing Technological Changes</i>	<ol style="list-style-type: none"> 11. Ensure Data Security and Privacy Rights of Individuals 12. Make Government AI Ready

Table 1. Grand Challenges in Public Administration

Public administration institutions and programs will have to be critical components of addressing each Grand Challenge, and individual agencies and administrators also will have to act in new and innovative ways for the nation to make the necessary progress. To successfully address these Grand Challenges, we believe that public organizations will have to address core management issues and learn to operate differently:

- Manage amidst risk and uncertainty;
- Conduct business in an agile manner;
- Reflect the nation's diversity and ensure inclusion;
- Improve service delivery;
- Protect cybersecurity; and
- Ensure environmentally sustainable operations.

These core management issues both cut across the Grand Challenges in Public Administration as a whole and must be addressed within each one of them.

What Is the Role of the Academy?

These are not *our organization's* Grand Challenges—they are Grand Challenges *for our entire field*. The Academy will work with stakeholders at all levels of government, in universities, and in the private and nonprofit sectors so that, collectively, the nation can make the needed progress. The Academy's role is to inspire action, enhance understanding, connect stakeholders, and drive change.

ACADEMY ROLE	KEY TASKS
<i>Inspire Action</i>	<ul style="list-style-type: none">• Set a ten-year agenda for the field (practitioners & academics)• Develop baseline understanding• Educate & inform stakeholders
<i>Enhance Understanding</i>	<ul style="list-style-type: none">• Conduct or support research to determine what works, identify key innovations, and disseminate effective practices and lessons learned• Convene conferences and seminars on particular GCs and focus areas• Develop case libraries and toolkits
<i>Connect Stakeholders</i>	<ul style="list-style-type: none">• Interagency• Intergovernmental• Intersectoral• International• Academics and practitioners
<i>Drive Change</i>	<ul style="list-style-type: none">• Identify and assess solutions• Highlight successful innovations & promote effective practices• Identify ways to scale up solutions• Develop action plans & issue recommendations• Assess & report on progress

Table 2. Role of the Academy

What Are the Next Steps?

Public administration is a fascinating endeavor and field of study precisely because it is so interdisciplinary and so diverse. As both an intellectual and a practical enterprise, the field includes:

- Federal, state, and local career civil servants;
- Political appointees inside agencies at all levels of government;
- Contractors delivering public services and providing various support at all levels of government;
- Professors, researchers, and students in universities;
- Nonprofit grantees;
- Private business enablers and partners in innovative public-private ventures;
- Professional associations and advocacy organizations;
- Think tanks; and
- Subject matter experts on specific policy or management issues.

This is a broad field and a deep bench for the nation to draw upon to address its Grand Challenges in Public Administration. We believe that everyone has a role to play moving forward. As an immediate next step, the Academy will begin convening stakeholders across the public administration community to develop action plans for each Grand Challenge. We hope that you will join us. Together, there are no limits to what we can accomplish.





GRAND CHALLENGES

IN PUBLIC ADMINISTRATION

PROTECTING AND ADVANCING DEMOCRACY



**ENSURE ELECTORAL INTEGRITY &
ENHANCE VOTER PARTICIPATION**



**MODERNIZE AND REINVIGORATE THE
PUBLIC SERVICE**



**DEVELOP NEW APPROACHES TO PUBLIC
GOVERNANCE AND ENGAGEMENT**



**ADVANCE NATIONAL INTERESTS IN A
CHANGING GLOBAL CONTEXT**



GRAND CHALLENGE #1: ENSURE ELECTORAL INTEGRITY & ENHANCE VOTER PARTICIPATION

Voting at the federal, state, and local levels is fundamental to American democracy, and citizens must have confidence in electoral systems, processes, and results. Electoral integrity and voter participation are enhanced by (1) ensuring that everyone with a legal right to vote is able to do so; (2) protecting such critical election infrastructure as storage facilities, polling places, and centralized vote tabulation locations; and (3) safeguarding such information and communications technology as voter registration databases, voting machines, and other electoral management systems.

Some of the relevant issues include:

- **Foreign intervention and technology utilization.** In 2016, Russian government-affiliated cyber actors (1) conducted operations to identify vulnerabilities in U.S. voting infrastructure in all 50 states and (2) undertook cyber operations to enflame societal divisions and undermine confidence in our democracy. Although there is no evidence that individual votes were changed in the last presidential election, this conceivably could happen in a future election, which would lead to chaos on Election Day. New technologies such as “deep fakes” could further roil elections in the future.
- **Rules, processes, and locations for voting.** Voter participation is impacted by decisions made by states and localities. States have the primary responsibility for conducting elections, and there is great variation in the types of voting laws enacted. Some states, for example, have implemented automatic voter registration and vote-by-mail to increase participation. To protect against voter fraud, many states have passed laws on voter identification and voter database purging. Localities manage elections with limited resources, especially in rural areas. Practical local decisions about where to put polling places can impact participation. Decisions about laws, regulations, and polling location must be made and implemented in a fair and equitable manner to ensure that all citizens have equal access to the ballot box.
- **Gerrymandering.** With both chambers of most state legislatures now controlled by one political party, the creation of gerrymandered districts to maintain that party’s dominance has become more common. In response, some states have passed citizen initiatives to create independent commissions for the drawing of districts.
- **Lack of voter participation.** Voter turnout and trust in the political process continue to be low, as is understanding of how the electoral process works. In a typical presidential election year, for example, no more than 60 percent of the voting-eligible population chooses to participate. Only about 40 percent vote during the midterms. And turnout in local elections tends to be even lower than in federal and state-wide elections.

