



# Reimagining the Public Sector Workforce: Strategic Priorities and Drivers in Government

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## Introduction

As organizations adjust to remote and hybrid work models, the role of human resources (HR) is changing. HR functions are evolving beyond training, onboarding, and compliance enforcement as HR shifts to becoming a strategic partner in workplace innovation and adaptation. This evolution is taking place across industries and sectors—here, we'll examine the changes facing government agencies.

Now more than ever, data can help drive transformation. As government agencies manage their most valuable resource—people—strategic, data-driven human capital management is essential for hiring, managing, training, rewarding, and retaining talent. The public sector must reimagine HR functions through the lens of data. Building a foundational [Data Culture](#) that facilitates data-driven decision-making across the organization will allow the public sector to streamline operations, achieve better efficiencies, and empower the workforce—whether they're working in the office, at home, or some combination of the two. Only by addressing these strategic HR priorities will the public sector be equipped for future success.

## State, local, and federal government: Investments today ensure stability tomorrow



The use of data is transforming society, business, and the economy. If the Federal government does not maintain its role as a preeminent supplier and sophisticated user of data, it will no longer be able to fulfill the trust placed in it by the American People.”<sup>1</sup>

**The President's Management Agenda**

The call for public sector leaders to effectively manage and empower their workforce is more critical than ever. Local, state, and federal governments historically struggle with effective human capital management. It is increasingly apparent that the outdated and limited agency systems are not

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<sup>1</sup> [Fiscal Year 2019: Human Capital Reviews Report](#), United States Office of Personnel Management (OPM)

positioned to support post-COVID-19 remote and hybrid work models, or to meet the skill demands of an increasingly digital government. In fact, the difficulties facing government hiring are so severe that strategic human capital management was identified as “high risk” by the Government Accountability Office, declaring the need for transformation for the government to work effectively and efficiently.<sup>2</sup> The government’s pay and job classification system is over 70 years old, and its hiring laws predate the use of personal computers and the Internet.<sup>3</sup>

In addition, America is facing a labor crisis. In 2020, population growth for Americans ages 20 to 64 turned negative for the first time in US history.<sup>4</sup> The Congressional Budget Office projects that the potential labor force will grow a mere 0.3–0.4% annually for the remainder of the 2020s. To put these numbers in perspective, the size of the workforce rose an average of 0.8% per year from 2000 to 2020. With roughly one-third of federal employees eligible to retire in the next five years, the need for skilled talent has reached a critical stage. To remain competitive with the private sector—which has responded more readily to changing workforce trends—the government needs new data-driven human capital strategies and capabilities.



The administration supports a return to fully staffed agencies to ensure they can meet their missions on behalf of the American people. That’s why the [FY2022] budget helps efforts to expand and enhance recruitment and hiring efforts, as well as deploy more effective qualifying assessments to improve the overall hiring process.”

**Pam Coleman, Associate Director of Performance and Personnel Management, Office of Management and Budget (OMB)**

The Biden administration is answering this urgent call by establishing federal agency talent teams to execute new hiring strategies and improve hiring outcomes—a first step in the administration’s multi-year human resources strategy. The FY2022 budget sets aside funding to revive internship programs, recruit private-sector talent through fellowship programs, and invest in a new office to provide centralized, government-wide hiring actions for critical positions. These new agency-level

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<sup>2</sup> [Inspired to Serve: The Final Report of the National Commission on Military, National, and Public Service](#), March 2020

<sup>3</sup> [Transforming Human Resources: A Guide to delivering the HR services that government needs](#), March 2021

<sup>4</sup> [Workers Are Gaining Leverage Over Employers Right Before Our Eyes](#), *The New York Times*, June 5, 2021

teams, managed by the Office of Personnel Management, will include HR visionaries throughout the government. They will use data as a critical resource to inform and improve hiring strategies and pair overwhelmed and understaffed agencies with the best talent.

Data isn't only critical to building the foundation for a new, modernized HR strategy, it's essential for tackling complex processes and issues, such as diversity, equity, and inclusion (DE&I). For example, President Biden took significant steps to promote greater DE&I in the federal workforce by signing an executive order mandating wide-ranging hiring measures to advance opportunities for underrepresented communities. Agencies will require data skills and technology to assess their DE&I baseline and ultimately leverage this data to build a more diverse talent pipeline.

