



2022-23 Corporate Responsibility Report



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¹In 2022, the Value Reporting Foundation consolidated into the IFRS Foundation. The SASB Standards also became a resource of the IFRS Foundation as of August 1, 2022, upon the consolidation of the Value Reporting Foundation (which housed the SASB Standards and the Integrated Reporting Framework) into the IFRS Foundation.

Letter From Our CEO



The past several years demonstrated how central technology is to every aspect of human existence. Semiconductors power the essential technologies in a world that is becoming increasingly digital.

2022 was a challenging year for Intel. We continue to operate in a tough market, while simultaneously pursuing our multiyear transformation. To overcome these challenges, we remain committed to the highest ethical standards and use our resources and ingenuity to solve the world's greatest challenges. Our dedication to environmental, social, and corporate governance is key to our success as a business.

I was reminded of this with the recent passing of Intel's co-founder Gordon Moore, an icon whose legacy continues to inspire us every day. Moore was an avid philanthropist and established our commitment to environmental sustainability during a time when companies were not thinking about it the way they are today. This was a big part of his legacy and why corporate responsibility and sustainability remain deeply ingrained in Intel's DNA.

Over the past year, we have had some incredible achievements implementing sustainability as an industry initiative:

- **Driving our value chain toward sustainable computing –**

Achieving net-zero greenhouse gas emissions is one of the most complicated challenges the technology industry faces. In 2022, we pledged to reduce greenhouse gas emissions in our operations and across our value chain. We are focused on achieving 100% renewable electricity, net-positive water, and zero waste to landfill by 2030. We continue to develop a roadmap to drive reductions and ultimately achieve net-zero greenhouse gas emissions across our global operations by 2040.

We are also collaborating with the industry and academia to identify, develop, and pilot alternative green chemistry and abatement solutions, many of which do not exist today. For example, we are working with the industry association SEMI and the Semiconductor Research Corporation to set up a sustainable semiconductor manufacturing program that will strive to develop alternatives to these chemicals. Additionally, we are increasing energy efficiency and lowering the total carbon footprint of our products and platforms, which ultimately helps our customers achieve their sustainability goals.

- **Investing in renewable electricity –** We work with local utility providers to develop new contracting mechanisms that facilitate the construction of renewable electricity projects near many of our sites worldwide. In addition, our on-site alternative and renewable electricity installations have grown exponentially over the last decade—we now have more than 110 across our campuses. I am proud to share that at the end of 2022, our global renewable electricity usage is 93%, up from 80% in 2021. We are focused on finding credible and scalable opportunities to reach 100% globally by 2030.

- **Launching our most sustainable data center processors ever –** New generations of Intel products are designed to deliver higher performance using less energy. The 4th Gen Intel® Xeon® Scalable processors feature built-in accelerators to help drive power efficiency and performance. Accelerators are a more efficient way to achieve higher workload performance, rather than growing the CPU core count. This gives customers an advantage in data center performance, efficiency, security, and new capabilities for artificial intelligence (AI), the cloud, the network and edge, and the world's most powerful supercomputers. We're focused on improving operational usage with features like more energy-efficient designs, AI telemetry, and lower carbon platforms.

In 2022, we also saw the historic passage of the US CHIPS and Science Act. This was a victory for the semiconductor industry as well as American technological leadership and innovation; it will boost American semiconductor research, development, and production, ensuring US leadership in technology that forms the foundation of everything from household appliances to defense systems. Public-private

partnerships are key to generating the large, long-term investments needed to develop critical technologies of the future.

We're committed to deepening our collaborations to build on our current successes. Together, we can further drive tech as a force for good—ensuring the scale of our work with others to create a more responsible, inclusive, and sustainable world, enabled through technology and the expertise and passion of our employees. For example, this past year we also:

- **Achieved \$2 billion in spending with diverse suppliers –** We achieved our first RISE goal eight years ahead of schedule—reaching \$2.2 billion in annual spending with diverse suppliers. This represents nearly 15 times the annual total when our supplier diversity program launched in 2015 and double our 2019 results.¹

- **Expanded digital readiness –** In 2020, we made a commitment to collaborate with governments in 30 countries and 30,000 institutions worldwide to empower more than 30 million people with AI skills by 2030. Currently, we've expanded Intel® Digital Readiness Programs globally by collaborating with 27 country governments, enabling 23,000 institutions, and training more than 4 million people.

- **Reinforced a commitment to responsible AI –** This year, we shared details of our responsible AI strategy, which aims to enable Intel to leverage its place in the AI value chain, drive meaningful progress, and scale efforts broadly. As part of our responsible AI work, we announced the development of [FakeCatcher](#), a technology that can detect fake videos with a 96% accuracy rate. Intel's deepfake detection platform is the world's first real-time deepfake detector that returns results in milliseconds.

We are all part of a globally interconnected evolution. As we continue to transform human progress, we must continue to create world-changing technology that improves the life of every person on the planet. Intel remains fully committed to executing our strategy to deliver leadership products anchored on open and secure platforms, powered by at-scale manufacturing, and supercharged by our people. Our company and our people will continue to have a profound influence driving business and society forward by creating radical innovation that revolutionizes the way we live.

Pat Gelsinger, Chief Executive Officer, Intel Corporation

Letter From Our CPO



Intel's long-standing commitment to corporate responsibility and sustainability—built on a strong foundation of transparency, governance, and ethics—is deeply integrated throughout all aspects of our business. As Chief People Officer, I lead our integrated approach to environment, social, and governance (ESG), which we believe creates value for Intel and our stakeholders by helping us mitigate risks, reduce costs, build brand value, and identify new market opportunities.

Our strategy starts with our people. As such, we have focused on our human capital strategy to help us continue to attract and retain the world's best talent across every function while balancing the needs of the business groups. Our key technical and functional leaders are positioned to deliver on our IDM 2.0 transformation. We remain focused on optimizing our workforce in line with our business objectives and the long-term growth and leadership of the company in the semiconductor industry.

Leadership and I acknowledge the incredible sacrifice our employees make through the company's ongoing right-sizing exercise. These measures were put in place to reduce the impact of the current macroeconomic environment on our long-term business and are expected to be temporary in nature. We remain focused on our IDM 2.0 strategy and goals, investments in our employees, and Intel's leadership in corporate responsibility that help us continue to be an employer of choice. I know these decisions have been difficult, and we remain committed to rewarding employees who have helped us navigate these challenging times.

Intel's RISE framework is our integrated, "One Intel" ESG strategy, which we continue to integrate into our operations, supply chain, industry, and beyond. We also work to enable our customers to meet their environmental and corporate responsibility commitments through our technology and the expertise of our employees.

Our RISE goals focus on fully harnessing the power of technology to solve increasingly complex and interconnected global challenges. We continue to collaborate with the technology industry and other stakeholders. In 2022 we made progress on several industry-wide programs:

- **Continuing our work with the Alliance for Global Inclusion** – In April 2021, we launched the Alliance for Global Inclusion, a coalition of technology and adjacent industry peers focused on driving collective impact in four key areas: leadership representation, inclusive language, inclusive product development, and improving STEM readiness in underrepresented communities. In the second year, the member companies confirmed two additional commitments from the CEOs and ratified the fifth level of the traditional DEI maturity model: collective impact. Every company can use its internal data and benchmark results with the Alliance's Global Inclusion Index, understand where they are in the Alliance's Maturity Model, and establish goals to accelerate results.

- **Supporting efforts to increase the diverse STEM talent pipeline** – The Intel Scholars program aims to expand access and opportunity and to increase the pipeline of diverse STEM talent by providing nearly \$2 million annually to African American, Latinx, Native American, women, and veteran STEM students through higher education scholarships. In 2022, we awarded 194 students across the US scholarships and welcomed them into our Intel Scholars family. In addition to the financial award, every scholar received a welcome box, access to Headspace, a screening call from an Intel sourcer, career-focused training, Intel mentors, and more. We're excited to see many scholars joining Intel this summer for an internship!

Inside Intel, we have made meaningful progress on our RISE goals, including new climate commitments and achievements within our water, diversity and inclusion, and supply chain responsibility efforts:

- **Strengthening our supply chain resiliency** – In 2022, we achieved \$2.2 billion annual spending with diverse suppliers. In addition, we met two milestones to spend \$800 million annually with minority-owned suppliers globally by the end of 2023, including \$250 million with US Black-owned suppliers, and we are on track to meet a third milestone to spend \$500 million annually with women-owned suppliers outside the US by the end of 2025.¹

- **Reducing energy use and driving cost efficiencies** – Cumulatively we conserved approximately 970 million kWh of electricity from the 2020 baseline through the end of 2022, toward our 4 billion kWh 2030 goal. Cumulative savings through 2022 totaled approximately \$70 million. In addition to conserving energy, we purchase renewable electricity and operate on-site alternative electricity projects that provide power directly to Intel buildings. We continued our 100% renewable electricity commitment for our US, Europe, Israel, and Malaysia operations and achieved 93% globally as of the end of 2022. Our absolute Scope 1 and 2 greenhouse gas (GHG) emissions decreased 4% from our 2019 baseline.

- **Serving as an inclusive tech talent destination** – We continue to support the development and progression of all our talent. The representation of Intel US employees who identify as having one or more disabilities increased by over 1%, from nearly 4% in 2021 to almost 5% in 2022. While the percentage of Intel employees who identify as veterans dropped slightly from approximately 7.2% in 2021 to 7.1% in 2022, in absolute numbers, veterans increased by more than 190 individuals. Our global representation of technical women increased from just over 24% in 2021 to more than 24.5% in 2022.

We see the growing acknowledgment of the importance of ESG and our historic and ongoing leadership as an opportunity to fulfill our purpose to create world-changing technology that improves the life of every person on the planet. We are proud of what we've achieved over our long history of action in corporate responsibility and for what's to come.

Christy Pambianchi, Executive Vice President and Chief People Officer, Intel Corporation

¹ A comparison of spending under Intel's supplier diversity program was updated May 17, 2023.

A Year in Review

In May 2020, we laid out our 2030 RISE strategy and goals. Since then we have made considerable progress on those goals and adopted a new 2040 net-zero Scope 1 and 2 greenhouse gas emissions goal. Below are some highlights from 2022 and early 2023:

Creating a Next-Generation European Chip Ecosystem

In March 2022, we announced the first phase of our plans to invest as much as €80 billion in the European Union over the next decade. Included in that plan is €17 billion for a leading-edge semiconductor fab mega-site in Germany, a new R&D hub in France, and additional projects in Ireland, Italy, Poland, and Spain.

[Read more.](#)

Celebrating the Arrival of the “Silicon Heartland”

In September 2022, US President Joe Biden, Ohio Governor Mike DeWine, and other federal, state, and local officials joined Intel to celebrate the company's [groundbreaking](#) on two of the world's most advanced chipmaking facilities. As part of our commitment to develop a skilled pipeline for the two new fabs in Licking County, Ohio, we also announced the first phase of funding for our Ohio Semiconductor Education and Research Program. During this first phase, Intel is providing \$17.7 million for eight proposals from leading institutions and collaborators in Ohio to develop semiconductor-focused education and workforce programs.

A Victory for the Semiconductor Industry

The US CHIPS and Science Act, signed into law in August 2022, provides \$52.7 billion for American semiconductor research, development, manufacturing, and workforce development. The investment in domestic semiconductor manufacturing will help address disruptions in the US economy, military, and society as a whole.

[Read more.](#)

Launching Our Most Sustainable Data Center Processors Ever

In January 2023, we launched the 4th Gen Intel® Xeon® Scalable processors (also known as Sapphire Rapids), delivering for customers a leap in data center performance, efficiency, and security, as well as new capabilities for AI, the cloud, the network and edge, and the world's most powerful supercomputers. The new processors are designed to deliver the right performance at the right power for optimal overall total cost of ownership, helping customers to make optimal use of CPU resources and achieve their sustainability goals.

Leading Supply Chain Responsibility and Impact

As a result of our efforts to protect human rights in the workplace, our suppliers have returned more than \$26 million in fees to their workers since 2014. We believe a diverse supply chain supports greater innovation and value for our business. To that end, we are proud that in 2022 we achieved \$2.2 billion in annual spending with diverse-owned suppliers. In addition, in 2022, Intel ranked number 2 out of 60 public Information and Communications Technology firms in KnowTheChain's annual benchmarking of corporate efforts to address forced and bonded labor risks in their supply chains.



Progressing Toward a Net Positive Water Goal

In 2022, we conserved approximately 9.6 billion gallons of water internally and through community collaborations, and enabled restoration of 3.0 billion gallons through investments in watershed restoration projects. These achievements advanced us toward our goal of net positive water use. During 2022, we maintained net positive water in two countries: the US and India.

Advancing Responsible Mobility and Automotive Safety

In October 2022, Mobileye began trading on the Nasdaq Stock Exchange under the ticker "MBLY" in connection with its initial public offering by Intel (Mobileye's parent company). Building on Mobileye's track record of innovation and success as an Intel company, we believe the IPO better unlocks the value of Mobileye for stockholders. Intel led an IEEE working group to develop an open, transparent, and technology-neutral formal model for automated vehicle safety. The output of this working group, known as [IEEE 2846: Assumptions in Safety-Related Models for Automated Driving Systems](#), was the first international standard that provides guidance on what constitutes expected behavior of automated driving systems. In recognition of its novelty and impact to the industry, IEEE 2846 received the 2022 IEEE Standard Association Emerging Technology Award. IEEE 2846 complements Mobileye's RSS model for automated vehicles and represents an important milestone on the path to increasing safety on our roads through the wide-scale deployment of automated driving technology.

Building a More Inclusive Workforce

We continued our focus on career development and progression of our talent. The representation of US Intel employees who identify as having one or more disabilities increased by approximately 1%, from almost 4% in 2021 to nearly 5% in 2022, and while the percentage of Intel employees who identify as veterans decreased slightly, the absolute number of veterans increased by more than 190 individuals. In addition, our global representation of technical women increased from just over 24% in 2021 to nearly 25% in 2022.

Responding to Humanitarian Crises

When humanitarian crises or natural disasters strike, the Intel Foundation may offer matches to employees' donations to support affected communities. In 2022, 12 relief campaigns raised nearly \$2.66 million in donations and matches to aid recovery across eight countries affected by wildfires, floods, winter storms, tornadoes, earthquakes, hurricanes, and more. More recently, the Foundation launched an employee donation campaign in response to the humanitarian crisis in Ukraine. Together, the Foundation and Intel employees have raised over \$2 million to support Ukraine aid efforts.



Contributing Close to 1,010,000 Employee and Retiree Volunteer Hours

Intel's RISE goals include delivering 1 million volunteer hours every year to improve local communities, including an increase in skills-based volunteerism.

During the pandemic, we fell short of our 1 million hours-per-year goal for two years. We're proud that we hit the 2022 goal with over 1 million employee and retiree volunteer hours globally in support of schools and nonprofit organizations in our communities.



The US CHIPS and Science Act



On August 9, 2022, US President Joe Biden signed into law the US CHIPS and Science Act, what we consider the most significant industrial policy legislation since World War II. This is a victory not only for the semiconductor industry, but also for American technological leadership and innovation.

The CHIPS and Science Act provides \$52.7 billion for American semiconductor research, development, manufacturing, and workforce development. It also provides a 25% investment tax credit for capital expenses for manufacturing of semiconductors and related equipment.

Addressing an Urgent Need

COVID-19 taught us that chip shortages can sideline entire segments of the economy. Without investment in domestic semiconductor manufacturing capacity, the US economy, military, and society as a whole will remain vulnerable to disruption.

Despite the growing importance of semiconductor technology to the US economy and technological leadership, America's share of domestically produced semiconductors declined from approximately 37% to 12% since 1990, driven by substantial incentives offered by countries in East Asia that created a 30-50% cost disadvantage to manufacturing chips in the US.

We believe the only way for the US to address growing economic and national security risks is to increase domestic semiconductor manufacturing capacity and capability. Incentives in the US also level the playing field for American companies, who compete with foreign-based companies heavily subsidized by their own governments. Government incentives for domestic semiconductor industries in the US are essential to grow local economies, strengthen national security and supply chains, and cultivate the skills required to renew the engineering and innovation ecosystem.



"We are thrilled to see funding for the CHIPS Act enacted into law. Intel is committed to restoring end-to-end leadership, innovation, and manufacturing here in the US. We are doing our part and the federal government has now done their part. Thanks to President Biden, Secretary Raimondo, bipartisan leaders in Congress, and everybody involved in supporting the semiconductor industry."

—Pat Gelsinger, Intel CEO

Just the Beginning

For Intel, passage of the CHIPS and Science Act is just the beginning of the journey. Intel also intends to support the efforts of the US Department of Commerce and other leaders as they determine how to move as quickly as possible to address the urgent need to drive semiconductor leadership back to the US. We look forward to moving forward on implementation together and helping these investments in US innovation and leadership deliver great returns for our stakeholders and US taxpayers.

At his State of the Union Address in March 2022, US President Joe Biden recognized Intel CEO Pat Gelsinger, who was in attendance. Urging the US Congress to pass the CHIPS and Science Act, Biden said it is crucial to invest money in technologies and American manufacturing, and cited Intel's plans to invest \$20 billion to build a new semiconductor manufacturing campus in Ohio.

[Watch the video.](#)

Our IDM 2.0 Strategy

Intel has been an integrated device manufacturer (IDM)—a company that both designs and builds its own semiconductor chips—since the company's founding in 1968. In 2021, Intel CEO Pat Gelsinger introduced IDM 2.0, a major evolution of that strategy to enable Intel to regain unquestioned technology leadership, manufacturing scale, and long-term growth. IDM 2.0 combines three capabilities:

Internal factory network. Our global, internal factory network has been foundational to our success, enabling product optimization, improved economics, and supply resilience. We intend to remain a leading developer of process technology and a major manufacturer of semiconductors and to continue to build the majority of our products in our factories.

Strategic use of foundry capacity. We expect to expand our use of third-party foundry manufacturing capacity, which will provide us with increased flexibility and scale to optimize our product roadmaps for cost, performance, schedule, and supply. Our use of foundry capacity will include manufacturing for a range of modular tiles on advanced process technologies.

System foundry. We are building a world-class foundry business to meet the growing long-term global demand for semiconductors. We plan to differentiate our foundry offerings from those of others through a combination of leading-edge packaging and process technology, committed capacity in the US and Europe available for customers globally, and a world-class IP portfolio that will include x86 cores, as well as other ecosystem IP.

The system foundry involves engaging with customers at multiple levels, from basic wafer manufacturing to helping define and implement their desired system architecture. We intend to build our customers' silicon designs and deliver full end-to-end customizable products built with our advanced packaging technology.



In September 2022, we celebrated our groundbreaking of two of the world's most advanced chipmaking facilities, in Licking County, Ohio.

To help accelerate our IDM 2.0 strategy, we are investing in manufacturing capacity around the world. We broke ground on two new leading-edge chip factories in Ohio, initially announcing plans to invest more than \$20.0 billion to establish the first advanced semiconductor campus in the "Silicon Heartland." We also announced our plans to invest up to €80.0 billion in the European Union over the next decade across the semiconductor value chain—from R&D to manufacturing to state-of-the-art packaging technologies. These include a plan to invest up to an initial €17.0 billion to build a leading-edge semiconductor fab mega-site in Germany; to create a new R&D and design hub in France; and to invest in R&D, manufacturing, and foundry services in Ireland, Italy, Poland, and Spain.

We also introduced our IDM 2.0 Acceleration Office to transition our operations to an internal foundry model that is designed to deliver consistent processes, systems, and guardrails among our business units, and design and manufacturing teams, which we expect will allow us to improve structural efficiencies by driving accountability and costs back to decision makers within the company.

We also look to acquisitions to supplement and strengthen our capital. In Q1 2022, we entered into a definitive agreement to acquire Tower Semiconductor Ltd. (Tower) in a cash-for-stock transaction. Tower is a leading foundry for analog semiconductor solutions. The acquisition is expected to advance our IDM 2.0 strategy by accelerating our global end-to-end foundry business. We continue to work to close the transaction in 2023, subject to certain regulatory approvals and customary closing conditions.

In addition, to create further financial flexibility while we accelerate our strategy, we announced the Semiconductor Co-Investment Program (SCIP), which introduces a new funding model to the capital-intensive semiconductor industry. As part of this program, we closed a definitive agreement with Brookfield Asset Management (Brookfield), creating an equity partnership whereby we and Brookfield own 51% and 49%, respectively, of the newly formed entity, Arizona Fab LLC (Arizona Fab). We expect Arizona Fab will invest up to \$30.0 billion in expanded manufacturing infrastructure at our Ocotillo campus in Chandler, Arizona.

Intel's ESG Framework

One of our top priorities in 2022 was to further enhance our governance structure so that Intel's environmental, social, and governance (ESG) efforts are integrated throughout our business.

We review our ESG strategy annually with the Intel Board of Directors Corporate Governance and Nominating Committee, which provides oversight for our corporate responsibility initiatives. Our ESG Executive Steering Committee, established in 2022, is chaired by our Chief People Officer. Management groups oversee the functional areas (corporate responsibility, operational sustainability, supply chain, and sustainable product) of our ESG strategy. The visual to the right shows our current governance structure.

Corporate Responsibility and Our RISE Strategy and Goals

We continue to raise the bar for ourselves and leverage our leadership position in the global technology ecosystem to make greater strides in corporate responsibility and apply technology to address social and environmental challenges. Through our unified "One Intel" ESG framework, RISE, we aim to create a more **responsible**, **inclusive**, and **sustainable** world, **enabled** by our technology and the expertise and passion of our employees.

In addition to our 2030 RISE goals established in 2020, in April 2022 we announced our commitment to achieve net-zero greenhouse gas (GHG) emissions across our global operations (known as Scope 1 and 2) by 2040, reduce supply chain GHG emissions 30% by 2030 from what they would be in the absence of investment and action, and to increase the energy efficiency and lower the carbon footprint of our products and platforms.



Our RISE strategy also increases the scale and global impact of our work through new collaborations with our customers and a broad range of stakeholders. Our aim is to fully harness the power of technology to solve the increasingly complex and interconnected global challenges over the next decade and beyond. We know that acting alone, Intel cannot achieve the broad, societal impact to which we aspire.

For details of our progress against our RISE goals, see "[RISE Goals Progress](#)" in the Appendix of this report.

Awards and Recognitions

Third-party ratings and rankings give us valuable feedback on our programs and practices, and help drive continuous improvement over time. Below is a selection of the corporate responsibility-related awards and recognitions that Intel received in 2022 unless otherwise indicated.

3BL Media. 100 Best Corporate Citizens

AISES. Top 50 Workplaces for Indigenous STEM Professionals

American Association of People with Disabilities and Disability:IN. Disability Equality Index

As You Sow. Clean200

Barron's. #2 Most Sustainable Company (2023)

Bloomberg. Bloomberg Gender-Equality Index

CDP. "A-" Water Security Rating, "B" Climate Change Rating, "A-" Supplier Engagement Rating

Center for Political Accountability. CPA-Zicklin Index of Corporate Political Disclosure and Accountability – Trendsetter Company

Dow Jones Sustainability Index. North America Index

Ethisphere Institute. World's Most Ethical Companies

FTSE Group. FTSE4Good Index¹

Gartner. Supply Chain Top 25

Hispanic Association of Corporate Responsibility. Corporate Inclusion Index 5-Star Rating for Governance

Human Rights Campaign. Corporate Equality Index

ISS. 1 rating in both Environment & Social QualityScore

JUST Capital. JUST 100

KnowTheChain. Ranked #4, Information & Communications Technology

LATINA Style 50. Top 50 Best Companies for Latinas to Work in the US

Minority Engineer. Top 50 Employers

MSCI. World ESG Leaders Index²

National Business Inclusion Consortium. Best-of-the-Best Corporations for Inclusion

Newsweek. America's Most Responsible Companies, America's Greatest Workplaces for Women (2023)

Religious Freedom & Business Foundation. Corporate Religious Equity, Diversity and Inclusion Index

RepTrak. 2022 Global RepTrak 100

US Environmental Protection Agency. #3 Ranking on Green Power Partnership National Top 100

Wall Street Journal. Management Top 250

Women's Business Enterprise National Council. Top Corporations for Women's Business Enterprises

WE Connect International. Top 10 Global Champions for Supplier Diversity Inclusion

Women Engineer Magazine. Top 50 Employers – Readers' Choice



¹ FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Intel Corporation has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong environmental, social, and governance (ESG) practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

² The inclusion of Intel Corporation in any MSCI Index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, or promotion of Intel Corporation by MSCI or any of its affiliates. The MSCI Indexes are the exclusive property of MSCI. MSCI and the MSCI Index names and logos are trademarks or service marks of MSCI or its affiliates.

Our Business

Intel is at the forefront of developing new semiconductor technologies, products, and solutions as building blocks for an increasingly smart and connected world across a broad spectrum of markets. Our people build our technology, unlock new business opportunities, and work with our business associates and customers to create global impact. As the guardians of Moore's Law, a law of economics put forth by our co-founder Gordon Moore more than 50 years ago, we continuously innovate to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges.

This year's highlights

4th Gen Intel® Xeon® processors

We launched the 4th Gen Intel® Xeon® Scalable processors (also known as Sapphire Rapids), Intel's most sustainable data center processors. The new processors deliver customers a leap in data center performance, efficiency, security, and new capabilities for AI, the cloud, the network and edge, and the world's most powerful supercomputers.

The CHIPS and Science Act

Intel CEO Pat Gelsinger was on hand to celebrate US President Joe Biden's signing of the US CHIPS and Science Act, a victory for the semiconductor industry as well as American technological leadership and innovation. The CHIPS act will boost American semiconductor research, development, and production, helping to establish US leadership in technology that forms the foundation of everything from household appliances to automobiles to defense systems.

Manufacturing Expansion

We broke ground on two new leading-edge chip factories in Ohio, and also unveiled plans for an €80 billion decade-long investment in the European Union. Included are plans to invest up to an initial €17.0 billion to build a leading-edge semiconductor fab mega-site in Germany; to create a new R&D and design hub in France; and to invest in R&D, manufacturing, and foundry services in Ireland, Italy, Poland, and Spain.



Company Profile

The entire world is becoming more digital as technology is increasingly central to every aspect of human existence. As we look ahead to the next decade, we expect to see continued movement to digital for everything—the way we work, learn, connect, develop, and operate. Semiconductors are the underlying technology powering the digitization of everything, and this is being accelerated by five superpowers: ubiquitous compute, pervasive connectivity, cloud-to-edge infrastructure, AI, and sensing. Together these superpowers combine to amplify, and reinforce each other, and will exponentially increase the world's need for computing by packing even more processing capability onto ever-smaller microchips. We intend to lead the industry by harnessing these superpowers for our customers' growth and our own.

Our 2022 revenue was \$63.1 billion, down \$16 billion, or 20%, from 2021. Our Client Computing Group revenue decreased 23%, our Data Center and AI Group revenue decreased 15%, and our Network and Edge segment revenue increased 11%. 2022 results were impacted by an uncertain macroeconomic environment—with

slowing consumer demand, persistent inflation, and higher interest rates—that we believe impacts our target markets and creates a high level of uncertainty with our customers.

During 2022, we announced the implementation of cost-cutting measures, including a slower pace of hiring and restructuring actions, designed to reduce operating expenditures and manage the business toward our long-term financial strategy. We also reorganized our business units in a way that is designed to accelerate the execution and innovation of our company by allowing us to capture growth in both large traditional markets and high-growth emerging markets, while providing increased transparency, focus, and accountability.

Our IDM 2.0 strategy, announced in 2021, combines our internal factory network, strategic use of external foundries, and system foundry. We believe our IDM 2.0 strategy enables us to deliver leading process technology and products to meet growing long-term demand using internal and external capacity, while leveraging our core strengths to provide foundry services to others and providing superior capacity, supply resilience, and an



We are an industry leader

and a catalyst for technology innovation and products that revolutionize the way we live. We are committed to harnessing the breadth and scale of our reach to have a positive effect on business, society, and the planet.

Our purpose is to create world-changing technology that improves the life of every person on the planet.



advantageous cost structure. Though we aggressively adjusted capital investments in 2022 to respond to changing business conditions, we still made significant investments in support of our IDM 2.0 strategy during the year.

Delivering on our strategy and growth ambitions requires attracting, developing, and retaining top talent from across the world. Our people build our technology, unlock new business opportunities, and work with our collaborators and customers to create global impact. We are committed to creating an inclusive workplace where the world's best engineers and technologists can fulfill their dreams and create technology that improves the life of every person on the planet.

The sections of this Company Profile derived from our [2022 Annual Report on Form 10-K](#) speak as of January 26, 2023, unless another date is indicated, are truncated and summary in nature, and do not reproduce exactly or in full the disclosures from that report. For a full discussion of our business, financial results, and the topics discussed in this Company Profile, review our 2022 Annual Report on Form 10-K. Beginning with our first quarter 2022 results, we reported under six business units for 2022, following an update to segment reporting that aligns with our organizational structure and business strategy. More information regarding this reporting structure, including recasts of our historical financial statements for the past three years, are available through our filings with the Securities and Exchange Commission.

How We Organize Our Business

% Intel Revenue Key Markets and Products



Client Computing Group. Includes products designed for end-user form factors, focusing on higher growth segments of 2 in 1, thin-and-light, commercial and gaming, and growing other products such as connectivity and graphics.



Data Center and AI Group. Includes a broad portfolio of central processing units (CPUs), domain-specific accelerators, and field-programmable gate arrays (FPGAs) designed to empower data center and hyperscale solutions for diverse computing needs.



Network and Edge Group. Includes programmable platforms and high-performance connectivity and compute solutions designed for market segments such as cloud networking, telecommunications networks, on-premises edge, software, and platforms.



Mobileye. Includes the development and deployment of advanced driver-assistance systems (ADAS) and automated driving technologies and solutions.



Accelerated Computing Systems and Graphics Group (AXG). Includes CPUs for high-performance computing (HPC) and graphics processing units (GPUs) targeted for a range of workloads and platforms from gaming and content creation to HPC and artificial intelligence (AI) in the data center.



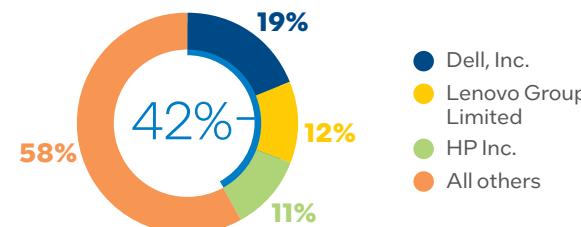
Intel Foundry Services (IFS). Provides differentiated full stack solutions, including wafer fabrication, packaging, chiplet standard, and software.

¹ Beginning in 2023, AXG will be integrated into CCG/DCAI and no longer reported.

For more information, refer to the [2022 Intel Annual Report on Form 10-K](#).

Our Customers

We sell our products primarily to original equipment manufacturers (OEMs), original design manufacturers (ODMs), and cloud service providers. ODMs provide design and manufacturing services to branded and unbranded private-label resellers. In addition, our customers include other manufacturers and service providers, such as industrial and communication equipment manufacturers and other cloud service providers who buy our products through distributor, reseller, retail, and OEM channels throughout the world. Our worldwide reseller sales channel consists of thousands of indirect customers—systems builders that purchase Intel® processors and other products from our distributors. For additional information, refer to the [2022 Intel Annual Report on Form 10-K](#).



Our three largest customers accounted for 42% of our 2022 net revenue.

Our Competitors

We face intense competition across our product portfolio from companies offering platform products; accelerator products such as GPUs; other accelerator products such as application-specific integrated circuits (ASICs), application-specific standard products, and FPGAs; memory and storage products; connectivity and networking products; and other semiconductor products. We also compete with internally developed semiconductors from OEMs, cloud service providers, and others, some of whom are customers. For additional information, refer to the [2022 Intel Annual Report on Form 10-K](#).

Our Products

Our product offerings provide end-to-end solutions, scaling from edge computing² to 5G networks, the cloud, and the emerging fields of AI and autonomous driving. Products, such as our gaming CPUs, may be sold directly to end customers, or they may be further integrated by our customers into end products such as notebooks and storage servers. Combining some of these products—for example, integrating FPGAs with Intel® Xeon® processors in a data center solution—enables incremental synergistic value and performance.

End-to-End Product Portfolio

Our diverse product line includes CPU and chipset, a system on a chip (SoC), or a multichip package based on Intel® architecture that processes data and controls other devices in a system. The primary CPU products in CCG are our Intel® Core™ processors, which include designs specifically for notebook and desktop applications. The primary CPU product in DCAI is our Intel Xeon processor, which includes solutions for data center compute, networking, and the intelligent edge. The primary offerings of NEX include Intel Xeon, Intel Core, and Intel Atom® processor products.

² Placing resources to move, store, and process data closer to where data is generated and consumed.

End-to-End Product Portfolio



In 2022, we launched new products, such as the 12th Gen Intel Core HX processors—the final products in our Alder Lake family, which utilize desktop-caliber silicon in a mobile package to deliver high levels of performance for professional workflows. 2022 launches also included Raptor Lake, our 13th Gen Intel Core processor family, which scales from thin and light laptops to enthusiast desktop and notebook platforms; and the first of our 4th Gen Intel Xeon Scalable processors (Sapphire Rapids), which enables built-in AI acceleration, cryptographic acceleration, and advanced security capabilities.

We also added to our graphics offerings with the introduction of our Intel[®] Arc[™] A-series GPUs, also known as Alchemist and Ponte Vecchio. The Intel Arc A-Series GPU is designed to enable premium

gaming, creating, and streaming experiences on consumer high-performance desktop and laptop systems, and Ponte Vecchio, our flagship data center GPU, is designed to take on the most demanding AI and high-performance computing workloads.

For more information about our products, read our [2022 Intel Annual Report on Form 10-K](#).

Product Responsibility and Impact

We strive to minimize the environmental impact of our products at all phases in their life cycle: development, production, use, and ultimate disposal. We also consider accessibility during product development, and design products to be accessible to a wider range of users—

including people with disabilities. For more information, see "[Product Ecology](#)" and "[Product Energy Efficiency](#)" in the Sustainable section and "[Making Technology Fully Inclusive and Expanding Digital Readiness](#)" in the Inclusive section of this report. We recognize that innovation, growth, and the success of our business and our industry depend on individuals' trust in their use of technology and in the responsible, protected collection and processing of their data. We also do not tolerate our products being used to violate human rights. For more detail, see "[Respecting Human Rights](#)" later in this section of the report.

Cybersecurity and Product Security

We strive to design, manufacture, and sell the world's most secure technology products, and we are frequently innovating and enhancing security capabilities for our products. System trust is rooted in security—if hardware isn't secure, then a system cannot be secure. At Intel, our goal is to build the most secure hardware on the planet, from world-class CPUs to XPPUs and related technology, enabled by software. As with previous reports, the [2022 Intel Product Security Report](#) demonstrates our Security First Pledge and our regular efforts to proactively seek out and mitigate security issues.

We prioritize security in two ways: in the way we work, through our culture and practices aimed at delivering high performance and protections in everything we build; and in what we work on, through our relentless pursuit of security-driven innovations that help our customers tackle today's toughest challenges.

Security Technologies Strategy. We understand the complexity that results from the ongoing computing transformation. We have deep experience in enabling security, as well as a comprehensive suite of technologies that help secure entire systems and deliver defense in depth. We engineer security solutions to meet specific challenges centered around three key priorities: foundational security to help systems come up as expected, workload protection to improve security of data in use, and software reliability to build in hardware-based protections against common software threats.

Comprehensive Security Practices. Through the [Security Development Lifecycle](#) (SDL), our practices apply security and privacy principles at six phases, from planning through release and post-deployment. SDL covers Intel® hardware, firmware, and software products. In release and post-deployment, an essential part of our product support is ongoing security research



and mitigations. Our [Bug Bounty Program](#) incentivizes security researchers to report vulnerabilities in Intel products. We reward researchers with bonus multipliers for findings in specific areas of interest, leading to mitigations and improved security in an array of products. We also work across the industry to improve security; when a vulnerability is identified, we work with affected organizations to develop and release mitigations. We align on disclosure to minimize potential threats while we work to address the vulnerability.

Security Research. Continued improvement is made through investments in offensive research on the security of our products. We have a dedicated team of experts who conduct ongoing research and test products internally. This work is scaled through practices that include red teaming and hackathons. We use what we learn to improve our products and practices, and we collaborate with world-class industry peers, global security researchers, and academic institutions to advance security research across the industry. For more information, visit [Product Security at Intel](#) or read the [2022 Intel Product Security Report](#).

Securing Intel's Supply Chain

Our sourcing and manufacturing practices are built on decades of experience designed to align to industry-leading processes. Our supply chain security program leverages this expertise and has embedded security controls throughout the vendor lifecycle. Intel's supply chain security risk management program is derived from standard industry risk management frameworks such as NIST and ISO and provides security assurance through the integration of security controls throughout sourcing and supplier management practices.

Security expectations begin at supplier selection. Expectations are then reinforced through contractual security terms and conditions, recurring information security audits, ongoing security key performance indicators, and recurrent required training.

Our Cybersecurity Supply Chain Risk Management (C-SCRM) program executes hundreds of information security supplier audits annually and is designed to align to standard industry information security management frameworks, including ISO 27001 and NIST 800-30. Additionally, we monitor the cybersecurity posture of our suppliers through a third-party security ratings platform and have a dedicated third-party cyber incident response team.

We are also committed to advancing evolving supply chain security standards and policies by working with governments, organizations, and industries. Visit our [Sourcing and Manufacturing Security](#) site to learn more.

Our Capital

We believe that our integrated approach to financial matters, corporate governance, and corporate responsibility drives increased accountability, improves decision making, and ultimately creates long-term value. In line with the International Integrated Reporting Council's International *<IR>* framework and six capitals concept, we have outlined how we deploy capital to execute our strategy in a way that seeks to reflect our corporate values, help our customers succeed, and create value for our stakeholders. Each of our six forms of capital, summarized below, plays a critical role in our long-term value creation. For more detail, see the [2022 Intel Annual Report on Form 10-K](#).

Financial Capital. We take a disciplined approach to our financial capital allocation strategy, which continues to focus on building stockholder value and is driven by our priority to invest in the business and capacity and our capital needs. Our first allocation priority is to invest in R&D and capital spending to capitalize on the opportunity presented by the world's demand for semiconductors. Our allocation strategy also includes returning excess cash to stockholders. We achieve this through our dividend policy and when permissible, stock repurchases. In addition, our capital allocation strategy includes opportunistic investment in and acquisition of companies that complement our strategic objectives.

As we invest in our IDM 2.0 strategy and implement our next phase of capacity expansions and the acceleration of our process technology roadmap, our allocation priorities have shifted more heavily toward investing in the business and away from stock repurchases. We expect our future stock repurchases to continue to be significantly below our levels from 2021 and recent preceding years due to our current curtailment of this program. During 2022, we paid \$6.0 billion in dividends. We have paid a cash dividend in each of the past 121 quarters. For additional 2022 financial information, see the [2022 Intel Annual Report on Form 10-K](#).

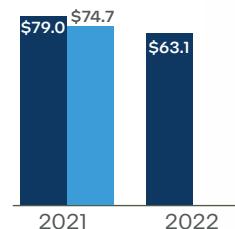
Our Capital

We deploy various forms of capital to execute our strategy in a way that seeks to reflect our corporate values, help our customers succeed, and create value for our stakeholders.

Capital	Strategy	Value
Financial	Leverage financial capital to invest in ourselves and drive our strategy, provide returns to stockholders, and supplement and strengthen our capabilities through acquisitions.	We strategically invest financial capital to create long-term value and provide returns to our stockholders.
Intellectual	Invest significantly in R&D and IP to enable us to deliver on our accelerated process technology roadmap, introduce leading x86 and xPU products, and develop new businesses and capabilities.	We develop IP to enable next-generation products, create synergies across our businesses, expand into new markets, and establish and support our brands.
Manufacturing	Build manufacturing capacity efficiently to meet the growing long-term global demand for semiconductors, aligned with our IDM 2.0 strategy.	Our geographically balanced manufacturing scope and scale enable us to provide our customers with a broad range of leading-edge products.
Human	Build a diverse, inclusive, and safe work environment to attract, develop, and retain top talent needed to build transformative products.	Our talented employees enable the development of solutions and enhance the intellectual and manufacturing capital critical to helping our customers win the technology inflections of the future.
Social and Relationship	Build trusted relationships for both Intel and our stakeholders, including employees, suppliers, customers, local communities, and governments.	We collaborate with stakeholders on programs to empower underserved communities through education and technology, and on initiatives to advance accountability and capabilities across our global supply chain, including accountability for the respect of human rights.
Natural	Strive to reduce our environmental footprint through efficient and responsible use of natural resources and materials used to create our products.	With our proactive efforts, we seek to mitigate climate and water impacts, achieve efficiencies, and lower costs, and position ourselves to respond to the expectations of our stakeholders.

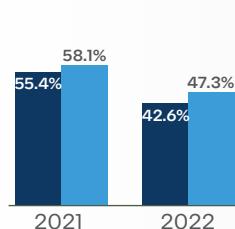
Revenue

■ GAAP \$B
■ Non-GAAP \$B



Gross Margin

■ GAAP
■ Non-GAAP



Diluted EPS

■ GAAP \$B
■ Non-GAAP \$B



The preparation of consolidated financial statements is in conformity with US Generally Accepted Accounting Principles (GAAP). We have included key metrics that we use to measure our business, some of which are non-GAAP measures. See "[Non-GAAP Financial Measures](#)" in the Appendix for a reconciliation of non-GAAP net revenue, non-GAAP gross margin percentage, and non-GAAP EPS to comparable GAAP measures.

Intellectual Capital. R&D investment is critical to enable us to deliver on our accelerated process technology roadmap, introduce leading products, and develop new businesses and capabilities. Our objective with each new generation of products is to improve user experiences and value through advances in performance, power, cost, connectivity, security, form factor, and other features. We also focus on reducing our design complexity, reusing IP, and increasing ecosystem collaboration to improve our efficiency. We seek to protect our R&D efforts through our IP rights and may augment R&D initiatives by acquiring or investing in companies, entering into R&D agreements, and directly purchasing or licensing technology. We own and develop significant IP and related IP rights around the world that support our products, services, R&D, and other activities and assets. Our IP portfolio includes patents, copyrights, trade secrets, trademarks, mask works, and other rights. Intel ranked #8 in patents granted for 2022 by the US Patents and Trademark Office, our eighth straight year in the top 10.³ For additional information regarding our IP rights, see the [2022 Intel Annual Report on Form 10-K](#).

Manufacturing Capital. Our IDM 2.0 strategy aims to allow us to deliver leadership products using internal and external capacity while leveraging our core strengths to provide foundry services to others. IDM 2.0 combines three capabilities. First, we expect to continue to build most of our products in Intel fabs. Second, we expect to expand our use of third-party foundry capacity to manufacture a range of modular tiles on advanced process technologies. Third, we are building a world-class foundry business with IFS, which we expect will combine

Intel Capital, our global investment organization, invests in companies shaping the future of cloud, devices, frontier, and silicon—the four domains that feed into the future of compute. [Learn more](#).

³ Source: [IFI CLAIMS Patent Services](#), as of January 10, 2023.



As of the end of 2022, we had nine manufacturing sites—five wafer fabrication and four assembly and test facilities. The map above shows these factory sites and the countries where we had a significant R&D and/or sales presence. We are expanding manufacturing capacity across multiple sites, including Arizona, Ireland, Israel, and Oregon, as well as investing to equip our New Mexico and Malaysia sites for advanced packaging. In 2022, we broke ground on our new site in Ohio and officially added Germany to our roadmap.

leading-edge packaging and process technology, committed capacity in the US and Europe, and a world-class IP portfolio that will include x86 cores, as well as other ecosystem IP.

Our work to advance the design and manufacturing of semiconductors enables new products with higher performance while balancing power efficiency, cost, and size. In 2022, our factories performed well in a highly dynamic environment, where we adapted to rapid demand shifts and industry component shortages affecting us and our customers. We continue to work across our supply chain to minimize disruptions, improve productivity, and increase overall capacity and output to meet customer expectations.

Our global supply chain supports internal partners across architecture, product design, technology development, manufacturing and operations, sales

and marketing, and business units, and our supply ecosystem comprises thousands of suppliers globally. Our priority is to enable product and process leadership, industry-leading total cost of ownership, and on-time and uninterrupted supply for our customers. We supplement our own manufacturing capacity through our use of third-party foundries.

Our manufacturing facilities are primarily used for silicon wafer manufacturing, assembling, and testing of our platform products. We operate in a network of manufacturing facilities integrated as though they were one factory to provide the most flexible supply capacity. Our new process technologies are transferred from a central development fab to each manufacturing facility. After transfer, the network of factories and the development fab collaborate to continue driving operational improvements.

Human Capital. Our human capital strategy is grounded in our belief that our people are fundamental to our success. Delivering on our IDM 2.0 strategy and growth ambitions requires attracting, developing, and retaining top talent across the world. We continue to see significant competition for talent throughout the semiconductor industry. Though we slowed the pace of hiring in the second half of 2022 in line with macroeconomic forecasts, financial performance, and cost-cutting measures, and took actions to rebalance our workforce, the investments we are making to accelerate our process technology require continued and focused efforts to attract and retain talent—especially technical talent.

We invest significant resources to develop the talent needed to remain at the forefront of innovation and make Intel an employer of choice. We offer extensive training programs and provide rotational assignment opportunities and are working to update our job architecture to help employees create custom learning curricula for building skills and owning their careers.

We seek to create an inclusive workplace where the world's best engineers and technologists can fulfill their dreams and create technology that improves the life of every person on the planet. We invest in our highly skilled workforce of nearly 132,000 by creating practices, programs, and benefits that support the evolving world of work and our employees' needs.

Social and Relationship Capital. We strive to engage in initiatives that support our communities and help us develop trusted relationships with our stakeholders. Proactive engagement with our stakeholders and investments in social impact initiatives, including those aligned with the [United Nations Sustainable Development Goals](#), advance our position as a leading corporate citizen and create shared value for Intel, our global supply chain, and our communities.



As part of our IDM 2.0 strategy, we are investing to boost production to meet the surging demand for advanced semiconductors. Our planned state-of-the-art semiconductor mega-fab sites (shown in artist's renderings) in Licking County, Ohio (left) and Magdeburg, Germany (right) will be powered by 100% renewable electricity.

We provide high-skill, high-paying jobs around the world, many of which are manufacturing and R&D jobs located in our own domestic and international factories. As we expand operations in Arizona, Oregon, Ohio, and Europe, we are building a pipeline of qualified workers through our talent strategy and the many investments we are making in education. We also benefit economies through our R&D ecosystem spending, sourcing activities, employee spending, and tax payments. In addition, we make sizable capital investments and provide leadership in public-private collaborations to spur economic growth and innovation.

Our Intel RISE Technology Initiative provides an expanded channel to build deeper relationships with our customers and partners aligned with our corporate purpose and work to create shared value through our RISE strategy. Specifically, we are funding projects in areas such as using technology to improve health and safety,

making technology more inclusive while expanding digital readiness, and carbon-neutral computing to help address climate change.

For more information on our social and relationship capital, see "[Stakeholder Engagement](#)" and "[Supply Chain Responsibility](#)" later in this section.

Natural Capital. Driving to the lowest possible environmental footprint as we grow helps us create efficiencies, support our communities, and respond to the needs of our stakeholders. We invest in sustainability projects and set company-wide environmental targets to drive reductions in greenhouse gas emissions, energy and water use, and waste generation. We build energy efficiency into our products to help our customers lower their own emissions, energy usage, and costs, and we collaborate with policymakers and other stakeholders to use technology to address environmental challenges. For more information, see the [Sustainable](#) section of this report.

Human Capital Competitive Advantage

Our people are at the heart of our transformation journey—building our technology, unlocking new business opportunities, and working with our stakeholders and customers to create world-changing technology to improve the lives of every person on the planet. We invest significant resources in our effort to build a diverse, inclusive, and safe work environment and to attract, develop, and retain world-class talent. Our workforce is highly skilled, with approximately 88.9% serving in technical roles.

