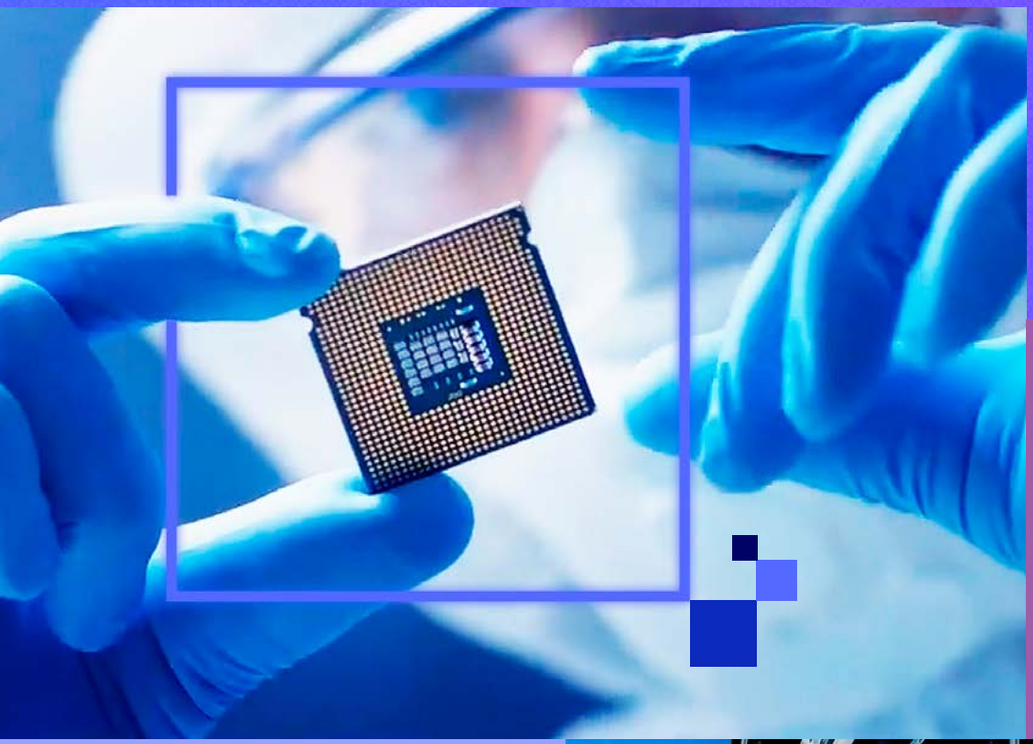
2023-24 Corporate Responsibility Report



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Our Commitment to Transparency

This report aims to provide a comprehensive summary of our approach to corporate responsibility and our performance for calendar and fiscal 2023, unless otherwise stated. This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards. Our 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 United Nations (UN) Global Compact, UN Sustainable Development Goals, the Task Force on Climate-Related Financial Disclosures (TCFD), and the IFRS Foundation.[1] In 2023, we continued to advance our integrated reporting strategy to include environmental, social, and governance information in our 2023 Annual Report on Form 10-K and 2024 Proxy Statement, available on our Investor Relations website. For additional information on Intel's approach to corporate responsibility, supporting documents and data, past reports, and to customize a report with the sections of your choice, visit our Corporate Responsibility and Report Builder websites.

[1] In 2024, the TCFD monitoring responsibilities were transferred to the IFRS Foundation's International Sustainability Standards Board.

Letter From Our CEO

At Intel, our work has always been defined by optimism.

Every single product we have ever launched began with a belief that it would move the world forward. And for more than half a century, our innovations have powered technology that has driven human progress and improved the lives of people everywhere.

Today, as the world confronts enormous and complex challenges, from climate change to extreme inequality, we could all use a little more of that positive outlook.

It's all too easy to sit back and feel that these problems are simply too daunting to address. But one thing I've seen proven time and again over my decades at Intel is that human ingenuity has yet to meet its match. No matter what challenges we face, we can invent the future we want for the world. And all of us at Intel feel a deep responsibility to not only build a strong business, but also serve as a force for good—leading the way with the same hopeful, can-do spirit we always have.

In this 2023-24 Intel Corporate Responsibility Report, you will see the tremendous strides we are making with our RISE strategy—our effort to create a more responsible, inclusive, and sustainable world, all enabled by technology and the expertise and passion of our employees.

Some highlights include:

Building the most sustainable foundry in history: Every aspect of our lives is becoming more digital—a trend that is only gaining momentum in the era of artificial intelligence. To meet this moment, we have launched Intel Foundry, the world's first systems foundry designed for the AI era. And we are building this business with sustainability at its core. For example, in 2023, Intel used 99% renewable electricity across our operations worldwide—and we are working with suppliers, customers, and industry peers to develop the next generation of sustainable processes and products.

Future-proofing supply chains: The events of recent years exposed the fragility of global supply chains, which led to a dire semiconductor shortage and extraordinary disruptions to the economy. And with 80% of semiconductor manufacturing still happening in Asia, supply chain flexibility and resilience remain elusive in most parts of the world. We're investing to change that and have set a moonshot goal: by the end of the decade, 50% of global semiconductors will be produced in the US and Europe.

Building open ecosystems: Innovation thrives most when people can come together and collaborate in a transparent environment. That kind of open ecosystem is the foundation of our approach at Intel—and why we launched the first global sustainability summit for the semiconductor industry. It's how we continue to democratize computing, achieve new breakthroughs, and improve productivity for our partners, developers, and customers. And it is leading to some historic progress, from responsible AI that advances and protects human rights, to decentralized cloud computing, which—thanks to Intel's AI Everywhere initiative—is ushering in the era of the AI PC.

Maintaining high ethical standards with all our work: As one of the world's largest semiconductor designers and manufacturers, Intel is uniquely positioned to make a positive impact up and down our value chain. And every day, we work tirelessly to live up to this obligation. This includes advocating for responsible minerals sourcing, championing human rights everywhere we do business, and extending our commitment to diversity and inclusion to our suppliers—all while investing in our workforce to flourish in the AI era.

In total, our progress is paving a path to a better tomorrow. Yes, we still have a lot of work ahead to achieve our goals—but that's what's most exciting of all, because we see a monumental opportunity to build a more responsible, sustainable, and inclusive world. We believe much of the essential work ahead starts with Intel. And we're determined to succeed, united by the same sense of limitless optimism that has long defined our company at its best.

Pat Gelsinger, Chief Executive Officer,
Intel Corporation

Letter From Our CPO

I am pleased to present our 2023–2024 Corporate Responsibility Report, which highlights our exemplary progress as we endeavor to be the leading sustainable foundry.

Leveraging our scale to drive sustainability across the industry: Through RISE, our corporate responsibility strategy, we strive to set the standard for sustainable manufacturing. We've implemented ambitious environmental targets, including maximizing renewable electricity use, conserving water, upcycling waste, and advancing greener chemistries to minimize hazardous substances. Our commitment to corporate responsibility and sustainability is deeply ingrained in Intel's DNA, and we will continue our longstanding efforts to reduce our footprint, even as we expand our global operations.

Beyond our direct impact, our scale and reach uniquely allow us to play an influential role in collaborating to take meaningful action and achieve far-reaching sustainability goals. Intel approaches this lofty task in a way that makes it easier for customers, stakeholders, and our entire value chain to take meaningful action too.

Educating the talent pipeline for a sustainable and responsible future: Intel's more than 120,000 employees are shaping the future with technology innovation. Our technology powers, connects, and secures billions of devices; accelerates critical infrastructure; and enables solutions for the world's most complex challenges.

We remain committed to attracting and retaining the world's best talent across every function—from the factory floors to the engineers at the forefront of the next technological revolution. We are a catalyst, driving innovative talent strategies to accelerate workforce representation to create an inclusive environment for the world's best and brightest talent.

Shared commitment and meaningful action are at the heart of our education and development efforts, designed to ignite interest and empower people with the skills to fuel their careers. Intel has already begun to lay the foundation for this work through the Intel® Digital Readiness Programs for community colleges in the US. Recently, we added AI for Sustainability and AI for Manufacturing standalone courses to the overall curriculum to further emphasize these priorities.

Looking toward our vision of collective impact: As we look ahead, our ambitions and opportunities have never been greater to unleash the power of data to help advance integrated corporate responsibility strategies. We believe in a sustainable future for—and through—AI. We welcome collaboration on responsible and sustainable AI across the ecosystem through cross-industry initiatives to address these shared challenges.

At Intel, we are unwavering in our commitment. Together, we seek to create more diverse, equitable, and inclusive outcomes in our workplace, in the communities in which we operate, in the semiconductor industry, and across society at large.

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

A Year in Review

Intel has proudly led the industry and ecosystem through innovation and technological advancement, and continues to expand its operations by investing in new facilities that propel our digital age. Below are some highlights from 2023 and early 2024:

First Systems Foundry Designed for the AI Era

At Intel Foundry Direct Connect in February 2024, Intel launched Intel Foundry as a more sustainable systems foundry business designed for the AI era. We also announced our expanded process roadmap, customers, and ecosystem collaboratorss to help deliver on Intel's ambition to be the number two foundry by 2030.

$8.5 Billion in CHIPS Act Funding

In March 2024, the US Department of Commerce proposed up to $8.5 billion in direct funding through the CHIPS and Science Act to advance Intel's commercial semiconductor projects in Arizona, New Mexico, Ohio, and Oregon. CHIPS Act funding aims to increase US semiconductor manufacturing and research and development capabilities, especially in leading-edge semiconductors. Intel is the only American company that both designs and manufactures leading-edge logic chips.

AI Everywhere

At our "AI Everywhere" event in New York City in December 2023, we introduced an unmatched portfolio of AI products to enable customers' AI solutions across the data center, cloud, network, edge, and PC. These new products bring AI computing power to where the data is generated and used. Intel's expansive footprint positions the company to support and supply AI across markets. In January 2024, we announced plans to drive Intel's "AI Everywhere" strategy into the automotive market. The announcement detailed a new family of Intel AI-enhanced, software-defined vehicle SoCs that address a critical industry need for power and performance scalability. The new family of SoCs enable desirable in-vehicle AI use cases, such as driver and passenger monitoring.

$425 Million of Green Bond Proceeds Allocated

In our first Annual Green Bond Report, published in 2023, we outlined allocation of $425 million, or approximately 34% of Intel's $1.25 billion green bond issued in 2022. Our first-ever green bond aligns our financing priorities with our commitment to sustainable business practices and will help us advance our RISE goals. Initial proceeds were allocated in five project categories: pollution prevention and control, water stewardship, energy efficiency, renewable energy, and circular economy and waste management.

Celebrating AI Accessibility and Enabling the Next Generation of Innovators

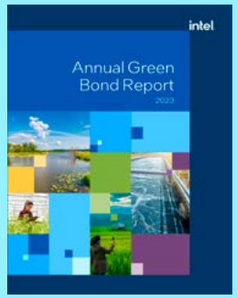
In September 2023, we celebrated AI accessibility innovation by next-generation technologists at the AI Global Impact Festival. The festival brought together future developers and educators who are working to solve real-world problems using AI, with the support of policymakers and academic leaders. Students from 26 countries participated in the competition at the 2023 festival, dubbed "Enriching Lives with AI Innovation."

Making AI Computing More Sustainable

Intel processors are designed and purpose-built for efficiency with AI workloads. Newly released 5th Gen Intel® Xeon® Scalable processors (code-named Emerald Rapids) have built-in AI accelerators that provide on average 36% performance-per-watt advantages over the 4th generation processor.[1] The Intel® Gaudi® 2 processor is designed for great efficiency and throughput per watt for training and running state-of-the-art models, from the largest language and multi-modal models to more basic computer vision and natural language processing models. Intel® Core™ Ultra processors feature new neural processing units to execute AI-based algorithms more efficiently. With AI-enhanced collaboration with Zoom, Intel Core Ultra processors consume up to 38% lower power than the previous generation.[2]

[1] See [T13] on the Performance Index site: 5th Gen Intel Xeon Scalable processors. Results may vary.

[2] Learn more on the Performance Index site. Results may vary.



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Tune in to AI

With episodes like "Saving Crops With AI," "Improving Accessibility with AI," and "Beep-Autonomous Mobility for All," Intel's Technically Speaking podcast on AI and innovation completed its first season in December 2023. Stay tuned for the launch of season two.

Leading Supply Chain Responsibility and Impact

We believe a responsible supply chain means being a thought leader and delivering results. In 2023, Intel spent $1.6 billion with diverse-owned suppliers,[3] despite a significant reclassification of key diverse-owned suppliers due to acquisition, which resulted in a corresponding impact to diverse supplier spending. Our diligent efforts to protect human rights in the workplace mean our suppliers have returned more than $27 million in fees to their workers since 2014. As a founding member and active leader in both the Semiconductor Climate Consortium and the Semiconductor Industry Association (SIA) Semiconductor PFAS Consortium, we have continued to push supply chain responsibility forward. We continue our diligence in responsible sourcing of tin, tantalum, and gold, and have expanded into other minerals and regions.

Extending our Net-Zero Commitment

In 2022, Intel announced our goal to achieve net-zero greenhouse gas (GHG) emissions (Scope 1 and 2) across our global operations by 2040. In 2023, we took that goal a step further and committed to work with our value chain to achieve net-zero upstream Scope 3 GHG emissions by 2050.

Progressing Toward Our Net Positive Water Goal

In 2023, we conserved approximately 10.2 billion gallons of water internally and through community collaborations, and enabled restoration of 3.1 billion gallons through investments in watershed restoration projects. These achievements advanced us toward our goal of net positive water. In 2023, we achieved net positive water in four countries: the US, India, Costa Rica, and Mexico. Net positive is defined as water returned through water management practices plus water restored to local watersheds for more than 100% of our fresh water consumption.

Our Roadmap for Climate Action

In November 2023, Intel published its Climate Transition Action Plan, detailing the company's path to reduce its climate footprint. Providing a roadmap for how we will achieve our critically important sustainability goals, this plan demonstrates our commitment to integrating sustainability into our core business, building resilience into our operations and value chain, and fostering innovation.

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 from just below 5% in 2022 to 5.3% in 2023, and the percentage of Intel employees who identify as veterans decreased slightly from 7.1% in 2022 to 7% in 2023. In addition, our global representation of technical women increased from 24.7% in 2022 to 25% in 2023.

Responding to Humanitarian Crises

When a natural disaster or humanitarian crisis occurs, the Intel Foundation responds by offering matching campaigns that enable employees to take action and amplify the impact of their generous donations to relief assistance efforts. In 2023, the Intel Foundation responded to an increased number of humanitarian crises and natural disasters, including earthquakes, tornadoes, wildfires, floods, and famine. Employees joined the Foundation in support of 10 special matching campaigns, raising over $4 million in donations and Foundation matches that enabled 26 causes to deliver assistance to those in need. These campaigns included relief for wildfires in Washington, Canada, and Maui; earthquakes in Turkey and Syria; and more.

Intel Sustainability Summit

In March 2024, Intel hosted the first Sustainability Summit, engaging our whole ecosystem, including fellow semiconductor manufacturers, suppliers, customers, civil society, academia, and government officials focused on moving the industry forward toward our joint goals.

[3] 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.

Addressing the Global Semiconductor Workforce Shortage

The US semiconductor industry is facing a workforce gap, as highlighted in a July 2023 report by the Semiconductor Industry Association. The report says that the workforce needed in the semiconductor industry is expected to grow 33% between 2023 and 2030, but 50% of projected new jobs risk being unfilled at current degree completion rates.

Closing the talent gap is critical to the semiconductor industry and Intel's IDM 2.0 strategy. We are facing this challenge head-on by creating specific regional programs in collaboration with institutes of higher education to meet Intel's and the semiconductor industry's workforce needs.

US National Scale Initiatives. Intel has been a founding member of The Semiconductor Research Corporation since its inception. The Semiconductor Research Corporation JUMP 2.0 program is a ground-breaking five-year initiative led by the Semiconductor Research Corporation in collaboration with Defense Advanced Research Projects Agency (DARPA), the commercial semiconductor industry, and the defense industrial base. This public-private collaborations aims to push the boundaries of cognitive technologies and advance various facets of information and communication technology (ICT) systems. The program involves significant collaboration with 141 principal investigators from 42 universities and supports more than 850 student research projects.

The US National Science Foundation (NSF) Future of Semiconductors (FuSe) program awarded $45.6 million in funding across 24 projects to enable rapid progress in new semiconductor technologies, manufacturing, and workforce development through a public-private partnership with IBM, Intel, Ericsson, and Samsung. In direct alignment with the landmark CHIPS and Science Act of 2022, the FuSe program addresses semiconductor research across the stack, spanning materials, devices, and systems while simultaneously considering sustainability and workforce development impacts for the semiconductor industry. The first round of FuSe projects began in the fall of 2023.

Additionally, Intel's University Shuttle Program enables researchers and students from academic institutions around the world access to modern design technology for their classes, training, and talent development. The focus of the program is strengthening the workforce through training and university programs in chip design and prototyping. In 2023, we reached over 500 active users, including more than 80 professors.

Other recent support Intel has provided to higher education programs includes:

Ohio. In advance of the opening of our new wafer manufacturing campus in Licking County, we collaborated with community colleges in Ohio to launch a one-year semiconductor technician certificate program. The program is funded through the Intel Semiconductor Education and Research Program for Ohio—part of Intel's $50 million commitment to Ohio higher education institutions over the next decade.

Oregon, Arizona, and New Mexico. In 2023, Intel continued investments in the northwest and southwest regions, providing an additional $1.8 million dollars to community colleges and universities to augment existing and pilot new programs that broaden access for students and faculty for future workforce growth. These investments focus on increasing diversity in the semiconductor industry and include experiential hands-on opportunities. The funding will reach more than 3,500 students through 11 leading institutes working with local community colleges, tech centers, and high schools.

Ohio: One-year semiconductor technician certificate program

The blue dots represent the 11 colleges Intel is collaborating with for the one-year semiconductor technician certificate program. Colleges include: Columbus State Community College, Marion Technical College, Rhodes State College, North Central State College, Central Ohio Technical College, Clark State, Northwestern State, Stark State, Zane State, Owens Community College, and Lorian Community College.

Europe. Intel and European public and private sector collaborators are investing $13 million over four years to launch six research centers. One of these research centers, the Center for AI Aware Pathways to Sustainable Semiconductor Manufacturing, is focused on harnessing and augmenting AI technologies to achieve breakthroughs in sustainable semiconductor processes and manufacturing technologies.

Germany. In Magdeburg, where we plan to build a wafer fabrication (fab) mega-site, Intel announced a €1.2 million investment in higher education grants for technical colleges and universities across the state of Saxony Anhalt. As part of this, Intel provided support to enable Otto von Guericke University in Magdeburg to revamp its clean room. The facility is now capable of educating some 170 students per year for fab experiential learning. Additionally, Intel Ireland employees worked with Magdeburg-Stendal University of Applied Sciences engineering students on wastewater treatment projects. A panel of expert judges selected three award-winning teams, and three student scholars were chosen to continue to engage with Intel throughout the remainder of their undergraduate studies.

Poland. Intel provided curriculum funding to upgrade the very large-scale integration (VLSI) programs at Poznań University of Technology, covering the entire application-specific integrated circuit (ASIC) design and verification process. In a separate effort, Intel delivered master class instruction to more than 140 vocational school students, providing an overview of the assembly test manufacturing process and exposure to fab technician job roles.

"Semiconductors are at the heart of America's strength, enabling the essential technologies that drive economic growth and national security. With demand for semiconductors projected to increase significantly by 2030 and beyond, semiconductor companies are ramping up production and innovation to keep pace."

– July 2023 Semiconductor Industry Association report

Ireland. Intel provided funding to Technological University Dublin to purchase a benchtop scanning electron microscope to upgrade its microelectronics facility clean room capabilities. The upgrade will enhance training of over 500 engineering and science students across three campuses. In addition, funding was allocated to Maynooth University to support creation of the Maynooth University Robotics Laboratory, where 180 students will learn from practical exercises and projects each year.

Israel. Intel provided support to enable four universities to upgrade and expand their VLSI and semiconductor programs. For example, Intel provided funding to support Technion's on-campus clean room and microfabrication training programs, as well as a major upgrade of the VLSI lab, which will double the number of students reached in the field. At the Sapir Negev College, Intel is providing tuition assistance to train 60 new fab manufacturing technicians, and is helping to modernize the semiconductor curriculum of three other technology colleges.

Latin America. Intel provided curriculum funding to upgrade VLSI programs at both the Costa Rica Institute of Technology and the Center for Research and Advanced Studies (CINVESTAV) in Guadalajara, Mexico.

India. Intel has collaborated with leading universities to enhance their curriculum in areas such as VLSI design, AI, and data science to align with the evolving needs of the semiconductor sector. As part of the Intel® Leadership and Excellence in Academic Development (LEAD) Program, Intel facilitated 20 Intel FPGA curriculum adoptions and conducted workshops and national faculty development programs that trained some 2,000 students and, 1,200 faculty members at more than 100 institutions in 2023. In addition, close to 1,200 students from 22 colleges were trained in a virtual six-week Intel® Unnati Industrial Training program.

Malaysia and Vietnam. To train students in industry-relevant areas for the regional workforce, Intel funded the development of new semiconductor curriculum in three universities, including advanced packaging, AI curriculum for packaging visual inspection, and FPGAs curricula.

Our Global Manufacturing Expansions and Investments

We are committed to strengthening the resilience of the global semiconductor supply chain for leading-edge semiconductor products by investing in geographically balanced manufacturing capacity. In the US, we are expanding our existing operations in Arizona, New Mexico, and Oregon, and investing in two new leading-edge chip factories in Ohio. We have submitted all four of our major project proposals in Arizona, New Mexico, Ohio, and Oregon to the US Department of Commerce's CHIPS Program Office. These projects are estimated to represent over $100 billion of US manufacturing and research investments over the next five years.

In the EU and Israel, we have announced a series of investments spanning our existing operations in Ireland and Israel, as well as a planned investment of more than $33 billion in Germany to build a leading-edge wafer fabrication mega-site. We have also announced our plans to invest up to $4.6 billion in an assembly and test facility in Poland, and the start of high-volume manufacturing using Intel 4 technology and extreme ultraviolet (EUV) technology in Ireland.

Look Inside an Intel Fab

An Intel semiconductor factory, or "fab," is a manufacturing marvel. Discover how semiconductors come to life in some of the largest, most complex factories in the world.

Intel teams across the globe are installing new tools, delivering new clean rooms, and completing construction of new buildings. To give an idea of the sheer scale of operations, in 2023, about 145,000 tons of steel—roughly the weight of 20,743 African elephants—was used in our construction and expansion projects, Our construction teams also poured over 2 million cubic yards of concrete—enough to build the Empire State Building 32 times over.

Below are updates on 10 of Intel's largest build projects:

Arizona. We have completed the "cheese slab" concrete pour, which forms the base of the fab level of our two upcoming factories, Fab 52 and Fab 62. Construction teams have poured over 430,000 cubic yards of concrete on the project to date—enough to fill 132 Olympic-size pools.

New Mexico. In January 2024, we celebrated the opening of Fab 9 in Rio Rancho for the manufacturing of advanced semiconductor packaging technologies. Later this year, teams will install and qualify more tools at Fabs 9 and 11x, also in Rio Rancho.

Ohio. Construction teams moved 1 million cubic yards of dirt over the past year, and fitted 4,300 tons of steel rebar and installed 210,000 feet of underground conduit. While most of the work in 2023 was below ground level, the next milestone will be the construction of the above-ground utility level.

Oregon. In September 2023, construction engineering teams celebrated the groundbreaking of MSB2—a new support building adjacent to the existing D1X fab, Intel's largest technology development site. By the end of 2024, the lower level of MSB2 should be online and fab teams will begin using the building as the arrival hub for D1X's cutting-edge fab tools.

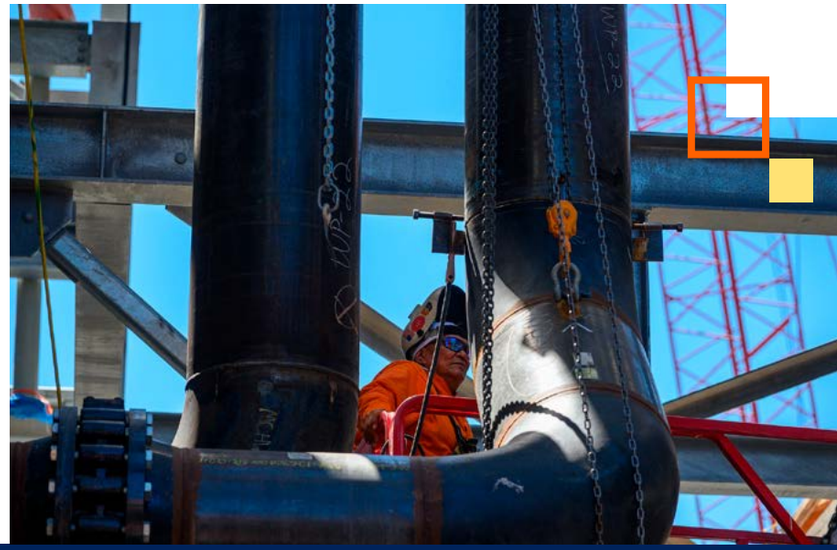
Ireland. Intel's Ireland operations are a cornerstone of our global manufacturing footprint, and an important part of building an end-to-end semiconductor manufacturing value chain in Europe. In January 2024, Fab 34 in Leixlip celebrated the start of high-volume manufacturing using Intel 4 and EUV technology.

Israel. Kiryat Gat, currently home to Intel's most advanced manufacturing facility in Israel, will soon welcome Fab 38. Located adjacent to Fab 28, which makes chips on the Intel 7 technology node, Fab 38 will produce advanced chips using EUV lithography. Later this year, construction teams will begin installing Fab 38's electricity modules, followed by the installation and qualification of advanced fab tools. In 2024, Intel Israel marks a special milestone—50 years of operation.

Germany. In June 2023, Intel and the German government inked a fresh agreement to increase the scope of our wafer fabrication site in Magdeburg. The agreement encompasses Intel's increased investment in the site, reflecting the expanded scope and change in economic conditions since the site was first announced.

Malaysia. We are making a $7 billion investment at our site in Penang to build Intel's largest advanced packaging facility for 3D packaging technology, a 710,000-square-foot clean room with two levels of manufacturing space. In addition, in Kulim, Intel's fifth assembly test manufacturing factory in Malaysia is under construction.

Poland. In June 2023, Intel revealed plans for a new assembly test manufacturing facility in Wrocław that will support about 2,000 employees. The $4.6 billion project is the largest greenfield investment in the history of Poland. The location was chosen for several reasons, including its existing infrastructure, a strong talent base, and an excellent business environment. Later in 2024, we expect our teams will be busy with design and submission for construction permits.

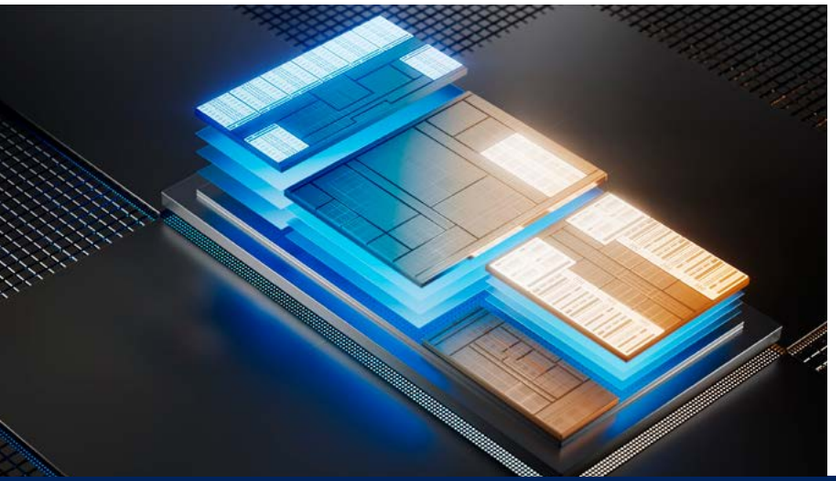


Driving Transformation With Sustainable AI

We are experiencing a global paradigm shift driven by AI—both through today's capabilities and the untapped potential for the future. According to Gartner, more than 80% of enterprises will have used generative APIs or deployed generative AI-enabled applications by 2026, up from under 5% in 2023.[1]

But with this growth, significant environmental implications follow. More AI compute leads to increased electricity consumption and consequent carbon emissions. Gartner predicts that by 2025, AI will consume more energy than the human workforce without sustainable AI practices, significantly offsetting any carbon-zero gains.[2] IDC also forecasts a steep climb in data center energy consumption, partially driven by generative AI, anticipating growth from 382 terawatt-hours in 2022 to 802 by 2027.[3]

While AI will not solve all problems driving climate change and holds serious carbon emissions implications, it also offers enormous opportunities and can serve as an excellent tool when employed responsibly. Our Sustainable CTO report found that 77% of senior IT leaders believe that "transformational IT"—using technology to improve their whole organization's environmental impact—is high on their organization's corporate agenda.[4]



Intel® Core™ Ultra processors feature new neural processing units to execute AI-based algorithms more efficiently. With AI-enhanced collaboration with Zoom, Intel Core Ultra processors consume up to 38% lower processor power than the previous generation.[7]

At Intel, we believe in a sustainable future for—and through—AI. For instance, combining real-time data collection with AI can help businesses quickly identify areas for operational improvement to help reduce carbon emissions at scale. Transformative efforts driving environmental responsibility need not conflict with cutting-edge innovation.

With intentional project design supported by Intel® technologies, companies can bring AI everywhere more sustainably and drive IT operations to Tech Zero.[5] The right hardware, software, tools, and design can accelerate innovation and maximize the impact of AI workloads' energy footprint at every stage of the pipeline.

AI can offer a direct path to the high-impact results that can significantly decrease an organization's environmental impact. Powered by Intel, AI can uncover new ways to help businesses understand their carbon footprint, make the most of resources, and eliminate waste. AI can also help accelerate the Tech Positive[6] innovation of much-needed climate-friendly technologies and outcomes.

Our mission is sustainable computing for a sustainable future, and we believe AI is critical to that goal. Intel has taken on the challenge to reduce energy consumption with AI workloads through comprehensive measures, including platform innovations. For more information about how we are making AI computing more sustainable, see "Product Energy Efficiency" in the Sustainable section.

[1] Gartner press release.
[2] Top Strategic Predictions for 2023 and Beyond | Gartner.
[3] IDC, July 2023, "Generative AI: Implications for the Data Center," ID#US51013223.
[4] The Sustainable CTO Report, Intel, 2023.
[5] Tech Zero: Reducing the carbon footprint of a company's IT function.
[6] Tech Positive: Using technology as a lever for the whole organization to reach its net-zero goals and to have a positive impact overall, driving business growth and accelerating innovation.
[7] Learn more at Intel Performance Index. Results may vary.

Intel's ESG Framework

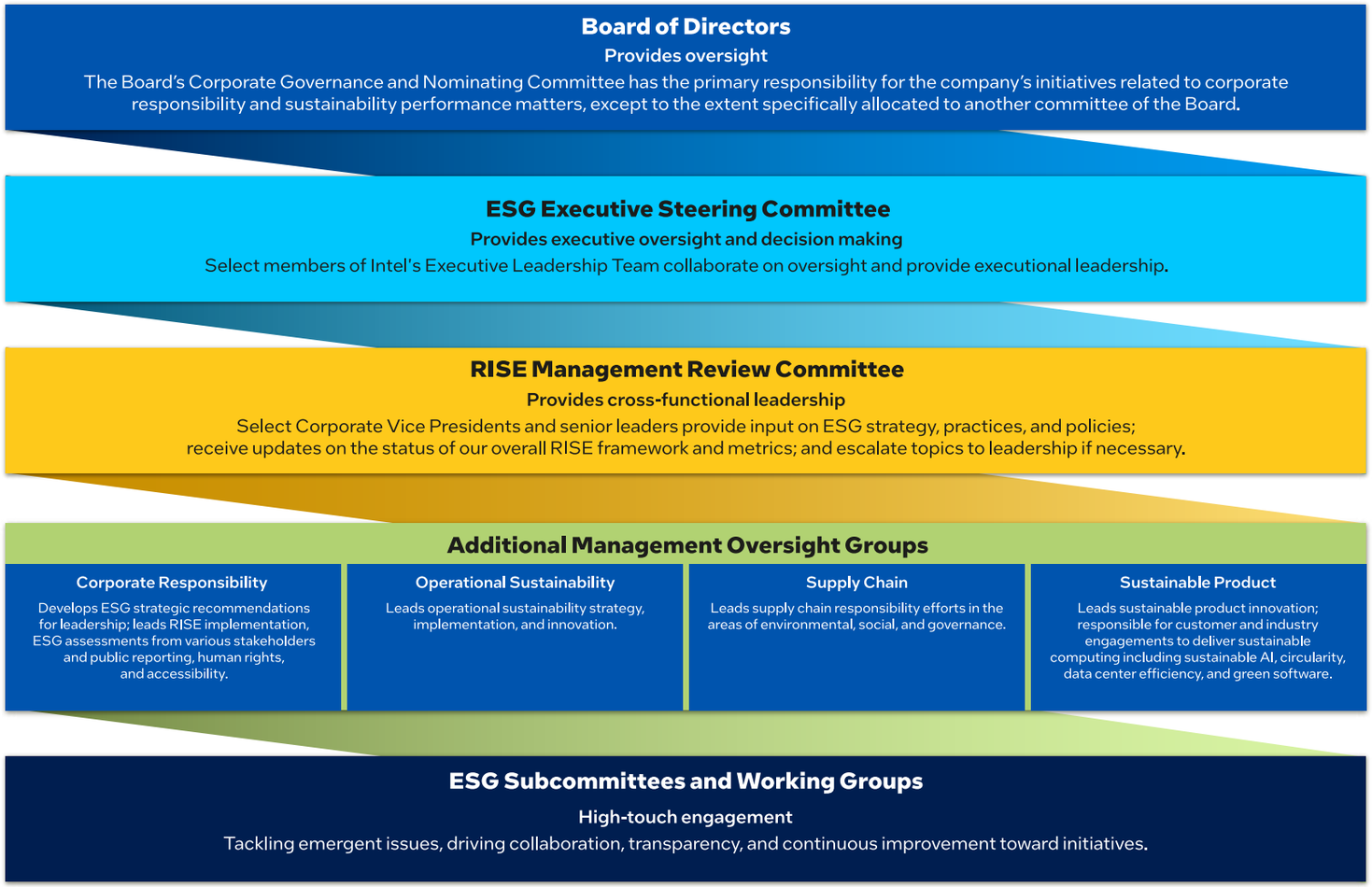
Our corporate responsibility strategy is reviewed annually by the Board or the Board's Corporate Governance and Nominating Committee, which, except to the extent specifically allocated to another committee of the Board, oversees and reports to the Board on a periodic basis regarding the company's initiatives related to corporate responsibility and sustainability performance matters. Those matters include potential short and long-term trends and impacts to the company's business of environmental, social, and governance developments, and the company's annual corporate social responsibility report. Our ESG Executive Steering Committee, established in 2022, is chaired by our Chief People Officer. Additional 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. In 2023, we took on the additional commitment to work with our value chain to achieve net-zero upstream Scope 3 GHG emissions by 2050.

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. 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 Strategy 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 2023 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

Bloomberg. Bloomberg Gender-Equality Index

CDP. "A" Water Security Rating, "A-" 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 Index[1]

Gartner. Supply Chain Top 25

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

Human Rights Campaign. Corporate Equality Index. Equality100 Award

ISS. 1 rating in both Environment & Social QualityScore[2]

JUST Capital. JUST 100

KnowTheChain. Ranked #2, Information & Communications Technology

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

Minority Engineer. Top 50 Employers

MSCI. AAA ESG Rating, World ESG Leaders Index[3]

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

Newsweek. America's Most Responsible Companies, America's Greatest Workplaces for Women, World's Most Trustworthy Companies

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

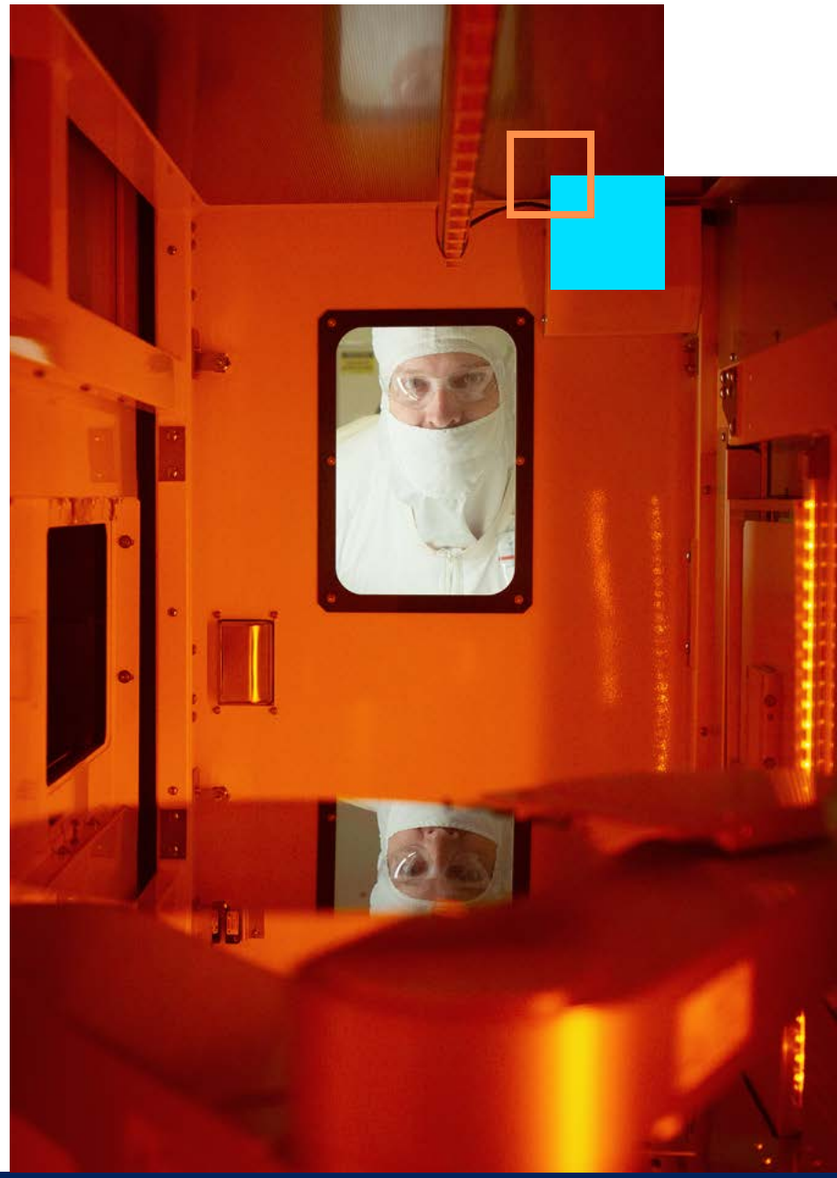
RepTrak. 2023 Global RepTrak 100

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] Score as of end of year 2023.