The U.S. election system is highly decentralized. Public agencies and administrators have critical roles to play in ensuring fair and safe elections. In most cases, the nation's counties are responsible for actually running our elections. Decentralization and lack of standardization create a number of challenges, but this structure can be a strength from a security perspective.

As part of the Grand Challenge to "Ensure Electoral Integrity and Enhance Voter Participation," the Academy will work with stakeholders to determine how to:

- Protect critical electoral infrastructure from cyber and other attacks;
- Identify needed electoral reforms and innovative mechanisms to engage the public;
- Promote effective practices in state voting laws and processes, including the potential role of independent redistricting commissions;
- Promote public confidence in election systems and results;
- Ensure fair access to the ballot box;
- Educate and train the election workforce; and
- Address the intergovernmental issues and tensions inherent in election administration in a federal system.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #2: MODERNIZE AND REINVIGORATE THE PUBLIC SERVICE

Federal, state, and local governments deliver vitally important services to the American people each and every day. If it is an important need, public agencies at one or more levels of government are likely to have an important role in meeting it, including but not limited to:

- Defense and international relations;
- Police and fire protection;
- Public education;
- Public health and housing;
- Transportation and other infrastructure;
- Mail delivery;
- Economic development and market regulation; and
- Natural resources, environmental protection, and public lands.

As governments are increasingly called upon to address complex and interconnected “wicked problems,” their need for leaders, managers, technical experts, and front-line workers in the right jobs with the right skills at the right time has never been greater. Yet federal, state, and local governments all struggle to build a public service workforce that can meet the unique demands of our time due to laborious and time-consuming hiring practices, limited salary flexibilities, and promotion rules that value longevity over expertise and performance. Public managers and employees are also struggling to adapt to the rapidly changing nature of work. For all these reasons, we face a significant risk that many public organizations will not have the workforce capacity necessary to accomplish their critical missions and provide critical services to the public.

Many public employees are already of retirement age. As they leave the workforce, the result can be a major brain drain given how government struggles to quickly bring new talent onboard. We are at risk of losing a generation of younger workers because of inadequate hiring systems and practices. Similarly, the needs of governments over the next 5 to 10 years will be different than that of today, but the public sector does a poor job of continually training and developing its workforce. It also is too resistant to bringing in outside talent, especially at senior levels. That said, the unique combination of public-spirited younger generations and a wave of retirements could, with proper planning, provide governments at all levels with an opportunity to restructure their workforce to meet modern-day needs.

How the public’s business is done by government has evolved over the last few decades and will continue to do so. Increasingly, complex public programs are managed by a multisector workforce of employees from multiple levels of government and contractors from public and nonprofit organizations. These employees often have unclear boundaries and intertwined responsibilities. Not only is it important to build an integrated system that seamlessly pursues and achieves the public interest, but it is also necessary to train public leaders who can manage amidst this ambiguity, complexity, and uncertainty.

Public agencies and administrators have an important role to play in addressing the full suite of government's human capital challenges, including:

- Recruiting, developing, and retaining top talent;
- Holding administrators and employees accountable for results;
- Striking the right balance between civil servants, contractors, non-profits, and other third-party service providers;
- Managing multiple generations in the workforce;
- Restructuring work in a world of AI and Robotic Process Automation; and
- Modernizing systems and processes to account for changing career patterns.

As part of the Grand Challenge to “Modernize and Reinvigorate the Public Service,” the Academy will work with stakeholders to determine how to:

- Build a highly skilled, agile, and responsive public sector workforce with appropriate roles for civil servants, contractors, and other service providers;
- Develop strategic foresight mechanisms to anticipate and address changing workforce requirements;
- Ensure long-term institutional knowledge capacity amidst the retirement wave;
- Design new human capital systems consistent with merit-system principles (including modernizing policies and practices for recruitment, retention, training, and development); and
- Adapt the MPA curriculum to meet future workforce needs.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #3: DEVELOP NEW APPROACHES TO PUBLIC GOVERNANCE AND ENGAGEMENT

In the 21st Century, no significant public problem fits entirely within one government agency, or even one level of government, and our federal system presupposes that all levels of government have an important role to play in the democratic process. Effective problem solving usually requires federal, state, and local governments to work successfully together, and often with the private and nonprofit sectors. And yet, we have not prioritized the building of collaborative capabilities to develop and implement effective policies and programs across levels of government and sectors of society. The demise of institutions such as the Advisory Commission on Intergovernmental Relations, which kept these governance issues front and center in policymaking and administration, may have contributed to this collective neglect.

