

Milliman

2023 MILLIMAN IMPACT REPORT

TABLE OF CONTENTS

CEO statement of support	2
Our mission	3
OUR WORK	4
Milliman and United Nations build momentum with actuarial initiative	5
GAIN 2023 achievements	8
Risk scenario model finds solutions to clients' complex climate challenges	9
Sustainable Income Plans reduce retirement risk for companies and retirees	. 11
Breaking new ground: Climate Risk Certificate Program debuts	12
Research helps clients address gaps in U.S. behavioral health services	14
Making insurance options available in uninsurable places	16
Interactive tool examines equity of healthcare systems	18
Flood models help European insurers understand growing climate risks	19
Award-winning communications create easier access to employee benefits	20
Building a roadmap for microinsurance projects in developing countries	21

OUR PEOPLE	22
Milliman's commitment to diversity, equity, and inclusion	.23
Pat Renzi: Inclusive leader spotlight	.29
Opportunity Scholarship leads to a career at Milliman	. 31
Scholarships expand opportunities for students globally	.33
OUR WORLD	34
USAID PREPARE Initiative	.35
Verified sustainability goals mark progress to net zero	.36
New Delhi office building stands out for its environmentally friendly design	.38
Milliman Giving Fund donations change lives on a global scale	.39
Splash transforms community health through schools	.40
Giving back to our communities	.42
Employee helps build a professional network for South Asian colleagues	.45
GOVERNANCE AND REPORTING	46
Our program – by the numbers	. 47
Overview and progress	.48
The 10 Principles of the UN Global Compact	49



Welcome to the Milliman Impact Report

This report shares highlights and ongoing progress in our fifth year as a signatory of the United Nations Global Compact.

With this report, I affirm Milliman's ongoing support of the 10 Principles of the UN Global **Compact** on human rights, labor, environment, and anti-corruption.

Milliman has also committed to advance the UN's Sustainable Development Goals, which aim to unite global stakeholders to end extreme poverty, fight inequality and injustice, and protect our planet by 2030. The way we do so forms the core of this report.

Inspired by our mission, we're accelerating solutions for a world at risk.

Our research is highlighting data clients can use to improve access to mental healthcare. We're increasing climate resilience by using data analytics to more precisely identify flood and wildfire risks. And we're helping companies create sustainable retirement plans for all market conditions, providing retirees with a more secure future.

We help our clients identify risks and capital concerns that may affect their long-term sustainable value. We're guiding them through these challenges by posing tough questions, emphasizing excellence, and crafting innovative strategies.

Global actuarial initiative marks its first year

Milliman and the United Nations Development Programme wrapped up the first year of a partnership to build actuarial expertise in 10 developing countries.

Efforts are underway to assist more countries as they help insurers, governments, and pension funds predict and manage risks and offer innovative and affordable solutions for all.

Moving toward net zero

The firm is committed to reaching our validated science-based targets for net zero emissions across our value chain by 2040.

We've made important progress in the first year of our formal commitment, including hiring dedicated resources to focus on carbon data

collection, identifying reduction recommendations, and monitoring ongoing regulatory requirements.

We are committed to resilient growth, and we're implementing governance procedures to effectively manage risks.

Our engagement in sustainability is driven by a belief that these practices contribute to the longterm success of our firm, our clients, and our employees.

Committed to workforce, workplace, and marketplace diversity

Through our employee resource groups and global and local DEI committees, we're promoting inclusive practices within our organization.

And we're increasing engagement and expanding resources to attract and retain a workforce that feels welcome regardless of any aspect of difference.

We've also created inclusive learning experiences for our Board and new principals and enhanced our recruitment strategies with colleges and universities.

Making a global impact

The employee- and retiree-funded Milliman Giving Fund continued its four transformative programs with local and global impact. 2023 grants exceeded \$1 million and focused on providing math tutoring, increasing access to clean water and improved sanitation, supporting economic development, and strengthening health systems.

Looking forward, we remain committed to building on our legacy of creating a more equitable and sustainable future for people globally.

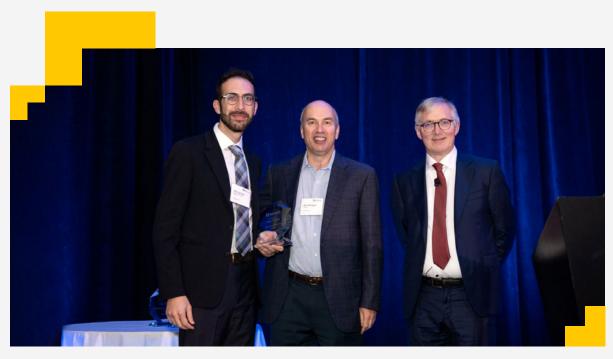
Best regards.

Dermot Corry President and CEO



Our mission

Inspired by our mission, we're accelerating solutions to meet the urgent, high-stakes challenges faced by our clients and the people they serve. Our work is helping clients address issues that include healthcare access, retirement insecurity, and climate resilience.



Matt Jordan receives the Milliman Mission Award from Chairman Ken Mungan and CEO Dermot Corry. Matt was recognized for his work to build SendVia, an innovative platform that helps immigrant workers in the developed world protect their loved ones back home through remittances, as well as his involvement in establishing the DREAM Employee Resource Group.

Our mission is to serve our clients to protect the health and financial well-being of people everywhere.

To fully realize our mission, Milliman aspires to the following vision:

We are influential market leaders, solving important problems through our deep subject matter expertise. To fulfill our vision, we aspire to:

- Be the preeminent source of consulting services and products in the markets we serve
- Be willing to tackle complex and challenging problems of societal importance
- Be innovators and industry experts with a unique global perspective

In keeping with our mission and values and as a signatory to the United Nations Global Compact, Milliman supports the **UN Sustainable Development** Goals. These include actions that end poverty and strategies that improve health and education, reduce inequality, spur economic growth, address climate change, and help preserve oceans and forests.



OUR WORK

Consulting actuaries Rajoshi Ray and Dhwani Gupta hosted a session organized by the Nepal Insurance Authority at Tribhuvan University where they spoke about their actuarial journey and answered student questions about actuarial careers.











Milliman and United Nations build momentum with actuarial initiative

hen the first group of
Milliman employees landed
in Nepal and saw the
majestic Himalayas in the distance,
it was a fitting setting. There were
actuarial mountains to climb, but with
expertise and motivation, they knew
they could help make the ascent.

The reason for the trip was the United Nations Development Programme (UNDP)-Milliman Global Actuarial Initiative (GAIN), created in September 2022, with a mission of contributing to the growth of actuarial expertise and helping countries and the insurance industry better manage the increasing risks faced by people and enterprises in developing countries. In 2023, the first full year of the initiative, progress was made all over the globe, and Nepal is a perfect example.

When the GAIN team first arrived in Nepal, the country had only one actuary, a woman named Prechhya Mathema, who is from London and came back to live with her parents in Nepal. Mathema, a fellow of the Institute and Faculty of Actuaries (IFoA) in the UK, saw firsthand the challenges of growing

the actuarial profession in Nepal from the university level up in a country that didn't have any other fellows or even associates.

To become an actuary, a candidate must not only pass a series of difficult exams to achieve certification via the titles of associate and then fellow. they also need to have exposure to appropriate and relevant actuarial work. In Nepal, insurance companies don't have actuaries on staff, so they outsource these services to other countries. With lack of in-house actuarial work, hiring and retaining actuarial professionals within Nepal has been one of the biggest challenges faced by the insurance industry. Moreover, it is important for employers to establish best practices to support and retain actuarial talent.

Although the recently established actuarial society and graduates from the university actuarial program have been striving to grow the actuarial profession organically, the support from GAIN has led to a paradigm shift. Thanks to the work of the UNDP and Milliman, Nepal now has a foundation for scaling the country's actuarial capabilities



L-R: Sudhan Paudel, student and GAIN coordinator at Tribhuvan University, with actuaries Dhwani Gupta and Rajoshi Ray, who presented a session at the university.

strategically and sustainably and supporting the development of a more robust regulatory environment.

The strong support provided by local stakeholders (Nepal Insurance Authority, Actuarial Society of Nepal,

Nepal Non-life Insurer's Association, Nepal Life Insurer's Association, and Tribhuvan University) was indispensable during this process.



On the supply (education) side, GAIN conducted tutorials to prepare actuarial graduates for exams, sponsored a mentorship program, led webinars on technical topics, and helped the university gain accreditation. On the demand side. GAIN hosted a virtual session for insurance company CEOs to advocate for the program and reinforce the importance of the actuarial profession.

And perhaps most important, public policy changes were set in motion. With assistance from GAIN, the Nepal Insurance Authority supported adoption of the Guideline for Actuary Appointment for Insurers, focusing on the recruitment and retention of local actuarial staff in the country.

"This has given us visibility that we didn't have before." Mathema said. "Everybody in the industry in Nepal, including the insurers, is interested in being involved, and more importantly, with the stronger foundation now, we know we can achieve more."

Diana Almoro, the UNDP Insurance and Risk Finance Facility (IRFF) regional specialist for Asia Pacific,

said her organization is proud to work with its public- and privatesector partners to strengthen the actuarial profession in Nepal.

"Effective collaboration through GAIN has allowed us to successfully link public policy and insurance market transformation to a broader financial resiliencebuilding agenda," Almoro said.

But 2023 wasn't only about Nepal. Since the inception of the program. Milliman ambassadors have introduced a similar model of intervention and support to Colombia, Ecuador, Egypt, Ethiopia, Ghana, Maldives, Nigeria, Tanzania, Uzbekistan, and Vietnam.

Eight roadmap implementation plans have been agreed upon with partners, and eight working groups have been set up in-country, involving more than 50 local volunteers. GAIN implemented multiple interventions focused on short-term and mediumterm capacity-building, tool development, advocacy, and systemic change. A mentorship program with over 100 participants was launched.



Dhwani Gupta, a consulting actuary from Mumbai led a tutoring session for second- and third-year students at Tribhuvan University.

"The UNDP-GAIN program made great strides in 2023, with tangible progress in countries around the world," said Merideth Randles, a Milliman equity principal based in Seattle and GAIN ambassador. "Building actuarial communities requires intentionality and time. Most critically, we are working towards a shared vision

and long-term ownership by local stakeholders: regulators, insurers, associations, educators, etc.

There are many opportunities for growth ahead of us, and we are thrilled to continue this fulfilling and impactful work into 2024 and beyond."

You can learn more by listening to the Critical Point podcast episode, Growing the actuarial profession in the developing world: Where the UNDP-GAIN initiative stands after one year.



DESIGNING CORAL REEF INSURANCE

Simon Wong, a principal and consulting actuary for Milliman, was part of the 2023 GAIN trip to the Maldives, a tropical South Asian country made up of more than 1.100 islands in the Indian Ocean.

Simon was pleased to be able to present a session on insurance product development using coral reef insurance as a case study.

"Coral is one of the most important natural assets for the Maldives," Wong said. "Not only does it serve

as a big draw to tourists, but it makes up a huge part of the ecosystem and provides a first line of defense against hurricane damage for many of the islands.

Designing an insurance program to protect and restore these endangered species takes creativity and innovation as well as participation from all the stakeholders. I was encouraged to see the Maldivian insurance industry come together and take part in the presentation."



Simon Wong spoke about coral reef insurance in a product development presentation.







GAIN 2023 achievements

10

Active countries

8

Working groups and roadmap plans set up in-country

70+

Milliman volunteers/ ambassadors participated 83

Volunteers outside of Milliman participated

10K
Pro-bono consulting hours

5+

Capacity building programs delivered 4

Toolkits under development

3

Peer reviews of public policy

3

Countries launched a mentorship program







Risk scenario model finds solutions to clients' complex climate challenges

Solving pressing problems often means embracing their complexity.

That's the approach London actuarial employees are taking as they help clients develop business strategies and address climate challenges with risk scenario modeling.

"You find with risk in business, and in the actuarial world in particular, it may seem intuitive to tackle a problem by breaking it down into pieces, understanding those elements, and then hoping that tells you something about how to solve it," said Neil Cantle, a consulting actuary in Milliman's London office.

Problems around sustainability and climate change are complex and require a more holistic approach. Cantle employs a methodology that examines problems with all the elements of risk to reveal the full context and how each piece interacts.

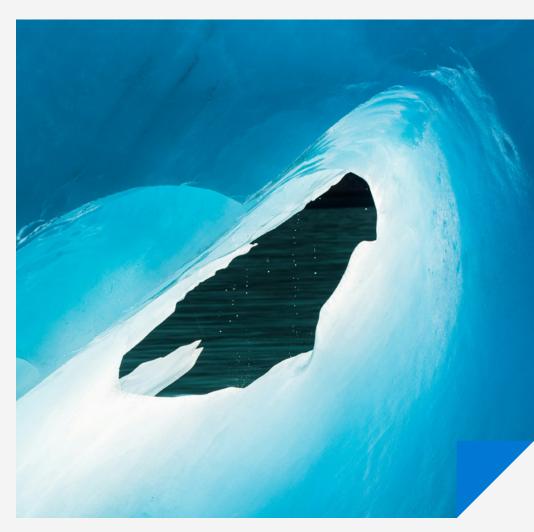
Starting with the goal

In one scenario, Cantle started by identifying types of sustainability projects a firm might invest in and then examining each element.