[3] 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

As a creator of life-changing technology, Intel has the opportunity to push the boundaries of what's possible and to create solutions to the world's biggest challenges. We continue our relentless pursuit of Moore's Law—a guiding principle for the semiconductor industry that relies on innovation and technological advancement to deliver more and more processing power at a lower cost, generation after generation. We remain committed to being an excellent collaborator for our customers for the next era of compute: creating trusted environments, innovating, and delivering exceptional engineering from silicon to services.

This year's highlights

$3 billion in cost savings

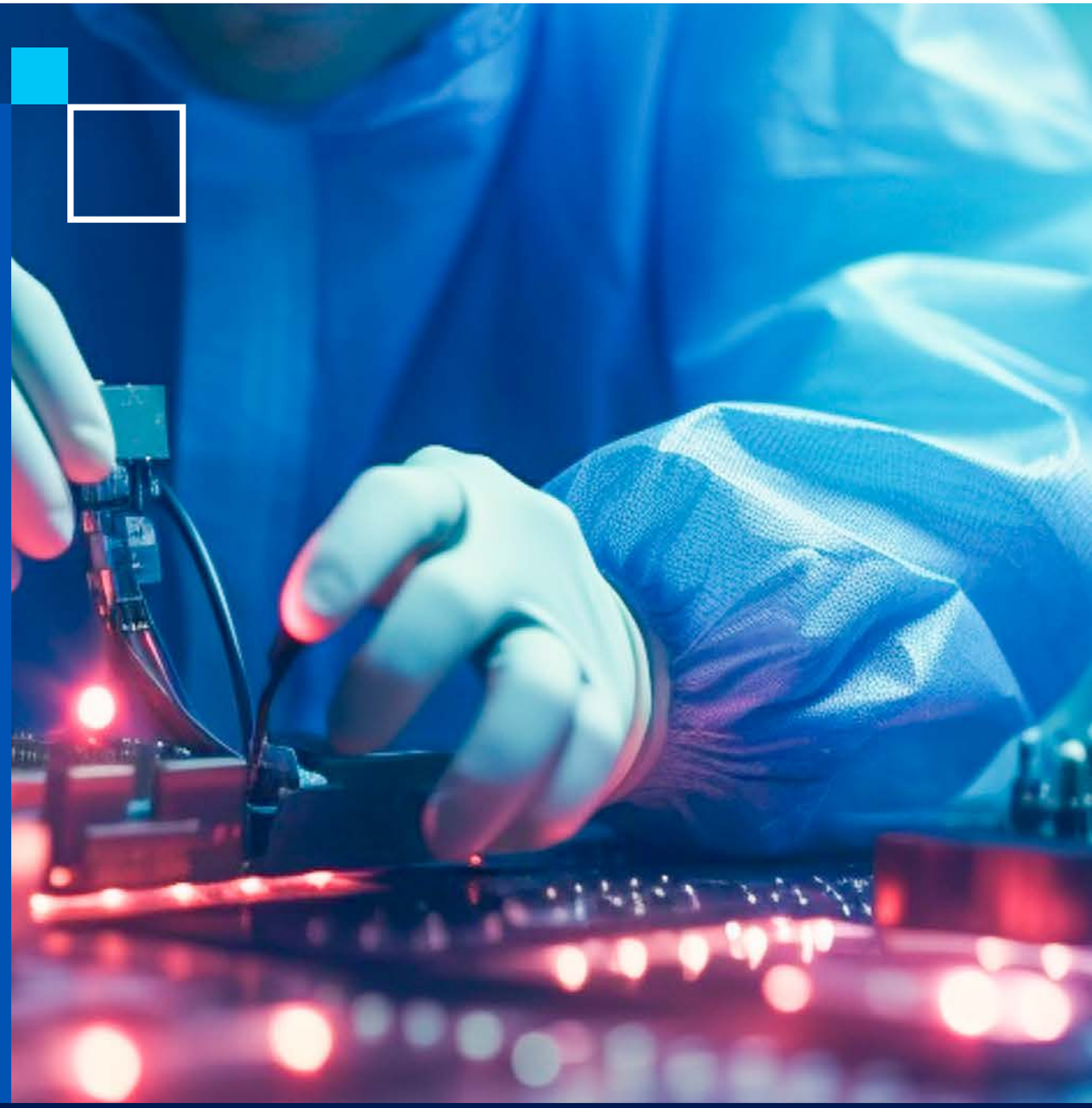
We drove execution and accelerated innovation, resulting in strong customer demand for our products. We continued to drive operational efficiencies and achieved our commitment to deliver $3 billion in cost savings. We expect to unlock further efficiencies in 2024 and beyond as we implement our new internal foundry model.

AI acceleration in every core

We launched the 5th Gen Intel® Xeon® Scalable processors, which deliver improvements in performance and efficiency compared to the previous generation. The cutting-edge processors unlock new possibilities for advanced AI not only in the data center and cloud, but across the world's network and edge applications.

On the path to a trillion transistors

We unveiled technical breakthroughs that maintain a rich pipeline of innovations for our future process roadmap, underscoring the continuation and evolution of Moore's Law. Through transistor stacking and scaling technologies, new materials, and other breakthroughs, we are working to extend Moore's Law to a trillion transistors on a package by 2030.



Company Profile

Technology permeates every aspect of our lives and is increasingly central to every aspect of human existence. As we look ahead to the next decade, we expect to see continued demand for processing power. Semiconductors are the underlying technology powering this digital expansion, and we are strategically positioning ourselves to create a resilient global semiconductor supply chain by investing in geographically balanced manufacturing capacity.

The demand for compute 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.

IDM 2.0, the next evolution and expansion of our integrated device manufacturing (IDM) model, is a differentiated strategy that combines three capabilities: our global internal factory network; strategic use of third-party foundry manufacturing capacity; and our building of a world-class open system foundry business. 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 advantageous cost structure.

Our 2023 revenue was $54.2 billion, down $8.8 billion, or 14%, from 2022. Our overall gross margin dollars in 2023 decreased by $5.2 billion, or 19%, compared to 2022. Total R&D and MG&A expenses for 2023 were $21.7 billion, down 12% compared to 2022.

Our 2023 results reflect the continued advancement of our transformational journey. We continued to prioritize investments critical to our IDM 2.0 transformation, achieved operational milestones, and executed disciplined expense management.

We are investing to position the company for accelerated long-term growth, focusing on both our core and growth businesses. In our client and server businesses, our strategy is to invest to strengthen the competitiveness of our product roadmap and to explore new opportunities. We believe we have significant opportunities to grow and gain share in graphics; mobility, including autonomous driving; networking and edge; AI; software; and foundry services.

We are focused on executing our product and process roadmap and accelerating our cadence of innovation. We have set a detailed process and packaging technology roadmap and announced key architectural innovations to further our goal of delivering leadership products in every area in which we compete.

Our world-class talent is at the heart of everything we do. Our people build our technology, unlock new business opportunities, and work with our customers and stakeholders to create global impact.

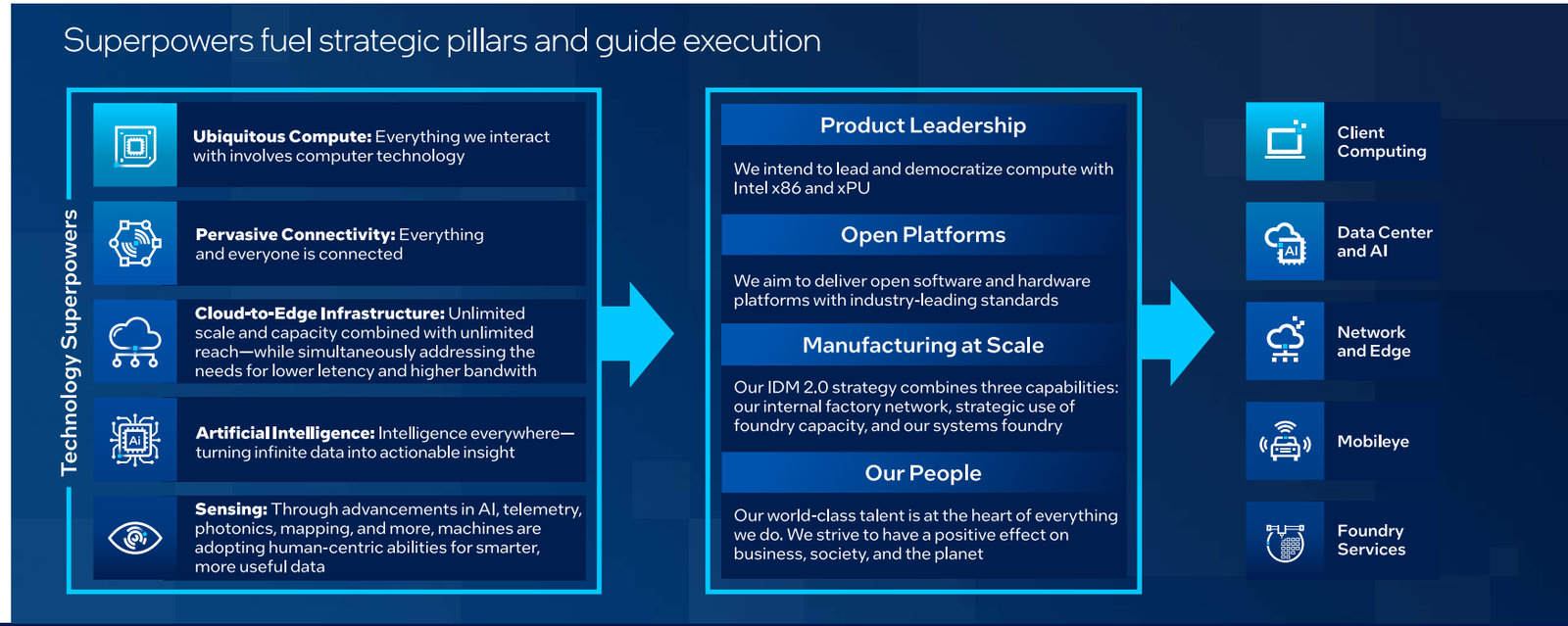
The sections of this Company Profile derived from our 2023 Annual Report on Form 10-K speak as of January 25, 2024, unless another date is indicated, are truncated and summary in nature, and do not reproduce exactly or in full the disclosures from that report. For a full discussion of our business, financial results, and the topics discussed in this Company Profile, review our 2023 Annual Report on Form 10-K.

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.

Superpowers fuel strategic pillars and guide execution



CCG Client Computing Group.[1]

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.

DCAI Data Center and AI Group.[1]

Includes a broad portfolio of CPUs, domain-specific accelerators, and FPGAs, designed to empower data center and hyperscale solutions for diverse computing needs.

NEX 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.

MBLY Mobileye.

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

IFS Intel Foundry Services.

Provides differentiated full-stack solutions, including wafer fabrication, packaging, chiplet standard, and software. Effective 2024, IFS is now part of Intel Foundry, a more sustainable systems foundry business designed for the AI era.

For more information, refer to the 2023 Intel Annual Report on Form 10-K.

[1] Beginning in 2023, our former AXG segment was integrated into CCG/DCAI and no longer reported as a separate operating segment.

Our Customers

We sell our products primarily to OEMs, 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 2023 Intel Annual Report on Form 10-K.

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 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. As we pursue our strategy to establish IFS as a major provider of foundry capacity to manufacture semiconductors for others, we will face intense competition from well-established foundry competitors. For additional information, refer to the 2023 Intel Annual Report on Form 10-K.

Our Products

Our product offerings provide end-to-end solutions, scaling from data center to network, PCs, edge computing,[2] and the emerging fields of AI and autonomous driving, to serve an increasingly smart and connected world. Products, such as our gaming CPUs, may be sold directly to end consumers, 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.

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

Our diverse product line includes CPU and chipset, an 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.

In 2023, we launched new products, including the Intel® Core™ Ultra processors, featuring our first integrated neural processing unit, for power-efficient AI acceleration and local inference on the PC; and the 14th Gen Intel® Core™ desktop processor family, delivering fast desktop frequencies and enhanced desktop experience for enthusiasts.

We also introduced the 13th Gen Intel® Core™ mobile processor family, led by the launch of the first 24-core processor for laptops, and introduced the new Intel vPro® Platform powered by the full lineup of 13th Gen Intel Core processors.

Other 2023 launches included the 4th Gen Intel® Xeon® Scalable processors, a critical part of our heterogeneous hardware and software portfolio to accelerate real-world data center, cloud, and edge workloads, including AI; the 4th Gen Intel Xeon Scalable processors with Intel vRAN Boost; and the 5th Gen Intel Xeon Scalable processors for data center, cloud, and edge, with embedded capabilities for powering AI workloads.

We also added to our graphics offerings with the introduction of two new Intel® Arc™ Pro GPUs, Intel Arc Pro A60 and Intel Arc Pro A60M, and shipped Intel Arc Pro A40-based systems.

For more information about our products, read our 2023 Intel Annual Report on Form 10-K.

From Sand to Silicon

The transistor is the engine that powers every Intel processor. To build a modern computer chip, our engineers place billions of these tiny switches into an area no larger than a fingernail. Watch the video to see how Intel builds the world's most complex devices.

Product Responsibility and Impact

We strive to minimize the environmental impact of our products at all phases in their lifecycle: 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

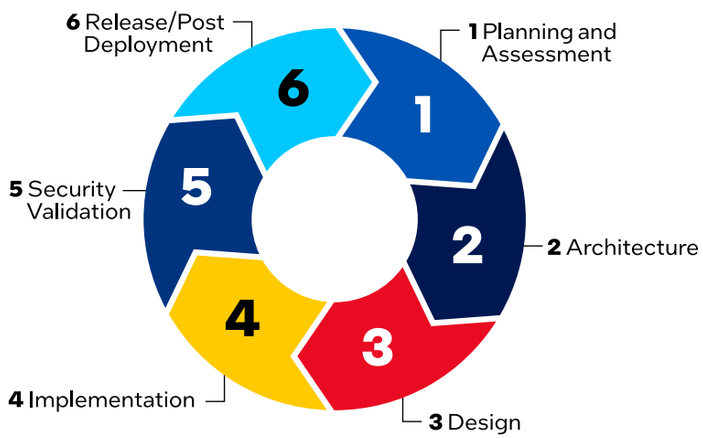
We strive to design, manufacture, and sell the world's most secure technology products, and we are frequently innovating and enhancing security capabilities for our products. System trust is rooted in security—if hardware isn't secure, then a system cannot be secure. At Intel, our goal is to build the most secure hardware on the planet, from world-class CPUs to xPUs and related technology, enabled by software. As with previous reports, the 2023 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 Development Lifecycle



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, read our Security-First Pledge or the 2023 Intel Product Security Report.

Securing Intel's Supply Chain

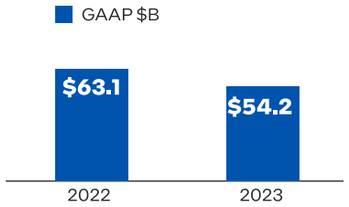
Our sourcing and manufacturing practices are built on decades of experience designed to align to industry-leading processes. Our supply chain security program leverages this expertise and has embedded security controls throughout the vendor lifecycle. Intel's supply chain security risk management program 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.

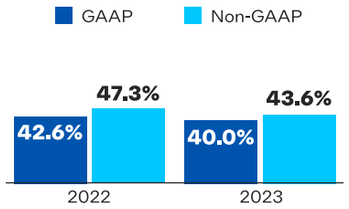
Our Cybersecurity Supply Chain Risk Management (C-SCRM) program executes hundreds of information security supplier audits annually and is designed to align to standard industry information security management frameworks, including ISO and NIST. Additionally, we monitor the cybersecurity posture of our 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.

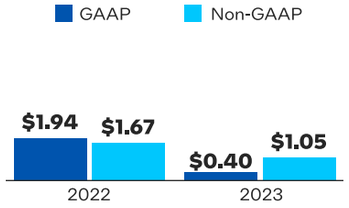
Revenue



Gross Margin



Diluted EPS Attributable to Intel



Non-GAAP financial measures presented here should not be considered a substitute for, or superior to, the financial measures prepared in accordance with GAAP. See "Non-GAAP Financial Measures" in the Appendix for additional information and reconciliations to comparable GAAP measures.

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 2023 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 stakeholder 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 capital allocation strategy includes returning excess cash to stockholders. We achieve this through our dividend policy and, when permissible, stock repurchases. In 2023, we declared a reduced quarterly dividend on our common stock. This dividend reduction reflects our deliberate approach to capital allocation, is expected to support the critical investments needed to execute our business strategy, and is designed to position us to create long-term value. We expect future stock repurchases to continue to be curtailed during this time of meaningful investment in capital. During 2023, we paid $3.1 billion in dividends. We have paid a cash dividend in each of the past 125 quarters.

In addition, our capital allocation strategy includes opportunistic investment in and acquisition of companies that complement our strategic objectives. We look for acquisitions that supplement our capital and R&D investments. We also seek to drive value creation through transactions such as the 2022 Mobileye IPO, the 2023 minority stake sales in IMS, and the 2023 announcement of our intent to operate Altera,® an Intel company (formerly PSG), which we expect to enable potential private and public equity investments. Together, these transactions provide an additional source of capital to support the critical investments needed to advance our business strategy. Lastly, we take action when investments do not strategically align to our key priorities. In the last three years, we exited numerous businesses, including the NAND memory business and Intel® Optane™ memory business.

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 exit businesses to optimize our portfolio, both to drive our strategy and long-term value creation.	We strategically invest financial capital to continue to build our business, 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 and foundry capabilities.
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, lower costs, and position ourselves to respond to the expectations of our stakeholders.

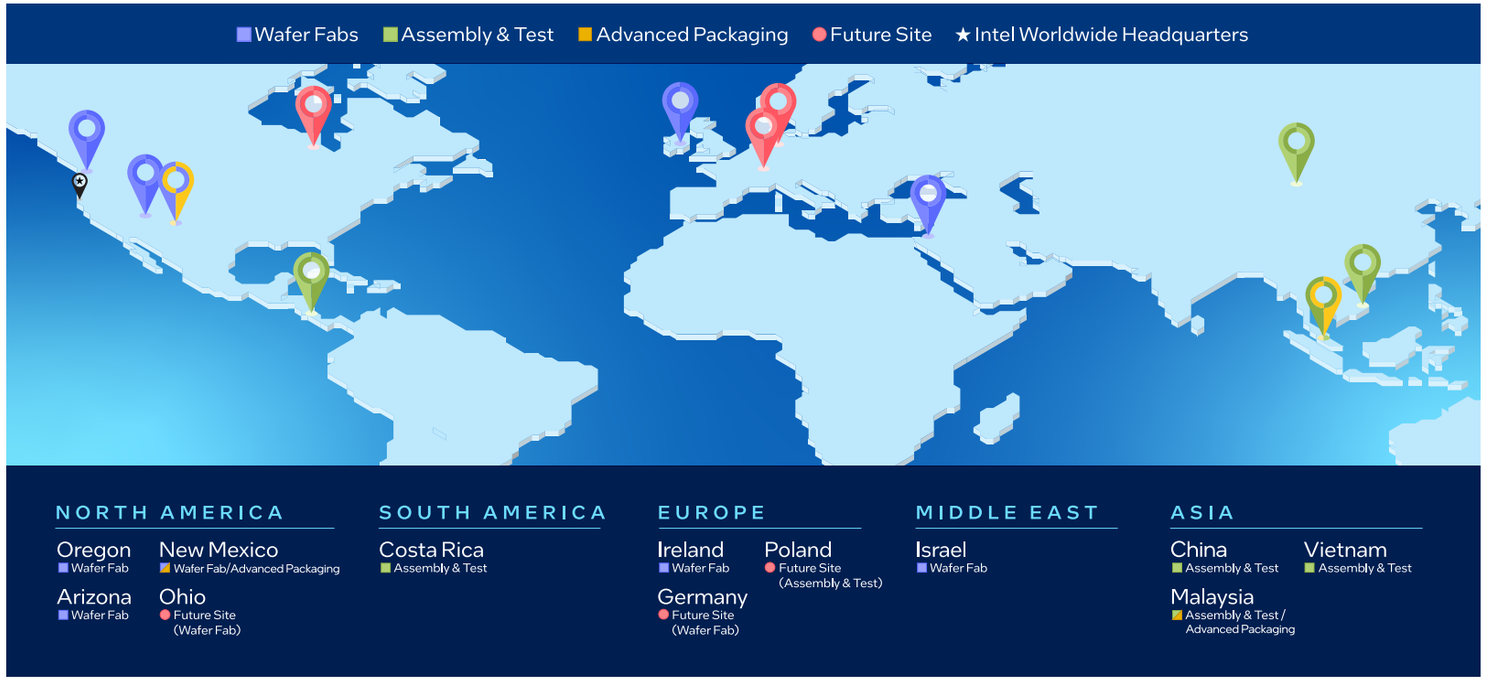
For additional 2023 financial information, see the 2023 Intel Annual Report on Form 10-K.

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 in the future. 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 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. We actively seek to protect our global IP rights and deter unauthorized use of our IP and other assets. In addition to developing patents based on our own R&D efforts, we may purchase or license patents from third parties. Intel ranked #10 in patents granted for 2023 by the US Patents and Trademark Office, our ninth straight year in the top 10.[3] For additional information regarding our IP rights, see the 2023 Intel Annual Report on Form 10-K.

Manufacturing Capital. Our IDM 2.0 strategy allows 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 will continue to build most of our products in our fabs. Second, we expect continued 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, which we expect will combine 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.

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 4, 2024.



As of the end of 2023, we had nine geographically dispersed manufacturing sites in production. We are expanding manufacturing capacity across multiple sites and geographies. These include silicon wafer manufacturing in Arizona, Germany, Ireland, Israel, Ohio, and Oregon and advanced packaging manufacturing in Malaysia and New Mexico. In 2023, we added Poland to our assembly and test expansion roadmap. These investments further our IDM 2.0 strategy and are expected to support a resilient semiconductor supply chain and to create the foundation for a next-generation chip ecosystem.

In 2023, our factories delivered continuous support to our customers as we ramped new process technologies and equipment for our products and expanded Open System Foundry offerings. 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 mission is to enable product and process leadership, industry-leading total cost of ownership, and on-time and uninterrupted supply for our customers, delivered in a responsible and sustainable manner.

Our manufacturing facilities are primarily used for silicon wafer manufacturing, assembling, testing, and advanced packaging. We operate in a network of manufacturing facilities integrated as though they were one factory to provide the most flexible supply capacity, allowing us to better analyze our production costs and adapt to changes in capacity needs. Our new process technologies, when ready for high-volume manufacturing, are transferred from a central development fab to one or more of our manufacturing facilities. The network of factories and the development fab collaborate to continue driving operational improvements. This enables fast ramp of the operation, quick learning, and quality control.

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 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. We invest in our highly skilled workforce of 124,800 people by creating practices, programs, and benefits that support the evolving world of work and our employees' needs.

We believe that an inclusive culture is important for attracting, developing, and retaining top talent, and we strive to provide a work environment where all employees from all backgrounds are valued, challenged, and rewarded. We are focused on reinvigorating our culture to strengthen our execution and accelerate our cadence of innovation. For more about our human capital competitive advantage, read the Our Talent and Inclusive sections of this report.

Social and Relationship Capital. We are committed to engaging 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.

We provide high-skill, high-paying jobs around the world, many of which are manufacturing and R&D jobs located in our factories. As we expand operations in both existing and new locations around the world, 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. We make sizable capital investments and provide leadership in public-private partnerships to spur economic growth and innovation.

The Intel RISE Technology Initiative provides an expanded channel to build deeper relationships with our customers and other industry organizations 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.

We are committed to maintaining and improving systems and processes to avoid causing or contributing to adverse impacts on human rights in our own operations, products, and supply chain. We have established an integrated approach to managing human rights across our business, including senior-level management involvement and board-level oversight. We actively manage our supply chain to help reduce risk, improve product quality, achieve environmental and social goals, and improve overall performance and value creation for Intel, our customers, and our suppliers. 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 environmental 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. We collaborate with policymakers and other stakeholders to use technology to address environmental challenges. For more information, see the Sustainable section of this report.

We invest in our highly skilled workforce of 124,800 people by creating practices, programs, and benefits that support the evolving world of work and our employees' needs.

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 and Approach
- 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 Responsible AI Principles
- 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 2023, we included ESG metrics aligned with our culture transformation and RISE goals, including employee experience, inclusion, climate change, and water stewardship. In 2024, we set new metrics in these same areas. For more details, see 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 and, at times, director participation—met with investors in 2023 to discuss a wide range of issues, including ESG and corporate responsibility topics. Regular engagement during the spring and fall outreach efforts engaged approximately 49% of institutionally-held shares, and our virtual meeting focused on corporate responsibility, environmental, and social matters engaged approximately 31% of our institutionally-held 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.

We integrate ESG information into our 2023 Annual Report on Form 10-K, 2024 Proxy Statement, and Investor Relations website and align our disclosure with external reporting frameworks such as the Sustainability Accounting Standards Board, Task Force on Climate-related Financial Disclosures, and other reporting frameworks.

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.

Board Oversight

The Board actively oversees Intel's long-term business strategy and strategic priorities and is actively engaged in aligning Intel's leadership and culture with its longstanding commitment to those subjects. For example, from early 2021 through 2023 the Board worked closely with our CEO and management in developing, announcing, monitoring, and refining the strategy and execution of "IDM 2.0"—Intel's new strategy for innovation and product leadership—and related process technology and process leadership goals. In 2023, the Board worked closely with senior management in evaluating and refining our AI strategy.

The Board's Corporate Governance and Nominating Committee (Governance Committee) has primary responsibility for the company's initiatives related to corporate responsibility and sustainability performance matters, except to the extent specifically allocated to another committee of the Board (e.g., the Talent and Compensation Committee is responsible for oversight of human capital issues, and the Audit & Finance Committee is responsible for oversight of our ethics and compliance program).

Management provides formal updates to the Governance Committee at least twice each year, and at least annually to the full Board, on the company's corporate social responsibility performance and related disclosures. In 2023, this included a review of the 2022-2023 Corporate Responsibility Report and updates on issues including environmental sustainability, climate risk and transition action plan, human capital, human rights, political accountability, and investor outreach and feedback.

In 2023, the committee retained a leading search firm to generate candidate pools with diverse perspectives, expertise, experiences, and backgrounds important to support Intel's nearer-term and longer-term Board composition needs and appropriate Board and committee succession plans, which included deep semiconductor industry and financial expertise. The committee reviews the candidate pipeline regularly. Such reviews resulted in the appointment in March 2024 of our newest director, Stacy J. Smith, who was initially recommended to the committee by the retained independent search firm.

A full description of the Board's responsibilities, skills, and experience are available in our 2024 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 of 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 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. Consistent concerns are to be addressed through senior management discussions, employee communications, process and controls improvements, and individual corrective action measures, where appropriate.

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

In 2024, for the 14th year, Ethisphere Institute named Intel to its annual list of the World's Most Ethical Companies.

The Intel Code of Conduct

We recently 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 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, the 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 2023, approximately 99% of our employees completed ethics and legal compliance training (Code of Conduct training, anti-corruption, and antitrust awareness) and over 99% received training on information security and privacy awareness (including Intel employees and contract workers). In addition, approximately 99% of assigned employees completed harassment avoidance training (including regional harassment courses), and over 99% completed Safety Always training.

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, we 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 2023, we published statements on our Public Policy blog covering a range of issues important to our business and industry, including bridging the skills gap in the semiconductor industry, responsible AI, sustainable economic growth, R&D, tax policy, cybersecurity, and more.

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:** Collaborating 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, DIGITALEUROPE, 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."

2023 Contributions

Contribution Type	Amount
Corporate contributions, including state and local candidates, campaigns, and ballot propositions	$72,000
Intel Political Action Committee contributions	$476,696

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.

Digital Climate Alliance

Together with other technology companies, we continued our commitment to the Digital Climate Alliance, a first-of-its-kind coalition of leading global companies with the purpose of informing public policy regarding the role digitalization can play as an enabler of climate solutions. The alliance's agenda focuses on building the policy infrastructure needed to ensure that the digital age enables the large-scale societal transformations needed to build a climate-safe and equitable world. Specifically, the alliance addresses how digital solutions could help reduce global carbon emissions; drive greater productivity and resource efficiency; measure and track the impact of climate initiatives; create demand for green products and services; promote accounting systems that use real-time, verifiable data to turn carbon transparency into market-driven climate action; and enhance business resiliency in the face of resource scarcity, changing market standards, industry disruptions, and unforeseen global developments.

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.

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 Democrat 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.

Intel was named a "Trendsetter" company in the 2023 CPA-Zicklin Index of Corporate Political Disclosure and Accountability.

Key Public Policy Issues

- Automotive and Transportation
- Customs and Trade Facilitation
- Digital Health
- Diversity and Inclusion
- Environment and Energy
- Global Trade
- Immigration
- Intellectual Property
- Privacy
- 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 community 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 account on X, formerly known as Twitter. Additional details on our stakeholder engagement practices and issues raised throughout the year are available on our Report Builder website.

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

Corporate Responsibility Priority Assessment

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

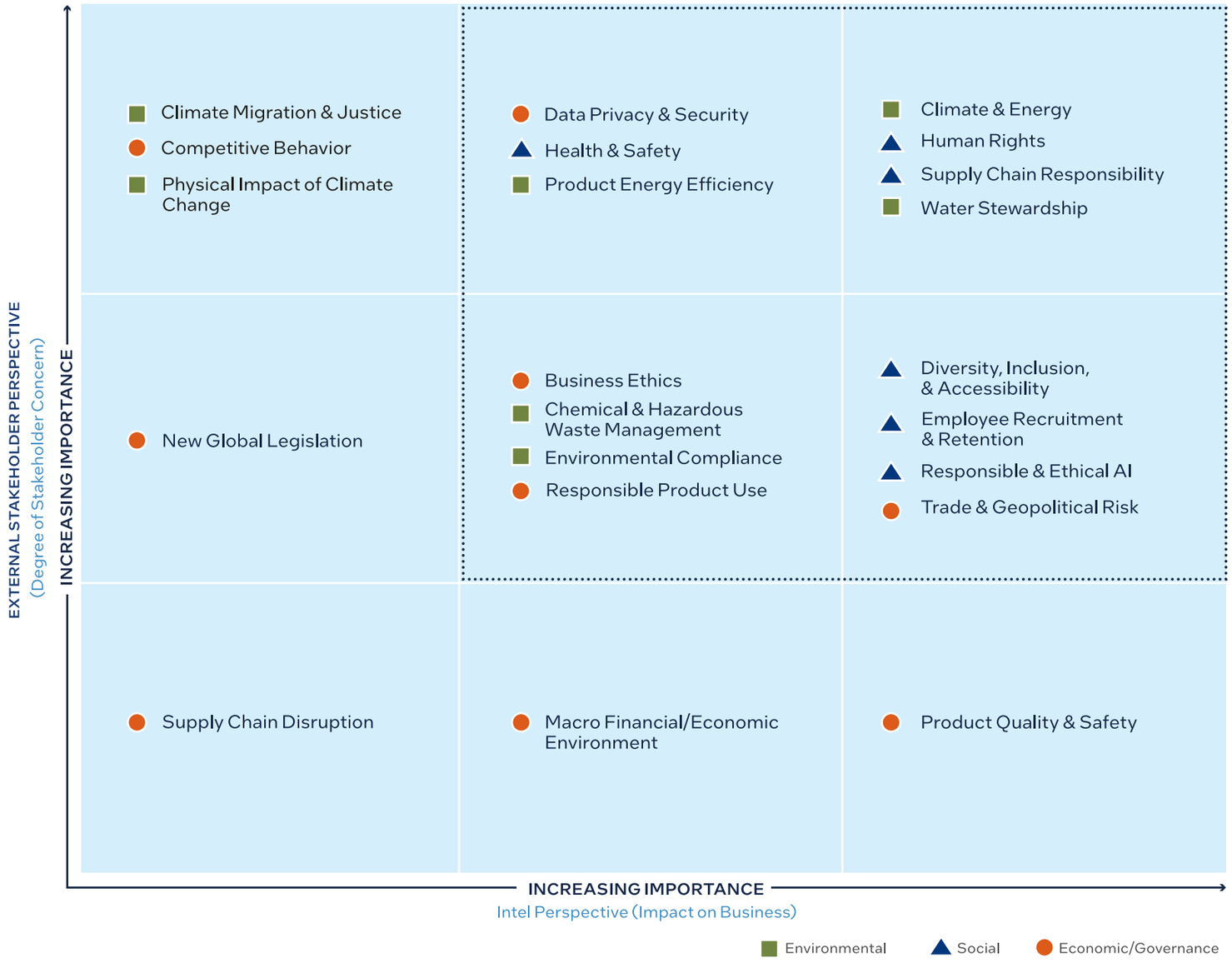
- Corporate social responsibility and social media channels
- ESG investor outreach
- Results of community advisory panels and surveys
- Customer data requests and survey data
- Employee open forums and surveys
- Meetings with governments, international organizations, and NGOs
- Human rights impact assessment 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

Additionally, Intel engages a third-party specialist to conduct a comprehensive Corporate Responsibility priority 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.

Corporate Responsibility Priority Matrix

The output of this assessment is our Corporate Responsibility Priority 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 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 subjects 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 Corporate Responsibility Priority Matrix is of importance to Intel; the issues 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.



Respecting Human Rights

Human rights are the fundamental rights, freedoms, and standards of treatment to which all people are entitled. The recently updated Intel Global Human Rights Principles and Approach statement, 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, ILO 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 contractors, our subsidiaries, and our business relationships, including our supply chain. We aim to support the rights of all our stakeholders, including end users, and are committed to maintaining and continuously improving our systems and processes to avoid causing or contributing to adverse impacts on human rights in our own operations, our products, and supply chain. We also look for opportunities to apply our technology to support the advancement of human rights. Learn more about our approach, principles, and processes.

Human Rights Governance

We have established an integrated approach designed to embed respect for human rights 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.

The ECOC, which is chartered by and reports to the Audit & Finance Committee of the Board of Directors, is responsible for overseeing compliance with and approving changes to 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 Board's Governance Committee has primary responsibility for oversight of corporate responsibility at Intel, including human rights issues; management provides formal updates to the Governance 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 and approved by our Board and signed on the Board's behalf 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—such as those 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, and a member of the Global Business Initiative on Human Rights and the Partnership on AI. In 2023, we discussed human rights issues with peer companies and experts such as NGOs and investors who specialize in business and human rights.

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. We respect the human right to a safe, clean, healthy, and sustainable environment. Our commitment to environmental stewardship and sustainability is embodied in the policies mentioned above, as well as the Intel Climate Change Policy Statement and the Intel Code of Conduct.

Our Supply Chain

As an active and founding member of the RBA, we have the same expectations for our suppliers as we have for ourselves. For more than a decade, we have directly engaged with many of our suppliers with regard to their internal human rights programs. We work with them to build capabilities, verify compliance, monitor progress, and maintain a culture of continuous improvement. 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 worker fees to obtain employment. As a result of our efforts, since 2014, suppliers in our global supply chain have returned more than $27 million in recruitment fees to their workers.

For more information, see "Respecting Human Rights in the Supply Chain" in the Responsible section.

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. Intel is committed to the right to privacy and freedom of expression. We seek to protect against unauthorized access, use, destruction, modification, or disclosure of personal information and data, as outlined in Intel's privacy policy. Intel's policy is to not design functionality into any of our products that would enable others to compromise the security of our technologies in ways that could be used to infringe on privacy or limit the freedom of expression.

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 adversely impact 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. Intel has long recognized the ethical and human rights implications associated with the development of technology. With the development of AI technology, we remain committed to evolving best methods, principles, and tools to ensure responsible practices in our product use, design, and development. For more information, see our Responsible AI Principles and "Responsible AI" in the Responsible section of this report.

The Intel Global Human Rights Principle and Approach statement includes 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 that are sold to end users by system manufacturers, distributors, 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, Intel does not support or tolerate our products being used to adversely impact human rights. We evaluate potential concerns and implement a high confidence standard to prevent and mitigate product misuse. Where we become aware of a concern that Intel products are being used by a business partner in connection with abuses of human rights, we will restrict or cease business with the third party unless and until we have a high confidence that Intel's products are not being used to adversely impact human rights.

In 2023, 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 and Approach. 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 "High Confidence Standard." We continue to leverage the UN Guiding Principles on Business and Human Rights and due diligence standards under the laws and regulations that apply to our business in the US and globally.

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. One output of this work is Intel's Human Rights Salient Risk 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 Impact Assessment, Salient Risk Matrix, and Salient Human Rights Risk mapping is publicly available on our Report Builder site and our Human Rights website, and is widely communicated internally to provide visibility to 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 rights holders in a dynamic global environment.

"We will continue to build on our strong legacy of respect for human rights by embedding it at the core of every function of our business."