This is not an abstract academic issue. Fragmented and fractious inter-governmental arrangements—characterized by slow bureaucratic processes, conflicting rules, competing objectives, organizational stovepipes, and overlapping programs—are significant impediments to meeting public needs. Consistent with existing constitutional and legal structures, the United States needs to develop new intergovernmental, interjurisdictional, and intersectoral collaborative mechanisms to address such issues as:

- **Grant Programs.** Federal grant programs for medical research, education, transportation infrastructure, and social welfare touch every American. States, localities, and nonprofits spend too much time trying to navigate the multiplicity of programs and too many resources on documenting compliance. This reduces the funding available to meet the public's needs.
- **Emergency Management.** Federal, state, and local emergency managers must cope with the rising number of extreme, havoc-wreaking weather events that impose huge costs on people, property, and places. When disasters (whether natural or human-made) strike, the intergovernmental path for recovery can be bifurcated and disjointed, making it difficult, if not impossible, for local governments to navigate at a time of great crisis. The current network of institutions at national, state, and local levels of government hinders disaster preparation, response, and recovery.
- **Social, Economic, and Environmental Needs.** A wide range of needs require intergovernmental and intersectoral collaboration without which significant problems result. For example, the water crisis in Flint, MI, and the national opioid crisis, were intergovernmental failings. And the nation's current struggle to address the mobility, housing, and employment needs of a population increasingly migrating to already congested urban areas will require new intergovernmental and intersectoral solutions.

More broadly, new problem-solving and public engagement approaches should be utilized. Some innovators inside and outside of government have begun to utilize a people-centered, experimental, and data-enabled problem-solving approach to address public needs. For example, chronic homelessness in some communities is being fought through a bottoms-up approach of bringing stakeholders together, creating a list of individuals in need, and using a

dashboard to share real-time data across agencies and nonprofits. Our decentralized governmental system can maximize opportunities for this approach, while also serving to enhance representation in our increasingly diverse country.

Public agencies and administrators have an important role to play in working across levels of government and sectors. Public administrators can use their expertise to help design policies and programs that will have maximum chance of succeeding in an intergovernmental and intersectoral context. During policy development and implementation, they can build our system's capacity to meet complex public needs by broadly engaging the public, helping facilitate ongoing intergovernmental dialogues, providing flexibility, and encouraging innovation. Public administrators can play a key role in ensuring democratic values in policymaking and implementation in multi-stakeholder environments with actors from non-governmental sectors.

As part of the Grand Challenge to “Develop New Approaches to Public Governance and Engagement,” the Academy will work with stakeholders to determine how to:

- Establish joint solutions to complex policy and administrative problems;
- Design new institutional mechanisms—including regional governance models—to promote intergovernmental and intersectoral solutions, effective practices, and lessons learned;
- Improve the intergovernmental/intersectoral partnership and develop mutual accountability;
- Educate and train intergovernmental and intersectoral leaders;
- Identify the laws, regulations, and policies that significantly impede intergovernmental and intersectoral collaboration;
- Assess new public problem-solving mechanisms; and
- Improve the grants system to reduce compliance costs, focus on outcomes, and streamline programs.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #4: ADVANCE NATIONAL INTERESTS IN A CHANGING GLOBAL CONTEXT

Although the United States remains the world's most powerful nation, the unipolar moment of the early post-Cold War years has been replaced with a much more diffuse international system and a wider array of complex issues requiring sustained attention, including:

- Many vulnerable nations are experiencing state breakdown, terrorism, natural disasters, and environmental degradation;
- The world has the largest population flows and total number of refugees since the 1940s;
- Russia has aggressively challenged other countries' borders and political systems;
- China's rise has fueled tensions in the South China Sea; and
- Nuclear proliferation in the Middle East and Asia could destabilize the regional and global order.

Even as public administration and policy issues cross national boundaries more than ever, many Americans and citizens of allied countries are questioning the value of global engagement. Many people are concerned that globalization has negatively impacted their lives and reduced their nation-state's ability to provide protection and promote the general welfare. In this context, many of today's international institutions—established in the aftermath of World War II, before most of the world's population was born—are under significant stress. Given that major global issues cannot be addressed without effective international collaboration, many international institutions may need to be reformed and modernized.

The United States must develop new ways to advance its national and global interests within this changing global landscape. Key national interests include preventing an attack on the American homeland, deterring great-power Eurasian wars and intense security competitions, preserving access to reasonably priced and secure energy supplies, and maintaining an open international economic order. In addition, America continues to have a strong interest in promoting democracy, protecting human rights, and preserving a clean environment for current and future generations. The country will need to further develop key instruments—development, diplomatic, economic, military, intelligence, homeland security, and international institutions—to more effectively advance these interests.

Public agencies and administrators have a key role to play in addressing global issues. The federal government has whole departments and agencies—from the Defense and State Departments to the U.S. Agency for International Development and the International Trade Commission—dedicated to managing key components of the nation's foreign affairs. With most issues today having global attributes, many seemingly purely domestic issues such as diseases and environmental pollution are not constrained by national boundaries. Accordingly, a wider array of public departments and agencies now have an international aspect to their mission. States, localities, and communities have direct engagement with other countries and international entities. And many university departments of public

administration have expanded their curriculum to address international issues and develop global leaders.