"From there, we look backwards and say, well, 'OK, what would it take for those things to not work?'" Answers could range from distribution breakdowns, pricing errors, or construction projects that fail.

"Eventually, you get to a point where you analyze which climate-related elements would create issues," he said. "Elements might include the physical impacts connected with weather, flooding, and temperature."

Other risks could be transitional as companies move through a net-zero economy, including changes in policy, regulations, technology, and customer attitudes.



Hole in an iceberg, Patagonia, Chile.



Creating a scenario

"By anticipating specific incidents, such as that the temperature went up a degree, combined with having a really good understanding of how the business works, we can create various scenarios," he said.

One example involved investing in a hydroelectric facility to provide sustainable power. The team predicted possible risks, from reputational issues to environmental damage.

"It's all perfectly sensible, but the project could go completely sideways," he said. "Imagine something goes wrong, and the dam bursts and floods farmland—food production downstream could be wiped out."

Catastrophic events could create public relations and humanitarian crises, Cantle said. "And effectively if you were the biggest name on a project, you get all the blame even though you weren't the only investor."

One scenario also imagined fallout from regulators. "Suddenly there could also be a domino effect of regulators not wanting to work with you," he said.

Bringing what-if scenarios to life

"In a sense, these scenarios sound like something from an action film, and yeah, a bit sensational, but they're entirely realistic," he said. "And they're all based on understanding that we gain from one-hour workshops delving into how clients' businesses work."

After a workshop, Cantle's team documents a worst-case scenario detailing how the risks could play out and the impact. Then, they identify potential actions a client could take, and whether those actions are sound.

"Clients actually feel like it's super realistic," Cantle said. The exercise spurs clients to revise how they assess projects to ensure they're properly analyzing and preparing for risks.

Scoping out possible issues can prevent or better manage disasters.

Other actions could include creating public relations plans and disaster recovery and humanitarian processes. "Businesses can consider partnering with other companies to reduce risk and include other perspectives," he said.

"The workshops offer a much richer understanding of what climate change could mean for businesses, rather than just saying, well, we're trying to invest in green energy," Cantle said.

Making better, more timely decisions

The challenge with most discussions about emerging risks, such as climate risks, is that the risks feel a long way off.

"These scenarios actually make it feel more proximate, because we're asking a question: If that happened, do we currently have plans that would help us survive that situation? Or are there things that we could do today to improve our situation?

It makes you decide to do something right now rather than just kicking the can down the road."

"In a sense, these scenarios sound like something from an action film, and yeah, a bit sensational."

Neil Cantle, Principal & Consulting Actuary





Sustainable Income Plans reduce retirement risk for companies and retirees

any retirees and workers ages 50 and up fear they will outlive their retirement savings.

That's what a survey by the nonprofit Transamerica Center for Retirement Studies found when it examined expectations and realities of retirement through a nationally representative sample of more than 4,500 people.

Sustainable Income Plans (SIPs), an innovative Milliman retirement plan approach, aim to provide consistent income that helps retirees live comfortably during retirement, said Kelly Coffing, a principal with Milliman's Employee Benefits Practice.

Milliman has set up 23 SIPs covering 100,000 plan participants since it started offering the plans in 2016. Other firms have also helped clients implement SIPs.

Milliman has built a coalition of support for the SIP design within the retirement industry and worked to build acceptance within the Pension Guaranty Benefit Corporation and the Internal Revenue Service.

Retirement confidence continues to be strongly related to retirement plan participation, according to the Employee Benefit Research Institute. Employers have increasingly used defined contribution (DC) plans, where employees take on most of the risk. Traditional defined benefit (DB) plans that provide a fixed pension require employers to bear more risk.

By combining many of the strengths of both traditional plan designs, SIPs provide lifelong income to participants, like a DB plan, and have predictable employer costs, like a DC plan.

"SIPs provide benefits for people as long as they live, and employers get nice stable contribution requirements like a 401K," Coffing said.

Balancing benefits and risks

SIPs offer a unique blend of features. They have controllable employer costs like DC plans and stay fully funded at all times, providing funding and accounting consistency.

SIPs maintain a balanced investment portfolio—like a DB plan—that is not overly weighted toward bonds, generally resulting in higher expected investment returns and higher benefits. Reserves help prevent large benefit declines in market downturns, providing sustainable retirement security.

Retirees can face volatility of returns right when they need the investments to cover retirement expenses. With a SIP, benefits adjust each year based on investment returns of the plan's assets and keep the assets and liabilities in balance.

"We're helping companies and unions implement retirement plans that are sustainable for all market conditions and interest rate environments, creating a more secure future for retirees and plan sponsors," Coffing said.

"So, it really is a win-win, and a way to provide benefits across generations through one plan." ■

"We're helping companies and unions implement retirement plans that are sustainable for all market conditions and interest rate environments, creating a more secure future for retirees and plan sponsors."

- Kelly Coffing, Principal & Consulting Actuary









Breaking new ground: Climate Risk Certificate Program debuts

illiman is committed to helping the world address climate change, and the firm took a collaborative and important step in that direction in 2023.

Milliman and the Society of Actuaries (SOA) developed the first Climate Risk Certificate Program, which provides comprehensive professional education on climate risk management and measurement.

The program includes an interdisciplinary curriculum and content led by Milliman experts and a certification process administered by the SOA. In-depth subject matter expertise is actuarial, financial, clinical, technological, and scientific in nature. The program includes

Climate Risk
Certificate
Program

Climate Risk Management
and Measurement
Study in-depth content in this
self-paced program

Society of Actuaries

training with assessments and interactive activities along with instructor-led virtual office hours. The full course culminates with the awarding of a Climate Risk Certificate.

"We used Milliman professionals from all around the world and every discipline and there are 10 modules in all," says Garrett Bradford, a principal and geographic information system consultant.

Bradford and Melody Craff, a vice president of strategic analytics and education, led the project for Milliman and created the firm's proposal for the SOA's RFP. "It's flattering that the SOA would come to us to help design this program," Bradford said. "It shows that Milliman is respected as a thought leader in climate."

The first two courses of the program, Climate Risk Fundamentals and Climate Risk Data Sources, cover the basics of climate change and serve as an introduction to all courses. They are recommended for anyone who wants to learn more about this subject. The full program additionally includes the following courses: Climate Risk Modeling;

- "It's flattering that the SOA would come to us to help design this program. It shows that Milliman is respected as a thought leader in climate."
- Garrett Bradford, Principal and Geographic Information Systems Consultant



Supercell thunderstorm over the Texas Panhandle.

General Actuarial Risk Analysis/ Climate Risk Impact; Climate Risk for Life Insurance; Climate Risk for Health Insurance; Climate Risk for Pensions; Climate Risk for General Insurance; Climate Risk for Investment/Finance; and Climate Risk Governance and Strategy.

The program is recommended for actuaries and others looking to delve deeply into applications, including clinicians interested in receiving practical instruction and training about climate risk. To receive the certificate, one must complete five required courses, one specialty course, and pass the "final exam" assessment.

"If the extreme weather events of the last few years have taught us anything, it's that we need a diverse team and broad collaborations to make sure people are prepared and protected," Milliman chairman Ken Mungan said.

"This certification program will help ensure that those earning this certificate remain on the forefront of managing this ever-evolving risk."

SOA CEO Greg Heidrich agreed, adding that climate risk assessment has become a critical business need and societal focus, and that actuaries continue to provide research and insights to manage and measure climate risk.

"Through this collaboration with Milliman, this critical certificate program will provide learners with focused training to measure and manage the complex challenges of climate risk." Heidrich said.

Craff said that when it comes to Milliman, the work of tackling climate risk has only just begun, and the certification program will go a long way toward achieving that goal.

"This course is building that shared understanding and shared momentum," she said. "And I think it will be fun."

"This certification program will help ensure that those earning this certificate remain on the forefront of managing this ever-evolving risk."

- Ken Mungan, Chairman of the Milliman Board of Directors





Research helps clients address gaps in U.S. behavioral health services

ental health and substance use disorders affect millions of Americans.

However, treatment options across the United States are inconsistent and make it challenging for people to access timely, appropriate, and affordable care.

A report produced by Milliman measures access to services across the nation and sheds light on the disparate challenges of mental health services. Clients and other organizations are using the data to work toward closing gaps.

"Our research shows the intersection of what people need and what resources are available to meet the need," said Stoddard Davenport, a principal and healthcare management consultant and one of the report's authors.

Inseparable, a mental health advocacy group in Washington D.C., commissioned the report to demonstrate some of the barriers to accessing services across the United States.

"We help address public health issues by arming people with the data that they need to go out and improve healthcare delivery and improve outcomes for folks in need," Davenport said.

Metrics show the prevalence of different behavioral health conditions and data on use of services, availability, and affordability of providers by state and types of insurance coverage.

The report found that access to behavioral healthcare services is highly variable across the United States, and even among healthcare coverage types within each state, depending on where people live, their healthcare coverage, and personal resources. The report shares strengths and challenges among states.

Inseparable has presented the data along with its own insight at various events, including the National Conference of State Legislators, where they've had discussions about policy ideas that could help close some of the gaps in access to care.

Continued on page 15



"We help address public health issues by arming people with the data that they need to go out and improve healthcare delivery and improve outcomes for folks in need."

 Stoddard Davenport, Principal & Healthcare Management Consultant



Several of the findings include:



Significant gaps in care exist in behavioral health.

Measures of behavioral health treatment patterns indicated a high percentage of individuals diagnosed with behavioral health conditions were not receiving treatment from a behavioral health specialist.



Access to healthcare coverage needs to be improved.

Strategies to increase healthcare coverage and reduce out-of-pocket costs could help to improve access to behavioral health services. Nationally, psychiatrists are less likely to accept healthcare coverage of all types compared to other specialties, further limiting access to the small number of providers available for those unable to pay out of pocket.



Mental health provider shortages are present in every state.

In 2023, over half (52.7%) of the U.S. population lives in counties that are entirely designated as Mental Health Professional Shortage Areas (HPSA). And only 27.7% of the psychiatrists needed to remove these shortages are available across the United States. The need for psychiatrists is not fully met in any of the 50 states.



Household income and healthcare coverage can dictate accessibility of service.

The average self-pay cost for someone without insurance coverage for a 60-minute psychotherapy visit was \$174 per visit in 2021.

Cost can be a barrier depending on household income.

The findings also highlight financial barriers to accessing behavioral health services, particularly for individuals without healthcare coverage.

"Mental health is a topic that touches each of us in one way or another. This opportunity to address important information on gaps in access to care was rewarding for our team and helped us further Milliman's mission," Davenport said.

"Mental health is a topic that touches each of us in one way or another. This opportunity to address important information on gaps in access to care was rewarding for our team and helped us further Milliman's mission,"

Stoddard Davenport,
 Principal & Healthcare
 Management Consultant









Making insurance options available in uninsurable places

estruction from California wildfires devastates property, endangers people, and creates challenges for homeowners to insure their property.

Milliman is working with fire chiefs, California state regulators, insurers, and other organizations on strategies to mitigate wildfire risk. The firm is providing insight about regulations that could improve affordability and access to insurance.

"A lot of the work we do is trying to make insurance and protection more available for everybody," said Max Mindel, a consulting actuary in San Francisco.

Increasing numbers of weatherrelated disasters have led insurance companies to leave states, including California and Florida, due to volatility of the risks, challenges with rate setting, and concerns about remaining solvent.

Wildfire mitigation reduces risk

People can make their communities safer, and in some cases reduce wildfire risk, so it's similar in scope to other large events insurers cover. "A lot of the work we do is trying to make insurance and protection more available for everybody."

 Max Mindel, Principal & Consulting Actuary

"Fire just doesn't spread indiscriminately," Mindel said. "It's similar to the way water flows, and there are fire pathways that fires follow."

Many at-risk communities are actively clearing out fuel sources, such as vegetation on their property. Other mitigation strategies include choosing different building materials and strategic building development.

A case study: Paradise, California

In 2018, the Camp Fire devastated Paradise, California. It was the deadliest and most destructive wildfire in California's history, killing 85 people and destroying 90% of the town's structures.



A helicopter drops water on a burning forest during wildfires in California, U.S.

In a case study, Milliman and CoreLogic, an Irvine, California-based company that provides financial and property analytics and business intelligence, estimated the financial benefits of various risk reduction strategies. They used a catastrophe model based on actions individual homeowners and the community could take to reduce risk.

The report looked at strategic planning, including decreasing the number of structures in the town, rebuilding in lower-risk areas, and implementing land use planning.

Other factors included the impact of buffers in well-maintained areas with low fire-spread potential on the border of the town, and individual mitigation actions.



Pursuing regulatory changes for more accurate rate setting

Changes in how insurance companies can set rates and measure risk could also help make insurance more available and affordable.

"Milliman's goal is to improve the understanding of risk so that insurers are better able to match premiums to the actual risk taken." Mindel said.

Milliman works with regulators, both as advocates for insurers and as independent advisors to state insurance departments and legislatures, to establish methods for measuring risk.

Reinsurance – Insurance companies often manage their exposure risk by working with reinsurers who agree to cover some of the financial risk of potential claims. This helps insurers better manage their financial exposure, but also adds to the expense of the premium as they compensate the reinsurer for assuming risk. "It provides cost certainty and protection against insolvency, but it cuts into their profits," Mindel said.