Over the past two years, we have worked to build a strong foundation for repeatable, sustainable talent investment that supports our efforts to have the right talent to deliver on our IDM 2.0 transformation strategy. Our human capital philosophy includes three pillars we believe are needed to position our talent strategy as a competitive advantage:

- Create a winning culture:** We have reigned Intel's results-driven, performance culture.



As of December 31, 2022, we had almost 132,000 employees worldwide in more than 50 countries and territories (excluding Mobileye employees). A list of sites with more than 50 employees is included on the [Report Builder](#) website.

- Hire and retain the best talent:** We have introduced the future of work with a flexible, hybrid-first approach that differentiates Intel from competition.
- Develop our talent to full potential:** We have updated roles and careers to better enable movement and help top talent work on the highest priorities.

We believe that an inclusive culture is important for attracting, retaining, and progressing top talent, and are working to provide a work environment where employees from all backgrounds are valued, challenged, and rewarded. Detailed information on our diversity and inclusion initiatives is available on our [Diversity and Inclusion](#) website and in the [Inclusive](#) section of this report.

Create a Winning Culture

Leaders play a critical role in our transformation. To inspire and equip executives to lead employees, Intel's top 650 senior leaders participated in an immersive in-person experience alongside CEO Pat Gelsinger to align on Intel's business strategy and reflect on critical shifts required to drive results and fearless innovation throughout the organization.

We continue to evolve our systems and business processes to build a culture of execution excellence, including end-to-end objectives and key results goal setting, performance ratings, and reinforcing differentiation to drive a "One Intel" performance culture.

The Intel Values inspire us and are key to delivering on our purpose. We continue to drive toward innovation and execution, making data-driven decisions quickly and setting disciplined goals to drive business results. All employees are responsible for upholding these values, the [Intel Code of Conduct](#), and the [Intel Global Human Rights Principles](#), which form the foundation of our policies and practices and ethical business culture.



Intel Values

Customer first. We listen, learn, and anticipate our customers' needs. We deliver to our customer commitments with simplicity, clarity, and speed. We nurture partnerships and foster growing ecosystems.

Fearless innovation. We take informed risks together, learn and pivot quickly from mistakes to be better, faster, smarter. We continuously improve, enabling us to be more curious, bold, and innovative. We are competitively paranoid to anticipate change and disrupt markets.

Results driven. We prioritize, focus, and execute flawlessly with urgency. We make data-driven decisions with intellectual honesty and constructive debate; we disagree and commit. We assume responsibility to deliver long-term stakeholder value.

One Intel. We commit to team success, doing what's best for Intel. We recognize, respect, and build trust with each other. We value and grow passionate, empowered teams.

Inclusion. We value diversity and embrace differences. We build inclusive teams where everyone does their best work, celebrates, and has fun. We care and make a difference to each other and our communities.

Quality. We are disciplined to deliver products and services that our customers and stakeholders can always rely on. We set and achieve high quality and security standards. We cultivate talent to do the right things right.

Integrity. We are truthful and transparent and act with uncompromising integrity. We ensure a safe and healthy workplace. We shape technology as a force for good.

Communication and Employee Engagement

Our success is supported by employees understanding how their work contributes to the company's overall strategy. We continue to use a variety of channels to facilitate open and direct communication, including online forums, open forums with executives, employee experience surveys, and engagement through nearly 40 Employee Resource Groups. The annual Employee Experience Survey invites our entire employee population to provide feedback on Intel culture, leadership, career opportunities, and engagement. We also have an Employee Inclusion Survey to help us understand how different employee populations experience inclusion at Intel. In addition, employees can provide direct feedback to their managers and leaders through the annual Manager Development Feedback survey, and individual business groups conduct their own surveys to gather employee input and assess progress. For example, our Ethics Program Office surveys employees on the state of ethics at the company, and our Corporate Services organization measures satisfaction with workplace design, cafeterias, and other on-site employee services.

Recognition and Appreciation

We believe in celebrating the accomplishments of our employees through everyday thank yous, such as recognition e-cards, shout-outs in team and organizational meetings, e-mails, and more. In 2022, these also included formal recognition programs with cash or stock awards. Formal programs include the Intel Achievement Awards; Intel Environmental Excellence Awards; Intel Quality Awards; Global Diversity, Inclusion, and Social Impact Awards; Division Recognition Awards; Spontaneous Recognition Awards; and the Intel Involved Hero Awards.

Hire and Retain the Best Talent

Compensation and Benefits

We structure pay, benefits, and services to meet the varying needs of our employees. Our 2022 bonus programs linked employees' compensation directly to Intel's financial and operational performance goals:

Quarterly Profit Bonus: A cash profit-sharing bonus paid to all employees four times per year based on Intel's profitability.

Annual Performance Bonus: Cash awards based on Intel's achievement of financial and operational goals, as well as employees' individual performance. Since 2008, we have included criteria related to corporate responsibility metrics such as diversity and inclusion and sustainability performance. For more details, see "[Governance, Ethics, and Public Policy](#)" later in this section of the report.

Stock Equity Plans: In 2022, we granted equity in the form of restricted stock units (RSUs) to more than 98% of global employees. In addition, through our Employee Stock Purchase Plan, eligible employees can purchase stock through payroll deductions at 85% of fair market value.

Since 2019, we have achieved gender pay equity globally and we continue to maintain race/ethnicity pay equity in the US. For more information, see the [Inclusive](#) section of this report.

Beyond market-competitive pay, broad-based stock grants, and bonuses, our total rewards package includes comprehensive healthcare and retirement benefits, paid time off and family leave, parent reintegration, fertility assistance, flexible work schedules, sabbaticals, and on-site services. For many years, we have also provided programs dedicated to supporting the education of Intel employees' children, including tutoring, college coaching, and scholarships.

Our extensive health benefits include medical, dental, and vision insurance plans, sick leave, and a 365/24/7 global Employee Assistance Program for employees and their families. Our US retirement plan options include a 401(k) retirement match by Intel and we sponsor market-based retirement programs in all other countries in which we operate. Our leave benefits include paid family leave to care for a seriously ill family member, extended bereavement leave, expanded bonding leave and parental reintegration support, and additional short-term disability coverage.

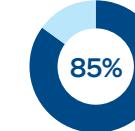
Employee Experience Survey Highlights



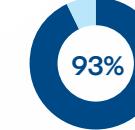
“My organization supports and encourages employees' safety, physical health, and well-being.”



“Intel provides me with opportunities for learning and development.”



“My work gives me a feeling of personal accomplishment.”



“I am treated with dignity and respect at work.”



“My job is challenging and interesting.”

Responses from the 2022 Employee Experience Survey.

Wellness time was made available again in 2022 and continues to be available in 2023. We encourage employees to take advantage of this time to step away from work and intentionally schedule time to do something that helps them refresh and recharge. Employees also have access to a suite of mental wellness resources at no cost. This includes talking with mental health professionals, programs, tools, and learning opportunities that can support employees' journey of mental wellness, with global and site-specific options. Employees can engage through an app, view a class, hear from an expert, or take advantage of other mental health resources. For more details, see "[Employee Health, Safety, and Wellness](#)" later in the Responsible section of the report.

We continue to implement our flexible work schedule as part of our existing total rewards package. Our "hybrid-first" approach remains in place and we continue to provide employees with the support needed for both remote and on-site work to drive best outputs.

[Learn more](#) about our comprehensive benefits, including details of benefits offered by country.

2023 Austerity Measures

In January 2023, Intel implemented austerity measures related to Intel's compensation, benefits, and recognition programs. These actions are expected to be temporary and are intended to help preserve the overall investments needed to accelerate our company transformation and the people needed to execute it. The leadership team is working to manage the business within financial guidelines and restoring compensation programs.

During these times of austerity, we encourage and support non-monetary recognition for peer-to-peer, manager-to-employee, and group awards. Recognition has tremendous value and there are many different ways to provide recognition in a company as large and diverse as Intel. As we address austerity measures with the current recognition program suspensions, we also intend to take the opportunity to seek feedback and reimagine the future of recognition at Intel.

Develop Our Talent to Full Potential

Our employees can develop their skills and strengthen their leadership abilities through our extensive training programs and rotational opportunities. Each year, we deliver a portfolio of learning resources that help employees keep their skills up-to-date. We also provide financial assistance for job-related degrees and coursework, as well as support to enable employees to attend industry conferences.

We continue to provide our virtual learning platforms to deliver technical, innovation, and collaboration skills training and programs for employees, while maintaining our on-the-job development opportunities through rotation or temporary assignment programs. In addition, our US sabbatical program remains a growth opportunity platform through job coverage assignments that enable employees to work in different Intel organizations or learn new skills on short-term projects without transferring positions, thereby helping them gain new experiences, build valuable skills, expand their networks, and grow their careers.

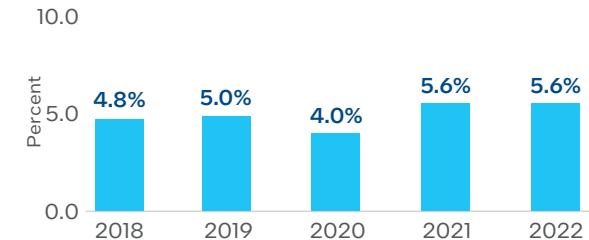
We continue to work to make compliance training more efficient and impactful while meeting corporate benchmark and legal and ethics requirements of compliance training per employee per year.



Intern Program

Despite the current macroeconomic headwinds, we have maintained our intern program as part of our continuing goal of building a solid talent pipeline. We plan to continue to increase our intern hire reach to support our IDM 2.0 strategy. Our internships cover a wide spectrum of Intel's business.

Undesired Global Turnover



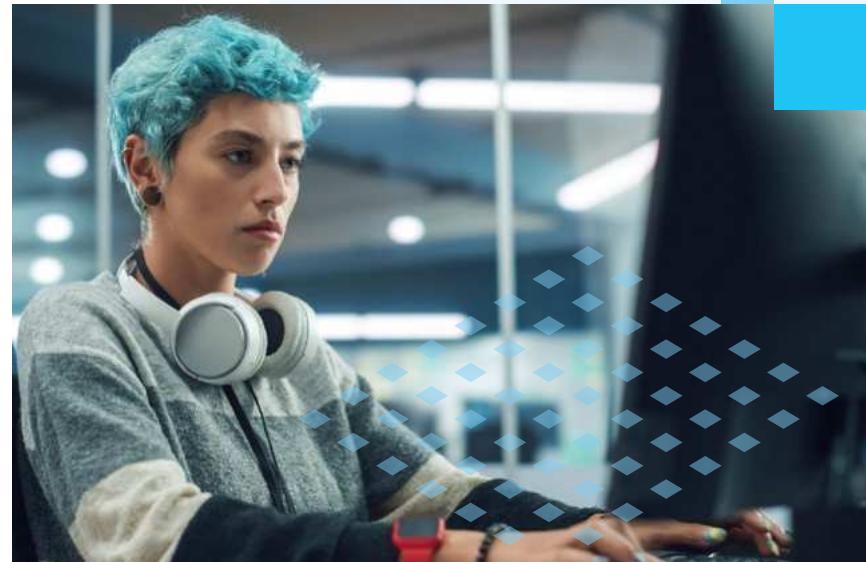
The current macroeconomic headwinds continue to drive attrition in the labor market. We will continue to adapt, while critical actions and programs designed to enable us to hire and retain talent—especially technical talent—are maintained and intensified. In 2022, our undesired turnover rate was approximately 5.6%, the same as in 2021. These figures include all regular Intel employees who voluntarily left Intel, but do not include Intel contract employees, interns, or employees who separated from Intel due to divestiture, retirement, voluntary separation packages, death, job elimination, or redeployment.

Engaging Employees in Our RISE Strategy

Intel and the Intel Foundation continue to invest in programs that create opportunities for employees around the world to help advance Intel's corporate purpose and our corporate responsibility goals. Intel's leadership in corporate responsibility and sustainability remains a driving force as we navigate and address current macroeconomic headwinds.

We continue to build on the momentum of the RISE Employee Engagement Champion Network, through which employees support select RISE programs and deliverables. This includes skills-based volunteering for initiatives such as the AI for Youth Program, in addition to employees taking actions on their own to support other ESG and corporate responsibility goals.

Our "Learn, Act, Transform" RISE engagement model helps employees understand Intel's corporate responsibility issues and priorities, take action and apply their engineering skills in support of our goals, and further integrate corporate responsibility practices into their teams' work objectives.



// Intel's success depends upon attracting and retaining the remarkable people that differentiate our business and drive to improve the life of every person on the planet. Maintaining a strong culture and positive employee relations is paramount as we grow and transform Intel to win with IDM 2.0. Our leadership team offers the expertise, resources, and structure required to bring Intel through this challenging environment and into the future successfully. //

—Christy Pambianchi, Executive Vice President
and Chief People Officer

Learn. Cross-functional teams host virtual learning sessions around sustainability, diversity and inclusion, technology, and other topics, sharing insights, brainstorming, lessons learned, and more with employees across the company.

Act. Our RISE portal provides employees with information on specific actions they can take to support our RISE goals, including information on our skills-based volunteer programs.

Transform. For each of the key areas of RISE, cross-functional teams of employees lead integration strategies for the corresponding goals, including a Technology Impact Steering Committee aimed at deepening engagement with business units and product teams. In addition, individual teams and business units have created customized plans to leverage their unique skills and expertise in support of our goals.

Governance, Ethics, and Public Policy

Intel Guidelines and Policies on Strategic Corporate Responsibility Issues:

Intel Values
Intel Code of Conduct
Intel Global Human Rights Principles
Combating Modern Slavery and Ensuring Transparent Supply Chains

Intel RBA Commitment Letter
Intel EHS Policy

Intel Climate Change Policy Statement

Intel Global Water Policy
Intel Political Accountability Guidelines

Intel Responsible Minerals Sourcing Policy

Intel Corporate Accessibility Policy

Intel Product Content Declaration for REACH

Intel Quality Policy

Intel's Support of the UN Sustainable Development Goals

Access documents at intel.com/responsibility.

Embedding Corporate Responsibility

We believe that having an integrated strategy and embedding corporate responsibility across the company is the most effective management approach to drive continuous improvements in our performance. We have established cross-functional Management Review Committees (MRCs) of senior executives who are responsible for managing corporate responsibility and sustainability activities across the organization. Our global Corporate Responsibility Office acts as an internal adviser to drive strategic alignment and incorporate external stakeholder input into decisions and processes. Many Intel business groups have established teams dedicated to corporate responsibility issues. Read more about the oversight and management of each area of corporate responsibility in each section of this report and on the [Report Builder](#) website.

We have developed corporate guidelines and policies that take into account the concept of shared value and frameworks such as the [UN Global Compact](#), [International Labour Standards](#), [OECD Guidelines for Multinational Enterprises](#), and the [UN Sustainable Development Goals](#).

Linking Compensation to Corporate Responsibility Factors

Since 2008, we have linked a portion of our executive and employee compensation to corporate responsibility factors in our Annual Performance Bonus. In 2022, we included ESG metrics aligned with our culture transformation and RISE goals, including diversity and inclusion, employee experience, climate change, and water stewardship.

Integrated Value Framework

Risk Management

License to Operate and Governance

- Regulatory risk (e.g., environmental)
- Community engagement
- Supply chain

Operations

Cost Savings and Continuous Improvements

- Operational efficiency
- Management quality
- Employee engagement

Brand

Reputation and Goodwill

- Differentiation
- Trusted partner
- Goodwill

Revenue

Growth and Innovation

- Market expansion
- Product innovation
- New customer needs

We believe embedding corporate responsibility and sustainability into our business and decision making creates value for Intel in four main ways: It helps us reduce risk and protect our license to operate, improve the efficiency and effectiveness of our operations, protect and build brand value, and drive revenue growth through innovation and identification of market opportunities.

In 2023, we set out new metrics in these same areas. For more detail, see our [2023 Proxy Statement](#) and the [Sustainable](#) and [Inclusive](#) sections of this report.

Integrated Investor Outreach

Our integrated outreach team, led by our Investor Relations group, Corporate Responsibility Office, Human Resources, and Corporate Strategy Office—and including representatives from other business groups—met in fall 2022 to discuss a wide range of issues, including ESG topics, with investors representing approximately 49% of our outstanding shares. We believe that our approach to engaging openly and year-round with our investors regarding ESG issues drives increased corporate accountability, improves decision making, and ultimately creates long-term value. The feedback we receive through our investor outreach activities is communicated to Intel's Board of Directors and relevant committees throughout the year.

In response to investor feedback, we further integrated ESG information into our [2022 Annual Report on Form 10-K](#), [2023 Proxy Statement](#), and [Investor Relations](#) website; we expanded disclosure on culture, human capital management, and climate risk; the Board increased its focus on additional risk areas such as macroeconomics, political events, natural disasters, public health crises, and business specifics such as human capital risks. We further aligned our disclosure with external reporting frameworks such as the [Sustainability Accounting Standards Board](#), [Task Force on Climate-related Financial Disclosures](#), and other reporting frameworks.

Board Oversight of ESG

We established formal Board-level oversight for corporate responsibility in 2003. The Board's Corporate Governance and Nominating (CGN) Committee has primary responsibility for oversight of ESG issues at Intel, with additional topics also reviewed by other committees (e.g., the Compensation Committee is responsible for oversight of human capital issues, and the Audit and Finance Committee is responsible for oversight of our ethics and compliance program). Management provides formal updates to the CGN Committee at least twice each year and at least annually to the full Board on the company's ESG performance and disclosure. In 2022, this included review of the annual Corporate Responsibility Report and updates on issues including environmental sustainability, climate risk, human capital, human rights, political accountability, and investor outreach and feedback. A number of directors have expertise on key ESG issues and as part of every Board search, our Board is committed to actively seeking women and minority candidates, as well as candidates with diverse backgrounds, experiences, and skills—see “Board Diversity and Refreshment” on page 35 of our [2023 Proxy Statement](#) for details. Since 2018, Intel has been a member of the [Thirty Percent Coalition](#), which focuses on strategies to increase gender, racial, and ethnic diversity on corporate boards.

One of the Board’s functions is the oversight of risk management, which includes ESG-related risks. The Board receives periodic briefing and informational sessions by management on the types of risks the company faces and enterprise risk management. Management is responsible for identifying risk and risk controls related to significant business activities; mapping the risks to company strategy; and developing

programs and recommendations to determine the sufficiency of risk identification, the balance of potential risk to potential reward, and appropriate ways to control risk.

A full description of the Board’s responsibilities, skills, experience, director biographies, compensation practices, commitment to diversity, and oversight of risk management are available in our [2023 Proxy Statement](#).

Ethics and Compliance

Each year, our CEO communicates with our employees and managers about the importance of ethics and legal compliance, including regular reminders on our strong commitment to act with integrity. This “tone from the top”—reiterated by our senior leadership and proliferated in our corporate required annual ethics and compliance training, regular communications throughout the year, company-wide ethics culture surveys, awareness trainings, annual ethics and compliance summits, and educational resources—helps to create and maintain an ethical and legally compliant culture.

We maintain a robust process for reporting misconduct, and our policies encourage employees to raise questions and concerns and to ask questions about policies or procedures without fear of retaliation. We maintain multiple channels for employees and others to report concerns, including reporting anonymously, as permitted by applicable law around the world. The anonymous reporting channel consists of an Integrity Line through which anyone can report alleged misconduct via messaging or an online reporting tool managed by an independent third party. We inform employees, managers, and other stakeholders about Intel’s non-retaliation policy, which prohibits retaliation against anyone who, in good faith, reports a concern or participates in an investigation.

The Intel Code of Conduct

In 2022, we published an updated [Intel Code of Conduct](#) along with a description of the primary changes to the Code. The Code affirms the principles intended to guide the behavior of employees, subsidiaries, and members of our Board of Directors regarding their Intel-related activities, as well as independent contractors, consultants, suppliers, and others who do business with Intel. Through the Code, which is available in 12 languages, we seek to promote honest and ethical conduct, deter wrongdoing, and support compliance with applicable laws and regulations. We also communicate our ethical expectations, including compliance with our Code principles and policies, to our suppliers and third parties.

Employees are expected to complete annual online training, through which they also certify adherence to the Code. Intel executives also receive instructor-led training. In addition, a targeted employee population completes an annual disclosure process to monitor compliance with the Code. Depending on their roles and geographic locations, certain employees are assigned more in-depth ethics and compliance training on topics such as anti-corruption, import-export compliance, insider trading, conflicts of interest, and antitrust. In 2022, approximately 98% of our employees completed ethics and legal compliance training (Code of Conduct training, anti-corruption and antitrust awareness) and over 96% received training on information security and privacy awareness (including Intel employees and contract workers). In addition, approximately 93% of assigned employees completed harassment avoidance training (including regional harassment courses), and over 97% completed Safety Always training.

The Board and senior management receive periodic reports of statistics related to misconduct, as well as details about key investigations. Our Ethics and Compliance Business Champions encourage employees to stay current with their ethics and compliance training, review verified investigations quarterly with business group leaders, and raise employee awareness regarding how to report concerns. In 2022, the largest categories of verified cases involved falsification of documents, conflicts of interest, and compliance items. Consistent concerns are to be addressed through senior management discussions, employee communications, process and controls improvements, and individual corrective action measures, where appropriate.

In 2023, for the 13th year, Ethisphere Institute named Intel to its annual list of the World's Most Ethical Companies.

Digital Climate Alliance

Together with other technology companies, we continued our commitment to the [Digital Climate Alliance](#) to advance discussions with policymakers on the value and opportunity of the information and communications technology (ICT) "handprint," or the ways in which technology can be applied to help reduce climate impact. Our homes, cars, buildings are all being integrated with "smart" devices that allow them to be connected to the internet, cloud computers, and AI. The Digital Climate Alliance sees an opportunity to integrate climate policy with interconnected data and digital tools.

Each quarter, Intel's Ethics and Compliance Oversight Committee (ECOC) receives formal reports from various Intel organizations and reviews risk topics that span business groups.

Public Policy and Political Accountability

Intel works with governments, organizations, and industries around the world to advocate for policies that encourage new ideas, promote fair commerce, and protect resources. We also work to educate political candidates about the implications of public policy decisions for our business, and in the US provide financial support to candidates who hold positions consistent with our business objectives.

We work to make our priorities and positions on key issues clear by including information on our [Public Policy website](#), publicly supporting amicus briefs, or submitting testimony. In 2022, we published statements on our [Public Policy blog](#) covering a range of issues important to our business and industry, including US federal investment in the domestic semiconductor manufacturing industry; preparing the tech workforce of the future; benefits and risks of quantum computing; rebalancing semiconductor supply chains; and more.

To advance our social equity goals, in 2022, we delivered \$1 million in grants to six historically Black colleges or universities (HBCUs). We also renewed our \$250,000 investment in Georgia Tech's Center for Engineering Education and Diversity program and we continued our collaborations with Arizona State, HBCU.vc, Advancing Minorities' Interest in Engineering (AMIE), and the Inclusive Engineering Consortium (IEC) to help support diverse students in engineering and entrepreneurship. In 2023, we are revamping our Minority Serving Institute initiatives to align with Intel's IDM 2.0 strategy, beginning with a new call for proposals in the first quarter.

Intel's global social equity principles guide our work with governments and organizations to build a more equitable world and advance legislation to combat systemic inequities impacting employees and communities globally. Included are regulation and policies in the areas of economic, education, digital, health, justice, environmental, and civic equity. We also advocate for initiatives that expand access to technology, including broadband.

We engage with trade associations to help us work collaboratively with other companies and groups to address key public policy issues on a range of corporate responsibility and sustainability issues. Recent examples include:

- **Social equity:** Working as a member of the [Business Roundtable](#) to advance action on racial and social justice issues in the US.
- **Climate change:** Collaborating with the [Center for Climate and Energy Solutions](#) to encourage climate action.
- **Responsible Supply Chain:** Partnering with the [Responsible Business Alliance](#) (RBA), [Responsible Minerals Initiative](#) (RMI), [Responsible Labor Initiative](#) (RLI), and other stakeholders to educate policymakers on the benefits of collective action on responsible global supply chain practices.
- **Sustainable Corporate Governance:** Working with the RBA, [Digital Europe](#), and other stakeholders to improve the knowledge and understanding of policymakers on the benefits of common approaches to responsible business conduct and to align future due diligence requirements with existing international frameworks.

For more information, see "[Climate and Energy](#)," "[Social Equity](#)," and "[Responsible Minerals Sourcing](#)."

The [Intel Political Accountability Guidelines](#) outline our approach to making political contributions, including senior management and Board-level review processes and our goal of transparency. Decisions on political contributions, whether from the Intel Political Action Committee (IPAC) or corporate funds, consider Intel's business objectives, corporate policies, and the public policy priorities outlined on our [Public Policy](#) and [Corporate Responsibility](#) websites.

We publish reports on our corporate contributions, IPAC contributions, and trade association membership dues on our [Report Builder](#) website.

2022 Contributions

Contribution Type	Amount
Corporate contributions, including state and local candidates, campaigns, and ballot propositions	\$191,150
Intel Political Action Committee contributions	\$1,184,800

Policy on Anti-Corruption

Intel seeks to conduct its business with integrity and to adhere to applicable anti-corruption laws, including the US Foreign Corrupt Practices Act, the UK Bribery Act, and local anti-corruption laws in the locations where we do business. Our long-standing global anti-corruption program includes governance mechanisms designed to support adherence to our [Policy on Anti-Corruption](#) by our employees and supply chain, and to provide for easy reporting of concerns.

Intel was named a “Trendsetter” company in the 2022 CPA-Zicklin Index of Corporate Political Disclosure and Accountability.

Direct Corporate Contributions. Intel makes relatively few direct political contributions using corporate funds, and has a policy of not making independent political expenditures or funding electioneering communications.

Intel Political Action Committee. Our goal is to not contribute corporate funds to IPAC other than for administrative purposes. All employee participation in IPAC is voluntary. IPAC's approach targets balanced support of Democratic and Republican candidates each cycle.

Industry and Trade Associations. We disclose trade association membership dues and payments to other tax-exempt organizations such as 501(c)(4) and 501(c)(6) organizations annually, including the reported portion of dues used for political purposes for annual dues over \$50,000.

Lobbying Expenses. Intel files quarterly reports with the Secretary of the US Senate and the Clerk of the US House of Representatives that detail our lobbying activities. These reports can be found in the Senate's [Lobbying Disclosure Act Database](#). We also publish updated lobbying expenditures on our external [Report Builder](#) website annually.

We regularly evaluate our political spending for effectiveness and alignment as part of our contributions process. Decisions are to be made based on states and districts with a significant Intel presence and leadership on committees of jurisdiction on important Intel priorities. In response to stakeholder feedback, we have further enhanced our review process by adding reviews of public statements to better assess alignment with our values. Under our policies, if we identify some degree of misalignment, we are to communicate directly with contribution recipients. In cases of significant misalignment across our multiple key public policy issues, we are to take action to realign future funding decisions.

Key Public Policy Issues

Automotive and Transportation	Global Trade
Customs and Trade Facilitation	Immigration
Digital Health	Intellectual Property
Diversity and Inclusion	Privacy
Environment and Energy	Security and Trust
	Spectrum
	Tax

More Information:

[Public Policy website](#) and our [Public Policy blog](#).

Stakeholder Engagement

We value transparency, and through open and direct communication, we work to foster and develop trusted relationships with all stakeholders, including employees, customers, suppliers, governments, NGOs, and communities. We maintain formal management systems—including neighbor relations managers for our major manufacturing sites—to engage with, listen to, and learn from our stakeholders to incorporate their input into our thinking and planning.

In addition to face-to-face meetings, several online channels provide us with valuable, ongoing input to our performance and strategy. Our corporate responsibility [e-mail account](#) enables stakeholders to share their concerns, and comments directly with members of our corporate responsibility team, who respond to hundreds of messages each year on a wide variety of topics. We also receive and respond to feedback through our [CSR@Intel blog](#), [Exploreintel.com website](#), [Facebook page](#), and [@WeAreIntel Twitter account](#). Additional details on our stakeholder engagement practices and issues raised through the year are available on our [Report Builder](#) website.

Materiality Assessment

We use a range of methods and inputs to identify priority topics and emerging issues from our stakeholders including:

- Corporate social responsibility and social media channels
- ESG investor outreach meetings
- Results of community advisory panels and surveys

- Customer data requests and survey data
- Employee open forums and surveys
- Meetings with governments, international organizations, and NGOs
- Human rights impact assessment and ethics and compliance processes
- Research on existing and emerging legislation, external standards, trends, and frameworks
- Proactive outreach and dialogue with internal and external stakeholders with relevant expertise, via a third party

Participating in an ongoing, two-way dialogue with our stakeholders strengthens our understanding of important ESG issues.

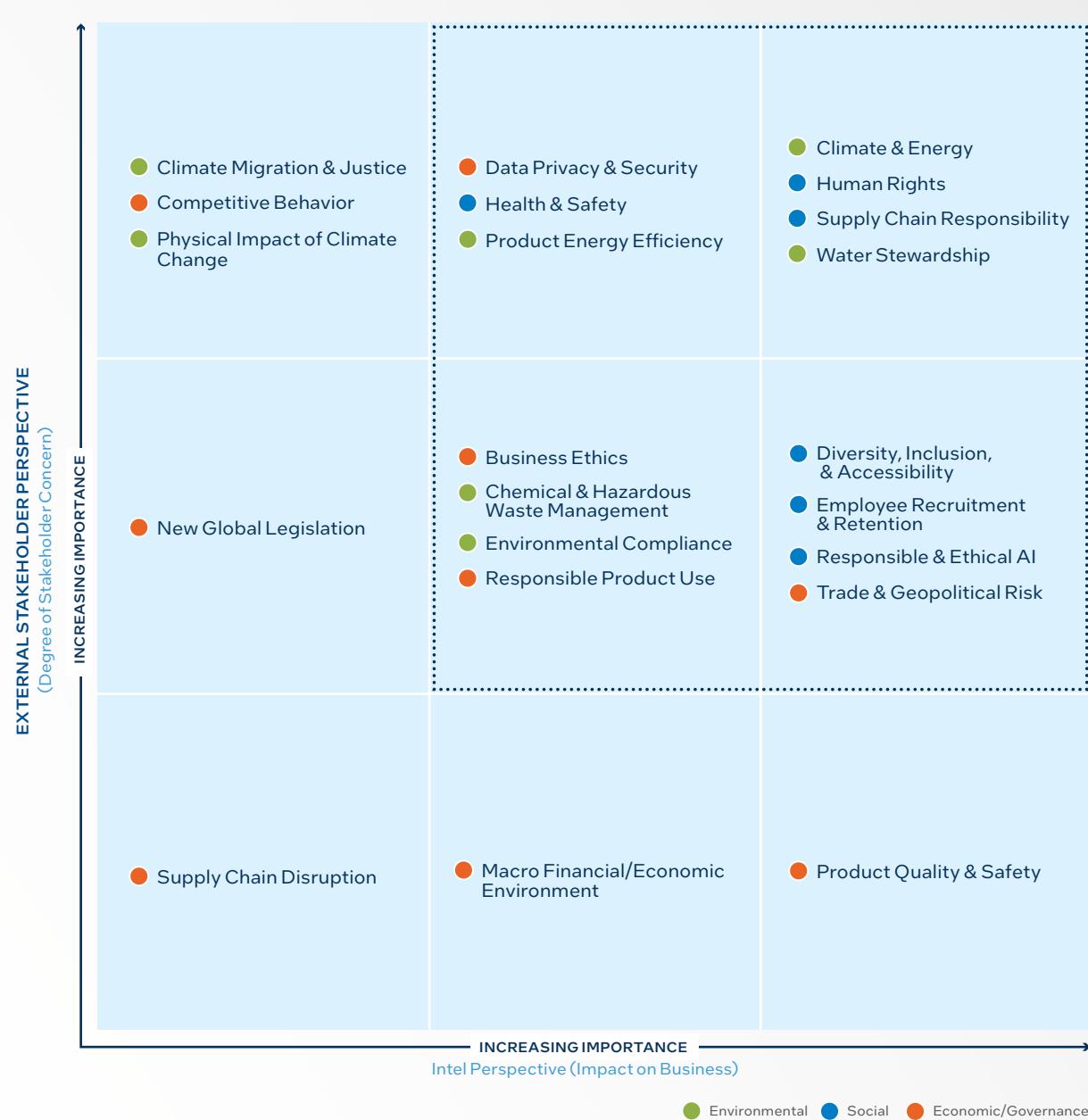
Additionally, Intel engages a third-party specialist to conduct a comprehensive ESG materiality assessment every two years. This assessment is designed to allow us to identify and prioritize the ESG issues that are of greatest concern to our stakeholders and that impact the success of our business. To do the assessment, we review industry best practices and reports, external reporting standards, and new and emerging ESG legislation. We also engage multiple internal ESG experts across the business and conduct external outreach to gain additional external perspectives from governments, NGOs, investors/stockholders, customers, and peer companies.



ESG Materiality Matrix

The output of this work is our corporate responsibility materiality¹ matrix, which plots material ESG issues based on their current or potential relevance—from the Intel perspective (“x” axis) and degree of external stakeholder concern (“y” axis). Issues and themes in each cell are viewed as equivalent in priority for Intel and are listed in alphabetical order. Issues and themes are assigned singly as “Environmental,” “Social,” or “Economic/Governance” based on how they have traditionally been understood. We recognize that many ESG issues and themes are multi-faceted and intersectional in nature and as such, in practice, do not fall neatly into one designation as depicted here for ease of interpretation. It is important to note that everything included within the materiality matrix is of importance to Intel; the subjects and themes listed in the matrix were prioritized from multiple topics that were identified and reviewed during the process.

This work informs our ESG strategy and goals and is used to help draw attention and resources to where they are most needed.



¹“Materiality” used in this report refers to materiality within the context of our corporate responsibility program and priorities and does not refer to concepts of materiality used in securities or other applicable law.

Respecting Human Rights

Human rights are the fundamental rights, freedoms, and standards of treatment to which all people are entitled. Intel's [Global Human Rights Principles](#), policies, and integrated approach to respecting human rights, draw upon internationally recognized labor and human rights standards—including the [UN Universal Declaration of Human Rights](#), [UN Guiding Principles on Business and Human Rights \(UDHR\)](#), [ILO core conventions](#), [OECD Guidelines for Multinational Enterprises](#), and [OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas](#)—and apply to all employees and contingent workers, including those in our subsidiaries. We seek to maintain and improve our processes to avoid causing or contributing to human rights violations related to our operations, supply chain, and products. We also look for opportunities to apply our technology to support the advancement of human rights.

Human Rights Governance

We have established an integrated approach designed to ensure respect for human rights is embedded across our business, including board-level oversight and the involvement of senior-level Management Review Committees. The Human Rights program is managed by the Corporate Responsibility Office and directed by a cross-Intel Human Rights Steering Committee, a global team that develops and implements policies and actions related to our human rights risks across our business. Intel's Ethics & Compliance Oversight Committee (ECOC), which is chartered by and reports to the Audit Committee of the Board of Directors, is responsible for maintaining the [Intel Code of Conduct](#). The ECOC includes senior representatives from across the company and is co-chaired by Intel's Chief Compliance Officer and Director of Internal Audit. Each year, the ECOC invites various Intel organizations to assess and report

on ethics and compliance in their respective businesses or sites and reviews risk topics across the company. The Intel Board of Directors' Corporate Governance and Nominating (CGN) Committee has primary responsibility for oversight of corporate responsibility at Intel, including human rights issues. Management provides formal updates to the CGN Committee at least twice each year and at least annually to the full Board on the company's corporate responsibility performance and disclosure. Our annual [Combating Modern Slavery and Ensuring Transparent Supply Chains](#) statement is discussed with our Board and signed by one of our directors. Our human rights program has been incorporated into the annual ethics and legal compliance review process, which has resulted in increased visibility and awareness of human rights topics across the organization. Key learnings help to drive further improvements.

The [Intel Code of Conduct](#) directs employees to consider both short-term and long-term impacts on human rights when making business decisions and to report potential issues as soon as they are identified. We also continue to offer a holistic human rights training course for employees to help raise their awareness about Intel's initiatives and ways they can act in their roles to advance our human rights strategy. This training is in addition to role-specific training that employees with direct responsibility for supply chain management, for example, receive with respect to mitigating human rights risks within our supply chain.

Throughout the year we meet with external stakeholders and experts on human rights to continue to inform and evolve our human rights policies and oversight processes. We are a signatory to the [UN Global Compact](#), a member of the [Global Business Initiative on Human Rights](#), and a participant in the [Centre for Sport and Human Rights](#) and the [Partnership on AI](#). In 2022, we discussed human rights issues with our investors and NGOs.



Our Approach to Managing Human Rights

Our Operations

Our goal is to cultivate a safe, diverse, and respectful work environment where employees can thrive and innovate. See "[Employee Health, Safety, and Wellness](#)" in the Responsible section and "[Inclusive Workforce](#)" in the Inclusive section of this report for more detail.

The [Intel Environmental, Health, and Safety Policy](#) guides us to "provide a safe and injury-free workplace" through our core safety programs and injury-reduction initiatives—not only for our employees, but also for contractors working at our sites. In addition, our [Global Water Policy](#) reinforces our respect for the human right to water by helping us responsibly meet our operational needs as well as those of our communities.

Our Supply Chain

As a founding and active member of the [Responsible Business Alliance](#) (RBA), we have the same expectations for our suppliers as we have for ourselves. Over the past decade, we have directly engaged with many of our suppliers to verify compliance and build capacity to support addressing risks of forced and bonded labor and other human rights issues. We also periodically engage with indirect suppliers through our programs. Our significant investments of time and resources are aimed at influencing system-level, industry-wide improvements to protect and empower workers in the global electronics supply chain and to reduce community impacts. Our efforts to combat forced and bonded labor in our supply chain include prohibiting the holding of worker passports and charging of workers fees to obtain employment. As a result of our efforts, since 2014, suppliers in our global supply chain have returned more than \$26 million in fees to their workers.

For more information, see "[Supply Chain Responsibility](#)" later in this section.

UDHR Article # and Fundamental Human Rights	Operations	Potential Impacts on Rights Holders		
		Supply Chain	End Users & Data Subjects	Community & Society
2 Right to be free from discrimination	●	●	●	●
3 Right to life and security of person		●	●	●
4 Right to be free from slavery		●		
8 Access to remedy	●	●	●	●
12 Right to privacy		●	●	●
19 Right to freedom of opinion and expression		●	●	●
20 Right to freedom of peaceful assembly and association		●	●	●
23 Right to decent work	●	●		
24 Right to rest and leisure	●	●		
25 Right to an adequate living standard				
UN Right to a clean, healthy, and sustainable environment (Resolution 76/300) and Right to water and sanitation (Resolution 64/292)	●	●		●
UN Right to humanitarian and treatment in armed conflict		●		●

This Human Rights Saliency matrix is a high-level mapping of salient human rights risks within our value chain due to external environmental factors. See Intel's [Code of Conduct](#), [Global Human Rights Principles](#), [RISE Strategy and Goals](#), and [other corporate responsibility policies](#) for more information on Intel's approach to various human rights and sustainability issues. For more detail, see our Salient Human Rights Risk mapping on the [Report Builder](#) website.

Our Products

We have long been committed to respecting privacy and security related to the development and use of our products. We practice privacy and security by design and our [Security Development Lifecycle \(SDL\)](#) processes define actions, deliverables, and checkpoints aimed at integrating security and privacy protections into our products and services. At Intel, our practice is not to participate in any efforts to decrease security in technology and to not design back doors for access into our products. The [Intel Privacy Notice](#) outlines our general approach to managing personal data. In addition, we advocate for global policies and standards to protect privacy and data security.

As the range of products and services we offer broadens and changes, we periodically evaluate potential concerns about how technology products may be used to infringe on human rights. The challenges range from product misuse and limits on freedom of expression, to health and safety concerns that may arise from new technologies. The [Intel Global Human Rights Principles](#) includes language regarding our expectations on product responsibility and human rights. We regularly improve our processes for operationalizing this work. Most Intel products are general-purpose computing products that can be incorporated into systems and applications and that are sold to end users by distributors, system manufacturers, and others, and not directly by Intel. While we do not always know nor can we control what products our customers create or the applications end users may develop, our policy is that we do not support or tolerate our products being used to violate human rights. When we become aware of a concern that Intel products are being used by a business associate in connection with impacts to human rights, we restrict or cease business with the third party until we have high confidence that our products are not being used to violate human rights.

In 2022, while certain product sales to third-party entities met Intel's high-confidence human rights standards, we continued to restrict other product sales based on the [Intel Global Human Rights Principles](#). We continue to leverage the [UN Guiding Principles for Business and Human Rights](#) and due diligence standards under the laws and regulations that apply to our business in the US and globally. Additionally, we applied procedures and methods used in risk-based anti-corruption compliance, as well as supply chain assessment, risk mitigation, training, and remedy processes to implement Intel's product responsibility standard.

Human Rights Impact Assessments

Since 2016, we have regularly engaged with third parties who specialize in human rights to conduct human rights impact assessments (HRIAs), review our processes, and validate our human rights risks across the enterprise. The output of this work is Intel's [Human Rights Saliency Matrix](#). HRIAs are part of our due diligence process to help identify potential impacts. They involve internal cross-functional stakeholders as well as external stakeholders from governments, NGOs, peer companies, and investors. Our human rights risk analysis is publicly available on our [Report Builder](#) site and widely communicated internally to provide visibility across relevant employees and decision makers. To date, our HRIAs have confirmed that, through our policies and practices, we address our most salient human rights risks while reaffirming our need to continue assessing emerging risks to rightsholders in a dynamic global environment.

2023 Human Rights Priorities

- Continue to review, assess, and strengthen the [Intel Global Human Rights Principles](#), policies, due diligence processes, product responsibility governance, monitoring, and employee training to make further improvements and leverage best practices.



- Continue to engage in stakeholder and industry dialogues regarding potential human rights issues related to emerging technologies, for example: advancing research efforts around manipulated content detection and responsible generation of synthetic media in collaboration with associations like the [Coalition for Content Provenance and Authenticity \(C2PA\)](#), [DeepTrust Alliance](#), and [Partnership on AI](#); and AI funding and collaboration on responsible AI with academic researchers and relevant government programs of [DARPA](#) (e.g., Guaranteeing AI Robustness against Deception [GARD]) and [NSF](#), in the areas of privacy, security, and trust for machine learning. For more information, see "[Responsible AI](#)" in the Responsible section of this report.
- Continue to work to identify the highest priority minerals and mitigate risks pertaining to the geopolitical landscape, global regulations, and salient human rights risks in our supply chain. For more details, see "[Responsible Minerals Sourcing](#)" in the Responsible section of this report.
- Continue our work to combat forced and bonded labor throughout our supply chain. We are committed to improving and maintaining processes to avoid causing or contributing to human rights violations related to our operations, supply chain, and products. For more details, see "[Protecting Human Rights in the Supply Chain](#)" in the Responsible section.

Supply Chain Responsibility

We maintain due diligence procedures throughout our supply chain as we work to reduce risk, improve product quality, achieve environmental and social goals, and improve overall performance for Intel, our customers, and our suppliers. To drive responsible and sustainable practices, we have robust programs to educate and engage suppliers that support our manufacturing operations. We collaborate with other companies and lead initiatives on key issues such as improving transparency around climate and water impacts in the global electronics supply chain and, as part of our RISE strategy, we are advancing industry collaboration on responsible minerals sourcing. Through these efforts we help set electronics industry-wide standards, develop robust assessment and audit processes, and conduct training.

Our Approach to Supply Chain Responsibility and Due Diligence

Approximately 9,000 first-tier¹ suppliers in more than 85 countries, regions, and territories provide direct materials for our production processes, intellectual property, tools and machines for our factories, logistics and packaging services, software, office materials, and travel services for Intel. We also rely on others to manufacture, assemble, and test some of our components and products. See a list of our [Top 100 Production and Service Suppliers](#) in the Appendix.

We continue to collaborate extensively with supply chain-related organizations—including the [Responsible Business Alliance](#) (RBA) and its Mineral and Labor Initiatives, the [Semiconductor Industry Association](#), and [SEMI](#)—to help set electronics industry-wide standards, develop audit processes, conduct training, address third-party anti-corruption issues, and more.

We expect our suppliers and their suppliers to comply with the [Intel Code of Conduct](#), Intel's Supplier policies, and the RBA Code of Conduct ([RBA Code](#)). The RBA Code describes expected industry human rights, health and safety, environmental, and ethical standards, and is consistent with the [Intel Global Human Rights Principles](#), the [Intel Statement on Combating Modern Slavery](#), the [International Labour Organization Core Conventions](#), and the [UN Guiding Principles on Business and Human Rights](#). For more, read our [RBA Commitment Letter](#).

We also expect and help enable our suppliers to develop their own corporate responsibility strategies, policies, and processes; set goals and report on their performance; engage with audits; and work to mature their own suppliers.

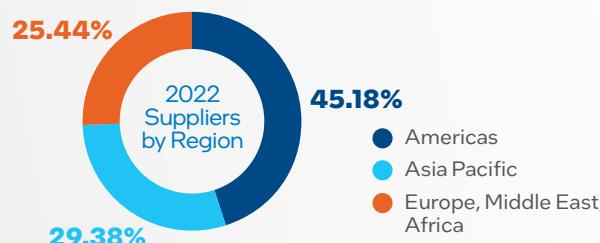
Our supplier development, monitoring, and enforcement efforts are integrated across our commodity teams. This integration helps to scale our coverage, support

supplier progress, and influence suppliers that may be reluctant to meet our requirements. We communicate our expectations in our supplier contracts and request-for-proposal documents, on our [supplier website](#), at meetings and training events, and in annual [letters to suppliers](#).

Internal Assessments. Every year we complete the RBA Self-Assessment Questionnaire (SAQ) and publish the [results](#) on our corporate website. We follow the [RBA Validated Assessment Program \(VAP\)](#) to conduct audits of our finished goods factories. In 2022, we conducted an RBA closure VAP audit of our manufacturing operations in Kulim, Malaysia, which verified our corrective actions had addressed the minor findings from a 2021 audit. We conducted a full RBA initial VAP audit of our manufacturing operations in Ho Chi Minh City, Vietnam, and received a perfect score of 200/200 and the RBA's Platinum recognition. In early 2023, we also conducted an RBA audit of our manufacturing operations in Costa Rica, earning full marks of 200/200. An audit of our Penang, Malaysia operations is planned for later this year.

Strengthening Supplier Capabilities

For more than a decade, we have worked to help less mature and evolving suppliers build critical sustainability and corporate responsibility acumen, including a focus on compliance with the RBA and our Code of Conduct expectations and requirements. We have delivered a broad range of no-cost support options for select suppliers, including online resources, interactive training sessions, and connection to external resources such as the RBA and other NGO-led co-hosted training and conferences.



¹First-tier (referred to as “tier 1” in previous reports) suppliers are companies from which Intel makes direct purchases. Among Intel’s first-tier suppliers, we identify “critical” suppliers that we directly engage through our capability-building programs. These suppliers represent 68% of our spends. Beyond this, we engage periodically with lower tier suppliers through our programs on forced and bonded labor, responsible minerals, and supplier diversity.

Safety Programs. We set high safety training and performance expectations during our contracting process and orientation for new suppliers. Under our process, we validate that suppliers have robust safety management systems and employee safety training programs in place, and evaluate supplier safety performance for compliance with the American National Standards Institute (ANSI) standards, OSHA regulations, and Intel's minimum safety requirements.

In 2022, we collaborated with 68 suppliers to elevate their safety management systems to provide for safe work practices at Intel sites. In addition, we worked with over 40 suppliers to close more than 130 occupational health and safety audit findings and improve worker conditions in their factories. We will continue to advance occupational health and safety systems with our suppliers in 2023.

