Mathematica. Progress Together

Mathematica's 2023 Impact Report

Four years ago, we announced a vision for ourselves in 2035 to shape an equitable and just world in which evidence drives decisions for global impact. We knew that for evidence to drive impact, we would have to **go beyond generating insights** using the highest-quality data and methods. We would have to take the additional step of **engaging decision makers** to help them understand the implications of those insights for guiding decisions that **improve public well-being**. The following report, the first of its kind for Mathematica, describes the results of our efforts to ensure that evidence does indeed **drive impact**.
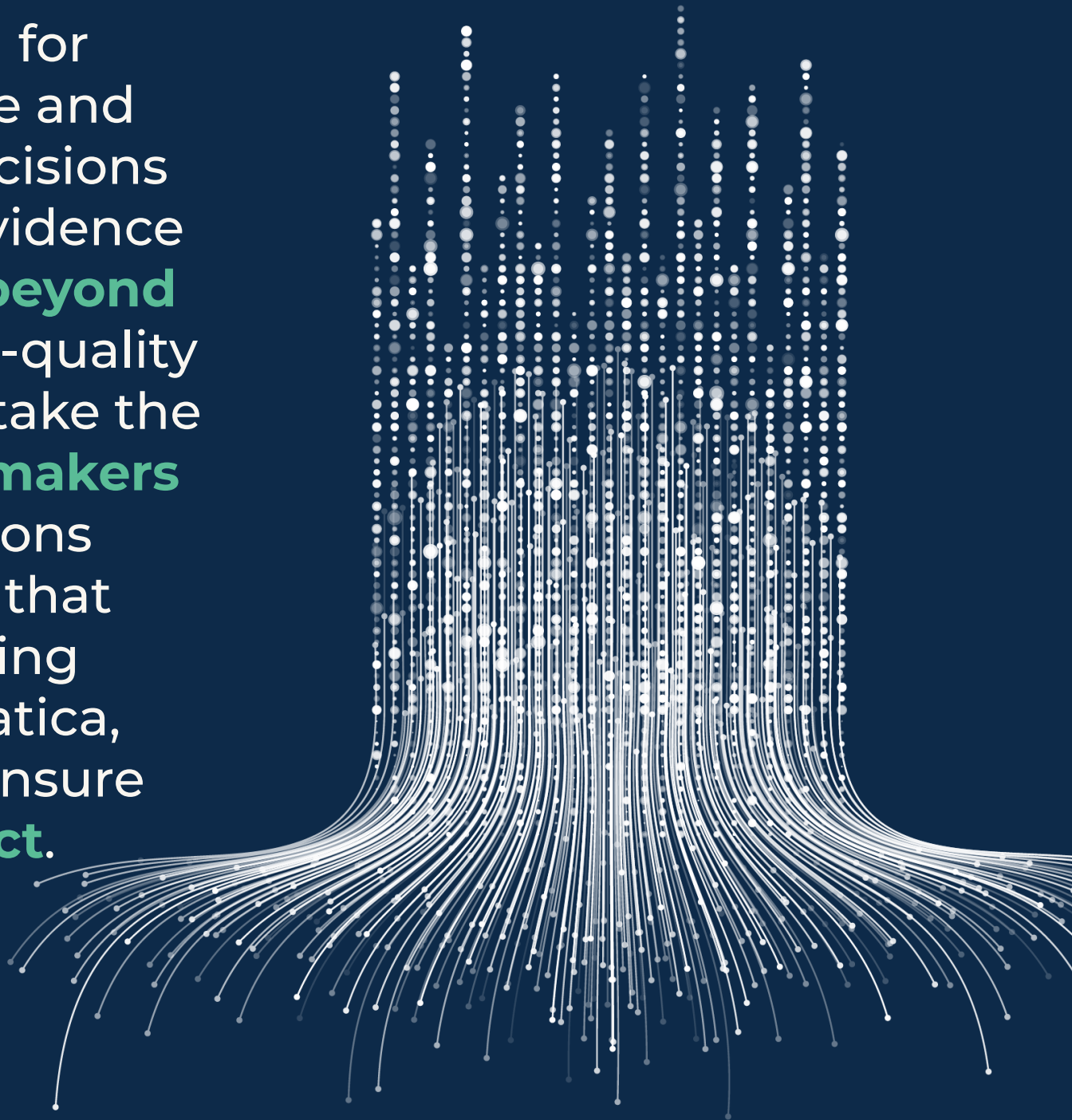
Deepening our clients' impact on public well-being