The California Department of Insurance currently doesn't allow insurers to reflect the cost of reinsurance in homeowners' insurance premiums. "It's a key reason why insurers avoid offering insurance in high-risk areas," Mindel said. "In California, many couldn't price for their costs and pulled out of the state."

Catastrophe models – Milliman consultants have been advising regulators on the use of catastrophe models in rate setting.

"This is a big deal because insurers' greatest fear is volatility," Mindel said. A single event, such as a catastrophic fire, can cause a huge shift in premiums without adding much predictive value for events occurring in the future.

"Catastrophe models help insurers maintain more consistent policyholder premiums without overreacting to a single event," Mindel said. And reinsurance allows insurers to absorb a catastrophic event without experiencing a huge fluctuation in their profitability.

In Paradise, catastrophe models tell a larger story. "They can show the impact of the work the community has done to reduce wildfire danger," he said. "And expected losses and premiums will be lower."

"These regulatory changes are two very important things that ensure companies can accurately assess insurance rates and risks, and that could bring them back to this market."



Could Climate Change
Break Home Insurance?

Learn more about insurance and climate change by listening to an interview with Consulting Actuary Nancy Watkins in a podcast, Could Climate Change Break Home Insurance?

"Milliman's goal is to improve the understanding of risk so that insurers are better able to match premiums to the actual risk taken."

- Max Mindel, Principal & Consulting Actuary





Interactive tool examines equity of healthcare systems

illiman is dedicated to advancing health equity, and it's using its analytics expertise to identify opportunities to improve healthcare quality and reduce costs.

In July 2023, the firm created an interactive tool under the Centers for Medicare and Medicaid Services Qualified Entity Program that allows users to see how healthcare quality performance is associated with regional social determinants of health (SDoH) characteristics.

SDoH characteristics include race and ethnicity, socioeconomic status, and provider supply, after accounting for the differences in underlying disease burden that are expected to impact performance.

The interactive tool shows demographic and social determinants of health information, and various healthcare quality measures nationally or at the state level. The tool also allows users to explore smaller geographies, including counties and ZIP code tabulation areas that align closely with five-digit ZIP codes.

"The team created a valuable tool that showcases Milliman's business intelligence and health equity focus," said Global Health Practice Director Tom Snook.

The Qualified Entity Program allows organizations to access Medicare claims data, combine it with other non-Medicare claims data, and generate reports that show variability in healthcare quality performance.

Snook presented Harsha Mirchandani, Cherie Dodge, Hope Norris, and Carol Bazell with the Global Practice Director Vision Award for their work leading the project. The Vision Award celebrates significant contributions to the firm, with a particular emphasis on realizing Milliman's vision.

As a certified qualified entity (QE) for all 50 states and the District of Columbia, Milliman has a combined claims dataset of over 50 million Medicare fee-for-service beneficiaries and over 100 million commercially insured members.

The team produced its <u>first report</u> in 2023. The annual Qualified Entity Report available on <u>milliman.com</u>

was refreshed to include results on the combined data for eight quality measures related to hospital-based acute care for 2018 through 2021.

Services following hospital discharge are major contributors to overall healthcare costs. Belowbenchmark performance may reflect shortcomings in the provision of

high-quality care during an acute care encounter, post-discharge follow-up, or in ongoing health management.

Understanding variation in healthcare quality performance across different geographies highlights potential gaps in care that may represent opportunities to improve services and reduce costs.



Health Practice colleagues received the Global Health Practice Director's Vision Award for their work on the Qualified Entity Report. L-R: Tom Snook, Health Practice director; Harsha Mirchandani; Cherie Dodge; Hope Norris; Carol Bazell, and CEO Dermot Corry.









Flood models help European insurers understand growing climate risks

Iready flood-prone regions in Europe are seeing record-breaking weather disasters. And data reveals that climate change is expected to escalate the severity and frequency of flooding due to heavier rainfall and melting snow.

Catastrophe and scenario analysis tools powered a study by Milliman to analyze the probability of floods and losses in the Netherlands and France. The data is guiding discussions with the government, insurers, and reinsurers as they address climate risks and solutions.

Flooding is pervasive across Europe, due to persistent precipitation, locally or upstream of rivers, as well as from the ocean and groundwater. "This study gives insight on where flooding can happen, and it's quite precise," said Henny Verheugen, a consulting actuary in Amsterdam.

Colleagues in various Milliman offices collaborated on the study using public information, data analytics, and visualization.

The models include the probability of flooding at various locations and the potential for property and economic damage. A catastrophe risk tool evaluated impacts of floods based on current climate and protection levels and various flood depth events. A second scenario analysis tool analyzed long-term effects of climate events and levels of protection.

Finding solutions for accelerating risks

"In places that they know are risky, insurance companies are asking, 'What else can we do to stop the problem from happening in the first place,'" Verheugen said.

Adaptation measures, such as early warning systems, evacuations, insurance, and flood retention strategies, can help reduce or mitigate flood risks.

Raising the height of dikes and creating more pathways for water during heavy rainstorms is key, Verheugen said. And the industry is looking to the government to help. Public-private partnerships are working to raise awareness about risks and make insurance affordable.

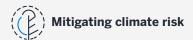
In the Netherlands, the Association of Insurers is working to insure flood losses from primary river barrier

breaks, in addition to insuring for secondary barrier breaks included in many 2021 and 2022 policies.

In the French region Hauts-de-France, residents have seen two very close to one-in-100-year floods recently. The first one occurred in November 2023, with an estimated cost of €550 million by the Caisse centrale de reassurance. The second one in January resulted in an estimated €90 million in damages.

Some properties have never experienced the level of flooding that people are seeing, as catastrophic wind and rainstorms occur.

"People living near rivers or coastal areas are more vulnerable," Verheugen said. "Water levels are increasing, and if it happens more frequently, it becomes riskier."



In other research, learn about 2023 extreme weather events in Europe and strategies to reduce financial impact.



Severe thunderstorms caused flash flooding in Poland.

"In places that they know are risky, insurance companies are asking, 'What else can we do to stop the problem from happening in the first place?'"

Henny Verheugen, Principal & Consulting Actuary





Award-winning communications create easier access to employee benefits

avigating healthcare and retirement benefits can be challenging. In keeping with its mission. Milliman's award-winning solutions help employees easily access benefits information and make choices that best fit their needs.

The Employee Benefits Administration and Consulting (EBAC) communication practice develops communications for 2 million participants in Milliman's health and welfare, defined contribution, and defined benefit administration plans, as well as tens of thousands of employees of clients.

Consultants start each project by creating a communication strategy to determine what information employees need and how to best deliver that information. Two projects demonstrate the effectiveness of this approach.

Innovative website streamlines access to benefits

"We want to make sure that employees can access information anytime, anywhere," said Jennifer Bolton, a senior communication consultant in Dallas, "For several clients, we've built a website as a one-stop shop where they can find everything they need to enroll and use their benefits."

One of those clients, Parkland Health, places a priority on health equity, and a cohesive communication plan is essential to meeting their goals.

"Through our valuable benefit programs, we can educate and inform our staff about the use of their benefits that potentially help close the gaps in the social determinants of health that impact our diverse workforce." said Felicia Miller. executive vice president and chief talent officer, Parkland Health.

The single-site approach provides easy access to all employees and their dependents with clear, consistent, and timely information. Then it seamlessly directs them how and where to enroll. "We wanted the navigation to be really intuitive and easy to understand," Bolton said. "Even if they don't have computer access at work, they can access the mobilefriendly site on their smartphone."

Their efforts were recognized when the site won a Gold Ouill Award of Merit from the International Association of **Business Communicators.**

The site serves 14.000 Parkland Health employees with enrollment information and year-round

updates, including targeted information for new employees.

"We aim to separate information from action," Bolton said. "For example, during enrollment, it's about choosing the benefits you need, and during the year, you need to understand how to use your benefits wisely."

Helping retirement plan participants make informed decisions

Clarity is key for making informed decisions about retirement savings options.

"I've seen firsthand how confusing benefits can be for people," said Jackie Willey, senior consultant, DC communication manager.

Willey was recognized for her work to simplify 401(k) enrollment materials. The fast-track enrollment solution provides participants with one clear call to action, and it's flexible and easy to update



with legislation changes and web enhancements. It also reduces print and fulfillment costs for plan sponsors.

She received the Milliman Global Practice Director's Vision Award for creating and delivering top quality retirement and financial wellness education for participants on EBAC's DC administration platform. The award recognizes significant contributions to realizing Milliman's vision.

"Jackie's focus on participants is where she shines," said EB Global Practice Director Bret Linton.



Jackie Willey received the Practice Director's Vision Award for creating and delivering top quality retirement and financial wellness education.

















Building a roadmap for microinsurance projects in developing countries

he MicroInsurance Centre at Milliman (MIC@M) has created a roadmap to protect people in developing countries against life, health, asset, and financial risks.

MIC@M worked with the United Nations Development Programme (UNDP) to identify needs and issues countries face. They've done country studies and created diagnostic reports that propose solutions to address the impact of climate change-related catastrophes to "protect the health and financial well-being of people everywhere."

"The project focused on 23 core countries where the UNDP wants to make an impact, so they contracted us to conduct diagnostics on both microinsurance and disaster risk financing issues," said Michael McCord, managing director of MIC@M.

MIC@M is dedicated to generating access to valuable risk management solutions for three billion low-income people across the globe.

The project includes some of the same countries that Milliman is working with through its collaboration

with the UNDP-Global Actuarial Initiative (GAIN) to build actuarial expertise, including Colombia, Ecuador, Ghana, Nigeria, Madagascar, and Uganda, as well as Bangladesh, Nepal, Pakistan, and Vietnam.

"The goal is to dramatically increase the volume of microinsurance given the extreme coverage gaps in these target countries," McCord said. "It will also improve the structures of disaster risk financing, which the UN's Insurance Development Forum will help to address in some of the key countries."

Setting a foundation for progress

The reports and summaries of each country also include recommendations for implementation. "They're pretty detailed even down to the point where a recommendation might say that the Office of Disaster Risk in the Ministry of Finance should take on this role and do this," McCord said.

Two of the country studies included recommendations for inclusive microinsurance projects in Ecuador and Egypt. Inclusive insurance helps protect people and businesses who haven't had access to insurance for

risks such as crop damage, health issues, or natural disasters.

Ecuador is among the world's most vulnerable countries, ranking at 18th place in the 2023 World Risk Report, with risks that include volcanic eruptions, landslides, and destructive storms.

The informal sector accounts for 52% of jobs in Ecuador. These jobs are often unstable, with low salaries and with limited social protection or rights. Women in Ecuador are more likely to work in the informal sector and suffer significant inequalities.

With market research, innovation, and collaboration with public and private partnerships, inclusive insurance could become a powerful tool to improve financial security for Ecuadorans.

Inclusive microinsurance is also the focus in Egypt, which ranks 24th in the world in exposure and vulnerability to risks from natural disasters, including floods, storms, rising sea levels, and drought. Rising temperatures are causing biological changes that have increased the spread of insectborne diseases such as malaria, dengue fever, and West Nile virus.

Of the 110 million people who live in Egypt, 57% reside in rural areas and often face persistent food insecurity. Key recommendations center on microinsurance product development and distribution, with a focus on agricultural insurance.

To date, the most progress has been with credit-life and personal accident policies. Areas for growth include micro-Takaful and agricultural insurance.

Now that a foundation has been set, MIC@M created a tool to look at all the potential work that the UNDP project is proposing based on the country reports and summaries.

"When a proposal comes up that sounds like it might be interesting, we assess it," McCord said. "And the question is not, 'Will we make a ton of money?' but, 'Does it fit our mission, and can we make an impact with this project?"



OUR PEOPLE



Employee Resource Group leaders attended a summit in Milwaukee, Wisconsin.













Milliman's commitment to diversity, equity, and inclusion

he path to realizing Diversity, Equity, and Inclusion (DEI) has never been easy, but this year has introduced unprecedented challenges. Yet we remain steadfast in our commitment to the principles of DEI.

The changing regulatory environment and intense social discord globally have deeply affected many of our employees. Despite these hurdles, we have drawn upon the foundational knowledge and insights gained from past DEI efforts, to continue advancing representation and fortifying our culture of inclusivity.

We've achieved this by maintaining our commitment to inclusive recruitment practices wherever possible, creating new career development and learning opportunities, prioritizing the well-being and satisfaction of our employees, and fostering essential discussions.

Diversity, equity, and inclusion are core to Milliman's mission

In presenting this report, which marks our second consecutive year of public DEI data disclosure, we reassert our primary aim: To recruit, nurture, and retain a diverse workforce that mirrors the global community and foster an environment where all individuals have the opportunity to flourish.

"Our forward-looking approach to DEI, supported by our top leaders, stresses accountability and a commitment to making continuous and consistent improvements."

Beyond just collecting demographic information, we're dedicated to capturing how our employees genuinely feel, allowing us to measure the effectiveness of our DEI initiatives.

This approach helps us identify any discrepancies between the inclusive culture we strive for and the actual experiences of everyone at Milliman.

Employee surveys show that sentiment around DEI is positive. This year, we've seen several promising signs that encourage us to continue our efforts.

 86% of our employees feel the leaders in their practice encourage a diverse and inclusive workplace and support DEI efforts. 86% of our employees feel they are treated with dignity and respect.