As part of the Grand Challenge to “Advance National Interests in a Changing Global Context,” the Academy will work with stakeholders to determine how to:

- Sustain America’s role in the world;
- Make progress on the UN Sustainable Development Goals;
- Develop international norms for cybersecurity;
- Strengthen existing international institutions and institutional capacities;
- Ensure that organizations, processes, and tools both domestically and internationally (including new ones, if needed) are available for managing current global challenges;
- Foster global innovation and sharing leading practices in addressing public issues;
- Develop leaders with a global perspective;
- Work with non-governmental organizations as major actors; and
- Align teaching, research, and lessons learned to the changing reality of globalization.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGES

IN PUBLIC ADMINISTRATION

STRENGTHENING SOCIAL AND ECONOMIC DEVELOPMENT



FOSTER SOCIAL EQUITY



**CONNECT INDIVIDUALS TO MEANINGFUL
WORK**



BUILD RESILIENT COMMUNITIES



**ADVANCE THE NATION'S LONG-TERM FISCAL
HEALTH**



GRAND CHALLENGE #5: FOSTER SOCIAL EQUITY

Social equity—a key pillar of public administration alongside economy, efficiency, and effectiveness—addresses fairness, justice, and equity within a variety of public contexts. Although the United States has made significant progress in expanding access to opportunities to more of the nation’s citizens and residents, we continue to struggle with ensuring the equitable design and implementation of public policies and programs that reduce or eliminate disparities, discrimination, and marginalization. Much remains to be done to address the substantial social and economic disparities in 21st Century America, such as:

- The nation continues to face significant racial and gender disparities in such areas as criminal justice, healthcare, education, environment, housing, social services, and transportation.
- A growing divide in income and wealth has left many people behind based on their race, gender, or geographic location, and many groups are marginalized or excluded from the political process.
- The social and economic fortunes of urban and rural areas—and those of the coasts and the interior of the country—began to diverge significantly in the years just and after the financial crisis of 2009 and more dramatically thereafter.
- An increasing number of communities in the United States are under significant distress, facing such difficulties as declining populations, healthcare outcomes, and economic indicators.
- The digital divide will increase in importance with the advent of 5G and AI.

All of these disparities not only harm those individuals and families who directly experience them, but also impose substantial and increasing costs on the entire society and economy.

Public agencies and administrators have a critical role to play in addressing this Grand Challenge. They must work in partnership with elected officials to address social equity issues by bringing problems to the attention of policymakers, making recommendations on the basis of their deep expertise and extensive citizen engagement, and exercising lawful discretion to promote and ensure social equity within agencies and programs. Moving forward, public administrators and policymakers should develop a broader understanding of the elements and implications of social equity. For example, social equity includes not just equitable access to programs and services but the unhindered ability to engage in the political process. It also means equitable educational and economic opportunities. Ultimately, it is important to use a social equity lens to examine nearly all policies and practices, and there are major social equity dimensions of each of the other Grand Challenges in Public Administration that should be addressed moving forward.

As part of the Grand Challenge to “Foster Social Equity,” the Academy will work with stakeholders to determine how to:

- Incentivize tangible results by exploring, identifying, and disseminating social equity frameworks and metrics;
- Build awareness of social equity issues and indicators to foster organizational cultures that value and reward social equity;
- Develop frameworks to proactively assess and improve the social equity dimensions of public policy, program design, and organizational implementation;
- Provide practical advice on how public administrators can lawfully promote social equity within their agencies and programs;
- Educate and motivate administrators and policymakers to include a social equity lens in public management and throughout their careers;
- Address specific social equity issues, including affordable housing, criminal justice, education, and access to technology; and
- Ensure that social equity is considered in actions to address each of the other Grand Challenges in Public Administration.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #6: CONNECT INDIVIDUALS TO MEANINGFUL WORK

Humans have an innate quest for meaning. Our jobs and our work are a principal means for fulfilling that need—they have both instrumental and intrinsic value. Instrumentally, work provides the means by which we make a living and support our families. Work also has important implications for one's personal identity, with much of our self-esteem deriving from it. When the work is perceived as meaningful, people have a sense of fulfillment and purpose that not only strengthens their psychological welfare, but also contributes to other aspects of life and to an individual's overall life purpose.

In addition to the important connection of meaningful work to humanity, the national employment rate directly affects tax revenues, health insurance coverage, community cohesion, and so much more. With rapid changes to the world of work, many individuals and communities have experienced a great sense of dislocation and loss while others have benefited. Labor force participation in our country has fallen from nearly 70 percent before the Great Recession to about 63 percent. Millions of working-age Americans (in particular males 25-54) are neither working nor seeking work. The complex set of laws and regulations, and administration of safety net, workforce, and related programs can hinder an individual's ability to work, especially when individuals and households benefit from more than a program.

Where manufacturing and production jobs were once pathways to the middle class, Artificial Intelligence and globalization are leaving millions of Americans without the qualifications for the middle class jobs and meaningful work of the future, but offering those who do adapt new paths toward economic and personal success. The impacts are being felt differently across the country—with states in the Midwest, Great Plains, and the South most at risk of losing jobs to automation—and across different demographic groups.