Mathematica drives impact by helping government agencies, private-sector organizations, foundations, and businesses providing health care and other human services deliver evidence-based solutions that improve programs, refine strategies, and deepen understanding. The following three examples provide a sampling of how we improved public well-being in 2023 by deepening the impact of our clients.

Evaluation of the Medicare Care Choices Model

In 2016, the Centers for Medicare & Medicaid Services (CMS) Innovation Center launched the Medicare Care Choices Model (MCCM), which allowed hospices to offer services to Medicare fee-for-service beneficiaries at the end of life. Eligible beneficiaries could receive supportive services without forgoing payment for treating their terminal conditions, which enrollment in the Medicare hospice benefit typically required. Our mixed-methods evaluation broadly evaluated the model's implementation, estimated the model's effects on quality of care and Medicare expenditures over the full model period, and synthesized factors associated with successful model performance and outcomes. In total, more than 7,000 Medicare beneficiaries enrolled in the model. As the agency wrote in a *Health Affairs* article about the model, findings from Mathematica informed the Innovation Center as it designed end-of-life care components for four new health care models. While the agency decided not to expand the model, changing Medicare policies to offer palliative care at the end of life could affect the options available to approximately 2.7 million Medicare beneficiaries who die annually.

CCMEP Training and Technical Assistance for the Ohio Department of Job & Family Services

When Ohio's Department of Job and Family Services sought to implement a first-of-its-kind statewide Temporary Assistance for Needy Families (TANF) and Workforce Investment Opportunity Act (WIOA) program for roughly 18,000 youth, Mathematica helped the agency scale up and transform service delivery based on the best available evidence in human behavior, implementation practices, and coaching. We also helped the state improve communication and coordination across the TANF and WIOA programs to better serve clients. Even amid disruptions caused by the COVID-19 pandemic, 65 counties in Ohio voluntarily adopted the case management coaching

model co-developed by the state and Mathematica. Going forward, the Department of Job and Family Services has taken ownership for replicating and sustaining the model statewide.

New Jersey Rape Prevention and Education Program

In 2018, the Centers for Disease Control and Prevention (CDC) released a new five-year Rape Prevention and Education grant, which has changed the implementation of primary prevention initiatives. In New Jersey, the grant focuses on building community- and individual-level strategies in three separate areas:

1/ Girls' leadership development

2/ Creating protective environments for the LGBTQ+ community

3/ Engaging men and boys as allies

Mathematica helped the state's Division of Women translate and put into operation language from the CDC to create a health equity learning collaborative, which provided training to grantees. So far, nearly 7,000 individuals have received sexual violence services, 747 of whom engaged in primary prevention work. In the future, agencies from all 21 counties are anticipated to participate in the training, extending the program's reach. Because of the magnifying effect of collaboration between county agencies and community-based organizations, the training could ultimately benefit hundreds of thousands of people per year across the state. The partnership with Mathematica has also positioned the state for new funding opportunities that will extend the program's long-term impact.

**David Foster, a former MCCM patient, meets with his nurse at a hospice facility in Jacksonville, FL.**

Data modernization

Across our Health and Human Services units, we help government and nonprofit partners increase the usefulness of the data they already have and identify gaps in their data. In public health, we worked with the Robert Wood Johnson Foundation and Pew Charitable Trusts to understand problems with the nation's public health data infrastructure, which hindered the response of state and local agencies to the COVID-19 pandemic and exacerbated health inequities. The work with the Robert Wood Johnson Foundation, in particular, illuminated the importance of elevating community voice in co-creating meaningful public health data systems that can drive improved health outcomes at the local level. In partnership with the Association of State and Territorial Health Officials, we are embarking on a multiyear effort to help state and local agencies use Medicaid funding to solve current resource constraints and data gaps that make it difficult for critical public health information to spur a timely response.