We believe these results demonstrate that despite external pressures, our commitment to fostering a culture of mutual respect and understanding continues to yield results.

Our Culture

Our DEI strategy is our people strategy. DEI is built into how we hire, develop, and retain our talent and serves as a core strength in ensuring that all perspectives are heard and valued. In 2021, our DEI committee composed of various leaders across practices, functions, and regions shaped our DEI strategy, which cascades to local and regional DEI committees.

The strategy consists of five core pillars:

- Belonging We create a culture where everyone feels welcome, supported, and able to thrive.
- Education We provide opportunities for all our people to understand how to build and sustain a culture of belonging.



- "Our aim is to recruit, nurture, and retain a diverse workforce that mirrors the global community and to foster an environment where all individuals have the opportunity to flourish."
- Dr. Christal Morris,
 Chief Sustainability
 and DEI Officer



- Advancement Opportunity is a stated value at Milliman. and we invest in programs that will help us increase diversity in leadership roles.
- **Policies** We ensure our policies and procedures are not inadvertently creating inequities.
- Monitoring and Reporting We monitor and communicate our statistics and regularly assess plans and strategy and share metrics with our board.

Our DEI and Employee Resource Group (ERG) intranet sites feature extensive programming designed to inform and educate our ERG members and allies.

In addition to global events, such as International Women's Day, our employees across the world celebrate local and regional days that are most relevant to them. Each ERG has its own site and Teams channels to promote their events, share photos, and collaborate on intersectional themes.

Additionally, our DEI Community of Practice provides a place for all employees to post articles and discuss news stories, or share books, podcasts, movies, and events covering a wide range of DEI topics.

Professional development

We encourage employees to grow and build new skills to support their career development and cultivate the next generation of diverse and inclusive leaders. Milliman has a robust learning and development platform called Milliman University, which offers thousands of live and online courses in partnership with LinkedIn Learning. It includes our DEI core curriculum, with courses on topics such as understanding bias, allyship, and inclusive leadership.

In 2023, we incorporated inclusive leadership topics into sessions for our Board and new shareholders. Milliman's Board of Directors has an Inclusive Leadership experience at each September Board meeting to expand language, learn strategies for leading a multi-generational

workforce, and stay abreast of the latest advancements in DFI.

In our New Principal Orientation, we have added an Inclusive Leadership session, where we discuss various concepts, including microagressions, allyship, and psychologically safe workspaces, as well as tactics for giving and receiving feedback.

Since it was launched in 2017, more than 120 of our professionals have participated in the Milliman Leadership Academy, an intensive leadership development program. And 334 employees have participated in the Milliman Mentorship Program, which advances professional and career development. Since its start in 2016, more than 1,500 employees have participated.

Milliman's annual awards program recognizes employees from around the firm. The Milliman Awards provide an opportunity for employees to nominate colleagues and celebrate their contributions to innovation and collaboration:

accomplishments that exemplify our mission, vision, and values.

In 2023. 15 winners received awards for efforts including building an innovative online remittances platform, developing a new Al-based compliance tool, leading collaboration amongst IT professionals, and providing innovative, quality solutions for our clients. Since 2016, 114 Milliman employees have been recognized through this program.

Employee Resource Groups

ERGs are employee-led groups united by shared experiences and focused on goals designed to strengthen and support our commitment to DEI throughout the firm. ERGs organize events and communications to celebrate and raise awareness during significant diversity-related months and occasions. Our ERGs are empowered to influence policies, develop future leaders, and increase employee engagement.



At Milliman, colleagues are welcome to join any ERG as members, allies, sponsors, or leaders. This year, 15% of our employees led or participated in our seven ERGs, which hosted events ranging from cultural celebrations to topics of social justice, professional development, and mental health and wellness.

We launched the Asian ERG in July. In addition to its mission to promote the unique intersectionality of Asians at Milliman, "we celebrate the many festivals, languages, culinary heritages, and experiences that define our Asian community, both in the United States and in our homelands." said equity principal sponsor Vandana Bhardwaj. "By sharing the stories of Asian achievers, internally and externally, we celebrate their accomplishments and inspire others."

Milliman is dedicated to attracting and retaining veterans, military spouses, and National Guard and Reserve service members. And in 2023, dedicated members of our Military and Veterans ERG released a toolkit for hiring managers to support this effort.

Continued on page 26

MILLIMAN EMPLOYEE RESOURCE GROUPS

MilliWomen – The mission of the MilliWomen ERG is to serve as a resource to Milliman to achieve its diversity, equity, and inclusion plan by attracting, retaining, empowering, supporting, and ensuring professional development of employees who identify as women.

BERG - The mission of the Black Employee Resource Group (BERG) is to create a more diverse organization by providing opportunities for Black persons to obtain employment, achieve advancement, and experience meaningful sustained careers at Milliman.

DREAM – The mission of the DREAM (Diversity, Recognition, **Empowerment Affecting** Abilities @ Milliman) ERG is to promote a safe space for conversations and support for those living with visible and invisible challenges and their caregivers, guardians, coworkers, friends, and family.

MVERG – The mission of the Military and Veterans ERG (MVERG) is to provide Milliman leadership with the tools they need to recognize the unique value of Military veterans, overcome the challenges that Military veterans may face when applying to Milliman, help our Military veterans transition to civilian life, and connect with one another to build a sense of community.

Pride - The mission of the Pride (LGBTQIA+) ERG is to build community, promote allyship, and create psychologically safe spaces for members and allies to bring their whole selves to work and celebrate living inclusively.

Unidos – The mission of the Unidos ERG is to create opportunities for Latino/a/e employees to connect and network with each other and work with leaders to provide opportunities through engagement, development, and recruitment of Latino/a/e individuals.

Asian – The mission of the Asian ERG is to promote and affirm the unique intersectionality of Asians at Milliman by fostering networking, professional development, mentoring, and leadership opportunities with a focus on recruitment, retention, learning, and advancement.



As a result of the firm's longstanding efforts to hire and support veterans and their families. Milliman was awarded three Military-friendly designations as a Military Friendly® Company, Military Friendly® Spouse Employer, and for its Military Friendly® Supplier Diversity Program.

In the Fall, ERG leaders and executive sponsors gathered for a strategy session in our Milwaukee office. The event included a panel of ERG leaders from industry peers sharing how they run and promote their programs, grow ERG membership, and leverage them to win business. The session inspired our leaders to consider ways to develop programs together with a focus on intersectionality.

"It was really important to have our ERG colleagues meet, connect, establish trust, and collaborate in

an effort to plan for 2024," said Dr. Christal Morris, Milliman's Chief Diversity, Equity, and Inclusion Officer.

Although we're invigorated by the enthusiasm we've seen and advancements we've made in DEI this year, we acknowledge that our journey is far from over. DEI isn't just a component of our business. it's a critical driver of who we are and how we work. Our enduring aim is to diversify the array of perspectives and experiences within our workforce. By doing so, we aim to catalyze innovation that benefits our employees, our clients, and the professions we represent.

Global DEI Stories

As an international firm that operates in over 30 countries and employs about 5,000 individuals, we benefit from our immense

diversity of cultures, communities, and perspectives. To ensure our DEI efforts are cohesive and globally impactful, they are rooted in universally applicable core concepts such as allyship, covering, belonging, and bias. These fundamental concepts offer a common framework that improves our understanding of DEI across different contexts. ensuring that our efforts are cohesive and impactful on a global scale.

In 2023, leaders and teams across the firm fostered critical conversations aimed at accelerating positive change. By tailoring DEI efforts to address the specific needs and challenges of different practices and offices, Milliman has been able to create more meaningful impact, ensuring that the strategies implemented are not only globally informed but also locally relevant.

This approach has fostered a more inclusive environment where global voices are heard and valued.

In the UK, the DEI Committee worked toward three goals: assess DEI in current practices, encourage diverse future actuaries, and build awareness.

Continued on page 27

"It was really important to have our ERG colleagues meet, connect. establish trust. and collaborate in an effort to plan for 2024."

- Dr. Christal Morris, Chief Sustainability & DEI Officer









Some highlights from the goal to encourage diverse future actuaries include hosting an intern from the #10,000blackinterns project, speaking at five school career events and joining the Institute and Faculty of Actuaries (IFoA) DEI Employer Network.

The Committee continued to raise awareness externally through the Milliman UK LinkedIn page and internally through:

- Weekly "Gayly News" emails and a book club for Pride
- A quiz, TV club, and "Did you know" emails for Black History Month
- A baking and colouring competition for Armed Forces Day
- Emails and training by Enhance the UK for Disability Awareness Month

These fun and educational activities do have an impact. In response to a Pride month "Gayly News" email in June 2023, featuring Louis Graydon Sullivan, one of the first well-known gay transgender men, Milliman consultant Louise Pirie shared the following: "This one today made me solemnly reflective, remembering

how trans folk were treated. We have come forward, but I still feel there is so far to travel to achieve parity, and these stories are an excellent way for us to reflect on that journey and those who have trailblazed its way!"

In Paris, members of the corporate team participated in quarterly DEI Discussions, including presenting in a session called, "Allyship: A lifelong journey," highlighting the importance of continuous learning and support for DEI principles through allyship.

Dorothee Bary, a principal in the Paris office, began to develop and promote a program for secondments within the Life Practice. "A secondment allows our consultants to not only gain new expertise but also to immerse themselves in a different culture and experience a new way of working," said Bary. "All consultants who return from secondment share how this experience has broadened their perspectives and opened them up to new ways of thinking. They have also learned to adapt to different cultures and mindsets, and this adaptability and open-mindedness are key skills for achieving our diversity, equity, and inclusion goals at Milliman."

In Amsterdam, Belgium, and Luxembourg, staff reviewed all local policies and made them gender neutral. And they added a policy to include a diversity day so employees can exchange a national holiday for one they choose to celebrate for cultural or religious reasons.

To create an inclusive culture, the recruiting focus is on balancing gender ratios at all levels. This will contribute to inclusive decision-making, a healthy culture, and role modeling at all levels in the organization.

In summary, by including everyone and drawing on differences in who we are, what we have experienced, and how we think, we are better able to deliver services that exceed the expectations of our clients, strengthen our communities, and provide opportunities for all.

We are driven by the understanding that our actions have long-term effects on our employees, our clients, and ultimately, society.



Charle Hower of the OK DEI Confinitiee
awarded a Milliman-sponsored raffle prize to
Kwabena Osei-Mensah from Moody's at the
Institute and Faculty of Actuaries Foundation
annual celebration.



Employee Representation

Our global workforce increased by

9%1

taking us from 4,525 employees to 4,918.

Our U.S. workforce increased by

6%1

taking us from 3,355 employees to 3,544.



Racial and Ethnic Breakdown

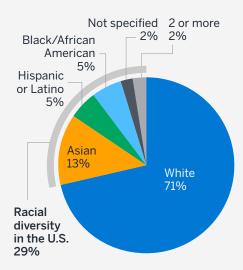
Our U.S. workforce is

29%

racially diverse.

This is a

3% ncrease from 2022.



Women

Women make up

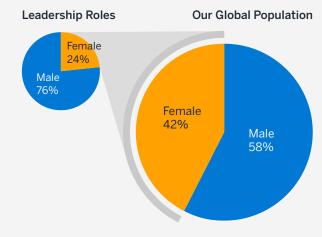
42%

of our global population and

24%

of senior leadership roles, a

7% increase from 2022.











Pat Renzi: Inclusive leader spotlight

t an early age, Pat Renzi learned from her mother that it was important to fit in. When she entered the workforce, her mother told her, "Don't stand out, don't wear bright colors." Instead, wear black and blue.

"I had been going through my career tiptoeing around, not being myself, and I have since learned that is true for others." she said.

She realized that this wasn't healthy for her, her practice, and Milliman. "At some point you feel a little more empowered to push back."

Renzi leads Life Technology Solutions, which provides financial and risk reporting and projection products, and has advocated for a more diverse, equitable, and inclusive workplace at Milliman.

She served on Milliman's Board of Directors from 2015 to 2019, and as chair of the firm's Diversity, Equity, and Inclusion (DEI) Committee from 2019 to 2023.

"Pat is an inspiration to me and many across Milliman," said Steve White, who was CEO during Renzi's time on "She has been central to our DEI progress work that she has done while also leading a dynamic and successful practice."

Steve White, former President
 & CEO

the board of directors. "She has been central to our DEI progress—work that she has done while also leading a dynamic and successful practice."

Renzi's practice employs more than 170 people in six countries.

Changed by family tragedy

When Pat was four years old, her father was killed, leaving her mother to raise three young daughters.
Growing up in the 1960s and 70s, Renzi observed how her mother was treated as a single parent. That's when she became aware of issues around DEI, even if she didn't have the words then to define it.



Pat Renzi led efforts to create a more diverse, equitable, and inclusive culture.

Renzi's father had owned a business, which her mother took over when he died. But the bank wouldn't allow her to borrow money. So, Renzi's grandfather, who had no connection to the business, had to sign for the loan.

As Renzi's mother ran the business, Henrietta, a family friend who was Black, took on childcare responsibilities.

"She and my mom were best friends, and she was the most loving person and like a second parent to us," Renzi said.