As many legacy personnel management systems await much-needed replacement, organizations can integrate modern platforms to access and analyze their workforce and HR process data. Public sector organizations can utilize this data to:

- Assess and reform application and hiring processes
- Identify and address critical skills gaps through data-driven skills assessments
- Promote high-performance work cultures
- Address hiring gaps to increase DE&I
- Leverage data to understand employee needs and sentiments

Government agencies must recognize that workforce management and employee satisfaction are inextricably linked. A holistic approach to workforce analytics that integrates technology, data, and work processes can reveal advantageous insights. Through enterprise-wide skills analysis, agencies can visualize skills gaps, develop training programs, and improve retention and employee satisfaction. Analytics enhance stability, resiliency, and flexibility, positioning government agencies for a sustainable future.

The Deloitte 2021 Human Capital Trends report emphasizes the importance of investing in a human-centered employee experience through innovative technology and data-driven solutions.<sup>5</sup> For example, workforce analytics can inform a personalized employee experience by giving agencies insight into employee preferences, workplace needs, and career goals. Agencies can attract and retain much-needed talent by reimagining public-service personnel systems as proactive tools for positive change.

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<sup>5</sup> [A public sector perspective: Human Capital Trends 2021](#), Deloitte, 2021

## Federal government case study: NASA enacts enterprise-wide data solutions to evolve its Data Culture



We are pursuing digital transformation and new capabilities for more agency agility and best deployment of our talent—we have some ambitious goals and are figuring out how to make the most of our resources against those goals to achieve our mission. The future of work is on all of our minds.”

**Keith Krut, Branch Chief, People Analytics, NASA**

Shaping the future of work is critical to NASA’s mission of advancing science, technology, aeronautics, and space exploration. NASA is deploying its resources in an enterprise-wide, integrated effort to transform the use of data to better support decisions and manage its workforce. People Analytics Branch Chief Keith Krut sees this as an opportunity to align and maximize the work that is already being done at NASA, as well as a way to open new career opportunities, diversify the workforce, and position the agency for success in space.

### **Building an enterprise data platform for long-lasting change, value, and greater diversity**

Moving from siloed systems to an enterprise data platform (EDP) is more than just an IT project—it requires collaboration across departments and functions, all focused on the big picture. For NASA, the move comes with a host of considerations: interdepartmental collaboration and access, business processes, intuitive technology, data integration, and standards and governance around the storage, access, and use of information. “Shifting the way we use data in every aspect of the organization requires buy-in and support from across the agency,” Krut says, “which makes it even more critical to demonstrate value, listen for barriers to change, and address them.”

“Demonstrating the value of data analytics and management is the best way to build momentum among NASA’s leaders,” Krut continues. For example, building analytics products with human-centered design

and superior user experience can simplify decision-making and better equip employees to accomplish their goals. Intuitive, value-driven products are integral to enterprise-wide adoption. “Part of our challenge is to deliver analytics that resonate across a spectrum of interests and engagement with data. We need to stage the data so that it is useful, scalable, and discoverable for a range of products. It has taken time to create architecture to enable this at the enterprise level, and thanks to partnerships we are making great progress.” To grow NASA’s data culture, Krut emphasizes that with limited resources, prioritizing achievable projects and sharing a clear message is the best approach.

In an agency populated by naturally creative and inventive employees, new ideas for data analytics are abundant. Building analytic communities connected by an embedded, enterprise-wide architecture helps grow those ideas, Krut notes, “So those creative seeds can take root.” The solution is to lead with value by leveraging existing assets and building data solutions that prioritize problem-solving over sophistication.



We’ve seen a trend in the broader global discussion about the workforce that organizations aren’t going to be able to hire their way out of rising skills gaps, such as those driven by emerging technologies. We’ll all have to figure out a big picture view and plan for advancing workforce upskilling and reskilling in this entirely different world that is coming. We need to evaluate the way we view job categorization, how we hire for the work, and how we help enable agile and enriching careers. Data science will be essential, both in near-term insights, applications, and experiences, and in longer-term vision. For example, I would love to see a future where there are no resumes as we know them.”

**Keith Krut, Branch Chief, People Analytics, NASA**

NASA is exploring new ways to understand employee perspectives, and increasingly merging employee surveys with systems data and transactional workforce information to gain rich insight into how people experience work differently. Krut sees this as a tremendous opportunity to support diversity, equity,

and inclusion. The agency, which added inclusion as a core value last year, is developing new approaches for listening to the workforce and analyzing the data to help all leaders identify and take action on improvement opportunities. This work aligns with the Biden administration's recent executive order calling for equity in federal agencies and aims for a more complete understanding of critical issues.

In recruitment and hiring, “funnel” visualizations will offer crucial understanding of where diversity gaps appear in the hiring process. The team will analyze recruitment initiatives further upstream in the process to gain valuable insights into where applications get traction, which resumes lead to interviews, and which candidates are hired and retained. This shift upstream will help NASA identify the root cause of diversity gaps and create effective solutions. A similar process shift for career development programs can help NASA understand not just who was selected but also who applied. Accessible agency data products like these—that can be adapted by internal communities via self-service analytics—are central to NASA's People Analytics strategy.