Public agencies and administrators have a central role in preparing our people for the future of work. The national workforce system is a complex network of federal programs implemented through grants to state and local partners. Universities and community colleges, employers, community leaders, state licensing boards, and unions all also have key roles to play. Getting this network to operate effectively so that all able individuals can be connected to meaningful work is fundamental to our national economic prosperity.

Further, the social safety net that supports people as they transition between jobs needs mending. Reforms to federal and state regulations and administrative actions need to be undertaken to remove impediments in safety net, workforce, and related programs. In many cases, this will require actions by Congress and state legislatures, but some of these issues can be addressed administratively through regulatory action. Increasing the effectiveness of programs that provide relocation assistance, training grants, unemployment insurance and compensation, and portability of benefits could offer stability to people who need to move between opportunities and geographies.

As part of the Grand Challenge to “Connect Individuals to Meaningful Work,” the Academy will work with stakeholders to determine how to:

- Create lifelong learning systems;
- Identify innovative and successful workforce training retraining programs with the potential to scale more broadly;
- Identify needed reforms to existing training and retraining programs;
- Standardize qualifications and simplify cross-state portability for professional licenses;
- Optimize terms and performance metrics for workforce development grants to simplify program delivery and improve outcomes; and
- Align education, training, and social welfare policies and programs to the new world of work.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #7: BUILD RESILIENT COMMUNITIES

Across the nation, America needs resilient communities with the capacity to respond to, withstand, and recover from adverse situations. Such communities are able to bounce back from disruptions while providing a high quality of life for all residents. Resilient communities are able to address natural hazard preparedness, mitigation, and response needs, but, as the term is used here, “resilient” refers to the much broader ability to prepare for and respond to the whole panoply of potential and actual stresses facing communities.

Our nation’s communities are on the front lines of numerous challenges, including but certainly not limited to:

- **Extreme weather conditions and natural disasters.** Natural disasters such as floods, hurricanes, wildfires, and earthquakes have all struck different parts of the country. Just last year, California experienced the two most destructive wildfires in its history. Recently, hurricanes have done significant damage to Puerto Rico, Florida, Texas, and the Carolinas, while the Midwest has had catastrophic flooding.
- **Economic dislocations.** With the decline of manufacturing, the rise of innovative technologies, and the increase in service work, many communities are suffering from significant economic dislocations. Thousands of distressed communities have lost their economic growth engines and have emerged as ground zero for a combination of opioid addiction, educational and healthcare disparities, and population declines. Even communities that are not in significant distress must pay attention to such issues: growing urban metropolises, for example, have disadvantaged populations that are disproportionately affected by economic dislocation; face challenges providing affordable housing to their population; and must prepare for a future in which they are not guaranteed to continue to grow.
- **Health epidemics.** Opioid overdoses have become the leading cause of death in recent years—killing more than 400,000 people since 2000, with nearly 100,000 of these deaths occurring in the last two years. The per capita death toll has been especially high in the Appalachian region. About half of the American population has diabetes or pre-diabetes. Diet-related diseases such as obesity have imposed significant costs on individuals, families, and communities; they have also begun to impede our economic competitiveness and military readiness and are a major driver in skyrocketing healthcare costs. Sexually Transmitted Diseases have increased in prevalence in all parts of the country. Nearly 20 percent of Americans suffer from mental health issues.
- **Unaffordable housing.** The affordability of housing has declined over the past 7 years. In 2012, the NAHB/Wells Fargo Housing Opportunity Index showed that nearly 80 percent of new and existing homes were affordable; this dropped to 56 percent in late 2018 and is projected to continue to fall. Affordable housing is an issue throughout the country, especially in the fast-growing urban areas on the East and West Coasts.

This disturbing list is not exhaustive. Public agencies and administrators have an important role to play in building resilient communities. As this will require a cross-cutting intergovernmental and intersectoral approach, public administrators can bring a diverse array of public, nonprofit, and private organizations together to develop strategies and implement programs. They can assist with mitigating and withstanding stresses, recovering, and applying lessons learned.

As part of the Grand Challenge to “Build Resilient Communities,” the Academy will work with stakeholders to determine how to:

- Identify key precepts of resilient communities as applied to the natural disaster area that can be used to address a broader set of issues such as education, healthcare, and housing;
- Determine how communities can optimize and coordinate existing federal, state, and local resources to build resilience;
- Increase preparedness, mitigation, and response capabilities to all hazards;
- Ensure equal access to education and vocational training;
- Promote public health and healthcare access; and
- Meet modern day infrastructure and housing needs.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #8: ADVANCE THE NATION'S LONG-TERM FISCAL HEALTH

The United States faces serious current and long-term fiscal challenges at every level of government: the federal government, which spends nearly \$4.5 trillion per year, has a total of \$22 trillion dollars of debt. This is 78 percent of GDP—or double the average over the past 50 years. The national debt is growing by about \$1 trillion a year—despite a robust economy with unemployment in the 3 percent range. Even with interest rates at historically low levels, interest payments on the debt will begin to exceed Defense spending by 2023. Entitlements are a long-term issue, with trust funds for Medicare and Social Security possibly being depleted in 2026 and 2035 respectively. Existing spending commitments have created significant unfunded liabilities.