As children, Pat and her sisters called Henrietta, "Hen Hen." As she



aged, Renzi's mom cared for her. When Pat was in the fifth grade, she recalls hearing the father of a friend use racially charged language when speaking about Black people.

"It was shocking to me that someone would say that about someone because of their skin color," Pat said. "Hen Hen was the warmest, kindest, most giving person that I knew, and people were talking about her community in a way that just didn't make sense."

Pat felt conflicted but also powerless as a child to say anything. "I just absorbed it, but as I got older, I wasn't going to absorb it anymore," she said. "This incident and an accumulation of observing injustices and inequities, and feeling that I had to pretend it was ok drove me to be vocal and pursue DEI initiatives."

Creating a more diverse workforce

In her first five years as an equity principal, Renzi was often the only woman in the room.

In 2016, she pushed to start a DEI Community of Practice in the firm, and the next year, advocated that the Board of Directors establish a DFI Committee.

"We went from having the committee to creating a public statement explicitly reflecting that DEI is important to us," Pat said.

Pat was instrumental in advocating for employee resource groups (ERGs) at Milliman, starting with the Black Employee Resource Group. The firm now has seven ERGs.

"If we want to take advantage of having a diverse workforce, we have to let people be themselves," she said. "Otherwise, we don't get any benefit from the diversity."

Balancing work and empowering employees

An incident early in her career shaped her as a manager. When her 6-year-old son began playing T-ball, she wanted to coach his team. When she asked her boss if she could leave early one afternoon a week for eight weeks, he refused.

Frustrated that she was already in the office more hours than required, yet couldn't have short-term flexibility,

she quit her job and found one that allowed her to work from home.

This was before companies used email as the primary means of communication, and remote work wasn't a typical practice. "All the correspondence was with phone calls and fax machines," she said. "But they allowed me to do it, and when my children were old enough, I spent more time in the office."

As a leader, Renzi has been flexible with employees who had sick family members. And she's supported employees who needed to work remotely, including a military spouse who had put her actuarial career on hold when her husband was deployed.

"It's not as though you're giving something away by making this accommodation, you're empowering them to do their best."

Renzi's influence has spurred significant changes in the firm's culture. "Pat leads with conviction and courage, and with a seemingly endless supply of energy," White said. "With her leadership, Milliman has become a better place to work for all of us."

"If we want to take advantage of having a diverse workforce, we have to let people be themselves," she said. "Otherwise, we don't get any benefit from the diversity."

Pat Renzi, Principal & CEO,
 Life Technology Solutions









Opportunity Scholarship leads to a career at Milliman

hen Genius Mapalo Mukuka was 11 years old, she traveled from Zambia to the United Kingdom for a school trip. After that experience, she vowed to return.

"I was amazed by how everything is so advanced, and I really loved the educational system here," she said. "So, I remember telling myself, 'One day, I'm going to come back to this country, and I'm going to study here."

Zambia, where she grew up, faced economic challenges, which sparked her interest in studying economics. "I wanted to learn more about why things are the way they are," she said.

Her parents managed to raise enough money to send Mukuka to University of Birmingham. Then COVID-19 struck, affecting the economy and exchange rates, which made it harder for her parents to provide financial assistance. International fees and the cost of graduate visas also make it more expensive to study in the UK.

"I remember one day praying and just asking for help from God," she said. "I typed the word scholarship, and I found Scholarship America, stumbled across Milliman. I saw I fit the requirements, and so I was excited." Her sister, who was already attending college in the UK, encouraged her to apply.

"My sister is my number two cheerleader, right after my mom, and she told me, 'Look, you've got nothing to lose,'" Mukuka said. "When I received the email about the scholarship, I remember screaming and jumping up and down, I was just so happy, and I immediately called my sister."

A Milliman welcome

Shortly after Mukuka received the email notification, Anna Pelc and Joanne Buckle in London called her to share more about Milliman, including the firm's inclusive culture and mission to protect people's health and financial security. Joanne volunteers with Milliman's UNDP Global Actuarial Initiative (GAIN), which helps develop actuarial expertise and manage increasing risks faced by people in developing countries.

"I thought, 'Wow, this company is so amazing because I'm very passionate about these things, especially back in my country,"

Continued on page 32



Genius Mapalo Mukuka fulfilled her childhood dream of attending college in the United Kingdom. She now works in Milliman's London office.



Mukuka said, "It resonates with my values, and I love the culture."

"I believe it's really important for good decision-making to have diverse inputs and perspectives from a range of people," said Joanne. "I am also passionate about helping people achieve their potential, whatever their background."

Mukuka received Milliman Opportunity Scholarships for two more years and an internship, another major turning point. "I was so excited because it's really difficult to get an internship in the UK, especially for international students," she said.

Just when she didn't think it could get any better, Milliman offered Mukuka a full-time job. She started as an associate working with the business analysts in Life Technology Solutions in September 2023.

"I was like, 'somebody pinch me," she said. "It's like a dream come true. and I see myself being here in the long run because I'm growing a lot." Mukuka has learned programming languages Python and R.

She's found Milliman to be a welcoming place where you can talk "It's like a dream come true, and I see myself being here in the long run because I'm growing a lot."

- Genius Mapalo Mukuka

to anyone, including principals and equity principals. "No question is too silly," she said. "I can be myself, and it's been an amazing journey."

Her passion for her work and inclusion led her to volunteer as a mentor for Generating Genius, a UK organization that aims to help talented students from disadvantaged backgrounds excel in STEM careers. "I've talked about actuarial science, and it seems like many young people don't know about it," she said. "And it was good to help them figure out their career trajectory."

Building financial security

The Opportunity Scholarship awards helped her whole family by reducing the financial burden while both daughters were in college. Mukuka's brother also plans to attend college.



Genius (right) and her sister Princess celebrated Genius' graduation from University of Birmingham in the UK.

"Now, I can also help out financially," she said. "My parents invested in me, and Milliman invested in me. I'll be able to help my brother, and my parents don't have to bear the whole expense.

Looking back now, I'm so happy that by God's grace, I can tell the 11-year-old me, 'You said you'd come here, and not only did you study here, but you're working here."



Opportunity Scholarship recipients share stories about the scholarship's impact on their education.









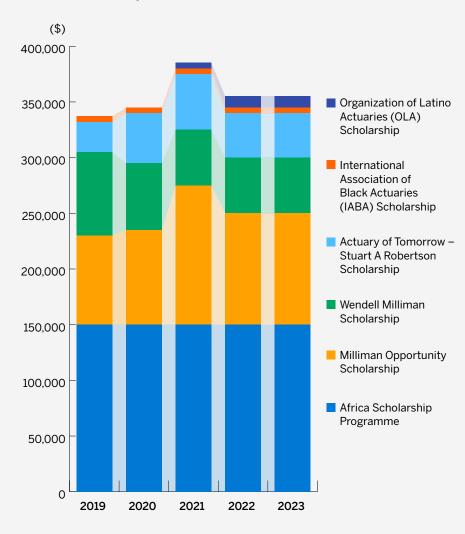
Scholarships expand opportunities for students globally

illiman provides educational opportunities with scholarships that encourage academic achievements in actuarial and computer science, mathematics, and finance.

- The Milliman Opportunity
 Scholarship started in 2017
 and assists students from
 ethnic groups and races that
 are underrepresented in the
 fields of actuarial science, data
 science, computer science,
 economics, programming,
 mathematics, statistics, data
 analytics, or finance. Recipients
 must have demonstrated
 academic excellence and plan
 to pursue a career in actuarial
 science or related fields.
- The Stuart Robertson Actuary of Tomorrow scholarship started in 2005 and assists students majoring in actuarial science.
- The Wendell Milliman Scholarship started in 2010 and assists college-bound children of Milliman employees.

- The Africa Scholarship Programme started in 2023 and assists African students with postgraduate studies for actuarial and other sciences, developing solutions to mitigate the impact of climate change on African nations. The scholarships are offered in collaboration with African Risk Capacity Limited (ARC Ltd.) and cover tuition, housing, and living expenses, and include a two-year internship with Milliman or ARC Ltd.
- Milliman's sponsorship of the International Association of Black Actuaries (IABA) since 2016 includes an annual named scholarship and internship.
- Milliman's sponsorship of the Organization of Latino Actuaries (OLA) since 2019 includes an annual named scholarship and internship.

Milliman Scholarships 2019-2023





OUR WORLD

Primary students in Addis Ababa, Ethiopia wash their hands at handwashing stations provided by Splash and funded through the Milliman Giving Fund.







USAID PREPARE Initiative

n 2023, Milliman joined 20 other private sector partners working to provide business solutions that help countries adapt to severe effects of climate change through United States Agency for International Development (USAID) PREPARE initiative (President's Emergency Plan for Adaptation and Resilience).

PREPARE aims to help over half a billion people in vulnerable situations in developing countries adapt to and mitigate the impacts of climate change by 2030.

Milliman is committed to this effort, and through our UNDP Global Actuarial Initiative (GAIN) partnership, we're working to train actuaries so they can use risk management and insurance techniques to protect themselves, their families, and their communities.











Verified sustainability goals mark progress to net zero

n 2023, Milliman reached a significant milestone in its commitment to sustainability: receiving official verification for our carbon reduction targets from the Science Based Targets initiative (SBTi). This marks a pivotal shift, starting the transition from setting carbon reduction goals to the practical implementation of carbon reduction strategies.

The SBTi conducted a thorough evaluation of Milliman's short- and long-term environmental goals. aligning them with the SBTi's netzero criteria and criteria version 5. We received formal verification in June 2023.

Our journey to net zero

Like other professional services firms, Scope 3 is our largest source of emissions with travel and purchased goods the primary contributors. These two categories will be our primary focus during our decarbonization process. The good news is that these categories are also where the firm has operational control to reduce emissions, and we have begun to assess specific opportunities for reduction within those categories.

We are breaking our work into three-year phases, which will allow us to monitor our progress, while setting manageable annual goals.

Continued on page 37

MILLIMAN COMMITS TO REACH NET-ZERO GREENHOUSE GAS **EMISSIONS ACROSS THE VALUE CHAIN BY 2040.**

June 2023, SBTi officially verified our Science Based Targets initiative (SBTi) goals for net zero.

Near-term target – Milliman commits to reduce absolute scope 1, 2, and 3 GHG emissions.

by 2030 from a 2019 base year.

Long-term target – Milliman commits to reduce absolute scope 1, 2, and 3 GHG emissions.

by 2040 from a 2019 base year.

TWO WAYS WE'RE MAKING PROGRESS

Forums

Location matters for events. In 2023, roughly 25% of attendees at our European Consultants Forum traveled via mass transit. The reason? It was held in Paris. a highly accessible city via mass transit from all over the EU. The firm also began to look at the food served during forums and selected the sustainable food menu at multiple events, which replaced carbon heavy menus with more plant-based options.

E-waste circularity

Multiple offices throughout the United States work with Revivn. a certified B-Corp e-waste management company, to facilitate our e-waste management. Revivn manages both sustainable/ethical

recycling and disposal, but also repurposes and redistributes surrendered IT assets to those in need. In 2023, five offices managed 2,750 pounds of e-waste through Revivn, including 74 laptops that were repurposed.



A journey that takes a village

2023 brought into sharp focus how strong internal partnerships are critical to our success. The social impact and sustainability team worked closely with our finance and procurement teams, collaborated with the meeting planning and business development teams, and engaged Milliman's business units themselves—all with one purpose: to engage the firm to thoroughly inform our decisions.

Milliman's internal professional development events, known as forums, are a significant portion of our travel footprint. We are identifying ways to reduce our travel impact through operational improvements within and around these events.

With purchased goods and services as our other largest emissions category, we have begun the process of assessing opportunities for reductions through vendor management.

We continue to refine and improve our data capture and methodologies. We're also increasing our primary data acquisition, assessing policy supports, aligning with global procurement priorities and requirements. We're working across the firm to ensure our carbon reduction strategies not only meet our net zero goals, but also meet client and industry standards.

Looking forward

In 2024, Milliman will enter the second year of its first three-year phase, leveraging the valuable insights and robust partnerships established in 2023. Forthcoming actions will focus on presenting evidence-based and time-sensitive operational recommendations for reducing our carbon footprint. These will be submitted to the Board of Directors for their review and endorsement, ensuring engagement and decision-making from the highest level of leadership.

Milliman is committed to following the same guidance we give our clients, including businesses, governments, and communities.

Principal and actuary Nancy Watkins is a leading expert on climate resilience and a driving force in Milliman's Climate Resilience Initiative. She noted in 2023 testimony before the U.S. Senate Committee on the Budget that, "The cost of driving down climate risk is much lower than the cost of inaction."

This ethos informs our approach. The endeavor to reduce Milliman's carbon footprint is a continuous and evolving journey.

By conducting thorough analyses and fostering collaboration within the firm, we continue to lay the essential groundwork for a resilient and successful path toward achieving net zero by 2040.

"The cost of driving down climate risk is much lower than the cost of inaction."

 Nancy Watkins, Principal and Consulting Actuary











New Delhi office building stands out for its environmentally friendly design

illiman's largest office, in New Delhi, India, is located in one of the most energy-efficient buildings of all the firm's offices.

When the New Delhi office grew out of its original space, employees were excited to move to a modern building that embraces green and sustainable design, said Anand Shankar, general manager of New Delhi shared services.