—Pat Gelsinger, Intel Chief Executive Officer

2024 Human Rights Priorities

- Continue our commitment to maintaining and improving systems and processes to avoid causing or contributing to adverse impacts on human rights in our own operations, our products, and supply chain. Engage with and listen to people whose human rights we may affect, continuously seeking to implement our principles and approach, and assess our business practices for alignment with respect for internationally recognized human rights.
- Continue to engage in stakeholder and industry dialogues and research regarding potential human rights issues related to emerging technologies, for example, advancing standardization efforts around manipulated content detection and responsible generation of synthetic media in collaboration with associations like the Coalition for Content Provenance and Authenticity and Partnership on AI; funding and collaborating on responsible AI with academic researchers and relevant government programs such as the National Science Foundation and the MLCommons® AI Safety Working Group in the areas of safety, 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 adverse human rights impacts related to our operations, supply chain, and products. For more details, see "Respecting Human Rights in the Supply Chain" in the Responsible section.

UDHR Article # and Fundamental Human Rights	Potential Impacts on Rights Holders: Operations	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 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 and Approach, 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 details, also see our Human Rights Impact Assessment, Human Rights Salient Risk Matrix, and Salient Human Rights Risk Mapping.

Supply Chain Responsibility

Our long-standing dedication to supply chain responsibility and sustainability stands out as an example of how our corporate philosophy and practices of transparency, governance, and ethics can have global impact. Our customers and stakeholders expect Intel to lead and deliver innovative solutions in both our products and how our products are created. Our supply chain responsibility and sustainability efforts are focused on our being an active steward of the resources that contribute to the technology that Intel creates and inspiring the greater ecosystem to do the same.

We work to enhance Intel's overall global environmental, social, and governance impact by actively engaging our suppliers and stakeholders to innovate and operate in a way that is sustainable and responsible. We collaborate with industry groups and other organizations to drive supply chain policies and practices that create value for customers and mitigate risk for people and the planet. Our priority programs focus effort in critical areas where we want to accelerate and see results. Our work with suppliers focuses on enabling them to meet their environmental and corporate responsibility commitments. To advance practices across our supply chain, we engage, educate, and support suppliers as they improve and perform due diligence. The semiconductor supply chain is dynamic, and through our constant support, investment, and presence, we can report positive and sustained outcomes that are valued by our customers, suppliers, collaborators, and stockholders.

Essential Supply Chain Collaborations

Each year, we are grateful for a strong ecosystem of suppliers, peers, and organizations that share a collective commitment to further the purpose of responsibility and sustainability in the supply chain. Sustainable and ethical practices in our operations are core to our success, and this work cannot be accomplished alone. We are pleased to lead and participate in collaborations that improve the way supply chain responsibility work is done and drive creative solutions to global challenges.

As a founding member of the Responsible Business Alliance (RBA) and a current member of the board, we enthusiastically work to support the RBA and other industry groups. We are also a founding member and are represented on the governing council of the Semiconductor Climate Consortium, which gained traction and momentum this year. In addition, Intel is a founding co-sponsor of the Catalyze program, a supply chain renewables accelerator program. In June of 2023, we announced a new goal to achieve net-zero upstream Scope 3 GHG emissions by 2050. We know that we cannot set and achieve such goals without collaborators that share a commitment to an ethical and sustainable supply chain.

"Intel has been a trusted leader in ethical business practices and operations for decades, and with leadership comes responsibility. Through our commitment to responsible supply chain practices and collaborative consortia, we're setting new standards and driving positive global impact that resonates with our customers, suppliers, and workforce alike."

—Keyvan Esfarjani, Intel Executive Vice President, Chief Global Operations Officer, and General Manager, Foundry Manufacturing and Supply Chain

[1] 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.

Supply Chain Responsibility Programs

We aim to be a global steward of the resources in Intel products and to protect the most vulnerable workers in our value chain.

Supply Chain Human Rights. We work to 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. Read more about our work in "Respecting Human Rights in the Supply Chain" in the Responsible section of this report.

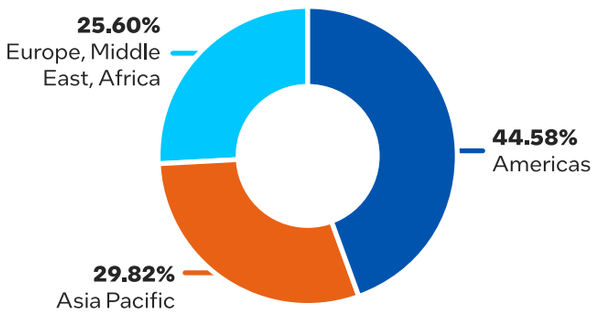
Supplier Diversity and Inclusion. We work to increase global spending with contracted diverse-owned suppliers,[1] and have a 2030 goal of $2 billion in such annual spending. For more details, see "Supplier Diversity and Inclusion" in the Inclusive section of this report.

Responsible Minerals Sourcing. We work to expand our efforts beyond conflict minerals to cover all minerals used in semiconductor manufacturing and apply the learnings to lead our industry in creating new sourcing standards. For more information, see "Responsible Minerals Sourcing" in the Responsible section of this report.

Supply Chain Sustainability. We work to enhance Intel's global environmental performance through the advancement of positive environmental actions in the supply chain. This includes collaborating with Intel's supply chain ecosystem to reach net-zero upstream Scope 3 GHG emissions by 2050. For more details, see "Supply Chain Sustainability" in the Sustainable section of this report.

Responsible Chemicals. We work to improve chemical management practices and chemical sustainability initiatives across the electronics supply chain to enable greener chemical solutions where technologically feasible. For more details, see "Sustainable Chemistry" in the Sustainable section of this report.

2023 Suppliers by Region



Active Engagement, Support, and Due Diligence

We approach our supply chain responsibility work in a structured way that enables us to actively engage, educate, and support suppliers. We align on expectations through Intel and industry standards. Due diligence is performed through assessments and audits. Key deliverables and outcomes are monitored and tracked. We recognize excellence through our formal supplier recognition program.

The scale of our supply chain responsibility work is extensive. Approximately 8,200 first-tier[2] suppliers in over 85 countries, regions, and territories provide direct materials for Intel's production processes, intellectual property, tools and machines for our factories, logistics and packaging services, construction, marketing, software, and travel services. 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.

Strengthening Supplier Capabilities

We support suppliers as they build critical sustainability and corporate responsibility acumen. 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. 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. We expect our suppliers to develop their own corporate responsibility strategies, policies, and processes; set goals and report on their performance; and engage with audits to mature their own suppliers.

Our supplier development, monitoring, and enforcement efforts are integrated across our commodity teams. This integration helps 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 our annual letter to suppliers.

Supplier On-Site Safety Programs. During our contracting process and orientation for new suppliers, we establish high standards for safety training and performance. 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 standards, OSHA regulations, and Intel's minimum safety requirements. We expect safety programs to be in place at both supplier facilities and at Intel sites.

Advancing Accountability Through Assessments and Audits

Intel's processes are designed to regularly evaluate, verify, and address risks in our supply chain. Our suppliers and their suppliers are expected to comply with the Intel Code of Conduct, Intel's Supplier policies, and the RBA Code of Conduct (RBA Code). Having established clear expectations with suppliers, we then perform due diligence on a set schedule to ensure performance and adjust as needed. We strive to audit 100% of major suppliers and high-risk supplier sites within a two-year cycle. Additional suppliers may be audited at our discretion. The audit standard we utilize throughout our supply chain is the RBA Code of Conduct, which has expectations in the areas of human rights, health and safety, environmental ethics, and management systems. For more information, see the Responsible section of this report.

Supplier Program to Accelerate Responsibility and Commitment (SPARC). SPARC is a collaborative and proactive initiative designed to help our suppliers build internal capacity around corporate responsibility through rigorous commitments to compliance, transparency, and capability-building. We have increased the number of suppliers required to participate in SPARC over the past 10 years to encompass both suppliers selected using our risk-based approach and those providing critical materials and services to Intel. We broaden the scope as needed to include additional programs and bring requirements into a single framework. The SPARC program is a key aspect of how we provide training and ongoing communication to suppliers as we manage to new expectations and requirements.

Supplier Report Card (SRC). Intel conducts regular reviews and has a scoring process that evaluates our suppliers for product availability, cost, quality, sustainability (ethics, supplier diversity, and environmental and human rights performance), security, safety, technology, and customer satisfaction. This process enables executive-level dialogue on past and future performance and reinforces the expectations we have for our suppliers.

Recognizing and Rewarding Performance. The Intel Excellence, Partnership, Inclusion, and Continuous Improvement (EPIC) Program is a structured, multi-year roadmap that helps suppliers improve their products and services while achieving consistent performance. As part of providing regular feedback to suppliers on their overall progress and achievements, we integrate corporate responsibility considerations into the EPIC program. EPIC recognizes suppliers that have demonstrated outstanding, distinguished, and valued performance. Visit our supplier website after July 2024 to see a list of 2023 suppliers that received EPIC recognition.

[2] First-tier 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. Beyond this, we also engage with high risk identified lower tier suppliers through several of our supply chain responsibility programs.

Our Talent

Our people are at the heart of our transformation journey—building our technology, unlocking new business opportunities, and working with our customers and stakeholders to create world-changing technology to improve the life of every person on the planet. Human capital is the greatest value creator available to any organization. A Korn Ferry economic analysis indicates that for every $1 invested in talent, $11.39 is added back to the GDP.[1] Intel is committed to unlocking the true potential of our talent as a competitive advantage for us and the world. 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.

This year's highlights

Our promise to employees

We refreshed our Employee Value Proposition (EVP)—the promise we make to employees and candidates for their work in support of Intel's purpose. We believe that our new EVP enables us to more effectively market Intel's value to current and future employees.

Improved career navigation

We launched a new job architecture with updated roles and career paths to improve skills assessments and help employees navigate their careers more consistently and fairly.

Developing technical leaders

We revitalized our technical career path to strengthen alignment to business unit priorities and enable faster decisions. This built upon our technical readiness indicators that describe behaviors our technology leaders need to embrace to create a community capable of solving the world's most difficult challenges.

[1] Korn Ferry Economic Analysis.

Talent: Our Approach

We believe our talent is part of our competitive advantage. Over the past three years, we have focused on building a strong foundation for repeatable, sustainable investment that supports our efforts to have the right talent to deliver on our IDM 2.0 transformation strategy. We believe that an inclusive culture is important for attracting, developing, and retaining top talent, and we strive to provide a work environment where employees from all backgrounds are valued, challenged, and rewarded. Detailed information on our programs and initiatives designed to support inclusive hiring, retention, and progression is available on our Diversity and Inclusion website and in the Inclusive section of this report.

Our human capital philosophy includes three pillars to position our talent strategy as a competitive advantage:

- **Hire and retain the best talent:** We refreshed and expanded our Employee Value Proposition (EVP), the promise we make employees and candidates for their work in support of Intel's purpose. We also embrace the future of work with a flexible, hybrid-first[1] approach that differentiates Intel from competition.
- **Develop our talent to full potential:** We have updated roles and careers to better enable mobility and help top talent work on the highest priorities.
- **Create a winning culture:** We have reignited Intel's results-driven, performance culture.

"We remain committed to building a dynamic workplace where all employees are inspired and encouraged to achieve their full potential, thereby enabling Intel to remain an industry leader and drive continued innovation."

—**Christy Pambianchi,** Intel Executive Vice President and Chief People Officer

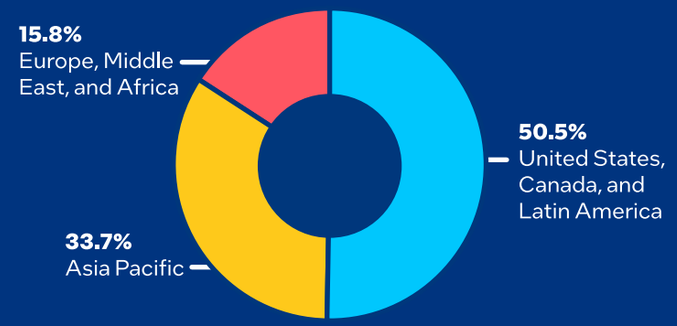
Intel Workforce at a Glance

124,800 employees globally

90.3% of our employees serve in technical roles

5.6% undesired turnover in 2023

Employees by Region



[1] "Hybrid-first" refers to a company that allows the majority of its employees to split their time between working remotely and in the office.

Hire and Retain the Best Talent

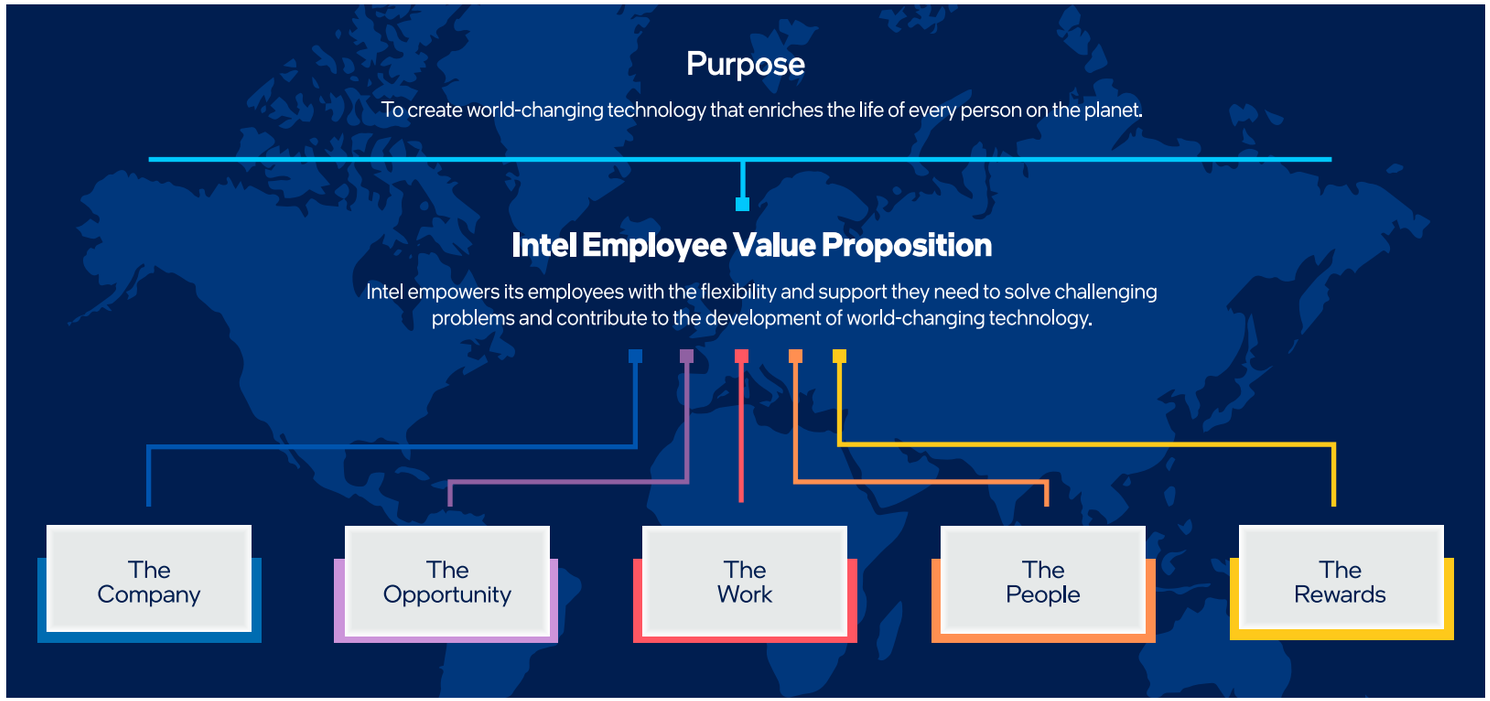
At Intel, we empower our employees to create life-changing innovation and deliver solutions to humanity's biggest challenges. Our Employee Value Proposition (EVP) is the promise we make to employees and candidates for their work in support of Intel's purpose. With Intel's IDM 2.0 transformation, we refreshed and expanded that promise to improve our ability to:

- Retain our best and brightest employees to reduce voluntary turnover;
- Compete for new talent by differentiating Intel from other employers; and
- Inspire our employees to be advocates for Intel through their own stories and compelling messages about why it's great to work here.

In 2023, teams across Intel were involved in developing our new global EVP, using a variety of data-driven, analytical activities, such as surveys, interviews, audits, and concept testing. The research showed that employees attach great importance to being empowered with the flexibility and support to do meaningful work that improves lives around the world.

Intern Program

Despite the challenging and dynamic environment for technology, we have maintained our intern program as part of our continuing goal of building a solid talent pipeline. In 2023, Intel hosted 8,642 interns globally, and found full-time roles for 58.3% of prior interns. We plan to continue to invest in our intern and student programs to support our IDM 2.0 strategy across the wide spectrum of Intel's businesses.



Our global EVP framework encapsulates Intel's value to current and future employees.

Each of the five EVP pillars are supported by programs and aspects of Intel that together describe the value the company offers current and future employees:

- **The company:** Intel's legacy unites employees in pushing the boundaries of technology, and provides stability, industry leadership, global work teams, a high-performance culture, and awards and acknowledgments.
- **The opportunity:** Employees have opportunities to grow and unlock their abilities to shine through personal and professional development opportunities, lifelong learning, career mobility, and networking with colleagues.
- **The work:** Intel's work has the power to change lives and better the world, enabling employees to take on exciting challenges, drive innovation, and impact humanity.
- **The people:** Intel's shared values bring out individual voices and diverse perspectives, and create belonging, recognition, visionary leaders, and supportive managers.
- **The rewards:** Employee overall well-being is supported both at work and at home, through health and wellness programs, a flexible work life, compensation and benefits, and opportunities to give back to communities.

Compensation and Benefits

Our total rewards package ranks among the best in the industry—including competitive pay, stock, bonuses, and benefit programs. In January 2023, we implemented temporary austerity measures related to Intel's compensation, benefits, and recognition programs. These measures were intended to help preserve the overall investments needed to accelerate our company transformation and the people needed to execute it. We began reinstating affected compensation programs in October 2023. The leadership team continues to work to manage the business within financial guidelines and restore compensation programs.

We structure pay, benefits, and services to meet the varying needs of our employees. Our bonus programs link 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" in the Our Business section.

Stock Equity Plans: Our stock programs offer eligible employees the opportunity to share in Intel's future growth. Typically, we grant restricted stock units (RSUs) each year, which vest periodically and convert into stock that can be held or sold. In addition, eligible employees can purchase Intel stock through payroll deductions at 85% of fair market value through our popular Employee Stock Purchase Plan.

Our total rewards package also includes comprehensive healthcare and retirement benefits, paid time off and family leave, parent reintegration, fertility assistance, adoption expense support, 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.

Recognition and Appreciation

We believe in celebrating the accomplishments of our employees through recognition e-cards, shout-outs in team and organizational meetings, e-mails, and more. In times of austerity, we encouraged and supported non-monetary recognition for peer-to-peer, manager-to-employee, and group awards. Recognition has tremendous value and there are many ways to provide recognition in a company as large and diverse as Intel. We used the time last year to reimagine the future of recognition at Intel, and, in January 2024, announced a new, streamlined program to encourage and reward recognition.

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.

Wellness time continued to be available to employees 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 a mental health professional, programs, tools, and learning opportunities that can support their journey of mental wellness, with global and site-specific options. For more details, see "Employee Health, Safety, and Wellness" 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.

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.

Develop Our Talent to Their 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 learning resources that help employees keep their skills up-to-date. We also provide financial assistance for job-related degrees and coursework.

We continue to provide our virtual learning platforms to deliver technical, innovation, and collaboration skills training and programs, as well as on-the-job development opportunities through rotation or temporary assignment programs.

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

Renewed Job Architecture

In 2023, we upgraded our job architecture—that is, our job titles and associated skills—using a more precise and modern approach. The updated titles and skills improve the structure of our jobs, and we have a global, centralized job catalog that is applicable across Intel.

For employees, the more specific titles and associated skills will provide better insights into jobs they may be exploring based on their skills and interests. This also gives Intel a better view of the work our employees are performing, which will help us understand and act on current talent gaps and be better able to staff future projects.

The new job architecture also helps instill job clarity and drive fairness while enabling diversity, equity, and inclusion, and improve our ability to connect jobs to capabilities and ensure market alignment.

With a consistent skills architecture, we are able to better understand the skills of our employees and gain insight into any talent gaps. A centralized library of skills content is leveraged to build capabilities and workforce analytics are in place to drive business staffing investment decisions.

Job architecture enhancements also empower our employees to navigate their careers at Intel through our newly launched Career Compass, a unified learning and development platform. With a clarified job catalog and skills profiles, Career Compass offers employees an improved way to chart their own career pathways and work-life balance—from gaining new skills to finding new job opportunities, connecting with mentors, and exploring new hobbies.

We believe that Intel benefits from an ongoing understanding of workforce skills, and building and delivering improved development plans and providing richer coaching conversations between managers and employees.

From Finance Intern to Tech Maverick

"Yes, sure. Let's give it a shot!" Throughout her professional journey at Intel, Alexis Crowell has followed this motto, gaining confidence from Intel's faith in her abilities as she moved up the ranks from intern in 2004 to her current role as Vice President and General Manager of Intel's Sales, Marketing, and Communications Group in Asia Pacific and Japan. "My career has been an amazing, winding road that I am forever grateful for," she says. "I've seen the world, worked with the smartest people on the planet, and continue to help make the world a better place through technology." Read more about Crowell's Intel journey.

"To compete in today's hyper-competitive, fast-moving talent landscape, jobs and skills reflect the market. A refreshed job architecture can ensure our top talent is working on our highest priorities—and give employees a clear path to find roles that match their skill sets. It also enables leaders to get a holistic view of the talent in their organizations and to plan ways to grow or gain the talent they need to succeed."

—**Christy Pambianchi,** Intel Executive Vice President and Chief People Officer

Revitalized Technical Career Path

Intel technologists have the opportunity to enjoy challenging, satisfying, world-changing work. Those on Intel's technical job ladder may start their careers as early as their college years as participants in the company's intern program and then move up through the engineering ranks. Employees who reach the highest level of technical achievement, Senior Fellow, guide Intel in new technical directions and propose new areas for development based on extremely advanced technical knowledge and judgment. Throughout their careers, Intel technologists are guided and coached by more senior technical employees. Promotions to the next level of seniority are reviewed by technical peers in addition to managers.

In 2023, we revitalized Intel's Fellows career path to strengthen alignment to business unit priorities and enable faster decisions. This work built upon our technical readiness indicators (TRIs), which provide a high-level framework for what is expected from technical leaders at Intel and support our culture and business transformation. The TRI pillars emphasize behaviors that we need technologists to embrace to create a thriving technical community that solves our toughest problems:

- **Expertise: What you know.** Serve as a top domain expert and trusted advisor; advocate for continuous learning; exhibit expert-level judgment; anticipate emerging trends and future customer needs.
- **Leadership: How you lead.** Foster a culture of inclusion, innovation, and empowerment of others' success; build trust and followership; develop technical talent; act as a change agent and challenge the status quo; admit mistakes, take accountability, and learn from failure; set technical direction; align organizational goals.
- **Impact: Results you achieve.** Formulate strategy; focus on solving Intel's most important and complex technical problems; lead delivery of solutions; influence industry standards; demonstrate relentless execution in bringing products and technologies to market; shape the technology ecosystem.
- **Aspirations: What drives you.** Aspire to make a positive impact on Intel and the world through your work; seek to be seen as an inspiration for others.

Intel is applying its reach, scale, and resources to deliver on bold goals in this period of significant change. We want our people to be a critical competitive advantage for Intel. Our people are at the very center of these transformational changes—helping, ultimately, drive Intel to win.

Create a Winning Culture

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. All employees are responsible for upholding these values, the Intel Code of Conduct, and the Intel Global Human Rights Principles and Approach, which form the foundation of our policies and practices and ethical business culture.

Employee Health, Safety, and Wellness

Integral to Intel's winning culture is a strong focus on employee health, safety, and wellness. We continue to invest in programs to provide a safe and injury-free workplace and to help employees enjoy a better quality of life. For more details, see "Employee Health, Safety, and Wellness" in the Responsible section of this report.

Communication and Employee Engagement

Employees support Intel's success better when they have a clear understanding of 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 (EES) invites our entire employee population to provide feedback on Intel culture, leadership, career opportunities, and engagement. We also have an Employee Inclusion Survey (EIS) to help us understand how different employee populations experience inclusion at Intel. Results from these surveys inform how we continue to move forward and build momentum. Read more detailed information about our survey results in the Inclusive section of this report.

Employees can provide aggregated commentary 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.

Employee experience survey results. Intel's overall favorability score was 81%, which is high for employee surveys. This represents a year-over-year decline from 2022's highest recorded favorability score of 85%, but it is in line with our 2021 results, which were a marked improvement over prior years. Results indicate that we need to do a better job building belief in Intel's future and ensuring trust in leadership. We take employee feedback seriously and will focus on these areas.

91%
"I am treated with dignity and respect at work."

90%
"Intel creates an environment where people of diverse backgrounds can succeed."

90%
"My organization supports and encourages employees' safety, physical health, and well-being."

89%
"There is a clear link between my work and Intel's strategy."

88%
"I would recommend Intel as an inclusive place to work."

Responses from the 2023 Employee Experience Survey.

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.

Engaging Employees in Our RISE Strategy

Intel and the Intel Foundation invest in programs that create opportunities for employees around the world to help advance Intel's purpose and corporate responsibility goals. Through our "Learn, Act, Transform" engagement model, we host learning sessions to educate employees about Intel's corporate responsibility priorities; use our RISE portal to provide information and opportunities for employees to take action through volunteerism; and create cross-functional teams across business units to plan and integrate customized strategies to achieve our goals. The following are examples of these strategies in action.

AI Global Impact Festival. Intel employees contribute their time and skills through multiple Intel programs aimed at helping us achieve our global RISE goals. This includes the AI Global Impact Festival, an annual Digital Readiness initiative that highlights innovative AI projects of developers from around the world. Intel employees contribute as judges for the global competition and as mentors to the winners, helping students and teachers develop their technical, social, and business skills for AI.

Engaging for Sustainability. To enable employees to become champions of sustainability, we have engaged externally with EARTH 51, a global sustainability leadership organization. In the EMEA region, Intel and Lenovo collaborated with EARTH 51 to establish a sustainability leadership certification program focused on promoting environmental awareness and social responsibility through educational initiatives. Hundreds of leaders within Intel and Lenovo have attended EARTH 51 sustainability leadership modules, workshops, and seminars, which cover topics such as carbon footprint reduction, responsible sourcing, energy efficiency, food waste reduction, and recycling initiatives.

The initiative is a purposeful strategic alliance aimed at promoting sustainable practices within the technology sector. The joint effort drives environmental consciousness and social responsibility through education, and underscores the transformative potential of educating stakeholders about sustainable practices.

Feedback from employees who have taken this course indicates that it is an example of Intel's commitment to environmental leadership. The knowledge is helping employees drive efficiency in response to the needs of our customers and community stakeholders.

Intel has a long history of developing, supporting, and promoting initiatives that acknowledge the significance of environmental responsibility and social impact. We have established a comprehensive sustainability framework that spans the tech industry, working closely with key Intel customers and ecosystem collaborators. In 2023, for example, Intel EMEA developed a series of EARTH books to facilitate collaboration between Intel and our ecosystem to drive sustainability transformation programs.

The messages conveyed in these initiatives served as connecting platforms for the healthcare, public services, automotive, and financial services industry sectors with Intel® technologies like responsible AI, trusted security, renewable energy, and sustainability in hardware. Collaborating with EARTH 51 to craft social impact and environmental narratives that resonate with our customers is a crucial step in initiating conversations that seek to address sustainability challenges.

"We at EARTH 51 are proud to be collaborating with Intel to achieve our vision of creating better businesses for a better world. The 2023 EARTH Award is a reflection of Intel's commitment to this joint cause."

—Akhil Handa, EARTH 51 Chief Executive Officer

Intel teams are also collaborating to scale the EARTH 51 sustainability program to participants in the AI for Youth program in Ghana, West Africa by providing seed training for participating schools and colleges.

In recognition of these efforts, Intel received the prestigious EARTH Award from EARTH 51 in 2023.

Looking to the Future: IDM 2.0

Our human capital strategy is grounded in our belief that our people are fundamental to our success. Delivering on our 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. The investments we are making to accelerate our process technology require continued and focused efforts to attract and retain critical technical talent.

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. We are investing in our highly skilled workforce by creating practices, programs, and benefits that support the evolving world of work and our employees' needs.

We have built a strong leadership bench with key technical and functional leaders from across the technology sector, and our people are focused on driving Intel's long-term growth strategy. We believe our people strategy and team will deliver on our IDM 2.0 transformation.

Fostering Talent for a World With AI Everywhere

As a responsible company helping the digital economy grow, Intel recognizes the urgent need to upskill and reskill the workforce across industries. AI-ready talent is critical to the success of our IDM 2.0 strategy. We continue to invest in public-private programs to make technology inclusive and expand digital readiness with AI skills. In 2023, we commissioned research with Jobs for the Future on AI's impact on the top five industries and top 10 jobs per industry. The report—which we shared with policymakers, civil society, and industry collaborators—described how AI can reshape, not replace, jobs when we invest in human capital as a competitive advantage. We continue to educate stakeholders on our approach to long-term workforce development as a key differentiator for us and the communities where we operate.

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

58 employees earn safety honors

Through our Safety Always-Safety Star program, we honored 58 employees for their work to advance Intel's safety culture in 2023. Honorees are recognized as role models who go above and beyond to make Intel a safe place.

>$27 million in recruitment 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 $27 million in fees to their workers since 2014. Intel ranked number 2 out of 60 public ICT firms in KnowTheChain's 2022–2023 benchmarking of corporate efforts to address forced and bonded labor risks in their supply chains.

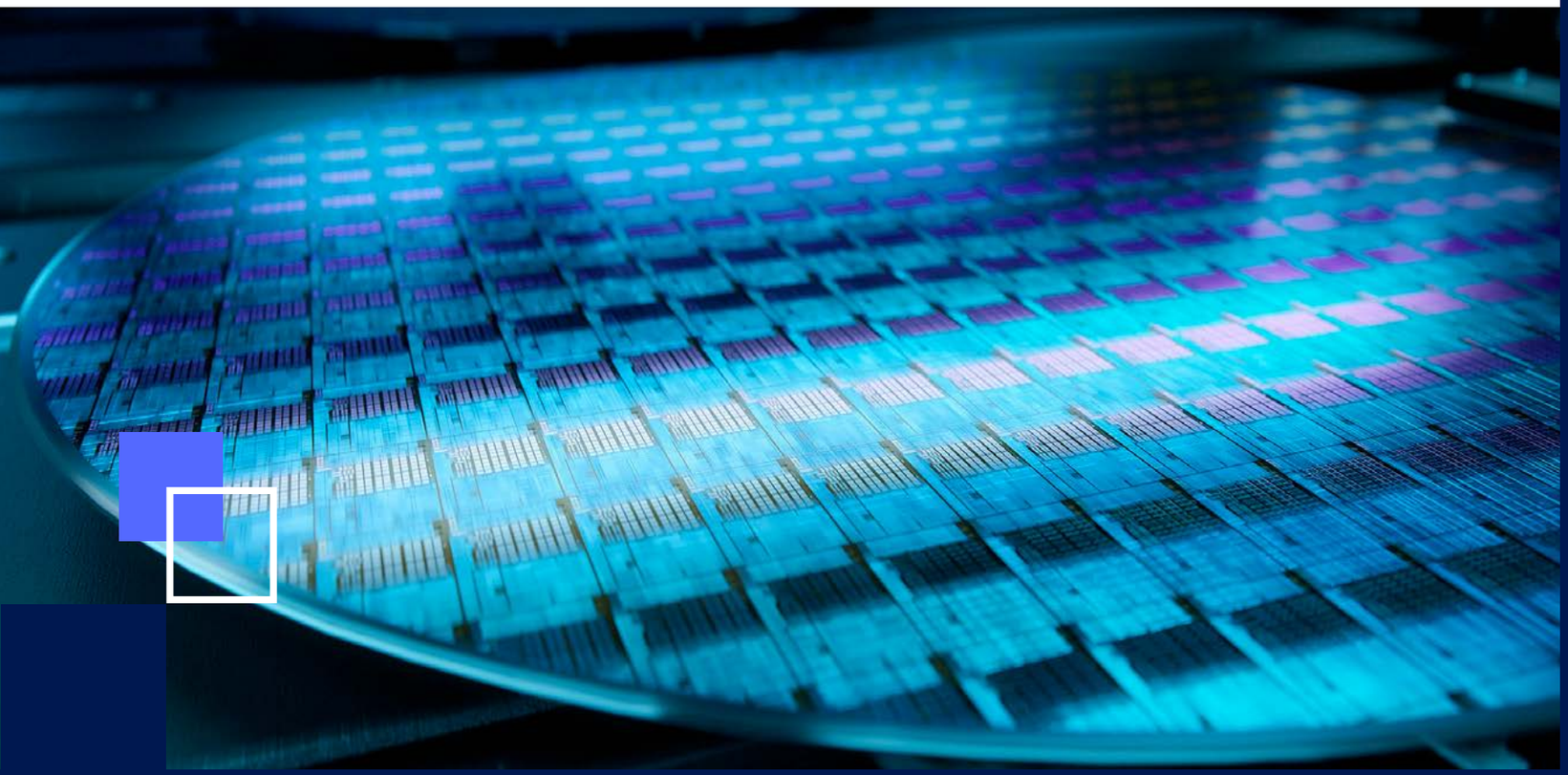
Responsible AI strategy

In 2023, we evolved our responsible AI strategy and principles to reflect recent innovations and emerging risks. Key progress included adding a "Protect the Environment" principle, launching new internal and academic research, and increasing focus on AI safety by engaging in critical new multi-stakeholder initiatives.

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 have significantly expanded 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 changes and grows, and to expand the global impact of our wellness programs.



intel RISE

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 minerals[1] 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 contracted suppliers and all high-risk-identified suppliers in the supply chain.

[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.

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 EHS management to our business success and 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 2023, independent third-party audits were conducted to maintain this certification. For information on our EHS assurance program, see"Environmental Management" in the Sustainable section of this report.

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, virtual and augmented reality, and on-the-job training. Throughout the year Intel employees are required to complete designated EHS training, as relevant to their roles. In 2023, more than 370,500 such training courses were completed.

In 2023, 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. Safety TALK goals were exceeded every quarter. We also refreshed our 2023 Safety Always training course using updated training methodologies. To boost safety awareness across the company, this training continues to be assigned to all employees, and 98% of our workforce completed it in 2023. 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.

Recognizing that early intervention is critical for good ergonomic health and the prevention of injuries, in 2023, we continued with our Ergo+ concierge program. Ergo+ concierge provides one-on-one advice and proactive ergonomic assessments for employees working in both remote and in-office setups. In 2023, over 19,000 employees engaged in the program. Individual organizations additionally targeted a 25% engagement rate, and a number of business groups exceeding 30% engagement of employees having personalized recommendations from an ergonomics specialist to help manage their ergonomic health. Employees can initiate these services via an online tool.

We also set a global leading indicator to support employees' compliance with rest breaks, using software prompts to encourage employees to take breaks for musculoskeletal recovery. Break compliance improved from 91% to 92% for those participating during 2023.

In addition, we continue to expand our year-round multimedia Safety Always employee awareness campaign. In 2023, we held in-person events at multiple sites, as well as virtual engagements with business leaders and experts from a variety of fields who provided new perspectives on safety, health, and wellness topics. The campaign included interactive learning games on safety, as well as regular, widely read employee communications on topics such as traffic safety, ergonomics, and improving safety culture.

Intel ended 2023 with an OSHA recordable rate of 0.83 per 100 employees, compared to the most recently published US semiconductor industry average recordable rate of 1.4 in 2022.[1] Our 2023 days away case rate[2] was 0.16, compared to the most recently published semiconductor industry average of 0.4.[1] Ergonomic-related or cumulative trauma disorders (CTDs) remained the most prevalent type of injury experienced at Intel in 2023, accounting for 61% of all reports, followed by strains/sprains. While ergonomic injuries remain our highest injury occurrence, our 2023 Office Ergonomics Program's early intervention focus is starting to have an impact, with a 15% reduction in office CTD rates compared to 2022. We are working to integrate learnings into our 2024 ergonomics program's early intervention focus plans.

In 2023, 98% of our workforce completed our Safety Always training course.

[1] Source: Bureau of Labor Statistics. 2022 indicators.

[2] Days away begins the day after the accident.

Ergonomics | Management Systems | Safety Communications | Site Safety

8 Countries | **58** Employees TOTAL

6 Teams | **10** Individuals | **16** RELATED PROJECTS

Recognizing Safety Achievements

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 125 individual and team nominations received globally.

Safety Star Achievement Examples

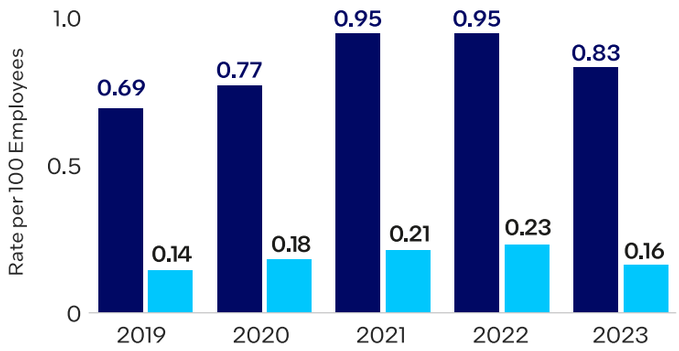
Enhancing Safety Audits. The Control Of Hazardous Energies (COHE) Audit App team identified a need for a scalable and standardized safety auditing system as the Intel Ireland site expanded. This team in Intel's Manufacturing Supply Chain and Operations organization worked to develop the COHE app, which replaces the paper-based auditing system with a digital app that includes features such as image capture, comments, and best-known methods. The app is designed to follow the COHE standard and allows for real-time data recording, making it easier to identify COHE trends and ensure compliance. The app has been in use since late 2021 and has successfully conducted over 500 audits. It has been useful for training new COHE auditors and has received positive feedback from both new recruits and experienced auditors. The app has also been used to perform proactive audits with Intel supplier groups to ensure they meet COHE standards.