States and localities account for more than one-third of all government spending. Their finances have only recently recovered from the Great Recession, and they continue to face near-term difficulties due to such factors as rising healthcare costs. Some states have cut taxes without corresponding spending cuts, while others have increased spending without corresponding revenue increases. Many state and local balance sheets have a time bomb of unfunded pension liabilities that could easily crowd out public investments in such areas as education and infrastructure over the next decade.

This pressure of long-term structural fiscal trends at all levels of government hinders fiscal democracy, as elected officials have a limited ability to apply funds to the programs for which they promised action when running for office, and makes it more difficult to invest in the future. For example, many Americans are concerned about the nation's infrastructure backlog (estimated at about \$2 trillion), which reduces our quality of life and hinders our ability to thrive in a global economy. Similarly, many Americans support additional investments in education (such as universal pre-K and free community college) and healthcare (such as insurance expansion). With a larger portion of government budgets going to mandatory spending such as interest payments on previously accumulated debts and legacy entitlement programs, it will be more difficult to find the resources needed to meet future needs.

Although the nation's fiscal problems are significant, there is no shortage of proposals to begin addressing them. Long-term fiscal sustainability will require many difficult decisions by elected officials who will be forced to make challenging tradeoffs. One strategy to begin restoring fiscal health could be to make budget process changes, including the use of such foresight mechanisms as scenario planning. The federal government, in particular, has failed to establish workable and effective approaches to put the budget on a path to structural balance and long-term fiscal sustainability. The expiration of the 2010 Budget Control Act spending caps and the lapse of other controls offers an opportunity to put in place a stronger system of fiscal targets and enforcement procedures to begin stabilizing the federal debt. Similarly, processes could be established to incorporate long-term impact assessments into annual budget deliberations; and the budget's transparency and comprehensiveness could be improved to discourage

gimmickry. Although process changes cannot solve the problem of deficits and debt by themselves, they can help facilitate needed fiscal discipline. Tackling these issues earlier rather than later will increase the likelihood of strengthening the economy and meeting other goals while achieving fiscal stability.

Public agencies and administrators have an important supporting role to play in advancing the nation's long-term fiscal health. For example, they can identify more effective ways of managing the public's business to help prioritize spending and tax policies by advising elected officials on fiscal options and impacts; educating, informing, and engaging the public about these issues; and using evidence-based approaches, including rigorous evaluations of existing programs to determine which ones are worthwhile investments. Through their management of agencies, they also can identify new options for revenue generation through public-private partnerships, enforcement of existing laws and regulations, or user fees.

As part of the Grand Challenge to "Advance the Nation's Long-Term Fiscal Health," the Academy will work with stakeholders to determine how to:

- Catalyze a national conversation about fiscal conditions, implications, and tradeoffs;
- Reduce the long-term structural federal deficit;
- Address state and local budget issues and challenges;
- Identify new budgetary process mechanisms at all levels of government that are anticipatory, sustainable, and mission-focused;
- Develop new fiscally sound intergovernmental partnerships;
- Address intergenerational inequities; and
- Provide needed new investments within the limited resource base.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGES

IN PUBLIC ADMINISTRATION

ENSURING ENVIRONMENTAL SUSTAINABILITY



**STEWARD NATURAL RESOURCES &
ADDRESS CLIMATE CHANGE**



**CREATE MODERN WATER SYSTEMS
FOR SAFE AND SUSTAINABLE USE**



GRAND CHALLENGE #9: STEWARD NATURAL RESOURCES & ADDRESS CLIMATE CHANGE

As the nation's industry and population grow, it is critical that the public, nonprofit, and private sectors effectively steward natural resources and protect the environment for ourselves and future generations. America's natural resources—including our public lands—are a rich heritage that has made enormous contributions to our economy, health, environment, and society. And yet, the nation continues to grapple with how to sustainably steward the nation's forests, lakes, rivers, wildlands, mineral deposits, and fossil fuels. As demand rises for rare earth minerals and lumber, communities throughout the United States must reconcile strongly held, but sharply differing, views regarding jobs, habitat protection, private property rights, open space, recreation, and cultural values. Similarly, oceans and their ecosystems are under considerable distress from climate change and pollution.

While protecting natural resources, the nation also must address new and emerging environmental issues, especially pollutants contributing to climate change. Since the passage of major federal pollution control laws in the 1960s and 1970s, the United States has reduced the release of many pollutants to our air, water, and land. Despite this progress, new health and environmental threats have emerged that must be addressed. For example, while domestic greenhouse gas emissions have generally decreased, this decline is insufficient to avoid significant future adverse effects on public health, ecosystems, and infrastructure due to climate change. Other key emerging issues include the rising levels of microplastics and pharmaceuticals in our food and drinking water from oceans, rivers, and lakes.