In joint Health and Human Services work, we have improved the usability of the Substance Abuse and Mental Health Services Administration's (SAMHSA) Performance Accountability and Reporting System (SPARS) for grantees. SAMHSA and its grantees use SPARS to collect, analyze, and report on data and trends in mental health and substance use services. Through SPARS, Mathematica has helped SAMHSA's government project officers manage and monitor the performance of more than 6,500 grants across more than 100 grant programs. SPARS data are also key factors used to formulate SAMHSA policy and the program's future direction.

The Hospital Cost Tool, co-developed and maintained by Mathematica, the National Academy for State Health Policy, and the Baker Institute at Rice University, uses an intuitive online dashboard to make national data on health care costs and pricing easier to understand.
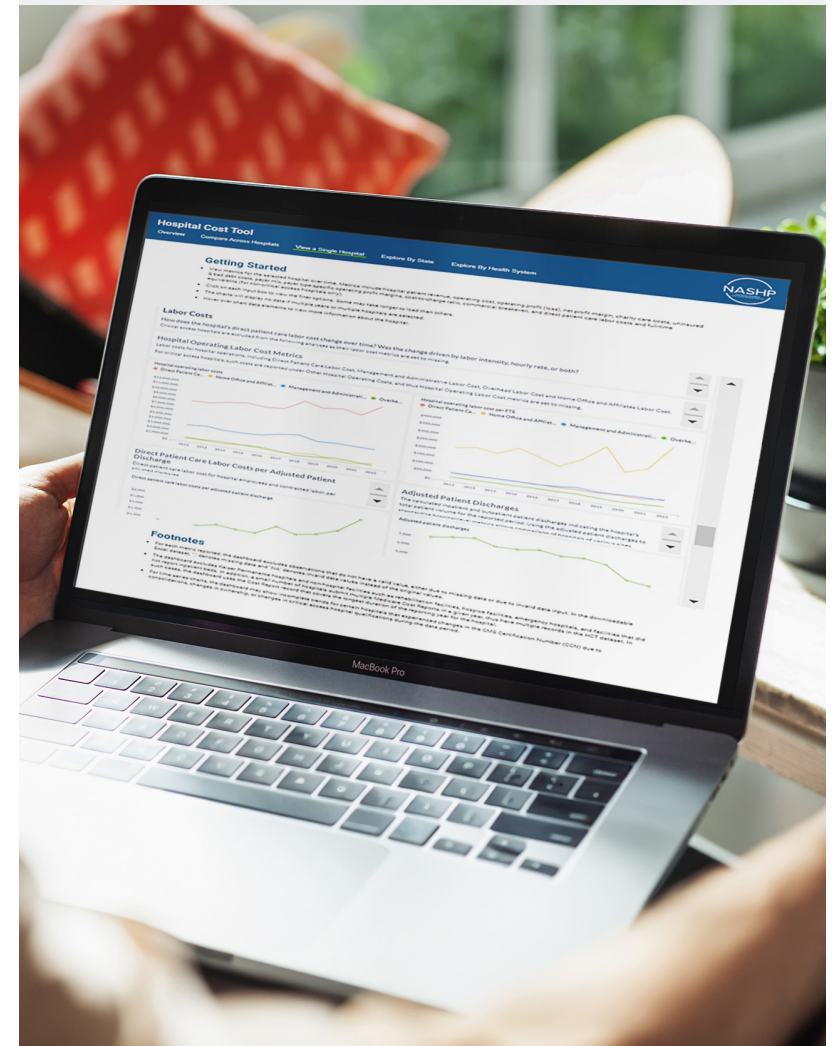
> ❝ **What's at stake is saving lives. Bad data, lack of timely data, lack of connected data [means] lives are lost.**
>
> **Alonzo Plough**
> **Chief Science Officer and Vice President of Research-Evaluation-**Learning at the Robert Wood Johnson Foundation