Scaling Safety Awareness. A senior operations manager in Intel's Logic Technology Development (LTD) team demonstrated initiative and commitment to safety by creating two apps for safety walks and collaboration among multiple groups. She designed, tested, and implemented both apps and provided detailed training to ensure their successful adoption. The success of one of her apps in LTD led to its adoption by Intel's Aloha, Oregon Fab Operations. The apps have been widely used in Intel's LTD Sort Test department and other groups, and can be easily accessed using Intel-provided cell phones. The tools enhance safety awareness and documentation, which has resulted in improved safety outcomes across multiple Intel factories.

Intel's global wellness program, known as the Intel® Vitality 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. Intel® Vitality Program virtual services were enhanced in 2023 with the launch of individual challenges, recognition badges, and a self-guided learning series offered through the Exos Fit app. Utilization of on-site fitness services increased in 2023, with a total of 42,409 unique users, 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 2023, we offered more than 100,000 Intel Vitality sessions, with a total of over 550,000 participants, including nearly 52,000 unique individuals. Participants reported a 94% satisfaction rating with the program. The global wellness program continued offering access to the Headspace meditation application, with 26,000 enrolled members. The program also expanded Headspace access to employee dependents starting in October 2023. Over the course of the year, almost 10,000 employees used Headspace an average of 12 sessions per month.

Through our mental wellness strategy, we seek to support the spectrum of mental health challenges employees and their loved ones may face. The program aims to create a culture of care where employees feel empowered to take the next step in their mental health journey and remove barriers to facilitate easier access to care. In 2023, we improved our navigation experience for employees to ensure that their path to receive mental health care is seamless and straightforward. We also expanded access to our digital mental wellness platform, now available in 48 countries. In addition, we have continued to support our employees through stressful world events through group support sessions, enhanced 1:1 access, in-person therapy opportunities, and more. In recognition of World Mental Health Day, Intel hosted Global Mental Wellness Month, which focused on four pillars of well-being—social, emotional, physical, and financial—and included webinars, mindfulness breaks, movement sessions, and events led by industry experts. Two executives from Intel's leadership team shared their personal experiences in nurturing their mental health, serving as examples to underscore the significance 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 12, 2024. Certain historical figures have been updated based on new reported cases received.

Globally, we have close to 35 on-site health clinics to address 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 care, condition management, behavioral health services, and physical therapy) in a safe and inclusive environment for our employees and their eligible dependents. In 2023, the Health for Life Centers administered hundreds of flu shots and COVID-19 vaccinations, and delivered approximately 14,000 virtual visits. Most of the time, employees and eligible dependents can make same-day appointments or be seen within 24 hours.

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% participation[3] 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 2023. Our health, safety, and wellness teams took steps to identify effective ways to expand the number of employees who have the opportunity to participate in the safety culture survey. Based on Intel restructuring actions, the safety culture surveys were paused in 2023 with a plan to restart in 2024. 87% of employees from organizations that engaged in the survey process in 2022 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 continued to reach 90% of Intel's employee population in 2023. Globally, 41% of Intel employees participated in Intel's wellness services in 2023, including the Intel Vitality Program and on-site fitness centers.

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

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

Respecting Human Rights in the Supply Chain

We conduct human rights due diligence in accordance with the UN Guiding Principles on Business and Human Rights and OECD Guidelines for Multinational Enterprises to identify, assess, prevent, and mitigate adverse human rights impacts associated with our operations, supply chain, and business relationships, and at the customer or product level. We recognize that our commitment to respect human rights is a continuous process that requires us to regularly engage with, listen to, and learn from all Intel stakeholders. We meet with internal and external stakeholders and experts to inform and evolve our human rights policies and oversight processes. We recognize that some people may be at greater risk of adverse human rights impacts due to their vulnerability or marginalization—including women, children, persons with disabilities, migrant workers, and human rights defenders. For more details, visit our Human Rights site.

We expect our suppliers and their suppliers to comply with the Intel Human Rights Principles and Approach, the Intel Code of Conduct, Intel's Supplier Policies, Intel's Supplier Compliance Handbook, and the RBA Code. The RBA Code describes industry-wide human rights, health and safety, environmental, and ethical standards, and is consistent with the Intel Global Human Rights Principles and Approach, the Intel Statement on Combating Modern Slavery, the ILO Core Conventions, and the UN Guiding Principles on Business and Human Rights. For more, read our RBA Commitment Letter.

Risk Assessment and Due Diligence

Internal Assessments

Every year we complete the RBA Self-Assessment Questionnaire and publish the results on our corporate website. We follow the RBA Validated Assessment Program (VAP) to conduct audits of our high-risk finished goods factories. In 2023, we conducted an RBA audit of our manufacturing operations in Costa Rica, earning full marks of 200/200. We also conducted an audit of our Penang, Malaysia operations earning 175.4/200 and the RBA's Silver Recognition. We will address any confirmed findings through a closure audit at the Penang site in 2024. An audit of our Chengdu, China operations is scheduled for 2024.

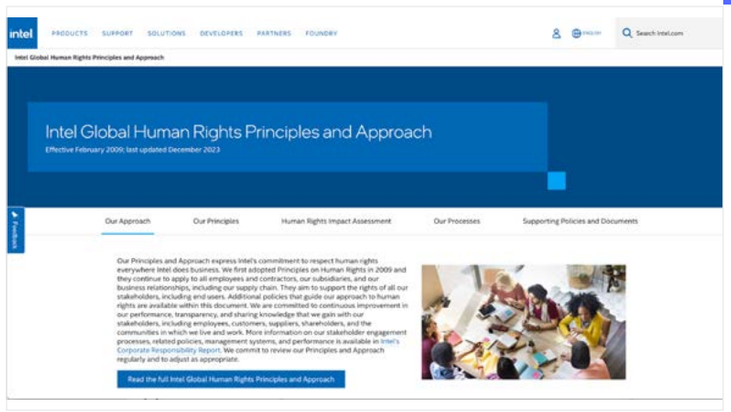
Supplier Audit and Assessment Steps

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. We then undertake a set of due diligence steps:

New Supplier Assessment: The work to begin assessing suppliers for risk and conducting due diligence begins 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, most enter into contracts that require suppliers to strictly comply with Intel policies and applicable local laws and regulations. Additionally, we communicate our expectations to suppliers regularly, reminding them of their legal obligations to comply with Intel policies.

Self-Assessments: Designed to cover more than 300 environmental, safety, and human rights factors, self-assessments help us determine a supplier's risk profile. Critical and high-risk suppliers[1] must 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 used to determine whether an audit or other engagement such as capability-building is appropriate.

Audits: We strive to audit 100% of major suppliers and high-risk supplier sites within a two-year cycle. Additional suppliers may be audited at our discretion. In 2023, we conducted 17 audits for suppliers deeper within our supply chain. Identified suppliers must undergo an on-site audit conducted by a third party (RBA VAP audit) or trained Intel personnel (Intel RBA-based target audit). Both audit types follow the RBA VAP standard and help us identify where immediate action is needed and where longer term, corrective "targeted action plans" should be put in place. The audit standard we utilize throughout our supply chain is the RBA Code of Conduct, which has expectations in the areas of human rights, health and safety, environmental ethics, and management systems.



We are committed to respecting human rights everywhere Intel does business. Read more about our commitment on our Intel Global Human Rights Principles and Approach website.

Corrective Action Plans: When auditors uncover findings, our policies require suppliers to draft comprehensive corrective action plans to address those findings. 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. In 2023, 67% of the combined RBA audits were follow-up or closure audits to verify whether the findings from a previous audit had been addressed. 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 2023.

For priority and major findings identified and findings verified as closed through closure audits, by category and sub-category, visit the Report Builder.

[1] "Critical suppliers" represent a subset of all first-tier suppliers with which we have significant 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.

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 swiftly implement a Targeted Action Plan. Supplier progress is 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 2023, we did not have any suppliers on Targeted Action Plans.

Managing Reports of Alleged Adverse Human Rights Impacts

Intel has established formal grievance and remedy processes that enable anyone—including Intel employees, supplier personnel, and other external stakeholders—to report ethics, human rights, compliance, or safety concerns through our third party-operated Intel Integrity Line Ethics and Compliance Reporting Portal. Once received, reports concerning alleged human rights impacts within the supply chain are managed by a cross functional multi-disciplinary team, which promptly investigates allegations and takes measures to mitigate any adverse impacts. Intel does not tolerate retaliation against anyone who in good faith reports possible violations of the law, Intel's Code of Conduct, or other policies; questions ongoing or proposed conduct; or participates in an internal investigation.

Total Audits Conducted

Type of Audit	2019	2020	2021	2022	2023
RBA VAP Audits	112	88	140	207	234
RBA SVAP on Forced Labor Audits	–	–	–	–	4
Intel RBA-Based Target Audits	42	38	17	63	25
Intel Quality Audits with Sustainability Element	53	–	–	–	–
Total Audits Conducted[2]	**207**	**126**	**157**	**270**	**263**

In 2023, 263 audits were conducted across 161 suppliers. Audits that were planned in 2023 but not executed and still deemed necessary are included in our 2024 plan. Cumulatively, over 520 supplier sites had received RBA VAP, RBA SVAP, or RBA-Based Target audits by the end of 2023.

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

Findings That May Trigger Forced and Bonded Labor Risks

Findings	2019	2020	2021	2022	2023
Closed	40	30	52	76	13
In Process	–	–	1	3	61
Total	**40**	**30**	**53**	**79**	**74**

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.

Addressing Forced and Bonded Labor Risk 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. Intel's policy is to request an audit when we detect a higher risk to the human rights of 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.

The Intel 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 workers in our global supply chain, including our suppliers (i.e., first-tier and lower-tier suppliers) having returned more than $27 million in fees to more than 28,000 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.

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.

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 2023. In 2023, the language for this goal 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. As such, we adjusted our progress on our path to reach 100% of our verified contracted suppliers in 2030. In 2023, we reached 25%, through audits, validated third-party assessments, and attestation for lower-risk contracted suppliers.

Looking Ahead. In 2024, we aim to maintain our progress and continue to evaluate the impact of IDM 2.0 supply chain changes.

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 2023, Intel co-sponsored virtual workshop-style training sessions, "Mandatory Human Rights Due Diligence Legislation," which were facilitated by the RBA and reached over 600 participants from our supply chain and those of our industry co-sponsors. We expect to continue to co-sponsor these trainings in 2024.

Actions to Respect Human Rights in the Supply Chain

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 by 2030.

Conduct human rights due diligence in accordance with the UN Guiding Principles on Business and Human Rights and OECD Guidelines for Multinational Enterprises to identify, assess, prevent, and mitigate adverse human rights impacts.

Recruitment fee remediation. We set expectations with our suppliers that workers should not have to pay for their employment.

Strengthen supplier capabilities to help less-mature and evolving suppliers build critical corporate responsibility acumen.

Currently 25% of our contracted suppliers are verified through audits and assessments.

1,669 audits with 6,059 findings closed since 2011.

Since 2014 we have returned $27M in fees to over 28,000 workers in our global supply chain.

We have conducted human rights due diligence training for more than 600 suppliers.

2023 Snapshot

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 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 the electronics 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 (CAHRAs[2]).

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).

Driving a Responsibly Sourced Mineral Supply Chain

In 2023, we sought sourcing information for what we deem critical minerals—including aluminum, copper, nickel, and zinc—from suppliers contributing these materials to our Intel-manufactured microprocessors. This represented an important step in our RISE strategy, as we begin mapping our supply chain for our highest priority minerals. Intel is one of the first companies to require the sourcing information on these minerals, and we received a response from approximately 90% of the in-scope suppliers. We are continuing to pursue information on smelters and refiners in our extended supply chain—those that supply our direct suppliers. Increasing transparency is a foundational component of enabling Intel to conduct supply chain due diligence, support capability-building, and, ultimately, ensure that our mineral supply chain respects human rights at every step.

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, including participating in its Risk Readiness Assessment Technical Revision Committee, and the Technical Due Diligence and Impact Working Groups. To support the uptake of transparency and responsible practices in large-scale mining across all other minerals that we source, Intel joined the Initiative for Responsible Mining Assurance (IRMA) in 2023. Additionally, Intel serves as co-leader of the Emerging Minerals Working Group within the Responsible Minerals Initiative (RMI).

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 use that 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 refiner 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 2023, Intel led in-person outreach to over 12 smelters in Indonesia to encourage and support RMAP participation.

Through our 2023 supply chain survey process using the RMI Conflict Minerals Reporting Template, 99% of 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.

[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.

Our goal is to responsibly source all cobalt in our products. Intel used the RMI Extended Minerals Reporting Template to survey the suppliers contributing cobalt to our products and in 2023, 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 collaborated with direct suppliers to facilitate alternative sourcing where appropriate. Through leading RMI's cobalt task force and crude refiner outreach, we are working to have all refiners in our cobalt supply chain participate in RMAP.

Supporting In-Region Sourcing. We believe that the creation and support of responsibly sourced[3] 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.

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 2024, we will continue to identify the highest priority minerals and seek to 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.

Beyond Due Diligence Reporting: Supporting Mining Communities

While Intel's mineral supply chain due diligence activities are critical for both enabling compliance and achieving our RISE goals, we also believe in direct engagement with mining communities to elevate the perspectives of rights holders, address human rights issues, and effect positive change 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 are: Congo Power, an alliance providing mining areas with clean power, and RMI-Pact Youth Vocational Training Program, which aims to provide livelihood alternatives to Congolese youth engaged in mining. 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 RMI and RCS Global. We are supporters of a sustainable development project focusing on ASM copper mining in Peru led by The Copper Mark and Alliance for Responsible Mining. In collaboration with Solidaridad and IMPACT, Intel also supported Esawa, a digital suite of data collection tools that include miner incentives. Designed specifically for the ASM sector, Esawa 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.

Responsible Mobility

Intel entered the market for automotive engine controllers in 1976, and since then, the company's reputation within the auto industry has continued to grow along with the range and sophistication of technology produced for the automotive industry. Now, with an eye toward the future, Intel's responsible mobility RISE technology initiative focuses on collaborating with industry, ecosystem peers, and governments to advance automotive safety and sustainability globally. In support of this vision, Intel has worked alongside the industry to solve its toughest challenges in the pivot toward a future that is software-defined, sustainable, and scalable.

In 2023, Intel advanced responsible mobility by continuing to contribute to standards that improve road safety for automated vehicles and re-architecting the automotive industry by creating a new generation of software-defined vehicles (SDVs). To fuel a faster, smoother transition to electric vehicles (EVs) and sustainable SDVs, Intel and SAE International announced a committee to deliver an automotive standard for Vehicle Platform Power Management (J3311). Intel will chair the committee.

Software-Defined Vehicles. The foundational architecture of the modern vehicle hasn't changed radically since the early 1960s. Many of the functions in modern vehicles have been added piecemeal, one by one, leading to a vehicle architecture that today is technically and economically unsustainable. The IT industry long ago moved away from embedded single-function devices and migrated to modern, high-performance computing systems where multiple functions and workloads run on a single, centralized system taking advantage of the power of software. The results have been significant cost and performance efficiency benefits. Since modern software-defined, high-performance systems were introduced in the IT industry more than 20 years ago, IT and other industries that have embraced them have never looked back.

Using a similar model, Intel Automotive has committed to an open software architecture for vehicles. Our commitment to openness extends to our silicon, as well. Customers can use Intel Foundry to integrate their own custom chiplet into a standard Intel Automotive roadmap product via the UCIe standard. As the only automotive industry supplier offering such a capability, Intel is underscoring its commitment to automotive open platforms for both hardware and software.

Enabling Energy-Efficient Vehicles. Many modern EV architectures are based on traditional vehicle designs that used internal combustion engines, but EVs use an electrical power source instead of a mechanical one. Often these EV designs include less-energy-efficient multi-cell batteries similar to those used in laptops in the mid-1990s.

With up to 100 electronic control units (ECUs) in today's vehicles, the cumulative energy usage by these components keeps growing as vehicles become more and more intelligent and connected. As the industry advances, there is a need for a power management standard with vehicle-level intelligence for energy management across individual ECUs to meet efficiency needs. In the same way Intel pioneered the Advanced Configuration and Power Interface specification for laptops in the mid 1990s, which helped reduce up to 60% the power consumption of a CPU, Intel is committed to bring better power management for internal combustion engine vehicles and EVs by introducing a new standard for vehicle platform power management that benefits the entire automotive ecosystem.

Setting the Standard for Roadside Safety

Introduced in 2017, Mobileye's[1] 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) and consumer AVs. RSS formalizes decision making for safe driving and is based on the need to balance safety with usefulness 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 safety performance of driverless vehicles.

Intel led an IEEE standards working group to define an open, transparent, and technology-neutral standard for safe decision making in automated driving. 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 safe 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. In 2023, Intel continued to participate in developing standardization guidelines by providing contributions focused on expanding the scope of IEEE 2846-2022 to complex traffic conditions, as well as defining a recommended practice that provides guidance for applying the IEEE 2846-2022 standard to automated driving systems verification and validation processes.

[1] Mobileye completed an initial public offering in October 2022. Intel remains the majority stockholder and continues to consolidate the results of Mobileye into its consolidated financial statements.

Responsible AI

Artificial intelligence (AI) is transforming how we live and work, and enabling us to solve new and complex challenges. It is helping save lives through early cancer detection, giving people with visual impairments new ways to see, restoring and maximizing agricultural crop health, and empowering people to overcome disabilities in whole new ways.

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 and Approach. We remain committed to implementing leading processes founded on international standards and industry best practice, aligned with the rapidly evolving global AI regulatory landscape.

We saw rapid advancement in AI innovation in 2023, with generative AI technology at the forefront. Intel's goal is to support all AI models, including generative AI, with responsible perspectives and principles. We now have a greater opportunity to responsibly use generative AI to improve people's efficiency and creativity. Intel's Trusted Media team works to build generative AI applications with humans in mind, striving to create AI that improves people's lives while limiting harm—with responsibility at each step of the process, not just at the end.

In 2023, we shared additional details publicly about our RAI strategy, which is centered along four pillars that represent what we consider the most effective ways for Intel to leverage its place in the AI value chain, help drive meaningful progress, and scale these efforts broadly: internal and external governance, research and collaboration, products and solutions, and inclusive AI.

Internal and External Governance

Members of our multidisciplinary Responsible AI Advisory Council (RAI Council) are responsible for conducting a rigorous review throughout the lifecycle of an AI project. The RAI Council has a diverse composition that brings a balanced and equitable approach to our AI risk assessment process. The goals are to assess potential ethical risks within AI projects and address those risks as early as possible.

In 2023, we engaged with diverse business groups and improved our processes to make it easier and more efficient for development teams to engage with the RAI Council. We also started working with our supply chain responsibility organization to accelerate progress in addressing the human rights of global AI data enrichment workers—those who perform tasks such as data annotation, data cleaning, and human review of algorithmic outputs. Moving the global ecosystem forward on this issue will require industry-wide efforts and leveraging our two decades of experience tackling issues like conflict minerals and forced labor.

RAI Council members provide training, feedback, and support to our 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 RAI Council's internal work is based on seven principles:

1. **Respect Human Rights:** Development, use, and implementation of AI should proactively contemplate and respect the human rights of all relevant rights holders. Intel approaches this in alignment with our Global Human Rights Principles and Approach and relevant international frameworks such as the United Nations Guiding Principles on Business and Human Rights and Organization for Economic Cooperation and Development Guidelines for Multinational Enterprises on Responsible Business Conduct.
2. **Enable Human Oversight:** To enable human controls throughout the life cycle of an AI system, the needs of various stakeholders should be supported. Developers should seek to train AI systems with the appropriate feedback and oversight, while users and interested parties should assess the outputs of these systems and be able to intervene when needed.
3. **Progress Transparency and Explainability:** To promote responsible development and use across the AI value chain, developers should strive to provide comprehensive information, including things like: recommended uses, potential harms, and best possible explanations of system behavior for all stakeholders; documentation detailing how AI systems were trained and tested, information on training sets and the results of bias testing; and access to resources for stakeholders that enable them to address concerns regarding system performance.
4. **Advance Security, Safety, and Reliability:** Intel prioritizes security, safety, resistance to tampering and reliability in the development of AI products. We strive to limit the application of Intel AI products to their intended use. Intel utilizes "security by design" development principles consistent with our Security First Pledge and Cybersecurity Public Policy, in addition to the "safety by design" development principles consistent with our commitment to Product Quality and Reliability.
5. **Design for Privacy:** AI applications utilize large amounts of data, so respecting the privacy and security of personal information must be prioritized. Consistent with Intel's Privacy Notice, Intel supports privacy rights by designing our technology with those rights in mind, including being transparent about the need for any personal data collection; allowing user choice and control; and designing, developing, and deploying our products with appropriate guardrails to protect personal data.
6. **Promote Equity and Inclusion:** Whether building stand-alone products or working with customers and partners to bring new AI capabilities into the world, Intel is committed to building inclusivity into every step in the value chain. Intel strives to look at all aspects of AI with an inclusion lens, from the diverse backgrounds of developers in accordance with our Diversity and Inclusion Policy, to datasets, models, and intended and unintended uses. We take action to mitigate potential biases and communicate with stakeholders to make it easier for them to do the same.
7. **Protect the environment:** AI can consume significant amounts of energy and require substantial use of materials. Intel strives to develop, deploy, and use AI consistent with Intel's environmental stewardship commitments by considering the decarbonization and efficiency of AI solutions throughout their lifecycle, and focusing on hardware and software development that accelerates the transition toward a low-carbon, low-waste future. Read this blog for more information.

Externally, as part of the Intel® Digital Readiness program, in 2023, we launched our first 16-week/64-hour "Applied Ethics for AI" and "AI for Sustainability" course curriculum to further promote responsible AI skills for developers and AI users. We also debuted the Digital Trust for All program with Miami-Dade College to educate users on cybersecurity principles, safety, and digital responsibility.

Research and Collaboration

We continue 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, AI sustainability, explainability, and transparency. We value our engagement in the MLCommons® AI Safety Working Group, the AI Alliance, Partnership on AI work groups, Roundtable on Human Rights and AI, and other multi-stakeholder initiatives as opportunities to make progress more quickly on new and emerging challenges and to share best practices.

In 2023, we launched new internal and academic research focused on several RAI priorities, including safety, trusted media, and environmental sustainability. One innovative example is carbon-aware workloads research, which includes designing tools to empower machine learning developers to decarbonize their work, whether through "grid-adaptive" AI training, recommendations about resource utilization, or even simply ensuring that developers have access to emissions predictions before they decide when to train. This effort will help solve the current gap between corporate net-zero goals and the immediate incentives that AI researchers and developers experience. Read more in this journal article.

Another research example proposes a novel approach to combat deepfake satellite imagery, which creates significant risks like eroding trust in surveillance and masking or falsifying military activities. Intel is collaborating with Dr. Umur Ciftci from Binghamton University on this research, which has shown promising results to date, with accuracy rates ranging from 92-99%. For more details, read this paper. Additional research collaborations with Dr. Ciftci include My Face My Choice, which enables users to appear only in photos they approve in social media. My Face My Choice goes well beyond current tagging systems and replacing unapproved faces in photos with quantitatively dissimilar deepfakes. Other research with Dr. Ciftci includes My Art My Choice, which combats GenAI that leverages artwork not authorized by creators by generating "protected" versions of images.

Intel and Georgia Tech have been leading DARPA's Guaranteeing AI Robustness Against Deception, a four-year program focused on trustworthy AI. The program challenged performers to design mitigations against AI system vulnerabilities like evasion and poisoning attacks. We showed that these vulnerabilities exist in the real world and improved the methodology for understanding them by using simulation. We delivered several innovative solutions to help train a model with adversarial examples to improve its robustness and resilience against evasion attacks. One solution used a generative AI model to filter images and show that we can mitigate adversaries that cause hallucinations. We showed these solutions at Intel Vision and Innovation 2023 events. We also open-sourced a modular adversarial robustness toolkit as a unified framework that enables users to easily compose novel attacks and defenses for robust and resilient deep learning models.

In addition, we established the Intel Center of Excellence on Responsible Human-AI Systems (RESUMAIS). The multiyear effort brings together four leading research institutions, including three in Germany: DFKI, the German Research Center for Artificial Intelligence; the FZI Research Center for Information Technology; and Leibniz Universität Hannover; and one in Spain, the European Laboratory for Learning and Intelligent Systems (ELLIS) Alicante. RESUMAIS aims to foster the ethical and user-centric development of AI, focusing on issues such as fairness, human/AI collaboration, accountability, and transparency.

AI Research Projects and Collaborations

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

- The AI Alliance
- AI-Ready Workforce with Jobs for the Future
- Business Roundtable on Human Rights & AI
- Data Systems and AI Lab at MIT
- Guaranteeing AI Robustness Against Deception DARPA program
- Information Technology Industry Council AI Futures Initiative
- MLCommons® AI Safety Working Group
- National Institute of Standards and Technology
- National Science Foundation National Artificial Intelligence Research Institutes
- OECD Expert Group on AI Risk & Accountability
- Ohio State University Data Ethics Working Group
- Partnership on AI
- Private AI Collaborative Research Institute
- Responsible Innovations Lab
- Trusted Media

Global Standards and Initiatives

We are committed to advancing AI technology responsibly by contributing to the development of principles, guidelines, best practices, and standards. Some examples include The Coalition for Content Provenance and Authenticity (C2PA), focusing on addressing content ownership online and advancing interoperable content authentication technology; and the Confidential Computing Consortium, focused on securing and enhancing privacy of data in use.

We participate in the development of international standards to harmonize concepts and guidance for secure and trustworthy AI across the global AI ecosystem. These international standardization efforts, such as those under ISO/IEC JTC 1 SC 42, serve an important role in supporting global AI policies. Our contributions to these international standardization efforts reflect the latest advancements in technology development and RAI research. We are also contributing to initiatives led by the US National Institute of Standards and Technology (NIST), including the AI Risk Management Framework, which informs US practices and advances global standards efforts.

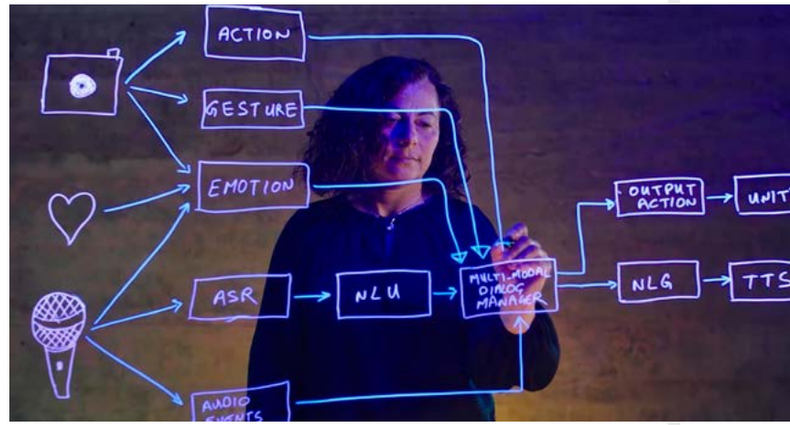
Products and Solutions

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 how to address those appropriately. We made progress in 2023, releasing new open source explainability tools like Model Card Generator, which allows users to perform quantitative analysis on performance and fairness metrics across groups to promote transparency and accountability.

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 the Alliance for Global Inclusion and the Pledge for Gender Fair AI. In line with our mission to bring AI skills everywhere, as part of the Intel® Digital Readiness Programs, we released new AI content to promote skills development across traditional industry sectors as part of the Intel® AI for Future Workforce program, including courses in agriculture, manufacturing, and more.

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 continue our 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 expand our thriving AI business.



AI in the Service of Humanity

Intel Fellow Lama Nachman has led Intel's RAI work since its inception. She and her team of researchers are working on optimizing human-AI collaboration. Learn about her perspectives on RAI by reading this editorial or watching this video.

"We are focused on human AI collaboration and the relentless pursuit of developing human-AI systems that amplify human potential, forging a brighter path for how we live, work, and learn. At the same time, AI systems continue to improve and become more resilient as a result of the collaboration with users. AI should really be in service of humanity."

—Intel Fellow Lama Nachman, who lead's Intel's RAI work

Revolutionizing Health and Safety Through Technology

In 2023, we advanced our work to revolutionize health and safety through technology by participating in innovative collaborations, scaling AI and federated learning in health care, and improving health equity. We also deepened our engagement around AI safety and invested in new workplace safety technologies.

Healthcare

Technology-enabled brain tumor detection. Cancer research is one of the most impactful uses for AI today, but bringing AI-driven research to scale is difficult due to patient data confidentiality. In 2023, Intel Labs continued to collaborate with a leading medical university to devise a novel solution with the help of federated learning. This international collaboration brought an unprecedented 71 institutions across six continents together through a decentralized system using federated learning (FL) and Intel® Software Guard Extensions (Intel® SGX). Using this model, organizations gain the value of patient data without compromising privacy. The result: a 33% improvement, up from 30% in 2022, in brain tumor detection based on MRI scans from more than 6,300 patients. Other healthcare researchers can immediately benefit from this study through Intel's open-source OpenFL project, which enables anyone to deploy their own FL applications with Intel SGX. "I am honored to be working alongside medical AI researchers. Seeing our technology empower their efforts toward the common good excites me for the future of federated learning," says Micah Sheller, Intel Labs' Senior Researcher.

Building on this research, in 2023, we advanced progress on the responsible evaluation of AI learning models as part of safe and effective healthcare delivery. Intel joined with MLCommons' MedPerf to build a platform that was launched in neuro-oncology using FL to develop the next standard for evaluating brain tumor treatments.

Screening for throat cancer in seconds. Intel spent the past year collaborating with FarEasTone Telecom and Taiwan-based hospitals to build more accurate AI models to develop an app to recognize signs of laryngeal cancer. A patient vocalizes for two to three seconds into the app on a smartphone, and then AI, in combination with Intel-based hardware and software, compares the voice against scores of trained data and runs the results through complex algorithms. The diagnostic results—exceeding 80% accuracy—are returned seconds after the voice has been recorded. All data is anonymized to preserve patient privacy. The AI used is built on 4th Gen Intel® Xeon® Scalable processors, FPGA accelerators, and two open-source software tools: Intel's OpenVINO™ Toolkit and OpenFL.

Increasing health equity. Despite the US having one of the most robust and high-quality healthcare systems in the world, marginalized communities are often disproportionately impacted by disparities in healthcare. An example of this inequity is found at Brooklyn Center—one of Minnesota's most diverse municipalities—where impacts of COVID-19, along with limited primary, dental, mental, maternal, and other forms of healthcare have exacerbated trauma. In 2023, Intel, healthcare solutions provider Henry Schein, and Blue Cross and Blue Shield of Minnesota collaborated to enhance healthcare access by developing a pilot program delivering cutting-edge telehealth solutions to community centers, places of worship, and homes in Brooklyn Center. The solution integrates next-generation decision support enriched by AI and machine learning, enhanced diagnostics, and the data analytics necessary to enable precise decision-making. Results of similar telediagnostic pilot programs show incredible promise, with a greater than 86% reduction in emergency room visits and 50% faster access to care for patients.

Improving global pediatric healthcare. Pediatric expertise is both scarce and increasingly centralized, leaving many rural areas without access to pediatric specialists. The goal of the Pediatric Moonshot, led by the Dr. Timothy Chou, is to address the pressing issue of healthcare inequity for children worldwide. The concept is simple yet transformative: Connect 1 million medical machines across 500 children's hospitals globally, enabling clinical experts to reach patients beyond their immediate geographical areas and collaborate seamlessly in real time.

In 2023, Intel began making this vision a reality. In collaboration with Dr. Chou, Intel's Health Solutions Team provided the tools necessary to support privacy-preserving compression, communication, and viewing of medical data across the medical machines globally. Subsequent stages in the Moonshot will explore how FL can train diagnostic AI models to help enable more meaningful diagnostic results for rare diseases in underrepresented populations and improve health outcomes for children around the globe.

Safety

Working to mitigate the societal risks of technology. Responsible training and deployment of large language models and tools are of utmost importance in helping to mitigate the societal risks posed by powerful technologies. Intel has long recognized the importance of the ethical and human rights implications associated with the development of technology, especially AI. In 2023, Intel joined the MLCommons AI Safety Working Group, a team of leading AI industry and academia experts focused on establishing standard AI safety benchmarks that will guide responsible AI development. As a founding member, Intel will contribute its expertise and knowledge to help create benchmarks that measure the safety and risk factors of AI tools and models.

Intel Capital supports workplace safety startup. In December 2023, Intel Capital, Intel's global investment organization, led a $10 million funding round for TuMeke, developer of a computer vision platform that automatically assesses injury risk in manufacturing facilities. Using TuMeke, safety staff can take a video on their smartphone and then reduce the identified risk of a job in minutes. The solution's AI system combines the best in computer vision and ergonomics to help users redesign jobs or retrain workers. TuMeke's suite of products helps companies assess ergonomic risk 12 times faster than traditional techniques, driving forward TuMeke's mission of eliminating workplace musculoskeletal injuries.

Inclusive

Diversity, equity, and inclusion have long been Intel's core values and are 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 address discrimination and inequities impacting our employees and our communities. We are intensifying actions to advance our RISE goals, which, in line with market availability, include increasing the number of women and underrepresented minorities in senior leadership, the representation of women in technical roles, and the 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

Top score for disability inclusion

Intel earned a top score of 100 on the Disability Equality Index by Disability:In and the American Association of People with Disabilities. The recognition also named Intel one of the best places to work for disability inclusion.

27,000+ Employee Resource Group, Leadership Council, and Affinity Group members

Our 47 Employee Resource Groups (ERGs), Affinity Groups, and Leadership Councils help drive community and inclusion at Intel. Our communities are formed around shared attributes and goals, and are open to anyone and everyone, with the opportunity to opt in or out at every employee's discretion. In 2023, ERGs held 889 events, with an average satisfaction rating of 96%. Approximately 1,500 Intel leaders on eight Leadership Councils serve as role models, helping to guide and mentor ERG members.

20% Intel Capital investments in diverse start-ups

Intel Capital, our venture capital organization, continued its commitment to helping build a diverse technology industry, with 20% of its 2023 venture stage dollars committed to technology start-ups led by diverse leaders.

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. 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.

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 in 2030. We intend to continue to advance inclusion in our workforce using a holistic approach toward representation, pay equity, and strengthening our inclusive and accessible culture that enables employees to develop and progress in their careers across all levels. In 2023, we changed the way that we reflect our inclusive workforce goals by focusing on percentages rather than absolute numbers. For transparency, we have continued 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 include increasing our annual spending with diverse-owned suppliers to $2 billion by 2030—a goal we reached for the first time 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. Through the Alliance, we work with a broad range of stakeholders on initiatives that expand the diverse pipeline of talent for our industry. The Alliance is making a difference by documenting diversity, equity, and inclusion trends and best practices on a global basis. For more, see "Building a Diverse Technology Industry."

[1] Prior to a 2023 update, this goal language was: "Double the number of women and underrepresented minorities in senior leadership roles."

[2] In 2023, we augmented our 2020 milestone goal to "Accelerate US representation of African American employees at senior, director, and executive levels by 30% by the end of 2023" by revising our objective to "Achieve 5% representation of Black/African American employees in senior, director, and executive roles within the US by 2030."

[3] Prior to a 2023 update, this goal language was "Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce."

intel RISE

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 an inclusive leader certification program and 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. Achieve 25% representation of women in senior leadership roles (globally) and achieve 12% representation of URMs in US senior leadership roles.[1] Achieve 5% representation of Black/African American employees in senior, director, and executive roles in the US.[2]

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] Achieve 10% representation of employees with a disability in our global workforce by 2030.

Supplier Diversity. Increase global annual spending with diverse suppliers by 100% (to $2 billion).

Inclusive Workforce

We continue to work toward ensuring employees have a voice and creating a sense of belonging, 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 seek to drive further advancement in 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 2023, we continued our focus on hiring, retention, career development, and progression for all employees, including women and URMs. In 2023, 1,515 women and 466 URMs held senior leadership positions. While the representation of senior leaders who are women and URMs increased slightly as a percentage in 2023, the absolute numbers represented a slight decline from 2022. Technical representation of URMs and women increased slightly. Additionally, the representation of Intel US employees who identify as having one or more disabilities increased from just below 5% in 2022 to 5.3% in 2023. The percentage of employees who identify as veterans dropped slightly—from 7.1% in 2022 to 7.0% in 2023. Our global representation of technical women increased from 24.7% in 2022 to 25.0% in 2023. 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.

Women at Intel – Global Data[1]

Positions	2021	2022	2023
Board of Directors	40.0%	42.0%	42.0%
Executives	20.7%	18.9%	18.8%
Senior Leadership	18.6%	18.9%	19.0%
Senior	21.7%	22.6%	22.9%
Experienced	31.3%	32.0%	32.3%
Entry-Level	36.5%	36.5%	36.4%
All Global Employees	27.7%	28.1%	28.1%
Technical[1]	24.3%	24.7%	25.0%
Non-Technical	54.4%	55.2%	56.2%

Undesired Turnover

Group	2021	2022	2023
Global Overall	5.6%	5.6%	5.6%
Global Women	5.3%	5.1%	4.8%
US Women	6.0%	5.4%	3.7%
Global Men	5.7%	5.8%	5.8%
US URM[2]	4.9%	4.9%	4.9%
US Hispanic/Latinx	4.6%	4.6%	4.7%
US Black/African American	5.8%	5.9%	5.3%
US Native American	2.8%	2.8%	5.0%

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 Data[1]

Group	2021	2022	2023
Women	25.8%	25.9%	25.9%
Men	74.2%	74.1%	74.1%
URMs[2]	16.1%	16.8%	17.0%
URMs in Senior Leadership	7.8%	8.1%	8.2%
URM Women	3.8%	4.1%	4.1%
White	44.1%	42.6%	41.7%
Asian	36.3%	36.2%	36.6%
Hispanic/Latinx	9.3%	10.9%	11.4%
Black/African American	4.9%	5.1%	4.9%
Native American	0.9%	0.8%	0.8%
Pacific Islander	0.4%	0.4%	0.5%
Disabilities	3.8%	4.9%	5.3%
Veterans	7.2%	7.1%	7.0%
Two or more[3]	2.2%	1.9%	0.5%
Other	1.8%	2.1%	2.2%

[1] 2023 data as of December 30, 2023; 2022 data as of December 31, 2021; and 2021 data as of December 25, 2021. "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. While this data represents women and men, we acknowledge that this is not fully encompassing of all gender identities. See information about our self-identity initiatives related to our LGBT+ employees later in this section. "Other" includes unknown, declined, not specified.