Beyond our core capability-building offerings, we have long engaged with supply chain sustainability consultants to offer suppliers training and programs focused on topics like work-hours management, occupational health and safety, environmental issues, and prevention of forced and bonded labor.

Supplier Diversity and Inclusion

We achieved our RISE goal to double annual spending with diverse suppliers² eight years ahead of schedule. We spent \$2.2 billion with diverse suppliers in 2022. For more details, see "[Supplier Diversity and Inclusion](#)" in the Inclusive section of this report.

² We recognize diverse suppliers as businesses that are 51% owned and operated by at least one of the following: women; minorities as defined by the country or region where the business was established; veterans/service-disabled veterans; persons who are lesbian, gay, bisexual, or transgender; or persons who are disabled. While Intel recognizes these categories, they may vary in accordance with local law.

Total Audits Conducted

Type of Audit	2017	2018	2019	2020	2021	2022
RBA VAP Audits	66	108	112	88	140	207
Intel RBA-Based Target Audits	52	54	42	38	17	63
Intel Quality Audits with Sustainability Element	52	59	53	–	–	–
Total Audits Conducted³	170	221	207	126	157	270

Applying our risk-based approach, we continue to use the RBA program as the industry standard for our validated audits for manufacturing suppliers. In addition, we apply the risk-based criteria to complete targeted assessments of our non-manufacturing suppliers. Our sustainability criteria have also been embedded into our supplier quality assessment process to further extend our reach into the supply chain. For priority and major findings identified and findings verified as closed through closure audits, by category and sub-category, visit the [Report Builder](#). In certain circumstances, the same facility may be audited multiple times in a calendar year. We treat each individual audit of a single facility as a unique audit in the above table. Despite lingering challenges due to COVID-19, in 2022, 270 audits were conducted across 136 suppliers. Audits that were planned in 2022 but not executed due to COVID-19 restrictions or other reasons and still deemed necessary are included in our 2023 plan. Cumulatively, over 675 supplier sites had received audits by the end of 2022.

³ Previous years' figures are updated from time to time to reflect the most current information as new audit data becomes available.

Advancing Supplier Leadership and Accountability

We have established several programs aimed at advancing our supplier leadership and accountability, as well as making the latest information available through education and collaboration.

Supplier Program to Accelerate Responsibility and Commitment (SPARC). This initiative is designed to help our SPARC suppliers build internal capacity around corporate responsibility through rigorous annual commitments to compliance, transparency, and capability-building. We have increased the number of suppliers required to participate in SPARC over the past nine years as we have broadened our scope to include additional programs and to bring requirements into a single framework. This increase represents suppliers selected using our risk-based approach and those providing critical materials and services to Intel. In 2023 we will continue to work with suppliers and provide training and ongoing communication as we manage to expectations and requirements and a broadened set of focus areas, including growing environmental concerns, regulations, and global initiatives.

Supplier Report Card (SRC). We have a regular review and scoring process for our SRC to grade suppliers for product availability, cost, quality, sustainability (ethics, supplier diversity, and environmental and human rights performance), security, safety, technology, and customer satisfaction. These processes allow for executive-level dialogue on past and future performance, and remind suppliers of our expectations.

Assessments and Audits. Supplier assessments and audits are designed to cover more than 300 environmental, safety, and human rights factors, and help us determine a supplier's risk profile. The audits, conducted by a mix of third parties and Intel personnel, follow the [RBA VAP](#) and help us identify where immediate action is needed and where longer term, corrective "targeted action plans" should be put in place. In 2022, 46% of the combined RBA audits were follow-up or closure audits to verify whether the findings from a previous audit had been addressed. We strive to audit 100% of high-risk supplier sites within a two-year cycle. We have instituted a process of unannounced audits to follow up on credible reports of non-compliance, but we did not need to conduct any such audits in 2022.

Risk Assessment and Due Diligence

Intel's processes are designed to regularly evaluate, verify, and address risks in our supply chain, with the intention of protecting people and eliminating those risks. We start by setting clear expectations for suppliers. These expectations are codified in Intel's Code of Conduct, supplier policies and expectations, and the RBA Code. We then undertake a set of due diligence steps.

New Supplier Assessment: We work to begin assessments and due diligence during the supplier selection process. Suppliers that want to do business with Intel are expected to complete a corporate social responsibility survey that includes questions designed to help us identify potential risks. For suppliers that are selected, contracts are put in place that require suppliers to strictly comply with Intel policies and local laws and regulations that are applicable. Additionally, we communicate our expectations to suppliers regularly, reminding them of their legal obligations to comply with Intel policies.

Self-Assessment: Critical and high-risk suppliers⁴ are to complete a questionnaire to determine a facility's potential gaps to the RBA Code. Self-assessments are then evaluated for human rights, health and safety, environmental, and ethical risks. Each facility is then assigned a risk rating, which is to be used to determine whether an audit or other engagement such as capacity-building is appropriate.

Audits: Higher risk suppliers must undergo either an on-site audit by qualified third-party auditors who use the [RBA VAP](#), or a qualified Intel auditor. The latter audits are structured according to risk and compliance concerns for a particular supplier or facility. Lower risk suppliers,⁵ as determined by the self-assessment, may also be audited at our determination. The audit standard is the RBA Code of Conduct, which has expectations in the areas of human rights, health and safety, environmental ethics, and management systems. When auditors

uncover findings, our policies require suppliers to draft comprehensive corrective action plans (CAPs) to address those findings, and we work closely with the suppliers to document actions taken to remedy the findings. We then monitor their progress until the issues are resolved. Closure of the findings is typically verified with a closure audit. What we learn from audits helps inform our supplier engagement, capability-building programs, and future audit plans.

Targeted Action Plans: When a supplier does not make sufficient progress in addressing audit findings or has particularly egregious issues, we seek to work with the supplier to quickly develop and implement a strong CAP. Supplier progress is to be reviewed quarterly until we have verified that key issues have been closed, and that processes have been put in place that are designed to prevent recurrence. If satisfactory progress is not made, we may take additional action, such as not awarding new business ("conditional use" status) until issues are resolved or—when necessary—ending the supplier relationship. While complete closure of some issues can take several years, we work to close egregious issues within 30 days. We help suppliers with targeted action plans make progress in multiple ways. Our actions may include conducting additional reviews, such as unannounced audits, and increasing the frequency of contact between Intel executives and supplier senior management. At the end of 2022, we had two suppliers on action plans to progress toward compliance.

Action Plan Status

Supplier	Area of Concern	Status (as of April 2023)
Kinetics Systems Malaysia Sdn Bhd	Labor	On track
Walsin	Labor	At risk

An "on-track" supplier has made significant progress to implement the agreed-upon action plan. An "at-risk supplier" faces challenges to achieving progress and may be placed on conditional use status.

Training/Attestation: In 2022, as part of our progress toward our RISE goals, we had more than 20 lower risk suppliers complete training through the RBA eLearning Academy. The curriculum instructed the suppliers on human rights principles of the RBA Code of Conduct and their obligation to abide by RBA Code 7.0.

Recognizing and Rewarding Performance

We seek to provide regular feedback to suppliers on their overall progress and achievements, and integrate corporate responsibility considerations into our Excellence, Partnership, Inclusion, and Continuous Improvement (EPIC) program. EPIC recognizes suppliers that have demonstrated outstanding, distinguished, and valued performance. Visit our [supplier website](#) after July 2023 to see a list of 2022 suppliers that received EPIC recognition.

Supplier Environmental Impact

We seek to work with our suppliers to decrease their waste generated, water usage, and greenhouse gas emissions, and thereby reduce our own environmental impact, lower supply chain risk, and decrease costs. We may also work with our first-tier chemical and gas suppliers on green chemistry initiatives. Our procurement teams work with our logistics and packaging suppliers to help drive changes in the materials we use to ship products.

⁴ "Critical suppliers" represent a subset of all first-tier suppliers with which we have significant business relationships and spends. "High(er) risk suppliers" refers to any suppliers (first-tier as well as lower-tier suppliers) deemed above average risk, based on data and supplier performance.

⁵ "Lower risk suppliers" refers to suppliers (first-tier and lower-tier suppliers) deemed below average risk, based on data and supplier performance.

Reducing Greenhouse Gas Emissions and Water Use

We are actively engaged with our suppliers to help identify areas of improvement, including increasing supplier focus on energy conservation and renewable energy sourcing, increasing chemical and resource efficiencies, and collaborating through cross-industry consortia to support the transition to a net-zero greenhouse gas semiconductor manufacturing value chain. To accelerate progress, we seek to work with suppliers to drive supply chain greenhouse gas emissions to at least 30% lower by 2030 than they would be in the absence of investment and action. In 2022, we also became a founding member of the [Semiconductor Climate Consortium](#), which is focused on advancing collaboration across the semiconductor value chain to reduce greenhouse gas emissions.

In 2022, we asked approximately 130 first-tier suppliers that have higher environmental impacts to submit data on their own carbon footprints through the CDP Supply Chain Climate Change Questionnaire. Of those suppliers, about 98% submitted the questionnaire, and approximately 92% of those made their responses public, giving both Intel and other stakeholders information about the environmental performance of Intel's supply chain. Using information provided in our suppliers' CDP Climate Change Questionnaire helps us confirm that we are focusing on the largest climate change impacts.

We also sent the CDP water questionnaire to more than 60 suppliers located in water-stressed regions. We achieved a 100% response rate, with 93% of the suppliers publicly sharing their responses.

We seek to decrease the greenhouse gas emissions related to our transportation and logistics network by optimizing packaging to reduce the quantity and weight of shipments and by increasing local sourcing. In 2022, we drove further reductions by converting 83% of capital

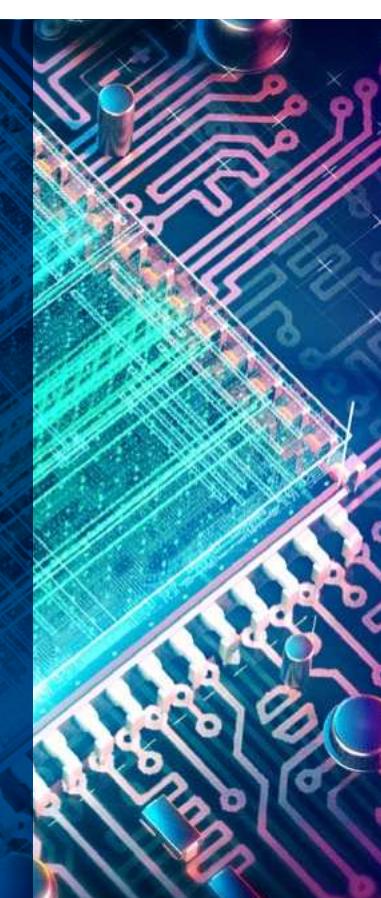
tool shipments from air freight to ocean freight, resulting in a 95%+ reduction in emissions per shipment. Intel also designed and implemented a new process for using primary, supplier-specific data for the measurement of transportation and logistics greenhouse gas emissions, with a focus on improving data quality and enabling targeted action to drive future emissions reductions.

For more information, see the [Sustainable](#) section of this report.



“ Reducing greenhouse gas emissions across the semiconductor value chain will benefit not just the technology industry, but also industries across the globe. However, this requires immense innovation and collaboration—the challenges we'll face can't be solved by just one company. I am proud Intel joined the Semiconductor Climate Consortium as a founding leadership member to support these critical efforts. Together, we will strive to make a lasting impact to help mitigate the outcomes of climate change.”

—Keyvan Esfarjani, Executive Vice President
and Chief Global Operations Officer at Intel



Responsible

We have a long history as a leader in advancing safety, wellness, and responsible business practices across our global manufacturing operations, our value chain, and beyond. This includes our strong focus on employee health, safety, and wellness, as well as our work to advance human rights and to scale responsible minerals sourcing practices across our supply chain and industry. It also includes collaborations with others to revolutionize how technology can improve health and safety through strategic healthcare, manufacturing, and automotive safety initiatives, and the responsible use of AI.

This year's highlights

57 employees earn safety honors

Through the Intel Safety Always-Safety Star program, we honored 57 employees for their work to advance Intel's safety culture in 2022—including incorporating new technology to improve safety inspections, creating programs to improve office and manufacturing ergonomics, developing new strategies to improve safety culture, and providing safety coaching and communications

>\$26 million in fees remediated

We set expectations with our suppliers that workers should not have to pay for their employment. As a result of our efforts, suppliers in our global supply chain have returned more than \$26 million in fees to their workers since 2014. In 2022, Intel ranked number 2 out of 60 public ICT firms in [KnowTheChain's](#) annual benchmarking of corporate efforts to address forced and bonded labor risks in their supply chains.

Responsible AI strategy

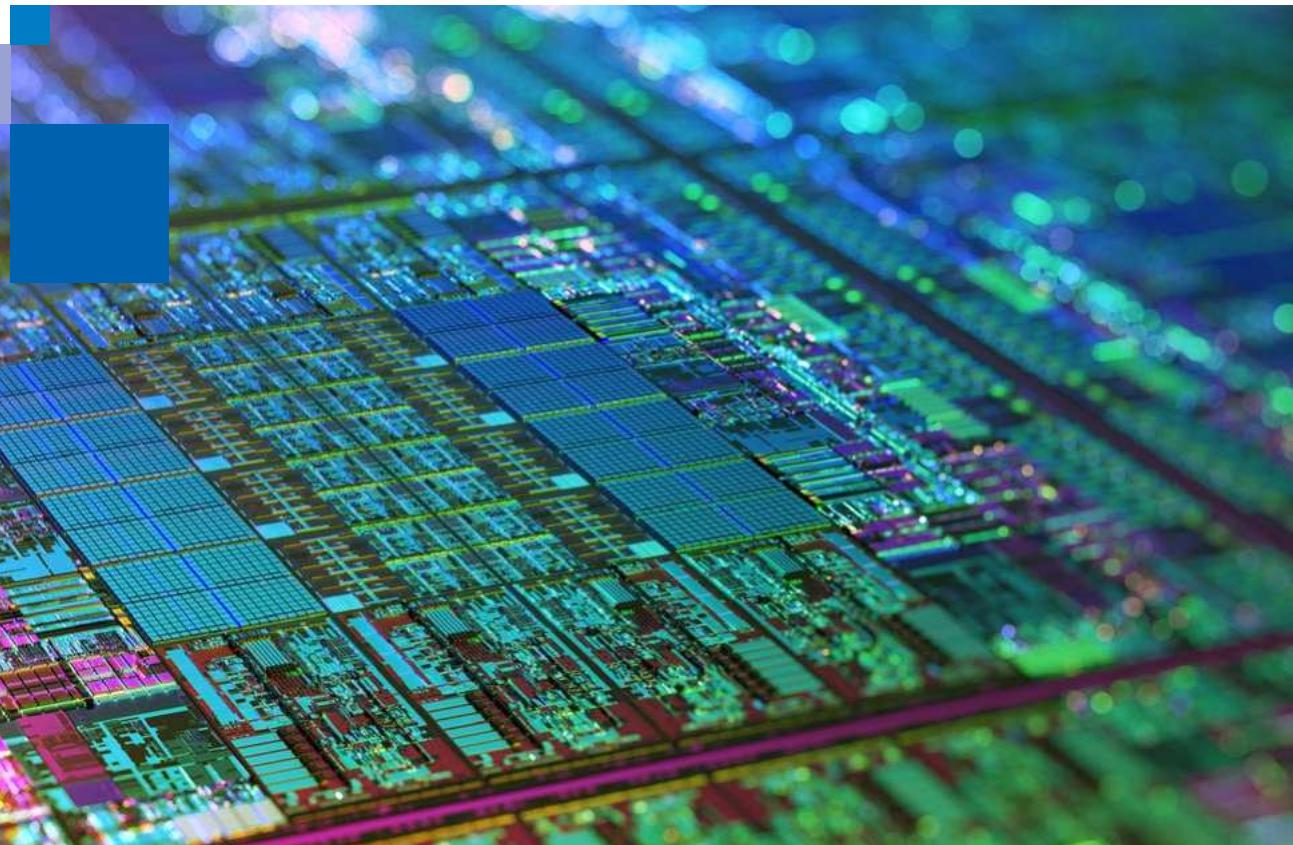
In 2022, we shared details of our responsible AI strategy, which aims to enable Intel to leverage its place in the AI value chain, drive meaningful progress, and scale efforts broadly. Our strategy is centered along four pillars: internal and external governance, research and collaboration, platforms and solutions, and inclusive AI.



Responsible: Our Approach

We have long engaged directly with our suppliers to support their compliance with our corporate responsibility expectations and build capacity to address risks of forced and bonded labor and other human rights issues. Our RISE goals significantly expand the number of suppliers covered by our engagement activities to drive deeper accountability for human rights throughout our global supply chain. We are also leading technology industry initiatives to further advance responsible practices in minerals sourcing, mobility, and AI. The impacts of these efforts are expected to have even greater reach as we continue to execute our IDM 2.0 strategy and grow globally.

We apply our expertise and resources to further enable others to harness the power of technology to improve health, safety, and well-being. This includes working with the healthcare industry to accelerate critical research and improve healthcare access and affordability; applying technology to build smart and safer workplaces and factories to reduce injuries; and expanding the use of technology in transportation to advance safety and transform personal mobility and access. Through our RISE goals and IDM 2.0 strategy, we intend to continue to take actions to deepen our focus on maintaining and building a robust safety culture as our business continues to change and grow, and to expand the global impact of our wellness programs.



2030 RISE: Responsible Goals, Initiatives, and Global Challenges

Global Challenge:

Revolutionize health and safety through technology.

Technology Industry Initiatives:

Responsible Minerals. Expand our efforts beyond conflict minerals¹ to cover all minerals used in semiconductor manufacturing and apply the learnings to lead our industry in creating new sourcing standards.

Responsible Mobility. Collaborate with our industry and ecosystem peers to advance the adoption of technology-neutral safety standards to reduce traffic accidents globally.

Operational and Supply Chain Goals:

Employee Health, Safety, and Wellness. Ensure that more than 90% of our employees believe that Intel has a strong safety culture, and 50% participate in our global corporate wellness program.

Supply Chain Human Rights. Scale our supplier responsibility programs to ensure respect for human rights across 100% of our tier 1 contracted suppliers and higher risk tier 2 suppliers.

¹Conflict minerals, as defined by the US Securities and Exchange Commission (SEC), is a broad term that means tin, tantalum, tungsten, and gold (3TG), regardless of whether these minerals finance conflict in the Democratic Republic of the Congo (DRC) or adjoining countries.

Employee Health, Safety, and Wellness

We continue to invest in health, safety, and wellness programs to help employees enjoy a better quality of life and contribute to Intel's success. Our [Global Environmental, Health, and Safety Policy](#) defines our commitment to provide a safe and injury-free workplace for our employees, contractors, customers, collaborators, and the public. We recognize the importance of environmental, health, and safety (EHS) management to our business success and we regularly work to assess and improve our EHS management system, standards, culture performance, early intervention, and injury-reduction initiatives. Since 2001, we have maintained a multi-site [certification](#) to the internationally recognized ISO 14001 and ISO 45001 standards to help our manufacturing sites sustain a comprehensive, fully integrated EHS management system. In 2022, independent third-party virtual audits were conducted to maintain this certification. For information on our EHS assurance program, see "[Environmental Management](#)" in the Sustainable section of this report.

Since 2020, Intel's Pandemic Leadership Team (PLT) has led our response to the COVID-19 pandemic, working to pivot quickly and deal ethically with ever-changing government restrictions and requirements in the 50-plus countries and regions where Intel operates. From virus variants, case expansions, governmental restrictions, and vaccination requirements, the PLT has helped keep Intel's employees and contingent workers safe, healthy, and productive, whether they are working on site or remotely. In 2022, Intel returned most of its global workforce to normal operating conditions at most locations. The PLT continues to monitor case and variant trends globally, and adjusts its site practices to meet any local additional regulatory requirements.

As we expand manufacturing operations in support of Intel's IDM 2.0 strategy, we intend to continue to implement world-class EHS programs to care for people and the planet—from the development of our products through our manufacturing and supply chain. Advancing

accountability and improving performance across our supply chain creates value for Intel and our customers by helping us reduce risks, improve product quality, and achieve environmental and social goals. For more information, see "[Supply Chain Responsibility](#)" in the Our Business section of this report.

Health and safety training creates awareness and enables our employees to better understand their safety responsibilities. Our training system is designed to cover information needed for specific jobs (such as electrical safety, ergonomics, control of hazardous materials, and chemical safety), general awareness, and safety culture. EHS courses are provided in different languages, and include web-based, instructor-led, and on-the-job training. We are also developing learning methodologies such as virtual and augmented reality.

In 2022, our manufacturing, supply chain, and technology development organizations continued quarterly, trackable manager Safety TALKs to encourage proactive one-on-one discussions between managers and employees on various safety topics. Quarterly Safety TALK goals were exceeded every quarter. We also refreshed our 2022 Safety Always training course using updated training methodologies. To boost safety awareness across the company, this training was assigned to all employees, and 94% of our workforce completed it in 2022. All new non-factory employees are required to complete Office Ergonomics training to build awareness of both on-site and remote office ergonomic risks, proper workstation set-up, and ergonomic services available.

We achieved an EHS training milestone in 2022, with an all-time-high 607,000 EHS training hours completed.



Recognizing that early intervention is critical for good ergonomic health and the prevention of injuries, in 2022, we implemented a global proactive employee concierge Ergo+ program, following our successful pilot in 2021. Ergo+ provides one-on-one advice and proactive ergonomic assessments for employees working in both remote and in-office setups. In addition, we brought on board a new global specialist ergonomics vendor to support virtual office ergonomic assessments for our hybrid, virtual, and on-site employees. We are now able to provide ergonomic assessments in relevant local languages and data can be collected in a central tool, thus facilitating data analysis and trending. In 2022, we set a goal of 10,000 proactive ergonomic assessments for the year, which we increased to 12,000 in the third quarter due to progress being made. We exceeded our revised 2022 goal, with nearly 15,200 employees having personalized recommendations from an ergonomics specialist to manage their ergonomic health. Employees can initiate both of these services via an online tool.

We also set a global leading indicator to support our organization's compliance with rest breaks. Software prompts encourage employees to take breaks for musculoskeletal recovery. Break compliance improved from 89% to 91% for those participating during 2022.

In addition, we continue to expand our year-round multimedia Safety Always employee awareness campaign. In 2022, we held in-person events at multiple sites, as well as virtual engagement opportunities with world-class speakers who provided new perspectives on safety, health, and wellness topics. The campaign also included regular, widely read employee communications on topics such as traffic safety, ergonomics, and reporting.

Intel ended 2022 with an Occupational Safety and Health Administration (OSHA) recordable rate of 0.90 per 100 employees, compared to the most recently published US semiconductor industry average recordable rate of 0.80 in 2021.¹ Our 2022 days away case rate² was 0.22, compared to the semiconductor industry average of 0.2 in 2021. Ergonomic-related or cumulative trauma disorders (CTDs) remained the most prevalent type of injury experienced at Intel in 2022, accounting for 60% of all reports, followed by strains/sprains. While ergo injuries remain our highest injury pareto, our 2022 Office Ergonomics Program early intervention focus is starting to have an impact, with a 15% reduction in office CTD rates compared to 2021. There were 19 high-consequence injuries during 2021, with 47% CTD injuries and 37% strain/sprain injuries. We are working to integrate learnings into our 2023 ergonomics program's early intervention focus plans.

The virtual Intel® Vitality program was enhanced at the beginning of 2022 with the launch of the Exos Fit app to support the well-being of employees, whether on-site, remote, or hybrid. The global wellness program supports our RISE goals and focuses on four pillars of wellness: mindset, nutrition, movement, and recovery. It offers livestream and on-demand fitness classes, wellness coach consultations, and nutrition seminars. On-site fitness services resumed during 2022, as more employees returned to working at Intel facilities. As part of our RISE wellness goal, we aim to have 50% of our employees participating in our corporate wellness program every year. In 2022, we offered more than 81,000 Intel Vitality sessions, with a total of over 423,000 participants, including nearly 40,000 unique individuals. Participants reported a 95% satisfaction rating with the program. The global wellness program continued offering access to the [Headspace](#) meditation application, as well as to five virtual webinars led by Headspace in 2022. Over the course of the year, almost 6,000 employees used Headspace an average of 13 sessions per week.



Recognizing Safety Achievement

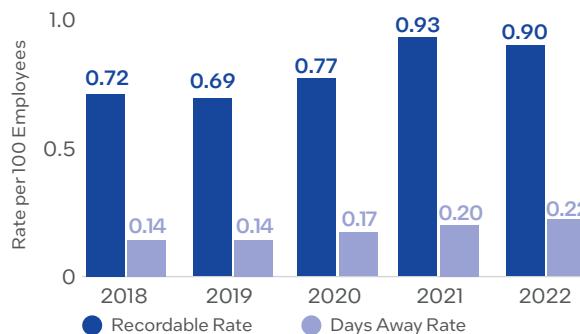
Through our Safety Always-Safety Star program, we are proud to recognize employees who exemplify our safety value every day in what they do. Each Safety Star is passionate about maintaining our strong safety culture, serves as a role model, and goes above and beyond to make Intel a safe place. During Global Safety Day in April, the honorees were recognized individually or as part of a team, selected from over 160 individual and team nominations received globally. Winners' contributions to advancing Intel's safety culture included new technology to improve safety inspections, programs to improve office and manufacturing ergonomics, new strategies to improve safety culture, and safety coaching.

¹Source Bureau of Labor Statistics. 2021 indicators are available at https://www.bls.gov/web/osh/summ1_00.htm.

²Days away begins the day after the accident.

Intel's mental wellness strategy is designed to raise awareness of the importance of mental health, cultivate an accepting culture so employees feel supported, and remove barriers to make it easier for our employees and their family members to access and receive care. In 2022, we partnered with Intel's Employee Resource Groups and other communities to provide programming and a safe space to discuss social issues and the impact on mental health. We also expanded access to our digital mental wellness platform, now available in 22 countries. Understanding that manager support for mental health can also matter, Intel introduced training for managers to provide them the resources needed to identify and support the mental health of their teams. In recognition of World Mental Health Day, Intel hosted Global Mental Wellness week. The week-long event encouraged employees to take time for their minds and invest in their mental well-being through over 20 webinars, a renowned keynote speaker session, and tools to check up on their mental well-being status. Four members of Intel's executive leadership team shared their personal experience with caring for their mental health to exemplify the importance of prioritizing mental wellness.

Recordable and Days Away Injury Rates



Rate based on 100 employees working full time for one year. Data as of January 19, 2023. Certain historical figures have been updated based on new reported cases received.

2030 Goal: Employee Safety and Wellness

Description. Ensure that more than 90% of our employees believe that Intel has a strong safety culture, and achieve 50% participation³ in our global corporate wellness program.

Baseline. At the start of 2020: (1) 37% of Intel employees (primarily in our manufacturing operations) had the opportunity to provide feedback in our EHS Safety Culture Survey, reporting a baseline average of 79% on "safety is a value" metrics; and (2) 22% of Intel employees participated in Intel wellness programs (inclusive of employees who reside in countries with no formal program offerings).

Progress in 2022. Our health, safety, and wellness teams took steps to expand the number of employees who have the opportunity to participate in the safety culture survey to 60%, which was below our 62% interim 2022 goal. Based on Intel restructuring actions, the safety culture surveys in the fourth quarter were postponed until the second quarter of 2023. 87% of employees from organizations engaged in the survey process reported that "safety is a value." We also worked to increase employee awareness and engagement in our programs, with a focus on prevention and early intervention programs (e.g., ergonomic programs) and participation in the Intel Vitality Program's newly expanded virtual offerings. The Intel Vitality Program was expanded to reach 90% of Intel's employee population in 2022. 38% of global Intel employees participated in Intel's wellness services in 2022, including the Intel Vitality Program and on-site fitness center use.

Looking Ahead. For our safety culture goal, we intend to work toward company-wide participation in our safety culture survey (with a target to expand the survey to 75% of employees by end of 2023) and increase employee and management engagement in our safety programs. For our wellness goal, we also intend to continue to further expand wellness program access to our global employee population over the next three years, with a target to reach 100% of global employees by the end of 2025, and then to increase the annual participation rate for global employees to 50%.

³ Industry benchmarking indicates general corporate wellness program participation rates are about 20-40%. Intel participation is measured by percentage of employees engaging in the program during the calendar year.

Globally, we have more than 35 on-site health clinics to attend to work-related employee health and safety needs. At our sites in Arizona, New Mexico, and Oregon, we also have [Health for Life Centers](#) to provide primary care and specialty services (including acupuncture, chiropractic, condition management, behavioral health services, and physical therapy) in a safe and inclusive

environment for our employees and their eligible dependents. The Health for Life Centers administered hundreds of COVID-19 vaccinations in 2022, as well as delivering approximately 14,000 virtual visits.

Protecting Human Rights in the Supply Chain

We have worked to build a strong system to detect and address risks of forced and bonded labor among our suppliers and their recruiting and labor agents. In 2022, we conducted approximately 270 supply chain audits, including 125 closure audits to confirm that corrective action was put in place. These included over 30 lower-tier supplier audits. Intel's policy is to request an audit when we detect a higher risk to the human rights of the workers or a non-conformance to any of our expectations.

Importantly, our suppliers report benefits gained as a result of their improved practices, such as reduced business risks, better and larger pools of candidates, a more satisfied workforce, and higher worker retention—all of which can lead to improved productivity and product quality, as well as positive social impacts.

Our [Statement on Combating Modern Slavery](#) details the expectations we have for ourselves and for our suppliers, including prohibitions against holding worker passports and charging workers fees to obtain or keep employment. Since 2014, our ongoing assessments and efforts to reach deeper into the supply chain have positively affected almost 49,000 workers in our global supply chain, including our suppliers (i.e., first-tier and lower-tier suppliers) having returned more than \$26 million in fees to more than 24,000 of their workers. Fees returned typically equate to approximately three to five months of base pay, depending on location and situation. In some instances, we have faced challenges in gaining cooperation from suppliers in repaying workers quickly; we strive to work closely with suppliers to determine acceptable remedies and put systems in place to prevent such issues in the future.

According to the RBA, the payment of recruitment fees by workers to obtain work is one of the most widespread factors that can contribute to situations of forced labor. Intel helped create a [guide](#) that details best practices for repayment.

Findings that May Trigger Forced and Bonded Labor Risks

Findings	2018	2019	2020	2021	2022
Closed	48	38	30	52	27
In Process	—	—	—	2	52
Total	48	38	30	54	79

Our processes are designed to help us proactively work to identify and help suppliers close findings that we believe may be trigger factors for forced and bonded labor.

Due to lingering COVID-19 pandemic effects, some suppliers in the electronics industry have faced worker shortages, which has continued to create pressure for longer working hours and fewer days off for workers. Intel's policy is to continue to press suppliers to abide by the Responsible Business Association (RBA) Code of Conduct, including allowing workers a day of rest each week and making all overtime voluntary. In limited, controlled situations workers were allowed to work up to 72 hours as an exception.

Industry Collaboration through Training

Collaboration is key to addressing broad, long-standing issues. Intel co-founded and serves on the working group of the multi-industry, multi-stakeholder [Responsible Labor Initiative](#) (RLI), which aims to protect and promote the rights of vulnerable workers.

In 2022, Intel co-sponsored virtual workshop-style training sessions, "Manifestations of Forced Labor Indicators in the Global Supply Chain" which were facilitated by Verité, a noted leader in efforts to uncover and combat forced labor. We expect to continue to co-sponsor these trainings in 2023.

For more information on our work on human rights in our supply chain, see "[Respecting Human Rights](#)" in the Our Business section of this report.

2030 Goal: Supply Chain Human Rights

Description. Scale our supplier responsibility programs to ensure respect for human rights across 100% of our contracted suppliers and all high-risk-identified suppliers in the supply chain.¹

Baseline. At the beginning of 2020, 18% of our contracted suppliers had been assessed and engaged in our supplier responsibility programs. By the end of 2020, 8% of our contracted suppliers had completed the requirements of the goal.

Progress in 2022. On our path to reach 100% verified contracted suppliers in 2030, we met 28% in 2022. We made this progress through audits, assessments and RBA training, and attestation for lower risk contracted suppliers. Additionally, in 2022 we included over 30 lower tier suppliers in our audits.

Looking Ahead. In 2023, we aim to maintain our progress and continue to evaluate the impact of IDM 2.0 supply chain changes.

¹In 2023, the goal language was updated to reflect Intel's continued commitment to human rights for all high-risk-identified suppliers—not solely those noted as tier 1 and tier 2—in our supply chain.

Responsible Minerals Sourcing

Like many companies in the electronics industry, Intel and its suppliers use minerals in manufacturing. In 2008, Intel began work to responsibly source conflict minerals,¹ and in 2017, we expanded our efforts to also address cobalt in our supply chain. We are proud of the significant progress we have made as a company and as an industry, but we believe that there is more work we can achieve. A key technology initiative in our RISE strategy is to significantly expand our impact in responsible minerals and accelerate the creation of new sourcing standards for critical minerals in Intel products.

Intel's strategy is to maintain the positive progress we've made to date on 3TG (tantalum, tin, tungsten, and gold) and cobalt, and to proactively address emerging risks from the expanding scope of materials and geographies. Our ambition is to apply our learnings from over a decade and work with our industry to broaden and accelerate the creation of sourcing standards for a much wider set of minerals across additional conflict-affected and high-risk areas (CAHRAs²).

More information is available on our [Responsible Minerals website](#). Our Responsible Minerals program, [Responsible Minerals Sourcing Policy](#), and due diligence practices are designed to address minerals originating in CAHRAs, and are aligned to the [OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas](#) (OECD Guidance).

¹ Conflict minerals, as defined by the US Securities and Exchange Commission (SEC), is a broad term that means tin, tantalum, tungsten, and gold (3TG), regardless of whether these minerals finance conflict in the DRC or adjoining countries.

² CAHRAs, as defined by OECD, are identified by the presence of armed conflict, widespread violence, or other risks of harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars, etc. High-risk areas may include areas of political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, and widespread violence. Such areas are often characterized by widespread human rights abuses and violations of national or international law.

Beyond Conflict Minerals: Driving a Responsibly Sourced Mineral Supply Chain

In 2022, we sent our Intel minerals survey for what we deemed the highest priority minerals in our supply chain. This request was to provide sourcing information for critical minerals, including aluminum, copper, nickel, and zinc and was required from suppliers contributing these materials in our Intel-manufactured microprocessors. This is an important step in our RISE strategy, as we begin mapping our supply chain for our highest priority minerals. Although sourcing of these minerals is not yet widely reported, we received a response from approximately 83% of relevant suppliers. We are continuing to pursue information on smelters and refiners in our extended supply chain—those that supply our direct suppliers. A [list of smelters and refiners](#) reported can be found on our website.

To contribute to standards and help define and engage in due diligence within the copper supply chain, Intel is an active member of [The Copper Mark](#), participating in its Risk Readiness Assessment Technical Revision Committee and Technical Working Group. We are continuing to map our supply chain for targeted minerals, as well as other priority minerals.

Connecting with Mining Communities

Intel believes in the importance of direct engagement with mining communities to address human rights issues in our supply chain. As a complement to our due diligence program, we have an ongoing program to dedicate resources and work with expert civil society organizations to help identify and remedy the challenges of the mining communities that source our products.



Examples of projects supported by Intel in 2022 are: [Congo Power](#), an alliance providing mining areas with clean power, and [RMI-PACT Youth Vocational Training Program](#), aimed at providing mining alternatives to Congolese people. Additionally, Intel believes in the local socio-economic importance of the artisanal and small-scale mining (ASM) sector in CAHRAs and seeks to assist ASM sites in meeting downstream compliance requirements through the Better Mining ASM Mine Monitoring Program in collaboration with [Responsible Minerals Initiative](#) (RMI) and [RCS Global](#). Intel also supported a digital suite designed specifically for the ASM sector, which is expected to create new pathways to track, access, and share data about practices in mining communities. Maintaining a connection and providing support to the communities that we depend on in our vast global supply chain is a crucial component to our responsible minerals program.

Our Due Diligence Continues: 3TG and Cobalt

Intel's responsible 3TG and cobalt program, aligned with the [OECD Guidance](#), focuses on three primary areas:

Risk Identification. Each year we conduct a supply chain survey to identify the smelters and refiners that process the 3TG and cobalt contained in the products supplied to Intel, and the country of origin of minerals used. We then compare those smelters and refiners to the list of facilities that conform to a responsible minerals sourcing validation program such as [RMI's Responsible Minerals Assurance Process](#) (RMAP). We can then use the information to identify potential mineral supply chain risks.

Risk Mitigation. When we identify potential risks, we work to conduct further due diligence, which may include on-site smelter or refinery visits or virtual outreach. Such visits or virtual outreach help identify risks, encourage smelters and refiners to participate in an assurance program to validate their sourcing

practices, and drive risk mitigation for human rights impacts. When necessary, we may disengage from mineral supply chains that cannot uphold our responsible minerals sourcing standards. In 2022, Intel led in-person outreach to over 20 smelters in Indonesia to encourage and support participation RMAP.

Supporting In-Region Sourcing. We believe that the creation and support of responsibly sourced³ minerals from CAHRAs improve the lives of the people in the regions. In addition to our independent project resourcing, our membership in and support of the [Public-Private Alliance for Responsible Minerals Trade \(PPA\)](#) and [European Partnership for Responsible Minerals \(EPRM\)](#) directly support regional projects that enable responsibly sourced minerals from CAHRAs by helping to implement programs that are consistent with the OECD Guidance and supported RMI programs.

Through our 2022 supply chain survey process using the RMI Conflict Minerals Reporting Template, 96% of the relevant smelters and refiners reported in our supply chain are deemed responsibly sourced through their conformance to and/or participation in a responsible minerals assurance program.

Intel used the RMI Extended Minerals Reporting Template to survey the suppliers contributing cobalt to our products. In 2022, we received responses from 100% of suppliers surveyed. We conducted risk mitigation in our supply chain, including smelter outreach and country of origin assessments, and worked with direct suppliers to facilitate alternative sourcing where appropriate. Our goal is to responsibly source all cobalt in our products. Through RMI's cobalt working group and smelter outreach, we are working to have all smelters and refiners in our cobalt supply chain participate in RMAP.



Intel's long-term leadership in initiatives such as the RMI and PPA allows us to regularly collaborate on the issue of responsible minerals sourcing with other companies, industries, governments, and civil society. Such collaboration is crucial to identify and address risks associated with mineral extraction and trade in complex mineral supply chains. Additionally, we plan to continue to work with industry associations to confirm that standards are in place to enable our ultimate goal of responsible sourcing for all the minerals in our supply chain. In 2023, we will continue to identify the highest priority minerals and mitigate risks pertaining to the geopolitical landscape, global regulations, and salient human rights risks in our supply chain.

Our annual [conflict minerals disclosure](#) filed with the US Securities and Exchange Commission contains additional information about our 3TG and cobalt due diligence practices.

³ "Responsibly sourced" refers to products from suppliers, supply chains, smelters, and refiners that, based on our due diligence, are in line with current global standards and respect human rights in every aspect of their practice.

Responsible Mobility

In September 2020, United Nations General Assembly proclaimed 2021-2030 the Decade of Action for Road Safety, and set an ambitious target of preventing at least 50% of road traffic deaths and injuries by 2030. According to the World Health Organization, approximately 1.3 million people die each year as a result of road traffic crashes. More than half of all road traffic deaths are among vulnerable road users—pedestrians, cyclists, and motorcyclists.¹ Automated vehicle technology has the potential to improve road safety, save lives, and transform personal mobility, including bringing broader mobility to the elderly and those with disabilities.

One of Intel's RISE technology industry initiatives is to collaborate with industry, ecosystem peers, and governments to advance the adoption of technology-neutral safety standards to advance the automated vehicle industry in pursuit of reduced traffic accidents globally. Mobileye's [Responsibility-Sensitive Safety \(RSS\)](#) model can enable safe, commercial deployment of automated vehicles at scale, anywhere in the world, via self-driving Mobility-as-a-Service (MaaS).

Introduced in 2017, RSS is a formal model for safety based on human concepts of what it means to drive safely. RSS enables efficient validation of the safety of an automated vehicle, providing strong assurances to the public of the safety of automated vehicles. RSS formalizes human decision making for safe driving and is based on the need to balance safety with useful driving by making reasonable worst-case assumptions about other road users. RSS is designed to be a technology-neutral approach to automated vehicle safety and provides regulators around the world a transparent way to evaluate the performance of driverless vehicles.

RSS has become a leading model for global automated vehicle safety frameworks. Numerous standards bodies are beginning to include RSS in their standards development activities. Regulators and policymakers are looking at RSS as a tool for defining what it means for an automated vehicle to drive “safely.” Researchers are digging into the application of RSS and pushing the boundaries of its efficacy. Standards progress has been especially robust, as RSS has contributed to both IEEE and International Organization for Standardization standards efforts.

Furthering Advancements in Safety for Automated Vehicles

Intel has continued to develop new technologies to help further enhance responsible mobility. For example, as future vehicle generations are becoming increasingly complex, it is important to understand potential errors that may occur in different subsystems. To help address this, Intel, together with Mobileye, has introduced a [new system-level failure model](#) to help estimate how safe an automated vehicle will be under certain traffic conditions.

By using roadside infrastructure—such as cameras and other sensors at critical road segments—Intel, along with other collaborating stakeholders, has also developed [a pilot traffic-monitoring system](#) near Munich, Germany. The pilot uses multiple sensor streams to create a digital twin of the current traffic to analyze traffic safety and highlight dangerous situations in real time. Another area of focus is to improve the dependability of AI applications for object detection and classification in automated driving. To support this, Intel has [investigated techniques](#) to avoid mispredictions of autonomous driving-related deep neural networks against faults in the underlying hardware.



A New Standard for Responsible Mobility

Intel led an IEEE working group to develop an open, transparent, and technology-neutral formal model for safety. The output of this working group, known as [IEEE 2846: Assumptions in Safety-Related Models for Automated Driving Systems](#) was the first international standard that provides guidance on what constitutes expected behavior of automated driving systems. It does this by defining a set of reasonably foreseeable assumptions about other road users that must be taken into consideration by the automated driving system. This standard also provides attributes common to safety-related models and methods, which can be used by industry and regulators in the deployment of automated driving systems.

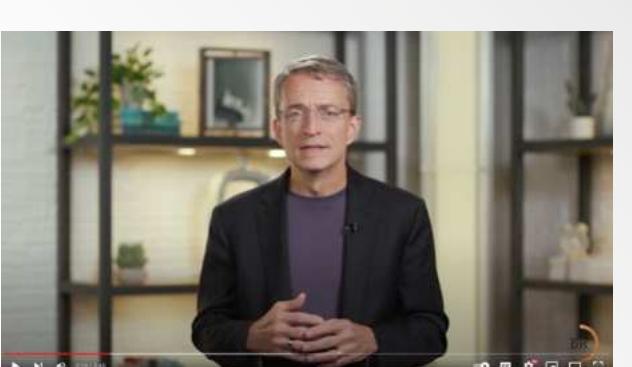
In recognition of its novelty and impact to the industry, IEEE 2846 received the 2022 IEEE Standard Association Emerging Technology Award. IEEE 2846 complements Mobileye's RSS model for automated vehicles and represents an important milestone on the path to increasing safety on our roads through the wide-scale deployment of automated driving technology.

¹Source: World Health Organization, [Decade of Action](#).

Responsible AI

Artificial intelligence (AI) has become a part of everyday life, transforming how we live, work, and solve new and complex challenges. From making [voice banking possible for people with neurological conditions](#) and [roads safer with AVs](#), to helping [researchers better understand rainfall patterns and human population trends](#), AI has allowed us to overcome barriers and develop solutions for a better future.

We believe in the potential of AI technology to create positive global change, empower people with the right tools, and improve the life of every person on the planet—provided we follow a comprehensive approach to lower risks and optimize benefits for our society. Intel's focused work on responsible AI (RAI) began in 2017 and has evolved to include structured, rigorous, multidisciplinary processes to advance AI technology responsibly from development to deployment, consistent with our [Global Human Rights Principles](#).



Pat Gelsinger, Intel CEO and member of the [Business Roundtable](#), speaks about the importance of responsible artificial intelligence. [Watch the video.](#)

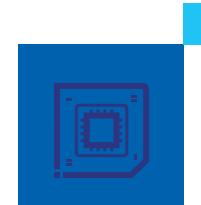
In 2022, we shared details publicly for the first time about our [RAI strategy](#), which is centered along four pillars that represent what we consider the most effective way for Intel to leverage its place in the AI value chain, help drive meaningful progress, and scale these efforts broadly:

Internal and External Governance: Our multidisciplinary Responsible AI Advisory Council is responsible for conducting a rigorous review throughout the lifecycle of an AI project. The goal is to assess potential ethical risks within AI projects and mitigate those risks as early as possible. Council members also provide training, feedback, and support to the development teams and business units to provide for consistency and compliance to our principles across Intel. We continue to evolve our thinking and approach and iterate based on insights from key learnings. The Council's internal work is based on six principles: Respect Human Rights (in alignment with Intel's [Global Human Rights Principles](#)); Enable Human Oversight; Explainable Use of AI; Security, Safety, and Reliability (consistent with Intel's [Security First Pledge](#), and the "safety by design" development principles that are part of Intel's commitment to [Product Quality and Reliability](#)); Personal Privacy; and Equity and Inclusion (building upon [Intel's Diversity and Inclusion policy](#)).

Research and Collaboration: We seek to collaborate with academic organizations across the world to conduct research in key areas where we believe we can have the greatest impact: privacy, security, human/AI collaboration, trust in media, AI sustainability, explainability, and transparency. For example, in 2022, Intel entered into a

strategic research and co-innovation [collaboration with Mila](#), an AI research institute based in Montreal. As part of this commitment, more than 20 researchers across Intel and Mila are expected to focus on developing advanced AI techniques to tackle global challenges such as climate change, new materials discovery, and digital biology.

Products and Solutions: We develop platforms and solutions to make responsible AI pragmatic and manageable for developers. We create software tools to ease the burden of responsible AI development and explore different algorithmic approaches to improve privacy, security, and transparency and to reduce bias. We do this by conducting ethnographic research to understand pain points and address those appropriately. In addition to the [Intel® Homomorphic Encryption Toolkit](#) and [Project Amber](#) initiatives, Intel recently developed [FakeCatcher](#), a technology that can detect fake videos with an approximately 96% accuracy rate. Intel's deepfake detection platform is the world's first real-time deepfake detector that returns results in milliseconds. Deepfake videos are both a growing opportunity and threat; it is difficult to detect deepfake videos in real time, because detection apps typically require uploading videos for analysis and then waiting hours for results. Deception due to deepfakes can cause harm and result in negative consequences, like diminished trust in media. FakeCatcher helps restore trust by enabling users to distinguish between real and fake content.



Inclusive AI: We believe there is a need for equity, inclusion, and cultural sensitivity in the development and deployment of AI. We strive to ensure that the teams working on these technologies are diverse and inclusive. We believe that the AI technology domain should be developed and informed by diverse populations, perspectives, voices, and experiences. We are involved in multiple efforts aimed at creating inclusive AI, including [AI for Future Workforce](#), [AI for Youth](#), [Alliance for Global Inclusion](#), and the [Pledge for Gender Fair AI](#).



We strive to be transparent about our position and practices so we can address shared challenges and improve our products and the overall industry. We are involved in and contributing to national and international development of standards and methods, including active engagement in forums like the [Business Roundtable on Human Rights and AI](#), [Global Business Initiative on Human Rights](#), and the [Partnership on AI](#) to learn from our peers and establish ethical, moral, and privacy parameters so we can build a thriving AI business.