Engaging policymakers

Last year, in recognition of the role we should play in advocating for using evidence in decisions, we expanded our engagement with congressional committees, individual members of Congress, and federal agencies. These engagements have taken the form of conducting Capitol Hill briefings; convening public forums on the Hill and at our nearby DC office; providing written input on legislation and requests for information from congressional committees and the White House; and interviewing thought leaders at the intersection of data, technology, and policy through Mathematica's podcast.

Last year's policymaker engagements raised Mathematica's profile among decisionmakers in Washington, DC, and strengthened our organization's formal and informal working relationships with key partners in the evidence-based policy ecosystem. Among the partners we engaged were the White House Domestic Policy Council, the Senate Finance Committee, the Senate Agriculture Appropriations Subcommittee, the House Education and the Workforce Committee, the House Energy and Commerce Committee; the House Ways and Means Health Subcommittee, Results for America, the Bipartisan Policy Center, the White House Office of Management and Budget's Evidence Team, and the ONE Campaign.

The following examples highlight how our efforts also made or supported a material change in policies or programs.

/ **Informed legislation on dually eligible individuals.**
Recommendations made by Mathematica were incorporated into the Delivering Unified Access to Lifesaving Services (DUALS) Act of 2024, legislation regarding improving coverage and care for those dually eligible for Medicare and Medicaid.

/ **Informed the Education Sciences Reform Act reauthorization bill advancing through the Senate.** The Senate Health, Education, Labor and Pensions Committee's bipartisan bill, the Advancing Research in Education Act, aligns with recommendations made by Mathematica, including clearer delineation between the scope of responsibilities for regional Comprehensive Centers and Regional Educational Laboratories. In December, the Senate Committee advanced the legislation on a vote of 20-1.

/ **Partnered with the Elizabeth Dole Foundation and Senate offices to raise awareness about the needs of military and veteran caregiving children.** Mathematica partnered with the Elizabeth Dole Foundation and the offices of Senators Patty Murray and John Boozman to hold an event on Capitol Hill about Murray and Boozman's Helping Heroes Act and the evidence and research generated by Mathematica underlying the legislation to support children and families in military caregiving homes. Before the event, Mathematica and the Elizabeth Dole Foundation published an op-ed about the research and legislation in *The Hill*.

/ **Supported the Evidence-Based Policymaking Resolution Advancing in the House.** Mathematica endorsed the Congressional Evidence-Based Policymaking Resolution, a resolution to establish a bipartisan Commission on Evidence-Based Policymaking to facilitate the use of federal data for evidence-building and evidence-based policymaking. A congressional press release announcing the resolution, which received a legislative hearing before the House Administration Committee's Modernization Subcommittee, quoted CEO Paul Decker.

/ **Informed revised standards for federal data on race and ethnicity.** The Office of Management and Budget's final updated standards for federal agencies on maintaining, collecting, and presenting federal data on race and ethnicity reflected recommendations and evidence from Mathematica.

Mathematica convened in-person discussions on Capitol Hill about using artificial intelligence to advance health equity and building on the progress of the Evidence Act.

Pictured, left to right: Victoria Knight of Axios, Ellie Graeden of the Georgetown University Center for Global Health Science and Security, Ngan MacDonald of Mathematica, Christopher Trenholm of Mathematica, Jen Roberts of Advanced Research Projects Agency for Health, Deliya Banda Wesley of Mathematica, Rep. William Timmons (R-Tenn.), Rep. Derek Kilmer (D-Wash.), and Mathematica President and CEO Paul Decker

Diversity, equity, and inclusion

Diversity, equity, and inclusion are fundamental to Mathematica's mission of improving public well-being. Our ongoing journey of learning—from each other, our peers, and through our work—continually informs our efforts to advance equity, both internally and externally.