[2] We 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 three of our workforce inclusion goals and progress we made in 2023. Read about our other inclusion goals in "Accessibility and Disability Inclusion" and "Supplier Diversity and Inclusion."

2030 Goal: Representation in Senior Leadership

Description. Achieve 25% representation of women in senior leadership roles and achieve 12% representation of URMs in US senior leadership roles.[4] "Senior leadership" refers to salary grades 10+ and equivalent grades.

Baseline. 1,250 (18.4%) women and 380 (7.4%) URMs in senior leadership roles as of April 30, 2020.[5]

Progress in 2023. In 2023, we surpassed our annual milestone goal of 18.9%, ending the year at 19.0%, or 1,515 women in senior leadership roles across the globe. We took on and exceeded a flat milestone goal and established plans in readiness for incremental goals in the upcoming year. We made progress in our representation of US URM senior leaders, which increased from 8.1% in 2022 to over 8.2% in 2023.

Looking Ahead. 2023 was a challenging year. Our commitment to our long-term goals remains unchanged, but internal and external business conditions and the steps we have taken to respond will also impact our ability to make visible gains in the coming years. In 2024, we aim to strengthen our current momentum, focus on retention, and leverage hiring opportunities to attain our short- and long-term goals.

2030 Goal: Women in Technical Positions

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

Baseline. 24.9% of technical roles were held by women globally as of April 30, 2020.[5]

Progress in 2023. At the end of 2023, 25.0% of technical roles were held by women, an increase from 24.7% at the end of 2022.

Looking Ahead. In 2024, we will continue to focus on increasing representation through ongoing education and outreach programs, particularly at new manufacturing sites where Intel previously had no presence. We are investing in local schools as we aim to connect community members with work in technical roles at Intel. In 2024, our corporate-level Annual Performance Bonus related goal is to maintain 18% global hiring rate of our non exempt women into our technical roles. This is a shift in our strategy to enable more opportunities for women to support our manufacturing facilities.

2030 Goal: Disability Self-ID

Description. Achieve 10% representation of employees with a disability in our global workforce by 2030.[6]

Baseline. 1.4% of Intel's global workforce and 2.9% of Intel's US employees self-identified as having a disability as of December 2020.[7]

Progress in 2023. At the end of 2023, 2.4% of Intel's global workforce and 5.3% of US employees self-identified as having a disability, a year-over-year increase from 2.2% and 4.9% at the end of 2022, respectively.

Looking Ahead. In 2024, we will expand the use of our disability self-identification tool to countries outside of the US, and will conduct a global self-identification awareness and marketing campaign.

[4] Prior to a 2023 update, this goal language was "Double the number of women and underrepresented minorities (URMs) in senior leadership goals." With a focus on percentages rather than absolute numbers, the updated goal language reflects our commitment to industry best practices, market availability alignment 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] Prior to a 2023 update, this goal language was, "Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce by 2030."

[7] This baseline has been updated to clarify the global versus US baseline percentages.

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 and Approach 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 enable all employees to practice it daily. Offerings include Inclusion@Intel, an enterprise-wide portal with bite-sized resources, and a thriving Viva Engage community with some 65,000 monthly interactions.

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.

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 2023, we refreshed our required "Inclusive Hiring" training for our global hiring managers. This training was created to help standardize our hiring approach and to enable managers to role model inclusive hiring practices.

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 2023 inclusion goals included women representing 30% of technical, salaried early career[8] hires; increasing by another 10% the representation of Black/African American employees in senior, director, and executive-level roles in our US workforce (to 3.69%); 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 31% hiring rate. We fell short of our goal to reach 3.69% representation of Black/African American senior, director, and executive-level representation, ending the year with 3.21% representation. Lastly, we spent $1.6 billion with diverse-owned suppliers, meeting our annual goal of $1.6 billion following a record year in 2022, when we first exceeded our 2030 $2 billion ambition. For more information, see our 2024 Proxy Statement, "Supplier Diversity and Inclusion" later in this section, and the Sustainable section of this report.

[8] We define early career employees as employees with salary grades 2-6.

Inclusive Awards and Recognitions

In 2023, Intel received the following awards related to our inclusion leadership:

- **American Association of People with Disabilities and Disability:IN.** Disability Equality Index – top score of 100
- **World Benchmark Alliance.** Digital Inclusion Benchmark
- **Bloomberg.** Gender Equality Index
- **Alliance for Global Inclusion.** Global Inclusion Index
- **Religious Freedom & Business Foundation.** #1 Corporate Religious Equity, Diversity & Inclusion Index
- **Seramount.** Inclusion Index
- **Hispanic Association on Corporate Responsibility.** Corporate Inclusion Index – Governance and Employment: 5-Star companies
- **American Indian Science and Engineering Society.** Top Workplace for Indigenous STEM Professionals
- **HITEC.** 100 Most Influential Hispanics in the Technology Industry
- **Human Rights Campaign.** Corporate Equality Index – 100%, Best Place to Work for LGBTQIA+ People – Intel Brazil, Best Places to Work for LGBTQ+ Equality – Intel Mexico
- **VETS Index.** 3-Star Employer
- **Seramount.** Best Companies for Multicultural Women
- **Newsweek.** America's Greatest Workplaces for LGBTQ+

Leadership Councils and Employee Resource Groups

We offer 39 Employee Resource Groups (ERGs) and Affinity Groups, and eight Leadership Councils that connected more than 27,000 employees in 2023. Some 23% of our employees are members of ERGs, and approximately 10% of our employees are members of more than one ERG.

Leadership Councils. Our Leadership Councils include more than 1,500 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 Council 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 and Affinity Groups. Intel's ERGs and Affinity Groups are organized around race, national origin, gender identity, parenthood, disability, education, faith and beliefs, and other common affinities. We encourage employees to participate in ERGs and Affinity Groups beyond their personal affinities to build relationships with a wider community and exchange learnings; allies are welcomed and encouraged. ERGs and Affinity Groups 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 ERGs or Affinity Groups offers employees many benefits, including building networks, gaining leadership skills, learning about other business groups at Intel, mentorship programs, and growing skills and leadership experience. These experiences help employees grow their skills and build 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 members of at least one ERG, Affinity Group, or Leadership Council see a progression rate of 1.3% higher than employees who are not members and a retention rate of 2.75% higher. The 889 ERG events held in 2023 had an average satisfaction score of 96%. In our 2023 Employee Inclusion Survey, 73% of employees engaged in ERGs reported that the groups help them develop at Intel through networking, career development, mentorship, or sponsorship. In addition, 62% reported that ERGs provide a sense of community or support that helps them stay at Intel.

We have provided social crisis response to our Leadership Councils, ERGs, and Affinity Groups for a number of years by offering support through several mechanisms. In 2022 we formalized our social crisis response into a structured process and in 2023 we continued our response using these more formalized processes to provide a valuable support mechanism to our entire employee base.

In 2023, we combined Intel's annual ERG conference with the Alliance for Global Inclusion's Power of All conference, providing an opportunity for the 750,000 employees of Alliance for Global Inclusion's member companies to participate and better understand the positive impact that diversity and inclusion have on business, retention, and engagement of employees. The conference allowed us to expand our reach, influence, and impact while showcasing Intel as an industry leader in diversity, equity, and inclusion. For more about the Alliance, see "Building a Diverse Technology Industry" later in this section.

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

Employee Surveys

Through our regular Employee Experience Survey (EES), employees can voice their perceptions of the company and their work experience, including their views on our diversity and inclusion performance and culture. For the third consecutive year, we deployed our Employee Inclusion Survey (EIS), 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. We shared results with employees and enabled them to ask questions about actions.

Employee Experience Survey results. In our 2023 EES, our culture scores held strong, reflecting our culture journey over the past several years. The highest-scoring questions related to inclusion, respect, and the link between employees' work and Intel's strategy. 91% of responding employees reported, "I am treated with dignity and respect at work" and 90% reported, "Intel creates and environment where people of diverse backgrounds can succeed."

Intel's overall favorability score was 81%, which is very high for employee surveys, and we had a strong 79% participation rate and more than 100,000 voluntary respondents. This represents a year-over-year decline from 2022's highest recorded favorability score of 85%, but it is in line with our 2021 results, which were a marked improvement over prior years. Results indicate that we need to do a better job building belief in Intel's future and ensuring trust in leadership. While we still have work to do to return to the historically high scores from 2022, employee feedback provides leaders with a solid source of data on which to focus our efforts, build belief in our future, and drive our transformation.

Employee Inclusion Survey results. 89% of employees who participated in our 2023 EIS reported, "Intel provides a safe and inclusive workplace for people like me." However, a wide range of experiences reported by different demographic groups indicates that we can continue to improve the inclusivity of our culture.

Two new statements were included on the survey in 2023: 78% of responding employees agreed with the statement, "I feel my voice is valued at Intel," and 77% of responding employees agreed with the statement, "The unwritten norms and workplace practices at Intel support people like me." The new data provides Intel with the opportunity to address perceptions of workplace practices and seek to ensure our work culture supports all employees, and will help guide our continued efforts in driving an inclusive culture.

Managers play an important role in supporting Intel's culture, engaging employees, and creating an inclusive workplace. 88% of responding employees agreed with the statement, "My manager values diverse talents, beliefs, backgrounds, and experiences." We will continue to provide education, inclusive leadership skills development, and additional training to people managers.

While we saw a lower response rate of 37.5% as compared to 2022's record high of 63.5%, overall inclusion experience reported by survey participants remains high at 80%, a 3-point decrease year over year. The feedback enables leadership to identify areas of opportunity, implement action to advance inclusion, and continue our focus on our inclusive workforce culture.

Hiring, Retention, and Progression

We seek to make Intel a place where employees can continually grow and evolve their careers. We have developed a set of programs and initiatives intended to support inclusive hiring, retention, and progression of all of our employees. Inclusive hiring practices include, in part, providing a pool of diverse candidates. We have invested in programs that help us to reach underrepresented candidates, give all candidates equal opportunities to compete for jobs, and hire the best available talent.

In 2023, we launched Career Compass, a comprehensive portal that helps all employees navigate their career through a unified gateway to the large number of learning and career development tools available at Intel. Along with our refreshed job titles and associated skills, Career Compass makes it easier for employees to chart their own career pathways. The portal enables employees to:

- **Explore career options** and find their places in our world-changing work.
- **Find open opportunities** that match their skills and interests to advance their careers.
- **Build skills** by taking development into their own hands with learning resources, career courses, and training opportunities.
- **Connect with others**, including mentors, coaches, and colleagues.
- **Maximize their performance** and unlock their full potential.
- **Develop as a leader** in people and organizational management or technical roles.

Career Compass also connects employees to Degreed, a "one-stop shop" for learning and career development resources in various fields. In 2023, popular Degreed courses included everything from coding in Python and using ChatGPT for business writing to the basics of interior design and practicing yoga.

In 2023, we continued to deliver 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 436 employees and 263 managers have completed the program since launch, with employee participants showing better promotion (+1.3%) and retention (+4%) rates than their counterparts.

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 88% of employees who used the Warmline service in 2023 have stayed at Intel and 99% would recommend the service to others. In 2023, 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, 91% have stayed at Intel.

We also aim to support various pathways to join Intel along a career journey. For those beginning their career, we engage with internal business units, Intel leaders, and external organizations to support under-represented students pursuing degrees in STEM fields through the Intel Scholars Program. The program includes financial scholarships, exposure to Intel jobs, mentors, networking, research insights, and training opportunities.

For people who have taken a career break of more than one year in the US, we expanded Intel's Relaunch Your Career pilot to an enterprise program focused on assisting those who are re-entering the work-force. Since 2022, 62 program participants have become permanent employees, and an additional 31 are on contract assignments. Of the 62 employees, 13% are URMs and 100% are in technical roles.

LGBT+ Inclusion

We 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 2023, Intel employees promoted our LGBT+ inclusion across the industry in two sessions at the 2023 Out & Equal Workplace Advocates Summit, kicked off the 2023 Society of Women Engineers Conference as the opening keynote speaker on intersectionality, and launched an initiative to create the first LGBT coalition in the SEMI Foundation.

Intel also launched an internal visible role models web site, giving employees the opportunity to opt in, share their stories, and serve as visible representatives of their community at Intel. In 2023, the Intel Pride Leadership Council (IPLC) launched Safe Space, a quarterly forum aimed at providing Intel Pride ERG members the opportunity to voice their concerns in a safe environment, and to inform issues affecting the LGBT+ community at Intel.

We also launched a pronoun badge sleeve program in 2023, creating the option for employees to include their pronouns with their badges. The new sleeve is available with a standard and fab-approved pouch that can display a tag with pronouns or the Intel Values. Using correct pronouns helps create an inclusive environment, and the badge plays a crucial role in fostering a safe space by promoting the normalization of gender identity and preventing unintentional misgendering.

In 2023, IPLC hosted eight IPLC Speakership Series sessions and continued its mentorship program, enabling employees to meet, connect, and learn from LGBT+ and ally leaders at Intel. The Intel Pride ERG commemorated Transgender Day of Visibility with a panel on safety and inclusivity of gender-neutral bathrooms that was well-received with a 93% satisfaction rating. Intel Pride also hosted three cross-site events for Pride Month with an average 94% satisfaction rating, including a fireside chat and storytelling with Intel leaders and executives, a sharing and learning session on LGBT+ equality in Europe, and a networking and social gathering at the Virtual Pride Month Sendoff. Local chapters also hosted in-person flag raising ceremonies at multiple sites and participated in Pride parades around the world. In addition, October's National Coming Out Day featured a talk titled "What does 'Coming Out' mean in 2023," which received a 97% satisfaction rating from attendees.

Feedback on guidelines for preferred names at Intel prompted several changes to improve clarity and inclusion. Several members of the transgender community at Intel were consulted to help clarify how chosen names could be entered in our people systems.

Intel's Gender Transition Toolkit was updated in 2023, including guidance on how backend office system changes may be made without requiring a legal name change. The toolkit was also reorganized and formatted to make it easier to use. Topics include steps to transition, resources, case studies, guidelines and expectations, definitions, and FAQs. It also includes sample letters and transition plans, checklists, and announcement templates.

Intel received several LGBT+ inclusion awards and recognitions in 2023. For more, see "Inclusive Awards and Recognitions."

In our 2023 Employee Inclusion Survey, LGBT+ employees reported favorable results in some areas, but also indicated opportunities for further improvements in some areas, such as LGBT+ visible role models. Of those who responded to the survey as members of the LGBT+ community, about 53% indicated they have visible role models at Intel, 66% shared that being part of the Intel Pride ERG had a positive impact on their progression, and indicated that LGBT+ employees who are engaged in the Intel Pride ERG are more likely to be out at work.

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, 1.3 billion people—16% of the world's population—experience a significant disability.[9]

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 "Accessiblity Innovation" section of the report and on our Accessibility at Intel website. We work to advance accessibility through a three-pillar strategy centered 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.

"I commit to progress over perfection. Through practice, I will get better at making things accessible, noticing inaccessible things and advocating for accessibility."

—Intel Accessibility Champions Network Pledge

In 2023, the Intel Accessibility Office launched an Accessibility Champions Network, which enables Intel employees to commit to being an Accessibility Champion by pledging to make things accessible, highlighting inaccessible things, and advocating for accessibility. With the network, we aim to connect and activate champions to drive change within their teams and across Intel. The network is foundational in our approach to building a culture of accessibility through awareness, education, and enablement.

The Accessibility Champions Network also facilitates individual and career development in accessibility through a digital badging program. Accessibility Champion badges recognize employees who develop their accessibility and advocacy skills starting with being teammates who help make Intel a great place to work for people with disabilities, to subject matter experts who specialize in accessibility as part of their career at Intel. Intel currently has over 200 Accessibility Champions who have taken the pledge to develop their accessibility skills and advocate for accessibility globally across Intel organizations.

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. These groups advocate for and work to advance and retain our disability community, while amplifying awareness both internally and externally.

In 2023, we expanded and formalized our IDAN peer-based group offerings to include ADHD, auditory, cancer, caregivers, chronic migraine, dementia, diabetes, neurodiversity, and vision. Within three months of formation, three of these peer groups had engaged 10% of IDAN members. In 2024, we are continuing to foster and add peer groups.

In 2023, for the seventh year in a row, Intel received a top score of 100 on the Disability Equality Index, and was named one of the Best Places to Work for People with Disabilities. The index, 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.

[9] World Health Organization.

Social Equity

We believe we have shared responsibility to address the structural inequalities impacting our employees and communities. We further believe that accelerating equity is critical to successfully strengthening our culture of inclusion and belonging. Social equity is an extension of our Global Human Rights Principles and Approach, 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 helped to create sustained focus as we further integrated equity into our systems and practices to close gaps in African American and other inclusive leadership representation goals. While we made notable progress in 2022, 2023 year-end progress fell just short of the 30% milestone goal. Recognizing the persistent gap and the importance of long-term commitment to diversity and inclusion, we have recalibrated our efforts and established a new objective. Our revised goal is to achieve 5% US representation of African American employees in these leadership positions by 2030, which reflects our dedication to sustaining meaningful progress and aligns with our broader diversity and inclusion goals. As we continue to analyze patterns and trends in our most recent Employee Inclusion Survey (EIS), we have added efforts to focus on development and retention opportunities. Going forward, we seek to drive sustainable 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.

2030 Goal: US Black/African American Leadership Representation

Description. Achieve 5% representation of Black/African American employees in senior, director, and executive roles in the US.[1]

Baseline. 2.84% representation of Black/African American employees in senior, director, and executive roles in the US at end of 2020.

Progress in 2023. At the end of 2023, Black/African American representation in senior, director, and executive roles in the US was 3.22%.

Looking Ahead. While we acknowledge we have made some progress, even greater leadership and accountability are needed to create and sustain long-term change to achieve representation in our workforce that reflects our customers and communities. Our revised goal of achieving 5% representation of Black/African American employees in senior, director, and executive roles in the US by 2030 will require systems-level solutions that address root cause issues and drive progression and retention throughout the talent life cycle. In 2024, as we focus on the implications for our workforce and business, we must take deliberate and proven measures to enable the full participation of all.

[1] In 2023, we augmented our 2020 milestone goal to "Accelerate US representation of African American employees at senior, director, and executive levels by 30% by the end of 2023" by revising our objective to "Achieve 5% representation of African American employees in senior, director, and executive roles within the US by 2030."

Building a Diverse Technology Industry

We 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

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.

The vision of the Alliance is to create a transparent path to improve diversity and inclusion outcomes in industry for people, products, and communities worldwide through a coalition of business leaders leveraging the strengths of industries. Its purpose is to create a global network of executives and leaders that will amplify and accelerate inclusion outcomes.

Founding members of the Alliance included Dell, Intel, Nasdaq, NTT DATA, and Snap Inc. Today the Alliance comprises 20 companies working together, with a collective global reach of more than 755,000 employees, over $343 billion in revenue, and more than 2,300 locations across the globe. The Alliance recognizes that one size does not fit all; fostering inclusive business practices requires a personal commitment from the first-line manager to the C-Suite, an organizational commitment, and—for the Alliance—a collective commitment.

For more about the Alliance for Global Inclusion, visit its website and read about its progress in the 2023 report.

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 look to expand our student engagement through hackathons, summer design externships, mentor programs, and other activities connecting students with our employees.

Also, as announced in February 2021, Intel pledged to North Carolina Central University (NCCU), a $5 million grant over five years to help the school create a first-of-its-kind tech law and policy center. This engagement makes NCCU the only HBCU and only law school in the country with a Tech Law Center that focuses on technology disparities and social justice. As NCCU is one of only six HBCUs with a school of law, it is uniquely positioned to carry forward the important work of developing solutions that address tech equity, while creating a more diverse workforce in the legal profession.

In 2023, Intel commemorated the inaugural NCCU School of Law Tech Law and Policy certificate graduates. We hosted two students for the summer associate program and participated in NCCU's Law & Technology Summit as keynote speaker and in AI-related workshops. Additionally, we paired more than 25 NCCU law students with Intel mentors. The program is designed to help grow the pipeline of Black attorneys in tech and corporate practices. Second- and third-year law students who have identified an interest in technology-related legal careers are matched with practicing Intel attorneys or policy professionals for an academic year-long mentoring engagement.

Supplier Diversity and Inclusion

Intel believes 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. Our commitment to a more inclusive supply chain continues to differentiate Intel globally in the semiconductor and high-tech industries and with our customers. Our supplier diversity and inclusion efforts are considered one of the strongest global programs across all industries and the leader in the semiconductor industry.

Benefits of a Diverse Supply Chain

Our supplier diversity and inclusion program contributes significant value to our supply chain and is increasingly important to our greater ecosystem, including our customers. Broadening the competitive landscape as we work with suppliers has enabled us to identify new suppliers that were not on our radar previously. Our diverse supply base is known for being agile, collaborative, and innovative, providing noteworthy overall value.

Alongside the traditional business results, we are equally pleased with how our efforts engage our customers, stockholders, and employees in a collective commitment help support an inclusive supply chain. Many of our key customers, representing over 50% of our revenue in 2023, require us to report spending with diverse suppliers[1] on a quarterly basis. Intel encourages our sales team to share the spending with diverse supplier data with our customers.

Diverse Spending Goals and Focus Areas

Amid a shifting economic landscape and changes in our supplier ecosystem, we are proud we achieved $1.6 billion annual spending with diverse suppliers in 2023. Our overall diverse spending declined in 2023 from $2.2 billion in 2022 due to several factors, including a decrease in overall procurement spends. In addition, the acquisition of several of our previous diverse-owned suppliers by non-diverse companies—a testament to the growth they achieved while supporting Intel—resulted in a reduction of over $400 million in diverse spending. Also, another large supplier's multi-year project completed, reducing qualified diverse spending.

While we are proud of our annual achievements, we are working to stay on track toward our longer-term goals with a constant focus on process, collaboration, and outcomes, as outlined in our Supplier Diversity Policy. We have integrated requirements for including diverse suppliers into our supplier bidding, selection, and management processes. We work to apply these expectations and requirements to first-tier suppliers.[2]

Our non-diverse suppliers report their own spending with diverse-owned suppliers and subcontractors. With the growth of the program, we are pleased that we have more than 180 suppliers reporting lower-tier/subcontractor diverse supplier spends. Our focus on extending our efforts through our lower-tier program to achieve best-in-class performance exemplifies our dedication to leadership in diverse supplier spends across all levels of the supply chain. This lower-tier reporting contributes to suppliers' overall supplier scorecards, which qualifies them for our EPIC awards and the Supplier Diversity Distinction Award. Both awards recognize suppliers that exemplify Intel's standard of excellence.

We remain committed to growing our spending with US Black-owned and global minority-owned suppliers. In addition, we have set a goal to spend $500 million annually with women-owned suppliers outside the US by the end of 2025. We anticipate that these efforts, combined with our construction ramps around the world, will increase our annual diverse spends back to over $2 billion.

In 2024, we continue to focus on maintaining our success and collaborating with suppliers and industry organizations to improve awareness, training, and opportunities for diverse-owned suppliers to compete for Intel contracts.

[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] "First-tier"suppliers" are companies from which Intel makes direct purchases. Lower-tier suppliers are Intel subcontractors who are selected and managed by non-diverse-owned first-tier suppliers.

Ecosystem Leadership

Over the past decade, we have collaborated 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 WEConnect International, and many others around the globe. In 2023, as in previous years, Intel was recognized as a leader in supply chain diversity and inclusion by several organizations, including WEConnect International, the Women's Business Enterprise National Council , the 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, specifically going global and creating a strong Tier 2 program.

2030 Goal: Supplier Diversity and Inclusion

Description. Increase global annual spending with diverse suppliers[1] by 100% to $2 billion.

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

Progress in 2023. Amid a shifting economic landscape and changes in our supplier ecosystem, we are proud we achieved $1.6 billion in annual spending with diverse suppliers. Our overall diverse spending declined in 2023 from $2.2 billion in 2022 due to several factors, including a decrease in overall procurement spends. In addition, a reduction of over $400 million in diverse spending resulted from several of our previously diverse-owned suppliers being acquired by non-diverse companies—a testament to the growth they achieved while supporting Intel.

Looking Ahead. In 2024, 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.

Supplier Feature:
Jack's Mechanical Solutions

Jack's Mechanical Solutions is a woman/Hispanic/veteran-owned business started by Gabe and Liz Martinez in 2004 in Rio Rancho, New Mexico. Jack's installs leading-edge semiconductor manufacturing equipment that helps enable Intel's IDM 2.0 strategy. Nearing its 20-year anniversary, Jack's is proud to have grown alongside Intel in New Mexico and Arizona.

Supporting complicated installations requires a talented workforce with specialized skills. Jack's works closely with Intel to innovate in areas ranging from piping to project management. Jack's works to grow the talent of its workforce by participating in union apprenticeship programs that enable workers to get hands-on experience in their trade at Intel's semiconductor facilities.

Jack's is a proud supplier to Intel and attributes the successful relationship between the two companies to shared values around quality, safety, and a commitment to community. Communication, collaborative problem solving, and disciplined execution keep the engagement strong and the work on pace. Always ready to step forward and take on more to help meet schedules, Jack's looks forward to building the future alongside Intel for years to come.

Invest in Supplier Diversity
Around the World

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

Establishing an Inclusive Supply Chain in Ohio

We have made considerable progress in establishing inclusive sourcing practices for IDM 2.0 growth, specifically in Ohio. We are collaborating with dozens of Ohio NGOs and nonprofits to build our diverse supplier base in that state. With our first two Ohio general contractors, Intel negotiated agreements to deliver 15-20% of total spend with diverse suppliers, well above our stated 10% expectations for our broader program.

Gilbane Building Company is a family-owned company providing services for the early excavation work for Intel's new Ohio site. Building on Intel's commitment to diversity and inclusion, Gilbane identified significant project goals and achieved 20% diverse participation in all project phases.

"Our supplier diversity and inclusion program has expanded the breadth of our value chain, enabling Intel to grow our manufacturing footprint, presence, and impact around the world to benefit all our customers. Achieving $1.6 billion in spends with diverse-owned businesses in 2023 highlights our continued commitment to the communities in which we operate and progress toward our goal of building a more representative and equitable technology industry."

—Frank Sanders, Intel Corporate Vice President, and General Manager of Global Supply Chain Operations

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 2023, we scaled several programs and collaborations with customers, governments, and other stakeholders in the areas of accessibility innovation, product and inclusive design, 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 an 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.

Accessible Computing Experiences: We aim to improve accessibility experiences each year on client computing platforms with augmented features, capabilities, collaborations, or services designed together with people with disabilities. These quality enhancements improve experiences with new products and also make existing solutions and off-the-shelf hardware components better. In 2022, we launched the 13th Gen Intel® Core™ processor family, which included new features that enhance PC-to-device connectivity for one-click device pairing and enabled collaborators to start building solutions with next-generation Bluetooth® LE Audio capabilities.[1] In 2023, we built upon this progress by launching the new Bluetooth® LE Audio standard with Microsoft Windows.[2] Intel also worked with GN ReSound, a leading manufacturer of hearing aid solutions, to improve people's experiences when connecting hearing aids to Intel® Evo™ laptops. This work included a trial in which Intel employees with a variety of hearing disabilities engaged with the product development teams to test use cases and drive key user experience improvements.

[1] Intel Bluetooth LE Audio Infographic

[2] Windows 11 Insider Preview Build

Our accessible technology innovations have 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.

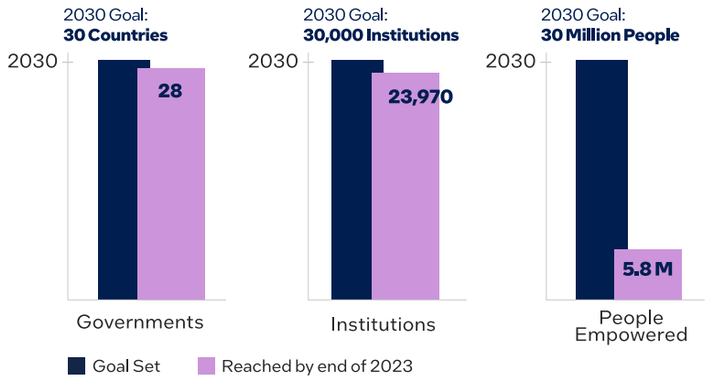
Inclusive Design: Our goal is to have all Intel user experience teams practicing inclusive design and research by 2030. To track our progress toward that goal, we established an annual survey in 2022 with a baseline adoption rate of 21%. In 2023, our adoption score decreased to 16.8%, which is attributed to a decrease in headcount and budget. In support of inclusive research, the Inclusive Design Operations Program continued the program that makes it easier to recruit people with disabilities for user research, leading to over 150 engagements with people who use assistive technology to improve products and services in multiple business units.

Looking forward, Intel has established a new job profile for Accessible User Experience Specialists, recognizing the need to train and hire experts in accessibility to create inclusive experiences both internally for employees and externally for our customers, developers, and end users.

Technology Skills for Today and Tomorrow

A report released by the National Skills Coalition and the Federal Reserve Bank of Atlanta revealed that some 92% of jobs analyzed require digital skills. The report found strong demand for digital skills across every industry and in almost every occupation, including entry-level and frontline positions. But today's workforce lacks the required skills to fill these jobs. Digital readiness focused on emerging technologies like AI is critical for countries, industries, and their citizens to remain competitive. The concept of digital readiness encompasses digital skills, trust, and responsible use of emerging technologies for broader socio-economic benefits.

Expanding Intel® Digital Readiness Program Portfolio



Scaling the Intel® Digital Readiness Program Portfolio. To expand digital readiness of all people, we have been scaling the Intel Digital Readiness Programs globally, aiming to collaborate with 30 countries and 30,000 institutions worldwide to empower more than 30 million people with AI skills for current and future jobs by 2030. This shared-value initiative aims to demystify and democratize technology superpowers like AI for broad, diverse, and non-technical audiences, regardless of location, gender, and ethnicity. At year-end 2023, Intel had collaborated with 28 countries with more than 50 public-private collaborations, enabled 23,970 institutions, and trained 5.8 million people.

We also expanded the Intel Digital Readiness portfolio with new AI courses, including AI for Youth content for grades 3 and up; prepackaged "AIOT" (artificial intelligence, Internet of Things) and "Intro to Generative AI" curriculum for the workforce; and "AI-for-X," which includes "AI for Manufacturing," "AI for Sustainability," and "AI for Agriculture"—the first courses of their kind in the world. We also expanded the portfolio beyond AI to new areas such as digital trust (cybersecurity and semiconductors). Intel Digital Readiness program content now totals more than 1,500 hours.

Community College Path to Employment. In 2023, the first cohort of students completed our AI for Future Workforce program that was launched as an associate degree at Houston Community College (HCC) in 2021. These graduates are now taking on leadership roles at companies like Tesla, McKinsey, and SeedAI, and starting their own diverse businesses that utilize AI in industries such as trucking and plumbing. In the fall of 2023, using courses developed by Intel and other companies, HCC began a 4-year bachelor's degree program in Applied Technology in Artificial Intelligence & Robotics.

Our program footprint grew to 89 colleges across 39 states in the US, with more than 40% offering full 2- and 4-year degrees based on Intel content. In November 2023, Intel launched a collaboration with the State Government of Ohio's Individual Micro-credential Assistance Program and TechCred Ohio to provide a new certificate credential program for those in the workforce, entering the workforce, and students applying AI tools in their workplace to enhance their productivity and capabilities. In the US, we engaged with Jobs for the Future to release the AI Ready Workforce report, which proposes a robust workforce-centric narrative of how to reshape, not replace, jobs with AI. This analysis covers the top 10 jobs in each of the five critical industries for US competitiveness.

Fostering Global Public-Private Collaborations to Transform AI Skill Building. Intel's focus on responsible AI highlights our commitment to address the AI skills gap in the US and around the world. To advance AI skills in new ways, Intel collaborated with the National Science Foundation (NSF) to support two key National AI Centers of Excellence: The Institute for Learning Enabled Optimization At Scale with National University and the AI Institute for Advances in Optimization with Georgia Tech University. National University collaborated with the Intel Digital Readiness Program to introduce AI skills to multiple new disciplines in STEM as well as the arts and humanities.

Expanding our footprint, we began engaging in new countries and regions, such as Mexico, Ghana, Bulgaria, Albania, and Saudi Arabia. As part of the New European Innovation Agenda, Intel was commissioned by the European Parliament and EU Commission to scale AI for Youth in Spain, Portugal, and Italy in collaboration with Junior Achievement. At the beginning of 2023, Intel launched an engagement with the Commonwealth, inaugurating a digital learning platform to enable public sector officials in all 56 Commonwealth nations to demystify AI and other emerging technologies and build national strategies to achieve development goals.

AI for Accessibility Award

As part of the 2023 AI Global Impact Festival, Intel introduced a new global award for students utilizing AI to promote accessibility. Three groups of students from Thailand, Brazil, and Singapore were chosen as winners. In Singapore, a student-built AI-powered program that—when paired with augmented reality, voice assistants, or other innovative technologies—allows users with dementia to navigate physical spaces more confidently, building more dementia-friendly environments and a more inclusive society.

Intel® AI Impact Festival: Celebrating Responsible AI Innovation by the Next Generation. In 2023, we revamped the third edition of the Intel AI Global Impact Festival to emphasize responsibility and inclusion. The virtual event attracted nearly 500,000 visitors from 84 countries, celebrating AI innovation by student developers around the world. We expanded our global reach, garnering first-time participants and winners from both Latin America (Mexico, Brazil, and Costa Rica) and South Africa. Numerous projects stood out on the global stage as diverse with a focus on sustainability, health, and social equity. A group of high school girls from Costa Rica developed an AI-powered repository that allows conservationists to identify native bees in the local ecosystem. Another high school student from Warsaw, Poland developed an "AI Posture Assistant," which reminds laptop users to correct their head or back positioning by blurring their screen slightly when bad posture is detected.

The Intel® Skills for Innovation (Intel® SFI) initiative empowers educators to integrate technology effectively into teaching methodologies, fostering innovation and actively engaging students across various learning environments. Engaging over 60,000 teachers in 50 countries, it addresses workforce readiness by emphasizing analytical, social-emotional, and technical skills, adapting to evolving job requirements. Intel SFI's Implementation Framework includes seven essential mindsets and skill sets, and programs for effective technology integration in education. Key aspects include design thinking, computational thinking, programming, coding, data science, modeling, simulation, AI, and machine learning. The Intel SFI initiative aligns with Intel's RISE goals, preparing students for a rapidly evolving job market and bridging the industry skills gap.

Million Girls Moonshot. In 2020, the Intel Foundation and other companies and foundations launched the Million Girls Moonshot (MGM), aimed at engaging millions more girls, youth of color, and youth from low-income households in STEM/STEAM learning activities through after-school and summer programs across the 50 US states. The initiative connects local after-school and summer programs with the resources they need to increase access and quality of STEAM programming for youth. The initiative includes raising awareness for STEAM learning and igniting champions for STEAM, building the capacity of educators through training and professional development, and curating curriculum like Intel Future Skills.

In the third year of the program (August 2022 – November 2023), MGM resources, training, and curricula reached 45,000 after-school and summer programs. These offerings shifted instructional STEAM practices of 85,000 staff members, providing higher quality STEAM learning to 1,150,000 more youth (including 570,000 girls). Overall, 68% are low income, 58% identify as BIPOC, 20% live in rural areas; and 18% are English language learners. In addition to increasing reach and diversity among those served, depth of stakeholder engagement also grew as the number of youth who were deeply engaged[3] rose from 140,000 to 220,000—a 57% increase—in 2023.

[3] Deep engagement occurs through repeated experiential learning opportunities over time, establishing the mindset to shift through consistency of practice (i.e., minimum of 10 hours of activity) vs. one-off events or activities. Impact data collected via pre- and post-participation surveys.

As an example of the program's impact, the Moonshot Ohio community collaboration strategy now engages 92 programs, universities, nonprofits, museums, school districts, and businesses working in coordination with the Ohio Afterschool Network. Within the state, we reached 834 educators across 260 programs and 9,444 youth, nearly double our goal of 5,000. Among Ohio youth reached, 40% are girls, 94% are low-income, and 95% are BIPOC. We also exceeded the number of Intel Future Skills pilot sites and students served, expanding community outreach, engaging 92 local organizations, and inspiring 886 students through Intel Future Skills and 430 through STEAM camps.

Moonshot Ohio brings together powerful collaborations across the state to transform STEAM learning and complement existing public and private sector investments. In addition to creating economic opportunity for youth and strengthening the advanced manufacturing talent pool in Ohio, this initiative will help galvanize the community behind a more diverse, equitable future for all. Together, we're re-imagining who can build, who can engineer, and who can create.

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 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 skills like empathy and creative problem solving. We provide this content online at no cost.

In addition, Intel Employee Service Corps skill-based volunteers continue to dedicate their time and talent facilitating in-person, hands-on deep engagement learning in school, after school, and during summer STEAM camps for under-resourced youth. In 2023, the Intel Foundation collaborated with the STEM Next Opportunity Fund to facilitate three fully accessible Intel Future Skills summer STEAM camps for more than 430 Ohio students in grades pre-K through 8. They also activated 12 Intel Future Skills pilots in 20 locations, reaching over 1,300 K-8 students in Columbus, Cincinnati, and Cleveland.