AI Research Projects and Collaborations

Examples of Intel's involvement in research in key areas of AI include work with:

[Private AI Collaborative Research Institute](#)

[Guaranteeing AI Robustness Against Deception \(GARD\) DARPA program](#)

[Trusted Media](#)

[Partnership on AI](#)

[Responsible AI, Innovation and Business Conduct Symposium in Dublin](#)

[National Science Foundation \(NSF\) National Artificial Research Institutes](#)

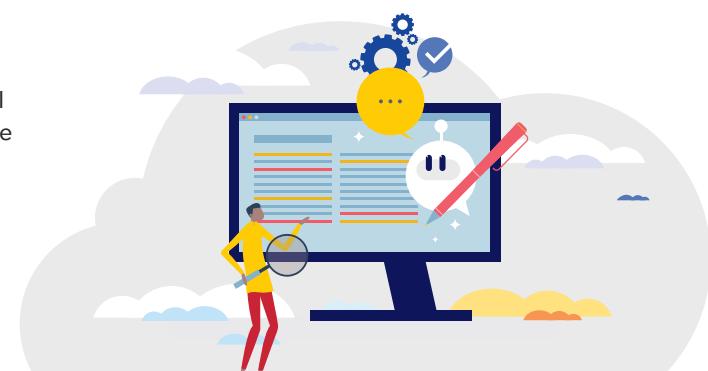
[DSAII at MIT](#)

[University of California at Berkeley Center for Long-Term Cybersecurity](#)

[Ohio State University Data Ethics Working Group](#)

[National Institute of Standards and Technology](#)

[C2PA](#)



Breaking Barriers to Make AI More Inclusive

Numerous barriers exclude students around the world from learning or using new technologies, including native language and coding complexities. Language barriers inhibit inclusiveness—a key pillar of responsible AI as defined by the World Economic Forum. A survey by 16-year-old student Krish Yadav showed that over 75% of students from rural India were dependent on their native language to discuss or try to fix code issues, and faced difficulties in learning how to code.

Yadav decided to break this barrier by developing BhasaX, a program designed to decode the functionality of code and explain it in a chosen language to help developers understand it better in real time. His AI application improves access to programming by allowing developers—especially beginners—to better grasp code in their own language. For this impressive and inspiring work, Yadav was an Intel AI Global Impact Festival Top 3 Winner in the age 13-18 category.

Revolutionizing Health and Safety Through Technology

In 2022, we advanced our work to revolutionize health and safety through technology. We participated in innovative collaborations—applying AI, distributed computing, and edge capabilities to create transformative healthcare technology. In the safety area, we saw breakthroughs in using confidential computing to combat modern slavery and technology transformations in occupational safety and security.

Healthcare

Open-source AI reference kits democratize healthcare. Intel released the first set of [open source AI reference kits](#) specifically designed to make AI more accessible to organizations in on-premise, cloud, and edge environments. These kits enable data scientists and developers to learn how to deploy AI faster and more easily across healthcare, manufacturing, retail, and other industries with higher accuracy, better performance, and lower total cost of implementation.

The [Disease Prediction AI reference kit](#) aims to benefit healthcare payers by using natural language processing to uncover insights hidden in the unstructured data in patient health records. These insights may help with early disease progression, identify gaps in a patient's care, and improve the risk adjustment process.

Largest medical federated learning study completed. Intel and the Perelman School of Medicine at the University of Pennsylvania (Penn Medicine) completed a joint research study using federated learning—a distributed machine learning AI approach—to help international healthcare and research institutions identify malignant brain tumors. The project is the [largest medical federated learning study to date](#), with an unprecedented global dataset from over 70 institutions across six continents. Results demonstrated the ability to improve brain tumor detection by more than

30%. The study used OpenFL library and Intel's Secure Guard Extensions to support data confidentiality. The resulting consensus model was optimized using Intel's distribution of OpenVINO toolkit to make it deployable in low-resource clinical environments.

Preserving privacy in clinical decision making for childhood diseases. Exome sequencing—a technique for sequencing a portion of genes in a genome—has been widely used in genetic testing for pediatric disorders. However, exome sequencing has limitations due in part to data fragmentation, which is exacerbated by privacy concerns. Traditionally, matchmaking web services based on exome sequencing aim to connect patients, providers, and researchers around the world with a shared interest in a specific phenotype or genotype. Today's methods have privacy vulnerabilities, which could arise with the direct transfer of sensitive patient data among trusted parties. Genetic data are highly sensitive, and unprotected disclosure may negatively impact patients and their families.

To help mitigate these concerns, Intel worked with Nuwei Tech to conduct a project with the Children's Hospital of Fudan University in Shanghai, China. This project applied privacy-preserving computing technology to improve patient privacy protection and enhance the exome sequencing-based clinical decision-making process. The technical framework adopted uses a private online retrieval system based on [Intel® Software Guard Extensions \(Intel® SGX\) technology](#), a hardware-based isolation and memory encryption tool. Results indicate that this framework provides strong privacy protection for executed code and data.

Safety

Confidential computing helps combat modern slavery. More than 50 million human beings are trapped in some form of modern slavery, including trafficking, forced labor, servitude, and more. In the fall of 2022, Intel, enterprise technology and services firm R3, and nonprofit Hope for Justice [announced they](#) are working together to build a pilot application that aims to enable organizations combating modern slavery to confidently share sensitive data related to individual cases with enhanced privacy protections. The Private Data Exchange—built for Hope for Justice, a nonprofit, nongovernmental organization working to end modern slavery and human trafficking—is designed to aggregate and analyze data and then notify the appropriate agencies when relevant data matches are identified.

Portable solution for emergency responders. At Hsinchu's fire station, about an hour's drive from downtown Taipei, Taiwan, firefighters are [using a new communications solution](#) when responding to disasters. Pegatron, a leading electronics design and manufacturing company, collaborated with Intel to design a portable 5G network-in-a-box base station. The solution is now in use by the city of Hsinchu's emergency responders, who often struggled with the lack of connectivity in remote areas and mountainous regions.



Inclusive

Diversity, equity, and inclusion have long been core to Intel's values and instrumental to driving innovation and delivering strong business growth. We are advancing diversity, equity, accessibility, and inclusion in our global workforce, and advocating for public policies and laws that combat discrimination and inequities impacting our employees and our communities. We are intensifying actions to advance our 2030 goals, which include increasing the number of women and underrepresented minorities in senior leadership, increasing the representation of women in technical roles to 40%, and increasing representation of Black/African American employees in senior, director, and executive roles in the US. Our aim is to continue to expand opportunities for our employees and the industry through technology, inclusion, and digital readiness initiatives.

This year's highlights

\$2.2 billion annual spending with diverse-owned suppliers

In 2022—eight years early—we achieved our RISE goal to double annual spending with diverse suppliers. In addition, in 2022 we reached two milestones goals we had set for 2023: spend \$800 million annually with minority-owned suppliers globally, including \$250 million with US Black-owned suppliers.¹

33,000+ Employee Resource Group members

Our 38 Employee Resource Groups (ERGs) help drive community and inclusion at Intel. Our communities are formed around shared attributes and goals, and are open to anyone and everyone, with opportunity to opt in or out at every employee's discretion. In 2022, ERGs held more than 1,100 events, with an average satisfaction rating of 94%. Approximately 1,800 Intel leaders on eight Leadership Councils serve as role models, helping to guide and mentor ERG members.

>200 Inclusive Leadership workshops

Our Inclusive Leaders program grew again in 2022, with over 200 workshops delivered to 4,400 participants globally. The program helps equip managers to play leadership roles in growing Intel's inclusive culture and develop skills needed to build diverse and inclusive teams. We also trained 140 inclusion mentors in 12 countries; employees can reach out to the mentors for specific help or coaching on inclusion topics.

¹ Correction to progress in 2022 updated on May 17, 2023.



Inclusive: Our Approach

For more than a decade, we have taken actions to integrate diversity and inclusion expectations into our culture, performance management systems, leadership expectations, and annual bonus metrics. We seek to transparently report our representation and pay equity data to hold ourselves accountable and encourage action by others. This is not added work, it's how we work. We believe that diversity and inclusion are instrumental in driving innovation and delivering strong business growth. We hold ourselves, our people, our leaders, and the industries we lead to high standards by creating an inclusive culture and advancing diversity and inclusion in the industry and beyond.

Through our integrated strategy focused on the hiring, retention, and progression of all employees, we reached full representation¹ of underrepresented minorities and women in our US workforce, and since 2019, we have achieved gender pay equity globally and race/ethnicity pay equity in the US. We are proud of what we have accomplished to date, but we believe we can still achieve more, including beyond the walls of Intel.

Our RISE strategy and goals set our global ambitions for where we want our company to be at the end of the decade. We intend to continue to advance inclusion in our workforce using a holistic approach toward representation, pay equity, and creating an inclusive and accessible culture that enables employees to develop and progress in their careers across all levels. In 2022, we continued to link a portion of our executive and employee compensation to diversity and inclusion metrics to drive accountability and progress. In 2023 and beyond, we expect to change the way that we reflect our inclusive workforce goals by focusing on

percentages rather than absolute numbers. For transparency, we intend to continue to report progress to goals using both percentages and absolute numbers. This update strengthens our commitment to industry best practices and helps us continue to advance our workforce representation.

Just as we value diversity and inclusion to foster innovation within Intel, our commitment to diversity and inclusion extends to our suppliers. Our RISE goals included increasing our annual spending with diverse-owned suppliers to \$2 billion by 2030—a goal we reached in 2022. We also work with others to expand and enable inclusive sourcing practices across the industry.

We know that today's greatest challenges require a shared commitment to a plan and meaningful action to advance inclusion and social equity. That is why we committed our scale, expertise, and reach and launched the Alliance for Global Inclusion in 2021 with the goal of creating and implementing an Inclusion Index with unified goals and metrics. We work with a broad range of stakeholders on initiatives that expand the diverse pipeline of talent for our industry. In 2022, the CEOs of the Alliance members shared two additional commitments to contribute to the collective impact: 100% of CEO staff are to obtain inclusive leadership development training by 2025 and 5%+ employees are to be hired from nontraditional pathways by 2030. We aspire to make technology fully inclusive and expand technology access and digital readiness for millions of people around the world who currently do not have the technology skills or access needed to participate and thrive in our digital economy.

¹ In 2018, Intel met full representation of its workforce, meaning our workforce reflected the percentage of women and underrepresented minorities available in the US skilled labor market.

² In 2023, we updated this goal language to "Achieve 25% representation of women in senior leadership roles and achieve 12% representation of URM in US senior leadership roles." (Replaces "Double the number of women and underrepresented minorities in senior leadership roles.")

³ In 2023, we updated this goal language to "Achieve 10% representation of employees with a disability in our global workforce by 2030."



2030 RISE: Inclusive Goals, Initiatives, and Global Challenges

Global Challenge:
Make technology fully inclusive and expand digital readiness.

Technology Industry Initiatives:

- Inclusion Index.** Drive full inclusion and accessibility across the technology industry by creating and implementing a Global Inclusion Index with common metrics to advance progress.
- Inclusive Pipeline.** Expand the inclusive pipeline of talent for our industry through innovative global education initiatives and STEM programs for girls and underrepresented groups.
- Product, Operations, and Supply Chain Goals:**
- Senior Leadership.²** Double the number of women and underrepresented minorities in senior leadership roles.
- Technical Roles.** Exceed 40% representation of women in technical positions.
- Inclusive Leadership.** Ensure that inclusive leadership practices and accountability are embedded in our culture globally by creating and adopting an inclusive leader certification program.
- Accessibility and Disability Inclusion.³** Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce.
- Supplier Diversity.** Increase global annual spending with diverse suppliers by 100% (to \$2 billion).

Inclusive Workforce

We continue to work toward giving employees a voice and a sense of belonging to create a level playing field, which in turn will allow Intel to be more innovative, agile, and competitive. We believe that an inclusive culture that welcomes all perspectives is critical for attracting, retaining, and progressing top talent, and top talent has a direct impact on innovation and our products. Intel is committed to providing a work environment where employees from all backgrounds are valued, respected, challenged, acknowledged, and rewarded so they can achieve their full potential.

Through our RISE goals, we are driving to further advance the representation of women in technical positions and women and underrepresented minorities (URMs) in leadership positions at Intel by advancing accessibility and embedding inclusive leadership practices in our culture and across our business. Learn more about our strategy on our [Diversity and Inclusion](#) website.

Transparency and open sharing of our data enable us to both celebrate progress and identify key areas for action and improvement. In 2022, we continued our focus on career development and progression for all employees including women and URMs. Technical representation slightly increased across the URM population and women. Additionally, the representation of Intel US employees who identify as having one or more disabilities increased by approximately 1%, from just below 4% in 2021 to almost 5% in 2022. The percentage of employees who identify as veterans dropped slightly—from 7.2% in 2021 to 7.1% in 2022—but in absolute numbers, veterans increased by more than 190. Our global representation of technical women increased from just above 24% in 2021 to nearly 25% in 2022. In alignment with our RISE

2030 strategy for inclusion, we increased the number of women in senior leadership to nearly 1,650 employees and increased the number of URMs in senior leadership to over 500 employees.

Women at Intel – Global Data¹

Positions	2020	2021	2022
Board of Directors	30.0%	30.0%	33.0%
Executives	20.7%	20.7%	18.9%
Senior Leadership	18.8%	18.6%	18.9%
Senior	21.3%	21.7%	22.6%
Experienced	30.4%	31.3%	32.0%
Entry-Level	37.9%	36.5%	36.5%
All Global Employees	27.8%	27.7%	28.1%
Technical	25.2%	24.3%	24.7%
Non-Technical	57.7%	54.4%	55.2%

We remain steadfast in our efforts to build a diverse workforce that represents our world. We recognize that this will require persistence and a long-term, sustainable strategy.

Undesired Turnover

Group Represented	2021	2022
Global Overall	5.6%	5.6%
Global Women	5.3%	5.1%
US Women	6.0%	5.4%
US URM ²	4.9%	4.9%
US Hispanic/Latinx	4.6%	4.6%
US African American	5.8%	5.9%
US Native American	2.8%	2.8%

These figures include all regular Intel employees who voluntarily left Intel, but do not include contract employees, interns, or employees who separated from Intel due to divestiture, retirement, voluntary separation packages, death, job elimination, or redeployment.

US Workforce Representation Data¹

Group	2020	2021	2022
Women	26.3%	25.8%	25.9%
URMs ²	16.3%	16.1%	16.8%
URMs in Senior Leadership	7.6%	7.8%	8.1%
URM Women	3.8%	3.8%	4.1%
White	45.8 %	44.1 %	42.6%
Asian	37.6 %	36.3 %	36.2%
Hispanic/Latinx	10.5%	9.3%	10.9%
African American	5.0%	4.9%	5.1%
Native American	0.8%	0.9%	0.8%
Pacific Islander	0.4%	0.4%	0.4%
Veterans	7.3%	7.2%	7.1%
Two or more ³	N/A	2.2%	1.9%
Other	N/A	1.8%	2.1%

¹2022 data as of Dec. 31 2022; 2021 data as of Dec. 25, 2021; and 2020 data as of Dec. 26, 2020. “Executives” refers to salary grades 12+ and equivalent grades. “Senior Leadership” refers to salary grades 10+ and equivalent grades. “Senior” refers to salary grades 8-9 and equivalent grades. “Experienced” includes salary grades 6 to 7 and equivalent grades. “Entry-Level” refers to salary grades 2 to 5 and equivalent grades. “Technical” is based on Intel’s internal job codes and reflects technical job requirements. The definition of “technical” employee was revised in 2021 to better align with industry standards. While this data represents women and men, we acknowledge that this is not fully encompassing of all gender identities. See information about our self-identify initiatives related to our LGBT+ employees later in this section. 33% of our Board members self-identified as female. “Other” includes unknown, declined, not specified.

²We define URM to include our Hispanic, African American, and Native American employees.

³“Two or more” ethnicity category includes employees who have checked two or more ethnicities as part of their self-identifiable data choices.



Raising the Bar

Intel's ambitious goals are designed to continue to raise the bar for ourselves and the industry to deliver greater value through corporate responsibility excellence. We expect to achieve those goals by strengthening our systems, processes, and programs to drive diversity, equity, inclusion, and accessibility throughout our workforce. To the right are descriptions of two of our workforce inclusion goals and progress we made in 2022. Read about our other inclusion goals in "[Accessibility and Disability Inclusion](#)" and "[Supplier Diversity and Inclusion](#)".

⁴ In 2023, we updated this goal language to "Achieve 25% representation of women in senior leadership roles" and "Achieve 12% representation of URM s in US senior leadership roles." With a focus on percentages rather than absolute numbers, the updated goal language reflects our commitment to industry best practices and helps us to continue to advance our workforce representation. For transparency, we intend to continue to report progress to goals using both percentages and absolute numbers.

⁵ We selected the April 30 baseline to align with the completion of our annual performance review process and promotion cycle.

⁶ We define early career employees as employees salary grades 2-6.

2030 Goal: Representation in Senior Leadership

Description. Double the number of women and underrepresented minorities (URMs) in senior leadership roles.⁴ "Senior leadership" refers to salary grades 10+ and equivalent grades.

Baseline. 1,250 (18.4%) women and 380 (7.4%) URM s in senior leadership roles as of April 30, 2020.⁵

Progress in 2022. During 2022, we surpassed by almost 150 our milestone goal of reaching 1,500 women in senior leadership roles, ending the year with 1,646 women in senior leadership roles across the globe. The results in 2022 set us up to continue making progress in women in senior leadership. Women senior leadership representation increased by 0.3%, from 18.6% in 2021 to 18.9% in 2022. Though we saw an increase of our global women senior leadership representation, we lost progress on our global executive women representation from 20.7% in 2021 to 18.9% in 2022. We made good progress in our representation of US URM senior leaders, which increased by approximately 0.3%, from 7.8% in 2021 to over 8% in 2022.

Looking Ahead. We are slightly behind pace to achieve our 2030 goals for representation in senior leadership. Our commitment to those long-term goals remains unchanged, but the reality of business conditions and the steps we're taking to respond also impact our ability to make visible gains in 2023. Our development programs and opportunity disciplines remain in place. This year, we aim to maintain the gains we've made to enable us to be prepared to resume stronger leadership representation progress as we regain business momentum.

2030 Goal: Women in Technical Positions

Description. Exceed 40% representation of women in technical positions.

Baseline. 24.9% of technical roles held by women globally as of April 30, 2020.⁵

Progress in 2022. At the end of 2022, 24.7% of technical roles were held by women in technical positions, an increase from 24.3% at the end of 2021.

Looking Ahead. In 2023, we will continue to focus on increasing representation by establishing new education and outreach programs in our Greenfield sites, which is a term used for new manufacturing facilities where there has not been an Intel site previously. These programs aim to proactively connect the communities where we are investing in local schools to opportunities to work at Intel in technical roles. We have also tied corporate-level goals to hire 30% women into our technical, salaried early career⁶ roles to an Annual Performance Bonus for all employees in 2023.

Pay Equity

At Intel, we strive for an inclusive and fully engaged workforce that is reflective of the best and brightest talent in our industry. Since 2019, we have achieved gender pay equity globally and we continue to maintain race/ethnicity pay equity in the US. We maintain pay equity by closing the gap in average pay between employees of different genders or race/ethnicity in the same or similar roles after accounting for legitimate business factors that can explain differences, such as location, time at grade level, and tenure.

Intel's legal and human resources teams work with third-party experts using established statistical modeling techniques to monitor and advance global pay equity. Our comprehensive analysis includes base pay, bonuses, and stock grants. Individual employees who are identified as having a gap through this analysis are to receive appropriate adjustments.

Inclusive Culture

Inclusion is one of Intel's core values and it is at the heart of our culture. We have taken actions to integrate our inclusion expectations into our policies, performance management systems, leadership expectations, annual bonus metrics, and employee surveys.

The [Intel Code of Conduct](#) and [Intel Global Human Rights Principles](#) set out our commitment to nondiscrimination and to provide a workplace free of harassment. We have redesigned our employee performance management system and leadership promotions process to focus on results delivered, as well as how those results are achieved through alignment with Intel's values and commitment to inclusion.

Our ongoing efforts to create an inclusive culture have several aspects. Recognizing that inclusion is a skill, we continue to invest in tools and training to allow all em-

ployees to practice it day to day. Offerings include Inclusion@Intel, an enterprise-wide portal with bite-sized resources, and a thriving Yammer channel with some 46,000 interactions per month.

Our Inclusive Leaders program is designed to equip managers and employees to play leadership roles in growing Intel's inclusive culture and fostering leadership skills needed to build diverse and inclusive, high-performance teams. The program grew again in 2022, with over 200 workshops delivered to 4,400 participants globally. The program curriculum spans from "Inclusive Leaders Foundations" to "Transform the Way you Lead Inclusively." Approximately 92% of participants state that this offering deepens skills in leading inclusively, and managers demonstrated a 13.5% increase in sharing their learnings to better include people who are different from themselves. By attending the Inclusive Leaders program, participants were able to drive a positive impact in their teams (79%), and practice inclusive leadership skills (87%). A total of 61 additional facilitators were also trained through the Inclusive Leaders Train-the-Trainer initiative, which will help us scale the program to provide additional offerings. We also trained 140 inclusion mentors in 12 countries; employees can reach out to these mentors for specific help or coaching on inclusion topics.

Executive inclusion advocates are senior Intel leaders across the company who are exemplars of inclusion, actively working to use their influence to build a more inclusive culture at Intel. In 2022, we doubled the number of executive inclusion advocates, to 45, with representation across our business units and regions. As part of our global Career Connections program, we also trained more than 20 inclusion mentors to whom employees can reach out to receive specific help or coaching on inclusion topics.

Linking Compensation to Diversity and Inclusion Goals

Since 2008, we have linked a portion of our executive and employee compensation to corporate responsibility metrics, including those related to diversity and inclusion. The 2022 inclusion goals included women representing 30% of technical, salaried early career hires; increasing by another 10% the representation of Black/African American employees in senior, director, and executive-level roles in our US workforce (to 3.41%); and advancing toward our goal of \$2 billion in annual spending with diverse suppliers. We exceeded our 30% hiring goal for women in technical global, salaried early career roles, closing the year at an over 30% hiring rate. While we fell short of our goal to reach 3.41% representation of Black/African American senior, director, and executive-level representation, we made progress, ending the year with 3.33% representation. Lastly, we spent \$2.2 billion with diverse-owned suppliers, exceeding our annual milestone and reaching our 2030 goal eight years early. For more information, see our [2023 Proxy Statement](#), "Supplier Diversity and Inclusion" later in this section, and the [Sustainable](#) section of this report.

Inclusive Hiring Practices. We have developed a set of best practices and training to help mitigate the influence of unconscious bias in the hiring process. These practices include posting of formal requisitions for the majority of internal positions, using impartial descriptions of qualifications for open jobs, providing diverse slates of candidates for hiring managers to engage with, and encouraging managers to assemble diverse interview panels to engage with candidates. In 2022, we also required inclusive hiring training for our hiring managers to help standardize our hiring approach and help managers role model inclusive hiring practices.

Leadership Councils and Employee Resource Groups

We offer 38 Employee Resource Groups (ERGs) and eight Leadership Councils that connected over 33,000 employees in 2022. Some 25% of our employees are members of ERGs, and approximately 11% of our employees are members of more than one ERG.

Leadership Councils. Our Leadership Councils include more than 1,800 Intel leaders who serve as role models of leadership and champions of the company's ERG members and initiatives, helping to guide and mentor ERG members. Their mission is to promote the progression and growth of diverse employees and foster an inclusive culture where all employees can thrive professionally. The Intel Black Leadership Council, Intel Disability Leadership Council, Intel Latinx Leadership Council, Intel Native American and Pacific Islander Leadership Council, Intel Network of Executive Women, Intel Veteran Leadership Council, Out and Ally Leadership Council, and Senior Women's Community host sponsorship programs to help support and advance leaders within their respective communities, while driving business results. Leadership Councils' members are usually at the director or principal engineer level or above. A sponsor at the executive or senior vice-president level supports each council.

ERGs. Intel's ERGs are organized around race, national origin, gender identity, parenthood, diverse abilities, education, faith and beliefs, and other common affinities. We encourage employees to participate in ERGs beyond their personal affinities to build relationships with a wider community and exchange learnings; allies are welcomed and encouraged. ERGs can serve as powerful networks, offering opportunities for personal and professional development, access to mentors, and volunteer activities that facilitate teamwork and build camaraderie. Getting involved with an ERG has many benefits to the individual employee—developing a network, gaining leadership skills, learning about other business groups at Intel, and

Intel Employee Resource Groups

Our ERGs are part of the engine that drives community and inclusion at Intel. The vast variety of these groups reflects how Intel tries to include and empower every employee to embrace a sense of belonging.

Agnostics, Atheists, and Allies at Intel	Intel Eastern European Balkanika Group	Intel Nepalese Group
American Veterans at Intel	Intel Filipino Employee Network	Intel Pakistani Employee Group
Arabs at Intel Community	Intel French Speakers Network	Intel Parents Network
Asian Cultural Integration	Intel Pride (recently renamed from Intel Gay, Lesbian, Bisexual, or Transgender Employees)	Intel Russian-Speaking Employee Group
Baha'i Intel Network	Intel Hindu Network	Intel Sikh Employee Group
Employees X-Site Together Embracing Diversity Community	Intel India Employee Group	Intel Taiwan Network
Intel Armenian Society	Intel Iranian Employee Group	Intel Vietnamese Group
Intel Bangladesh Association	Intel Jewish Community	India Veterans at Intel
Intel Bible-Based Christian Network	Intel Korean Community	Network of Intel African Ancestry
Intel Chinese Employee Network	Intel Latinx Network	NextGen Professionals Network
Intel Disability and Accessibility Network	Intel Muslim Employee Group	Pacific Islanders of Intel
Intel Doctorates Leadership Forum	Intel Native American Network	Partners for Inclusion and Equity
		Turkish Employee Network at Intel
		Women at Intel Network



Intel received the following awards related to our ERGs in 2022:

AISES. Top Workplace for Indigenous STEM Professionals

HITEC. 50 most influential technology leaders in Spain, Portugal, Latin America, and Brazil

HITEC. 100 Most Influential Hispanics in the Technology Industry

Religious Freedom & Business Foundation. Corporate Religious Equity, Diversity and Inclusion (REDI) Index. Ranked #2 Most Religious/Belief Inclusive Company

Human Rights Campaign. Corporate Equality Index – 100%

DisabilityIN. Disability Equality Index – 100%

growing skills and leadership experience that may not be available in their primary role. These experiences can lead employees to more opportunities within their current roles, as well as helping them progress, grow, and expand their careers in new ways. Employees who volunteer with ERGs develop new skills and experiences they can apply to business projects, use to role model inclusion and culture, and help us reach our RISE goals.

Employees who are a member of at least one ERG or Leadership Council see a progression rate of 5.3% higher than employees who are not members and a retention rate of 1% higher. Our ERG events had an average satisfaction score of 94% across 1,102 events

in 2022. In our 2022 Employee Inclusion Survey, 76% of employees engaged in ERGs reported that the groups help them develop at Intel through networking, career development, mentorship, or sponsorship. In addition, 65% reported that ERGs provide a sense of community or support that helps them stay at Intel.

Employee Surveys. Through our regular Employee Experience Surveys, employees can voice their perceptions of the company and their work experience, including their views on our diversity and inclusion performance and culture. In 2022, 93% of responding employees reported, "I am treated with dignity and respect at work" and "Intel creates an environment

where people of diverse backgrounds can succeed," an increase in favorable responses year over year. For the second consecutive year, we deployed our Employee Inclusion Survey, which helps us gain a deeper understanding of how different employee populations experience inclusion at Intel, identify opportunities for improvement, and better understand root causes of any systemic issues and how to address them. Employees from 52 countries were invited to participate and over 78,000 responded. We shared results with employees and enabled them to ask questions about actions. The table below shows the percent favorable ("Strongly Agree" or "Agree" with the statement) as scored by different demographic groups.

Employee Inclusion Survey Results (Shown percentage of favorable response)

Question	Global Employees						US Employees						
	All	Men	Women	Non-Apparent Disability	Visible Disability	LGBT+	All	URM	Hispanic or Latinx	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Black or African American	Black or African American Women
Average experience (across 9 inclusion questions)	84%	87%	85%	74%	82%	73%	85%	79%	81%	77%	76%	74%	69%
There are visible role models like me at Intel	81%	84%	80%	65%	74%	56%	77%	70%	73%	66%	70%	60%	49%
I can be open about who I am and still be successful at Intel	85%	88%	86%	72%	84%	68%	82%	80%	83%	79%	78%	75%	68%
My manager values diverse talents, beliefs, backgrounds, and experiences	91%	92%	91%	86%	87%	85%	89%	88%	88%	87%	87%	84%	88%
There is fairness in the Insights/Rewards process	76%	79%	77%	66%	78%	70%	70%	69%	74%	65%	63%	62%	53%
ERGs help me develop at Intel, through networking, career development, mentorship, or sponsorship	76%	77%	82%	74%	79%	68%	77%	80%	81%	64%	76%	80%	80%
ERGs' sense of community or support helps me stay at Intel	65%	67%	70%	63%	74%	61%	65%	69%	68%	64%	62%	72%	71%

Despite these high-level results, the wide range of experiences reported by different demographic groups indicates that we can continue to improve the inclusivity of our culture. We saw year-over-year improvement across all questions for women at a global level, with a 5-point improvement in perception of fairness in hiring and insights/rewards (performance management) and 3-point improvement in visible role models. Additionally, we saw a year-over-year improvement in visible roles models reported by Black women (plus 9 points) and LGBT+ (plus 4 points) compared to 2021. This data will help guide our continued efforts in driving an inclusive culture.

Hiring, Retention, and Progression

We have developed a set of programs and initiatives intended to support inclusive hiring, retention, and progression. Diversity and inclusion start from the moment we identify candidates and try to fill roles with the best available talent. Inclusive hiring practices include, in part, providing a pool of diverse candidates. We have invested in programs that help us to reach underrepresented candidates and give them equal opportunities to compete for jobs.

Through the [Intel Scholars Program](#), we engage with internal business units, Intel leaders, and eight external organizations to support underrepresented students pursuing degrees in STEM fields. The program includes financial scholarships, exposure to Intel jobs, mentors, networking, research insights, and training opportunities.

In Israel, where there is intense competition for talent and a shortage of electrical and software engineers, we developed creative solutions to break paradigms in the recruitment process. An upskilling program for training ultra-Orthodox women and a reskilling program for verification engineers enabled the hiring of almost 60% women employees and the expansion of managers' perceptions to help recruit people who do not have a

certain education and experience profile. The programs allowed employees from other sectors to start a significant career in the high-tech industry. Twenty-six students also received scholarships as part of an Intel Israel scholarship campaign focused on female and Arabic diversity.

We also developed an advanced manufacturing technician maintenance program in collaboration with Fasttrack to IT, an educational body in Ireland. The program includes a focus on women who have interest in hands-on problem solving and equipment troubleshooting used in manufacturing processes. Following completion of the program, the graduates are expected to meet Intel's hiring standards. Thirteen students who completed a 12-week work placement at Intel were offered and accepted permanent technician jobs. A second program started in November 2022.

In the US, we expanded Intel's [Relaunch Your Career](#) pilot to an enterprise program focused on assisting people who have taken a career break of more than one year to re-enter the workforce. In 2022, Intel hired 80 contractors for 16-20 weeks; 87% were converted to full-time Intel employees, and about 88% of those identified as women in technical roles and/or URMIs in the US.

We have received multiple recognitions for our efforts to promote diversity and inclusion. In India, for example, Intel received six DivHersity awards in 2022 from JobsForHer, one of India's largest career platforms for women. The awards recognized Intel's exceptional work to accelerate female participation and performance in the workforce. Other 2022 recognitions included awards in Vietnam and China for our commitment to promoting workplace diversity and inclusion.

Our confidential retention Warmline service provides employees with guidance through challenges in areas such as career progression, belonging/integration, job skills alignment, and employee-manager connection. In



addition to supporting employees before they consider leaving Intel, the Warmline provides a robust data set to help us identify patterns, locate problem areas, and address issues proactively and systemically. Some 84% of employees who used the Warmline service in 2022 have stayed at Intel and 94% would recommend the service to others. In 2022, we also continued the integration of our Executive Warmline to better serve executives with internal transition and navigational support. Of the executives who used the Executive Warmline since its launch in 2021, 82% have stayed at Intel.

In 2022, as planned, we expanded Talent Keepers, a program aimed at engaging mid-level Black and African American employees in the US and Costa Rica more directly with their managers in career development and progression discussions and initiatives. A total of 320 pairs of employees and managers have completed the program since launch, with participants showing better promotion (+7%) and retention (+1.5%) rates than their counterparts. Managers who completed the program also showed a 6% improvement in their ability to prevent race/gender bias from playing out in management practices.

LGBT+ Inclusion

We plan to continue to advance the culture of LGBT+ inclusion and belonging globally at Intel, with innovative ways to grow visibility of both company and leadership support. In 2022, we introduced Included Health, a comprehensive care navigation platform for the US LGBT+ community aimed at connecting members with affirming care. Our LGBT+ ERG changed its name to Intel Pride to be more inclusive of all community identities and allies. We also updated our global ally badges with black and brown stripes to support our inclusive workforce and align with pride flags that are flown externally at many Intel campuses during Pride Month every year. In 2022, Poland was added to the list of countries that proudly fly the pride flag. Intel Pride members were thrilled to "be back" and participate in pride parades around the globe. They increased engagement by inviting members of the Intel Out and Ally Leadership Council (OALC), executives, families, and allies to participate and demonstrate support. To celebrate National Coming Out Day in 2022, Intel Pride launched the #OutatIntel Campaign, providing an opportunity for LGBT+ employees and allies to share their coming out and self-discovery stories.

Together Intel Pride and OALC promoted visibility and focus on progression of LGBT+ employees and expansion of allyship through education, mentoring, and advocacy. In 2022, OALC launched a speaker series that provided a forum for LGBT+ senior leaders to present on topics of their choice. In 2022, the speaker series reached about 500 employees.

Since 2002, the Human Rights Campaign (HRC) has listed Intel on its Corporate Equality Index (CEI), awarding Intel the top score of 100 in 18 of those years. The CEI recognizes employers that take steps to support greater equality for LGBT+ workers and their families in the form of policies, benefits, and practices. Intel Guadalajara also earned 100 points and received HRC Equidae MX Certification, awarded to companies in Mexico committed to providing LGBT+ inclusion.

In our 2022 Employee Inclusion Survey, LGBT+ employees reported favorable results in some areas, but also indicated opportunities for further growth, such as continued improvement in LGBT+ visible role models. On average, about 56% of the LGBT+ community indicated they have visible role models at Intel and 56% of employees identifying as LGBT+/non-cisgender know fewer than five other people within the community. LGBT+ employees who are engaged in the Intel Pride ERG are more likely to be out at work, and 66% shared that being part of Intel Pride had positive impact on their progression.



Accessibility and Disability Inclusion

We strive to become a global employer of choice for people with disabilities and those caring for family members with disabilities. According to the World Health Organization, 16% of the world's population (over 1.3 billion people) experience a significant disability, and it is estimated that 70% of disabilities are non-apparent.⁷

The [Intel Corporate Accessibility Policy](#) outlines our commitment to creating a culture of accessibility and broader impact through our technology. Learn more about accessibility, innovation, and product development at Intel in the "[Accessibility Innovation](#)" section of the report. We work to advance accessibility via a three-pillar strategy focused on our workplace, products, and industry. We focus on advancing accessible design and innovative technology solutions, physical and digital accessibility in the workplace, integration of accessibility best practices in our culture, use of accessible hiring and employee practices, and external engagement and collaboration. The Intel Disability and Accessibility Network (IDAN) has a presence at 12 of our sites worldwide and is supported by the Intel Disability Leadership Council (IDLC). These groups advocate for and work to advance and retain our disability community, while amplifying awareness both internally and externally. The team has also advanced a plan to help support employees who are caring for a family member.

In 2022, for the sixth year in a row, Intel received 100% on the Disability Equality Index (DEI), and was named one of the Best Places to Work for People with Disabilities. The DEI, a joint initiative of Disability:IN and the American Association of People with Disabilities, is a comprehensive benchmarking tool that provides an objective score and roadmap on disability inclusion policies and practices.

⁷[World Health Organization](#) and [Invisible Disabilities Association](#).

2030 Goal: Accessibility and Disability Inclusion

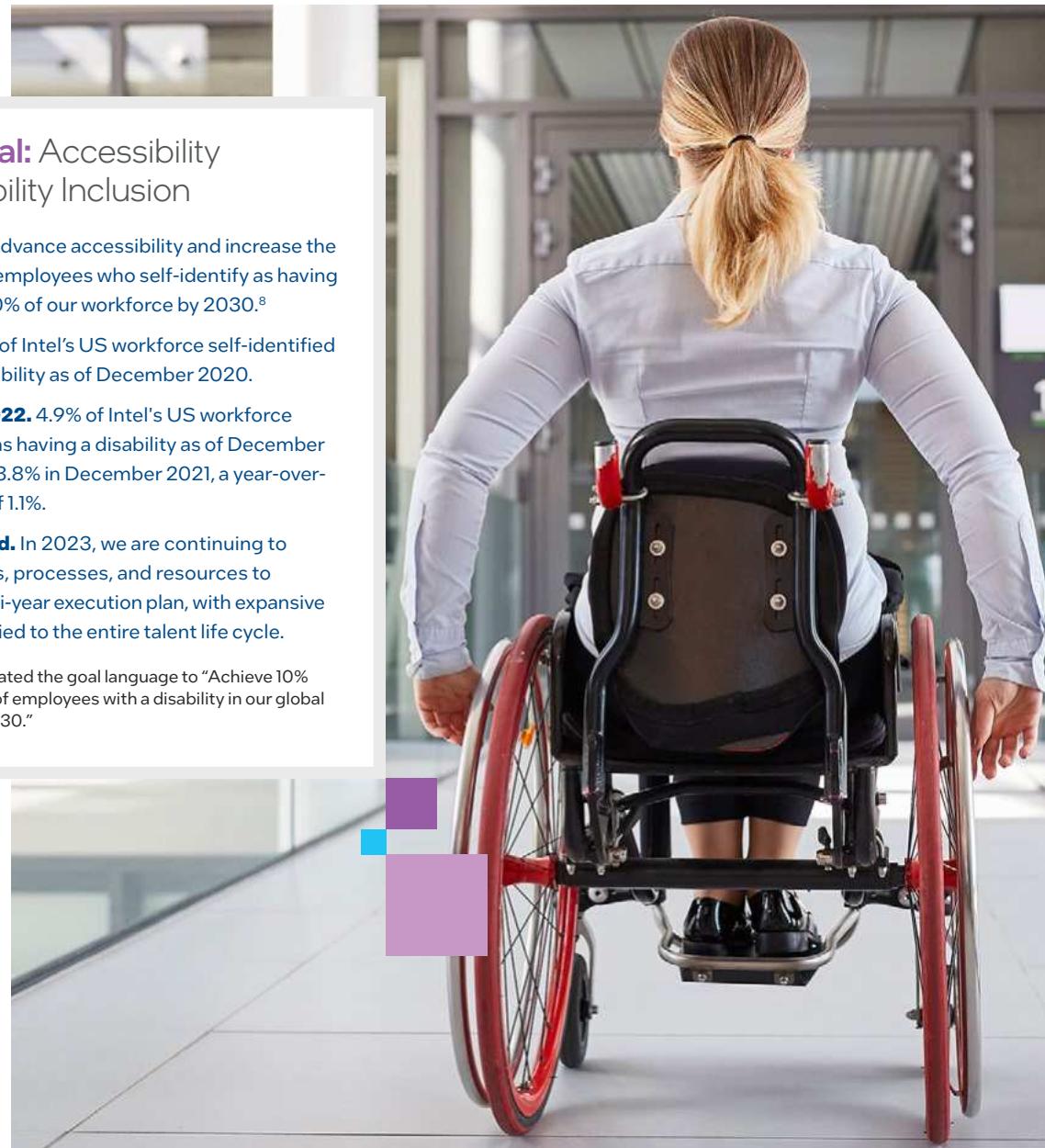
Description. Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce by 2030.⁸

Baseline. 1.4% of Intel's US workforce self-identified as having a disability as of December 2020.

Progress in 2022. 4.9% of Intel's US workforce self-identified as having a disability as of December 2022, up from 3.8% in December 2021, a year-over-year increase of 1.1%.

Looking Ahead. In 2023, we are continuing to assess systems, processes, and resources to prioritize a multi-year execution plan, with expansive programming tied to the entire talent life cycle.

⁸ In 2023, we updated the goal language to "Achieve 10% representation of employees with a disability in our global workforce by 2030."



Social Equity

Intel is working to build a culture of inclusion for all employees, and we believe we have shared responsibility to combat the structural inequalities impacting our employees and communities. We further believe that accelerating equity is critical to successfully creating a culture of inclusion and belonging. At Intel, social equity is an extension of our [Global Human Rights Principles](#), and it means creating a world in which all people, regardless of their identity or background, have equal voice, representation, and access to opportunities.

Globally, issues of social justice, human rights, and equity continue to arise and are critical for business. As corporations have an increased expectation to respond and demonstrate meaningful action in these spaces, the need for social equity at Intel continues. Our approach to social equity supports our business growth and talent goals, and focuses on root causes, leveraging data to address systemic inequalities and drive equitable change inside Intel, in our communities, and across broader society.

Social Equity Inside Intel

Our support for social equity starts inside the company. In 2020, we established milestone representation goals to help accelerate US representation of African American employees at senior, director, and executive levels by 30% by the end of 2023. Setting interim milestones helps create sustained focus as we further integrate equity into our systems and practices to close gaps in African American and other inclusive leadership representation goals. Since 2020, we have achieved a 20% increase in representation. In 2022, year-end progress fell just short of the 10% milestone goal. As we continue to analyze patterns and trends in our 2022 Employee Inclusion Survey (EIS), we see opportunities for further work. In 2023 and beyond, we seek to drive sustainable, long-term change by improving equitable outcomes and increasing manager accountability and acumen through training, development, and systems-

level change. We believe that mitigating bias in systems to foster an inclusive culture is a business imperative and key to our long-term success, making Intel and each of our employees stronger.

Advancing Social Equity in Global Communities through STEM and Technology

The Intel Black Leadership Council (IBLC) and Network of Intel African Ancestry (NIA) ERGs support goals through strategic mentorship and sponsorship initiatives for employees, and work to catalyze change in our global communities by driving improvements and access to STEM and technology for youth. At Intel VISION 2022, IBLC collaborated with Autodesk and Monster Notebook to support the Hidden Genius Project, a national nonprofit organization based in Oakland, California, that trains and mentors Black male youth in technology creation, entrepreneurship, and leadership skills. Through this collaboration, Intel technology and [AI for Youth](#) training were scaled to a national cohort of community-based organizations, school districts, and individuals, effectively reaching more than 10,000 students across the country.

NIA Costa Rica, the only chapter of this ERG outside of the US, mobilizes impact to advance social equity beyond the US. In December 2022, NIA Costa Rica was recognized with a national award for its Skills for Life program, which provides access to technology training in Costa Rica's Limon Province, one of the lowest income regions in the country. The province is home to a large population of Afro-descendent and indigenous people, groups that have been largely underrepresented in higher education. The STEM training program consists of up to 16 months of capacity building, English as a second language, and internship placement to prepare students for future employment at high-tech companies. Since 2021, the program has positively impacted approximately 160 young people, 65% of whom are underrepresented minorities and 43% of whom are women.

Collective Impact to Advance Equity and Access in Technology

In 2020, the effects of the pandemic caused unprecedented societal, economic, business, and technology challenges. Increasing issues of global inequality, the global race reckoning, issues of equitable access to technology, the widening skills and location gap for underrepresented talent, and the persistent barriers some groups face to access traditional pathways to technology will continue to challenge our business growth aspirations, communities, and society. Amid these challenges, many companies doubled down on improving diversity, equity, and inclusion within their organizations. This was the impetus for the [Alliance for Global Inclusion](#)—a one-of-a-kind coalition founded by Intel and industry peers with a commitment to help build an equitable and just tomorrow.

The coalition combines the strengths and resources of member global organizations in an effort to bring inclusivity and full equity to the workplace. To create societal impact, the Alliance CEOs acknowledged the need to expand the pathways and access to STEM training and careers. This is where economic opportunity, market opportunity, and moral opportunity can meet, to enable the full participation of all. Our collective society goal is to increase more inclusive pathways to STEM careers for under-represented groups by removing barriers to ensure equitable opportunities for all. By 2030, our collective commitment is to hire 5%+ from non-traditional, more inclusive pathways like HBCUs, other minority-serving institutions, and reskilling programs further increase diverse representation in tech. For more about the Alliance, See "[Building a Diverse Technology Industry](#)".

Building a Diverse Technology Industry

We will continue to support the development of a more diverse technology industry through investments, collaborative initiatives, and research projects. We are also working to inspire more girls and women and underrepresented minorities to pursue and succeed in technology careers through education initiatives, financial assistance, and internship opportunities.

Alliance for Global Inclusion and Inclusion Index

As part of our RISE goals, we are working to drive full inclusion and accessibility across the technology industry by collaborating with others to create an inclusion index with common metrics and collaborative actions to advance progress. In 2020, we hosted a series of visioning conversations with representatives of nearly 20 chief diversity and inclusion officer teams across our industry and adjacent ones. The result was the launch in 2021 of the [Alliance for Global Inclusion](#), a coalition focused on creating a shared set of diversity and inclusion metrics.

Since its launch, the Alliance has tripled in size, from five to 15 members, and has made meaningful progress on creating an Inclusion Index to serve as a benchmark for companies to track diversity and inclusion improvements, provide information on current best practices, and highlight opportunities to improve outcomes across industries. The Alliance also created teams to drive metrics in four critical areas: leadership representation, inclusive language, inclusive product development, and STEM readiness in under-resourced communities. In September 2022, Alliance CEOs met with chief people officers and chief diversity and inclusion officers to review and celebrate accomplishments. They also shared two additional commitments to contribute to collective impact: have 100% of CEO staff obtain Inclusive Leadership Development by 2025 and hire 5%+ employees from nontraditional pathways by 2030. To support and accelerate our collective impact, we added to the traditional diversity, equity and inclusion maturity model a fifth stage for collective impact.

Investing in Diverse-Owned Start-Ups

[Intel Capital](#), our venture capital organization, has continued its commitment to invest in technology companies led by women and underrepresented minorities, entrepreneurs living with disabilities, US-based entrepreneurs from the LGBT+ community, and US military veterans. In 2022, approximately 20% of Intel Capital's venture stage dollars committed were in start-ups led by diverse leaders. In August 2020, Intel Capital announced a commitment to double its investments in Black founders over the next five years. At the end of 2022, approximately 6% of our venture dollars committed were in companies led by Black founders.

Creating Pathways to the Technology Industry

We invested over \$5 million over the past five years in historically Black colleges and universities (HBCUs) to support student research and retention programs in preparation for semiconductor careers. We have collaborated with top HBCU engineering and computer science programs at Florida A&M, North Carolina A&T, Morgan State, Tuskegee, Prairie View A&M, and Howard to create advanced research opportunities for students and faculty in AI, the Internet of Things, and hardware/software development. Since 1981, Intel has collaborated with the National GEM Consortium to advance the next generation of STEM professionals. In the last five years, Intel has given nearly \$4 million to support the GEM Fellowship Program, which aims to increase participation of underrepresented groups in graduate STEM degrees. Going forward, we plan to expand our student engagement through hackathons, summer design externships, mentor programs, and other activities connecting students with our employees.

Crowdsourced Career Advice for Women

As part of International Women's Month in 2022, Intel collaborated with the Society of Women Engineers and the Athena Alliance on the [#AIforWomen initiative](#). AIforWomen polled career professionals, asking

what advice they would offer to women starting their careers. People from all over the world responded and shared their advice on social media. AI algorithms sifted through the responses to turn it into key pieces of actionable advice. The campaign, led by Intel executive managers and female engineers, gained more than 10 million exposures worldwide.