As issues related to sustainability, proper use, and the intrinsic value of natural places have become more complex, we must move beyond business as usual to develop new solutions to natural resource management, pollution control, and clean energy development and utilization. Public agencies and administrators have a critical role to play in addressing these issues:

- Nearly 15,100 public agencies and nongovernmental organizations manage over three billion public land and marine acres found in 200,000 separate parks and protected areas. The federal government itself owns and manages about 650 million acres (30 percent of the nation's landmass), mostly in the Western part of the country. These lands can help combat climate change—for example, forests, parks, and grasslands can absorb millions of tons of carbon—but also contain valuable minerals, energy resources, and other industrial opportunities.
- Federal, state, and local environmental organizations develop and enforce regulations for water; chemicals and toxins; land, waste, and cleanup; health; and lead, mold, and radon. They are responsible for shaping, executing, and enforcing myriad federal, state, and local laws that govern everything from how we generate electricity to what chemicals we put on our crops.

- Public agencies at all levels of government have a role in funding clean energy R&D and spinning new technologies off to the private sector. These technologies can help reduce carbon dioxide emissions and mitigate climate change risks.

As part of the Grand Challenge to “Steward Natural Resources and Address Climate Change,” the Academy will work with stakeholders to address how to:

- Ensure consideration of ecosystem impacts on human health in policymaking and administration;
- Improve the management of public lands;
- Mitigate and adapt to climate change and extreme weather events;
- Protect marine life, animal health, and ecology;
- Increase clean energy development and utilization; and
- Identify improvements to regulatory frameworks, policies, and implementation to protect the environment and steward natural resources more effectively and efficiently.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #10: CREATE MODERN WATER SYSTEMS FOR SAFE AND SUSTAINABLE USE

Climate change, aging infrastructure, and dated governance and management structures have combined to undermine the safety and sustainability of America's water systems. In recent years, many parts of the country have experienced drought, leading states to limit the amount of water that can be used for agricultural purposes. For example, New Mexico's demand takes more than 80 percent of the largely arid state's annual supply. Although that leaves 20 percent, such a narrow margin means that the state may not be able to withstand an extended drought or address an increase in demand from population or industry growth. Some localities throughout the country have experienced contaminated drinking water due to aging lead pipes. More generally, state and local governments face difficulties in distributing water efficiently to industry, agriculture, and the general public. Because the law is often unclear about which state has rights to specific water sources, water access disputes between the states have grown.

The nation has struggled to reach consensus on how to rebuild all types of our aging infrastructure, and these challenges are magnified with our highly localized and fragmented water systems. Through the early 20th Century, water was typically supplied through lead pipes; not until 1986 were lead-containing service lines for new plumbing systems banned nationwide. Many homes around the country, especially in older cities, continue to be served by the older lead pipes. This aging infrastructure, which requires high maintenance costs, is particularly vulnerable to shedding lead if localities start to use more corrosive water. Additionally, older infrastructure often contributes to sewer overflows, pollution to streams and rivers, and flooding of homes and businesses.

From a governance standpoint, many states have a multiplicity of small water districts overseen by boards with limited subject matter expertise and oversight gaps. Legal and cultural clashes over water rights have become widespread. Diminished water quality is a critical issue of social equity and environmental justice, as we have seen in places like Flint, MI and Newark, NJ. In some disadvantaged communities, residents are forced to pay for bottled water to avoid unsafe drinking water, and many residents in low income communities must make choices between basic necessities in order to pay for basic water services. Similarly, issues of persistent flooding from stormwater and rising rivers often have disproportionate effects on historically marginalized communities such as Freeport, Illinois.

Public agencies and administrators have a key role to play in creating safe and sustainable regional water systems. All levels of government will need to collaborate, and states will need to address the pressing issues of climate change and create new water plans to ensure that every sector's water requirements are considered and prioritized when supply is limited. Authorities and regulations that enable investment strategies that support infrastructure repair, modernization, and maintenance to ensure safe and healthy water supplies must be developed.

As part of the Grand Challenge to “Create Safe and Sustainable Regional Water Systems,” the Academy will work with stakeholders to determine how to:

- Ensure safe and clean water across the nation;
- Provide water resources for agricultural, social, and economic needs;
- Address environmental justice issues related to water;
- Upgrade water infrastructure;
- Modernize water agreements between communities, states, and regions;
- Improve the governance and management of water resources; and
- Provide public officials with the necessary scientific expertise on water quality, water quantity, and human health.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





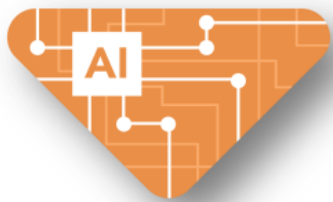
GRAND CHALLENGES

IN PUBLIC ADMINISTRATION

MANAGING TECHNOLOGICAL CHALLENGES



**ENSURE DATA SECURITY AND
INDIVIDUAL PRIVACY**



MAKE GOVERNMENT AI READY

GRAND CHALLENGE #11: ENSURE DATA SECURITY AND INDIVIDUAL PRIVACY



In the digital age, people knowingly and unknowingly produce huge amounts of data on a daily basis, and governments at all levels increasingly rely on digital systems to manage their internal operations and deliver public services. Through widespread e-commerce, ubiquitous GPS maps, and regular social media interactions, the public transmits their sensitive financial, health, and other personal information through online platforms. Americans need assurance that all sectors will keep their personal data private and safeguarded from abuse, but our data security infrastructure in both the public and the private sectors is vulnerable to exploitations, hacks, and breaches. With malevolent foreign intelligence entities, the hacking of public agencies, the infiltration of elections by non-state actors like WikiLeaks, and other dangers, the threat of data insecurity and exposure to breaches is real and immediate for governments, companies, and individuals.