Expanding Developer Impact Worldwide. The rapid growth of AI has also opened up new possibilities for developers to innovate and create experiences that help people worldwide. Open standards are essential to advancing modern businesses and improving productivity, and open standards-based skills are key to propelling growth in the heterogeneous computing ecosystem while helping developers learn new, impactful tools and techniques. In 2023, Intel delivered a worldwide training series that helped grow the skills of developers through every stage of their AI and heterogeneous compute journeys, with 30 technical webinars for 17,000 participants and over 430 hands-on workshops providing training to over 42,000 developers. More than 400 technical training videos have been viewed 36 million times by the worldwide community, including 19 million views and a gain of 124,000 new subscribers in 2023.

In 2023, 15,000 students participated in Cal Hacks, the largest collegiate hackathon in the US. Intel delivered workshops, meetups, and mentorship to the hackathon's enthusiastic crowd for three days, and three hackathon teams won Intel Developer Cloud credits, which provide access to more hardware options that developers can use to further their projects.

"Indeed, AI is here with us and it is revolutionizing our day-to-day activities from our homes, workplace, social places, environment, and even education. The presentation by Intel has demystified AI and nailed it. We look forward to more engagement on AI by Intel. Asante sana [thank you very much.]."

—Faith Njoki Karanja, Associate Professor (Geoinformation – University of Nairobi) and Science Consultant – STEM/ICT Lead

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

43% reduction in Scope 1 and 2 greenhouse gas emissions

In 2023, we achieved 100% renewable electricity for our US, Europe, Israel, Malaysia, Vietnam, and China locations, and are approaching 100% in Costa Rica—bringing the global total to 99%. Our renewable electricity purchases, combined with additional greenhouse gas reduction projects, contributed to a 43% reduction in Scope 1 and 2 emissions from our 2019 baseline. We published our Climate Transition Action Plan, outlining the steps we'll take over the next three decades toward more sustainable products and operations while considering the risks and opportunities associated with climate change.

Net-positive water in the US, India, Costa Rica, and Mexico

In 2023, we conserved approximately 10.2 billion gallons of water in our operations and community collaborations and enabled restoration of 3.1 billion gallons through watershed restoration projects. These achievements advanced us toward our goal of net positive water. In 2023, we maintained net positive water in the US and India and reached net positive water in two additional countries: Costa Rica and Mexico.

63% manufacturing waste upcycled

During 2023, circular economy practices were applied to approximately 63% of our manufacturing waste streams via reuse, recovery, or recycling.

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 Scope 1 and 2 greenhouse gas (GHG) emissions by 2040 and net-zero upstream Scope 3 GHG emissions by 2050, 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 to 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 their sustainability projects within the company, with customers, and in our local communities. In 2023, for example, Intel Oregon employee volunteers helped restore wetland habitats, and a team in Malaysia cleaned a local beach and sorted materials at a recycling center. To learn more, see "Employees Changing the World" in the Enabling section of this report.

We believe that Intel's position in the technology ecosystem, our wide range of products and solutions, 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, 2040, and 2050 RISE: Sustainable Goals, Initiatives, and Global Challenges

Global Challenge:

Advance carbon-neutral computing to address climate change.

Technology Industry Initiatives:

Sustainable Manufacturing. Create a collective approach to reduce GHG emissions for the semiconductor manufacturing industry and increase the use of technology to reduce climate impact in global manufacturing by 2030.

Sustainable Chemistry. Enable greener and circular chemistry strategies across the technology industry value chain by transforming chemical footprint methodology by 2030.

Product, Operations, and Supply Chain Goals:

Renewable Electricity. Achieve 100% renewable electricity globally by 2030.

Energy Conservation. Conserve 4 billion kWh of energy cumulatively by 2030.

Green Buildings. Build new factories and facilities to US Green Building Council® green building standards by 2030.

GHG Emissions. Reduce 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 by 2030 and achieve net-zero upstream Scope 3 GHG emissions by 2050.

Product Energy Efficiency. Increase product energy efficiency 10X for Intel client and server microprocessors to reduce our Scope 3 GHG emissions by 2030.

Lower Carbon Platforms. Reduce the carbon footprint of platform reference designs for future client form factors by 30% or more by 2030.

Net Positive Water. Achieve net positive water by conserving 60 billion gallons of water and funding external water restoration for more than 100% of our fresh water consumption by 2030.

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 by 2030.

Climate and Energy

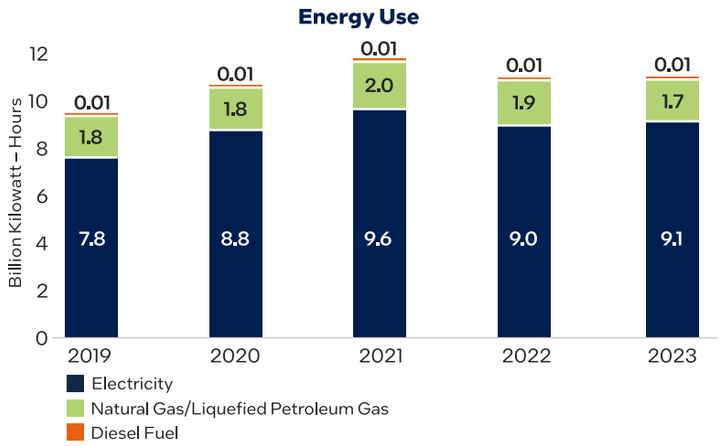
Climate change is a serious environmental, economic, and social challenge. We focus on reducing our own climate impact—the emissions resulting from our own operations, our supply chain, and our products. We also work to identify ways that Intel® technology can help others reduce their climate impacts. Our Climate Change Policy outlines our formal position on climate change and our policy advocacy principles, and our Climate Transition Action Plan, published in November 2023, details our climate-related goals, risks, and opportunities, and our path to net-zero.

Reducing the Carbon Footprint of Our Operations

For over two decades, Intel has set aggressive greenhouse gas (GHG) reduction goals. We invest 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 nearly 82% of our cumulative Scope 1 and 2 GHG emissions over the last decade and have reduced our absolute emissions by 78% from our peak year of 2006. 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" later in this section and "2023 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 1.6 billion kWh of electricity from the 2020 baseline through the end of 2023, toward our 4 billion kWh 2030 goal. Since 2020, we have invested $96 million in energy conservation projects in our global operations, resulting in cumulative cost savings of approximately $118 million.



Our 2023 absolute energy use was approximately the same compared to 2022. In 2023, approximately 84% 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.

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.

2030 Goal: Energy Conservation

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

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

Progress in 2023. In 2023, we invested in projects that enabled us to conserve an additional 160 million kWh of electricity. We have conserved a cumulative total of 1.6 billion kWh of electricity since the baseline date.

Looking Ahead. In 2024, we continue to invest in new and innovative projects aimed at conserving an additional 125 million kWh of electricity.

Alignment with TCFD

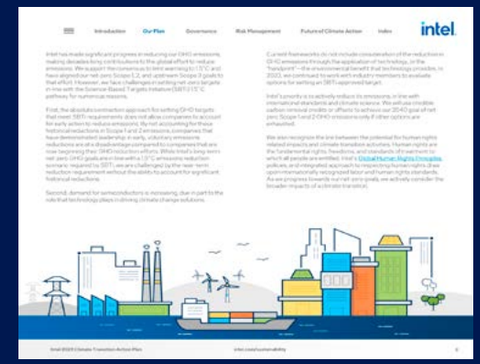
We value transparency around our carbon footprint and climate risk and use the framework developed by the Task Force on Climate-Related Financial Disclosures (TCFD) to inform our disclosure on climate governance, strategy, risk management, metrics, and targets. For governance and strategy, we seek to 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 2024 Proxy Statement, and we describe our climate-related risks and opportunities in this report; our Climate Change Policy; "Risk Factors" within our 2023 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 2023, 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.

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

Our Roadmap for Climate Action

In November 2023, Intel published its Climate Transition Action Plan (CTAP), detailing the company's path to reach net-zero GHG emissions. The CTAP is aligned with TCFD guidance on transition plans. This plan demonstrates our commitment to integrating sustainability into our core business, building resilience into our operations and value chain, and fostering innovation.



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

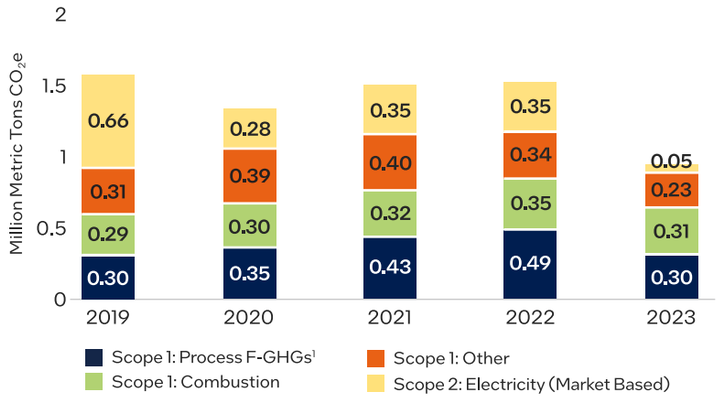
Description. Achieve a 10% reduction in our absolute Scope 1 and 2 GHG emissions by 2030 and reach net-zero Scope 1 and 2 GHG emissions by 2040.

Baseline. Progress measured as percent reduction from our calendar year 2019 emissions. Our combined Scope 1 and Scope 2 GHG emissions in 2019 were approximately 1.57 million metric tons of carbon dioxide equivalent (CO_2e).

Progress in 2023. During 2023, our Scope 1 and 2 GHG emissions decreased 43% from the 2019 baseline. This decrease was due in part to completion of energy conservation and other GHG reduction projects and renewable electricity purchases.

Looking Ahead. In 2024, we will continue to implement a project roadmap to reduce our Scope 1 and 2 GHG emissions while we expand our manufacturing capacity around the world. We expect to reduce approximately 25,000 metric tons of CO_2e during 2024 through targeted projects within our operations.

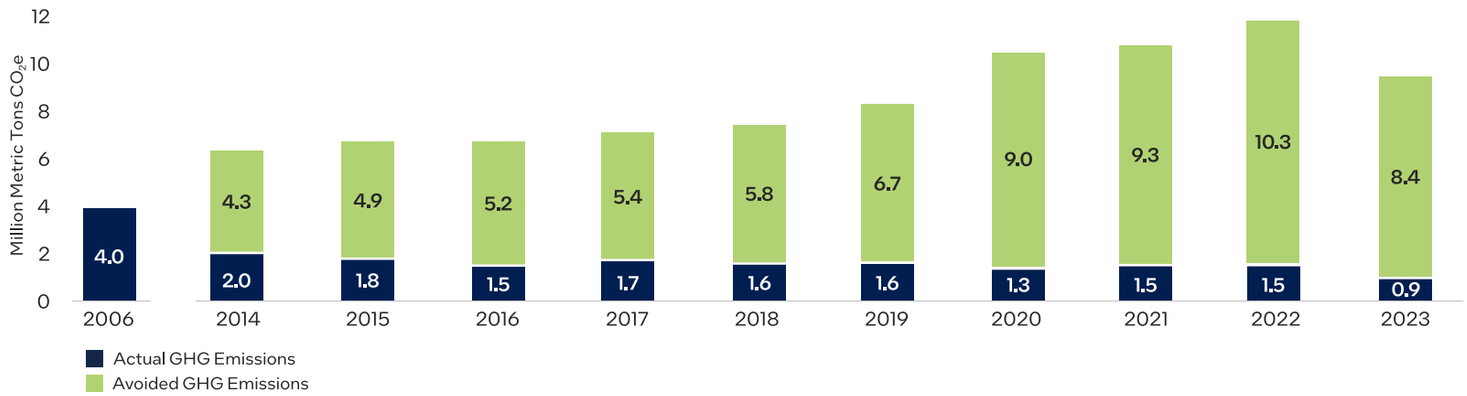
Scope 1 and 2 GHG Emissions



Our combined Scope 1 (direct) and Scope 2 (indirect) GHG emissions decreased 43% on an absolute basis in 2023 from the 2019 baseline. In 2023, we recalculated our GHG emissions for the 2019 baseline year and going forward to incorporate refinements in emission factors used in our GHG inventory and amendments to calculation parameters based on the most recent data available and industry best practices. See details of our "2023 Scope 1 and 2 Greenhouse Gas Inventory by Location and Category" in the Appendix. Total emissions for 2019 differ from other instances in this report due to rounding.

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

Avoided Scope 1 + 2 GHG Emissions



For over two decades, we have voluntarily reduced our GHG emissions through significant investments and actions. Despite our growth and increase in manufacturing output and complexity of our manufacturing process technologies, we have reduced our absolute Scope 1 and 2 GHG emissions by 78% from our peak year in 2006. As a result of these efforts, we have both reduced our absolute emissions and avoided 82% of our cumulative Scope 1 and 2 GHG emissions over the last decade. We are working to drive further reductions to reach net-zero GHG emissions (Scope 1 and 2) and to collaborate 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. "2023 Scope 1 and 2 Greenhouse Gas Inventory by Location and Category" is included in the Appendix. Additional GHG emissions reporting is publicly available in our CDP questionnaire response on our Report Builder website.

2023 GHG Emissions Reported by Category (metric tons of CO_2e)

Scope	Emissions	Notes
Scope 1 (Direct) Emissions	845,000	Manufacturing process, on-site fuel combustion, refrigerants, on-site fleet/air travel.
Scope 2 (Indirect, Electricity)	47,800	Market-based method;[2] includes renewable electricity purchases.
Scope 1 and 2 Total	**893,000**	
Scope 3 Total	**23,095,000**	Indirect/value chain.
Leased Vehicles and Commuting	363,000	Employee leased vehicles and commuting.[3]
Logistics and Distribution	158,000	Upstream and downstream transport and distribution.[4]
Employee Business Travel	25,000	Air travel, car rentals, and hotel stays.
Purchased Goods and Services	5,800,000	Hybrid methodology based on key suppliers' emissions disclosure information and extrapolation to cover total purchased goods and services spend.[5]
Capital Goods	2,500,000	
Fuel and Energy Related Activities	60,000	Impacts related to extraction, production, and transportation of fuels and energy purchased, not already included in Scope 1 or 2 market-based method.[6]
Waste Generated in Operations	28,000	Disposal and treatment of waste generated in our operations.
Product Energy Usage	14,040,000	Represents the GHG emissions of the product lifetime (3,253,000 metric tons of CO_2e annualized). Includes consideration of cloud service provider publicly reported use of renewable electricity in data centers.[7]
Processing of Sold Products	121,000	Processing of intermediate products sold to downstream manufacturers.

[2] Location-based method Scope 2 emissions (does not account for any renewable electricity attribute purchases) = 3,130,000 metric tons CO_2e/year.

[3] Upstream leased assets = 7,000 metric tons; employee commuting = 356,000 metric tons.

[4] Upstream portion = 74,000 metric tons; downstream portion = 85,000 metric tons.

[5] Purchased Goods and Services and Capital Goods Scope 3 calculation methods have been refined to account for cradle-to-gate emissions, to clarify boundaries between categories 1 and 2, and to improve temporal alignment between procurement and emissions-reporting timelines.

[6] Market-based method includes renewable purchases. Location-based method emissions (does not account for any renewable electricity attribute purchases) = 268,000 metric tons of CO_2e/year.

[7] Lifetime and annual product energy usage emissions without consideration of customer renewable electricity are 21,042,000 and 4,827,000 metric tons CO_2e, 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. Intel's absolute Scope 1 and 2 GHG emissions peaked in 2006, and since then we have reduced our absolute emissions by 78%. 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 goals are in line with a 1.5°C emissions reduction scenario required under the SBTi criteria, 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.

"Our plans to expand global operations must go hand-in-hand with a commitment to minimizing our carbon footprint and leading the industry in sustainable semiconductor manufacturing. It is a journey, but I am pleased with the progress our teams have made so far."

—Keyvan Esfarjani, Intel Executive Vice President and Chief Global Operations Officer and General Manager, Foundry Manufacturing and Supply Chain

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 attribute purchases have totaled more than 37.9 billion kWh, enough to power more than 3.5 million US households for one year.[8]

Over the last decade, the number of Intel's on-site alternative and renewable electricity installations and 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.

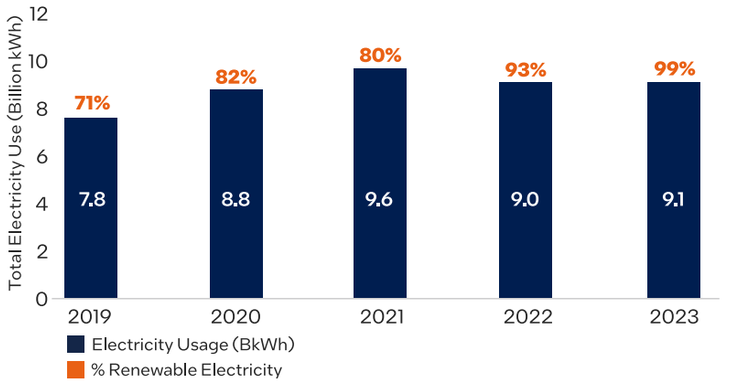
Our on-site projects, which include pilots of innovative technology applications, help us displace grid-supplied, carbon-intensive electricity sources and identify future installation and technology opportunities for both Intel and the broader alternative and renewable electricity market. When installed, 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.

In 2023, we expanded our renewable electricity purchases for our Vietnam and Chengdu, China sites. We also contracted a new 30 MW offsite solar Power Purchase Agreement, which once operational and registered with the relevant authorities, will serve Intel's locations in Malaysia.

Our approach to renewable and alternative electricity investments has been to reduce our own carbon footprint while inspiring 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 99% renewable electricity across our global operations in 2023. 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: 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% in our Israel operations, and 71% globally.

Progress in 2023. We continued 100% renewable electricity purchases for our US, Europe, Israel, and Malaysia operations, and we achieved 100% renewable electricity in Vietnam and China for the first time. We are also approaching 100% in Costa Rica—bringing the global total to 99% as of the end of 2023.

Looking Ahead. We will continue developing renewable electricity purchases in other locations, primarily India and Mexico, and are well on track to achieve our goal of 100% by 2030.

[8] Based on average US household energy usage figures published by the US Energy Information Administration.

Product Energy Efficiency

Compute demand continues to drive increases in global energy consumption, making sustainable computing not only a corporate imperative, but also a global priority. With each new generation of products, Intel aims to offer higher performance and improved energy efficiency compared to previous generations, reducing the Scope 3 GHG emissions of our products in customer applications and overall energy consumption.

Policy and Regulatory Updates

Intel works with industry organizations and worldwide government agencies to promote and enable better energy-efficiency standards across the PC and server industry. Working with the European Commission (EC) via DIGITALEUROPE (DE), a trade association, and other stakeholders on the upcoming EU Lot 3 Computers regulation revision, Intel continued to support DE to advance data collection on notebooks, desktops, and integrated desktops using the agreed-upon benchmark tool for a PC active-mode energy-efficiency metric. Industry is now working with the EC to narrow and align energy-efficiency classes, product families, and representative test configurations for A-G energy labeling recommendations. Intel worked with Information Technology Industry Council (ITI) to align on desktop and mobile workstation definitions, which were adopted by the US EPA on its Draft 1 of ENERGY STAR computers version 9 specification.

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. Intel actively worked with The Green Grid (TGG)—an affiliate member organization of ITI—and DE to provide feedback and guidance on the Ecodesign review study as part of the upcoming EU regulation recast for servers and data storage products. In support of the EU's Green Deal, Intel, as part of the ICT industry, advocates leveraging technology and digitalization to meet the EU's climate-neutral goals by 2050. Intel is also actively participating in the industry-led EU Climate Neutral Data Centre Pact, driving a holistic approach to resource efficiency and metrics to help make EU data centers carbon neutral by 2030.

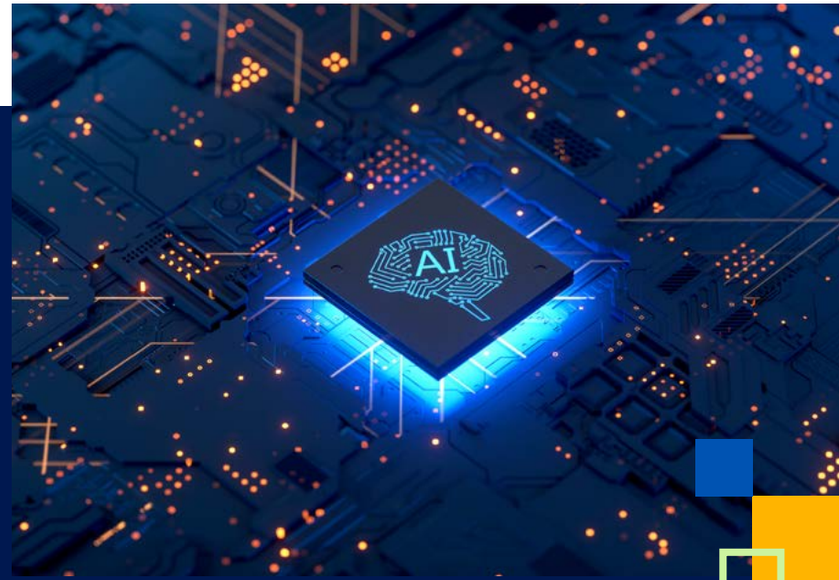
Making AI Computing More Sustainable

AI compute demands are increasing in the data center and on the PC. Intel has taken on the challenge to reduce energy consumption with AI workloads through comprehensive measures, including platform innovations as outlined below:

AI model size and software: We are working to enable developers to reduce AI model size through compression and quantization techniques and to run AI code more efficiently through optimized code. Intel tools such as the Intel® Neural Compressor and a host of optimizations for AI frameworks such as PyTorch and TensorFlow enable greater performance and power savings. One example is the optimization available for Sci-kit-learn, a machine learning library for Python. With Intel's optimization, Sci-kit-learn receives an 8X performance boost while reducing energy consumption 8.5X.[1]

Processors and AI accelerators: Intel processors are designed and purpose built for efficiency with AI workloads. Newly released 5th Gen Intel® Xeon® Scalable processors (code-named Emerald Rapids) have built-in AI accelerators that provide on average 36% performance per watt advantages over the 4th generation processor.[2] The Intel® Gaudi® 2 processor is designed for great efficiency and throughput per watt for training and running state-of-the-art models, from the largest language and multi-modal models to more basic computer vision and natural language processing models.

Intel® Core™ Ultra processors feature new neural processing units to execute AI-based algorithms more efficiently. With AI-enhanced collaboration with Zoom, Intel Core Ultra processors consume up to 38% lower processor power than the previous generation.[3] In addition, features such as Intel® Thread Director and Intel® Adaptix™ technology enable optimal platform energy efficiency and adaptive performance.



AI cooling solutions: Due to the higher performance demands of AI workloads, processor and accelerator thermal challenges are increasing. Cooling server processors becomes a challenge for traditional air cooling in the data center. Liquid cooling technology enables effective cooling that is also efficient—saving up to 30% of energy[4] consumption versus air cooling, as well as potentially reducing water usage. Intel is enabling the greater adoption and scaling of liquid cooling technologies through liquid and platform validation, availability of extended warranties for select processors, and creation of industry standards and specifications in collaboration with the Open Compute Project and the Liquid Cooling Coalition. For Intel Gaudi 3 AI accelerators, Intel and Vertiv have collaborated on an optimized liquid cooling solution that is made available to customers utilizing the accelerator.

[1] Greener Machine Learning Computing with Intel® AI Acceleration: Lowering the Environmental Impact of AI Workloads by 7x using Intel® Extension for Scikit-learn

[2] See [T13] on the Performance Index site: 5th Gen Intel Xeon Scalable processors. Results may vary.

[3] Learn more at Performance Index site. Results may vary.

[4] GRC.n.d. "Comparing Data Center Cooling Technologies – Which Is Best for Your Operation?" GRC. GRC Cooling. Accessed March 7, 2024.

As part of industry consortia in China, we continue to work with China National Institute of Standardization (CNIS) to help enable China's server energy-efficiency standard and Bench SEE (benchmark) tool improvements. The changes adopted by CNIS in the first standard will also minimize market entry risk for the server industry. Intel also worked with industry peers and the Chinese Institute of Electronics to make progress toward development of multiple sustainability standards for PCs. Intel is collaborating with SPEC and the TGG to develop the next version of the server benchmark tool including SPECloud and SPEC SERT suite to reflect modern workload demands and expand the class of servers.

Intel has estimated the GHG emissions due to energy consumption by Intel processors sold in 2023. The annual and lifetime emissions of Intel processors when used in customers' compute applications (i.e., server, desktop, notebook, and workstation) equate to approximately 3,253,000 and 14,040,000 metric tons of CO_2e, respectively.

For more, see the "2023 GHG Emissions Reported by Category" table earlier in the section.

Product Innovation: Client

In 2023, we introduced Intel® Core™ Ultra mobile processors that deliver reimagined power efficiency, world-class compute and graphics performance, and the best AI PC experience[10] to mobile platforms and out to the edge. Intel Core Ultra mobile processor-based notebooks total energy consumption can be as much as 64% lower than ENERGY STAR 8.0 requirements,[11] which is important for saving energy in the use phase of the PC life cycle.

As active workloads become an increasingly important component of the energy use mix, Intel has taken a proactive approach to minimize energy use in these scenarios. Users can consume up to 25% less power while streaming Netflix entertainment with an Intel Core Ultra 7 165H processor, compared to a 13th Gen Intel® Core™ i7 1370P processor.[12] In fact, an estimated 30 billion hours of Netflix programming is watched globally every year on PCs. Streaming those hours with an Intel Core Ultra processor-based laptop instead of the previous-generation system could save enough electricity to power 1,600 US homes for a year.[13]

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®) suite[5] on Intel and/or OEM commercial systems, using an end-of-2019 baseline.

Progress in 2023. Client: On-track. We introduced Intel 13th generation Intel® Core™ mobile processors as well as Intel 14th generation desktop processors[6] that include more efficient cores compared to the prior generation. As a result, we are on track to achieve our aggressive interim goal of 3.46X compared to the 2019 baseline. Late in the year, we also launched the Intel® Core™ Ultra mobile processor with designed-in energy-efficiency advancements.[7] For example, users can achieve up to 3X more power efficiency on Ghostrunner 2 with an Intel Core Ultra 7 165H processor, compared to a 13th Gen Intel® Core™ i7-1370P processor.[8] **Server: On-track.** In 2023, we released our 5th Gen Intel® Xeon® Scalable processors, which achieved approximately 2.1X improvement in energy efficiency vs. the 2019 baseline, as measured by SERT using high-volume SKU.[9] This is within 10% of the planned trajectory of 2.3X toward 10X improvement by 2030.

Looking Ahead. We plan to report on server progress toward the 2030 goals based on planned release of next-generation Intel Xeon Scalable processors in 2024 and client progress based on the Intel Core Ultra mobile processor, as well as the Intel® Core™ 14th Gen processors. We continue to monitor user needs and have observed that demand for AI in PCs has grown, resulting in a new focus on active workloads such as, but not limited to, 10-person Microsoft Teams calls with Microsoft Windows Studio Effects and AI-enhanced collaboration.

[5] SPEC and SERT are registered trademarks of the Standard Performance Evaluation Corporation (SPEC).

[6] "Intel® Core™ Desktop Processors." N.d. Intel® Core™ Desktop Processors. Accessed March 7, 2024.

[7] Learn more at Intel® Core™ Ultra Processors brief.

[8] Learn more at at the Performance Index site. Results may vary.

[9] EMR System Configuration: MiTAC Server M50FCP (Fox Creek Pass, 2U, dual socket system), BIOS SE5C741.86B.01.02.0001.2401260138 (default settings), BMC egs-1.95-0-ga44f42-39e80000, CPLD FCP_v3p0, ME 06.01.04.005.0, dual Intel® Xeon® 6538Y+ (32 cores per socket, 225W TDP), Hynix DDR5 32 GB 5600 MHz DIMMs (16 DIMMs, 1 DIMM per channel), 2 SATA Seagate ST4000NM0035 HDD's, Linksys USB 3Gb Ethernet Adapter, 2 PSU's Platinum 1600W, Windows Server 2022 Standard Build 10.0.20348 (default settings), OpenJDK 17, SERT 2.0.6, Intel_Win2022_OJDK17 SERT client configuration, Test Date: Feb 14, 2024. Baseline CLX System Configuration: Intel Server S2600WP (Wolf Pass, 2U, dual socket system), dual Intel® Xeon® 5218 (16 cores per socket, 125W TDP), Micron DDR4 16 GB 2666 MHz DIMMs (12 DIMMs, 1 DIMM per channel), 2 SATA Seagate ST4000NM0035 HDD's, on-board 10Gb NIC, 2 PSU's Titanium 1300W, Windows Server 2016 Standard Build 10.0.14393 (default settings), Oracle Java 1.8.0_144-b01, SERT 2.0.2, Intel_Win_HS18_5 SERT client configuration, Test Date: Aug 7, 2019.

[10] Based on the broad compatibility, extensive software options, unique architecture, and impressive performance of Intel® Core™ Ultra processors that combine to deliver the best overall AI experience, including in comparison to competition processors (as of December 2023). AI features may require additional purchase or specific compatibility requirements. See the Performance Index for details.

[11] As of January 2024, based on OEM design implementation as measured by data relative to one Asus Zenbook laptop tested and may not be characteristic of all platforms on the market. Platform configuration and implementation have obvious impact to overall platform power as it applies to power measurements for these government regulations. See the Performance Index for details.

[12] As measured by system on chip (SOC) package power consumption while running a Netflix streaming workflow. For more details see the Performance Index.

[13] Based on hypothetical scenario comparing the power consumption of 30 billion hours of PC streaming Netflix on Intel® Core™ Ultra 7 165H processor-powered systems versus 13th Gen Intel ® Core™ i7 1370P processor-powered systems. For additional details on calculations see CES 2024 in the Performance Index.

The introduction of the Intel Core Ultra processor brings the best AI PC experience[14] to mobile platforms. Users may experience up to 40% less power for AI-enhanced collaboration with an Intel Core Ultra 7 165H processor, compared to a 13th Gen Intel Core i7-1370P processor.[15]

The Intel Core Ultra Mobile Processor was architected from its inception with key principles to promote leading-edge power management across hardware subsystems and in coordination with system software. One example of this is the new low power island, which can run workloads while the system turns off the compute tile. Intel Thread Director helps to make on the optimal scheduling decisions.

The result is a new approach based on the needs of end users and OEMs to get the best energy efficiency and performance on the key usages and experiences that they need to support.

Product Innovation: Server and Network

In 2023, Intel launched 5th Generation Intel® Xeon® Scalable processors (code-named "Emerald Rapids") that provide an approximate average 36% improvement in energy efficiency over 4th Gen Intel Xeon Scalable processors over a wide range of workloads.[16] Efficiency gains are supported by improved core and SoC interconnect power efficiency, enhanced SoC interconnect frequency tuning, a fully integrated voltage regulator tuned for power efficiency, and enhanced active idle mode. 5th Gen Intel Xeon processors also include innovative and evolved features, such as built-in accelerators for AI, security, and storage, as well as Optimized Power Mode (OPM) 2.0 to enable energy-efficiency gains when running certain workloads or use cases.

Built-in accelerators can provide up to 10X better energy efficiency in 5th Gen Intel Xeon processors compared to previous-generation Intel Xeon processors.[17] These accelerators provide real-world workload advantages due to the performance and energy benefits they provide. OPM 2.0 builds on an earlier version that debuted in 4th Gen Intel Xeon Scalable processors and enables up to 110W power savings (2 socket) at typical, lower server utilization rates of 30-40%.[18] At idle, 5th Gen Intel Xeon processors enable up to 100W power savings per socket over 4th Gen Intel Xeon processors.[19] OPM 2.0 is enabled by a BIOS (basic input/output system) setting for ease of deployment.

Refreshing previous-generation servers can also reduce carbon and electricity consumption during the use phase of the product life cycle due to the lower number of servers needed to provide the same performance and the energy efficiency of older systems. For example, customers refreshing from 1st Gen Intel Xeon Scalable processor-based servers to those powered by 5th Gen Intel Xeon Scalable processors can experience energy reductions of 1,697.1 MWh while reducing operational CO_2e emissions of 719 metric tons.[20] These benefits and more, dependent on workload and fleet size, contribute to a TCO savings of up to 77%.[21]

As with 4th Gen Intel Xeon Scalable processors, we expect 5th Gen Intel Xeon Scalable processors to be available in deployments in both public cloud and telecommunications networks. 5th Gen Intel Xeon processors are built with 99% renewable electricity and enable up to 38% lower embodied processor product carbon footprint, benefiting customers' Scope 3 emissions.[22]

With greater than 600 million terabytes of mobile data traffic per month forecast by 2030,[23] communication service and network security providers need high-performance and energy-efficient infrastructure to meet rising demands. 5th Gen Intel Xeon processors meet the challenges of 5G Core use cases by providing up to 1.51X throughput and up to 1.31X performance/watt with 5G user plan function compared to previous-generation Intel processors.[24]

[14] Intel Core Ultra Ushers in the Age of the AI PC. Based on the broad compatibility, extensive software options, unique architecture, and impressive performance of Intel® Core™ Ultra processors that combine to deliver the best overall AI experience, including in comparison to competition processors (as of December 2023). AI features may require additional purchase or specific compatibility requirements. See the Performance Index for details. Results may vary.

[15] As measured by system on chip (SOC) package power on XSplit VCam during background removal, auto-framing, enhanced lighting, and chair removal on NPU. For additional details, see the Performance Index.

[16] See [T13] at the Performance Index: 5th Gen Intel Xeon Scalable processors. Results may vary.

[17] Based on performance-per-watt gains of 1.46x to 10.6x with built-in accelerators on a range of AI, database, and networking workloads. See [A19-25, D1, D2, D5, N16] at the Performance Index: 5th Gen Intel Xeon processors. Results may vary.

[18] Results may vary. System configuration: 8592+:Estimated performance on 1-node, pre-production platform with 2x5th Gen Intel Xeon Platinum processor 8592+ (Emerald Rapids). 64C, 350W TDP; Total Memory 1024GB (16x64GB DDR5 5600 MT/s), Turbo On, HT On, pre-production BIOS Version: EGSDCRB1.SYS.0107.D81.2311210259, Kernel: 6.2.0-emr.bkc.6.2.13.3.43.x86_64, Microcode: 0x21000161; OS: CentOS Stream 9; Software: jdk1.11; 2x Ethernet Controller I225-LM; Workload: Power efficiency; Test by Intel on 11/22/2023. 8480+: 1-node, 2x 4th Gen Intel Xeon Platinum processor (Sapphire Rapids), 56 cores, 350W TDP; Total Memory 1024GB (16x64GB DDR5 4800 MT/s), HT On, Turbo On, BIOS Version: EGSDCRB1.SYS.0105.D59.2308191339, Kernel: 5.15.0-spr.bkc.pc.16.4.24.x86_64, Microcode: 0x2b000541, OS: CentOS Stream 8; Software: jdk1.11; 2x Ethernet Controller I225-LM; Workload: Power efficiency; Test by Intel on 11/22/2023.

[19] 8592+: Estimated performance on 1-node, pre-production platform with 2x 5th Gen Intel Xeon Platinum processor 8592+ (Emerald Rapids). 64C, 350W TDP; Total Memory 1024GB (16x64GB DDR5 5600 MT/s), Turbo On, HT On, pre-production BIOS Version: EGSDCRB1.SYS.0107.D81.2311210259, Kernel: 6.2.0-emr.bkc.6.2.13.3.43.x86_64, Microcode: 0x21000161; OS: CentOS Stream 9; Software: jdk1.11; 2x Ethernet Controller I225-LM; Workload: Power efficiency; Test by Intel on 11/22/2023.

8480+: 1-node, 2x 4th Gen Intel Xeon Platinum processor (Sapphire Rapids), 56 cores, 350W TDP; Total Memory 1024GB (16x64GB DDR5 4800 MT/s), HT On, Turbo On, BIOS Version: EGSDCRB1.SYS.0105.D59.2308191339, Kernel: 5.15.0-spr.bkc.pc.16.4.24.x86_64, Microcode: 0x2b000541, OS: CentOS Stream 8; Software: jdk1.11; 2x Ethernet Controller I225-LM; Workload: Power efficiency; Test by Intel on 11/22/2023.

[20] See [T7] at the Performance Index: 5th Gen Intel Xeon Scalable processors. Results may vary.

[21] See [T7] at the Performance Index: 5th Gen Intel Xeon Scalable processors.

[22] Sustainability, Intel Performance Index

[23] Mobile Data Traffic: Global Strategic Business Report. ResearchandMarkets.com, September 2023.

[24] See [N4] and [N19] at the Performance Index: 5th Gen Intel Xeon Scalable processors. Xeon platinum 8592+. Results may vary.

Water Stewardship

By responsibly managing our water use, as guided by our Global Water Policy, we aim to meet our business needs and those of our communities. In 2023, we returned and restored 110%[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.

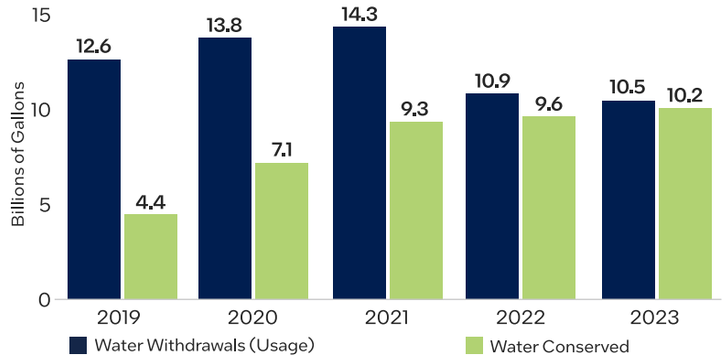
Our water strategy has three focus areas: reduce the water used in our operations through innovative water conservation projects, reuse water within our operations through investments in state-of-the-art water treatment facilities, and restore water to our watersheds in collaboration with local communities. 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.