"This approach results in a building that minimizes water and energy consumption, creates a healthy

work environment, and leaves a low carbon footprint," Shankar said.

Milliman was the first company to lease space in the new AIPL Business Club building when it opened in 2019. About 250 of the office's 640 employees regularly work in the office. Others work remotely and come in periodically for employee events and meetings.

Air quality in the city can be poor October through December, said Dinesh Marwah, associate director of finance and accounts. And the building's filtered air offers employees a healthy work environment.

Employees also have access to an onsite health club. "Employees have a lot of fun coming to the office," he said.



Milliman's occupancy of a GRIHA 4 Star and LEED Gold certified building contributes to sustainability efforts in India.

GREEN BUILDING WITH GRIHA* 4 STAR CERTIFICATION & LEED GOLD CERTIFICATION



Sustainable Materials

- Green chemicals used in housekeeping
- Recycled ash blocks used in construction work



Energy Conservation

- 125 KW rooftop solar panels tied to the grid
- LED light fixtures with automatic controls
- Building automation for equipment monitoring
- Maximized natural light in the office areas



Water Conservation

- Zero discharge building
- 100% recycled water for landscaping
- Native and drought resistant species incorporated into landscaping
- Minimum lawn area to reduce water consumption



Well-being Measures

- Fresh air recovery unit and inflow
- MERV 13 rated air filters
- Health club



^{* (}Green Rating for Integrated Habitat Assessment) is a certification for assessing green buildings in India





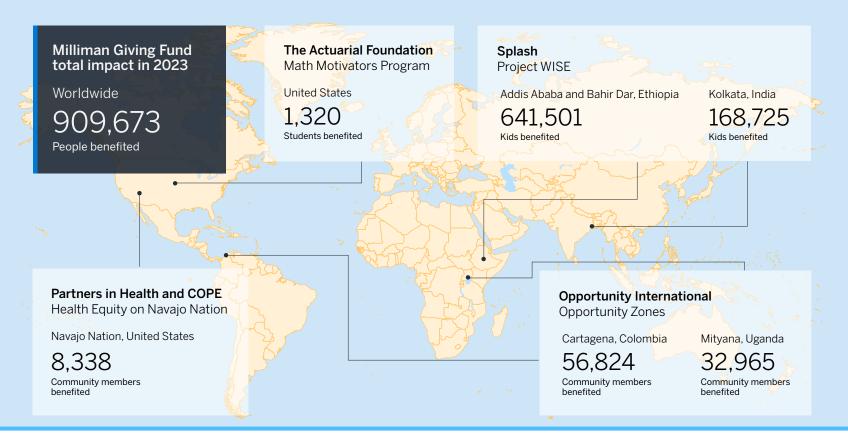








Milliman Giving Fund donations change lives on a global scale



The Milliman Giving Fund (MGF) is not your typical corporate foundation—it's entirely funded by employee and alumni donations. In 2018, employees and alumni started the MGF to amplify Milliman's mission by funding transformative programs that improve the lives of

communities around the world, not just in the places where we work.

The MGF is managed by a committee of current and retired employees who volunteer their time. Milliman pays the fees, so all donations go directly to the organizations it funds.

The MGF funds programs that make lasting changes to address complex problems. These programs can be multifaceted and hard to explain. While a photo or video can be helpful, seeing it in person can be life changing.

In 2023, a few committee members visited two of the programs that MGF funds—the Opportunity Zone in Mityana, Uganda, and Project WISE in Ethiopia—to see the impact of each program and to deepen our partnerships through improved understanding.











Splash transforms community health through schools

ne of the most fundamental human rights is the right to clean water and sanitation. Yet, millions of people around the world lack access to these basic necessities, putting their health, education, and livelihoods at risk.

In Ethiopia, children at 94% of all government primary schools in Addis Ababa now have access to child-friendly toilets and handwashing stations, clean drinking water, and education through clubs that promote awareness and behavior change around handwashing and menstruation, thanks to Splash.

The MGF committee members had the opportunity to visit a school where Splash had completed its intervention, and one it had not yet started (since the program began, 38 new schools were built, increasing the total schools in Addis Ababa from 485 to 523).

At both schools, the children had access to toilets and sinks. But the differences in these facilities was stark.

The "before" school had two graying concrete sinks, fed by a visible garden hose, with sagging taps and no soap.

Only a few poorly ventilated toilets served several hundred students. There was no filtered drinking water.

At the "after" school, colorful orange handwashing stations with mirrors and soap greeted students outside separate male and female toilets. Students in brightly colored vests—members of the hygiene club—hovered nearby to ensure there was soap and discuss the importance of handwashing. Separately, blue sinks indicated clean drinking water, purified with filters. This same filtered water is used for cooking student lunches.

This story from Rayna, a student in grade 7 in Addis Ababa, describes what a difference it made to her school.

The students at the "after" school treated the visitors to demonstrations, showing the importance of hand washing, and a skit about menstrual hygiene that emphasized the fact that menstruation should not stop girls from participating in activities. This drove home the importance of the behavior change aspects of the program, in which children, supported by teachers, educate their peers

Continued on page 41



A teacher and member of the student hygiene club demonstrated handwashing to Milliman Giving Fund guests.

Splash is a social justice organization that focuses on providing clean water to vulnerable children living in the poorest conditions within the largest cities.

In 2019, they launched **Project WISE** (WASH in Schools for Everyone) with the goal of reaching 100% of public schools in Kolkata, India, and Addis Ababa, Ethiopia. In 2021, the MGF became a significant corporate funder of this effort, with a three-year, \$750,000 grant. As of 2023, Splash has provided over 800,000 kids with water, sanitation, and hygiene services.



on these important topics. These lessons make their way to families and throughout communities, leading to wider change, which results in improved health outcomes. Selam, another student in Addis Ababa, shares in **this video** how the training has changed her school, family, and even her future plans. You can read more stories on Splash's website.

The timing of this visit coincided with the end of the Milliman Giving Fund's grant for Project WISE Phase 1, and the beginning of the MGF's annual year-end fundraising campaign.



Learn about Splash's impact on students, teachers, and maintenance staff.



Milliman Giving Fund committee members gathered with student volunteers from a primary school in Addis Ababa, Ethiopia, where Splash has made a difference.















Giving back to our communities

illiman's global culture of giving is deeply local. While the Milliman Giving Fund focuses on global largescale transformational solutions to complex issues, employees also donate to local charities and volunteer with professional and charitable organizations.

In fact, some of our offices and business units have their own charitable giving committees.

This allows them to build deeper relationships and drive more positive change in their communities.

Local charitable giving and volunteering

New Delhi, India – The New Delhi office is one of Milliman's largest and is comprised of people who work for a variety of Milliman's functional areas and business units. They have a strong culture of charitable giving, enshrined in India's CSR law, which

requires that companies donate 2% of annual profits to registered charities.

Milliman's New Delhi office has a board of directors that votes on the organizations to receive the donations and ensures they follow stringent procedures to document the funds. Their giving is focused on large organizations that promote education and empowerment of girls.

In 2023, they donated \$35,000 to three organizations, **Betterworld** Foundation, Shikshadaan, and **Earth Saviors.**

"A few families where the girls have received these funds have gone on to get good jobs and be breadwinners for their families," said Dinesh Marwah, who administers the program.

In addition to donating, employees occasionally volunteer to help with technology, or to participate in children's cultural activities.

IntelliScript - Milliman's IntelliScript practice, which has employees in Milwaukee and throughout the United States, has a Community Giving committee that gave \$300,000 to

GLOBAL GIVING

Our offices around the world volunteer and donate generously to local charities.

2023 Donations:

\$776,871

2023 Volunteer hours:

1,046

six organizations in 2023. Committee members vary depending on interest. and they have criteria to ensure that organizations align with core values.

In 2023, the selected organizations provided a wide variety of services. They empowered diverse women to excel in technology, and provided services and support to LGBTQ+ youth. They also fostered relationships between veterans, professional athletes, and their communities; and they enabled people with disabilities to strengthen workplace abilities, build life skills, and develop meaningful relationships.



Children from the Pankh Centers of the Betterworld Foundation. Milliman's support provided education, uniforms, supplies, shoes, and refreshments for 340 children.



In sub-Saharan Africa, funds provided access to reliable water projects. Four of these organizations are highlighted on Community Giving-Milliman IntelliScript's website.

Since 2020, they have donated more than \$1.1 million to 13 organizations. "There are so many deserving groups it is hard to choose which ones to support, but when we see the difference our team is making, it motivates us to keep going," said Principal and Managing



Students from Horizons for Youth join Milliman volunteers in Chicago to present their coding project—websites focusing on prominent women in history.

Director Angela Bolduc, a leadership sponsor of the committee, "I really believe this committee helps us deliver on our mission to protect the health and financial wellbeing of people everywhere."

Financial Risk Management -

Milliman's Financial Risk Management (FRM) Practice in Chicago also has a Charitable Giving committee. The organizations they select are STEMoriented to align with the skills of the practice and generally relate to climate, youth, and financial literacy. In 2023, they donated \$102,425 to 12 organizations.

The committee gives grants to organizations and also contributes to the fundraising efforts of employees or matches employee donations to a charity. Sometimes, they volunteer in addition to giving a donation. In 2023, these efforts included a backpack drive for local schools and winter care packages for local shelters.

The committee also funds the annual International Women's Day event, an FRM tradition for 20 years. In 2023, they partnered with the nonprofit educational organization

Horizons for Youth. The students were the highlight of the event, as they showed off the coding project they had undertaken with their Milliman partners: websites focusing on prominent women in history. including the late Princess Diana, Pakistani education activist and 2014 Nobel Peace Prize laureate Malala Yousafzai, and pop diva Beyoncé.

"It is always such an amazing event, and Horizons for Youth is an amazing organization," said Saba Rizvi, an associate actuary with the practice. who leads the committee and helped organize the event. "Their whole goal is to mentor students from first grade all the way through secondary school so they can succeed at the college level and beyond. We're really proud to be associated with them."

Minneapolis, Minnesota - In

Minneapolis, community giving and volunteering decisions are part of the local Social Impact and Sustainability Committee (separate from Milliman's firmwide SIS Committee). They organize events throughout the year. such as fundraisers, a holiday toy drive, road cleanup for a stretch of road they've adopted, food preparation for



Milliman volunteers participated in building a new home with Twin Cities Habitat for Humanity, in addition to a donation. L-R: Cassi Noel, Rylee Sevigny, Courtney Williamson, Robbie Hank, Derek Lesniak, Jack Bridges, Matt Mickolichek, Dexter Mosley, Caleb Stracke, Susan Knutson, Andrew Herder, Joey Millner.

a local nonprofit, and even building a house with Habitat for Humanity.

The management group is supportive—donating, matching donations, and sometimes even participating—such as in the annual polar plunge to benefit Special Olympics MN. In 2023, they donated \$17,782 in total to four organizations, including \$11,065 from the management group.

Actuarial industry awards for volunteering

In addition to giving back to the communities where they live and work, Milliman professionals also give back to their professions through volunteering and leadership in professional organizations. Bill Sayre, Al Klein, Sinéad Clarke, and Jason Karcher have all given back to the actuarial profession, and in 2023, the profession recognized them in return.

Principals Sayre and Klein were among the honorees for the 2023 Outstanding Volunteer.

Award given by the U.S. Society of Actuaries (SOA).

Sayre was recognized for guiding new faculty members and his commitment to mentorship. The award noted his inclusive approach during candidate discussions and how it contributed to growth and learning.

Among his contributions, Klein was singled out for his role as a faculty member during the March 2023 Fellowship Admission Course, overseeing and delivering exceptional content, including his pursuit of improvement and commitment to innovation.

Clarke, a consulting actuary in Dublin, Ireland, received the Bruce Maxwell Award for Outstanding Achievement by the **Society of Actuaries In Ireland**. Clarke established a virtual work program for 15- to 16-year-olds to try out an actuarial career over the course of a week.

The program was for boys and girls, but a key goal was to create an inclusive place for teenage girls to learn about the actuarial profession and see female role models in various stages of their actuarial careers, with the hope of improving the profession's gender ratios in the future.

"I am so proud that the SAI is taking tangible action to improve gender ratios, and that it values the importance of a diverse and inclusive pipeline of future Irish actuaries," Clarke said when she received the award.

Karcher, an actuary and health policy consultant, received an Outstanding Volunteerism Award from the American Academy of Actuaries. He was recognized for his role helping the Academy provide an unbiased actuarial perspective on the many health policy issues facing the United States.

"I have certainly enjoyed the opportunity to participate in this task," Karcher said. "But the real reward has been the time spent discussing these issues with the Academy's many devoted and highly knowledgeable volunteers—principled actuaries from insurance companies, consulting firms, and regulatory agencies whose many unique perspectives have broadened my understanding of the many facets of our health coverage ecosystem."

"I am so proud that the SAI is taking tangible action to improve gender ratios, and that it values the importance of a diverse and inclusive pipeline of future Irish actuaries."

Sinéad Clarke, Principal & Consulting Actuary









Employee helps build a professional network for South Asian colleagues

Rehan Siddique learned about the value of diversity at a young age as a Pakistani American who grew up in Little Rock, Arkansas.

Only one mosque served the small but diverse group of Muslim residents. "It was a pretty unique situation growing up with all the different Muslim backgrounds from all over the world—Black, Middle East, South and Southeast Asian." he said.