Supporting Black Women in Computer Science

Through a \$1,064,500 funding gift from the [Reboot Representation Tech Coalition](#), including a \$160,000 addition from the Intel Foundation, the Computer and Information Sciences Department at Spelman College will implement the Computer Science Challenge, a multi-faceted program that provides financial support to scholars. "At a time where Black women comprise less than 3 percent of the technology workforce, we recognize the unique role HBCUs like Spelman College play in shaping, supporting, and encouraging Black technology graduates for life beyond college," said Dwana Franklin-Davis, Chief Executive Officer, Reboot Representation. "This is our largest grant yet, and we are excited to work with the Spelman team on investing in Black women's success, nurturing community participation, and broadening access to computing education."



Supplier Diversity and Inclusion

For nearly a decade, Intel has been committed to diversity and inclusion beyond its workforce to our suppliers globally. We believe a diverse supply chain supports greater innovation and value for our business while helping to enable Intel's vision to create world-changing technology to improve the life of every person on the planet.

In 2022, we reached our 2030 RISE goal to increase annual spending to \$2 billion globally. We also achieved two 2023 milestone goals focused on spending with minority-owned suppliers globally and US Black-owned suppliers, and are on track to reach a 2025 milestone focused on women-owned suppliers outside the US.

While we are proud of this achievement, we are not done yet. We remain committed to staying on track with a solid diverse and inclusive supply chain focus through 2030 and beyond.

Inclusion of diverse-owned suppliers is built into our operations and outlined in our [Supplier Diversity Policy](#). We have integrated requirements for including diverse suppliers into our supplier bidding, selection,

and management processes, and in our EPIC award, which recognizes suppliers that exemplify Intel's standard of excellence. We work to apply these expectations and requirements to first-tier³ suppliers, and we also expect our non-diverse suppliers to report their own spending with diverse-owned suppliers and subcontractors.

Collaborating to Drive Change Globally

Over the past decade, we have partnered with other companies, NGOs, and governments to create opportunities for diverse suppliers, including hosting supplier workshops and collaborating on country-level certification standards. This work has included close collaboration with NGOs and certifying bodies, such as the [Women's Business Enterprise National Council](#) (WBENC), [WeConnect International](#), and many others around the globe. In 2022, as in previous years, Intel was recognized as a leader in supply chain diversity and inclusion by several organizations, including [WeConnect International](#), [National LGBT Chamber of Commerce](#), [National Business Inclusion Consortium](#), and [MSD China](#). In addition, we continued to share with companies across industry

sectors best practices on how to set up or expand supplier diversity programs and processes. See the [Quick Start Guide](#).

[Learn more](#) about Intel's efforts to create opportunities for diverse-owned businesses around the world to thrive.

2030 Goal: Supplier Diversity and Inclusion

Description. Increase global annual spending with diverse suppliers¹ by 100% to \$2 billion.

Baseline. \$1 billion in annual spending with diverse suppliers as of January 1, 2020.

Progress in 2022. In 2022, we achieved \$2.2 billion annual spending with diverse suppliers. In addition, we met two milestones we had set for 2023: spend \$800 million annually with minority-owned suppliers globally, including \$250 million with US Black-owned suppliers, and we are on track to meet a third milestone to spend \$500 million annually with women-owned suppliers outside the US by the end of 2025.²

Looking Ahead. In 2023, we intend to continue to focus on maintaining our success and collaborating with suppliers and industry organizations to improve awareness, training, and opportunities for supplier diversity and inclusion.

¹ We recognize certified diverse suppliers as businesses that are at least 51% owned, operated, and controlled by any of the following categories: women; minorities as recognized by the country or region where the business was established; veterans/military service-disabled veterans; persons who are lesbian, gay, bisexual, or transgender; or persons with disabilities. While Intel recognizes these categories, they may vary in accordance with local law.

² Correction to progress in 2022 updated on May 17, 2023.

Intel's Supplier Diversity and Inclusion program in 26 countries and regions works with NGOs to identify and certify potential suppliers.



Invest in Supplier Diversity Around the World

Making Technology Fully Inclusive and Expanding Digital Readiness

We are continuing our efforts to achieve our RISE global challenge to advance inclusion and accessibility for millions of people who do not have the technology skills or resources needed to access educational, economic, and community resources in our digital economy. In 2022, we scaled several programs and collaborations with customers, governments, and other stakeholders in the areas of accessibility innovation, inclusive design and online learning, digital skills and readiness, and technology applications to advance social equity and human rights.

Accessibility Innovation

Accessible technology can enable people to acquire education, have a career, use government services, make purchases, pursue hobbies, and much more. Access to information and communications technologies is defined as a basic human right in the [United Nations Convention on the Rights of Persons with Disabilities](#).

We aim to improve accessibility experiences each year on new key client computing platforms with augmented features, capabilities, collaborations, or services designed together with people with disabilities. In 2022, we launched the 13th Gen Intel® Core™ processor family, which [includes new features](#) that enhance PC-to-device connectivity for one-click device pairing and easier file sharing, up to 20% less audio power consumption compared to standard Bluetooth on select models, and faster speeds than Bluetooth.¹ We expect that these features will include direct compatibility between Bluetooth hearing aids and PCs in 2023. Our work has resulted in new assistive technologies that use indoor navigation, assistive speech, 3-D printing, and [AI-driven machine translation technology](#) to enable face-to-face conversations between people who communicate through American Sign Language and those who speak English.

¹[13th Gen Intel Core Mobile Processor Brief](#)

²[It's Learning. Just Not As We Know It.](#)

We have a goal to have all Intel user experience teams practicing inclusive design and research by 2030. To track our progress toward that goal, we established an annual survey. In 2022, the results of the survey established a baseline of 21% adoption rate of inclusive practices among user experience designers and researchers at Intel. Also in 2022, the Inclusive Design Operations Program launched a pilot to make it easier to recruit people with disabilities for user research. As part of this pilot, user experience teams had over 100 more engagements with people who use assistive technology, to improve designs in multiple business units.

In 2022, we launched an Intel-wide Accessibility Innovation Campaign to crowdsource accessible and assistive technology ideas from employees. The campaign aims to drive a sustained culture of embracing technology and inclusive design practices to eliminate barriers, foster innovation, and empower all people to reach their full potential. Employees around the globe submitted nearly 170 ideas. Winning ideas included using AI-based software to support personalized audio experiences, enhancements to screen reader technologies, and new software tools to enhance accessible communication practices.

Technology Skills for Today and Tomorrow

We are witnessing increased digitalization of everything. According to the World Bank, the digital economy is contributing to more than 15% of world gross domestic product (GDP), growing 2.5 times faster than the physical GDP. Digital readiness for all people, focused on emerging technologies like AI, is becoming more critical for countries, industries, and their citizens to remain competitive. The concept of digital readiness encompasses digital skills, trust, and responsible usage of emerging technologies for broader socio-economic benefits. Globally, there is a gap emerging between new jobs that require digital skills and a workforce that

Digital Training for Refugees

More than 7 million refugees have crossed the border into Poland since the outbreak of the war in Ukraine. To help address the urgent learning needs of this population, Intel provided over 1,300 new computers to 150 schools and formed a collaboration with a nonprofit organization to design courses on cross-cultural dialogue, digital inclusion, and Polish as a foreign language. Over 60,000 students and 5,000 teachers are benefiting from the initiative.

lacks the required skills to fill these jobs. According to Accenture,² closing the digital skills gap could add up to \$11.5 trillion in GDP in 14 G20 countries by 2028.

Intel will continue its efforts to expand digital readiness by collaborating with 30 governments and 30,000 institutions worldwide to empower more than 30 million people with AI skills for current and future jobs by 2030. At year-end 2022, Intel had worked with 27 governments with more than 50 public-private collaborations, enabled 23,000 institutions, and trained more than 4 million people.

Addressing the AI-related technical skills gap has become a critical industry and policy focus as jobs across all sectors increasingly adopt AI. To address this, Intel has rolled out [Intel® Digital Readiness Programs](#) globally in collaboration with government, academia, civil society, and industry stakeholders. This shared value and shared responsibility initiative aims to demystify and democratize technology superpowers like AI for broad, diverse, and non-technical audiences—regardless of location, gender, and ethnicity. Below are summaries of some of our initiatives aimed at building a technology industry that is fully inclusive.

100 million for semiconductor education and research. To address immediate semiconductor manufacturing technical challenges and workforce shortages, in March 2022, we announced a \$100 million investment over the next decade to establish semiconductor manufacturing and research collaborations with universities, community colleges, and technical educators across the US. We intend to invest \$50 million directly into higher education institutions in Ohio, where we are building two leading-edge chip factories. An additional \$50 million from Intel will be matched by \$50 million from the US National Science Foundation (NSF) in national funding opportunities. NSF will release a solicitation for proposals from researchers and educators across the nation to develop curriculum to improve STEM education at two-year colleges and four-year universities, inclusive of minority-serving institutions, and novel research to advance semiconductor design and manufacturing.

Community college path to employment. Intel and the Maricopa County Community College District collaborated to launch the first Intel-designed AI associate degree program in 2020. Since then, we have expanded that program, now reaching 83 community colleges across 37 states. Through collaboration with Dell and the American Association of Community Colleges, we expect to further scale the program. Students from these programs are already gaining employment at

Intel and other tech companies and businesses. In March 2022, Intel also announced a new [semiconductor manufacturing Quick Start](#) program with Maricopa Community Colleges in Arizona. Quick Start is an accelerated two-week program that prepares students for a rewarding career as a semiconductor technician with hands-on learning from industry-experienced Intel employees as instructors.

Building AI skills worldwide. Intel's focus on responsible AI highlights our commitment to address the AI skills gap around the world. UNESCO highlighted Intel in its new K-12 AI curricula standards. Smart Africa signed a memorandum of understanding for Africa-wide AI skills and government leader capacity building, and the Commonwealth of Nations engaged Intel for educating government leaders on emerging technologies. We also built innovative collaborations with global workforce readiness organizations like the United Nations Development Program (UNDP), the Khan Academy, and Junior Achievement Europe, and shared our program resources and knowledge for impact. As an example, [iDEA UK](#) created a certificate program based on Intel's [AI for Youth](#) program, benefiting more than 150,000 students.

In 2022, we rolled out the second edition of the [Intel® AI Global Impact Festival](#) to celebrate AI innovations with students around the world. The virtual event attracted more than 41,000 next-generation technologists from 80 countries. Participants from 25 countries submitted more than 100 winning projects showcasing innovative ways to solve various social problems using AI. The human impact of the program was highlighted through stories such as: "From prodigy to professor," "Microbial pest crop protection," "Predicting depression," "Turning learners into leaders," and "Learning never stops."

Intel and the Polish government launched an agriculture-focused AI for Future Workforce program for more than 50 vocational schools. The goal is to help transform the agriculture-driven economy. We also continue to build

trusted public-private collaborations with government ministries responsible for education, workforce readiness, and digital transformation from geographies such as Saudi Arabia, Japan, Taiwan, South Korea, Singapore, Israel, India, South Africa, Thailand, and Malaysia.

Ministries of Education in countries like Moldova, Albania, Bangladesh, and Costa Rica have adopted AI for Youth, scaling the curriculum nationally through schools. The Prime Minister of India also announced a public commitment to train 10 million citizens via the [AI for Citizens](#) program with Intel. In China, we scaled a digital readiness program across all 34 provinces with leading academic stakeholders like Tsinghua University and East China Normal University, and in South Korea, we worked with Samsung to provide AI skills training at 10 leading vocational institutes.

Advancing opportunities in India. Tech-enabled and solar-powered smart classrooms have the potential to modernize education and enhance the quality of classroom learning for students in government schools. An Intel India project enabled access to smart classrooms to over 7,000 students between grade 3 and 8 at 40 government schools in Karnataka and Telangana (15 schools). In addition, over 400 teachers were trained how to best use the smart classrooms to enhance STEM learning in a holistic learning environment.

A project in rural Bangalore improved education for children in local government schools while helping build sustainable livelihoods for marginalized women from underserved communities. Some 80 women received training in English language proficiency, pedagogy, curriculum mastery, and personal and professional leadership to better prepare them to serve as community teachers in rural government schools. An external impact assessment survey of the women in the project showed that nearly 70% of the respondents were unemployed prior to the project and 83% of the respondents who were employed after the project had an average increase in income by 176%.



Intel® Future Skills. Using design-thinking methodology and hands-on learning experiences, the [Intel Future Skills](#) program aims to give students the framework needed for a lifetime of problem solving and discovery through science, technology, engineering, arts, and math (STEAM) learning. The program's learning platform is made up of more than 60+ hours of content, which challenges students and encourages them to think differently, fail fast, and develop a growth mindset. The model combines technical learning with social emotional learning to enable students to recognize and understand the people they are creating for by building essential empathy and creative problem-solving skills. We provide this content online at no cost. In addition, Intel Employee Service Corps (IESC) skill-based volunteers continue to dedicate their time facilitating virtual Intel Future Skills camps and in-person classroom experiences for under-resourced youth. In 2022, in collaboration with the Winter Paralympic Games, Intel sponsored three fully accessible sports-themed STEAM camps for more than 200 middle school students with and without disabilities from 100 locations across the US and Puerto Rico.

National Q-12 Education Partnership. To support the quantum industries of the future, the White House Office of Science and Technology Policy and the National Science Foundation are spearheading the [National Q-12 Education Partnership](#) between the federal government, industry, professional societies, and the education community. The goal is to foster training opportunities to increase the capabilities, diversity, and number of students who are prepared to engage in the quantum workforce. As a member of the partnership, Intel produced the "Adventures in Computing" video series to introduce STEM learners to the field of quantum computing through entertaining interviews with Intel women engineers and scientists. In 2022, we launched the Intel® Future Skills Quantum Computing hands-on learning projects for K-12 after-

school programs. The projects include "Game of Chance," which visualizes probability, and "Making Waves," focused on visualizing waves with constructive and destructive wave interference to explore a principle that quantum computers employ.

Global Women in Science (WiSci) STEAM Camps.

In collaboration with the United Nations Foundation Girl Up Initiative and the US Department of State's Office of Global Partnerships, the Intel Foundation the Women in Science (WiSci) program, a unique global effort to bridge the gender gap in STEM fields through access to education, mentoring, and leadership training. In 2022, virtual WiSci Future Skills camps in Southeast Asia and Central America brought together 100 participants from Costa Rica, Indonesia, Malaysia, Panama, and the Philippines. [Ileana Valdez's amazing story](#) is a powerful example of the lifelong impact that WiSci has on hundreds of girls. Many previous WiSci participants have gone on to pursue STEM fields in college and launched successful careers.

Developing an Inclusive Talent Pipeline. In 2022, Intel collaborated with the Knowledge Is Power Program (KIPP) to help give students in grades K-8 a strong foundation in science. Today, nearly every KIPP school uses Amplify Science, a robust, hands-on curriculum that invites students to investigate phenomena with the purpose of solving authentic problems. KIPP intends to apply Amplify project learnings for future revisions and instructional materials creation. Across the KIPP network, 15 regions participated in over 20 hours of teacher trainings and workshops, resulting in some 90% of participating students agreeing with the statement, "What I am learning in science will be useful later in my life." This result gives KIPP confidence that this intentional focus will encourage more students choose STEM careers after high school.



Million Girls Moonshot

Since 2017, the Intel Foundation has invested \$4.65 million in grants supporting meaningful STEM experiences for middle school girls and their families. Building on proven results of those investments and the [Intel® She Will Connect](#) initiative, the Intel Foundation is collaborating with other foundations and companies on the [Million Girls Moonshot \(MGM\)](#). MGM aims to reach and collectively engage 1 million more girls through innovative, high-quality STEM/STEAM capacity across the 50 US states. In year two of the program (April 2021–August 2022), MGM engaged over 250 Intel volunteers, who provided 2,800 hours of service—reaching 65,000 after-school and summer programs and engaging approximately 1.4 million girls. Since the launch of the movement in 2020, MGM has collectively reached more than 75,000 after-school and summer programs that educate 3 million youth, including 1.5 million girls. Of those, about 80,000 girls are in programs that are intensively engaged with MGM in some way, and are therefore most likely to have directly benefited from opportunities to develop an engineering mindset.

Sustainable

Driving to the lowest possible environmental footprint as we grow helps us create efficiencies and respond to the needs of our stakeholders. We work across three main focus areas—climate, water, and waste—and invest in conservation projects and set company-wide environmental targets. We also collaborate externally to increase our “handprint”—the ways in which Intel® technologies can help others reduce their footprints.

This year's highlights

9.6 billion gallons water saved

In 2022, we conserved approximately 9.6 billion gallons of water in our operations and community collaborations and enabled restoration of 3.0 billion gallons through watershed restoration projects. These achievements advanced us toward our goal of net positive water. We continued to achieve net positive water in two countries: the US and India.

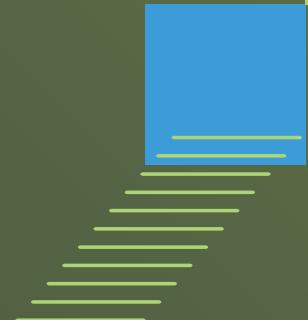
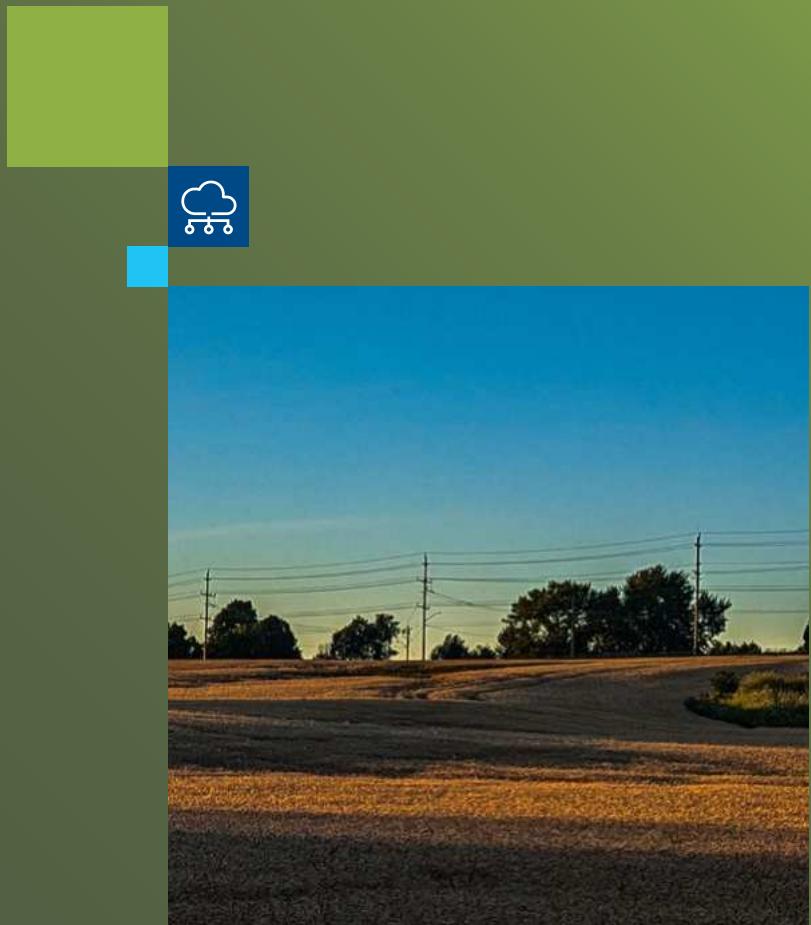
93% renewable electricity globally

In 2022, we achieved 100% renewable electricity in the US, European Union, Israel, and Malaysia, and are approaching 100% in Costa Rica—bringing the global total to 93%. Over the last five years, we have purchased 33.6 billion kWh of renewable electricity, enough to power more than 3.2 million US households for one year.¹

67% manufacturing waste upcycled

During 2022, circular economy practices were applied to approximately 67% of our manufacturing waste streams via reuse, recovery, or recycling.

¹ Based on average US household energy usage figures published by the US Energy Information Administration.



Sustainable: Our Approach

Through conservation, strong collaborations, and application of technology, we have long worked to reduce the environmental impact of our operations. We also collaborate with governments, other companies, our suppliers, and nonprofits to help others reduce their own environmental impacts. Our sustainability goals, including our commitment to achieve net-zero greenhouse gas (GHG) emissions (Scope 1 and 2) by 2040, help answer the call for even more urgent action to further address climate change.

In addition to our sustainability goals, our strategy includes creating a collective approach to reduce GHG emissions across the semiconductor industry, and increasing the use of technology to reduce climate change impact. To achieve the objectives of our RISE sustainable chemistry technology industry initiative, we continue to test and improve our unique methodology to calculate our manufacturing chemical footprint, which we believe will be instrumental in helping us identify projects to soften that footprint at Intel and within our ecosystem.

We recognize that solving the world's environmental challenges requires broad, collective action—action that starts with individuals. For that reason, we have long encouraged our employees' passion for the environment by supporting sustainability projects within the company, with customers, and in our local communities. For example, a global team of Intel volunteers is working with an Arizona nonprofit to leverage AI to identify invasive grasses and reduce the risk of wildfires in the Sonoran Desert. To learn more, see "[Collaborating for Technology Impact](#)" in the Enabling section of this report.

We believe that Intel's position in the technology ecosystem, our wide range of technology, and the passion and expertise of our employees will enable us to form critical collaborations, develop new approaches, and make significant progress over the next decade and beyond.



intel RISE

2030 and 2040 RISE: Sustainable Goals, Initiatives, and Global Challenges

Global Challenge:
Achieve carbon-neutral computing to address climate change.

Technology Industry Initiatives:

- Sustainable Manufacturing.** Create a collective approach to reducing emissions for the semiconductor manufacturing industry and increase the use of technology to reduce climate impact in global manufacturing.
- Sustainable Chemistry.** Enable greener and circular chemistry strategies across the technology industry value chain by transforming chemical footprint methodology.

Product, Operations, and Supply Chain Goals:

- Renewable Electricity.** Achieve 100% renewable electricity globally.
- Energy Conservation.** Conserve 4 billion kWh of energy cumulatively.
- Green Buildings.** Build new factories and facilities to US Green Building Council green building standards.
- GHG Emissions.** Reduce absolute GHG emissions 10% by 2030 and achieve net zero by 2040 (Scope 1 and 2).
- Supply Chain.** Reduce Scope 3 GHG supply chain emissions by 30% from what they would be in the absence of action.

Product Energy Efficiency. Increase product energy efficiency 10X for Intel client and server microprocessors to reduce our Scope 3 emissions. Reduce the carbon footprint of platform reference designs for future client form factors by 30% or more.

Net Positive Water. Achieve net positive water by conserving 60 billion gallons of water and funding external water restoration projects.

Zero Waste to Landfill. Achieve zero waste to landfill and implement circular economy strategies for at least 60% of our manufacturing waste streams in collaboration with our suppliers.

Environmental Management

Unlike many companies in the electronics industry that outsource their production, we manufacture the majority of our products in our own wafer fabrication facilities. As a result, Intel's direct environmental footprint is more significant than those of our "fab-less" competitors, whose manufacturing footprints sit in their supply chains. This business model also gives us a unique advantage when it comes to integrating sustainable practices within production, as we have direct control over manufacturing processes.

Governance and Management

The [Intel Code of Conduct](#), [Climate Change Policy](#), [Global Water Policy](#), [Energy Policy](#), and [Environmental, Health, and Safety Policy](#) guide our sustainability strategy and help us set goals. Under these policies, we strive to consider environmental impact when we select sites, design buildings, set performance levels for manufacturing tools, and establish goals for production processes.

For over a decade, Intel has maintained multi-site, third-party-verified International Organization for Standardization (ISO) 14001 registration to evaluate the effectiveness of our Environmental Management System. Our Corporate Energy Management System is designed to follow the ISO 50001 Energy Management Standard; to date, we have received third-party ISO 50001 accreditation for 6 of our manufacturing sites.¹

To minimize our emissions of particulate matter (PM)—including PM less than 2.5 microns (PM_{2.5}), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), nitrogen oxides (NOx), and carbon monoxide (CO)—we seek to use emissions reduction strategies, including abatement equipment such as rotary concentrator thermal oxidizers, wet electrostatic precipitators, wet scrubbers, and ultra-low NOx burners.

We also conduct regular environmental, health, and safety (EHS) program self-assessments to validate EHS compliance at the individual site level. In addition, our senior global EHS professionals partner with legal

counsel to complete periodic internal audits related to compliance, management systems, and business risk at various Intel sites. The audits are designed to include in-depth documentation and records reviews, interviews with site leadership, and physical inspections related to EHS compliance.

Key to our chemical management strategy is a comprehensive review of materials, which starts with a regulatory search of all applicable chemical regulations and use restrictions. The search includes Intel-specific restrictions (which often go beyond regulatory requirements), and local and global regulations. We then identify the environmental and safety controls needed to protect personnel and the environment during a chemical's intended use. In 2021, we launched new chemical management software systems aimed at improving employee access to hazard information and increasing the efficiency and quality of EHS review of new chemical introductions—including review of our chemical suppliers' regulatory obligations.

On an annual basis, we report Intel's emissions, waste transfers off-site, and treatment of reportable chemicals in the countries where Intel operates, and seek to do so in accordance with local and national regulations, such as those set by the US Environmental Protection Agency (EPA).

To better understand how Intel compares to others in our industry, we regularly benchmark our environmental performance with semiconductor and other large companies. To build a supportive policy environment for private sector leadership on climate change, Intel participates in organizations such as the [Center for Climate and Energy Solutions](#), the [American Council for an Energy-Efficient Economy](#), and the [Alliance to Save Energy](#). We also engage our main suppliers on sustainability issues to help them reduce their climate and water

¹The number of sites that have received ISO 50001 accreditation was updated May 31, 2023.

EHS Compliance Reporting Data

Year	Number of NOVs	Fines or Fees
2018	8	\$1,600
2019	7	\$400
2020	9	\$7,086
2021	9	\$2,100
2022	12	\$12,850

In 2022, government officials made more than 180 visits (including audits and inspections) to Intel sites across the globe, including over 65 health and safety agency inspections, nearly 35 fire protection agency inspections, and more than 80 environmental agency inspections.

Details on [Notices of Violations \(NOVs\)](#) are provided in the Appendix of this report, and previous NOV data can be accessed on our [Report Builder](#) website. Senior management is responsible for reviewing our NOVs to confirm that root cause corrective actions for identified concerns are put in place and tracked to completion.

impacts, reduce waste and identify circular solutions, advance green chemistry and footprinting practices, and identify collaboration opportunities.

To learn more, see "[Public Policy and Political Accountability](#)" and "[Supply Chain Responsibility](#)" in the Our Business section of this report.



Our [Explore Intel](#) website provides stakeholders with information about environmental management and performance at our major global facilities, such as the Rio Rancho, New Mexico campus pictured above.

Linking Compensation and Financing to Environmental Performance

Since 2008, we have linked a portion of executive and employee compensation to corporate responsibility factors. Our 2022 bonus incorporated environmental-related metrics aligned to our 2030 goals, including achieving 90% renewable electricity globally, conserving 8.5 billion gallons of water in our operations, and restoring 2.5 billion gallons of water to local watersheds. We surpassed each of the targets, conserving 9.6 billion gallons and restoring 3.0 billion gallons of water, and reaching 93% of renewable electricity globally. In 2023, environmental metrics include achieving at least 95% renewable electricity globally, reducing Scope 1 and 2 GHG emissions by 130,000 metric tons of carbon dioxide equivalent (CO₂e), conserving and restoring 12 billion gallons of water, and sending ≤5% of waste to landfill by the end of 2023. For more information, see our [2023 Proxy Statement](#).

In 2022, for the third consecutive year, we achieved our green revolving credit facility targets for energy and water conservation. In August 2022, we also announced the pricing of our [inaugural green bond issuance](#), totaling \$1.25 billion. The net proceeds of the green bond offering are intended to be used to fund eligible projects in six key areas that support Intel's sustainability goals, including green buildings, energy efficiency, circular economy and waste management, GHG emissions reductions, water stewardship, and renewable electricity. The green bond was part of a \$6 billion overall debt public offering, and the proceeds from the remainder of the offering are intended to be used for general corporate purposes. Additionally, we kicked off a pilot to implement an internal price of carbon to inform project decisions.

Smart and Green Building Practices

For many years, our engineers have incorporated green design into the new construction and renovation of our facilities, which helps us achieve efficiencies in energy consumption, water use, and recycling. We also collaborate with companies and nonprofits to expand the number of manufacturers implementing green building practices. We have achieved LEED® green building certification for more than 18.5 million square feet of space in 53 buildings. Our new Gdansk, Poland research lab facility, which received LEED® Platinum certification in March 2023, meets the Nearly Zero-Energy Building requirements in the European Union and incorporates technology solutions that will reduce electricity consumption by 32% and water consumption by 55%. Currently several additional new Intel buildings and site expansions are going through the LEED® certification process. As part of our [net-zero GHG announcement](#), we committed to build our new factories to LEED® standards.

Intel also collaborates with a robust ecosystem of equipment manufacturers and systems integrators to deliver a new generation of smart building solutions built on interoperable, secure, and scalable Internet of Things technologies and advanced data analytics—at the network edge. [Read more](#) about smart buildings with Intel® Internet of Things technologies.

Product Ecology

Intel's vision is to avoid the use of substances in our products that could harm the environment or human health, and to act responsibly and with caution. Intel product material restrictions are based on consideration for legal requirements, international treaties and conventions, and specific market requirements.



For more than a decade, we have collaborated with suppliers and customers to work toward eliminating hazardous substances such as lead and halogenated flame retardants from our products. While legislation does not require the elimination of halogenated flame retardants in all electronic components, Intel has played a role in facilitating industry consensus around low-halogen practices. We engage with industry committees on the development of materials declaration, test methods, carbon footprint, and eco-design standards. Intel leads several global environmental regulations influencing and harmonization efforts within multiple industry trade associations. We also strive to meet the requirements of the European Union's Registration, Evaluation, Authorization, and Restriction of Chemicals ([REACH](#)) regulation and comply with applicable product ecology regulations. When hazardous substances are included within our products, we take steps to handle them safely from the time they enter our operations until they are properly disposed of or recycled.

Managing electronic waste (e-waste) such as computers, monitors, and phones is a global concern. Most of our products—including motherboards, microprocessors, and other components—fall within the scope of e-waste laws when they are incorporated into a final product, generally by an original equipment manufacturer (OEM). As such, we endeavor to work with OEMs, retailers, customers, and others to identify shared solutions for used electronics. We also take steps to integrate environmental considerations into the design of our products to minimize environmental impacts of electronics at their end of life.

Intel supports the development of green procurement standards and tools such as [EPEAT](#) and other eco-design directives. These eco-design standards, directives, and tools are designed to help purchasers in the public and private sectors evaluate, compare, and select electronic products based on environmental leadership and corporate social responsibility attributes.

Product Carbon Footprint

The product specific methodologies, standards, and available data for estimating product carbon footprints (PCFs) vary considerably by company and geographical location. We believe consistency is needed and we are helping to lead the industry harmonization of PCF methods that relate to Intel products, for example, through involvement in efforts with the [Semiconductor Climate Consortium](#) and the [Massachusetts Institute of Technology's \(MIT\) Product Attribute to Impact Algorithm \(PAIA\) Consortium](#).

Our approach to modeling the embodied PCF² of Intel® processors is designed to follow the guidelines of the ISO 14067 standard and recommendations from the [International Electrotechnical Commission \(IEC\) Technical Report TR 62921](#). We make estimates available to our direct customers for informational purposes to enable customers to estimate the contribution of the processor to the overall impact of their finished product.

² The embodied PCF includes Scope 1, market-based Scope 2, and the applicable upstream portion of Scope 3 GHG emissions.



Climate and Energy

Climate change is a serious environmental, economic, and social challenge. We focus on reducing our own climate impact—the emissions resulting from our own operations, our supply chain, and the marketing and use of our products. We also work to identify ways that Intel® technology can help others reduce their climate impacts. Our [Climate Change Policy](#) outlines our formal position on climate change and our policy advocacy principles.

Reducing the Carbon Footprint of Our Operations

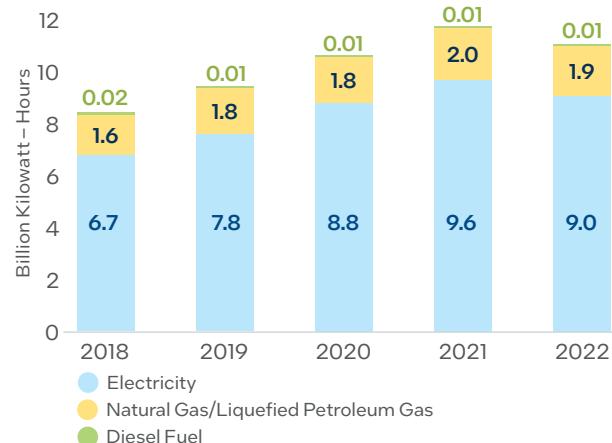
For over two decades, Intel has set aggressive greenhouse gas (GHG) reduction goals and invests in GHG reductions through chemical substitution, GHG abatement, energy conservation, process optimization, and renewable and alternative electricity. As a result of these actions, we have [avoided over 80% of our cumulative Scope 1 and 2 GHG emissions](#) over the last decade. We collaborate with others in the semiconductor and other manufacturing industries to identify new and innovative approaches to reduce emissions. For more information, see "[Sustainable Manufacturing](#)" and "[Sustainable Chemistry](#)" initiatives later in this section and "[2022 Scope 1 and 2 Greenhouse Gas Inventory by Location](#)" in the Appendix.

Energy Conservation

Reducing energy use in our operations is core to Intel's overall climate strategy and our sustainability goals. Cumulatively we conserved approximately 970 million kWh of electricity from the 2020 baseline through the end of 2022, toward our 4 billion kWh 2030 goal. Cumulative cost savings from the 2020 baseline through 2022 total approximately \$70 million.

Intel's Energy Management System is designed to follow the international ISO 50001 Energy Management System standard. Although energy conservation opportunities are present across the spectrum of Intel's manufacturing operations, we have identified strategic investment opportunities in a number of areas. To reduce energy usage in operations, we are investing in HVAC upgrades and heat recovery projects. For new factory construction projects, we are incorporating energy efficiency into design and equipment selections. Through occupancy and light-level control LED lighting in both manufacturing and non-manufacturing spaces, we expect up to a 90% reduction in lighting energy use. For more information on our approach to energy conservation, see our [white paper](#).

Energy Use



Our 2022 absolute energy use decreased 7% compared to 2021. In 2022, approximately 82% of our global energy use was electricity. The Dalian, China site was sold subsequent to year-end 2021 as part of the first closing of the divestiture of our NAND Memory business. Therefore, Dalian is not included in our sustainability goals and metrics beginning in 2022.



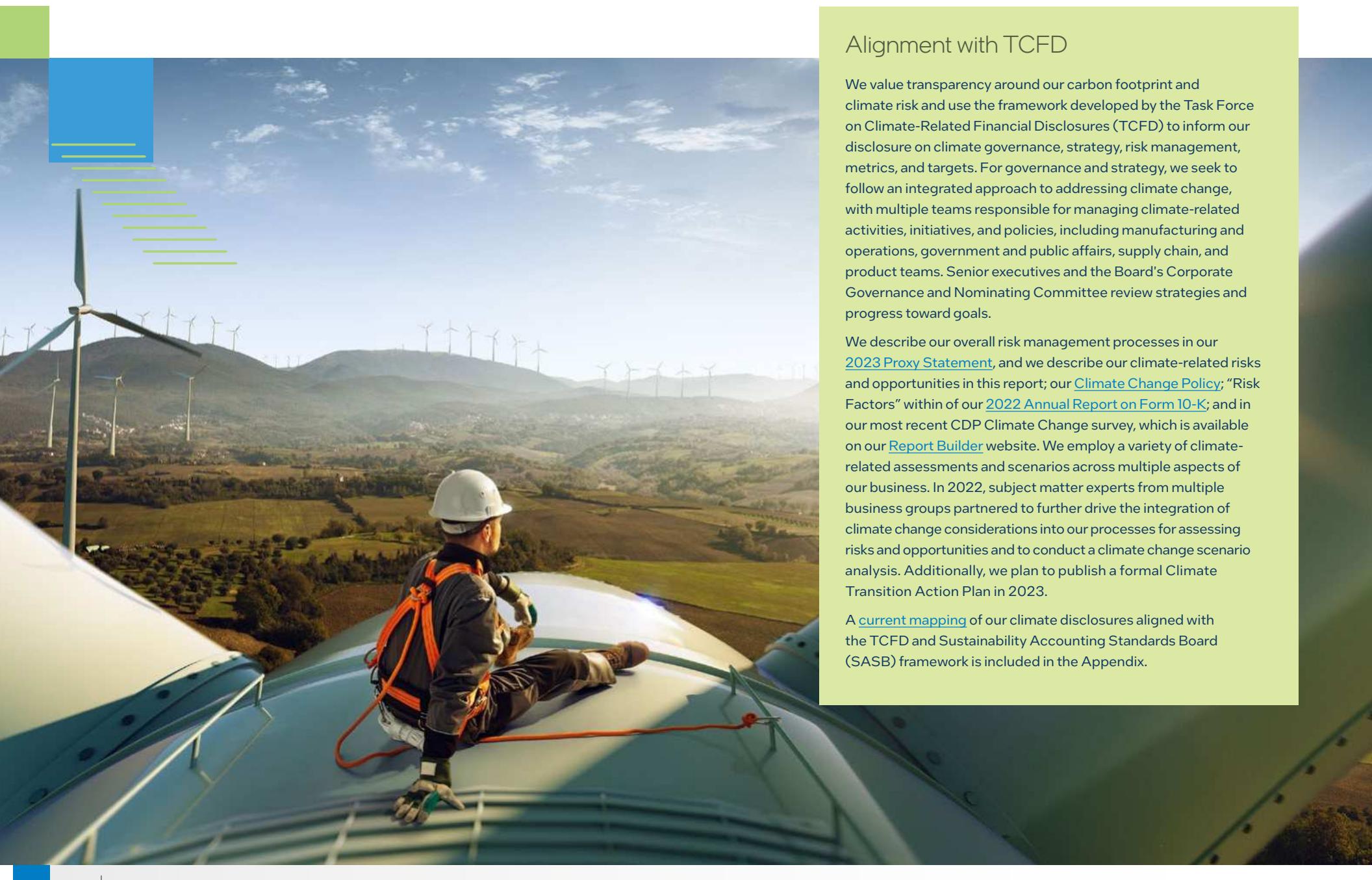
2030 Goal: Energy Conservation

Description. Achieve cumulative electricity savings of 4 billion kWh from 2020 to 2030.

Baseline. Progress measured from baseline of Jan. 1, 2020.

Progress in 2022. In 2022, we invested in projects that enabled us to conserve an additional 160 million kWh of electricity. We have conserved a cumulative total of approximately 970 million kWh of electricity since the baseline date.

Looking Ahead. In 2023, we continue to invest in new and innovative projects aimed at conserving an additional 150 million kWh of electricity.

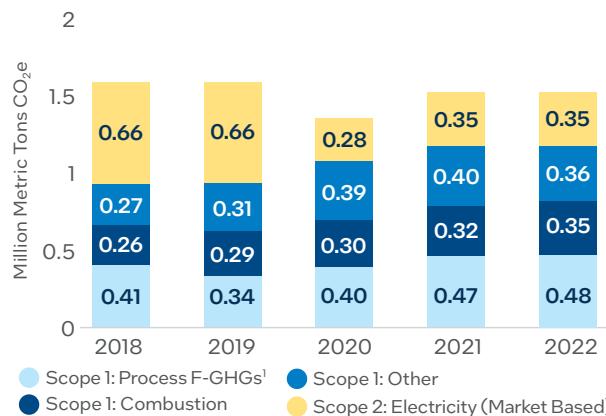


Alignment with TCFD

We value transparency around our carbon footprint and climate risk and use the framework developed by the Task Force on Climate-Related Financial Disclosures (TCFD) to inform our disclosure on climate governance, strategy, risk management, metrics, and targets. For governance and strategy, we seek to follow an integrated approach to addressing climate change, with multiple teams responsible for managing climate-related activities, initiatives, and policies, including manufacturing and operations, government and public affairs, supply chain, and product teams. Senior executives and the Board's Corporate Governance and Nominating Committee review strategies and progress toward goals.

We describe our overall risk management processes in our [2023 Proxy Statement](#), and we describe our climate-related risks and opportunities in this report; our [Climate Change Policy](#); "Risk Factors" within of our [2022 Annual Report on Form 10-K](#); and in our most recent CDP Climate Change survey, which is available on our [Report Builder](#) website. We employ a variety of climate-related assessments and scenarios across multiple aspects of our business. In 2022, subject matter experts from multiple business groups partnered to further drive the integration of climate change considerations into our processes for assessing risks and opportunities and to conduct a climate change scenario analysis. Additionally, we plan to publish a formal Climate Transition Action Plan in 2023.

A [current mapping](#) of our climate disclosures aligned with the TCFD and Sustainability Accounting Standards Board (SASB) framework is included in the Appendix.

Scope 1 + 2 GHG Emissions

Our combined Scope 1 (direct) and Scope 2 (indirect) GHG emissions decreased 4% on an absolute basis in 2022 from the 2019 baseline. Due to the divestment of our Dalian, China manufacturing site, Dalian has been removed from our GHG emissions inventory for all years shown in this chart. In addition, for our 2019 baseline year and going forward, we refined the emission factors used in our GHG inventory based on the most recent data available and industry best practices. See details of our [GHG emissions by location](#) in the Appendix.

¹F-GHGs stands for fluorinated greenhouse gases and includes perfluorocarbons (PFCs) and other fluorinated GHGs used in Intel's semiconductor fabrication.



In 2022, we celebrated the grand opening of a \$3 billion expansion at Intel's development factory in Hillsboro, Oregon.

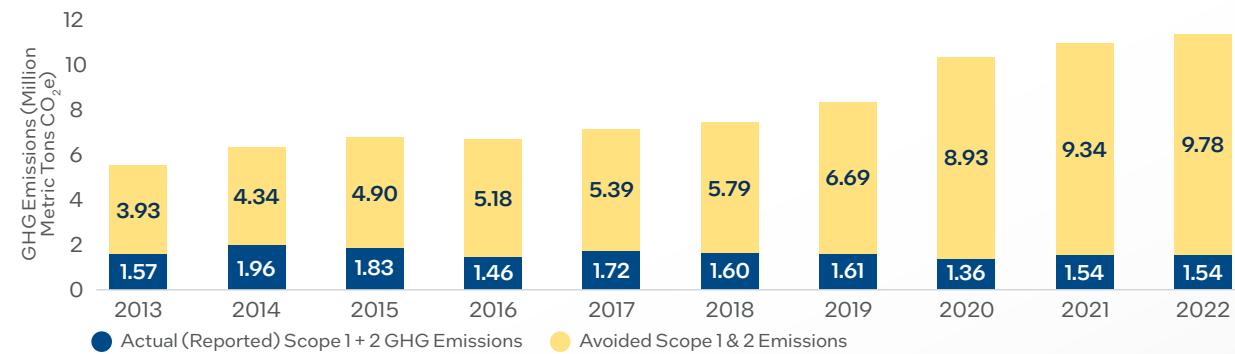
2030 and 2040 Goals: Net-Zero Scope 1 and 2 GHG Emissions

Description. Achieve a 10% reduction in our absolute Scope 1 and 2 GHG emissions by 2030 and reach net-zero Scope 1 and 2 GHG emissions by 2040.

Baseline. Progress measured as percent reduction from our calendar year 2019 emissions. Our combined Scope 1 and Scope 2 GHG emissions in 2019 were 1.61 million metric tons of carbon dioxide equivalent (CO₂e). Due to the divestment of our Dalian, China manufacturing site, Dalian has been removed from our GHG emissions inventory for the baseline year and all subsequent years.

Progress in 2022. During 2022, our Scope 1 and 2 GHG emissions decreased 4% from the 2019 baseline.

Looking Ahead. In 2023, we will continue to implement a project roadmap to reduce our Scope 1 and 2 GHG emissions. We expect to reduce approximately 130,000 metric tons of CO₂e on an annualized basis through targeted projects within our operations and use of renewable electricity. We seek to reduce our absolute emissions to reach our net-zero commitment by 2040, and only purchase carbon offsets or removal credits after feasible reduction options have been exhausted.

Scope 1 + 2 GHG Avoided Emissions Over the Last Decade

For over two decades we have voluntarily reduced our GHG emissions through significant investments and actions. Despite the increase in complexity of our current manufacturing process technologies, we have avoided 80% of our cumulative Scope 1 and 2 GHG emissions over the last decade, through these investments and actions. We are working to drive further reductions to reach net-zero GHG emissions (Scope 1 and 2), as well as through collaboration with others in the semiconductor and other manufacturing industries. For more information, see "[Sustainable Manufacturing](#)" later in this section.

Our emissions calculations are based on Global Reporting Initiative (GRI) Standards, the World Resources Institute/World Business Council for Sustainable Development's The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, and internal criteria defined by Intel management. GHG emissions by location are included in the Appendix. Additional GHG emissions reporting is publicly available in our CDP questionnaire response on our [Report Builder](#) website.

2022 GHG Emissions Reported by Category (metric tons of CO₂e)

Scope	Emissions	Notes
Scope 1(Direct) Emissions	1,190,900	Manufacturing process, on-site fuel combustion, refrigerants, on-site fleet/air travel.
Scope 2(Indirect, Electricity)	347,600	Market-based method; ² includes renewable electricity purchases.
Scope 1 and 2 Total	1,538,500	
Scope 3 Total	22,791,000	Indirect/value chain.
Leased Vehicles and Commuting	388,000	Employee leased vehicles and commuting.
Logistics and Distribution	371,000	Upstream and downstream transport and distribution. ³
Employee Business Travel	33,000	Air travel, car rentals, and hotel stays.
Supply Chain	4,792,000	Represents the 2022 estimate based on key suppliers' 2021 CDP Climate Change Questionnaire information.
Capital Goods	364,000	Extraction, production, and transport of capital goods purchased.
Fuel and Energy Related Activities	82,000	Impacts related to extraction, production, and transportation of fuels and energy purchased, not already included in Scope 1 or 2. ⁴
Waste Generated in Operations	36,000	Disposal and treatment of waste generated in our operations.
Product Energy Usage	16,591,000	Represents the GHG emissions of the product lifetime (3,867,000 metric tons of CO ₂ e annualized). Includes consideration of cloud service provider publicly reported use of renewable electricity in data centers. ⁵
Processing of Sold Products	134,000	Processing of intermediate products sold to downstream manufacturers.

² Location-based method Scope 2 emissions (does not account for any renewable electricity attribute purchases) = 3,303,000 metric tons CO₂e/year.

³ Upstream portion = 151,000 metric tons; downstream portion = 220,000 metric tons.

⁴ Market-based method includes renewable purchases. Location-based method emissions (does not account for any renewable electricity attribute purchases) = 244,000 metric tons of CO₂e/year.

⁵ Lifetime and annual product energy usage emissions without consideration of customer renewable electricity are 30,076,000 and 6,879,000 metric tons CO₂e, respectively.