Nonstate cyber actors and nation-states have developed sophisticated mechanisms for exploiting the vulnerabilities of government systems. Not only do they steal information and money; they increasingly disrupt, destroy, or threaten the delivery of essential public services. For example, hackers have been targeting local governments for ransomware attacks, with important systems and data being blocked until a ransom payment is made. In the summer of 2019, a host of local governments—including Baltimore, MD; Albany, NY; Laredo, TX; and 22 small Texas towns—had their operations disrupted by such attacks. The City of Baltimore experienced a hack that prevented the locality from issuing health alerts and delayed water bill delivery. Similarly, the City of Atlanta’s systems for police reports and employment applications were down for days due to a March 2018 cyberattack. State and county governments, school districts, hospitals, and court systems have also become common targets of ransomware attacks.

Over the next decade, technology will continue to evolve, and data security programs in both the public and the private sectors will face new vulnerabilities. Public agencies and administrators have a critical role in ensuring data security and privacy by:

- Establishing and enforcing the regulations regarding technology surveillance, non-consensual data collection, and commercial selling of individual data to private or public entities;
- Ensuring that the regulatory framework is informed by the careful consideration of the ethical aspects of data collection and dissemination;
- Making regulatory adjustments based on new technologies and other lessons learned;
- Ensuring that public agencies themselves only collect and maintain the minimal amount of data necessary to achieve their missions; and
- Developing a workforce with the core competencies to protect data systems, use data to strengthen operations, and improve services while safeguarding privacy and preventing breaches.

As part of the Grand Challenge to “Ensure Data Security and Individual Privacy,” the Academy will work with stakeholders to determine how to:

- Develop a model “Digital Bill of Rights” and framework/guidelines for protecting data privacy;
- Safeguard personal data, prevent data breaches, and protect data from cyberattacks (including ransomware);
- Ensure effective regulation of both the public and private sector’s collection and utilization of personal data;
- Identify needed adjustments to current statutory and regulatory frameworks to keep pace with emerging technologies; and
- Leverage administrative data consistent with privacy protections to improve public services.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.





GRAND CHALLENGE #12: MAKE GOVERNMENT AI READY

Artificial Intelligence (AI) allows computerized systems to perform tasks traditionally requiring human intelligence: analytics, decision support, visual perception, and foreign language translation. AI and Robotics Process Automation (RPA) have the potential to spur economic growth, enhance national security, and improve the quality of life. In a world of “Big Data” and “Thick Data,” AI tools can process huge amounts of data in seconds, automating tasks that would take days or longer for human beings to perform.

The public sector in the United States is at the very beginning of a long-term journey to develop and harness these tools. Chatbots are being used in citizen engagement systems; AI technology is augmenting decision-making in the areas of cyber security monitoring, public policy modeling, database anomalies, and waste and abuse identification. AI system utilization can:

- Improve speed, efficiency, and effectiveness;
- Save scarce public funds;
- Reach quicker conclusions than humans;
- Transform public sector work life;
- Allow more time to be spent on core agency missions; and
- Facilitate the development and utilization of more personalized services to agency stakeholders.

At the same time, AI raises concerns about bias, security, transparency, and budget and procurement processes. With biased data, AI systems will produce biased results. Cybersecurity will be more important than ever to protect against malicious actors that, by taking over AI systems, could do significant damage very quickly. Without transparency, the public may be confused about how key decisions were made. And governments may need to revamp their budgeting and procurement processes to be able to quickly acquire and deploy advanced technologies.

To continue to develop AI systems, the federal government, in particular, must play a leading role in facilitating AI research and development and protecting the nation’s AI technology base from adversaries and competitors. Governments at all levels must work collaboratively to promote public trust in the development and deployment of AI tools; train an AI-ready workforce for both the public and the private sectors; and address the ethical concerns about AI’s potential downsides in the areas of discrimination, civil liberties, and privacy.

Public agencies and administrators will be key in helping government become AI ready by developing new policies, systems, and processes to ensure that these systems can be harnessed to inform decision-making, provide insight on the public’s needs and perspectives, increase public communications, and improve service delivery. Because

governments will have far fewer employees performing data entry or other repetitious tasks, they will need to retrain employees and reshape their workforce to ensure it has the core competencies required to oversee, manage, and develop AI systems. And schools of public administration and public affairs will need to be more intentional about incorporating AI, along with related technical and data skills, into their core curriculum.

As part of the Grand Challenge of “Making Government AI Ready,” the Academy will work with stakeholders to determine how to:

- Use AI to improve service delivery;
- Develop an AI-ready public workforce;
- Incorporate AI into the public administration curriculum;
- Raise awareness of, and resolve, the ethical issues associated with AI;
- Develop appropriate multi-level governance schemes to protect against unintended bias;
- Ensure that the benefits of AI are available to all; and
- Address AI’s intergovernmental and intersectoral dimensions.

This is an illustrative list of topics. As the Grand Challenges campaign progresses, other issues can and will be addressed based on stakeholder feedback about critical needs and opportunities.



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