Our water conservation efforts saved approximately 10.2 billion gallons of water in 2023, and new projects completed during the year are estimated to save more than 200 million gallons annually, once operational. Since 2020, our water conservation efforts have saved more than 36 billion gallons of water, enough to sustain about 330,000 US homes for one year.[2]

During 2023, we continued to fund water restoration projects benefiting the watersheds that we impact and the communities where we operate, including new projects in Costa Rica and Vietnam. In July 2023, we achieved Alliance for Water Stewardship (AWS) Platinum certification for our Ocotillo, Arizona site. Intel was the first semiconductor company in the US and the second company in the US across all industries to earn the Platinum certification. See details in our "2023 Water Inventory by Location and Source" in the Appendix. Additional information is also available in our most recent CDP Water Security report posted on our Report Builder website.

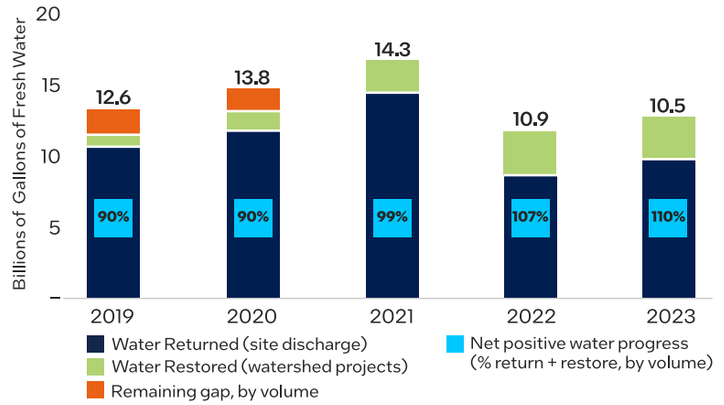
[1] Fresh water returned (8.3 billion gallons) + water restored (3.1 billion gallons)/water withdrawal (10.5 billion gallons) = 110% (small rounding difference). Net positive water percentage represents the total volume of water returned and restored globally. Some locations have returned and restored significantly more than their targets, resulting in a global total greater than 100%. Net positive water is achieved when each country reaches its specific target. Refer to "2023 Water Inventory by Location and Source" in the Appendix for net positive water progress by country.

Water Usage and Conservation

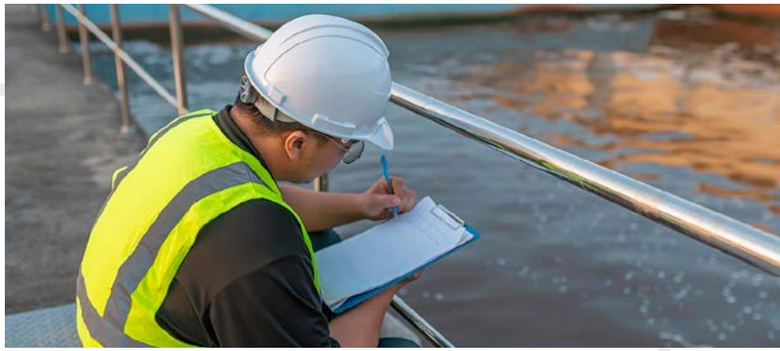


Our 2023 absolute fresh water use decreased 4% from 2022 and 24% from the 2020 baseline. We increased our water conservation by 6% from 2022 to 2023, and by 44% since the baseline year of 2020, due to significant investments in water conservation projects. We define water withdrawals, or water usage, 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.

Net Positive Water



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



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 January 1, 2020.

Progress in 2023. During 2023 we conserved approximately 10.2 billion gallons and 36 billion gallons cumulatively from the 2020 baseline. In addition, Intel-enabled projects restored about 3.1 billion gallons of water to our watersheds in 2023. As a result, we maintained net positive water in the US and India and reached net positive water in two additional countries: Costa Rica and Mexico. These achievements advanced us toward our 2030 goal of net positive water, resulting in 110%[1] (by volume) of fresh water that was returned and restored, and significant progress toward our goal to conserve 60 billion gallons of water by 2030.

Looking Ahead. In 2024, we expect to conserve and restore a total of 13.5 billion gallons of water in our operations, community collaborations, and watershed restoration projects and expect to maintain net positive water in the US, India, Mexico, and Costa Rica. We are well on track to achieve our water conservation goal by 2030.

Water Conservation and Restoration

Below are examples of water conservation projects Intel implemented in 2023 as part of our commitment to achieve net positive water.

Our Penang site in Malaysia reclaims wastewater from our assembly test manufacturing (ATM) operations via filtration and biocide control. The reclaimed water is then recirculated in cooling towers, reducing overall fresh water withdrawals. Following the success of this wastewater reclaim strategy, this project was expanded in 2023 to achieve double the water savings, or an additional 7 million gallons of water conserved per year.

We continue identifying opportunities to segregate and recover rinse water and bypass flows from our process manufacturing equipment. By adding an additional treatment step to remove ozone, we have significantly increased water reuse for factory systems such as cooling towers, scrubbers, and abatement units. The first system was installed in 2023 in our new F34 factory in Ireland, and is expected to conserve approximately 200 million gallons of water per year when fully implemented. Further retrofits to implement this project are planned in our other factory sites in 2024.

Below are examples of water restoration projects Intel funded in 2023 as part of our commitment to achieve net positive water.

Forest Ecosystems Management and Conservation Phase II (Costa Rica) – Fundecor. Agua Tica was established as the first public-private water fund in Costa Rica. One of its objectives is to promote water restoration through forest protection agreements. This project, which follows the successful implementation of Phase I funded by Intel in 2020, is protecting almost 540 acres of mature and/or secondary forest from being illegally converted to a more degraded condition such as grassland, agriculture, or residential development.

By protecting forests and preventing runoff, phase II of the Intel-supported Agua Tica water project is expected to enable the restoration of 71.3 million gallons of water per year near San Jose, Costa Rica.

With support from Intel, CLEAN International is implementing rainwater harvesting systems to provide a more resilient and sustainable water supply for students and staff at 86 schools in and around Ho Chi Minh City, Vietnam.

Rainwater Harvesting (Vietnam) – CLEAN International. The Saigon River basin has experienced declining groundwater due to population growth, seasonal flooding, water pollution, and saltwater intrusion. Rainwater harvesting can help mitigate these risks by capturing excess runoff and using it to decrease groundwater extraction. This project will implement rainwater harvesting systems at 86 local schools, making this water available for use at the schools and helping to create a more resilient and sustainable water supply.

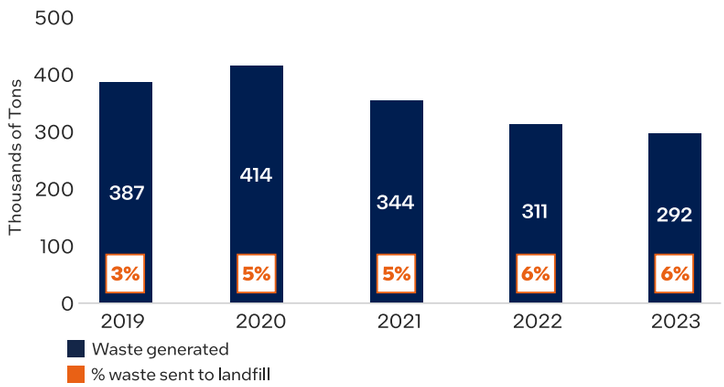
For more information on these and other projects, visit our Water Restoration website.

Waste and Circular Economy Solutions

The majority of Intel's waste originates from construction and manufacturing activities. Our focus on improved management of waste results in materials being kept in use longer. As part of our RISE goals, we remain committed to identifying innovative ways to achieve zero waste to landfill and implementing circular economy strategies for our manufacturing waste streams.

From 2022 to 2023, manufacturing waste decreased by 28% and construction waste increased as a result of our global expansion. Across our global operations, we have implemented waste prevention projects ranging from the removal of single-use cups at hot drink dispensing machines to applying waste materials from one construction project to another project. Projects to divert waste from landfill included finding ways to use waste floor tiles as raw material in the production of new flooring products, composting paper hand towels, recycling latex gloves, reusing polystyrene packaging waste, and more.

Waste Generated and Percent 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. Wastes for which local legislation prevents landfill diversion are not included.

2030 Goal: Zero Waste[1]/ 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.

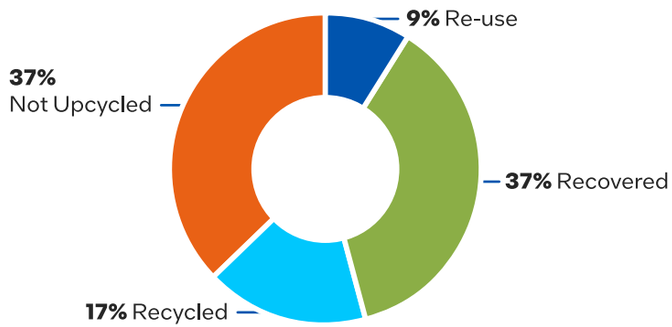
Progress in 2023. In 2023, we sent 6% of our waste to landfill and implemented circular strategies for approximately 63% of our manufacturing waste. Despite construction waste increasing in 2023, waste to landfill declined from 2022. This reflects the significant focus placed on landfill diversion by Intel's construction teams.

Looking Ahead. Management of construction waste will remain a key focus area during our global expansion and across our existing sites around the world. In 2024, we will continue to focus on the identification of markets for spent chemicals, landfill diversion, and upcycling of waste streams.

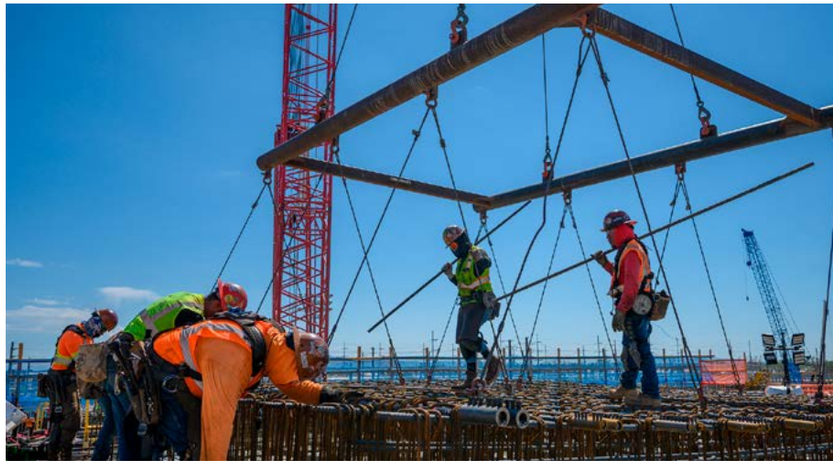
[1] Intel defines zero waste to landfill as less than 1%.

In 2023, we upcycled 76,000 tons, or approximately 63%, of our manufacturing waste.

Circular Solutions for Manufacturing Waste Streams



In 2023, approximately 63% of Intel's manufacturing waste was upcycled (recycled, reused, or recovered). Manufacturing waste represented 41% of our total waste in 2023, and included hazardous and non-hazardous waste associated with wafer manufacturing. For our circular economy solutions strategy, we follow the Ellen McArthur 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.



Upcycling 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 2023, we upcycled (reused, recovered, or recycled) 63% of our manufacturing waste, or approximately 76,000 tons.

We have put significant effort into finding alternate strategies for managing our spent solvent wastes, resulting in additional environmental benefits. For example, two years of work spent redesigning process tools and recipes enabled the on-site segregation of cyclohexanone and its recovery for resale in 2023. These activities supported our goal of circular economy management of our manufacturing waste. In addition, they reduce GHG emissions at the supplier's processing site. By continuing to identify opportunities to recover, recycle, and fuel blend spent solvents that otherwise would have been incinerated, we were able to avoid over 88,000 metric tons of CO_2e in our value chain in 2023.

Intel has invested in robust technologies to increase the recovery of wastes at our global manufacturing sites. In the US, some sulfuric acid waste from our manufacturing operations is sent 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. In Ireland, a treatment process to generate a new pellet form of fertilizer using the factory's ammonium sulfate waste was developed offsite with our waste vendors in 2023. This eliminates the need to export the waste for treatment and provides the raw ingredient needed to produce fertilizer in Ireland in a form particularly suited to Irish farming.

Construction underway at Intel's site in Rio Rancho, New Mexico.

Supply Chain Sustainability

Through engagement with our supply chain on environmental sustainability, we aim to reduce environmental impact, lower supply chain risk, and decrease costs. We seek to work with our suppliers to decrease GHG emissions, water usage, and waste generated, and to implement circular economy strategies. Our procurement teams also work with our logistics and packaging suppliers to help drive changes in the materials we use to ship products. In addition, we work with our first-tier chemical and gas suppliers on green chemistry initiatives.

Addressing Climate Change and Water Use

We engage 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 GHG semiconductor supply chain. In 2023, we announced a new goal to achieve net-zero upstream Scope 3 GHG emissions by 2050. We also have an interim 2030 goal to reduce supply chain GHG emissions by 30% from what they would be in the absence of investment and action. To achieve these goals, we are focused on identifying areas of synergy and collaboration in our supply chain to amplify and accelerate GHG emissions reductions. In 2023, we continued leadership roles in the Governing Council and Working Groups of the Semiconductor Climate Consortium (SCC), which focuses on advancing collaboration across the semiconductor value chain to reduce GHG emissions. We also become a founding co-sponsor of Catalyze, a semiconductor industry collaboration that focuses on accelerating the transition to renewable electricity in the semiconductor supply chain by providing suppliers with access to capacity building and educational resources, strategy support and guidance, and procurement opportunities.

In 2023, we asked approximately 130 first-tier suppliers that have higher environmental impacts to submit data on their own carbon footprints through the CDP Climate Change Questionnaire. Of those suppliers, about 99% submitted the questionnaire, and approximately 97% of those suppliers 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 Security Questionnaire to nearly 60 suppliers located in water-stressed regions. We achieved a 98% response rate, with 96% of those suppliers publicly sharing their responses.

We seek to decrease the GHG 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 2023, we drove further reductions by converting 53% (up from 15% in 2022) of all capital freight shipments from air freight to ocean freight. We will continue developing domestic truck and international ocean freight opportunities with our customers and stakeholders in 2024 for further emissions impacts. Additionally, we are working closely with our logistics suppliers to ensure they have robust internal processes in place to provide emissions reporting data in line with the Global Logistics Emissions Council framework.

> "Switching to renewable energy is an important step to reduce GHG emissions—Intel has achieved 99% renewable electricity in our global operations. As a founding member of Catalyze, we are proud to help remove barriers to choosing greener energy. Ultimately, we want our entire value chain to achieve net-zero GHG emissions as the world becomes more digital."
>
> **—Keyvan Esfarjani**, Intel Executive Vice President and Chief Global Operations Officer and General Manager, Foundry Manufacturing and Supply Chain

2030 and 2050 Goals: Net-Zero Upstream Scope 3 GHG Emissions

Description. Reduce Scope 3 supply chain GHG emissions by 30% from what they would be in the absence of action by 2030 and achieve net-zero upstream Scope 3 GHG emissions by 2050.

Baseline. Each year, we request that a subset of suppliers with higher environmental impacts submit data through the CDP Climate Change Questionnaire, including information on emissions reduction initiatives. Our requirements also include setting at least one GHG reduction goal or target. Progress toward our 2030 goal is measured as the impact of emissions avoided through first-tier supplier actions and initiatives, starting from a 2021 baseline and allocated to Intel using similar approaches as the allocation of supply chain emissions, relative to Intel's total supply chain Scope 3 GHG emissions for first-tier suppliers. Our 2050 goal includes all upstream Scope 3 GHG categories.

Progress in 2023. Supplier GHG emissions reduction actions and initiatives since 2021 have resulted in an estimated 9% of emissions avoidance in our supply chain. To drive further action on supply chain GHG emissions reductions, we also became founding co-sponsors of the Catalyze supplier renewable accelerator program, which is focused on advancing and accelerating renewable electricity adoption in the semiconductor value chain.

Looking Ahead. In 2024, we will continue to focus on advancing collective action on industry-wide emissions reductions through active engagement in SCC; will support supplier action toward use of 100% renewable electricity as founding co-sponsors of Catalyze; and will engage with suppliers on calls to action to set 100% renewable electricity and net-zero targets, and to develop project roadmaps to achieve their goals.

Circularity

The application of circular economy principles across the supply and value 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 2023 resulted in:

- 3,500 tons of manufacturing equipment averted from landfill through resale.
- 395 tons of parts averted from landfill through harvest.
- 61 tons of IT computing assets averted from landfill though resale.
- 2,000 tons of material containing precious metals reclaimed.
- 70% recovery rate on products returned to Intel.
- 75,800 tons of manufacturing waste upcycled.
- 30 countries supported by global e-waste program.

In addition, Intel introduced a prototype that dynamically manages the disposition of returned products from customers, directing it to the highest value recovery areas (restock, repair, resale, and repurpose). This AI learning model effectively leverages a broad set of data to optimize decision-making processes and facilitate a win-win situation for both Intel and the environment.

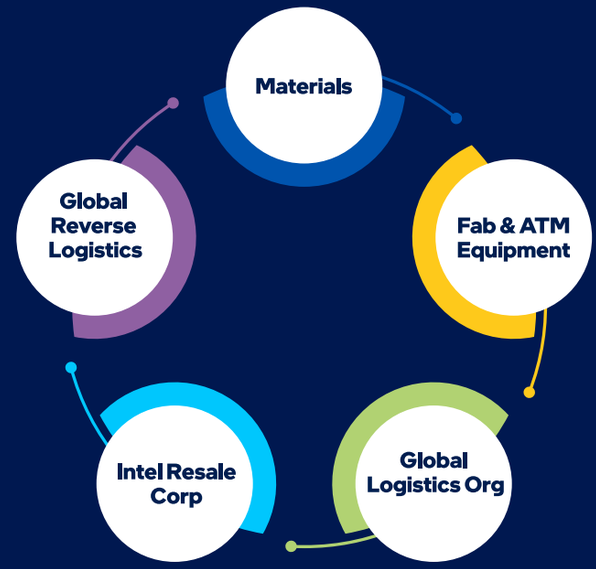
Sustainable Packaging

Intel has a history of practicing sustainable packaging methods to improve packaging designs and sustainable material selection. We focus on reducing unfavorable material, increasing material efficiency, designing for recovery and recycling, prioritizing recycled content, and sourcing responsibly managed 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 are historically sent to landfill. The thermoform tray is made out of a more recyclable material, polyethylene terephthalate (PET), and weighs 50% less than a standard industry injection molded tray. We worked to include post-consumer recycled material into the thermoform trays so that nearly half of the tray is non-virgin material. Since 2009, we conservatively estimate that we have eliminated over 23,800 metric tons of plastic material through these initiatives.

To drive further progress, we are working to achieve three additional sustainable packaging targets. The first is to ensure that 95% of the materials used in our new product packaging designs, by weight, will be recyclable or reusable by 2025. As of the end of 2023, we were exceeding this goal, at 97%. The second is to ensure that 100% of the virgin wood fiber used in our corrugated fiberboard packaging will be from a certified, responsibly managed source by 2025. We are well on track to reaching this target ahead of schedule. Third, we are focused on minimizing the use of virgin plastic in our packaging designs by 2030, and only using plastics containing post-consumer recycled or advanced recycling content for required applications.

Circular Across Supply Chain



Materials
- Waste upcycling
- Chemical footprint reduction
- e-Waste recycling

Fab & ATM Equipment
- Capital equipment reuse
- Expanding equipment life
- Landfill avoidance

Global Logistics Org
- Packaging optimization
- Reusable transportation media
- CO_2 reductions
- Water usage reductions

Intel Resale Corp
- Manufacturing equipment
- IT computing assets
- Returned products
- Precious metal reclaim

Global Reverse Logistics
- Returns asset recovery
- Extend use, reuse, repair, resale, reclaim

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 increase performance and value while protecting and enhancing human health and the environment.

We established the Chemical Footprint Methodology as a key component of Intel's RISE Sustainable Chemistry program to make our operations more sustainable. Building on work in 2021 and 2022 that established a chemical footprint baseline, we have implemented priority projects to address chemicals of concern and act on company commitments. We will continue to improve and update our methodology through our work with suppliers, customers, and our industry collaborators.

Assessing and Reducing Risks

Intel performs a detailed risk assessment of our high-volume manufacturing chemicals, addressing global chemical regulations and prioritizing critical chemicals of concern. To ensure these risk assessments are robust, we require full material disclosures from our chemical suppliers. Our chemical supplier EHS specification requires suppliers to assess the hazards of their formulations and propose alternatives for certain classes of materials. In addition, we publish a Manufacturing Restricted Substances List to guide suppliers regarding prohibited and non-preferred ingredients. For certain chemicals, we publish additional individual policies. In 2021, we released a policy regarding no new process applications utilizing n-methyl pyrrolidone and in 2022, we established a PFAS policy for restricted fab material use for certain PFAS materials. We will continue to review and establish chemical policies as needed.

Addressing PFAS

Perfluoroalkyl or polyfluoroalkyl substances (PFAS) are used in small quantities in certain process chemicals, and can also be found in many components within the electronics industry. In many of the process chemical applications, there are no readily available substitutes. Where there are potential substitutes, we are working with industry associations and our supply chain to assess the feasibility of their uses in high-volume manufacturing. In addition, we support research to address the challenges and ensure adequate controls.

As these efforts require industry collaboration, we have used our long-standing membership in the Semiconductor Industry Association (SIA) to support this work within the association's Semiconductor PFAS Consortium. This group of more than 40 semiconductor manufacturers and suppliers focuses on gathering technical information about PFAS uses and documenting the challenges and opportunities for reduction or elimination where feasible. In 2023, the consortium published 10 technical white papers detailing how PFAS are used in essential process steps and tools in semiconductor manufacturing and the assembly packaging process.

To expand the effort deeper into the supply chain, Intel worked with SEMI, the trade association focused on supply chain, to drive supplier commitments to address PFAS. Intel and SEMI hosted workshops in 2023 where we encouraged suppliers to work toward substitution plans for all PFAS and to identify pathways to overcome technical challenges. This effort ultimately led to the establishment of the SEMI PFAS Initiative. The initiative focuses on work related to resiliency and transparency and was established to complement the SIA work.

In addition, Intel continues its sponsorship and helps lead Semiconductor Research Corporation research projects aimed at identifying, developing, and implementing non-PFAS alternatives. Continued support of academic research, consortia, and supply chain initiatives is needed to further minimize and/or replace these specific substances and other chemistries of concern.

Collaborating for Impact

We continue to set expectations for our suppliers on our supplier portal and to collaborate with our suppliers on alternative assessments and viable chemical replacements. In 2023, as part of our Supplier Program to Accelerate Responsibility and Commitment (SPARC), we asked our chemical suppliers to begin screening all development materials, in addition to the previous requirement to screen high-volume materials, against several health and environmental points to drive conversations on alternative chemistries. We also assessed our suppliers' chemical policies to provide greater insight into how they could further support Intel's green chemistry and alternative assessment process and address specific areas for continuous improvement.

In 2023, we implemented the Supplier Sustainability Scorecard as a holistic program to baseline our suppliers' "sustainability" scores and to establish environmental sustainability expectations within our supply chain in the areas of water, waste, energy, greenhouse gas emissions, and chemical management. In 2024 we will continue the process and will collaborate with suppliers on sustainability improvements.

Intel is an active participant in the Responsible Business Alliance (RBA) Chemical Management and Environmental Work Groups, which work to improve the electronics industry chemical management practices through codes, policies, risk assessments, audits, and training. The RBA helped to establish and scale the Clean Electronics Product Network's (CEPN) Towards Zero Exposure Program, of which Intel is an active participant. CEPN's mission is to understand, address, and eliminate workers' exposure to chemicals in the electronics supply chain. Intel supports CEPN's principle to identify priority chemicals and work toward zero exposure of workers.

Intel is also an active member or participant in multiple other electronics trade associations such as Chemical Users Coalition, Sustainable PFAS Action Network, DIGITALEUROPE, American Chamber of Commerce to the European Union, Information Technology Industry Council, and IPC International. These organizations regularly work with regulatory agencies to provide technical information to show the industry's safe use of chemical substances.

Advancing 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 advance carbon-neutral computing.

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.

Sustainable PC Design to Reduce Product Lifetime Carbon

Intel has taken a holistic approach across the entire PC life cycle to reduce its carbon footprint and increase circularity. This includes the manufacturing phase (embodied carbon), use phase, and end of first life. From this approach came a modernized reference system upon which new platforms are developed. Innovations based on this approach are available in the market due to deep collaboration with OEMs. Working with OEMs, we have enabled several technologies for the Intel® Core™ Ultra processor, Intel vPro® platform, and Intel® Evo™ platform.

Intel® Core™ Ultra Processor Platform Technologies. For the Intel Core Ultra processor platform, we created over 14 technologies, including Intel Intelligent Display, Intel Automated Dust Cleaning, and advancements in WiFi7. Intel Intelligent Display technology enables up to 24% extended battery life that can be increased to 42% more when coupled with Modern Standby.[1] Intel Automated Dust Cleaning Technology reduces dust accumulation in notebooks over time, resulting in up to 13% improved cooling capability compared to normal systems over a usage period of three years.[2]

Intel vPro® Platform and Sustainability. Built for business, the Intel vPro platform offers enterprise-class performance, hardware-based security, and remote management. It is a validated platform with built-in features for performance, hardware-based security, manageability, and stability. According to Forrester's Total Economic Impact report,[3] Intel vPro platforms can provide significant savings to an organization by, for example, reducing hardware-related on-site maintenance visits by up to 90%. Reducing in-person maintenance and other remote management benefits reduced energy costs $69,800 and translated to 368,000 kgs of carbon emissions avoided (based on a company of 10,000 employees).[3] New requirements to the platform include Intel's Platform Service Record, which improves circularity by providing insight into device usage and overall health and any subsequent upgrading, repurposing, or retiring of the PC.

Intel® Evo™ Platform. We work closely with our OEMs to engage on a regular basis, accelerating innovation in areas of joint priority, such as in sustainability. In 2023, we introduced new requirements for OEMs manufacturing the high-performance Intel Evo platforms, including independently verified ecolabel compliance such as Electronic Product Environmental Assessment Tool (EPEAT)[4] Silver and total cost of ownership. Intel promotes going beyond these requirements and achieving EPEAT Gold, which approximately 65% of the designs in the market achieve. Additionally, Intel® Adaptix™ technology (Dynamic Tuning Technology) with Energy Performance Optimizer and a low-power display will also be required for all new Intel Evo edition PCs. These new requirements will enable greater sustainability starting with the Intel Core Ultra processor generation of systems.

[1] Power analysis based on estimates using pre-production performance data as of March 2024; subject to OEM system thermal design and power limitations and further testing. Learn more in the Performance index. Results may vary.

[2] Refers to benefits obtained for a specific system tested; outcomes might change from system to system based on internal design details. Performance varies by use, configuration, and other details. Learn more in the Performance index.

[3] Forrester. 2024. "Cost Savings and Business Benefits Enabled by the Intel vPro® Platform as an Endpoint Standard." January 2024. Commissioned by Intel.

[4] The 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™ Edition Lenovo Yoga 9i 2-in-1 (14", 9) laptop, image courtesy of Lenovo.

Customer Highlight

Through alignment with our OEM customers, such as Lenovo, in the area of sustainability we achieved outstanding collaboration and results in 2023. "Sustainability is a top priority for Lenovo, and we strive to push the boundaries in areas such as using recycled materials, sustainable packaging, and engineering our devices to be more energy efficient. The new Intel® Evo™ Edition Lenovo Yoga 9i 2-in-1 (14", 9) is the latest example of our innovations in more sustainable devices. Our close collaboration with Intel on the Intel® Core™ Ultra platform enables multiple AI applications to run on the Lenovo Yoga 9i 2-in-1 (14", 9)'s local NPU, offloading CPU and GPU workloads and improving battery life. This optimized energy use allows the device to meet ENERGY STAR 8.0 requirements."

—Jun Ouyang, Lenovo's Vice President and General Manager of the Consumer Business Segment, Intelligent Devices Group

Improving Data Center and Network Energy Consumption

The primary source of ICT emissions in the use phase is electricity used to power data centers and networks. One of the ways Intel processors enable a reduction in electricity usage 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 telecommunications performance metrics by dynamically matching CPU power consumption to traffic. In near commercial performance tests on a model network, several key 5G core software solution providers achieved a reduction of CPU power consumption by over 30% with no packet loss.[5]

Intel's Global Extensible Open Power Manager enables power and energy optimizations on heterogeneous platforms. Intel testing has demonstrated power savings of up to 20% in a supercomputing cluster with only minimal performance degradation on key AI and high-performance computing workloads.[6]

Data Center Measurement Best Practices. Measurements and standardized metrics are foundational to driving harmonized efficiency and carbon-neutral computing methodologies across the industry. Intel is collaborating with TGG and the Climate Neutral Data Centre Pact in pursuit of top-down metrics at the data center level that complement power usage effectiveness (PUE) by measuring IT compute energy efficiency, as well as metrics that comprehend resources beyond operational energy. We are also leveraging our leadership role in the Open Compute Project (OCP) Sustainability Initiative to pursue PUE reporting standards, and bottoms-up IT compute energy-efficiency metrics. This includes incorporating liquid cooling technologies and infrastructure design standards to enable future software to self-monitor and report energy consumption and the resulting footprint.

To modernize cloud benchmarking and change the way performance is perceived in data centers, Intel initiated a cross-Industry initiative and brought together major industry and academic players—including Microsoft, Google, Alibaba, IBM, Dell, AMD, Ampere, ARM, Tenstorrent, and MIT—to define a modern benchmark under the SPEC consortium.

We are actively driving the definition and development of the benchmark (code-named: SPEC Cloud V1) with the working group, and expect it to be released publicly in the second half of 2024.

Making Software More Efficient

Software inefficiency can be an unexpected source of energy consumption. We estimate that up to 30% of the energy consumed by the data center can be attributed to running inefficient code.[7] Intel provides code optimizations for developers that provide performance and energy efficiency. These optimizations are available in Intel® oneAPI, OpenVINO™ toolkit, and Kubernetes tools and toolkits.

One example is the Intel extension for the PyTorch AI and machine learning framework that provides up to 67% greater throughput on AI inference workload.[8] Intel's optimizations for TensorFlow, as part of the Intel oneAPI Deep Neural Network Library, provide over 2X better throughput for AI inference workloads.[9] In addition, Intel created the Kubernetes Power Manager to expose and use Intel specific power management technologies such as Intel Speed Select Technology, Intel Advanced Vector Extensions, and more. These features enable reduced power consumption and greater performance.

Intel's Granulate software-as-a-service offering enables companies to optimize cloud workloads and improve application performance and efficiency. A recent addition to Granulate is an energy and emissions counter, which enables results to be tracked across those vectors. With this software tool, Intel is enabling a reduction of cloud resources required to run applications—saving energy and cost. With Granulate software, Mobileye has reported using 45% less time to run the same workload, saving an annual carbon equivalent of 30,000 kg.[10]

To foster industry and ecosystem collaboration, Intel is a member of the Green Software Foundation and has contributed to the Impact Engine Framework to model, measure, simulate and monitor the impacts of software.

[5] Intel Corporation. 2024. "Intel Unleashes 2.7x Performance per Rack Improvement for 5G Core." February 25, 2024.

[6] Intel internal testing.

[7] Intel estimate.

[8] "PyTorch* Optimizations from Intel." n.d. Accessed March 7, 2024.

[9] "TensorFlow* Optimizations from Intel." n.d. Accessed March 7, 2024.

Reduce, Reuse, and Recycle with Circular Economy Principles

Data Center Reuse and Reduce: Intel continued its engagement with industry peers at the OCP on sustainability in the data center through modularity that enables "reuse and reduce." Modularity calls for a common building block design with verifiable interfaces to allow for replacement of only those pieces in need, instead of the entire platform. The OCP working group has released specifications for modular server components.

In this space, Intel was an instrumental leader in the development and official release of the server Data Center-Modular Hardware System (DC-MHS) specifications with OCP peers, customers, and organizations in 2022. In 2023, a new specification was released for shared power, cooling, and connectivity for 19" and 21" server racks. Intel modeled a 27% embodied carbon footprint reduction from implementing DC-MHS on upcoming Intel data center platforms[11] (using the Product Attribute to Impact Algorithm [PAIA] to estimate carbon and energy impact).

As the data center becomes more distributed, modular systems for the edge are needed. Challenges for these systems include designing and optimizing for environmental conditions, space, and existing infrastructure. Intel announced a collaboration with Foxconn Industrial Internet to create an optimized modular 5G vRAN DU (distributed unit) server, featuring AI capabilities powered by Intel Xeon processors.[12]

Client Reuse and Reduce: In 2023, Intel continued to evolve its servicing program, which delivers security and functional updates for our processors via the Intel Platform Update. Specifically, Intel has increased its engagement with OEMs and customers who are interested in extending the duration of platform servicing and support, which should extend the useful life of end products. We expect to make strides in that space in 2024.

[10] Mobileye Reduced 30,000 kg of CO2 Annually By Optimizing AWS With Intel Granulate n.d. Accessed March 22, 2024.

[11] Intel internal estimate. Embodied carbon, scope 3 specific calculation as of July 2023 using an Internal Intel optimization of PAIA model used to calculate embodied carbon. For general information on how Intel calculates embodied carbon, visit Performance Index Sustainability.

[12] "From Edge to Cloud System Design in the Era of AI." 2023. Open Compute Project.

Expanding the Technology "Handprint"

Intel's solution development is enabling the decarbonization of industries worldwide. One major focus area for Intel is enabling renewable energy through the implementation and deployment of a modern, smart grid. According to the International Energy Agency, investment in smart grids needs to more than double through to 2030 to track with the Net-Zero Emissions by 2050 Scenario that aligns with the Intergovernmental Panel on Climate Change's Sixth Assessment Report. To address this, industries such as grid operators, utilities, and IT are responding and rapidly deploying renewables and electrification globally. With smart grid technologies—which include the use of hardware, sensors, and software to match supply with demand and provide stability and resiliency—renewable electricity can be more readily integrated onto the grid. Intel's Center of Excellence for Energy Sector is actively involved in the creation, implementation, and expansion of the modern, smart grid with technology for software-defined substations, energy services delivery platforms, and EV charging infrastructure.

Intel-based software-defined substations help utilities integrate renewable energy and enable operators to manage an increasingly bi-directional and highly dynamic grid. In addition, Intel technology, including edge analytics and processors, is foundational to energy services delivery platforms, including distributed energy resource management systems (renewables), the EV charging infrastructure, and green data centers.

Intel has created coalitions and collaborations with leading utilities and the broader ecosystem in the US, Europe, and Asia to accelerate standards-based and interoperable next-generation smart grids and power system substations.

Intel is a founding member and technical advisor of the Edge for Smart Secondary Substations Alliance, a group dedicated to developing an open and interoperable platform for next-generation smart grid secondary substations. Research by the American Council for an Energy Efficient Economy estimates that energy-generation-reduction technologies for a single substation could reduce carbon dioxide by an equivalent of taking as many as 1,800 gasoline-powered cars off the road.[13]

[13] Hoffmeister, A., P. Srinivasan, A. Mersky, and E. Taylor. 2023. A Modeling Approach to Estimate Handprint Impacts: Applications in Grid Management and Fleet EV Charging. Washington, DC: ACEEE. Page 15.

Intel is also a founding member of the vPAC Alliance, which is driving a standards-based, open, interoperable, and secure software-defined architecture to host protection, automation, and control solutions for power system substations. Intel's efforts with vPAC include proof-of-concept substation automation projects underway at leading utilities around the globe, including with Hydro Quebec, National Grid, and the Salt River Project in Arizona.

To further scale grid modernization efforts, Intel has established a global program with Capgemini, a leader in consulting and digital transformation services. To help jumpstart and scale up the emerging carbon-reduction sector, Intel is supporting and leading workgroups for industrial decarbonization and grid modernization in the Houston Energy Transition Initiative.

Beyond grid modernization and scaling renewable electricity across the globe, Intel is involved in many other handprint projects, including those related to the development of smart buildings and smart cities. Intel technologies, including AI optimization software tools such as OpenVINO toolkit, enabled Terminus Group to develop a smart industrial park in China. The park reduces energy consumption via smart solar power systems, smart metering, and environmental monitoring to reduce carbon emissions.

Intelligent traffic management can also reduce emissions while improving safety and relieving road congestion. Intel and ISSD Electronics have created an intelligent transportation system featuring smart cameras, AI analytics, and more. In a deployment in Konya, Turkey, with a population of more than 2 million, wait times at traffic junctions have been reduced by 30% and carbon emissions have been reduced by 40%.

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. To evaluate the effectiveness of our environmental management system, Intel has maintained multi-site, third-party-verified International Organization for Standardization (ISO) 14001 for all manufacturing locations since 2001 and ISO 45001 since 2020. 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 six of our manufacturing sites. 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 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 EHS program self-assessments to validate EHS compliance at the individual site level. In addition, our senior global EHS professionals conduct 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), as well as 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. We seek to do so in accordance with local and national regulations, such as those set by the US 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 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.

Intel CEO Pat Gelsinger (center) tours our wafer fabrication facility under construction in Arizona.

EHS Compliance Reporting Data

Years	Number of NOVs	Fines or Fees
2019	7	$400
2020	8	$6,986
2021	10	$2,209
2022	13	$12,850
2023	14	$35,016

In 2023, government officials made more than 220 visits (including audits and inspections) to Intel sites across the globe, including over 80 health and safety agency inspections, nearly 40 fire protection agency inspections, and more than 90 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. Applicable historical data were restated to correct minor discrepancies.