Advancing diversity, equity, and inclusion with our clients and partners

By pursuing and delivering on projects centered in equity—engaging and co-creating with communities, amplifying the voices and values of those most affected, and identifying and confronting factors that contribute to disparities—we can make progress toward a more just and equitable world.

As of January 2024, Mathematica has 62 active equity-centered projects with federal, state, foundation, and commercial clients. **The following three examples illustrate the range of ways we advance equity with external partners.**

1/ To support the Centers for Medicare & Medicaid Services' (CMS) Innovation Center, we are working on a project to advance implementation of the Accountable Health Communities (AHC) Model, learning system, technical assistance, and monitoring. The AHC Model requires that 28 bridge organizations identify beneficiaries' health-related social needs and help beneficiaries access services to address those needs. So far, our team has tested and disseminated a screening tool for assessing health-related social needs, developed a learning system for and provided technical assistance to these bridge organizations, collected and managed AHC Model program data, and developed a data dashboard to help monitor implementation progress. Our work to help CMS study social determinants of health and health-related social needs helps advance the Innovation Center's goal of improving health equity.

2/ With funding from the Annie E. Casey Foundation, we developed a guide that provides evidence-informed recommendations for community-based organizations in the human services field to infuse equity principles and practices into their rapid-cycle learning process, a specific approach for program improvement.

> ❝ We bring no programs or services into a community that we have not first heard from those residents within the community that this is something that they're interested in seeing. We're not the savior. We are a part of this process equally.

Julie Sanon

Chief Operating Officer at Agape Child & Family Services, a community-based nonprofit

The guide draws from the experience of a rapid-cycle learning partnership between Mathematica, the foundation, and the Memphis-based nonprofit Agape Child & Family Services, in which Agape infused equity into the redesign of programs that serve children and parents in the same families.

3/ On behalf of the Administration for Children and Families, we support two projects to help healthy marriage and responsible fatherhood (HMRF) programs provide more equitable services. The HEROES project seeks to generate a more comprehensive understanding of the Hispanic and Latino communities that HMRF programs aim to serve. Meanwhile, the I-HMRF project will research how to make HMRF grants more culturally relevant to Indigenous communities, increase the uptake of HMRF programs among Indigenous communities, and develop resources for federal staff and partner providers to promote engagement of and service to Indigenous participants.

Advancing diversity, equity, and inclusion within Mathematica

We can enhance the work we do to help decisionmakers draw useful insights from data by ensuring that our colleagues bring a range of lived experiences and perspectives. To understand trends in the makeup of our workforce, we monitor representation by race and ethnicity, gender, disability, and veteran status. We also pay close attention to hires and exits among demographic groups. With hires and exits, we have made progress, but must maintain our focus on increasing the diversity of our staff. In terms of progress, we continue to see positive five-year trends in representation across under-represented racial and ethnic groups. For example, in 2023, 49 percent of all hires and 49 percent of senior hires were from under-represented racial and ethnic groups—a substantial increase from 42 percent for all hires and 36 percent for senior hires in 2022.

Climate change

Climate change represents the single most significant policy challenge in the 21st century. It is a multifaceted and global threat to society that touches on a range of concerns, from the environment and food security to health and economic inequality. Recognizing the urgency of the threat, Mathematica has established a Climate Change practice to help develop innovative and sustainable solutions that meet ambitious goals to reduce greenhouse gas emissions while helping vulnerable communities become more resilient. The company's climate change strategy includes internal activities to ensure we do our part to contribute to climate change mitigation, adaptation, and resilience.

Taking action on climate change with our clients and partners

Mathematica's Climate Change practice is quickly building a portfolio of projects with clients to apply our expertise to climate action. Two examples demonstrate how we are establishing a reputation as a go-to partner in climate monitoring, evaluation, and learning (MEL) to help clients understand the effects of climate change, the efficacy and impacts of climate change policy, and solutions across a range of sectors.