"I made friends with a lot of great people from different cultures and learned a lot," he said. "I carried that mindset forward in all aspects of my life, making sure to be inclusive and understanding of everyone's lived experience." Siddique is an actuary who works from Chicago on climate change risk, wildfire, flood, and other property and casualty projects.

These influences led him and a group of colleagues in the industry to launch the South Asian Network of Actuaries (SANA). The group aims to promote a global network of South Asian actuaries, increasing the number of South Asian actuaries and making the actuarial profession more inclusive.

Starting as the group's networking chair and then vice president of SANA's Board of Directors, Siddique has helped grow the group, which launched in 2021 to provide

networking and professional development opportunities.

SANA helps aspiring actuaries prepare for exams by providing access to study materials, and through a scholarship program, starting in 2023. They are adding a career fair in 2024.

Siddique is also helping build the actuarial profession in Ghana through Milliman's partnership with the United Nations Development Program—UNDP-Milliman Global Actuarial Initiative (GAIN). GAIN contributes to the growth of actuarial expertise and helps developing countries and the insurance industry manage risks and promote climate and disaster resilience.



Rehan Siddique (far right) with the SANA Board of Directors.

Milliman's Asian employee resource group promotes and partners with the **South Asian Network of Actuaries** to further their shared missions.

BUILDING DIVERSITY IN OUR PROFESSIONS

International Association of Black Actuaries (IABA)

Milliman has sponsored IABA since 2016. This includes a seat on IABA's Corporate Advisory Council, participation in the annual meeting and career fair, and an annual Milliman-named scholarship and internship.

Organization of Latino Actuaries (OLA)

Milliman has been a platinum sponsor of OLA since 2019. We participate in the OLA annual meeting and recruiting event and award an annual Milliman-named scholarship and internship.

Network of Actuarial Women and Allies (NAWA)

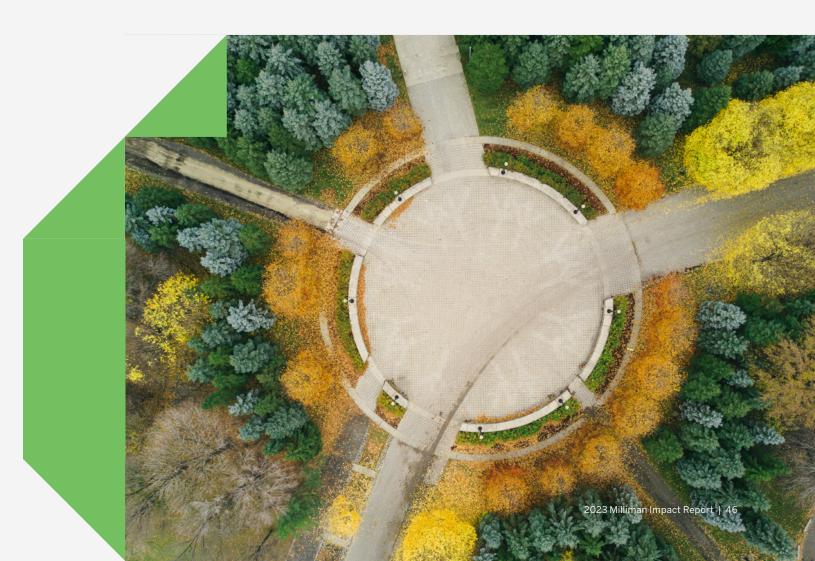
The firm has sponsored NAWA since 2021. We hold a position on NAWA's Corporate Action Council and sponsor the annual meeting, as well as post featured job openings on the NAWA website.

Abacus Actuaries

Milliman began sponsoring Abacus Actuaries in 2023. Our sponsorship as an ally includes recognition, prior registration, and participation in an upcoming career fair.

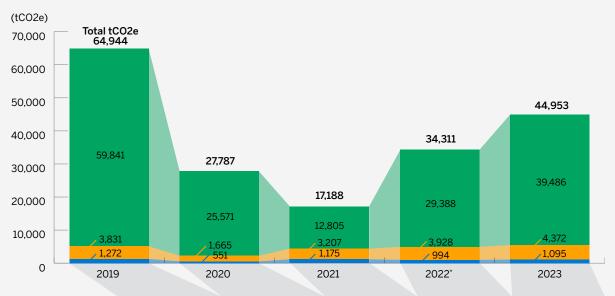


GOVERNANCE AND REPORTING



Our program – by the numbers

Greenhouse gas emissions



	2019	2020	2021	2022*	2023
Total tCO2e	64,944	27,787	17,188	34,311	44,953
Scope 1 ■	1,272	551	1,175	994	1,095
Scope 2	3,831	1,665	3,207	3,928	4,372
Scope 3	59,841	25,571	12,805	29,388	39,486

^{*} Our 2022 inventory has been recalculated with updated data resulting in a change to the previously stated value of 43,285 metric tons CO2e in our 2022 report. Milliman plans to maintain a 5% significance threshold for recalculating and restating its GHG base year data in line with the Greenhouse Gas Protocol.

2023 Ratings

OUR SCORES FROM ANNUAL REPORTING

CDP score:

B-

EcoVadis score:

46
and "Committed"
medal awarded

IntegrityNext rating:

GREEN

UN Global Compact: **Signatory since 2019**



Overview and progress

illiman is independently owned and managed by our principals and led by a board of directors that consists of senior leaders from diverse practice areas. It is the responsibility of Milliman's leaders to invest in the success of the next generation by building their practice, investing in their people, and passing it on to the next generation. We are committed to upholding our mission and protecting our values of quality, integrity, and opportunity, for future generations of Milliman leaders and employees.

Milliman operations are governed by policies that ensure work is high quality and provided in an ethical manner. These policies are regularly updated, and updates are communicated to the firm. All policies are available to employees on our intranet. Each new employee is required to acknowledge certain Milliman policies upon hire and annually thereafter.

Milliman is committed to providing superior services and work products. In keeping with our values of quality, integrity, and opportunity, we promote transparency and require peer review of all our projects to ensure that we deliver on this commitment.

Milliman employs a committee structure to effectively manage our widely distributed business operations and functions. All committees have a charter, a transparent reporting structure, and are required to set goals and report on progress.

Social Impact and Sustainability

The SIS department is led by a Chief Sustainability and DEI officer who reports directly to the President and CEO. The team consists of a Director of Social Impact and Sustainability, an SIS Program Manager, a SIS Analyst, and a DFI Coordinator.

Governance progress

In 2023, Milliman began a voluntary three-year plan to become fully compliant with the UK Modern Slavery Act by 2026. In 2024, we will publish the requisite transparency statement on milliman.com and begin the assessment of our vendor pool. In subsequent years, we'll focus on evaluation and implementation. These efforts are part of establishing our firm's global supplier engagement program, which will be supported by policies and enforcement mechanisms.

Additional details about our structure and governance are available in the next section of this report in the 10 Principles of the UN Global Compact, and in our Social Impact and Sustainability Statement and Policies and Code of Conduct.



The 10 Principles of the UN Global Compact

s a signatory of the United Nations Global Compact, Milliman incorporates the UN's 10 Principles into its strategies, policies, and procedures affirming our culture of integrity.

Milliman has five ways to ensure all employees are aware of and compliant with our standards:

- Each employee reviews select policies at the outset of their employment and all policies are available on our intranet to all staff.
- The chief compliance officer emails all employees when policies are updated. Education and training are available through Milliman's e-learning platform, Milliman University. Specific training, such as anti-harassment and security awareness, is required periodically.
- A peer review process is in place to assess risks, compliance, business effectiveness, and ethics for each line of business within Milliman.
- The firm also has an internal audit process that reports to the Audit Committee of our board.

 The chief compliance officer provides requisite reporting on an annual basis to the board of directors.

Human Rights

PRINCIPLE 1

Businesses should support and respect the protection of internationally proclaimed human rights.

Milliman policies pertaining to human rights are reviewed and affirmed on an annual basis and updated as needed.

PRINCIPLE 2

Make sure that they are not complicit in human rights abuses.

Milliman is committed to supporting and upholding the provision of basic human rights to all individuals globally.

Our operations are governed by policies and processes that ensure that work is high quality and provided in a legal and ethical manner.

Specialized committees oversee various business areas, including a Social Impact and Sustainability Committee and an Enterprise Risk Management Committee.

The Social Impact and Sustainability Committee directs and provides oversight of Milliman's social impact and sustainability program. It sets annual strategic direction, priorities, and the budget for the firm's social impact and sustainability initiatives.

The Enterprise Risk Management Committee (ERM Committee) is responsible for ensuring that all laws, rules, regulations, and Milliman policies are followed globally. Our Global Compliance Group (GCG) executes this responsibility. The compliance program includes key elements outlined by the Department of Justice and the U.S. Sentencing Guidelines, including policy oversight, training, monitoring, and reporting.

The ERM Committee conducts a global risk assessment that identifies the regulatory risks associated with Milliman's services.

The GCG reviews this risk assessment on an annual basis and oversees

compliance with all Milliman policies. Any employee can report potential violations to the GCG for investigation or through our established whistleblower hotline. If a severe issue arises, the chief compliance officer may report it to the board. The chief compliance officer can report potential issues to all executives. officers, and/or directors.

Training and acknowledgment

We inform each employee of their human rights obligations via our Code of Conduct. All employees are required to review and acknowledge the Code of Conduct annually as a condition of employment. Further training is available on Milliman University on human rights topics, including anti-discrimination and anti-bribery.

Auditing standards

The GCG monitors policies for effectiveness and compliance and makes changes or additions to policies as needed. Focus areas are determined through the risk assessment completed by the GCG, which audits these annual focus areas and reports critical findings to the ERMC.



Handling policy violations

Potential violations may be reported in several ways as outlined in the Whistleblower and Anti-Retaliation Policy detailed in the Employee Handbook and in the Policies section of our intranet.

Once a violation is reported, an investigation will be completed, depending on the nature of the report. If a violation of law or policy is confirmed, disciplinary action is based on the nature and severity of the violation and may include termination of employment and/ or reporting to law enforcement agencies.

Reporting to board

The Social Impact and Sustainability Committee reports on a periodic and as-needed basis to the board on developments in the program and on ongoing initiatives. The ERM Committee reports to the board annually on the committee's and the compliance group's activities. This report includes information on risk assessment, policy review, training, monitoring activity, and potential risks and violations.

Sanctions

Milliman is committed to complying with applicable United Nations Security Council sanctions. We will not sell products or services to individuals, companies, or entities as prohibited by United Nations Security Council sanctions without obtaining an exemption for humanitarian services.

Office of Foreign Asset Control (OFAC)

Milliman complies with the U.S. Treasury Department Office of Foreign Asset Control (OFAC) restrictions on countries and individuals related to economic sanctions programs. We accomplish this in two ways: as part of our client screening process (entities and senior leaders), and through the U.S. Background Check new hire process. In compliance with U.S. regulations, we may provide humanitarian assistance in support of an NGO's authorized activities. This commitment is outlined in our Social Impact and Sustainability Statement and Policies.

Labor

PRINCIPLE 3

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

Milliman recognizes the laws and the fundamental human rights associated with freedom of association and the right of collective bargaining and strives to comply with them.

Globally, we permit the formation of employee resource groups (ERGs), which are empowered to influence company policies, retention and advancement issues, develop future leaders, and increase awareness and employee engagement. We also encourage offices to form Green Teams, and/or volunteering or giving committees, focusing on local sustainability and/or philanthropy. These groups enrich our culture at Milliman.

Additionally, many employees are members and leaders of industryspecific professional organizations, such as The Society of Actuaries.

These organizations promote professional advancement and provide continuing education and issue credentials.

PRINCIPLE 4

The elimination of all forms of forced and compulsory labor.

PRINCIPLE 5

The effective abolition of child labor.

Milliman does not use or allow the use of forced or compulsory labor, modern slavery, servitude, human trafficking, or child labor in our direct operations, indirect operations, or our supply chain.

Milliman has voluntarily put a three-year plan in place to become fully compliant with the UK Modern Slavery Act by 2026. In 2024, we will publish the requisite transparency statement on milliman. com and begin the assessment of our vendor pool. In subsequent vears, we'll focus on evaluation and implementation. These efforts are part of establishing our firm's global supplier engagement program, which

will be supported by policies and enforcement mechanisms.

PRINCIPLE 6

The elimination of discrimination in respect of employment and occupation.

With the full support of our board of directors and executive staff, we're committed to protecting the rights of all applicants and employees.

We recruit, train, promote, and consider qualified applications for employment in all positions without regard to age, ancestry, citizenship status, color, creed, familial status. genetic information, marital status. national origin, political ideology, race, sex, sexual orientation, gender identity, status as an individual with a disability, or veteran status, and we prohibit discrimination against any individual or any other characteristic protected by law.

Milliman upholds all applicable labor laws, including all privacy regulations, at all stages of employment at the firm.

Labor concerns

Milliman's Anti-Discrimination and Unlawful Harassment Policy states that all employees are responsible for ensuring that our workplace is free from all forms of discrimination and harassment. Employees are required to avoid any action or conduct that could be viewed as harassment. including unwelcome sexual advances. offensive conversations or comments. requests for sexual acts or favors. or other verbal or physical conduct of a harassing nature. Employees must also refrain from any action or conduct that could be viewed as violent or threatening behavior toward a coworker, coworker's family. supervisor, or visitor.