Sustainable Manufacturing

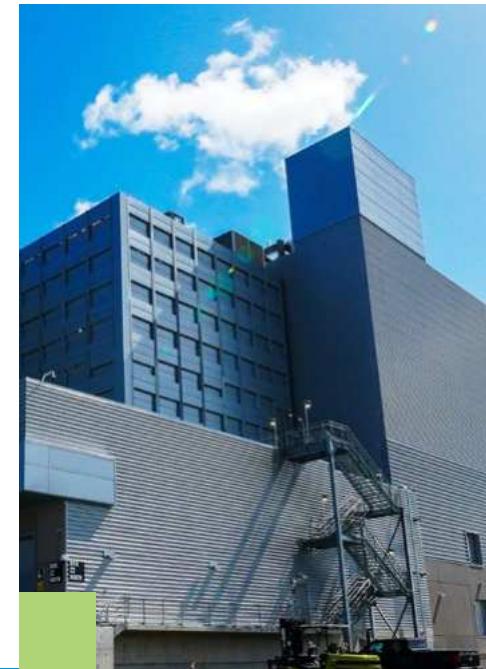
Intel strives to contribute to the global effort toward science-based GHG emissions reductions, in line with the reduction pathway to limit global warming to 1.5°C. However, we face challenges in gaining formal approval for an emissions-reduction target under the methodology of the [Science-Based Targets Initiative](#) (SBTi) due to a number of factors. First, the absolute contraction approach for setting science-based GHG targets does not allow companies to account for early action to reduce emissions. By not accounting for these historical reductions in Scope 1 and 2 emissions, companies that have demonstrated leadership in early, voluntary emissions reductions are at a disadvantage compared to companies that are now beginning their GHG reduction efforts. While Intel's long-term net-zero GHG goal is in line with a 1.5°C emissions reduction scenario required for a science-based target, we are challenged by the near-term reduction requirement without the ability to account for significant historical reductions.

Second, demand for semiconductors is increasing, due in part to the role that technology plays in driving climate change solutions. Current frameworks do not include consideration of the reduction in GHG emissions through the application of technology, or the "handprint"—the environmental benefit that technology provides.

In 2022, we continued our work with industry members to evaluate options for setting an SBTi-approved target, and we will continue this work in 2023.

"Intel has been a leader in sustainability results for decades. With leadership comes responsibility. We're now raising the bar and entering an exciting era to achieve net-zero GHG emissions across our operations by 2040. This will require significant innovation and investment, but we are committed to do what it takes and will work with our industry to achieve this critical mission."

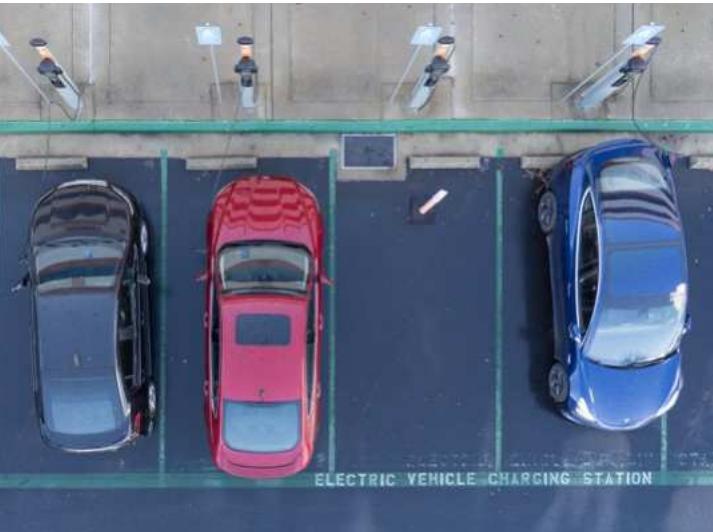
—Keyvan Esfarjani, Executive Vice President and Chief Global Operations Officer at Intel



Renewable and Alternative Electricity

To reduce our Scope 1 and 2 GHG emissions, we purchase renewable electricity and operate on-site alternative electricity projects that provide power directly to Intel buildings. Over the last five years, Intel's renewable electricity supply and renewable electricity attribute purchases have totaled more than 33.6 billion kWh, enough to power more than 3.2 million US households for one year.⁶

Over the last decade, the number of Intel's on-site alternative and renewable electricity installations and our installed capacity have grown significantly. We now have more than 110 alternative and renewable electricity installations with capacity of more than 50,000 kW across 22 Intel campuses. These installations use 22 different technology applications, such as solar hot and cooling water systems, solar electric photovoltaic-covered parking lots, solar window, mini bio-energy, motion power, geothermal energy, and micro wind turbine array systems.



⁶ Based on average US household energy usage figures published by the [US Energy Information Administration](#).

2030 Goal: Renewable Electricity

Description. Achieve 100% renewable electricity across our global operations.

Baseline. During 2020, we had reached 100% renewable electricity in our US and European operations, 50% for our Israel operations, and 71% globally.

Progress in 2022. We continued our 100% renewable electricity commitment for our US, European Union, Israel, and Malaysia operations, and are approaching 100% in Costa Rica—bringing the global total to 93% as of the end of 2022.

Looking Ahead. We will continue developing renewable electricity purchases in other locations, primarily Vietnam, China, and India, and expect to reach at least 95% renewable electricity globally in 2023.

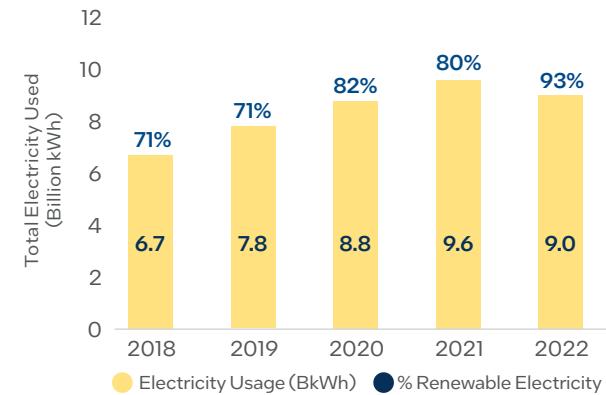
Our on-site projects, which include pilots of innovative technology applications, help us displace grid-supplied, carbon-intensive electricity sources and identify future installation and technology opportunities for both Intel and the broader alternative and renewable electricity market. When installed, our projects are often the largest corporate on-site projects of their type in a country or region.

For more than a decade, Intel has been one of the top corporate purchasers of renewable electricity in the US. In addition to generating on-site and off-site renewable electricity and purchasing renewable electricity from our utility suppliers, we purchase green attributes from multiple sources of generation. These include wind, solar, hydroelectric, and geothermal, many of which are certified and verified by nonprofit validation accreditors such as the [Center for Resource Solutions' Green-e program](#) to meet US Green Power Partnership (GPP) program requirements.

Our approach to renewable and alternative electricity investments has been to reduce our own carbon footprint while encouraging others to take similar actions. We are encouraged by actions we have seen over the

past decade—by companies, investors, utilities, and governments—to increase commitments and investments in renewable energy supplies and apply new technologies.

Renewable Electricity Use



We achieved 93% renewable electricity across our global operations in 2022. The Dalian, China site was sold subsequent to year-end 2021 as part of the first closing of the divestiture of our NAND Memory business. Therefore, Dalian is not included in our sustainability goals and metrics beginning in 2022.

Product Energy Efficiency

With each new generation of products, we aim to offer higher performance and improved energy efficiency compared to previous generations. Improving the energy efficiency of our products can reduce our Scope 3 GHG emissions and improve our customers Scope 2 GHG emissions, as well as reduce overall energy consumption.

In 2022, Intel launched 13th Generation Intel® Core™ processors for personal computers with hybrid architecture that has both performance and efficient cores. Intel's performance hybrid architecture is designed to lead to higher performance per watt in client products, helping us make progress toward our RISE 10X product efficiency goals.¹

During 2022, we made progress in replacing legacy system sleep and idle states with faster wake Modern Standby state. Intel had a 100% attach rate of Modern Standby on notebook PC designs using 13th Generation Intel Core processors. Intel launched the 13th Gen Intel Core mobile processors with a 20% increase in energy efficiency and 15% Microsoft Windows ADK Browsing power reduction compared to 12th Gen Intel Core mobile processors. Energy efficiency referenced was calculated by comparing the ratio of SPEC® CPU2017 Integer Rate benchmark and Display On Idle power between the top-performing 15W processors.

The transition of desktop PCs to Modern Standby continues to improve year over year. Our multi-year cross-industry collaboration to improve desktop energy efficiency yielded a key accomplishment. The first computer systems based on Intel's Single Rail Power Supply Specification [ATX12VO](#) were launched in 2022. ATX12VO (12V only) is designed to enable better power supply efficiency at low loads to enable a platform with up to a 30% reduction in typical annualized energy consumption and greenhouse gas emissions. Intel launched the 13th Gen Intel Core desktop processors with a 60%



increase in energy efficiency compared to 12th Gen Intel Core desktop processors. Energy efficiency referenced was calculated by comparing the ratio of SPEC® CPU2017 Integer Rate benchmark and Display On Idle power between the top-performing 125W processors.

In 2023, we launched 4th Generation Intel® Xeon® Scalable processors (code-named "Sapphire Rapids"), which achieved approximately 29% improvement energy efficiency over 3rd Generation Intel Xeon Scalable processors using top-bin SKUs as measured by industry benchmark SPEC® SERT.² The efficiency gain was largely driven by higher core count, micro-architecture improvements, support for DDR5 memory, and PCIe Gen 5.

4th Gen Intel Xeon processors [also include innovative features](#) such as Optimized Power Mode (OPM) and built-in accelerators for AI, security, etc., that customers

can utilize to achieve more efficiency gains when running certain workloads or use cases. These features, while not exercised by the SPEC SERT suite, can provide real energy savings across a wide variety of real-world scenarios.

Intel has worked with industry organizations and worldwide government agencies to promote and enable better energy-efficiency standards across the PC industry. Working with the European Commission and other stakeholders on the upcoming EU Lot 3 Computers regulation revision, Intel continued to make progress with [DIGITALEUROPE](#) on finalizing the new benchmark tool for a PC active-mode energy-efficiency metric for A-G labeling recommendations. Intel has also worked with government policy makers to influence the direction of the new version of computer standards in South Korea.

¹13th Gen Intel® Core™ Mobile Processors brief and [13th Gen Intel® Core™ Desktop Processors brief](#).

For server energy efficiency, Intel collaborated with technology industry consortia and European Standardization Organizations to continue development of new harmonized standards in support of EU Lot 9 server regulation already in effect. In support of the EU's Green Deal, Intel, as a part of the ICT industry, advocates leveraging technology and digitalization to meet EU's climate-neutral goals by 2050. Intel is also actively participating in the industry-led EU Carbon Neutral Data Centre Pact (CNDCP), driving a holistic approach and metrics to help make EU data centers carbon neutral by 2030. In China, as part of industry consortia, we continue to work with China National Institute of Standardization (CNIS) to help enable China's Energy Efficiency grades and benchmark approaches adopted

by CNIS in the final standard to be acceptable to the server industry with a minimal market entry risk. Intel is collaborating with SPEC and the Information Technology Industry Council's The Green Grid to develop the next version of the server benchmark tool SPEC® SERT® suite to support modern workloads and expand the class of servers.

Through continuous improvement of downstream Scope 3 energy use methodology, Intel has estimated the GHG emissions due to energy consumption by Intel processors sold in 2022. The annual and lifetime emissions of Intel processors when used in customers' compute applications (i.e., server, desktop, notebook, and workstation) equate to approximately 3,867,000

and 16,591,000 metric tons of CO₂e, respectively. For more, see the "[2022 GHG Emissions Reported by Category](#)" table earlier in this section.

The decrease in annual and lifetime emissions in 2022 compared to 2021 is driven by higher use of renewable electricity in customers' cloud data centers, higher cloud to enterprise server shipment mix, and reduced shipments for client processors. Methodology refinement for 2022 included expansion of client models and product families. Net lifetime emissions after accounting for renewable electricity are going down as more data centers are powered by renewable electricity.

For more information, see "[Achieving Carbon-Neutral Computing](#)" later in this section.

2030 Goal: Product Energy Efficiency

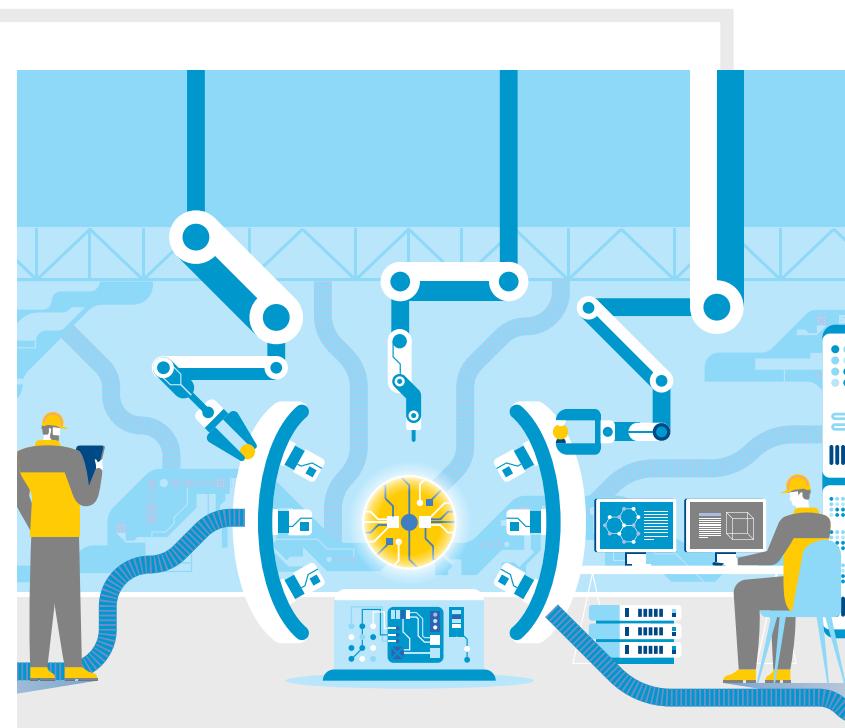
Description. Increase product energy efficiency 10X for Intel client and server microprocessors to reduce our Scope 3 GHG emissions.

Baseline. Progress on the client component of our product energy efficiency goal is measured using the SPEC® CPU2017 Integer Rate benchmark and Display On Idle Power using a 2019 baseline. Desktop and notebook product efficiencies should be reported together as a single number through a weighted average of desktop and notebook processor sales volumes. Progress on the data center component of our product energy efficiency goal is measured using SPEC® Server Efficiency Rating Tool (SERT®) suite² on Intel and/or OEM commercial systems, using an end-of-2019 baseline.

Progress in 2022. **Client:** On track. In 2022, 13th Generation Intel® Core™ processors improved product energy efficiency by approximately 43% over our 2021 products, and we are on track to meet our aggressive interim 2022 goal of 2.8X compared to the 2019 baseline. **Server:** Ahead. Energy efficiency exceeded the 2022 goal. In 2022, we released our 4th Generation Intel® Xeon® Scalable processors, which achieved approximately 2.2X improvement in energy efficiency vs. the 2019 baseline, as measured by SERT using high-volume SKUs. This surpasses the 2022 goal of 1.9X based on planned trajectory toward 10X improvement by 2030. This is the second consecutive year that Intel has successfully demonstrated to within 5% of our planned trajectory to the 10X by 2030 goal for server.

Looking Ahead. For 2023, we plan to report on server progress toward the 2030 goals based on planned release of next-generation Intel® Xeon® Scalable processors (code-named "Emerald Rapids") and client progress based on our next-generation processor code-named "Meteor Lake."

² SPEC and SERT are registered trademarks of the Standard Performance Evaluation Corporation (SPEC).



Water Stewardship

By responsibly managing our water use, guided by our [Global Water Policy](#), we aim to meet our business needs, as well as those of our communities. In 2022, we returned and restored 107%¹ (by volume) of our fresh water withdrawals to our communities through efficient water management, water reuse, and project funding that enabled water restoration in local watersheds.

Our water strategy has three main objectives: conserve water used in our operations, collaborate on water initiatives with local communities, and create technology solutions to help others reinvent how they use and conserve water. As a part of our 2030 RISE goals, we aim to achieve net positive water by conserving 60 billion gallons of water (cumulative from 2020) and funding water projects that will restore more fresh water than we consume to our local watersheds.

We estimate that our water conservation efforts saved approximately 9.6 billion gallons of water in 2022 and new projects completed are estimated to save almost 890 million gallons annually, once operational. Over the last 10 years, our water conservation efforts have saved approximately 52 billion gallons of water, enough to sustain about 470,000 US homes for one year.²

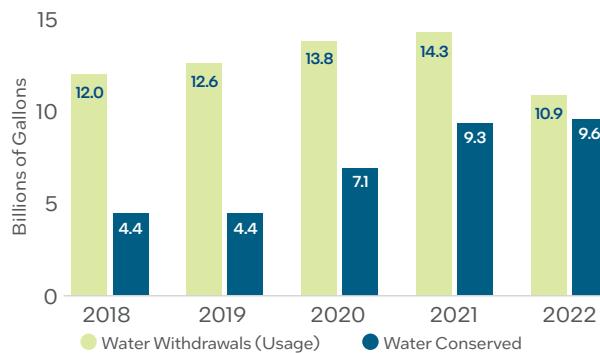
During 2022, we continued to fund water restoration projects benefiting the watersheds that we impact and the communities where we operate, including new projects supporting Arizona and Mexico.

¹ Water returned (8.6 BG) + water restored (3.0 BG)/water withdrawal (10.9 BG) = 107% (small rounding difference). Net positive water % represents the total volume of fresh water returned and restored globally. Some locations have returned and restored significantly more than their targets, resulting in a global total greater than 100%. Net positive water is achieved when each region reaches its specific target. Refer to "[2022 Water Inventory by Location and Source](#)" in the Appendix for net positive water progress by region.

² Based on average US household water usage figures published by the [US Environmental Protection Agency](#).

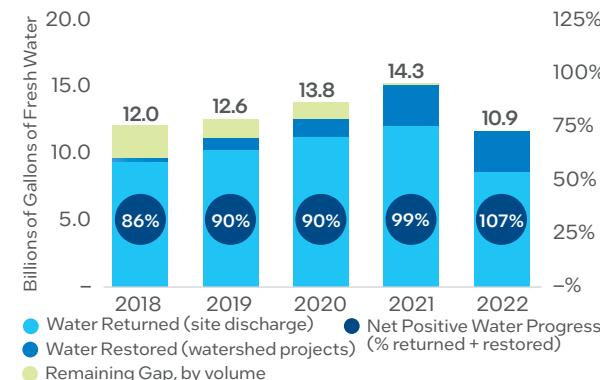
See details about our [water footprint and water risk assessment by location](#) in the Appendix. Additional information is also available in our most recent CDP Water Security report posted on our [Report Builder](#) website.

Water Usage and Conservation



Our 2022 absolute fresh water use decreased 23% from 2021. We increased our water conservation from 2021 to 2022 by about 4%, and increased it by approximately 36% since the baseline year of 2020, due to significant investments in water conservation projects. We define water withdrawals, or water usage, as total gallons of incoming fresh water used. "Operations" includes all manufacturing and non-manufacturing sites with 2,000 or more employees where Intel has operational control. The Dalian, China site was sold subsequent to year-end 2021 as part of the first closing of the divestiture of our NAND Memory business. Therefore, Dalian is not included in our sustainability goals and metrics beginning in 2022.

Net Positive Water



2030 Goal: Net Positive Water

Description. Achieve net positive water by conserving 60 billion gallons of water and funding water restoration projects that restore more fresh water than we consume to our local watersheds. Net positive water is defined as water returned through water management practices, plus water restored to local watersheds, equivalent to >100% of our fresh water consumption.

Baseline. Progress measured from baseline of Jan. 1, 2020.

Progress in 2022. During 2022 we conserved approximately 9.6 billion gallons of water and more than 26 billion gallons cumulatively from the 2020 baseline. In addition, Intel-enabled projects restored about 3.0 billion gallons of water to our watersheds. As a result, we reached net positive water in two countries: the US and India. These achievements advanced us toward our 2030 goal of net positive water, resulting in 107%¹ (by volume) of fresh water usage that was returned and restored, and significant progress toward our goal to conserve 60 billion gallons of water by 2030.³

Looking Ahead. In 2023 we expect to conserve and restore a total of 12 billion gallons of water in our operations, community collaborations, and watershed restoration projects.

³ Our 2022 water savings exclude water savings at our former Dalian, China manufacturing site. The Dalian site was sold subsequent to year-end 2021 as part of the first closing of the divestiture of our NAND Memory business. During 2022, we restarted manufacturing operations in Costa Rica, resulting in an increase in fresh water use. Since our net positive water goal is based on actual water usage, we did not achieve net positive in 2022 for Costa Rica. We continue to look for additional water restoration projects to fund in Costa Rica to achieve net positive water by 2030.

Water Conservation and Restoration

Below are examples of water conservation projects Intel recently implemented as part of our commitment to achieve net positive water:

In 2022, our Leixlip, Ireland campus implemented a new nanofiltration water recovery system that captures water that is rejected during our on-site reverse osmosis process and redirects it for use in other areas of manufacturing. When fully implemented, the project is expected to conserve up to 275 million gallons of water per year.

At our Ronler Acres campus in Oregon, we are working to optimize the water use of ozone generation equipment required for certain semiconductor manufacturing tools. Through the installation of recovery cabinets, the excess ultra-pure water (UPW) is captured and recycled back to the tools. When fully implemented, the project is expected to conserve approximately 500 million gallons of water per year.

The following recent examples of Intel-enabled water restoration projects contributed to the return and restoration of 107%⁴ (by volume) of our fresh water withdrawals by the end of 2022:



Nanofiltration water system.

Kilimo Precision Agriculture Project (Mexico) – Kilimo and Nuup.

Intel's first water restoration project in Mexico focuses on the use of technology solutions such as AI and site-specific data—including satellite imaging, precipitation measurement, and crop soil moisture—to develop tailored irrigation scheduling for a variety of high-value crops. The project objectives are to improve agricultural irrigation management and productivity, reduce water demand, and protect groundwater and surface water resources in the Lerma Basin of Mexico.



Technicians examining vineyard soil as part of the Lerma River restoration by Kilimo Precision Agriculture.

Yampa River Leasing Project (Colorado, benefiting Arizona) – Colorado Water Trust.

The 250-mile Yampa River is a major part of the Colorado River system. Sustained drought and climate change have altered the timing of snowpack melt, resulting in low base flows in the Yampa. This project facilitates an agreement to release water to increase stream flows and provide ecological benefits to fish, as well as recreational, hydropower generation, and water quality and temperature benefits.

⁴ Net positive water % represents the total volume of fresh water returned and restored globally. Some locations have returned and restored significantly more than their targets, resulting in a global total greater than 100%. Net positive water is achieved when each region reaches its specific target. Refer to “[2022 Water Inventory by Location and Source](#)” in the Appendix for net positive water progress by region.



Sunset over fishermen in the Yampa River, part of the Upper Yampa River restoration project by the Colorado Water Trust.

Upper Colorado River Flow Enhancement (Colorado, benefiting Arizona) – Colorado Water Trust.

During critical times of the year, stream flows in multiple upper Colorado River tributaries are inadequate to support fish and wildlife, sustain water quality, and support recreation. This project offers an opportunity to lease and draw water from multiple upstream reservoirs and deliver it downstream to benefit the river when enhanced flows are needed.



Bridge across a Colorado River reservoir, part of the Upper Colorado River flow enhancement project by Colorado Water Trust.

For more information on these and other projects, visit our [Water Restoration](#) website.

Waste and Circular Economy Solutions

Much of the waste we generate results from construction and manufacturing activities. Since the mid-1990s, we have increased our global recycling rate of non-hazardous waste from 25% to 87% even while Intel's business and production continued to grow. We also decreased our waste generation by 10% between 2021 and 2022, due in part to divestiture of our Dalian facility at the end of 2021. As part of our RISE goals, we are committed to achieving zero waste to landfill and implementing circular economy strategies for our manufacturing waste streams.



Circular Solutions for Manufacturing Waste

Major semiconductor manufacturing-related waste streams include lithography-related solvents, metal plating waste, specialty base cleaners, spent sulfuric acid, ammonium sulfate, and calcium fluoride. Our operations also generate plastic, metal, kitchen, and general office waste.

We continue to find ways to recover materials and regenerate resources to create circular economy solutions that reduce costs and environmental impact. In 2022, we upcycled (reused, recovered, or recycled) 67% of our manufacturing waste, or approximately 112,000 tons.

We have put significant effort into finding alternate strategies for managing our spent solvent wastes, resulting in additional environmental benefits. By identifying opportunities to recover, recycle, and fuel blend spent solvents that otherwise would have been incinerated, we were able to avoid over 120,000 metric tons of GHG emissions in our value chain in 2022. In addition, we invest in segregating constituents of our spent solvent waste to enable our waste vendors to more easily refine the high-value solvent and reintroduce it into the merchant market as a replacement raw material.

We also send sulfuric acid waste from our manufacturing operations to an off-site facility, where it is processed to technical grade sulfuric acid. It is then directed back to our manufacturing operations, where we use it in on-site wastewater treatment systems.

2030 Goal: Zero Waste¹/Circular Economy

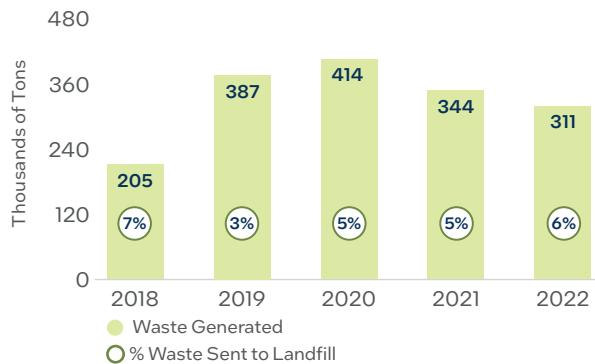
Description. Achieve zero waste to landfill and implement circular economy strategies for at least 60% of our manufacturing waste streams in collaboration with our suppliers.

Baseline. During 2020, 5% of our total waste went to landfill, and we had implemented circular economy strategies for 65% of manufacturing waste.

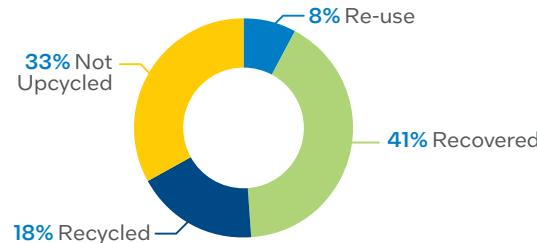
Progress in 2022. By the end of 2022, we sent 6.4% waste to landfill and implemented circular strategies for approximately 67% of our manufacturing waste. Although overall waste generation declined, waste to landfill ticked up slightly in 2022 due to construction activities. Management of construction waste will be a key focus area for 2023 and beyond. Our 2030 goal of managing at least 60% of our manufacturing waste using circular economy strategies will be challenging in future years, given our projected growth and new waste streams, suppliers, and locations.

Looking Ahead. In 2023, we continue to focus on opportunities to upcycle waste by working further on waste segregation practices and collaborating with our suppliers to evaluate new technology for waste recovery and reuse.

¹ Intel defines zero waste to landfill as less than 1%.

Total Waste Generated and % to Landfill

Our 2030 waste to landfill definition includes hazardous waste and non-hazardous solid waste, as well as non-hazardous liquid waste and chemical debris. In line with common waste reporting practices, we do not include salts and biosolids from our on-site water reclaim facilities in Israel, Oregon, and Arizona. The Dalian, China site was sold subsequent to year-end 2021 as part of the first closing of the divestiture of our NAND Memory business. Therefore, Dalian is not included in our sustainability goals and metrics beginning in 2022.

Circular Solutions for Manufacturing Waste Streams

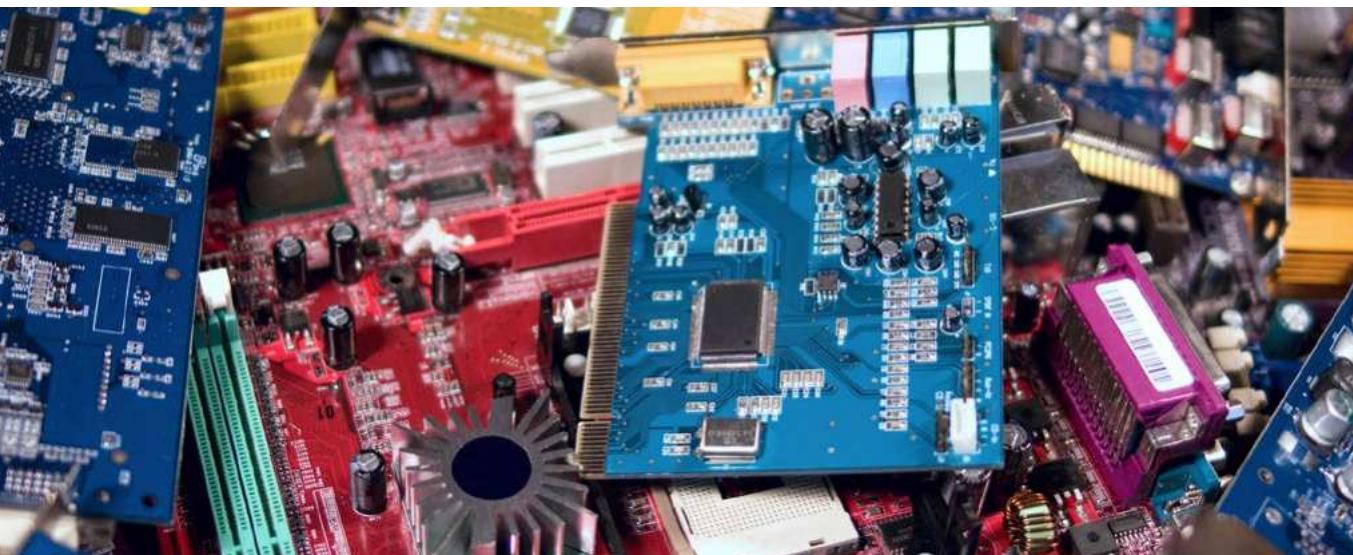
In 2022, approximately 67% of Intel's manufacturing waste was upcycled (recycled, reused, or recovered). Manufacturing waste represented 54% of our total waste in 2022, and included hazardous and non-hazardous waste associated with wafer manufacturing. For our circular economy solutions strategy, we follow the Ellen MacArthur Foundation definition of circular economy and upcycling of waste. Upcycling is defined as keeping products and materials in use via reuse, resale, repurposing, and recycling. It includes recovering and restoring products, components, and materials through strategies like reuse, repair, remanufacturing, use as feedstock, and recycling. It does not include fuel blending unless it is done after recovery of a major constituent of the waste stream.

Circular Supply Chain

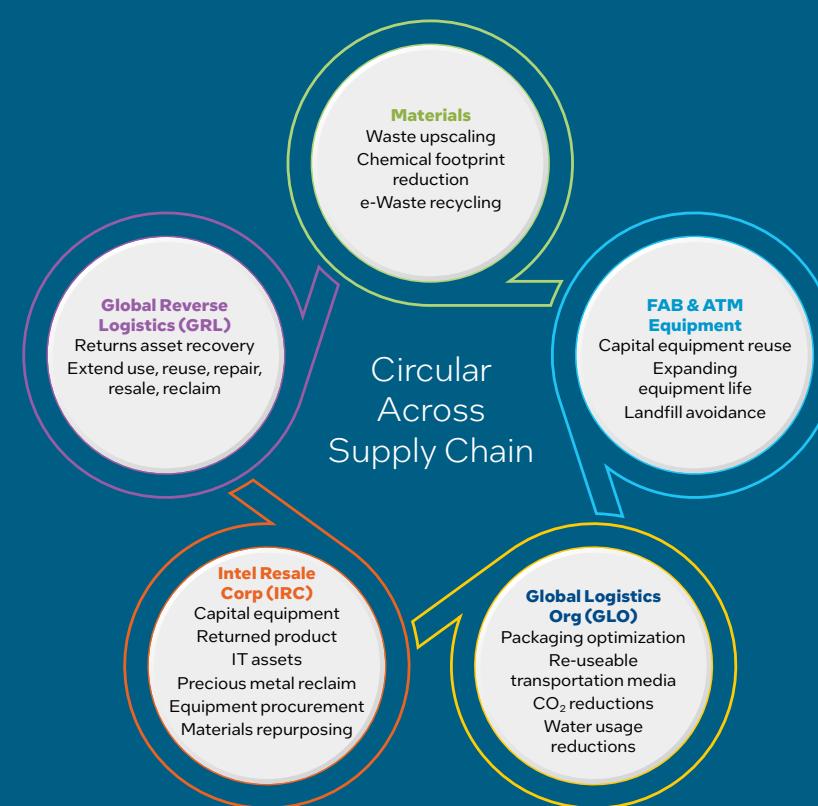
The application of circular economy principles across the supply chain is a cornerstone of our drive to sustainability leadership. Intel's supply chain plays a pivotal role through the implementation of circular economy solutions for manufacturing waste upcycling, extending the useful life of equipment and returned products, materials reclaim, and the use of post-consumer recycled materials on transportation media. The consolidated efforts across the supply chain in 2022 resulted in:

- Greater than 77,000 metric tons in total waste avoidance.
- Over 1,700 metric tons of material sent for precious metal reclaim.
- A 68% recovery rate on products returned to Intel.
- A global e-waste program supporting 30 different countries.
- The extended life of more than 19,000 computing assets into secondary market programs.
- More than 1,000 tools and 755,000 parts harvested for reuse.

To build on these benefits and drive increased focus and coordination, we are taking an integrated approach across our supply chain groups (Materials and Equipment Sourcing, Logistics, and Resale) to building a common set of circular economy performance metrics. These efforts support our RISE waste to landfill and circular economy goals.



In 2022 we upcycled 112,000 tons, or approximately 67%, of our manufacturing waste.



Sustainable Packaging

Intel has long worked to design packaging with a focus on reducing unfavorable material, increasing material efficiency, optimizing for recovery and recycling, prioritizing recycled content, and sourcing responsible materials. Working with suppliers, we developed a reusable precision thermoform tray for incoming material and for finished goods shipping to customers and eliminated piece part trays that were historically sent to landfill. The mass of the thermoform tray is 50% less than an industry injection molded tray and made of a more recyclable material (PET). Its closed pocket eliminates non-recyclable covers that were previously used to prevent product contamination in typical industry trays. We worked to include post-consumer recycled material in the thermoform trays so that nearly half of the tray is non-virgin material. Since 2009, we conservatively estimate that we have eliminated over 22,600 metric tons of plastic material through these initiatives. To drive further progress, we have set two 2025 sustainable packaging targets: First, over 95% of the materials used in our new product packaging designs, by weight, will be recyclable or reusable; as of the end of 2022, we were exceeding this goal, at 96%. Second, 100% of the virgin wood fiber used in current and new Intel-designed corrugated fiberboard packaging will be from a certified, responsibly managed source.

Sustainable Chemistry

Sustainable chemistry seeks to improve the efficiency with which natural resources are used to meet human needs for chemical products and services. It encompasses the design, manufacture, and use of efficient, effective, safe, and more environmentally benign chemical products and processes and stimulates the design and discovery of more benign chemicals, production processes, and product stewardship practices that will provide increased performance and value while protecting and enhancing human health and the environment.¹

The Chemical Footprint Methodology is a key component of our RISE Sustainable Chemistry technology industry initiative. In 2021, we developed the methodology to quantify our baseline and measure progress against our chemical footprint. In 2022, we tested this methodology across multiple classes of chemistry and Intel manufacturing technologies. This work included an initial version of a chemical footprint visualization tool to highlight the equipment and processes in Intel's semiconductor manufacturing that use the most chemistry and to compare technologies. We are now refining our methodology to account for increased global chemical regulatory priorities, business continuity, and other key focus areas. The Chemical Footprint Methodology will help quantify impacts of material or technology replacements. Initial case studies have driven robust discussions both internally and externally with suppliers.

Our Chemical Footprint Methodology recognizes the impact of Intel's operations, supply chain, and waste disposal programs. By accounting for impacts from all three areas, we can have a more well-rounded picture of the projects that will have the most impact and reduced total cost of ownership. While working to establish the

Chemical Footprint Methodology for Intel operations, we are also working to integrate the key concepts from the methodology into the chemical supply chain to enable better assessment of full lifecycle impact.

In 2022, we initiated the development of a Supplier Sustainability Scorecard (S3) that we expect will be used to establish environmental sustainability expectations within our supply chain, account for the positive work our supply chain is already doing, and identify possible collaboration opportunities between suppliers and Intel. We also established baseline supplier expectations in water, waste, energy, air, and chemical management and reviewed select suppliers' performance against those metrics. In 2023, we will pilot a comprehensive S3 program to help monitor progress over time. This program expands on our existing program to perform alternative assessments on our high-volume chemistries prior to proposing them to Intel. The S3 program further investigates the hazard types, toxicological data, and actions suppliers are taking to propose alternative materials and investigate alternative technologies.

Waste treatment and disposal are key components of the chemical footprint. By recycling or upcycling wastes, less material needs to be disposed of and less raw material needs to be obtained. In 2022, several components of waste streams were identified as possible sources for upcycling. These case studies can be used as sources of data to establish the relationship among waste hierarchy, chemical footprint, and total cost of ownership. For more information, see "[Waste and Circular Economy Solutions](#)" earlier in this section.



Chemical Footprint Methodology

Manufacturing Chemical Footprint =

**Mass of
Chemical Used**



Weighting Factors*

*(reputation impact X expectation of regulation X
human health factors X environmental impact X
climate impact)

¹Source: [OECD Sustainable Chemistry](#).



We engage in dialogue within the semiconductor industry and other industries as part of external chemical management initiatives, looking to leverage best practices and encourage further action on establishing footprinting methodologies. We intend to continue to collaborate in these areas, seeking best-known methods and working to improve the overall semiconductor ecosystem.

For instance, Intel is an active member of the [Clean Electronics Production Network \(CEPN\)](#), whose mission is to understand, address, and eliminate workers' exposure to toxic chemicals in the electronics supply chain. We support CEPN's principle to work toward zero exposure of workers to specific priority chemicals.

We control exposure to all chemicals and continue to implement efforts to ensure the supply chain is doing the same. Intel is an active participant in the [Responsible Business Alliance \(RBA\) Chemical Management Work Group](#), which works to increase awareness of safe chemical use and disposal through policies, risk assessments, and training. The RBA has helped CEPN scale initiatives to its broader membership, including the adoption of a policy on management of an Industry Focus Process Chemical List that has been incorporated into the standard RBA audit processes for Intel and its supply chain.

We also focus on the reduction, elimination, and substitution of specific chemicals. We have required full material disclosures from our suppliers for all chemicals used in our manufacturing operations for many years. This knowledge allows us to perform detailed risk assessments and directly address specific chemistries and processes to ensure safe use and disposal, and to proactively address global chemical regulations and initiate elimination of certain chemicals of concern. In 2021 and 2022, we released two policies in our internal operations and our supply chain that specify no new uses of n-methyl pyrrolidone (NMP) and per- and polyfluoroalkyl substances (PFAS). Innovation in academia, our supply chain, and at Intel will be needed to tackle minimization or replacement of these and other chemistries of concern. To address these concerns for the PFAS class of chemicals, Intel helped found and lead the [Semiconductor Industry Association PFAS Consortium](#), a group of more than 40 semiconductor manufacturers and suppliers collaborating to address this challenge. We believe our work with the consortium is leading the way for investigation, risk assessments, and alternative assessments for PFAS across multiple portions of the semiconductor manufacturing ecosystem. We set expectations for our suppliers on our [supplier portal](#), including a recommended list of chemicals to avoid, and work with our manufacturing chemical suppliers to perform alternative assessments. We are committed to efforts for alternative assessments and chemical replacements and invite others to join us in the effort.

Achieving Carbon-Neutral Computing

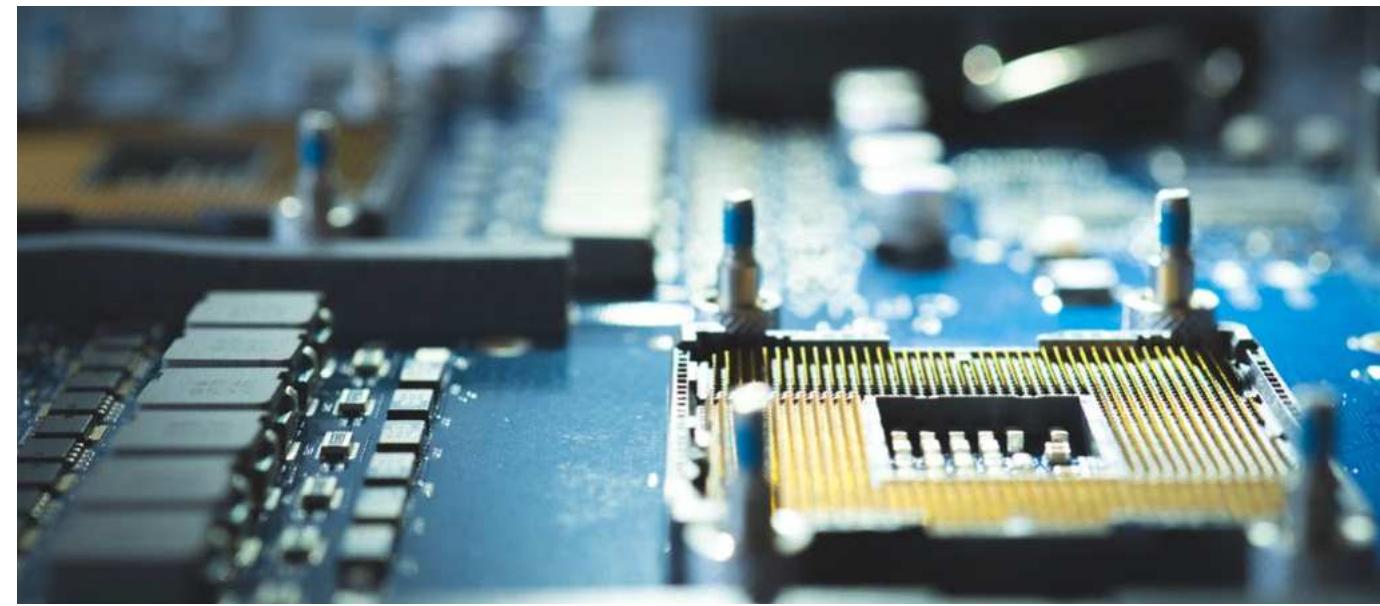
As we continue to take actions to reduce Intel's own global manufacturing and supply chain climate footprint and to advance product energy efficiency, we have also taken on the global challenge to collaborate with the technology industry and other stakeholders to achieve carbon-neutral computing. In addition, Intel [announced plans](#) in 2022 to achieve net-zero greenhouse gas emissions in its global operations by 2040.

Conceptually, carbon-neutral computing is achieved when the positive benefits of the ICT sector "handprint"—the ways in which technology is applied to reduce climate impact across the economy—equals or exceeds the climate and energy "footprint" of product-related emissions and carbon embedded in technology systems.

Our global challenge framework includes collaborating with others to accelerate the sustainability of PCs, improve the energy efficiency of data centers, and accelerate handprint solutions to reduce emissions across high-impact industries such as utilities, oil and gas, and manufacturing.

Collaborating on Sustainable PC Design

In 2022, Intel set a goal to achieve a 30% reduction in the reference system design carbon footprint by year 2030. These reference systems are used in collaboration with ODMs and OEMs to further reduce the carbon footprint in systems that end users purchase. In 2022, three advanced enabling platforms (AEPs), were created to be [EPEAT Gold-Ready](#)¹ by targeting key areas across the product lifecycle: sustainability in component and materials selection during manufacturing, high energy efficiency during operation, and modular design to enhance repairability. Additional engineering accomplishments include:



- For the thin and light Premium Intel® Evo™ laptop category, we created reference designs that reduced the motherboard footprint, included carefully selected system ingredients ensuring conflict-free minerals, and achieved energy-efficiency improvement through heterogeneous power delivery and a high-efficiency battery charger.
- Enhancements for the 13th Gen Intel® Core™ HX mobile gaming reference designs included printed circuit board miniaturization, system power optimization, better modularity, and Energy Star 8.0 compliance. The system was also designed to reduce waste by reusing the system connector, cable, and adapter from previous programs.
- For the mini-desktop category, we worked with [iFixit](#) to design and assess the repairability of the reference design supporting [Intel 13th Gen Core HX-series](#) processors.

Intel vPro® Platforms and Sustainability

As more and more companies modernize their equipment and operations, e-waste is a growing concern. According to the International Waste Electrical and Electronic Equipment (WEEE) Forum, e-waste will grow to 74 million tons a year by 2030. Less than 20% is properly recycled. Historically, security concerns led many IT managers to destroy storage drives or devices instead of repurposing or reselling them. With this in mind, Intel is investing in developing tools to help IT managers avoid unnecessary e-waste when assets need to be retired. Select systems powered by Intel vPro® technology include an Intel® Remote Platform Erase feature that is designed to securely wipe user data from the entire device, including solid-state drives and BIOS.

¹The [Global Electronics Council](#) manages the EPEAT ecolabel, a free resource for procurement professionals to identify and select more sustainable products. Gold-Ready indicates that we achieved the required plus 75% of optional targets for the items relevant for a reference design.

Intel® Evo™ Platforms

For an OEM to use the Intel Evo logo for laptops, certain requirements must be met. These include capability, quality, and sustainability metrics, and a careful balance of performance and energy utilization. Innovative design and high-efficiency components attached to Intel system-on-chips (SOCs) allow Intel Evo laptops to deliver lower embodied energy, longer battery life, and more friendly materials. EPEAT and [TCO](#) incentives in 2022 and 2023 also led to more than 30% of Intel Evo laptops being certified by these entities. We aim to increase the percent of systems that achieve EPEAT label and TCO certification in 2024.

Enabling Customers to Achieve Platform Carbon-Neutral Goals

Our flagship product line for sustainable small form-factor PCs, Intel® NUC (next unit of computing), is embarking on a strategic commitment to extend the life of the product generation over generation. In early 2023, Intel NUC launched an extended warranty pilot program to extend coverage on an already industry-leading three-year warranty. In addition, NUC has kicked off a multiphase program focused on empowering customers to create, repair, or personalize their systems to meet their needs through access to genuine replacement parts for their devices. In addition, NUC retail packaging is up to 100% recyclable, and 40% of NUC 12 mini-PCs use up to 75% recycled plastics (by weight).



Platform Energy Reduction

Advances in Europe toward active energy management highlight the importance of considering active energy consumption for both mobile and desktop computers. Accordingly, Intel is focused on optimization opportunities. Initial analysis shows strong opportunities for energy management for video conferencing, web browsing, software, and some peripherals. Focused efforts in the second half 2022 yielded approximately 500MW (approximately 10%) of power savings on a key browsing workload.² Further planned optimizations are in process for platforms based on the 13th Generation Intel Core processor. In addition, with [Intel® Dynamic Tuning Technology](#)—which directly improves power efficiency via built-in AI technology—OEMs can integrate their sustainability innovations, thereby allowing further differentiation. Power savings of up to 20% have already been achieved for some video conferencing scenarios.²

Reducing the Carbon Impact of Data Centers and the Network

Cloud computing technologies enabled by data center deployments are the infrastructure powering our increasingly digital world, and continue to play a vital role in the post-COVID-19 economic recovery. Intel CPUs and reference platforms with generational advancements in performance and energy efficiency form the backbone of digital infrastructure. Looking into the future, we anticipate similar cooperation and innovation with our ecosystem peers as key to mitigating the energy, water, and carbon footprints from data center growth and their impact on local economies and resources. In parallel, innovation and creativity in harnessing waste heat and gray water reuse provide opportunities for sustainable growth. In line with these trends, over the last year, we have fostered a number of technology and ecosystem initiatives to achieve our carbon-neutral computing vision.

² Intel internal measurement.

Accelerating Energy-Efficient Computing. We have delivered double-digit performance-per-watt efficiency in our data center CPU products over the past 15 years. To keep up with the exponential growth in data fueled by AI, 5G, and cloud computing, we designed a number of built-in accelerators in our [4th Gen Intel® Xeon® processors](#) that have improved the performance-per-watt of data center and network workloads such as AI, analytics, database, and crypto processing by an [average of 2.9 times](#). Example deployments include optimizations for both public cloud and telecommunications networks. To make energy savings a click away, we designed an [Optimized Power Mode](#), which decreases energy consumption by up to 20% with minimal impact to performance. Our innovations not only drive [step function performance](#) improvements, but the generational energy efficiencies enable and deliver new business opportunities for all.