## Application of artificial intelligence and machine learning

NASA's People Analytics Branch is researching new ways to apply artificial intelligence (AI) and machine learning (ML), including integration and dependencies with modernized data architectures, governance, and tools in the agency Enterprise Data Platform. As one AI/ML opportunity under review, Natural Language Processing offers the potential to identify themes and integrations across a wide variety of disparate information, ranging from descriptions of work and strategy to open-ended employee responses to surveys. Further, while agency technology groups explore chatbots to help navigate business processes and information, the analytics team is piloting a chatbot interviewer to elicit rich employee insights about the key issues that affect their experience and effectiveness at work.

*“Building communities across functional silos has been so important for NASA. In this past year, despite the challenges we faced from the COVID-19 pandemic, we saw remarkable and positive acceleration in how we work together with advanced digital collaboration tools. In turn, this is reducing constraints that were previously driven by geographic location or org charts, catalyzing integration and innovation in new partnerships. Data and technology are essential, but moreover it's the combined view of data and technology with organizational culture and behaviors that is helping NASA make breakthroughs.”*

—Keith Krut, Branch Chief, People Analytics, NASA



In addition, AI and ML offer opportunities to gain greater understanding of the current workforce. As Senior Data Scientist for the People Analytics Branch at NASA, David Meza is pushing frontiers with knowledge graphs for human capital, initially using varied sources to model the size and scope of the workforce's data skills. The advanced modeling provides better insights with less manual lift, enabling the team to streamline skills assessments, find experts and mentors, understand workforce capabilities and skills adjacencies, and support career decisions. These use cases will be invaluable to continue adapting for the future of work. Other key use cases include understanding how employees make interpersonal connections in the workplace, how to provide consistent exposure to opportunities for career growth, and how to personalize the employee experience with agency technologies.

## **State government case study: Minnesota promotes diversity and access through workforce analytics**

Healthcare workers have been center stage for their critical role combating the COVID-19 pandemic, and employees at the Minnesota Department of Health are focused on ensuring the state's healthcare workforce can meet the needs of residents for years to come.

Rural communities, hospitals, and health clinics tend to be underserved and have difficulty attracting and retaining doctors and nurses. Tracking the workforce and assessing healthcare professional shortages in these areas is the job of the Minnesota Department of Health, Office of Rural Health and Primary Care, where Angie Sechler, MPH, serves as a research analyst.

## Health Care Workforce Data Portal

This interactive portal provides data on Minnesota's licensed healthcare workforce. Available data include provider demographics, geographic distribution, education, career plans, and practice characteristics on over 20 different licensed health care providers.

Data are based on [surveys of health providers and administrative data collected](#) by state health licensing boards. This portal is maintained by the Department of Health's (MDH) Office of Rural Health & Primary Care (ORHPC).

For data request or further questions, please [contact us](#).

Select Data Portal Topics:

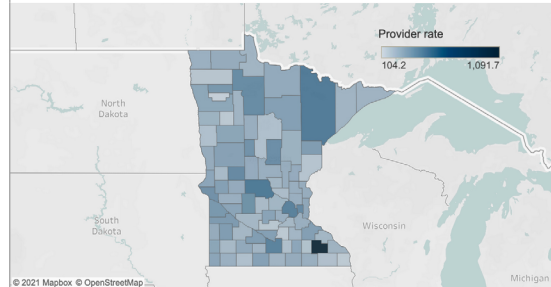
- [Overall Provider Supply](#)
- [Provider Sex and Race/Ethnicity](#)
- [Providers by Age Group](#)
- [Current Work Status, Average Hours Worked, and Time Spent Providing Patient Care](#)
- [Provider Future Career Plans](#)
- [Provider Education and Training](#)
- [Primary Work Setting](#)
- [Cultural Competency and Underserved Populations](#)
- [Provider Work Satisfaction](#)
- [Economic Development Regions](#)

### Overall Provider Supply

Rates are calculated as the number of providers per 10,000 population. Select provider type to see data results for a certain provider. Selecting multiple providers will combine data for all the providers selected.