Labor concerns are protected by three policies/trainings that all employees and contractors must abide by and are a condition of employment: attesting to the Employee Handbook upon their hire, and annually attending Antiharassment Training and attesting to the Milliman Code of Conduct. The Code of Conduct contains four key areas: values, values in action. reporting misconduct, and response. Values in action encompasses:

- Responsibilities
- Equal opportunity
- Unlawful harassment and discrimination
- Conflicts of interest
- Illegal activity
- Appropriate use of technology and company resources
- Privacy rights and obligations
- Health, safety, and well-being

The Code of Conduct also details critical areas and methods of response to report violations, such as our whistleblower policy and our commitment to non-retaliation.

Diversity, equity, and inclusion

Our diversity strengthens our firm and drives innovation. In 2022. Milliman hired Dr. Christal Morris as chief sustainability and diversity, equity, and inclusion (DEI) officer to lead our firmwide diversity efforts. Since then, we have hired a DEI

analyst to support our growing DEI initiatives and programs.

A DEI Committee, comprised of leaders from across the firm, drives efforts to increase awareness and build a more diverse workplace. We also have a firmwide DEI Community of Practice for firmwide sharing and collaboration on intersectional themes and seven Employee Resource Groups (ERGs).

Employees are encouraged to display the pronouns they identify with in their email signatures or their nametags at internal forums—e.g., "they, them;" "she, her;" "he, him." It's part of our commitment to a culture of respect and inclusion and sends a clear sign of solidarity and support to all employees.

We promote equality and diversity in the workplace through required annual anti-harassment and discrimination training. Through Milliman University, we also provide classes about cross-cultural considerations, unconscious bias. understanding gender identity, and creating a more inclusive workplace.



Additional details on our DEI strategy, program, and activities, and our ERGs can be found in the Our People section of this report.

Professional development

Milliman strengthens our company by encouraging employees to grow and build new skills to support their career development and cultivate the next generation of leaders. The firm safeguards against inequitable or discriminatory advancement through our requisite annual anti-harassment and discrimination training, role transparency, and by providing advancement guidelines. We are committed to transparency in advancement and are in the process of creating career paths for our workforce.

There is formal committee support through our Professional Development Committee, supporting these efforts by identifying and exploring opportunities to help employees advance professionally and develop technical and consulting skills that supplement their expertise.

Milliman also has a robust learning and development platform called

Milliman University, which offers in-person training and virtual options, associated with LinkedIn Learning. We have a more advanced leadership training program called the Milliman Leadership Academy, and a mentorship program described in the Our People section of this report.

Employee health and safety

Though the risk of workplace safety issues is low due to the nature of Milliman's business. Milliman is compliant with all local workplace safety laws and regulations, including OSHA compliance in our U.S. offices.

Each office provides safe working conditions that are conducive to creating high quality work. Each office is required to develop a disaster plan that includes a focus on employee safety in case of emergencies. This may include training to provide first aid, CPR, and emergency response procedures.

During the COVID-19 pandemic, the firm created guidelines for safe return to work and flexible options for remote and in-office working. Post-pandemic, many offices have maintained the flexibility of hybrid

working environments or are offering more remote work options.

Benefits and leaves protections

Milliman provides a comprehensive and competitive suite of insurance and retirement-focused benefits. In addition, we provide a generous paid time off policy for vacation or illness.

We operate in over 30 countries, many of which have family leave benefits provided via government programs. In countries/jurisdictions where paid family leave is not protected/available through government leave programs. Milliman may offer benefit packages that include paid family leave. For example, U.S. employees are eligible for 12 weeks of paid parental leave after a one-week elimination period. The benefit is paid at 100% for those who've completed one year of service and worked 1.250 hours or more in the 12 months immediately preceding the child's birthdate or date in which the child was placed for adoption.

Workers' compensation/occupational injury benefits are available to all employees and are based on the policy and laws of the local state/ country. Workers' compensation and

occupational injury benefit covers medical expenses and time lost from work if you suffer a work-related injury or illness.

The firm provides additional health resources that supplement our benefits package, through our employee assistance program, available at no cost to employees in many locations. These resources can include mental health and suicide prevention resources, and legal and financial management services. Milliman also provides access to Calm, a wellness management app. We encourage the formation of fitness groups, such as our Peloton and Strava fitness groups, and regularly host group wellness events such as online yoga.

Our ERGs have raised awareness and frequently engage on health-related topics such as PTSD, suicide, grief management, and neurodiversity. They provide safe spaces for employees to discuss and share topics that affect their happiness and well-being.



Fair hiring practices

Milliman engages in fair, nondiscriminatory hiring practices. As a U.S. federal contractor, Milliman has an annual obligation to notify contracted vendors, subcontractors. suppliers, and recruiters that Milliman expects them to comply with the requirements for non-discriminatory hiring and employment practices outlined in Executive Order 11246. In the United States, we have policy that prohibits hiring managers from requesting or soliciting salary histories directly from applicants or indirectly through third-party recruiters.

All hiring is conducted through our HR management system, which ensures GDPR-compliant security for applicants and transparency of roles and hiring expectations. All postings are vetted through our human resources department to safeguard against discriminatory language or practices. Training is available to all hiring managers on fair, nondiscriminatory hiring practices, antibias in job description development and job posting language, and best practices in interviewing.

Wage and fair pay protections

Milliman is in the process of building out a global compensation management program. In 2022, we hired a compensation manager serving our U.S. locations to drive equitable and transparent compensation practices based on U.S. federal and state guidelines. To safeguard against unfair and inequitable hiring compensation practices, all roles in the U.S. are required to have approved job descriptions and compensation ranges prior to posting them. In addition, some locations have performed wage gap analyses to further protect our workforce. For instance, we complete the requisite analyses per French labor laws: article D.1142-5 of the labor code, and formally submit our gender pay gap reports per regulation.

Performance management

All employees are required to receive an annual written performance review. Many teams provide more frequent quarterly or biannual reviews to better support performance management. Goals and reviews are recorded in an HR management system and are

available at any time to employees and managers. Training is available to all employees in setting goals, and manager-level training is provided for performance management.

Environment

PRINCIPLE 7

Businesses should support a precautionary approach to environmental challenges.

PRINCIPLE 8

Undertake initiatives to promote greater environmental responsibility.

In 2022, Milliman's Board of Directors formally approved Milliman becoming net zero by 2040, and we set validated science-based targets to reach net-zero emissions across the value chain by 2040.

Milliman committed to reduce absolute scope 1, 2, and 3 GHG emissions 46.2% by 2030 from a 2019 base year, and to reduce absolute scope 1, 2, and 3 GHG emissions 90% by 2040 from a 2019 base year. These

targets have been approved by the Science Based Targets initiative.

In 2023 the firm hired a director of social impact and sustainability to lead these efforts, as well as a social impact and sustainability analyst.

Many of our offices are located in LEED or Energy Star certified buildings that are energy efficient and use water saving and preservation methods. Our largest office is in New Delhi and is in a GRIHA 4 Star building that is a zero-discharge facility, has automatic irrigation systems for landscaped areas, uses 100% recycled water for landscaping, and has fixtures that yield 25% savings in water consumption.

Throughout our offices in over 30 countries, we have programs for waste reduction, such as composting, recycling, eliminating single-use plastics, e-waste recycling, transportation subsidies/programs, and paper use reduction. We work with landlords/property management companies on including green lease language in lease renegotiations and submetering of our offices (for better GHG data) and to



implement green strategies, such as switching to LED light bulbs.

Our headquarters in Seattle has a transportation program and offers mass transit passes free of charge to all employees with broad participation. For waste reduction, the Seattle office's approach to circularity includes participating in the city's robust recycling and composting program and replacing single-use plastics with compostable materials in kitchens and break rooms. Staff implemented a "classified ads" intranet site to re-distribute and reuse materials/equipment.

PRINCIPLE 9

Encourage the development and diffusion of environmentally friendly technologies.

Milliman also embraces a circularity approach in our e-waste management. Multiple offices throughout the United States work with Revivn, a certified B-Corp company that manages sustainable/ethical e-waste recycling and disposal, and also repurposes and redistributes surrendered IT assets to those in need. In 2023, five offices managed 2,750 lbs. of e-waste

through Revivn, including 74 laptops that were repurposed.

Milliman is a heavy user of large grid-computing, and we partner with vendors who adopt aggressive carbon mitigation measures in their own operations, such as Microsoft. which will be 100% renewable energy, water positive, net zero in deforestation from new construction, and zero waste by 2030. In our own operations, we are moving away from local servers to the cloud for security, efficiency, and sustainability. In our remaining "in-house" data centers, we optimize our servers for targeted tasks to enhance efficiency and reduce energy consumption.

Anti-corruption

PRINCIPLE 10

Businesses should work against corruption in all its forms, including extortion and bribery.

We are committed to legal and ethical behavior and actively work to prevent corruption in all areas of our business operations. Our values of quality,

integrity, and opportunity and our Code of Conduct guide us along with these policies:

- Anti-Bribery, which prohibits offering bribes to public officials or decision-makers at corporations.
- Whistleblower and Non-Retaliation, which requires employees to report misconduct and prohibits retaliatory action against whistleblowers who report issues in good faith.
- Insider Trading, which prohibits the use of nonpublic information for monetary gain.
- Milliman Information Security and other policies relating to data protection, which require all employees to take steps to detect and prevent threats outside the company where possible.

Anti-bribery

We educate our employees on this policy through communication, training, and requisite annual review and attestation of key policies. Milliman's Audit Committee oversees a series of financial audits by internal and external auditors, and the GCG oversees compliance.

Gifts and entertainment

The receipt and provision of gifts and entertainment must comply with Milliman's Anti-Bribery Policy. All gifts and entertainment must be paid for with Milliman resources and subject to additional financial review. They must be reasonable. taking into consideration the nature of the services provided and the local culture. Gifts and entertainment may not be used to influence any person or to obtain or retain an improper business advantage.

Conflicts of interest

Milliman is committed to a conflictfree environment. As a privately held company, we retain our independence. Milliman's policy requires any employee who becomes aware of a conflict or potential conflict to report it in a timely manner. Conflicts are managed through a series of procedures. starting with a conflict check prior to entering into any client work and continuing with conflict reporting and management throughout the project. Conflicts are analyzed and addressed through either conflict mitigation or disclosure.



Fraud

We're committed to legal and ethical behavior as stated in the Milliman. Code of Conduct. Internally, this is maintained through a series of policies, including our Anti-Bribery Policy and our Whistleblower and Non-Retaliation Policy. Milliman also acts to prevent fraud from outside the company.

Our Milliman Information Security
Policy and other policies relating
to data protection require all
employees to take steps to ensure
that threats from outside the
company are detected and prevented
where possible. All employees are
required to take monthly training on
information security and threats.

Anti-competitive practices

Milliman's Unfair Competition Policy prohibits conduct that reduces competition or involves competition by unfair means. Any anti-competitive activities in violation of this policy may subject an employee to disciplinary measures up to and including termination of employment. We do not collude with competitors to set prices, nor do we attempt to obtain information on competitors'

prices. Employees who perform work for or participate in professional associations pay particular attention to ensure their actions do not conflict with this policy.

Money laundering

Milliman prohibits money laundering and provides training to identify and detect it, so we can ensure that we are not providing any services or support to any individual or entity engaged in money laundering. Several business units globally are legally required to implement anti-money laundering programs. These robust programs are tailored for the types of services provided and the clients who receive the services. Each program is reviewed by an expert located within the business unit on a periodic basis. and employees must report any suspicious activity.

All employees submit to a background check, where legally allowed. In the United States, this includes screening against the Office of the Inspector General exclusion lists prior to starting employment and each month thereafter. Prior to providing services to any potential client, we conduct a thorough background check.

For global entities, this includes a screening through WorldCheck. Our staff remains vigilant and if they notice any suspicious behavior, they're required to report it through the Whistleblower and Non-Retaliation Policy.

Professional integrity

Milliman is committed to providing superior services and work products. In keeping with our values of quality, integrity, and opportunity, we promote transparency and require peer review of all our projects to ensure that we deliver on this commitment. This process requires an impartial, secondary review of work performed, reports prepared. and overall project management. Selected reviewers are familiar with the project but have not performed significant work on the project. The review identifies any outstanding issues, ensures information is presented in a logical and complete manner, and confirms that the overall quality of the work meets Milliman's high standards.



Social impact and sustainability statement and policies

Social responsibility is embedded in everything we do—how we work with clients, hire and develop our people, and interact with our communities. Our corporate social responsibility statement and policies set a standard for ethical and sustainable business practices, innovation that transforms communities, philanthropic pursuits, and diversity and inclusion.

For more information about our social impact activities, contact us at social-impact and visit milliman.com/social-impact.

About Milliman

Since 1947, we have combined technical expertise with business acumen to create elegant solutions for our clients. Today, we are helping organizations take on some of the world's most critical and complex issues, including retirement funding and healthcare financing, risk management and regulatory compliance, data analytics, and business transformation. Visit us at milliman.com.

Solutions for a World at Risk™

The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States.



A primary school teacher in Mityana, Uganda assists a student with writing. The school has benefited from the Milliman Giving Fund through its support of the Opportunity Zone.