Managing Data Center and Network Energy Consumption.

The primary source of emissions in the use phase is from electricity used to power data centers and networks. One of the ways Intel processors enable reduction of electricity use is through AI-based telemetry, which intelligently monitors and controls electricity in the data center and throughout the network. [Intel Xeon Scalable](#) processors incorporate telemetry capabilities to enable significant energy savings at scale. New [Intel Infrastructure Power Manager](#) reference software delivers power savings while maintaining key telco performance metrics by dynamically matching CPU power consumption to traffic. Tests based on SK Telecom's 24-hour traffic profiles delivered power savings of up to 55%. To make it easier for enterprises to intelligently manage their infrastructure, we released a new version of our [Intel Data Center Manager](#), a widely deployed software tool with added power and carbon tracking capabilities.

Measurement Best Practices

Measurements and standardized metrics are foundational to driving efficiency and carbon-neutral computing across the industry. Power usage effectiveness (PUE), a metric that measures the effectiveness of delivering energy to IT equipment at a facility, has plateaued over the past decade. While there is still headroom for more PUE improvement, the next decade of efficiency must come from understanding energy use of the equipment itself. Our efforts with industry consortia like [The Green Grid](#) and the [Open Compute Project](#) (OCP) support this goal to modernize the PUE. To effectively measure compute energy efficiency, new benchmarks are required that reflect actual workloads of the cloud today vs. decades-old, single-node, CPU-centric benchmarks that cannot represent these emerging cloud use cases and industry trends. At the Intel Innovation 2022 event—along with academic and industry leaders like MIT, Microsoft, and Alibaba—we invited the ecosystem to collaboratively develop a real-world, system-level [benchmarking framework](#) for modern workloads running on distributed infrastructure in the SPEC Cloud committee at SPEC.org. Finally, through our engagement with the [Semiconductor Climate Consortium](#) and [MIT PAIA](#) efforts, Intel is actively contributing to evolving next-generation silicon and system-level carbon measurement tools.

Reduce, Reuse, and Recycle With Circular Economy Principles

Intel engaged with industry peers at the OCP on sustainability as a new tenet, gaining significant momentum last year. The role of responsible energy and water usage for cooling has gained increasing focus in data center operations. With OCP, Intel is enabling breakthroughs in the cooling ecosystem with materials compatibility



Cooling pipes at an Intel data center in Hillsboro, Oregon.

technical specifications and reference designs to [scale liquid and immersion cooling technologies](#). This has the potential to significantly reduce water and energy use in data centers. The OCP Circularity working group has published guidelines with the aim of sharing and educating member companies on circularity principles. While the supply chain disruptions in recent years are making circularity a business imperative in many sectors, practical implementations of these principles in the data center sector are rare. A key first stage toward circular parts is modularity, whereby a common building block design with verifiable interfaces is used and reused to manufacture multiple products. In this space, Intel led the development and official release of the [server DC-MHS spec](#) with OCP peers, customers, or organizations last year. With multiple reference designs for various form factors to choose from, we have demonstrated taking a vision to reality by collaborating with [Jabil](#).

Green Software

The role of software in decarbonization across industries and around the world is largely untapped. Last year Intel joined the Green Software Foundation to help build an ecosystem of standards and best practices centered on software engineering. Highlights of this nascent effort included our sponsorship of a carbon-aware hackathon to accelerate the number of carbon-aware applications and use cases in the world and launch of the [State of Green Software survey](#). Building on these best practices, through the [Intel Granulate](#) software-as-a-service offering, Intel is enabling companies to optimize cloud workloads to improve application performance and efficiency. Fewer resources are wasted and businesses can downsize their fleet size, saving cost and energy—all while tracking their carbon reduction from Granulate’s optimizations in real time.

Expanding the Technology "Handprint"

Digital solutions hold the potential of reducing global emissions by up to 20%, according to the World Economic Forum. The energy sector, which is estimated to be responsible for almost 75% of emissions globally, is poised to benefit from “handprint” technology. Economy wide, the [International Energy Agency \(IEA\)](#) foresees a major role for this sector, where deep structural changes are already underway to meet the IEA Net-Zero emissions scenario of more than 60% renewables by 2030.



To meet rapidly approaching global, regional, and local sustainability goals, energy producers and providers are racing to implement energy transition solutions that help ease the shift from existing infrastructure to a more flexible, secure, and intelligent model that can handle variability in energy sources and power demand. Intel's [Energy Center of Excellence](#) has been showcasing solutions and proofs of concept for smart-grid modernization with utilities and organizations around the world, such as Enedis in France, Southern California Edison and Salt River Project in the US, and Tenaga National Berhad in Malaysia. Intel technology including edge analytics is foundational to energy services delivery platforms, including distributed energy resource management systems (renewable), the EV charging infrastructure, and green data centers. Intel-based software-defined substations, including Virtual Protection Relay and a Common Substation Platform, help utilities integrate renewable energy. Solutions are available now from Dell/VMWare and ABB. Enedis, one of France's largest power grid operators, recently announced it was upgrading 800,000 substations with solutions that provide real-time access control across its network using Intel processors.

Integrated energy solutions that enable energy consumers to achieve their decarbonization, resiliency, and sustainability goals are seeing new business models emerge. Intel's market-ready solution created with [Spirae Wave](#) enables energy service providers to offer tailored energy-as-a-service packages. Intel FPGAs are used in smart metering gateways and bi-directional DC chargers. Through increased digitalization, net-zero transformations can be accelerated by decarbonization of industrial transportation sectors.

Industry Coalition Building

Grid digitalization is a new paradigm of adaptive, resilient, secure, and intelligent grid control, enabling operators to manage increasingly bi-directional and dynamic power systems. To address industry challenges, Intel convened an ecosystem of technology leaders, early adopter utilities, and innovative organizations and created coalitions to advance software-defined technologies and virtualized versions of standard solutions. Two coalition examples are the [Virtual Protection Automation and Control Alliance](#) (vPAC) and [Edge for Smart Secondary Sub-Station Alliance](#) (E4S). These alliances call for standards that are more flexible, manageable, and interoperable. Using these standards, industry participants can build out the adaptive, intelligent tools and algorithms needed for the grid of the future. Intel's efforts with vPAC include more than 10 proof-of-concept projects underway at leading utilities around the globe, including substation points of control with AEP Energy and National Grid.

Intel has also signed on to the Houston Energy Transition Initiative, which aims to jumpstart and scale the emerging carbon-reduction sector; attract and support companies in new energy industries, including wind energy, solar power, and biofuels; and deploy cross-cutting initiatives to attract and grow companies in additional energy value chains, including energy-efficiency technologies.

The new energy economy is the product of a virtuous cycle of recent policy actions, technology innovations, and new business models lowering costs for end users. Intel plans to continue innovating in the low carbon energy space for society to reap the handprint benefits of technology.

Enabling

We continue to make progress in engaging with co-travelers and industry collaborators to achieve the broad, societal impact to which we aspire. We remain committed to creating a better world through the power of our technology, and our employees' expertise and passion remain a key driving force in this process. We also believe that the health of our company and the communities where we operate depends on an increasingly inclusive community of innovators prepared for the jobs of the future. Acting on Intel and the Intel Foundation's vision, "Empowering human potential. Igniting positive change," we are challenging ourselves to do even more. Our mission is to empower youth and communities with the skills and confidence to rise, advance, and excel by bringing people, collaborations, and technology together.

This year's highlights

1,010,000 volunteer hours

Over the years, Intel employees have donated millions of hours of service to schools and nonprofit organizations. In 2022, our employees and retirees found ways to continue to support local communities by volunteering close to 1,010,000 hours globally.

\$70 million committed to social impact tech

Through the Intel RISE Technology Initiative (IRTI), we have cumulatively committed approximately \$70 million since 2020 to some 335 projects in 33 countries, addressing health and life sciences, education, economic recovery, social equity and human rights, accessibility, and sustainability.

\$793 million in Intel Foundation contributions

Since its founding in 1988, the Intel Foundation has enabled positive social impact for our local communities and for underserved populations through more than \$793 million in funding of programs and STEM initiatives.



Enabling: Our Approach

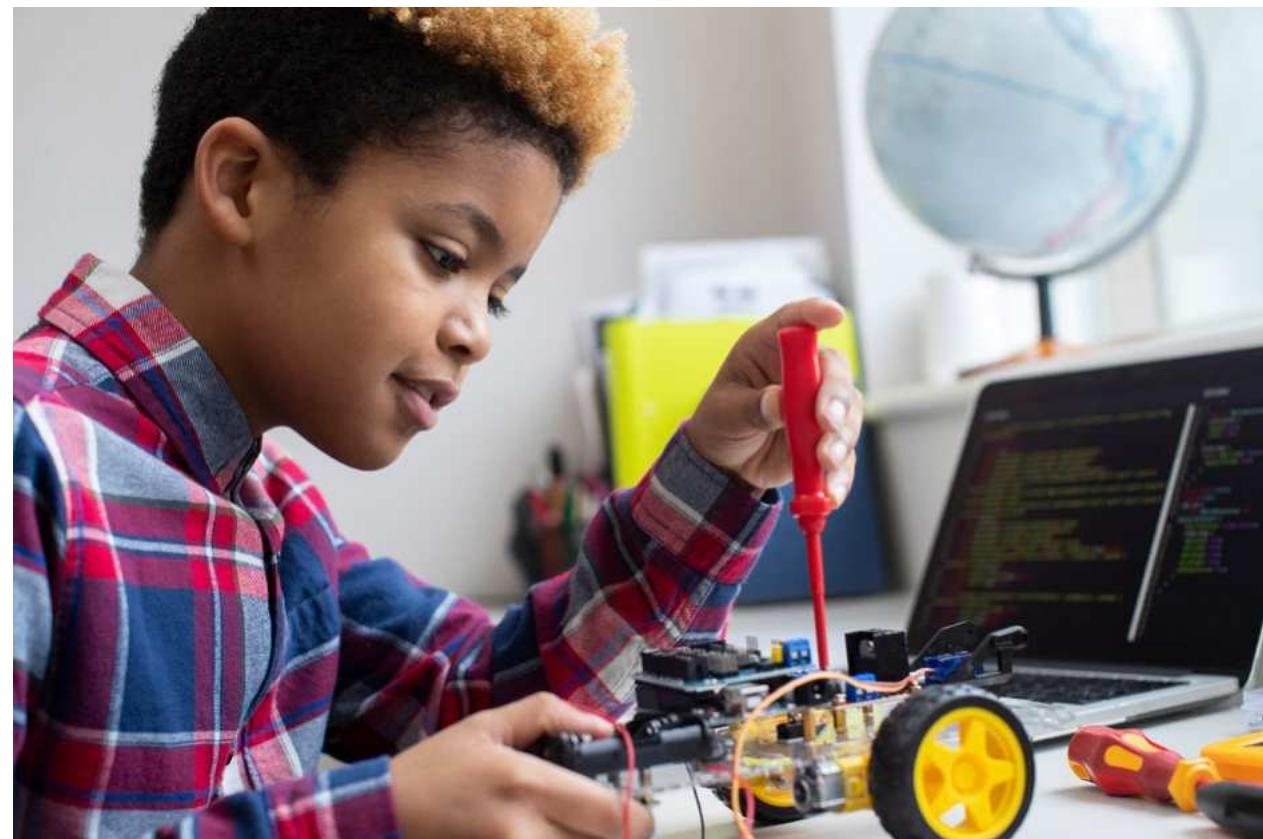
Our employees' expertise, dedication to making lives better in their communities, and passion for solving global challenges through application of Intel® technology are critical to the achievement of our RISE goals. We have long cultivated a culture aimed at enabling and strongly encouraging employees to be involved in their communities, and they have donated millions of volunteer hours. To continue this tradition of impact, we aim to donate an additional 10 million hours of volunteer service between 2020 and 2030, and to increase the impact of our skills-based volunteering.

To catalyze action and amplify the impact of our employees' service and generosity, Intel and the Intel Foundation invest in matching programs and innovative collaborations. In turn, our investments and support of local communities help us build trust with external stakeholders and realize our corporate purpose of enriching lives through technology.

As an innovation leader, Intel is well-positioned to share its technology expertise and solutions with communities, customers, governments, non-governmental organizations (NGOs), and educators to help them reach their own goals and effect broader change. We aspire to drive collective impact through our Intel RISE Technology Initiative in collaboration with our customers and other stakeholders, and to explore innovative ways to apply technology to solve global challenges.

In an increasingly high-tech world, empowering communities worldwide with digital readiness is critical to our future. In three years, we reached 25 countries, more than 13,000 institutions, and 3 million people globally through the Intel® Digital Readiness Programs.

Our programs empower non-technical audiences and next-generation technologists with the skills, trust, and tools to use artificial intelligence (AI) impactfully. This global, shared-value initiative to demystify and democratize AI is growing rapidly.



We're on track to help 30 million people by 2030 learn skills for current and future jobs by collaborating with 30 governments and 30,000 institutions, civil society, and industry stakeholders.

Employees Changing the World

Intel's corporate purpose is to create world-changing technology that improves the life of every person on the planet. Intel's goal is to make technology fully inclusive and expand digital readiness for all and to empower all of our employees to take action to advance Intel's RISE strategy and goals. Intel and the Intel Foundation invest in programs aimed at creating opportunities for employees around the world to learn and connect with each other, to further integrate corporate responsibility and sustainability into their teams' work objectives, and to share their engineering and other skills with our communities. Our RISE goals are an integral part of the measurement of our annual performance goals for all employees, including our Executive Leadership Team.

Intel Involved and Skills-Based Volunteering

In 2022, we continued to empower our employees to give back through Intel Involved, our global corporate employee volunteer program. Since the program's launch in 1995, our employees have generously donated their skills, technology expertise, and more than 20.6 million hours of service to tackle environmental challenges, improve education, and help meet community needs around the world.

Through Intel Involved, we identify and organize service projects for individuals and teams. Our employees reported close to 1,010,000 volunteer hours globally in

\$135.3 Million. Total matching grants for employee volunteer service through Intel Involved since the program's inception in 1995.



2022 in support of schools and nonprofit organizations in our communities. The Intel Foundation amplifies the impact of volunteerism by donating cash to eligible nonprofits and schools where Intel employees and US retirees donate at least 20 hours of service in a year. In 2022, the Foundation provided \$6.5 million in volunteer matching grants.

The Intel Employee Service Corps (IESC), Intel's flagship skills-based volunteer program, harnesses the passion and expertise of Intel employees to drive positive social impact in communities around the world. IESC provides employees with short-term immersive and collaborative experiences working with governments and non-governmental organizations (NGOs) to address local and global challenges, including disaster relief. When the pandemic impacted our long-standing, in-person delivery model, we pivoted the program quickly to meet the urgent needs of our communities, implementing a virtual delivery platform to enable volunteers to deliver [Intel® Future Skills](#) STEAM summer programs for hundreds of middle and high school youth around the world.

Sharing Valuable Skills

Intel is actively driving STEM training for girls in India through various diversity and inclusion programs such as [BeingWISE](#), an industry-wide initiative to accelerate women's participation in the workforce. Programs include building competencies in both technical skills and workplace interactions. Intel India employees worked with [Learning Links Foundation](#) for this program in collaboration with engineering colleges in Karnataka, and some 3,967 girls have participated in the program to date. Also in 2022, Intel India volunteers supported a hackathon and an interactive panel session for more than 600 girls.

2022 Volunteerism by the Numbers

20.5%	Percentage of employees who volunteered
CLOSE TO 1,010,000	Number of hours
\$30.6 M	Estimated in-kind value of volunteer hours ¹
\$6.5 M	Total dollars matched by the Intel Foundation for Intel Involved volunteer hours ²

¹Based on the 2022 Value of Volunteer Time rate of \$29.95 per hour published by Independent Sector.

² Volunteer payments made in 2022 are for 2021 hours. Payments are processed once the year closes.



Making a Difference in Local Communities

Our employees passionately work to address challenges and disparities in the communities where they live and work. Here are a few examples from 2022:

In celebration of Earth Day and in support of Intel's commitment to sustainability, more than 800 Intel volunteers across the US participated in community cleanups with local nonprofits. Volunteers in Costa Rica also completed a reforestation project, and in Mexico, employees helped clean up an open space and supported conservation efforts by covering the exposed ground with shredded wood and plants.

To encourage more women to consider careers in technology, volunteers in Vietnam participated in a 12-week mentoring program aimed at preparing more than 100 students to participate in the global [Technovation Challenge](#). This challenge, geared toward encouraging girls to engage with STEM, asks students to look at their communities and identify ways that technology could be used to help solve problems.

Volunteers in Israel collaborated with the city of Petach Tikva, residents, and athletes to design and build an "extended reality" dome to create an immersive learning experience for students in the community. The project, which combines virtual and augmented reality technology, seeks to reinforce social-emotional resilience and inquiry-driven learning among local youth.

2030 Goal: Community Impact

Description. Deliver 10 million volunteer hours to improve our local communities, including an increase in skills-based volunteerism.

Baseline. Progress measured from baseline of Jan. 1, 2020.

Progress in 2022. During 2022, our employees donated close to 1,010,000 hours of service in our local communities.

Looking Ahead. In 2023, our target is to reach 1 million more volunteer hours and to continue to expand our skills-based volunteering activities.



Intel Foundation: Rising to the Future

The Intel Foundation seeks to lift people and communities around the globe—to reach those we haven't reached before, to expand STEAM education into new communities, and empower women, girls, and people of color. Over the past 34 years the [Intel Foundation](#) has given nearly \$793 million to communities worldwide.

The Intel Foundation strives to empower human potential and ignite positive change, creating opportunities that impact the future and advance gender and racial equity and social justice globally. By empowering youth and communities with the skills and confidence to advance and excel, the Foundation aims to bring people, organizations, and technology together for a greater good.

The Foundation collaborates with nonprofit, public and private organizations, and schools to create and deploy global solutions by contributing thought leadership and financial resources to innovative programs that support underserved populations.

The Foundation's priorities include:

Amplifying employees' time and generosity: The Foundation connects employees' and US retirees' passions to philanthropy to take on global challenges and meet community needs through matching funds to schools and nonprofit organizations where our employees and US retirees volunteer and make donations.

Promoting STEM education: Recognizing the life-changing power of technology and learning, the Foundation champions immersive STEM experiences to help ensure that the next generation of innovators is diverse and inclusive.

Responding to humanitarian crises and natural disasters: When humanitarian crises or natural disasters strike, the Foundation may offer matches to employees'

donations to support communities and provides options for employees to make their donations count where and when they are needed most to achieve long-term impact.

The Foundation continues to collaborate with the STEM Next Opportunity Fund on the [Million Girls Moonshot](#) to engage more girls in STEM. To learn more, see "[Making Technology Fully Inclusive and Expanding Digital Readiness](#)" in the Inclusive section of this report.

Humanitarian Crisis and Natural Disaster Relief

In 2022, the Foundation supported organizations responding to an increased number of humanitarian crises and natural disasters, including wildfires, floods, winter storms, tornadoes, earthquakes, hurricanes, volcanos, and more. Through the Intel Foundation Humanitarian Crises and Disaster Relief program, 12 campaigns raised nearly \$2.66 million in donations and matches to aid recovery across eight countries. The Foundation launched an employee donation campaign in response to the humanitarian crisis in Ukraine, and collaborated with nonprofits to bring mobile communication centers to help refugees reach their loved ones and handle important documentation, and provide on-demand learning centers for displaced youth.

■■■ It is heartening to see both the generosity of Intel employees and also the global approach of the Intel Foundation. It makes me proud to work here. ■■■

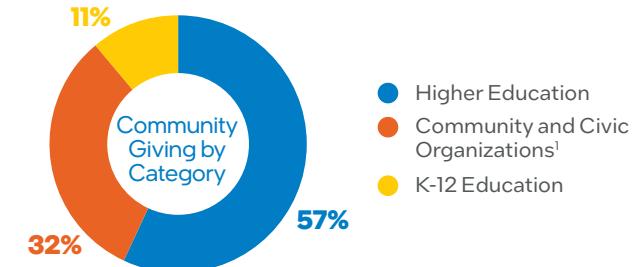
—Intel employee, following the donation of \$220,000 in employee donations and Foundation match to provide flood relief in Pakistan

Foundation and Corporate Giving

2022 Contributions (in millions)

Forms of Giving	US	International	Total
Corporate Cash	\$46.9	\$12.8	\$59.7
Foundation			
Foundation Grants	\$2.7	\$0.5	\$3.2
Donation Matching	\$16.7	\$6.0	\$22.7
Volunteer Matching	\$4.0	\$3.0	\$7.0
In-Kind Giving	\$1.3	\$0.4	\$1.7
Total	\$71.5	\$22.7	\$94.2

In 2022, charitable giving by Intel and the Intel Foundation totaled approximately \$94.2 million, compared with \$76.0 million in 2021.



As part of our social impact strategy, we work with a broad range of nonprofit and education organizations, including providing grants and other in-kind support. For all of our contributions, we maintain control and review processes to track contributions and ensure alignment with Intel's values and strategy. Recipients of grants from Intel and the Intel Foundation are required to verify compliance with Intel's non-discrimination policy. In 2022, examples of funded organizations receiving significant grants in each of our giving categories included: Higher Ed (University of California at Berkeley, National Science Foundation), K-12 Education (STEM Next Opportunity Fund, Nirmal Hriday Educational Society), and Community and Civic Organizations (Geeks Without Frontiers, Anna Unna Charitable Trust).

¹ Includes organizations focused on addressing community needs, disaster relief, diversity and inclusion, environmental impact, arts and culture, and other civic-related activities.

Collaborating for Technology Impact

To solve global challenges, we are changing the ways we work with customers, external organizations, and employees. Below are examples of collaborations that focus on our RISE goals and strategic growth areas.

Inspiring Sustainability Solutions

Non-native grasses in desert landscapes are a major contributor to wildfires around the world, resulting in destruction of land and impacts to wildlife and people. For several years, an Intel employee has been leading a team of global volunteers to leverage technology to address the issue. Working with the [McDowell Sonoran Conservancy](#) in Arizona, drone technology is being used to capture images of the desert landscape. Volunteers are building an AI model to analyze the images and identify precisely where the invasive grasses are. Conservancy staff and volunteers are then able to treat and remove the plants, saving hundreds of hours of time previously spent locating the grasses.

Intel® AI Global Impact Festival 2022

The Intel® AI Global Impact Festival is an annual Digital Readiness celebration for next-generation technologists and teachers, as well as academia, ecosystem, and government agencies to showcase AI innovation and impact. With the 2022 theme of "Enriching Lives with AI Innovation," we celebrated the success of impactful AI innovation by students, teachers, governments, and organizations worldwide at the [Intel AI Global Impact Festival 2022](#). With almost 150 projects from 25 countries, our second AI Global Impact Festival highlighted the value of AI innovation and application to real-life problems by next-generation technologists.

Responsible AI for Youth 2022

In collaboration with the government of India, we launched Responsible AI for Youth 2022 as a national AI skills program, aiming to reach a million students in the first year. The program builds AI readiness by empowering young people with an appropriate tech mindset, relevant skills, and access to required tools.



In addition, Intel India and the National e-Governance Division, Ministry of Electronics and Information Technology launched "Youth for Unnati and Vikas with AI." The program aims to enable students with AI skills in an inclusive manner through hands-on learning and mentorship opportunities.



Primary Healthcare for Vulnerable Populations

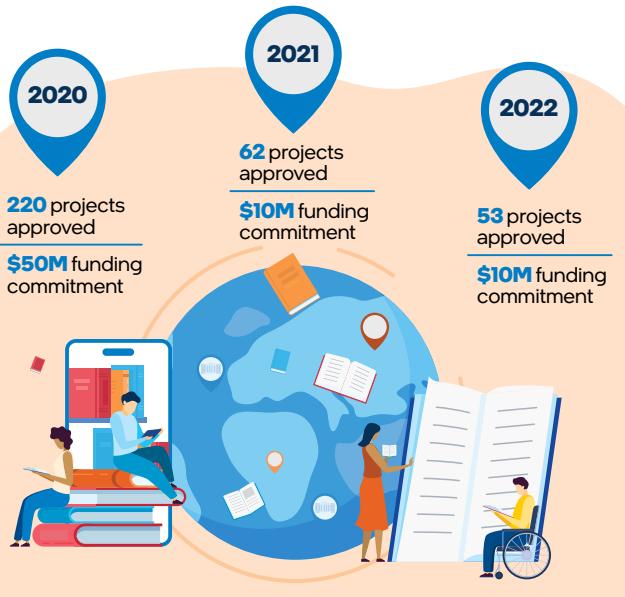
An Intel project helped bring accessible, affordable healthcare to vulnerable households in the Bengaluru area of Karnataka, India. Health check-ups conducted across 30 villages screened some 13,000 people for conditions such as diabetes and hypertension. As a result, hundreds are now receiving appropriate medical treatments. The project also created financial independence for more than 15 local women who were trained as frontline healthcare workers and are now recognized as champions for healthcare in their communities.



IRTI: Activating Tech as a Force for Good

In 2020, as a response to the COVID-19 pandemic, we launched our Pandemic Response Technology Initiative (PRTI), a \$50 million commitment to support essential workers, hard-hit businesses, and students of all ages with Intel-funded technology projects. Through PRTI, Intel collaborated with more than 170 organizations on over 230 projects in multiple sectors. In 2021, we expanded the scope of the PRTI to include additional program areas and renamed it the Intel RISE Technology Initiative (IRTI). With IRTI, we are building deeper relationships with our customers and other organizations in line with our corporate purpose and goal to create shared value. In the years since, the IRTI has evolved into a broad, purpose-driven platform for action. Among the many lessons learned over the past years is that technology is essential and can be a force for good.

Through IRTI, Intel has driven substantial impact, investing across six focus areas that align with the Intel RISE pillars: accessibility; economic recovery; education; health and life sciences; social equity and human rights; and sustainability and climate.



Cumulatively to date, Intel has committed approximately \$70 million to IRTI initiatives, funding some 335 projects in 33 countries across the globe. Intel's comprehensive portfolio is used in many of the projects to solve unique challenges that plague individuals and organizations globally. Intel experts drive the success of IRTI projects, and we work with organizations to identify issues and provide unique technology solutions to some of the world's most complex challenges. Some of the most compelling projects funded by IRTI support diverse communities and strengthen our goal to support social equity and innovation. Below are examples of IRTI projects that have been executed in the last year.

Accessibility: Using 3D Printing for Hearing Aids.

Nearly 80% of people with disabling hearing loss¹ live in low- and middle-income countries. Intel, [3DP4ME, and Accenture joined forces](#) to pilot a solution with Syrian refugees in Jordan. 3D printing allows for quick prototyping and easier customization—an essential requirement for hearing aids. Initially, a pilot used state-of-the-art 3D scanning, CAD design, and AI hosted on Intel infrastructure to model, print, and fit hearing aids for 50 children. The goal is to expand the solution, ultimately providing 12,000 hearing aids to this population.

Education/Economic Recovery: Online Learning

Enables Resiliency After Floods. In June 2021, severe flooding closed schools and disrupted transport links in western Germany. Through IRTI, Synaxon, JustAsk!, and Intel provided relief to teachers and schools in Germany, with a focus on remote learning and digital skills.

Health and Life Sciences: Fighting Cataract Blindness.

According to the International Agency for the Prevention of Blindness, more than 100 million people are blind or visually impaired due to untreated cataracts. Many cases of cataract blindness can be cured through surgery, but there is a shortage of providers who can perform these surgeries, particularly in resource-scarce settings. In

2022, Intel collaborated with HelpMeSee to use virtual reality to create instructor-led, simulation-based training to train cataract specialists at scale.

Social Equity and Human Rights: Digital Access for the Next 50%. Intel formed an alliance with other Fortune 500 companies, NGOs, and academia—including Dell Technologies, World Wide Technology, IBM, Softbank, AWS, T-Mobile, and African Mobile Networks—to build the [N50 Project](#). N50, part of IRTI, aims to bring access to affordable digital content, applications, and services to the next 3.9 billion people, providing health, social, and financial benefits to marginalized communities. In 2022, the effort scaled to 113 collaborating stakeholders working with 50 initiatives, with six global programs launched. Through one N50 initiative, Intel and associates are supporting the resettlement of young Afghan women in Arizona through scholarships, grant funding, donated laptops, multi-lingual tutoring, and mentoring. In another N50 project, the Intel Foundation is providing funding to Geeks Without Frontiers to build [10 solar-powered communication centers in areas neighboring Ukraine](#). The centers aim to alleviate communication and information challenges for millions of refugees.

Sustainability and Climate: Environmental Monitoring.

Organizations around the world are on a journey to reduce their environmental footprints. Real-time automated environmental footprint reporting systems can support and automate this process. Intel collaborated with Axians to create solutions focused on energy and water consumption, waste management, and project forecasting to analyze, plan, and manage environmental impacts in real time. The "GreenEdge" solution uses Intel's Edge Gateway, Edge Vision with OpenVINO™ toolkit, Intel® NUC, and Intel® Xeon® processors for database analytics, supporting legislative efforts to reduce climate impacts and helping organizations achieve their environmental targets.

¹Source: [WHO: Deafness and Hearing Loss](#).

Appendix

This section includes:

About This Report

Independent Limited Assurance Statement

RISE Goals Progress

Performance Data Summary

SASB and TCFD Framework Alignment

UN Sustainable Development Goals

Non-GAAP Financial Measures

2022 Water Inventory by Location and Source

2022 Scope 1 and Scope 2 Greenhouse Gas Inventory by Location

2022 Environmental, Health, and Safety Violations

Top 100 Production and Service Suppliers

Acronym Index

Forward Looking Statement



About This Report

We prepared this report in accordance with the [Global Reporting Initiative \(GRI\)](#) Standards. A GRI Content Index is provided on our [Report Builder](#) website. We also use other recognized frameworks to inform the content of this report, including the Sustainability Accounting Standards Board Standards, the Task Force on Climate-Related Financial Disclosures framework, the UN Global Compact, and the UN Sustainable Development Goals.

We continue to integrate sustainability information into our investor communications, and additional information about Intel's operations and financial statements is available in the [2022 Intel Annual Report on Form 10-K](#). The Our Business section of this report covers content recommended by the [International Integrated Reporting Council](#) for inclusion in "integrated reports," and can be downloaded as a standalone document or read as an interactive part of our full 2022-23 Corporate Responsibility Report.

For a high-level overview of Intel's corporate responsibility, supporting documents and data, past reports, and to customize a report with the sections you choose, visit our [Corporate Responsibility](#) and [Report Builder](#) websites. A printed summary of the report is available by request. You can also use our [web-based feedback form](#) or the [CSR@Intel](#) blog to contact our Corporate Responsibility team.

For best viewing results on a PC or tablet, we recommend using [Adobe Acrobat DC](#) or [QuickTime](#). For best printing results, use letter-size paper.

Report Scope and Profile

With the Intel 2022-23 Corporate Responsibility Report, we aim to provide stakeholders with a balanced view of our corporate responsibility strategy and performance for Intel's worldwide operations during fiscal year 2022 (ended December 31, 2022). Our previous report was published in May 2022.

References to "Intel" throughout this report pertain to Intel Corporation. The Intel Foundation is a separate entity. The report does not include performance information for Intel's joint ventures or firms included in the investment portfolio of Intel Capital, Intel's global investment organization, unless specified. Financial data is presented in US dollars.

This year's report does not reflect any significant changes in reporting scope compared to our previous report. Principles and policies apply to all officers and employees of Intel and its subsidiaries, unless otherwise noted.

Key performance indicators cover our global manufacturing operations, including our wafer manufacturing and assembly and test facilities. Unless stated otherwise, 2022 data is considered final based on information received by May 1, 2023, and provided that information reproduced or derived from the [2022 Intel Annual Report on Form 10-K](#) speaks as of January 27, 2023, the date we submitted our Form 10-K for filing.

Approach to Report Assurance

The information in this Corporate Responsibility Report is subject to internal reviews and, for selected content, external reviews. On a regular basis, we validate the management systems and processes used to collect the data. We have maintained a multi-site ISO 14001 certification for our manufacturing locations since 2001, which requires independent third-party audits at many of our sites each year. In 2019, we established a company-wide certification to ISO 45001, an internationally recognized standard for environmental, health, and safety management systems, which requires independent third-party audits at our manufacturing sites. Our Corporate Energy Management System is designed to follow the ISO 50001 Energy Management Standard; to date, we have received third-party ISO 50001 accreditation for 6 of our manufacturing sites.¹ Our operations in Ireland are covered by the European Union Emissions Trading Scheme.

For many years, we have obtained third-party verification for our greenhouse gas (GHG) emissions, renewable electricity, energy, and water metrics. Since 2012, we have completed third-party assurance for selected indicators contained in our Corporate Responsibility Report. For the 2022-23 Corporate Responsibility Report, we engaged Apex Companies LLC to complete the assurance review. Their report is included in this Appendix.

¹ The number of sites that have received ISO 50001 accreditation was updated May 31, 2023.

Independent Limited Assurance Statement

For a PDF copy of this statement, including a summary of data within the scope of assurance for 2022, access the [Report Builder](#) website.

INDEPENDENT LIMITED ASSURANCE STATEMENT



To: The Stakeholders of Intel Corporation

Introduction and Objectives of Work

Apex Companies, LLC (Apex) has been engaged by Intel Corporation (Intel) to provide limited assurance of its selected environmental, safety, supplier, and diversity data. This assurance statement applies to the related information included within the scope of work described below (Subject Matter).

This information and its presentation in Intel's 2022 Corporate Responsibility Report ('the Report') are the sole responsibility of the management of Intel. Apex was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on the accuracy of the Subject Matter. This is the fifth year in which we have provided assurance over Intel's Corporate Responsibility Report.

Scope of Work

The scope of our work was limited to assurance over the following environmental, safety, supplier, and diversity data included within Intel's 2022 Corporate Responsibility Report ('the Report') for the period of calendar year 2022 (the 'Subject Matter'):

- Global Greenhouse Gas Emissions (Scope 1, Scope 2 location-based and market-based, and Scope 3, Category 3 – Fuel and Energy-Related Activities)
- Adjustment of CY2018, CY2019, CY2020, and CY2021 Greenhouse Gas Emissions (Scope 1, Scope 2 market-based and location-based)
- Renewable Energy Percentage
- Energy Use
- Water Withdrawal (fresh water and reclaimed water)
- Water Conservation
- Energy Conservation
- Number of Responsible Business Alliance (RBA) Validated Audit Program (VAP) supplier audits conducted
- Priority/Major Findings by Category for RBA VAP supplier audits
- Recordable Injury and Illness Rate
- Cumulative Trauma Disorder (CTD) Cases as Percent of Total Cases
- Percent of Underrepresented Minorities in Senior Leadership (Hispanics, African Americans, and Native Americans in U.S. only)
- Percent of Women in Senior Leadership (Global)
- Global Employee Turnover Rate
- Volunteer hours
- Charitable contributions (methodology)
- Supplier Diversity Spend

Our assurance does not extend to any other information included in the Report.

Reporting Boundaries

The following are the boundaries used by Intel for reporting sustainability data:

- Operational Control
- For GHG Emissions - all manufacturing sites and all non-manufacturing sites with air permits
- For Water and Energy - all manufacturing and technology development (TD) sites, non-manufacturing sites where Intel has operational control that have either $\geq 2,000$ employees or $< 2,000$ employees that consume or generate an amount that is material to the global inventory.

*Material is defined by Intel as any site $\geq 1\%$ of the global total for that metric/inventory

Note: Manufacturing sites include wafer fabs, assembly test (ATM), technology development (TD), and mask operations

Reporting Criteria

The Subject Matter needs to be read and understood together with the description of the Subject Matter in the Report. The reporting criteria for greenhouse gas (GHG) emissions was the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. The reporting criteria for the safety data was the OSHA and US Bureau of Labor Standards. The reporting criteria for supplier audits was the RBA Code of Conduct. The reporting criteria for other data is based on company criteria, as described in the CR Report.

Limitations and Exclusions

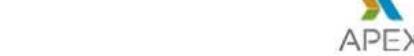
Excluded from the scope of our work is any assurance of information relating to:

- Text or other written statements associated with Intel's 2022 Report
- Activities outside the defined assurance period of Calendar Year 2022, with the exception of restated GHG emissions

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Apex Companies, LLC | 800.321.2239 | www.apexc.com

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This limited assurance engagement relies on a risk-based selected sample of sustainability data and the associated limitations that this entails. This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.

Responsibilities

This preparation and presentation of the Subject Matter in the Report are the sole responsibility of the management of Intel. Apex was not involved in the drafting of the Subject Matter or of the Reporting Criteria. Our responsibilities were to:

- obtain limited assurance about whether the Subject Matter has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- report our conclusions to the management of Intel.

Assessment Standards

We performed our work in accordance with Apex's standard procedures and guidelines for external Assurance of Sustainability Reports and International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015), issued by the International Auditing and Assurance Standards Board. GHG emissions were verified in accordance with ISO 14064-3: Second edition 2019-04: *Greenhouse gases – Part 3: Specification with Guidance for the Verification and Validation of Greenhouse Gas Statements*. A materiality threshold of $\pm 5\%$ percent was set for the assurance process.

Summary of Work Performed

As part of our independent assurance, our work included:

1. Assessing the appropriateness of the Reporting Criteria for the Subject Matter;
2. Conducting interviews with relevant Intel personnel regarding data collection and reporting systems;
3. Reviewing the data collection and consolidation processes used to compile Subject Matter, including assessing assumptions made, and the data scope and reporting boundaries;
4. Reviewing documentary evidence provided by Intel;
5. Agreeing a selection of the Subject Matter to the corresponding source documentation;
6. Reviewing Intel systems for quantitative data aggregation and analysis; and
7. Assessing the disclosure and presentation of the Subject Matter to ensure consistency with assured information.

Conclusion

On the basis of our methodology and the activities described above:

- Nothing has come to our attention to indicate that the Subject Matter is not fairly stated in all material respects; and
- It is our opinion that Intel has established appropriate systems for the collection, aggregation and analysis of quantitative data within the scope of this assurance.

A summary of data within the scope of assurance for 2022 is attached.

Statement of Independence, Integrity and Competence

Apex is an independent professional services company that specializes in Health, Safety, Social and Environmental management services including assurance with over 30 years history in providing these services.

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

No member of the assurance team has a business relationship with Intel, its Directors or Managers beyond that required of this assignment. We have conducted this assurance independently, and there has been no conflict of interest.

The assurance team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has over 20 years combined experience in this field and an excellent understanding of Apex's standard methodology for the assurance of greenhouse gas emissions data.

Mary E. Armstrong-Friberg, Lead Verifier
ESG Program Manager
Apex Companies, LLC
Cleveland, Ohio

John Rohde, Technical Reviewer
Senior Program Manager
Apex Companies, LLC
Lakewood, Colorado

May 1, 2023

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RISE Goals Progress

This table outlines our 2030 product, operations, and supply chain goals and 2040 net-zero greenhouse gas emissions goal, including progress made in 2022. These commitments are designed to raise the bar for ourselves and to deliver greater value to our customers by helping them reach their corporate responsibility goals. Click on each heading to learn more.

2030 Goal	Progress in 2022
Responsible	
Employee Health, Safety, and Wellness. Ensure that more than 90% of our employees believe that Intel has a strong safety culture and that 50% participate in our global wellness program.	87% of surveyed employees agreed with our “safety is a value” metrics. 90% of employees had access to the Intel® Vitality Program, and 38% of those employees participated in wellness programs.
Supply Chain Human Rights. Scale our supplier responsibility programs to ensure respect for human rights across 100% of our contracted suppliers and all high-risk-identified suppliers in the supply chain. ¹	We reached 28% of verified contracted suppliers, and remain on track to reach 100% in 2030. Additionally, we included 31 lower tier suppliers in our audits in 2022.
Inclusive	
Workforce Inclusion. <ul style="list-style-type: none"> Double the number of women and underrepresented minorities in senior leadership roles.² Exceed 40% representation of women in technical positions. Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce.³ 	We ended 2022 with 1,646 women in senior leadership roles, surpassing our milestone goal of 1,500. Women senior leadership representation reached 18.9%, up 0.2% from 18.7% in 2021. 24.7% of technical roles were held by women in technical positions, an increase from 24.3% at the end of 2021. Though we saw an increase of our global women senior leadership representation, we lost progress on our global executive women representation from 20.7% in 2021 to 18.9% in 2022. We made good progress in our representation of US URM senior leaders, which increased 14.9% from 444 in 2021 to 510 in 2022. 4.9% of Intel’s US workforce self-identified as having a disability as of December 2022, up from 3.8% in December 2021, a year-over-year increase of 1.1%.
Supplier Diversity. Increase global annual spending with diverse suppliers ⁴ by 100% to reach \$2 billion in annual spending by 2030.	In 2022, we achieved \$2.2 billion annual spending with diverse suppliers. In addition, we met two milestones to spend \$800 million annually with minority-owned suppliers globally by the end of 2023, including \$250 million with US Black-owned suppliers, and we are on track to meet a third milestone to spend \$500 million annually with women-owned suppliers outside the US by the end of 2025.*
Sustainable	
Climate and Energy. <ul style="list-style-type: none"> Achieve 100% renewable electricity. Conserve 4 billion kWh of electricity. Build new factories and facilities to US Green Building Council green building standards. Achieve a 10% reduction in our absolute Scope 1 and 2 GHG emissions. Increase product energy efficiency 10X for Intel client and server microprocessors to reduce our Scope 3 emissions. New goals set in 2022: <ul style="list-style-type: none"> Achieve net-zero Scope 1 and 2 GHG emissions by 2040. Reduce the carbon footprint of platform reference designs for future client form factors by 30% or more by 2030. Reduce Scope 3 GHG supply chain emissions by 30% from what they would be in the absence of action. 	<p>In 2022, we used 93% renewable electricity globally and completed projects that conserved ~160 million kWh of electricity. We have conserved a cumulative total of ~970 million kWh of electricity since the baseline date. We have achieved LEED® green building certification for more than 18.5 million square feet of space in 53 buildings, including our new Gdansk, Poland research lab facility, which received LEED® Platinum certification.</p> <p>Our absolute Scope 1 and 2 greenhouse gas (GHG) emissions decreased 4% from our 2019 baseline.</p> <p>We are on track and ahead on our goals to increase product energy efficiency 10X for client and server microprocessors, respectively, by 2030.</p>

* Correction to progress in 2022 updated on May 17, 2023.

2030 RISE Goals Progress, continued

2030 Goal	Progress in 2022
Sustainable	
Net Positive Water. Achieve net positive water by conserving 60 billion gallons of water and funding external water restoration projects.	During 2022, we conserved 9.6 billion gallons of water and conserved 26 billion gallons cumulatively from the 2020 baseline. Intel-funded projects restored 3.0 billion gallons of water during 2022 and 6.5 billion gallons cumulatively from the 2020 baseline, to our watersheds. This resulted in returning and restoring 107% ⁶ (by volume) of our fresh water withdrawals.
Zero Waste⁵/Circular Economy. Achieve zero waste to landfill and implement circular economy strategies for at least 60% of our manufacturing waste streams, in collaboration with our suppliers.	We sent 6.4% waste to landfill and upcycled 67% of our manufacturing waste through circular economy solutions in collaboration with our suppliers.
Enabling	
Community Impact. Deliver 10 million volunteer hours to improve our local communities, including an increase in skills-based volunteerism.	During 2022, our employees and retirees donated close to 1,010,000 hours of service in our local communities.

¹Contracted suppliers are subject to formal agreements with Intel based on the products and services provided and spends (approximately 1,500 at the beginning of 2021). In 2023, this goal language was updated to reflect Intel's continued commitment to human rights for all high-risk identified suppliers—not solely those noted as tier 1 and tier 2—in our supply chain.

²In 2023, we updated this goal language to "Achieve 25% representation of women in senior leadership roles" and "Achieve 12% representation of URMIs in US senior leadership roles." With a focus on percentages rather than absolute numbers, the updated goal language reflects our commitment to industry best practices and helps ensure that we continue to advance our workforce representation. For transparency, we will continue to report progress to goals using both percentages and absolute numbers.

³In 2023, we updated the goal language to "Achieve 10% representation of employees with a disability in our global workforce by 2030."

⁴We recognize diverse suppliers as businesses that are 51% owned and operated by at least one of the following: women; minorities as defined by the country or region where the business was established; veterans/service-disabled veterans; persons who are lesbian, gay, bisexual, or transgender; or persons who are disabled. While Intel recognizes these categories, they may vary by country in accordance with local law.

⁵Intel defines zero waste as less than 1% sent to landfill.

⁶Net positive water % represents the total volume of fresh water returned and restored globally. Some locations have returned and restored significantly more than their targets, resulting in a global total greater than 100%. Net positive water is achieved when each region reaches its specific target. Refer to [2022 Water Inventory by Location and Source](#) in the Appendix for net positive water progress by region.

Technology Industry Initiatives

Building on the foundation of our product, operations, and supply chain goals, we will work with the technology ecosystem to accelerate improvements across our industry. We know that we can go faster and be more effective working together. Click on the headers below for more details on our initiatives and progress.

Responsible	Inclusive	Sustainable
<p>Responsible minerals. Expand our efforts beyond conflict minerals¹ to cover all minerals used in semiconductor manufacturing and apply the learnings to lead our industry in creating new sourcing standards.</p> <p>In 2021, we sent our first expanded minerals survey for aluminum, copper, nickel, and silver to suppliers contributing these materials in our Intel-manufactured microprocessors. In 2022, lead and zinc were added to our survey as we continued this important step of mapping our supply chains for our highest priority minerals. Although sourcing of these minerals is not yet widely reported, we received a response from 83% of relevant suppliers. Additionally, we continue to collaborate with industry associations to ensure standards are in place to enable our ultimate goal of responsible sourcing for all the minerals in our supply chain. We will continue to identify the highest priority minerals in pursuit of our RISE goals.</p> <p>Responsible mobility. Collaborate with our industry and ecosystem organizations to advance the adoption of technology-neutral safety standards to reduce traffic accidents globally.</p> <p>Intel's Mobileye business is a global leader in driving assistance and self-driving solutions. The company's product portfolio employs a broad set of technologies, covering computer vision and machine learning-based sensing, data analysis, for advanced driver assistance systems and automated vehicles. Mobileye's Responsibility-Sensitive Safety (RSS) has become a leading model for global automated vehicle safety frameworks. Numerous standards bodies are beginning to include RSS in standards development activities and regulators and policymakers are looking at RSS as a tool for defining what it means for an automated vehicle to drive "safely."</p>	<p>Inclusion Index. Drive full inclusion and accessibility across the technology industry by creating and implementing an inclusive leader certification program and a Global Inclusion Index with common metrics to advance progress.</p> <p>In 2021, we launched the Alliance for Global Inclusion, a coalition focused on creating an inclusion index and working to collectively advance progress in four critical areas: leadership representation, inclusive language, inclusive product development, and STEM readiness in under-resourced communities. Since its formal launch in 2021, the Alliance has tripled in size, from five to 15 members, and has made meaningful progress on creating an Inclusion Index to serve as a benchmark for companies to track diversity and inclusion improvements, provide information on current best practices, and highlight opportunities to improve outcomes across industries. In 2022, the CEOs of the Alliance members shared two additional commitments to contribute to the collective impact: 100% of CEO staff are to obtain inclusive leadership development training by 2025 and 5%+ employees are to be hired from nontraditional pathways by 2030.</p> <p>Inclusive pipeline. Expand the inclusive pipeline of talent for our industry through innovative global education initiatives and STEM programs for girls and underrepresented groups.</p> <p>Building a diverse and inclusive workforce and industry requires continued collective investments and innovative approaches to increasing the diversity of the talent pipeline and expanding access to the education resources needed to pursue careers in our field. In 2022, we continued a number of programs and collaborations with customers, governments, and other stakeholders to bridge the gender gap in STEM fields, including Intel Foundation investments in the Million Girls Moonshot, which aims to collectively engage 1 million girls through innovative, high-quality STEM/STEAM capacity across the US. We also delivered \$1 million in grants to six historically Black colleges or universities (HBCUs), and renewed our \$250,000 investment in Georgia Tech's Center for Engineering Education and Diversity program, which provides STEM pathways for women and underrepresented minorities.</p>	<p>Sustainable manufacturing. Create a collective approach to reducing emissions for the semiconductor manufacturing industry and increase the use of technology to reduce climate impact in global manufacturing.</p> <p>Our goal to achieve net-zero Scope 1 and 2 GHG emissions by 2040 is based on a climate science approach to reach net zero 10 years earlier than 2050, but due to our (and our industry's) early emissions reductions and demand growth for semiconductors, it remains challenging to gain formal approval for a target under the existing methodology of the Science-Based Targets Initiative (SBTi). In 2022, we continued to work with industry stakeholders to assess the potential for the development of a sector-specific approach to setting science-based GHG emissions-reduction targets for the semiconductor manufacturing industry. The goal is to expand the number of companies in our sector that set approved SBTi targets.</p> <p>Sustainable chemistry. Enable greener and circular chemistry strategies across the technology industry value chain by transforming chemical footprint methodology. Lead the way in Green Chemistry with our Chemical Footprint methodology to lower Intel's impact and provide a lower total cost of ownership. Launch a cross-industry R&D initiative to identify greener chemicals with lower global warming potential and to develop new abatement equipment.</p> <p>In 2022, Intel continued efforts to refine the chemical footprint methodology for use in evaluation of the chemical supply chain. Based on initial learnings from data visualization and comparison case studies across chemicals and technologies, further refinement of the methodology is needed to better account for global chemical regulatory priorities, business continuity, and other factors. This improved chemical footprint methodology will help define sustainable chemistry priorities for 2023 and beyond. Intel also initiated a framework for a Supplier Sustainability Scorecard that will be used to collaborate with our supply chain to monitor existing supplier sustainability programs and encourage further progress and account for footprint reductions through alternative material/technologies.</p>

¹ Conflict minerals, as defined by the US Securities and Exchange Commission (SEC), is a broad term that means tin, tantalum, tungsten, and gold (3TG), regardless of whether these minerals finance conflict in the Democratic Republic of the Congo (DRC) or adjoining countries.