/ Mathematica is partnering with the United States Agency for International Development (USAID) and the international development firm ECODIT to develop a greenhouse gas emissions calculator for agriculture, forestry, and land use projects. This publicly accessible online tool will help USAID and its partners synthesize and analyze vast amounts of geospatial data to estimate the climate impact of planned activities, policies, and investments. The calculator will also inform the design of future programs and solutions to meet the emissions reduction targets in the USAID Climate Strategy 2022-2030.

/ Mathematica is supporting AGRA in implementing its MEL strategy, which aims to "catalyze the growth of sustainable food systems across Africa." The strategy supports smallholder farmers—particularly women and youth—to strengthen their resilience to climate change and boost their income, food security, and job opportunities. Mathematica's research activities will culminate in a series of systems analyses, heatmaps, and interactive dashboards designed to put insights into the hands of AGRA leadership, country teams, and MEL staff.

Agricultural workers cut cereal crops in Morrocco.

Taking action on climate change by doing our part as individuals and a company

To create a more sustainable future, Mathematica has committed to having a net zero carbon footprint by 2050 in alignment with President Biden's Federal Sustainability Executive Order. To reduce the company's footprint, we have installed LED lighting in communal areas, light sensors in all offices, MERV (Minimum Efficiency Reporting Value)-rated air filters for HVAC systems, auto flush toilets, hands-free faucets and soap dispensers, bike racks, rain sensors for irrigation, and green cleaning supplies. A volunteer, employee-led sustainability team also hosts events, such as sustainability drives, electronic recycling events, bike-to-work challenges, sustainable eating initiatives, and "flip the bins" campaigns, which challenge staff to use only the main trash bins in the office—not those at their desks—to decrease the use of plastic bin liners.

Mathematica's office in Washington, DC, has a bike locker in its parking garage to support our commuters who cycle.

Charitable giving

Three years ago, Mathematica formed an employee-led committee to support our corporate charitable giving strategy, foster an environment of equitable giving, strengthen our partnerships with community-based organizations, and support organizations our staff are actively engaged with or have benefitted from. In 2023, Mathematica **contributed roughly $165,000 to about 100 charitable organizations.** Staff also **volunteered 509 hours of their time** working with eight office-aligned organizations. In addition, Mathematica provides its resources and staff expertise at no cost for select initiatives that advance the company's mission, as illustrated by the $173,000 the company spent in 2023 in support of the Summer Institute in Computational Social Science, a program co-sponsored by Howard University and Mathematica that seeks to diversify the pipeline of data scientists and social scientists while focusing the work of early-career scholars in both disciplines on combatting inequity and anti-Black racism.

The organizations supported by Mathematica's philanthropy share our company's mission to improve public well-being, but how they deliver on that mission varies based on location and the needs of the populations they serve. The missions of recipient organizations in 2023 included raising awareness and support for people affected by Alzheimer's disease; humanitarian medical care in crisis zones; increasing girls' access to free, safe, and quality education across the globe; improving air quality; cultivating environmentally friendly alternatives to meat; providing food and shelter for people without permanent homes; and providing disaster relief after the wildfires in Maui, flooding in Libya, the violent conflict in Israel and Gaza, and earthquakes in Turkey, Morrocco, and Afghanistan.

Staff organized teams and participated in walks to raise funds for Alzheimer's research, including one event we sponsored in Mercer and Middlesex Counties, New Jersey.

Staff in Washington, DC participated in a 5K as part of their support for Miriam's Kitchen, a local nonprofit working to end homelessness in the community.

Staff in Ann Arbor, Michigan, volunteered to make the city's Gallup Park more beautiful.

In support of HomeFront, which serves the homeless in New Jersey, staff donated Thanksgiving food baskets.

Evidence driving impact

Since its inception, Mathematica has generated rigorous, policy-relevant evidence to improve public well-being. Today we're proud to be at the forefront of a growing movement to go beyond generating evidence and actually shape the equitable and just world we want to see: a global community where evidence drives decisions that make positive impacts on people's lives.