**Map: Provider Rate per 10,000 population**

Lighter shaded counties indicate fewer providers while darker shaded counties show where the most providers are concentrated. (click on one or more counties to see provider counts)



**Practitioner Counts by County** (scroll down to see other counties)

| County                    | Practitioner           | Count                     |             |
|---------------------------|------------------------|---------------------------|-------------|
|                           | Psychologist           | Less than 5               |             |
|                           | Respiratory Therapist  | Less than 5               |             |
|                           | Licensed Social Worker | 7                         |             |
|                           | Dental Hygienist       | 9                         |             |
|                           | Pharmacist             | 11                        |             |
|                           | Physical Therapist     | 11                        |             |
|                           | Dental Assistant       | 12                        |             |
|                           | Nurse Practitioner     | 13                        |             |
|                           | Physician              | 18                        |             |
|                           | Pharmacy Technician    | 20                        |             |
|                           | Practical Nurse        | 54                        |             |
|                           | Registered Nurse       | 180                       |             |
|                           | Anoka                  | Nurse Midwife             | Less than 5 |
|                           |                        | Professional Counselor    | 6           |
|                           |                        | Independent Social Worker | 9           |
| Clinical Nurse Specialist |                        | 10                        |             |
| Nurse Anesthetist         |                        | 29                        |             |
|                           | Graduate Social Worker | 76                        |             |

**County Provider Rate (total population) Counts of less than five providers will not appear in the table.**

| County     | Number of Providers | Provider rate |
|------------|---------------------|---------------|
| Carlton    | 1,155               | 321.4         |
| Carver     | 2,571               | 239.9         |
| Cass       | 493                 | 165.7         |
| Chippewa   | 340                 | 286.7         |
| Chisago    | 1,415               | 249.9         |
| Clay       | 1,070               | 165.7         |
| Clearwater | 192                 | 218.0         |
| Cook       | 121                 | 221.5         |
| Cottonwood | 301                 | 268.4         |
| Crow Wing  | 2,505               | 383.8         |
| Dakota     | 10,463              | 241.5         |
| Dodge      | 335                 | 160.0         |
| Douglas    | 1,539               | 402.7         |
| Faribault  | 297                 | 218.7         |
| Fillmore   | 354                 | 168.1         |

Source: Minnesota Health Licensing Boards. Data are current as of January 2021. County locations are based on primary business address submitted by providers during license renewal.

*The Minnesota Department of Health's Health Care Workforce dashboard provides an at-a-glance overview of provider demographics, geographic distribution, practice characteristics, and more. The Tableau dashboard will help the agency attract top talent in underserved communities.*

Sechler discussed the importance of a recent effort to merge professional licensing data, which establishes a provider's credentials and practice area, with survey data collected by the state into a web portal powered by Tableau. By bringing those datasets together and publishing user-driven dashboards on their website, Sechler wanted to democratize the data and put it at the fingertips of those who need it. The portal provides new details about the distribution of each type of provider—registered nurses, advanced practice nurses, primary care physicians, dentists, and many other types—across each county, and insights on how providers' experiences vary based on settings and geography. Measures such as job satisfaction, burnout, perception of the availability of key resources, and other survey-generated data points provide the Department of Health with insights about the state of the healthcare system

and make predictions about how the workforce will change in the coming years. With this knowledge, researchers, policy makers and health officials can identify shortfalls and address them before they happen.

In addition to ensuring access, the agency hopes the data project advances diversity and equity in the healthcare system. Public health studies<sup>6</sup> have found that patient outcomes improve when their providers are of similar backgrounds to patients—and using data—Sechler and her colleagues want to share new findings about the diversity of the current workforces, the experiences of diverse healthcare workers in their jobs, and how well the providers reflect the populations in each community they serve. In the future, the team plans to integrate additional datasets to evaluate policies and optimize incentives for healthcare workers to improve access and equity in Minnesota.

## The time for change is now

Government agencies must invest in both Data Culture and technology to become data-driven organizations. By marrying these two powerful tools, they can change the way people within the organization make decisions. A Data Culture encourages people to be inquisitive, challenge ideas, and use data—not just intuition—to make decisions. When data-driven decision-making is woven into the fabric of the operations and minds of employees, data dashboards and enterprise-wide technology solutions can truly empower the workforce.

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<sup>6</sup> [Increasing Racial and Ethnic Diversity Among Physicians: An Intervention to Address Health Disparities?](#), National Academy of Sciences, 2001

## Related resources

### Learn how the public sector is building successful Data Cultures:

- [How Government Agencies Can Use Data to Manage Through a Crisis](#)
- [Putting Data to Work in the Public Sector](#)
- [A Guide to Implementing Federal Data Strategy Using Tableau Blueprint](#)

### Get started with Tableau resources and communities:

- Learn from like-minded leaders and change agents with the [Data Leadership Collaborative](#)
- Build a data-driven organization with the [Data Culture Playbook](#)
- Inform DE&I efforts with insights from the [Racial Equity Data Hub](#)

## About Tableau

Governmental organizations around the world are using the Tableau platform to see and understand data using the power of visual analytics. Find out how Tableau can help your organization make better decisions and improve the citizen experience with data-driven insights. [Try Tableau](#) for free today.