2030 Global Challenges

We have identified three ambitious global challenges where we believe we can best leverage our manufacturing expertise, unique position within the technology ecosystem, and wide range of technology to bring others together to accelerate action to save and enrich lives. These include health and safety, inclusion and social equity, and climate change. Click on the headers below for more details on our approach and progress.

Responsible	Inclusive	Sustainable
<p>Revolutionize how technology will improve health and safety</p> <p>We will apply our expertise, resources, and technology to enable others to harness the power of technology to improve health, safety, and wellness—including in the areas of healthcare and life sciences, manufacturing, and transportation.</p> <p>In 2022, we progressed on our global challenge to apply technology to advance healthcare and safety on multiple fronts. Included were a joint research project aimed at improving brain tumor detection, a collaboration aimed at enabling organizations combating modern slavery to share sensitive data with enhanced privacy protections, and a collaboration that resulted in the development of a portable network-in-a-box base station for emergency responders working in remote regions in Taiwan.</p>	<p>Make technology fully inclusive and expand digital readiness</p> <p>We will advance inclusion and accessibility for millions of people who currently do not have the technology skills or resources needed to equitably access educational, economic, and community resources in our increasingly digital economy.</p> <p>We aim to improve accessibility experiences each year on new key client computing platforms with augmented features, capabilities, collaborations, or services designed together with people with disabilities. In 2022, we launched the 13th Gen Intel® Core™ processor family, which includes new features that enhance PC-to-device connectivity for one-click device pairing. In 2023, these features will include direct compatibility between Bluetooth hearing aids and the PC. By 2030, we aim to have all Intel user experience teams practicing inclusive design and research. In 2022, we established a baseline of 21% adoption rate of inclusive practices among user experience designers and researchers at Intel. Finally, we are committed to expanding digital readiness by collaborating with 30 country governments and 30,000 institutions worldwide to empower more than 30 million people with AI skills for current and future jobs by 2030. As of year-end 2022, Intel had collaborated with 27 country governments with more than 50 public-private collaborations, enabled 23,000 institutions, and trained more than 4 million people.</p>	<p>Achieve carbon neutral computing to address climate change</p> <p>While we continue to reduce our own global manufacturing climate footprint, we will also take actions with others to collectively expand the technology “handprint”—transforming product energy use and design and applying technology to reduce computing-related climate impacts across the rest of the global economy.</p> <p>In 2022, we announced our intent to achieve a 30% reduction in the reference system design carbon footprint by the year 2030. In data center, we designed our 4th Gen Intel Xeon processors to improve the performance per watt of select data center and network loads an average of 2.9 times. In 2022, Intel joined the Green Software Foundation and expanded our “handprint” through Intel’s Energy Center of Excellence.</p>

Enabling



Performance Data Summary

Report Section	2022	2021	2020	2019	2018
Our Business and Financial Results					
Net revenue (dollars in billions)	\$63.1	\$79.0	\$77.9	\$72.0	\$70.8
Net income (dollars in billions)	\$8.0	\$19.9	\$20.9	\$21.0	\$21.1
Provision for taxes (dollars in billions)	-\$0.2	\$1.8	\$4.2	\$3.0	\$2.3
Research and development spending (dollars in billions)	\$17.5	\$15.2	\$13.6	\$13.4	\$13.5
Capital investments (dollars in billions)	\$24.8	\$18.7	\$14.3	\$16.2	\$15.2
Employees at year end (in thousands)	131.9	121.1	110.6	110.8	107.4
Safety – recordable rate ¹ /days away case rate ¹	0.90/0.22	0.93/0.20	0.75/0.16	0.69/0.14	0.72/0.14
Environmental Sustainability					
Greenhouse gas emissions (million metric tons of CO ₂ equivalent) ²	1.54	1.54	1.36	1.61	1.60
Renewable electricity purchased (% of global electricity use)	93%	80%	82%	71%	71%
Energy use (billion kWh—includes electricity, gas, and diesel)	10.9	11.6	10.6	9.6	8.3
Total water withdrawn (billions of gallons) ³	10.9	14.3	13.8	12.6	12.0
Net positive water ⁴ (water returned + restored) progress	107%	99%	90%	90%	86%
Total waste generated (thousand short tons)/% to landfill	311/6%	344/5%	414/5%	387/3%	205/7%
Supply Chain Responsibility					
On-site supplier audits (third-party and Intel-led audits)	270	157	126	207	221
Diversity and Inclusion					
Percentage of women in our global workforce	28%	28%	28%	28%	27%
Percentage of women on our Board (%) ⁵	33%	30%	30%	20%	20%
Social Impact					
Employee and retiree volunteer hours (in millions)/volunteerism rate	1.0/20%	0.85/20%	0.91/20%	1.2/39%	1.5/64%
Worldwide charitable giving (dollars in millions) ⁶	\$94.2	\$76.0	\$80.4	\$75.1	\$84.2

¹ Rate based on 100 employees working full time for one year; data is as of March 2023.

² Including Scope 1 and Scope 2 market-based method.

³ We define water withdrawals, or water usage, as total incoming fresh water used.

⁴ Net positive water % represents the total volume of fresh water returned and restored globally. Some locations have returned and restored significantly more than their target, resulting in a global total greater than 100%. Net positive water is achieved when each region reaches their specific target. Refer to [2022 Water Inventory by Location and Source](#) in the Appendix for net positive water progress by region.

⁵ Note that if all of the director nominees are elected at our 2023 Annual Stockholder Meeting, 33% of our directors will have self-identified as women.

⁶ Includes total giving (cash and in-kind) from Intel Corporation and the Intel Foundation.

SASB and TCFD Framework Alignment

Based on feedback gathered during our integrated investor outreach activities, we have aligned our disclosure with two additional frameworks: the Sustainability Accounting Standards Board Standards (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). Below is a mapping of how our latest disclosure aligns with these frameworks.

SASB. SASB has developed voluntary industry-specific disclosure standards for sustainability issues in order to facilitate communication by companies to investors of decision-useful information. Below, we have outlined how our existing disclosure aligns with the recommended metrics for the SASB Technology and Communications Sector – Semiconductor Standard. The SASB Standards became a resource of the IFRS Foundation as of August 1, 2022, upon the consolidation of the Value Reporting Foundation (which housed the SASB Standards and the Integrated Reporting Framework) into the IFRS Foundation.

Topic	Accounting Metrics	Code	Intel Metric or Qualitative Disclosure	Disclosure Location ¹
Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	TC-SC-110a.1	(1) 1.19 million metric tons CO ₂ e (2) 481,000 metric tons CO ₂ e	2022-23 Corporate Responsibility Report, p 71 CDP Climate Change Survey
Greenhouse Gas Emissions	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	TC-SC-110a.2	We discuss our strategy and long history of goal setting and reductions. We have also avoided 80% of our cumulative Scope 1 and 2 GHG over the last decade.	2022-23 Corporate Responsibility Report, p 71 2022 Intel Annual Report on Form 10-K , p 15 2023 Proxy Statement , p 22 CDP Climate Change Survey
Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity, and (3) percentage renewable	TC-SC-130a.1	(1) 39.1 million gigajoules electricity consumed (2) 82% grid electricity (3) 93% renewable electricity globally.	2022-23 Corporate Responsibility Report, p 69 and p 73
Water Management	(1) Total water withdrawn and (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	TC-SC-140a.1	(1) 41.4 million m ³ withdrawn (2) 10.0 million m ³ consumed. See Appendix for detail on water metrics by location, including information on baseline water stress by location.	2022-23 Corporate Responsibility Report, p 76 , p 107-108 2022 Intel Annual Report on Form 10-K , p 17, 18 2023 Proxy Statement , p 52
Waste Management	(1) Amount of hazardous waste from manufacturing, (2) percentage recycled	TC-SC-150a.1	(1) 117,000 metric tons (2) 85% recycled.	2022-23 Corporate Responsibility Report, p 78-79 Report Data File on Report Builder website
Employee Health & Safety	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	TC-SC-320a.1	We disclose our strategy for employee health, safety, and wellness, including our company-wide certification to ISO 45001.	2022-23 Corporate Responsibility Report, p 38

¹ The “Intel Metric or Qualitative Disclosure” column references the specific disclosure(s) included in the 2022-23 Corporate Responsibility Report and therefore may vary from the breadth and context of disclosure(s) included in the 2022 Intel Annual Report on Form 10-K and 2023 Proxy Statement, if applicable.

SASB and TCFD Framework Alignment, continued

Topic	Accounting Metrics	Code	Intel Metric or Qualitative Disclosure	Disclosure Location ¹
Employee Health & Safety	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	TC-SC-320a.2	While we do not disclose this information, we do report on Environmental, Health, and Safety Violations and subsequent corrective actions.	2022-23 Corporate Responsibility Report, p 38-40
Recruiting & Managing a Global & Skilled Workforce	Percentage of employees that are: (1) foreign nationals and (2) located offshore	TC-SC-330a.1	We do not disclose the first metric as we do not believe a single percentage of foreign nationals is a useful metric for our business given our global business model, but we do disclose a breakdown of our workforce by region (47% of employees in the US and 53% outside of the US). We disclose additional human capital metrics that we believe are more effective for assessing this aspect of our performance, including diversity and inclusion, employee engagement, training and development, and responsible supply chain metrics.	2022-23 Corporate Responsibility Report, p 19-21 , p 24 , and p 32-34 2022 Intel Annual Report on Form 10-K , p 16, p 19 2023 Proxy Statement , p 23, 132
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	TC-SC-410a.1	While we do disclose information on our strategy and approach to product ecology and supplier requirements for declarable substances, we do not believe a single percentage of revenue is an effective metric for evaluating risk and performance in this area.	2022-23 Corporate Responsibility Report, p 13 , p 33 , and p 67 Material Declaration Data Sheet (MDDS) database website
Product Lifecycle Management	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	TC-SC-410a.2	We do not disclose single percentages for these product categories, given the wide range of products we produce in each category and the continued release of new products. We believe more decision-useful information is our disclosure regarding our overall strategy for product energy efficiency, supporting goals, industry collaborations, and public policy engagements.	2022-23 Corporate Responsibility Report, p 13-16 and p 74-75
Materials Sourcing	Description of the management of risks associated with the use of critical materials	TC-SC-440a.1	We provide disclosure on our management approach to responsible minerals sourcing. With respect to rare earth elements, Intel has thoroughly reviewed product and supply chain impacts and determined that although certain regional supplies may fluctuate, Intel has sufficient existing supply, alternative sourcing, and/or low risk material availability within our manufacturing and supply chain. Intel has confirmed that access to rare earth mineral supplies represents a low risk to impact production or delivery of goods.	2022-23 Corporate Responsibility Report, p 32-34 and p 42-43 SEC Conflict Minerals Filing Intel Statement on Rare Earth
IP Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	TC-SC-520a.1	Information on legal proceedings is disclosed in our Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q, available on our Investor Relations website.	2022 Intel Annual Report on Form 10-K , p 43, p 63-64, p 93, p 112 Investor Relations website

¹ The “Intel Metric or Qualitative Disclosure” column references the specific disclosure(s) included in the 2022-23 Corporate Responsibility Report and therefore may vary from the breadth and context of disclosure(s) included in the 2022 Intel Annual Report on Form 10-K and 2023 Proxy Statement, if applicable.

SASB and TCFD Framework Alignment, continued

TCFD. TCFD has developed a voluntary framework for use by companies to provide information to investors, lenders, insurers, and other stakeholders on climate-related financial risk disclosure. Below, we have outlined how our existing reporting aligns with the recommended disclosure. We will continue to evaluate opportunities to evolve our disclosure moving forward based on discussions with our investors and stakeholders.

Disclosure Area	TCFD Recommended Disclosure	Intel Metric or Qualitative Disclosure	Disclosure Location
Governance	Disclose the organization's governance around climate-related risks and opportunities.	<p>Responsibility for oversight of corporate social responsibility issues, including climate change, has been included in the Corporate Governance and Nominating Committee Charter since 2003.</p> <p>Intel follows an integrated approach to addressing climate change with multiple teams responsible for managing climate-related activities, initiatives, and policies, including manufacturing and operations, government and public affairs, supply chain, and product teams. Strategies, progress toward goals, and regulatory developments are reviewed with senior executives from these teams on a regular basis.</p>	<p>2022-23 Corporate Responsibility Report, p 9, and p 23-24</p> <p>2023 Proxy Statement, p 22, p 42, p 44, and p 48</p> <p>CDP Climate Change Survey</p>
Strategy	Disclosure of the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	We describe our climate-related risks and opportunities in our Corporate Responsibility Report (in the "Our Business" and "Climate and Energy" sections), the Intel Climate Change Policy Statement, and the risk-factors section of our Annual Report on Form 10-K. We focus on reducing our own direct climate "footprint"—the emissions resulting from our own operations, our supply chain, and the marketing and use of our products. We also focus on increasing our "handprint"—the ways in which Intel® technologies help others reduce their footprints. In addition, we collaborate with others to drive industry-wide improvements and policy change. For more than two decades, we have set aggressive greenhouse gas (GHG) reduction goals to conserve energy and reduce emissions. As a result of these actions, we have avoided 80% of our cumulative Scope 1 and 2 GHG emissions over the last decade. In 2022, subject matter experts from multiple business groups collaborated to further drive the integration of climate change considerations into our processes for assessing risks and opportunities and to conduct a climate change scenario analysis. Additionally, we plan to publish a formal Climate Transition Action Plan in 2023.	<p>2022-23 Corporate Responsibility Report, p 69</p> <p>2023 Proxy Statement, p 42 and p 48</p> <p>2022 Intel Annual Report on Form 10-K, p 59 and p 62</p> <p>Intel Climate Change Policy</p> <p>CDP Climate Change Survey</p>
Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks.	Our overall approach to risk management is described in our Proxy Statement and our risk factors are described in our Annual Report on Form 10-K. Additional detail on our proactive efforts to reduce our climate change impacts is included in our Corporate Responsibility Report, primarily in the Climate and Energy section as well as our CDP Climate Change report. This includes detail regarding our investments in renewable electricity, energy conservation, and product energy efficiency. For example, in 2022, we continued our 100% renewable electricity commitment for our US, Europe, Israel and Malaysia, and are approaching 100% in Costa Rica, bringing the global total to 93% globally. We also conserved ~160 million kWh of electricity in 2022. We also describe our proactive engagements with policymakers on climate and energy issues in our Corporate Responsibility Report and the Intel Climate Change Policy. We proactively engage with our stakeholders to understand impacts of both potential regulatory requirements and also changing expectations of stakeholders, including our investors, customers, and local communities.	<p>2022-23 Corporate Responsibility Report, p 23, p 27, and p 69</p> <p>2022 Intel Annual Report on Form 10-K, p 17</p> <p>2023 Proxy Statement, p 22, p 88</p> <p>Intel Climate Change Policy</p> <p>CDP Climate Change Survey</p>
Metrics and Targets	Disclosure of the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Our public climate-related metrics, goals and targets, as well as our Scope 1, 2, and 3 GHG emissions data are included in our annual Corporate Responsibility Report and also reported through the CDP Climate Change report.	<p>2022-23 Corporate Responsibility Report, p 69-73</p> <p>CDP Climate Change Survey</p>

UN Sustainable Development Goals



The [UN Sustainable Development Goals \(SDGs\)](#) are aimed at stimulating action in areas of critical importance for humanity and the planet. We believe that the achievement of the SDGs will be critical to creating a life of dignity and opportunity for all, and we believe technology will play a key role in achieving the SDGs. We use the goals below to inform the ongoing development of our strategies, initiatives, and long-term priorities, including our RISE Strategy and goals. We believe that information communications technology (ICT) can play an enabling role in the implementation of all of the SDGs. Intel, Nethope, and the UN Foundation developed an [SDG ICT Playbook](#) that outlines technology trends, opportunities, and innovative case studies that global leaders can reference as they develop their strategies and actions to address the SDGs.

Responsible



SDG 3: Ensure healthy lives and promote well-being for all at all ages

SDG 8: Promote inclusive and sustainable economic growth, employment, and decent work for all

SDG 12: Ensure sustainable consumption and production patterns

Through our employee health, safety, and wellness goals and our supplier health and safety requirements, we promote good health and well-being. Our efforts are designed to protect vulnerable workers throughout the global supply chain, and include setting clear supplier expectations and investing in assessments, audits, and capability-building programs. We collectively address issues through our leadership in the Responsible Business Alliance, including industry initiatives on key issues such as advancing responsible minerals sourcing, addressing human rights risks such as forced and bonded labor, and improving transparency on the environmental impacts in the global electronics supply chain.

Inclusive



SDG 4: Ensure inclusive and quality education for all and promote lifelong learning

SDG 5: Achieve gender equality and empower women and girls

SDG 8: Promote inclusive and sustainable economic growth, employment, and decent work for all

SDG 10: Reduce inequality within and among countries

To shape the future of technology, we believe we must be representative of that future. Since 2019, we have achieved gender pay equity globally and we continue to maintain racial/ethnic pay equity in the US. We also met our commitment to reach more than \$1 billion in annual spending with first-tier and lower tier certified diverse suppliers¹, and collaborate with others to encourage more women and underrepresented minorities to enter and succeed in technology careers. We provide our expertise and both financial and in-kind support to help communities, governments, NGOs, and educators achieve their goals.

¹ We recognize certified diverse suppliers as businesses that are at least 51% owned, operated, and controlled by any of the following categories: women; minorities as recognized by the country or region where the business was established; veterans/military service-disabled veterans; persons who are lesbian, gay, bisexual, or transgender; or persons with disabilities. While Intel recognizes these categories, they may vary in accordance with local law.

Sustainable



SDG 6: Ensure access to water and sanitation for all

SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

SDG 12: Ensure sustainable consumption and production patterns

SDG 13: Take urgent action to combat climate change and its impacts

We have made significant investments and set aggressive goals to reduce the environmental footprint of our global operations, including goals and policies on climate change and water stewardship. Our sustainability goals include achieving net positive water by 2030, zero waste to landfill by 2030, and net-zero GHG emissions for scope 1 and 2 by 2040. We will continue to invest in sustainability projects, actions, and investments to reduce our environmental footprint. We also collaborate with governments, leading companies, and nonprofits on innovative environmental projects, and proactively invest in our technology “handprint” to empower others to use Intel technology to reduce their environmental footprints and support sustainable consumption and production.

Enabling

We advance the SDGs above also through the application of our technology and the expertise and passion of our employees. Through the Intel RISE Technology Initiative, we are funding technology projects to drive social and environmental impact in collaboration with our customers. We also encourage our employees to share their experience, talents, and passions in communities around the world, and provide volunteer opportunities to help address local and global problems. The Intel Foundation acts as a catalyst for change by amplifying the investments of Intel employees across a broad spectrum of personal philanthropy and volunteerism and by working with NGOs, nonprofits, and governments on innovative programs that support underserved and disenfranchised populations.

Non-GAAP Financial Measures

Following are the reconciliations of our most comparable US GAAP measures to our non-GAAP measures presented:

Years Ended (In Millions, Except per Share Amounts)	Dec. 31, 2022	Dec. 25, 2021	Dec. 26, 2020
Net Revenue	\$63,054	\$79,024	\$77,867
NAND Memory Business	–	(4,306)	(4,967)
Non-GAAP Operating Income	\$63,054	\$74,718	\$72,900
Gross Margin Percentage	42.6%	55.4%	56.0%
Acquisition-related adjustments	2.1%	1.6%	1.6%
Share-based compensation	1.0%	0.4%	0.4%
Patent settlement	0.3%	–	–
Intel® Optane™ technology inventory impairment	–	–	–
NAND Memory Business	–	–	–
Non-GAAP Gross Margin Percentage	47.3%	58.1%	59.8%
Earnings per Share – Diluted¹	\$1.94	\$4.86	\$4.94
Acquisition-related adjustments	0.37	0.36	0.33
Share-based compensation	0.76	0.50	0.44
Patent settlement	0.05	–	–
Intel Optane technology inventory impairment	0.18	–	–
Restructuring and other charges	–	0.64	0.05
(Gains) losses on equity investments, net	(1.04)	(0.67)	(0.45)
(Gains) losses from divestiture	(0.28)	–	–
NAND memory Business	–	(0.33)	(0.22)
Tax Reform	(0.20)	–	–
Income tax effects	(0.06)	(0.06)	(0.03)
Non-GAAP Earnings per Share – Diluted	\$1.84	\$5.30	\$5.06

¹ For the year ended December 31, 2022, the impact of non-controlling interest to our non-GAAP adjustments is insignificant and thus is not included in our reconciliation of non-GAAP measures.

2022 Water Inventory by Location and Source

The following table details our water use, discharge, consumption, conservation, and restoration by source and destination for Intel sites around the world. Our fresh water withdrawals totaled 10.9 billion gallons (41.4 gigaliters) in 2022. Approximately 78% of the water used at our sites was sent back to municipal treatment operations, where it was treated so that it could be used for other purposes or to recharge surface or groundwater sources. For additional information, see the [Sustainable](#) section of this report. To prepare our global water inventory, we follow established internal procedures for collecting, reviewing, and reporting water data. Internal data collection and reporting practices are outlined within corporate standards and guidance documents developed by Intel. After a corporate-wide inventory was prepared, it was reviewed internally and water conservation data were assured by Apex Companies LLC (see the "[Independent Limited Assurance Statement](#)" in this Appendix).

Reported in Megaliters per Year

Location ¹		Water Withdrawals by Source (Total water usage) – Megaliters per Year										Water Source	Discharge Destination (Of municipality)	River Basin			
		Third-Party Water Withdrawals ² (Purchased water sources)				Water Withdrawals (On-site water sources)		Total Fresh Water Withdrawals (All sources)	Total Water Withdrawals (All sources)	Water Discharged (return) ³	Water Consumption	Water Conserved	Net Positive Water Progress (% returned + restored)				
		Fresh Water from Surface Water Sources	Fresh Water from Ground Water Sources	Sea Water Sources	Reclaimed Water	Ground Water Source (On-site well)	Surface Water Source (Rainwater)										
China	Chengdu	921	–	–	–	–	–	921	921	373	549	–	0	45%	Surface	Surface	Yangtze
	Shanghai – Zizhu ⁵	97	–	–	–	0.4	–	98	98	86	12	0.4	0	68%	Surface, Ground	Surface	Yangtze
Costa Rica	San Jose	–	414	–	–	0.01	22	436	436	113	323	0.1	184	346%	Ground	Surface	San Juan
India	Bangalore: Airport Rd ⁴	4	–	–	–	–	–	4	4	–	4	4	410	346%	Surface	N/A (Zero discharge)	Cauvery
	Bangalore: Sarjapur ⁴	95	–	–	–	20	–	115	115	–	115	73	0	88%	Surface	Surface	Shannon
Ireland	Leixlip	8,556	–	–	–	–	–	8,556	8,556	7,538	1,018	2,605	0	66%	Sea (Primary); Surface & Ground (Secondary)	Sea (Primary); Third-Party Reuse (Secondary)	Mediterranean Sea (Coastal aquifer)
Israel	Haifa ⁴	22	89	–	–	–	–	22	111	52	59	11	0	84%	Sea (Primary); Surface & Ground (Secondary)	Sea (Primary); Third-Party Reuse (Secondary)	Mediterranean Sea (Coastal aquifer)
	Petach Tikva ⁴	6	24	–	–	–	–	6	29	21	9	2	0	75%	Surface	Surface	Muda
	Qiryat Gat ⁴	800	3,200	–	–	–	–	800	4,000	2,651	1,349	5,686	100	75%	Ground	Ground	Lerma-Santiago
Malaysia	Kulim	1,090	–	–	–	–	–	1,090	1,090	919	171	205	0	75%	Ground	Ground	Wisla
Mexico	Guadalajara ⁴	–	59	–	–	–	–	59	59	44	15	24	0	75%	Sea	Sea	
Poland	Gdansk	–	16	–	–	–	–	16	16	12	4	2	0	75%	Ground	Ground	

¹We follow established internal procedures and thresholds to determine which sites are included in the inventory.

²Third-party water withdrawals represent water purchased from the local municipality.

³Third-party water discharges/returns represent water sent to the local municipality for reuse or surface/groundwater recharge.

⁴Sites located in area experiencing extremely high water stress, based on WRI's Aqueduct Water Risk Atlas (2022).

⁵Site located in area experiencing high water stress, based on WRI's Aqueduct Water Risk Atlas (2022).



2022 Water Inventory by Location and Source, continued

Reported in Megaliters per Year

Location ¹	Water Withdrawals by Source (Total water usage) – Megaliters per Year										Water Restored (Watershed projects)	Net Positive Water Progress (% returned + restored)	Discharge Destination (Of municipality)	River Basin			
	Third-Party Water Withdrawals ² (Purchased water sources)				Water Withdrawals (On-site water sources)		Total Fresh Water Withdrawals (All sources)	Total Water Withdrawals (All sources)	Water Discharged (return) ³	Water Consumption							
	Fresh Water from Surface Water Sources	Fresh Water from Ground Water Sources	Sea Water Sources	Reclaimed Water	Surface Water Source (Rainwater)	Ground Water Source (On-site well)											
United States	Arizona: Chandler ⁴	2,058		–	–	–	–	2,058	2,058	1,045	1,014	451	10,824	119%	Colorado/ Salt/Verde		
	Arizona: Ocotillo ⁴	11,185		–	1,037	–	–	11,185	12,223	10,662	1,561	12,570					
	California: Bowers - Santa Clara	216	–	–	–	–	–	216	216	146	71	24					
	California: Folsom ⁴	343	–	–	–	–	–	343	343	69	274	–			Santa Clara		
	California: Mission – Santa Clara	371	–	–	47	–	–	371	419	278	140	–					
	New Mexico: Rio Rancho ⁴	–	246	–	–	–	2,636	2,883	2,883	2,545	338	1,979			Rio Bravo		
	Oregon: Aloha	1,133	–	–	–	–	–	1,133	1,133	857	276	184			Columbia		
	Oregon: Hawthorn Farm	119	–	–	–	–	–	119	119	89	30	52					
	Oregon: Jones Farm	317	–	–	–	–	–	317	317	238	79	–					
	Oregon: Ronler Acres	9,313	–	–	–	–	–	9,313	9,313	7,355	1,958	12,505					
	Texas: Austin	65	–	–	–	–	–	65	65	49	16	–			Colorado		
Vietnam	Ho Chi Minh City	529	–	–	–	–	–	529	529	157	372	113	0	30%	Surface	Surface	Dong Nai
Total		38,650	3,312	1,085	20	2,658	41,329	45,726	35,755	9,971	36,514	11,518	107%				

¹We follow established internal procedures and thresholds to determine which sites are included in the inventory.

²Third-party water withdrawals represent water purchased from the local municipality.

³Third-party water discharges/returns represent water sent to the local municipality for reuse or surface/groundwater recharge.

⁴Sites located in area experiencing extremely high water stress, based on WRI's Aqueduct Water Risk Atlas (2022).

⁵Site located in area experiencing high water stress, based on WRI's Aqueduct Water Risk Atlas (2022).

2022 Scope 1 and Scope 2 Greenhouse Gas Inventory by Location

In support of our commitment to transparency, the following table details our 2022 Scope 1 and Scope 2 GHG emissions (metric tons of carbon dioxide equivalent, CO₂e) for Intel sites around the world, broken out by scope and emissions category. Our emissions calculations are based on the World Resources Institute/World Business Council for Sustainable Development's The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, and internal criteria defined by Intel management. Our corporate-wide Scope 1 and Scope 2 data were assured by Apex Companies LLC (see the "[Independent Limited Assurance Statement](#)" in this Appendix).

Location ¹		Scope 1 GHG Emissions (metric tons CO ₂ e)						Scope 2		Total Scope 1&2 GHG Emissions (metric Tons CO ₂ e)
		Fluorinated GHGs	Combustion/ Fuels	Heat Transfer Fluids	N ₂ O	Other ²	Total Scope 1	GHG ³ Emissions (metric tons CO ₂ e)	% Renewable Electricity	
China	Chengdu	0	154	6,906	0	2,426	9,486	144,121	0	153,607
	Shanghai - Zizhu	0	636	0	0	0	636	20,136	0	20,772
Costa Rica	San Jose	0	246	1,089	0	284	1,619	26	99%	1,645
India	Bangalore, Airport Rd	0	133	0	0	276	409	5,581	0	5,990
	Bangalore, Sarjapur	0	11,656	0	0	202	11,858	16,405	0	28,263
Ireland	Leixlip	57,387	51,126	0	46,382	4,613	159,508	0	100%	159,508
Israel	Haifa	0	0	0	0	3,486	3,486	0	100%	3,486
	Petach Tikva	0	1	0	0	2,424	2,425	0	100%	2,425
	Qiryat Gat	112,631	28,024	0	17,761	3,665	162,081	0	100%	162,081
Malaysia	Kulim	0	246	14,840	0	87	15,173	0	100%	15,173
	Penang	0	149	15,131	0	433	15,713	0	100%	15,713
Mexico	Guadalajara	0	37	0	0	0	37	8,288	0	8,325
Poland	Gdansk	0	339	0	0	0	339	0	100%	339
United States	Arizona: Chandler	12,256	11,673	5,240	0	647	29,816	0	100%	29,816
	Arizona: Ocotillo	147,464	86,617	22,769	28,792	6,164	291,806	0	100%	291,806
	California: Bowers – Santa Clara	0	3,933	0	0	63	3,996	0	100%	3,996
	California: Folsom	0	4,986	0	0	37	5,023	0	100%	5,023
	California: Mission Santa Clara	0	18,187	0	0	4,052	22,239	0	100%	22,239
	New Mexico: Rio Rancho	22,527	19,340	3,173	5,776	195	51,011	0	100%	51,011
	Oregon: Aloha	3,872	10,012	6,769	2,029	134	22,816	0	100%	22,816
	Oregon: Hawthorn Farm	0	1,553	0	0	0	1,553	0	100%	1,553
	Oregon: Jones Farm	0	2,013	0	0	0	2,013	0	100%	2,013
	Oregon: Ronler Acres	124,569	98,913	41,881	78,556	6,230	350,149	0	100%	350,149
Vietnam	Texas: Austin	0	31	0	0	0	31	0	100%	31
	Ho Chi Minh City	0	177	26,802	0	683	27,662	153,001	0	180,663
Total		480,706	350,182	144,600	179,296	36,101	1,190,885	347,558	93%	1,538,443

¹ We follow established internal procedures and thresholds to determine which sites are included in the inventory.

² "Other" category includes GHG emissions from volatile organic compounds (VOCs), leased assets, air shuttle, refrigerant leaks, and onsite vehicle use.

³ Market-based methodology.

2022 Environmental, Health, and Safety Violations

Each year we share information about regulatory visits to Intel sites across the globe and Notices of Violation (NOVs) received over the course of the year. In 2022, government officials made 182 visits (including audits and inspections) to Intel sites across the globe, including 67 health and safety agency inspections, 34 fire protection agency inspections, and 81 environmental agency inspections. Details on NOVs and our subsequent corrective actions are provided in the table below:

Location	Violation	Fine	Intel's Corrective Action
Santa Clara, California	Site maintains an ionizing radiation license: State agency was not informed of two licensed items that were removed from the site within 30 days of removal.	\$0	Site has removed the two items from the state license.
Ronler Acres, Oregon	Acid waste neutralization compliance pH went below limit due to a problem with the tank pH probe.	\$4,100	A full review of pH monitoring systems and alarms was performed and corrective action implemented.
Leixlip, Ireland	The EPA conducted an onsite compliance walk of temporary construction ground water management system and issued a site visit report noting items of concern relating to the control of materials and wastes in the water treatment compound.	\$0	The areas were assessed, and material management deficiencies fulfilled. Report was issued to EPA.
Leixlip, Ireland	The site observed a hydrocarbon sheen and confirmed contaminated groundwater samples from their onsite treatment systems. The elevated samples were reported to EPA. The Noncompliance issued by EPA due to late reporting of event.	\$0	Site noted requirement from EPA for timely reporting of events— independent of root cause identification.
Jones Farm, Oregon	The Hillsboro Fire Department (HFD) performed an inspection and identified deficiencies.	\$0	The Intel site fire protection program owner dispositioned the deficiencies through the HFD. Follow-up walks were performed with the HFD to verify closure of each finding.
Santa Clara, California	Site detected a deviation from a new permit condition related to chlorine emissions abatement. Notification was sent to Bay Area Air Quality Management District (BAAQMD). An NOV was issued for the deviation.	\$8,000	Site corrected the programming issue immediately. BAAQMD inspector confirmed that the site returned to compliance.
San Jose, California	The San Jose Fire Department (SJFD) performed the annual hazardous materials inspection, including a site walk that focused on chemical storage and hazardous materials inventory. The inspector identified four items that needed corrective action or follow-up.	\$0	Intel implemented corrective actions and submitted a response to the SJFD, providing the documentation that the inspector requested.
Ronler Acres, Oregon	The Hillsboro Fire Department (HFD) performed inspections of the Intel Ronler Acres facility and identified deficiencies related to legibility of piping labels and faded NFPA 704 diamond signs on above-ground tanks.	\$0	Site performed site-wide audits on process pipe labelling and storage tank diamond signs and replaced illegible or faded labelling and diamond signs.
Santa Clara, California	Bay Area Air Quality Management District (BAAQMD) conducted a visit to the site and identified a different start date to a site demolition project. An NOV was issued.	\$750	Internal control process was reviewed, and action implemented to prevent recurrence.
Rio Rancho, New Mexico	New Mexico Environment Department Hazardous Waste Bureau conducted a site inspection focused on waste collection areas. Inconsistencies were found related to hazardous waste labeling.	\$0	Corrections were made, internal procedures updated, and a formal response was sent to the agency.
Fort Collins, Colorado	The Poudre Fire Authority (PFA) performed the required annual fire inspection of the site and identified several deficiencies in an NOV report.	\$0	The deficiencies were corrected immediately after the inspection. Closure documentation was provided to PFA.
Ocotillo, Arizona	In December 2021, Maricopa County Air Quality Department (MCAQD) performed the annual Title V air permit compliance inspection. In March 2022, Intel was issued an opportunity to correct related to fire pump maintenance and H ₂ S annual compliance demonstration.	\$0	Internal controls were implemented to prevent a recurrence.
Lachish, Israel	EPA Sea and Shore Department was notified of a brine line permit condition violation related to changes in accounted personnel that appear on the permit. EPA issued a NOV.	\$0	Changes were made to accounted personnel that appear on the permit and notifications sent immediately. Internal procedures were reviewed and updated to prevent a recurrence.

Top 100 Production and Service Suppliers

These companies represented approximately 68% of Intel's total supply chain spends in 2022.

Advanced Semiconductor Engineering	EBARA Corporation	JSR Corporation	Samsung Electro-Mechanics Co., Ltd.
Advantest America Inc	Edwards Ltd	JX Nippon Mining & Metals Corporation	Samsung Semiconductor, Inc.
AEM Singapore Pte. Ltd.	Elitegroup Computer Systems Co., LTD.	KellyOCG	SCREEN Semiconductor Solutions Co., Ltd.
AGC, Inc.	Entegris, Inc.	Keysight Technologies, Inc.	Shin-Etsu Chemical Co., Ltd.
Air Liquide	Exyte AG	Kingston Technology Corporation	Shinko Electric Industries Co. LTD.
Air Products and Chemicals, Inc.	Fabrinet	Kintetsu World Express	Shunsin Technology Holdings Limited
Amkor Technology, Inc.	Flex Ltd.	KLA Corporation	Siliconware Precision Industries Co., Ltd.
Applied Materials Inc.	FormFactor, Inc.	Kokusai Electric Corporation	Siltronic AG
Asia Union Electronic Chemical Corp.	FUJIFILM Electronic Materials	Lam Research Corporation	SIRVA Worldwide, Inc.
ASM International N.V.	GCON, Inc.	Lasertec Corporation	SK hynix Inc.
ASML	Gemtek Technology Co., Ltd.	Linde plc	Skanska USA Building Inc.
AT & S Austria Technologie & Systemtechnik AG	Georg Fischer AG	Marvell Technology, Inc.	SUMCO Corporation
Avantor, Inc.	GLOBALFOUNDRIES	Merck KGaA Darmstadt, Germany	Sundt Construction, Inc.
BE Semiconductor Industries N.V.	GlobalWafers Co., LTD.	Microsoft Corporation	Super Micro Computer, Inc.
Cadence Design Systems, Inc.	Hensel Phelps	Mitac Holdings Corporation	Synopsys, Inc.
Compass Group PLC	Hewlett Packard Enterprise Company	Mitsubishi Gas Chemical Company Inc.	Taiwan Semiconductor Manufacturing Company Ltd
Courier Network Inc.	Hitachi High-Tech Corporation	Moses Lake Industries (TAMA Chemicals)	Technoprobe S.p.A.
Cymer	Hoffman Construction	Murata Machinery, Ltd.	Thermo Fisher Scientific Inc.
Daifuku Co., LTD	Honeywell Electronic Materials	Nanya Technology Corporation	Tokyo Electron Limited
DB Schenker	HP Inc	Nikon Corporation	Tokyo Ohka Kogyo Co., LTD
Dell Technologies, Inc.	IBIDEN Co., LTD.	Nippon Express Co., Ltd.	Unimicron Technology Corporation
Deloitte Touche Tohmatsu Limited	Infosys Limited	Nordson Corporation	United Microelectronics Corp
Dentsu Group, Inc.	Jacobs Engineering Group, Inc.	Pegatron Corporation	UPPRO Ltd.
Deutsche Post DHL Group	JE Dunn Construction	Powertech Technology Inc.	UST Holdings Ltd.
DSV A/S	JLL	Rinchem Company Inc.	VMLY&R

Acronym Index

3TG: Tin, tantalum, tungsten, and gold

A

AEP: Advanced enabling platforms

ADAS: Advanced driver-assistance system

AI: Artificial intelligence

AISES: American Indian Science and Engineering Society

AMIE: Advancing Minorities' Interest in Engineering

ANSI: American National Standards Institute

ASIC: Application-specific integrated circuit

C

CAHRA: Conflict-affected and high-risk area

CAD: Computer-aided design

CDIO: Chief diversity inclusion officer

CDP: A not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impact

CEED: Center for Engineering Education and Diversity

CEC: California Energy Commission

CEI: Corporate Equality Index

CEO: Chief Executive Officer

CEPN: Clean Electronics Production Network

CGN Committee: Corporate Governance and Nominating Committee

CNDCP: Carbon Neutral Data Centre Pact

CNIS: China National Institute of Standardization

CO: Carbon monoxide

CO₂: Carbon dioxide

CO₂e: Carbon dioxide equivalent

CPA: Center for Political Accountability

CPO: Chief people officer

CPU: Central processing unit

CRT: Cobalt response template

C-SCRM: Cyber supply chain risk management

CSR: Corporate social responsibility

CTD: Cumulative trauma disorder

D

DARPA: Defense Advanced Research Projects Agency

DEI: Diversity, equity, and inclusion or Disability Equality Index

DRC: Democratic Republic of the Congo

E

ECOC: Ethics and Compliance Oversight Committee

EEO: Equal Employment Opportunity

EHS: Environmental, health, and safety

EIS: Employee Inclusion Survey

EPA: Environmental Protection Agency

EPEAT: Electronic Product Environmental Assessment Tool

EPIC: Excellence, Partnership, Inclusion, and Continuous Improvement

ERG: Employee Resource Group

EPRM: European Partnership for Responsible Minerals

EPS: Earnings per share

ESG: Environmental, social, and governance

EU: European Union

F

F-GHG: Fluorinated greenhouse gas

FPGA: Field-programmable gate array

G

GAAP: Generally Accepted Accounting Principles

GDP: Gross domestic product

GHG: Greenhouse gas

GPP: Green Power Partnership

GPU: Graphics processing unit

GRI: Global Reporting Initiative

H

HAP: Hazardous air pollutant

HBCU: Historically Black college or university

HR: Human Resources

HRC: Human Rights Campaign

HRIA: Human rights impact assessment

HVAC: Heating, ventilation, and air conditioning

I**IBLC:** Intel Black Leadership Council**ICT:** Information and communications technology**IDAN:** Intel Disability and Accessibility Network**IDLC:** Intel Disability Leadership Council**IDM:** Integrated device manufacturer**IEEE:** Institute of Electrical and Electronics Engineers**IEC:** Inclusive Engineering Consortium**IEC:** International Electrotechnical Commission**IESC:** Intel Employee Service Corps**IFPCL:** Industry Focus Process Chemical List**IFS:** Intel Foundry Services**ILO:** International Labor Organization**I/O:** Input/output**IP:** Intellectual property**IPAC:** Intel Political Action Committee**IPO:** Initial Public Offering**IRTI:** Intel RISE Technology Initiative**ISO:** International Organization for Standardization**iTSCI:** International Tin Supply Chain Initiative**L****LED:** A light-emitting diode**LEED:** Leadership in Energy and Environmental Design**LGBT+:** Lesbian, gay, bisexual, and transgender/
transsexual +**M****MaaS:** Mobility-as-a-Service**MGM:** Million Girls Moonshot**MRC:** Management Review Committee**N****NGO:** Non-governmental organization**NIC:** Network interface controller**NIST:** National Institute of Standards and Technology**NOV:** Notice of violation**NOx:** Nitrogen oxides**NSF:** National Science Foundation**NUC:** Next Unit of Computing**O****OALC:** Out and Ally Leadership Council**OCP:** Open Compute Project**ODM:** Original design manufacturer**OECD:** Organisation for Economic Co-operation and Development**OEM:** Original equipment manufacturer**OTC:** Opportunity to correct**OSHA:** Occupational Safety and Health Administration**P****PAIA:** Product Attribute to Impact Algorithm Consortium**PBT:** Polybutylene Terephthalate**PC:** Personal computer**PCF:** Product carbon footprints**PFC:** Perfluorocarbon**PLT:** Pandemic Leadership Team**PM:** Particulate matter**PPA:** Public-Private Alliance for Responsible Minerals Trade**PRTI:** Pandemic Response Technology Initiative**PUE:** Power usage effectiveness**R****RAI:** Responsible Artificial Intelligence**R&D:** Research and development**RBA:** Responsible Business Alliance**REACH:** European Union's Registration, Evaluation, Authorization, and Restriction of Chemicals**RISE:** Responsible, inclusive, sustainable, and enabling**RLI:** Responsible Labor Initiative**RMAP:** Responsible Minerals Assurance Process**RMI:** Responsible Minerals Initiative**RSS:** Responsibility-Sensitive Safety**RSU:** Restricted stock unit

S

S3a: Supplier Sustainability Scorecard

SAQ: Self-Assessment Questionnaire

SASB: Sustainability Accounting Standards Board

SBTI: Science-Based Targets Initiative

SDA: Sectoral decarbonization approach

SDL: Security Development Lifecycle

SEC: US Securities and Exchange Commission

SDG: Sustainable development goals

SDSs: Safety data sheets

SKU: Stock keeping unit

SoC: System-on-a-Chip

SPARC: Supplier Program to Accelerate Responsibility and Commitment

SPEC: Standard Performance Evaluation Corporation

SPEC SERT: Server Efficiency Rating Tool

SRC: Supplier Report Card

STEAM: Science, technology, engineering, arts, and math

STEM: Science, technology, engineering, and math

T

TCFD: Task Force on Climate-Related Financial Disclosure

U

UN: United Nations

UNDP: United Nations Development Program

UNESCO: United Nations Educational, Scientific and Cultural Organization

UPW: Ultra-pure water

URM: Underrepresented minority

V

VAP: Validated Assessment Program

VOC: Volatile organic compound

W

WAI: Women in AI

WBENC: Women Business Enterprise National Council

WEEE: Waste Electrical and Electronic Equipment

WiSci: Women in Science

Forward-Looking Statement

This 2022-23 Corporate Responsibility Report contains statements that are aspirational or reflective of our views, forecasts, and opinions regarding our future performance that constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements in this Report include statements regarding our goals, metrics, aspirations, targets, strategy, and expectations with respect to corporate responsibility matters, including sustainability, human rights, supply chain management, human capital management, policy and procurement, philanthropy, data privacy, and information and product security, as well as other business risks and opportunities. These statements inherently involve risks and uncertainties that are difficult to predict, often beyond our control, and inherently uncertain, and actual results, including our goals, could differ materially from those predicted in such statements, including as a result of geopolitical or macroeconomic events, energy prices, technological advances or innovations, developing climate conditions, legislative or regulatory changes, engagements with stakeholders, and other unforeseen conditions or events. Forward-looking statements are not guarantees or promises that any such goals, metrics, aspirations, targets, strategy or expectations will be met or retained in their current form. Risk factors that could cause actual results to differ are set forth in the “Risk Factors” section of the [2022 Intel Annual Report on Form 10-K](#), as updated by our Quarterly Report on Form 10-Q for the quarter ended April 1, 2023. These risk factors are subject to update by our future filings and submissions with the US Securities and Exchange Commission and

earnings releases. Forward-looking statements are based on expectations as of the date of this report, unless an earlier date is indicated, as well as standards for measuring progress that are still developing, internal controls and diligence processes that continue to evolve, current legal and regulatory requirements, third-party data or affirmations or representations, and assumptions that are subject to change, including in light of current or historic goals or assumptions, and available data. Statements derived from our 2022 Annual Report on Form 10-K speak as of January 26, 2023. Intel disclaims any duty to update any statement made in this report except to the extent required by law. This report contains non-GAAP financial measures relating to our performance. You can find the reconciliation of these measures to the most directly comparable GAAP financial measures in this Appendix, and further explanation of these adjustments in the “Non-GAAP Financial Measures” within “Management’s Discussion and Analysis” in the [2022 Intel Annual Report on Form 10-K](#). Website references and hyperlinks throughout this report are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this report, nor does it constitute a part of this report. We assume no liability for any third-party content contained on the referenced websites.



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