Compensation aligned with our environmental goals

We reached our **2023** target goals

Achieved **99%** renewable electricity globally

Conserved and restored **13B** gallons of water

Reduced Scope 1 and 2 GHG emissions by **424K** metric tons of CO_2e

Sent **4%** of waste to landfill by the end of 2023

Allocated **$425M** of green bond proceeds

Linking Compensation and Financing to Environmental Performance

Since 2008, we have linked a portion of executive and employee compensation to corporate responsibility factors. Our 2023 bonus incorporated environmental-related metrics aligned to our 2030 and 2040 goals, including achieving at least 95% renewable electricity globally, reducing Scope 1 and 2 GHG emissions by 130,000 metric tons of carbon dioxide equivalent (CO_2e), conserving and restoring 12 billion gallons of water, and sending ≤5% of waste to landfill by the end of 2023. We achieved each of the targets, reaching 99% of renewable electricity globally, reducing Scope 1 and 2 GHG emissions by 424,000 metric tons of CO_2e, conserving and restoring 13 billion gallons of water, and sending 4% of waste to landfill by the end of 2023. In 2024, environmental metrics include achieving 95% renewable electricity globally, reducing Scope 1 and 2 GHG emissions by 25,000 metric tons of carbon dioxide equivalent (CO_2e), certifying two additional sites to ISO 50001, conserving and restoring 13.5 billion gallons of water, and achieving a ≥ 90% recycling rate of construction waste. For more information, see our 2024 Proxy Statement.

In 2023, for the fourth consecutive year, we achieved our green revolving credit facility targets for energy and water conservation. In 2023, we published our first green bond impact report, summarizing the allocation of $425 million of the $1.25 billion green bond proceeds across five project categories, including pollution prevention and control, water stewardship, energy efficiency, renewable electricity, circular economy, and waste. The green bond, which was announced in 2022, 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. Projects that meet the eligibility criteria were estimated to reduce Intel's GHG emissions by 5.3 million metric tons of CO_2e, save 4.5 billion gallons of water, and divert 56,000 tons of waste from landfills in 2021 and 2022.

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. As of the end of 2023, we had achieved LEED® green building certification for more than 18.9 million square feet of space in 55 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% compared to the original baseline design. We completed LEED® certification of one building at our Ronler Acres site and two buildings at the Bowers campus.

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.

Since 2012, 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 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 the 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 accelerating the industry harmonization of PCF methods that relate to Intel products. We believe consistency is needed, and we are accelerating the industry harmonization of PCF methods that relate to Intel products, for example, through leadership in the Scope 3 and the Emissions Reporting Protocol Working Groups in 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 PCF[1] 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 them to estimate the contribution of our processors to the overall impact of their finished products.

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

Enabling

We remain committed to creating a better world through the power of our technology. Our employees' expertise and passion remain key driving forces in this process. We also believe that the success of our IDM 2.0 strategy and the health of the communities where we operate depend on an inclusive community of innovators prepared for the jobs of the future. The Intel Foundation strives to empower human potential and ignite positive change. We are challenging ourselves to do even more to broaden access to opportunities, support community needs, and inspire the next generation. 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

1,013,000 volunteer hours

Globally, Intel employees and US retirees have donated more than 21.6 million hours of service—including 1,013,000 hours in 2023—to schools and nonprofits focused on furthering education, youth programs, social welfare, and many other significant causes that help those in need.

370 social impact technology projects funded

Through the Intel RISE Technology Initiative (IRTI), we have invested cumulatively in 370 technology projects across 42 countries since 2020, addressing health and life sciences, education, economic recovery, social equity and human rights, accessibility, and sustainability.

$819 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 nearly $819 million in funding of programs and STEM initiatives.

Enabling: Our Approach

Our employees deliver innovative ideas, expertise, and dedication to make lives better in their communities. Leveraging their passion for solving global challenges through application of Intel® technology, employees have addressed critical needs and contributed to the achievement of our RISE goals. Intel's culture of enabling employees to be involved in their communities has resulted in millions of hours contributed by our workforce since Intel Involved, our volunteer program, launch in 1995. We continue to aspire to increase the impact of our skills-based volunteering.

To catalyze action and amplify the impact of our employees' service and generosity, the Intel Foundation contributes funds to eligible nonprofits and schools where employees volunteer and donate their own funds. 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 (IRTI) by deploying Intel technology and our employees' talent, while collaborating with customers and the industry.

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. From our work with N50 to enable millions of people to participate in the digital world to our efforts to accelerate AI entrepreneurship in Africa, Intel is applying technology for impact.

Our experts drive the success of IRTI projects and we actively work with other organizations to identify issues and provide unique technological solutions to some of the world's most complex challenges. Some of the most compelling projects funded by IRTI aim to support diverse communities, social equity, and innovation.

We're on track to contribute **10 million hours of volunteer service** to our communities between 2020 and 2030.

Employees Changing the World

Intel's corporate purpose is to create world-changing technology that improves the life of every person on the planet. We are working to make technology fully inclusive, expand digital readiness, and empower all of our employees to take action. We aim to create opportunities for employees to connect with each other, further integrate corporate responsibility and sustainability into their teams' work objectives, and share their skills with our communities. Our RISE goals are an integral part of the measurement of our annual performance goals for all employees, including our management team. Intel and the Intel Foundation are instrumental in driving our global ambitions forward by contributing thought leadership and funds to deploy innovative programs that support underserved populations in collaboration with schools and nonprofit public and private organizations.

Intel Involved

We continue 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 21.6 million hours of service—including over 1 million hours in 2023—to tackle environmental challenges, improve education, and help meet community needs around the world.

We encourage volunteer activities whenever large groups meet and our leaders take it a step further with creative "give back" challenges for their business units. Our philosophy is to meet volunteers where they are by creating pop-up events convenient to factory workers' schedules, hosting site-wide volunteer events at nonprofits, and encouraging employees to report their personal volunteer efforts. 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.

$142.9 Million. Total matching grants for employee volunteer service through Intel Involved since the program's inception in 1995.

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 January 1, 2020.

Progress in 2023. During 2023, our employees volunteered 1,013,000 hours of service in our local communities. As of the end of 2023, we had reached approximately 3.8 million hours of service toward our 10 million-hour goal.

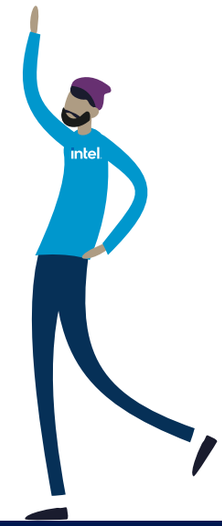
Looking Ahead. In 2024, our objective is to reach another 1 million volunteer hours and to continue to expand our skills-based volunteering activities.

2023 Volunteerism by the Numbers

22.6%	Percentage of employees who volunteered
1,013,000	Number of hours
$32.2 M	Estimated in-kind value of volunteer hours[1]
$7.6 M	Total dollars matched by the Intel Foundation for Intel Involved volunteer hours[2]

[1] Based on the 2023 Value of Volunteer Time rate of $31.80 per hour published by Independent Sector.

[2] Volunteer payments made in 2023 are for 2022 hours. Payments are processed once the year closes.



Making a Difference in Local Communities

Through the Intel Involved program, our employees passionately work to address challenges and disparities in the world. Employees devoted their time and talent in a variety of ways to make a difference in 2023.

Inspiring Tomorrow's Innovators. Intel Oregon volunteers engaged elementary students in hands-on, real-world engineering projects, including building miniature lunar landers. Employees in Vietnam served as mentors for local students and Intel volunteers judged local science and technology fairs in Costa Rica, Folsom (California), China, and Malaysia. In New Mexico and Arizona, employees hosted STEAM activities for local students.

Supporting Sustainability. Volunteers in Mexico helped clean up and maintain a local park. In Malaysia, employees planted trees, cleared trash and recyclable materials from a local beach, and helped sort materials at a local recycling center. Oregon employees worked to restore wetland habitats, and Arizona volunteers shoveled out weeds and removed invasive grass species at an arboretum.

On the Ground at New Sites. Communities at new Intel locations are already benefiting from our employees' passion for sharing their time and expertise. In Magdeburg, Germany, where Intel plans to open a leading-edge wafer fabrication facility, Intel volunteers hosted a booth at a science event and engaged local students in a hands-on STEAM activity. In Ohio, where a new Intel mega-site is being established, volunteers planted trees and engaged local fifth graders in conservation activities, conducted Earth Day science experiments with students, and shared sustainability tips with local middle schoolers.

Wide-Ranging Volunteer Efforts. The ways our employees enrich the communities where they live and work reflect their wide range of talents and interests. In 2023, their volunteer activities included bathing and socializing dogs at an animal shelter in India; helping to build homes in Folsom (California) and New Mexico; and collecting and distributing donations of school supplies, toys, and clothes in Vietnam. In Oregon and China, they provided technology support for seniors and installed lights to help prevent falls. In New Mexico, they put together snack packs for elementary school students, created a mural at a local nonprofit, and assembled bikes for local kids.

Intel Foundation and Corporate Philanthropy: Rising to the Future

Through corporate philanthropy, Intel funds innovative initiatives in higher education, technology for good, workforce development, and sustainability.

The Intel Foundation aspires to inclusively reach our global communities and positively inspire the next generation of innovators with unique K-12 and higher STEAM and STEM education initiatives. With the goals of igniting interest in science and technology through deep engagement, people-centered innovation methodology such as design thinking, and hands-on experiential learning for under-resourced groups and youth, the Intel Foundation promotes equitable access through community and employee engagements.

Over the past 35 years the Intel Foundation has given nearly $819 million to communities worldwide.

The Foundation's priorities include:

Amplifying employees' time and generosity: The Foundation connects employees' and US retirees' passions for philanthropy to take on global challenges and meet community needs by matching volunteer time with donations to eligible schools and nonprofit organizations.

Foundation and Corporate Giving 2023 Contributions (in millions)

Forms of Giving	US	International	Total
Corporate Cash	$36.7	$16.2	**$52.9**
Foundation			
Foundation Grants	$2.0	–	**$2.0**
Donation Matching	$12.5	$4.1	**$16.6**
Volunteer Matching	$4.2	$3.4	**$7.6**
In-Kind Giving	$1.8	$0.6	**$2.4**
Total	**$57.2**	**$24.3**	**$81.5**

In 2023, charitable giving by Intel and the Intel Foundation totaled approximately $81.5 million, compared with $94.2 million in 2022.

Humanitarian Crisis and Natural Disaster Relief

In 2023, the Intel Foundation responded to an increased number of humanitarian crises and natural disasters, including earthquakes, tornadoes, wildfires, floods, and famine. Employees joined the Foundation in support of 10 special matching campaigns, raising over $4 million in donations and Foundation matches that enabled about 26 causes to deliver assistance to those in need. These campaigns included relief for wildfires in Washington, Canada, and Maui; earthquakes in Turkey and Syria; and more.

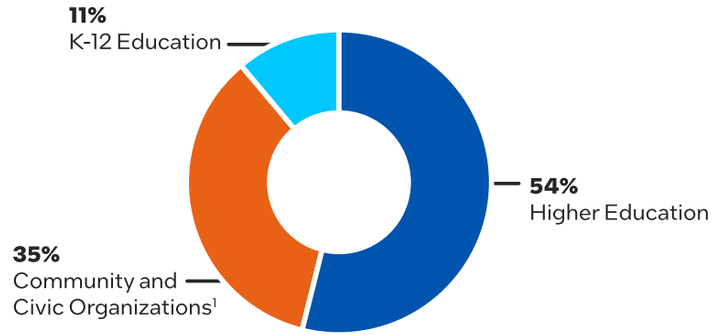
"Thank you, Intel and Intel Foundation, for the ability to maximize our impact in support of this terrible tragedy."

—Intel employee, following the donation of approximately $670,000 from employees and a Foundation match in response to wildfires on the Hawaiian island of Maui.

Promoting STEM education: Recognizing the life-changing power of technology and learning, the Foundation champions immersive STEAM and STEM experiences to help ensure the future is filled with diverse and inclusive innovators.

Responding to humanitarian crises and natural disasters: When a natural disaster or humanitarian crisis occurs, the Intel Foundation seeks to respond by offering matching campaigns that enable employees to take action and amplify the impact of their generous donations to relief assistance efforts.

Community Giving by Category



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 2023, examples of funded organizations receiving significant grants in each of our giving categories included: Higher Ed (National Science Foundation and University of Cincinnati), K-12 Education (STEM Next Opportunity and Society for Science & the Public), and Community and Civic Organizations (IITM Pravartak Technologies Foundation and Fundecor).

[1] Includes eligible 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

In our continuing efforts to solve global challenges, we are evolving 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.

Ensuring Digital Participation for the Next 50%

The N50 Project aims to enable the next 3 billion people to participate in the digital world, recognizing the critical importance of access to affordable content, applications, and services at adequate speed. Intel was a founding member of N50, whose collaborators and members include other Fortune 500 companies, non-governmental organizations, academic institutions, and entrepreneurial ventures. In 2023, the effort scaled to 160 collaborating stakeholders working on more than 70 initiatives across the globe, including the installation of virtual education labs in 12 locations, and formation of the Young African Leaders Initiative to help empower African youth. The N50 Project has already impacted more than 500,000 people, ultimately helping to enable digital equity.

Participants in the Young African Leaders Initiative, Kenya, November 2023. Photo by Geeks Without Frontiers.

Win-Win Impact

Intel's Client Computing Group (CCG) is working to create scalable, sustainable collaborator-enabled community technology programs in alignment with our business and social impact priorities and those of our customers and other stakeholders. This work started in 2022, when CCG provided tech expertise and resources to help accelerate more than 15 HBCU student start-ups; collaborated with Lenovo to provide 220 refurbished systems and peripherals to 20 schools and community organizations; and provided hardware and AI training to the Hidden Genius project, which trains and mentors Black male youth in technology creation, entrepreneurship, and leadership. Building on this momentum in 2023, we collaborated with ASUS to launch an employee-led STEM program that simultaneously yielded product design improvements; supported sustainability activities with the Aeras Foundation, which focuses on equitable access to technology; helped the Portland Trailblazers with outreach at a Boys & Girls Club and the Cleveland Cavaliers with out-reach to schools in Ohio; and formed an engagement to accelerate AI entrepreneurship in Africa. In Oregon, Intel also worked with East Metro STEAM and the Multnomah Education School District to create a K-12 Esports league serving 27,000 students with Intel hardware, technical expertise, and volunteers. These ongoing and diverse community engagements underscore Intel's dedication to both business objectives and social impact, emphasizing the transformative role of technology.

Women in STEM

According to a report by the National Science Foundation, women make up only 14% of the total workforce in STEM fields in India.[1] Furthermore, a study conducted by UNESCO found that only 35% of STEM students in higher education are women.[1] The Intel India team worked with Mind Empowered to conduct a series of initiatives in 2023 focused on women in technology. As a result of the initiatives, women were trained in STEM content across 10 engineering colleges in India. Intel India also trained over 800 women and girls across South India in STEM topics—including working with Jansons Institute of Technology and SSN College of Engineering using Intel AI tools.

[1] Times of India opinion piece.

Participants in the inaugural East Metro Esports Championships and Expo.

"Our work with Intel helps increase access and interest in computer science, deepen engagement with professionals of color and students, and connect higher education computer science programs to middle and high school students. Working with Intel has been central in not only providing technology expertise and in helping to connect industry and professionals to our program, but also by championing the use of eSports in education"

—Jarvez D. Hall, Director, East Metro STEAM Partnership

IRTI: Activating Tech as a Force for Good

In 2021, we created the Intel RISE Technology Initiative (IRTI), through which we are building deeper relationships with our customers and other organizations in line with our corporate purpose and our goal to create shared value. The IRTI has evolved into a broad, purpose-driven platform for action. Among the many lessons learned over the past few years is that technology is essential and can be a force for good. Through IRTI, Intel has driven substantial impact, investing across key focus areas that align with the Intel RISE global challenges: accessibility, economic recovery, education, health and life sciences, social equity and human rights, and sustainability and climate.

IRTI Project Updates

Year	Projects to Date*	Countries Benefited
2020-21	282	40
2021-22	335	42
2022-23	370	42

*Row totals are cumulative.

As of the end of 2023, Intel had funded some 370 projects in 42 countries across the globe. Intel's comprehensive portfolio is used in these projects to solve unique challenges that affect 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 over the last year.

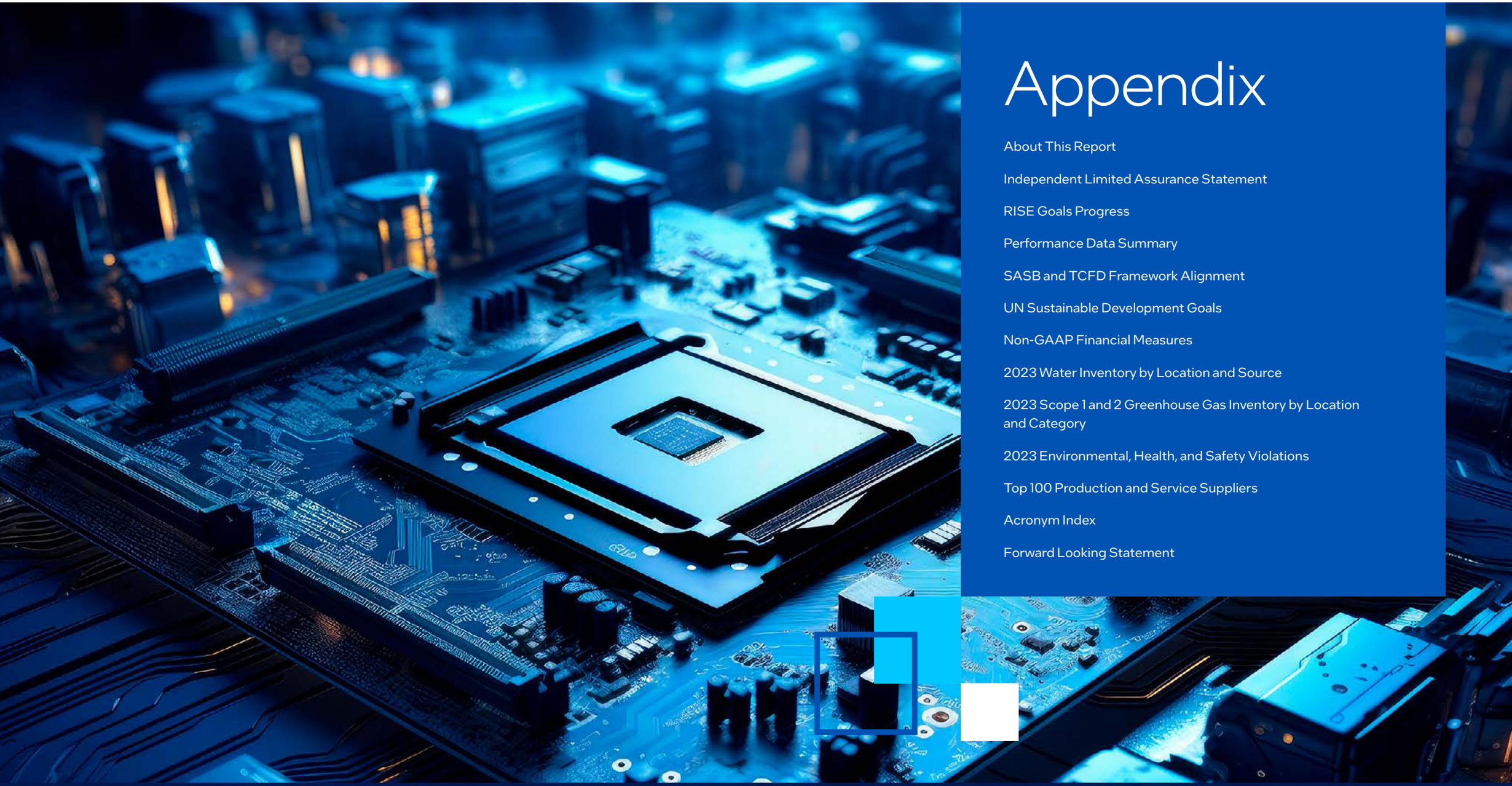
Accessibility: Navigation for People With Visual Impairments. A visually impaired friend inspired engineer and start-up founder Jagadish Mahendran to apply AI computer vision technology in a new way. Mahendran combined satellite navigation, voice activation, and AI computer vision into a single wearable prototype that would provide a new set of eyes for people with visual impairments. Mahendran's prototype incorporates a backpack-housed computer and battery system, a vest-mounted spatial camera, and a pair of wireless head-phones to provide up to eight hours of augmented navigation as the wearer traverses complex environments. The solution is an Intel platform that uses Intel® Movidius™ technology running computer inference at the edge. It optimizes algorithms to run locally, eliminating reliance on connectivity and/or cloud computing. Intel, via IRTI, funded prototyping and piloting of new visual scene detection use cases. The platform is open source and modular, which gives developers a founda-tion for incremental innovation. Mahendran and his team are working to bring an affordable version of the project to market as soon as possible.

Education: AI for Agriculture. Poland is one of the biggest agricultural suppliers in the European Union. Modern technologies such as advanced data analytics, autonomous vehicles, and image recognition, are revolutionizing this sector. In parallel, the Polish government has embarked on several strategic education initiatives to prepare the workforce of the future. The Polish Ministry of Agriculture and Intel have collaborated on the roll-out of the AI for Future Workforce program to introduce cutting- edge AI skills in vocational agriculture schools. To further support the effort, Intel also provided the Intel® Skills for Innovation (Intel®SFI) platform to the Polish Ministry of Education and conducted extensive teacher training. Based on the initial success of the collaboration, Poland's Ministry of Education is exploring scaling Intel SFI teacher training throughout the country.

Health and Life Sciences: Supporting Elderly Patients After Surgery. Postoperative delirium is relatively common in older patients undergoing major surgical procedures. It can lead to increased hospital cost, medical complications, intense family stress, and patient mortality. While post-operative delirium is a widely recognized issue, evaluating patients' mental status with enough frequency to intervene early is logistically difficult. Intel collaborated with Cleveland Clinic Florida on a pilot program to automate delirium assessment using computer vision and other technologies. The pilot showed that delirium assessment can be automated, and the collaborative is working on further improvements of the technology through the addition of AI.

Social Equity and Human Rights: Using Technology to Combat Modern Slavery. Intel joined with NGO Hope for Justice to build a pilot application that enables organizations combating modern slavery to confidentially share sensitive data related to individual cases. Using the enhanced privacy protections offered by Intel Confidential Computing Solutions, the technology will enable Hope for Justice to overcome many of the current obstacles to collaborations with national and inter-governmental stakeholders responding to the ongoing humanitarian crisis in Europe.

Sustainability and Climate: Resilient and Sustainable EV Charging. The transition to electric vehicles (EVs) places increased strain on the electric grid. Intel collaborated with Heysoft Pvt. Ltd. to develop an energy management automation system that helps EV charging stations operate more energy-efficiently and sustainably. The system enables EV chargers to prioritize renewables-based energy when available—whether from locally installed resources or from the grid itself. In addition to managing the energy consumption of the charging infrastructure, the system automatically throttles charging speed down in response to grid supply constraints. The system helps prevent generation of energy from fossil-fuel based, fast-ramping generators. The pilot site for the technology is located in Malaysia, part of the fast-growing EV market in Asia.



Appendix

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

2023 Water Inventory by Location and Source

2023 Scope 1 and 2 Greenhouse Gas Inventory by Location and Category

2023 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 2023 Intel Annual Report on Form 10-K. The Our Business section of this report covers content recommended by the International Integrated Framework, now overseen by the IFRS Foundation, for inclusion in "integrated reports," and can be downloaded as a standalone document or read as an interactive part of our full 2023-24 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 would like, visit our Corporate Responsibility and Report Builder websites. You can also use our web-based feedback form or the CSR@Intel blog to contact our Corporate Responsibility team.

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.

For best viewing results on a PC or tablet, we recommend using Adobe Acrobat DC or QuickTime. For best printing results, use legal-size paper.

Report Scope and Profile

With the Intel 2023-24 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 2023 (ended December 30, 2023). Our previous report was published in May 2023.

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, 2023 data is considered final based on information received by May 1, 2024, and provided that information reproduced or derived from the 2023 Intel Annual Report on Form 10-K speaks as of January 26, 2024, 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 six of our manufacturing sites. 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 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 2023-24 Corporate Responsibility Report, we engaged Apex Companies LLC to complete the assurance review. The Apex statement is included in this Appendix.

Independent Limited Assurance Statement

For a PDF copy of this statement, including a summary of data within the scope of assurance for 2023, 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 2023 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 sixth 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 2023 Corporate Responsibility Report ('the Report') for the period of calendar year 2023 (the 'Subject Matter'):

- Global Greenhouse Gas Emissions (Scope 1, Scope 2 location-based and market-based, and Scope 3, Category 5 – Waste Generated in Operations)
- Adjustment of CY2019, CY2020, CY2021, and CY2022 Greenhouse Gas Emissions (Scope 1 process emissions)
- 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 American, 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 >= 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 ≥ 1% of the global total for that metric/inventory

Note: Manufacturing sites include wafer fabrication (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 and the WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain 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 2023 Report

- Activities outside the defined assurance period of Calendar Year 2023, with the exception of restated GHG emissions for previous years.

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

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 ±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 2023 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
ESG Principal Consultant
Apex Companies, LLC
Lakewood, Colorado

April 30, 2024

RISE Goals Progress

In May 2020, we laid out our 2030 RISE strategy and goals. Since then, we have made progress on those goals and adopted both a new 2040 net-zero Scope 1 and 2 greenhouse gas emissions goal and a goal to achieve net-zero upstream Scope 3 greenhouse gas emissions by 2050. This table contains progress updates from 2023. Our RISE goals are designed to raise the bar for ourselves and help us deliver greater value to our customers by helping them reach their corporate responsibility goals. Click on each category to learn more.

RISE Goals Progress

RISE Cateory	Goals	Progress
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.	Based on Intel restructuring actions, the safety culture surveys were paused in 2023 with a plan to restart in 2024. 87% of employees from organizations that engaged in the survey process in 2022 reported that "safety is a value" and 87% of surveyed employees agreed with our "safety is a value" metrics. The Intel® Vitality Program continued to reach 90% of Intel's employee population in 2023, and 41% of Intel employees participated in Intel's wellness services in 2023.
	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]	In 2023, the language for this goal was updated to reflect Intel's continuing commitment to human rights for all high-risk-identified suppliers—not solely those in the top tiers of our supply chain. As such, we adjusted our progress on our path to reach 100% of our verified contracted suppliers in 2030. In 2023, we reached 25%, through audits, validated third-party assessments, and attestation for lower risk contracted suppliers.
Inclusive	**Workforce Inclusion.** ▪ Achieve 25% representation of women in senior leadership roles (globally). ▪ Achieve 12% representation of URMs in US senior leadership roles.[2] ▪ Achieve 5% representation of Black/African American employees in senior, director, and executive roles in the US.[3] ▪ Exceed 40% representation of women in technical positions. ▪ Achieve 10% representation of employees with a disability in our global workforce by 2030.[4]	▪ In 2023, we surpassed our annual milestone goal of 18.9%, ending the year at 19.0%, or 1,515 women in senior leadership roles across the globe. We took on and exceeded a flat milestone goal and established plans in readiness for incremental goals in 2024. ▪ We made progress in our representation of US URM senior leaders, which increased from 8.1% in 2022 to over 8.3% in 2023. ▪ At the end of 2023, Black/African American employees in senior, director, and executive roles in the US was 3.2%. ▪ At the end of 2023, 25.0% of technical roles were held by women, an increase from 24.7% at the end of 2022. ▪ At the end of 2023, 2.4% of Intel's global workforce and 5.3% of US employees self-identified as having a disability, a year-over-year increase from 2.2% and 4.9% at the end of 2022, respectively.
	Supplier Diversity. Increase global annual spending with diverse suppliers[5] by 100% to reach $2 billion in annual spending by 2030.	In 2023, we achieved our 2023 annual goal of $1.6 billion annual spending with diverse suppliers, following a record high 2022 when we exceeded our annual goal and achieved our 2030 ambition of $2 billion annual spending with diverse suppliers for the first time. We are on track to meet a milestone to spend $500 million annually with women-owned suppliers outside the US by the end of 2025.

[1] Contracted 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 in the upper tiers of our supply chain.

[2] Prior to a 2023 update, these goals were "Double the number of women and underrepresented minorities in senior leadership roles."

[3] In 2023, we augmented our 2020 milestone goal to "Accelerate US representation of African American employees at senior, director, and executive levels by 30% by the end of 2023" by revising our objective to "Achieve 5% representation of Black/African American employees in senior, director, and executive roles within the US by 2030."

[4] Prior to a 2023 update, this goal language was "Advance accessibility and increase the percentage of employees who self-identify as having a disability to 10% of our workforce."

[5] 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 by country in accordance with local law.

RISE Goals Progress, continued

RISE Goals Progress		
RISE Cateory	**Goals**	**Progress**
Sustainable	**Climate and Energy.** ▪ Achieve 100% renewable electricity. ▪ Conserve 4 billion kWh of electricity. ▪ 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 GHG emissions. **New goals set in 2022:** ▪ 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. ▪ Build new factories and facilities to US Green Building Council green building standards. **New goal set in 2023:** ▪ Achieve net-zero upstream Scope 3 GHG emissions by 2050.	▪ In 2023, we used 99% renewable electricity globally. ▪ We completed projects that conserved ~160 million kWh of electricity. We have conserved a cumulative total of ~1.6 billion kWh of electricity since the baseline date. ▪ Our absolute Scope 1 and 2 greenhouse gas (GHG) emissions decreased 43% from our 2019 baseline. ▪ We are on track on our goals to increase product energy efficiency 10X for client and server microprocessors, respectively, by 2030. ▪ GHG emissions reduction actions and initiatives implemented by key first-tier suppliers resulted in an estimated 9% of emissions avoidance in the supply chain. ▪ We have achieved LEED® green building certification for more than 18.9 million square feet of space in 55 buildings, including our new Gdansk, Poland research lab facility, which received LEED® Platinum certification.
	Net Positive Water. Achieve net positive water by conserving 60 billion gallons of water and funding external water restoration projects.	During 2023, we conserved 10.2 billion gallons of water and conserved more than 36 billion gallons cumulatively from the 2020 baseline. During 2023, Intel-funded projects restored 3.1 billion gallons of water to our watersheds. This resulted in returning and restoring 110%[7] (by volume) of our fresh water withdrawals.
	Zero Waste[6]/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.	During 2023, we sent 6% waste to landfill and upcycled 63% 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 2023, our employees volunteered 1,013,000 hours of service in our local communities. As of the end of 2023, we had reached approximately 3.8 million hours of service toward our 2030 10 million-hour goal.

[6] Intel defines zero waste as less than 1% sent to landfill.

[7] Net positive water % represents the total volume of 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 country reaches its specific target. Refer to "2023 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

Responsible minerals. Expand our efforts beyond conflict minerals[1] to cover all minerals used in semiconductor manufacturing and apply the learnings to lead our industry in creating new sourcing standards.

In 2023, we sought sourcing information for what we deem critical minerals—including aluminum, copper, nickel, and zinc—from suppliers contributing these materials to our Intel-manufactured microprocessors. This represented an important step in our RISE strategy, as we begin mapping our supply chain for our highest priority minerals. Intel is one of the first companies to require the sourcing information on these minerals, and we received a response from approximately 90% of the in-scope suppliers. We will continue to identify the highest priority minerals in pursuit of our RISE goals.

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

In 2023, Intel advanced responsible mobility by continuing to contribute to standards that improve road safety for automated vehicles (AVs) and re-architecting the automotive industry by creating a new generation of software-defined vehicles (SDVs). To fuel a faster, smoother transition to EVs and sustainable SDVs, Intel and SAE International announced a committee to deliver an automotive standard for Vehicle Platform Power Management (J3311). Intel will chair the committee.

[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.

Inclusive

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.

As part of the Alliance for Global Inclusion, we helped create a global inclusion index survey, which enables companies to track diversity and inclusion improvements, provide information on current best practices, and highlight opportunities to improve outcomes across industries. The results of the third survey were published in 2023. Based on the maturity of respondents' best practices, the survey results transitioned to an index, and organizations that received a score of 50% or higher across all regions in which they participated were recognized for their diversity and inclusion efforts. Out of the 27 respondents, 18 companies—including Intel—earned spots on the index. The survey shows increased commitment to diversity and inclusion in the workforce, recruitment, advancement opportunities, and accountability. We will continue to collaborate to expand the diverse pipeline of talent for our industry, advance social equity, make technology fully inclusive, and expand digital readiness.

Inclusive pipeline. Expand the inclusive pipeline of talent for our industry through innovative global education initiatives and STEM programs for girls and underrepresented groups.

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. Intel further works to expand the talent pipeline for underrepresented students by collaborating with minority-serving institutions, including Hispanic-serving institutions and historically Black colleges and universities. In 2023, Intel selected proposals from six institutions for three-year awards aimed at increasing diversity in semiconductor science and engineering higher education.

Sustainable

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.

Our goal to achieve net-zero Scope 1 and 2 GHG emissions by 2040 is informed by—and more ambitious than—climate science (i.e., reaching net-zero GHG by 2050) and the 1.5°C reduction pathway. Due to our (and our industry's) significant, early GHG emissions reductions that cannot be considered in Science-Based Targets Initiative (SBTi) target validation criteria, it remains challenging to gain formal approval for our target under the current requirements of SBTi. To advance progress on a collective approach, in 2023, we continued to engage via organizations such as the Semiconductor Climate Consortium to work to accelerate reductions in GHG emissions in our industry.

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.

Building on work in 2021-2022 that established a chemical footprint baseline, we have implemented priority projects to address chemicals of concern and act on company commitments. In 2023, as part of our Supplier Program to Accelerate Responsibility and Commitment, we asked our chemical suppliers to begin screening all R&D materials against our green chemistry screening/alternative assessment criteria—in addition to the previous requirement to screen high-volume materials—to drive conversations on alternative chemistries. We also continued to collaborate through industry consortia to identify research needs and key areas of focus, including reduction or elimination of PFAS.

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 the 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 detail on our approach and progress.

Responsible

Revolutionize how technology will improve health and safety

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.

In 2023, we made progress on our global challenge to apply technology to advance healthcare and safety on multiple fronts. Building on previous work to improve brain tumor detection with AI and Federated Learning, Intel teamed up with MLCommons' MedPerf to launch a platform revolutionizing the evaluation of brain tumor treatments. We also spent the last year collaborating with FarEasTone Telecom (FET) and Taiwan-based hospitals to build AI models to more accurately detect laryngeal cancer via an app exceeding 80% accuracy in diagnostic results. Additionally, we worked with Pediatric Moonshot to address healthcare inequity for children globally. In an effort to enhance risk mitigation relating to powerful technologies, Intel became a founding member of MLCommons AI Safety Workgroup where we will contribute expertise toward benchmarks to measure safety and risk factors of AI tools and models.

Inclusive

Make technology fully inclusive and expand digital readiness

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.

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 2023, Intel worked with GN ReSound, a leading manufacturer of hearing aid solutions, to improve people's experiences when connecting hearing aids to Intel® Evo™ laptops. By 2030, we aim to have all Intel user experience teams practicing inclusive design and research. To track our progress toward that goal, we established an annual survey in 2022 with a baseline adoption rate of 21%. In 2023, our adoption score decreased to 16.8%, which is attributed to a decrease in headcount and budget. 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 2023, Intel had collaborated with 28 governments with more than 50 public-private collaborations, enabled 24,000 institutions, and trained more than 5.8 million people.

Sustainable

Achieve carbon neutral computing to address climate change

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.

Intel works closely with our OEMs to engage on a regular basis, accelerating innovation in areas of joint priority—such as in sustainability. In 2023, we introduced new requirements for OEMs manufacturing the high-performance Intel Evo platforms, including independently verified ecolabel compliance such as Electronic Product Environmental Assessment Tool (EPEAT)[1] Silver. Intel promotes going beyond these requirements and achieving EPEAT Gold. Intel is also participating in the Open Compute Project (OCP) Sustainability Initiative to pursue power usage effectiveness reporting standards. This includes incorporating liquid cooling technologies, and infrastructure design standards to enable future software to self-monitor and report energy consumption and the resulting footprint.

[1] The 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.

Enabling

Performance Data Summary

Performance Data					
Report Section	**2023**	**2022**	**2021**	**2020**	**2019**
Our Business					
Net revenue (in billions)	$54.2	$63.1	$79.0	$77.9	$72.0
Net income attributable to Intel (in billions)	$1.7	$8.0	$19.9	$20.9	$21.0
Provision for (benefit from) taxes (in billions)	–$0.9	–$0.2	$1.8	$4.2	$3.0
Research and development (in billions)	$16.0	$17.5	$15.2	$13.6	$13.4
Capital investments (in billions)	$25.8	$24.8	$18.7	$14.3	$16.2
Employees at year end (in thousands)	124.8	131.9	121.1	110.6	110.8
Safety – recordable rate[1]/days away case rate[1]	0.83/0.16	0.90/0.22	0.93/0.20	0.75/0.16	0.69/0.14
Environmental Sustainability					
Greenhouse gas emissions (million metric tons of CO_2 equivalent)[2]	0.89	1.53	1.50	1.32	1.57
Renewable electricity (% of global electricity use)	99%	93%	80%	82%	71%
Energy use (billion kWh—includes electricity, gas, and diesel)	10.8	10.9	11.6	10.6	9.6
Total water withdrawn (billions of gallons)[3]	10.5	10.9	14.3	13.8	12.6
Net positive water[4] (water returned + restored) progress	110%	107%	99%	90%	90%
Total waste generated (thousand tons)/% to landfill	292/6%	311/6%	344/5%	414/5%	387/3%
Supply Chain Responsibility					
On-site supplier audits (third-party and Intel-led audits)	263	270	157	126	207
Diversity and Inclusion					
Percentage of women in our global workforce	28%	28%	28%	28%	28%
Percentage of women on our Board (%)[5]	42%	33%	30%	30%	20%
Social Impact					
Employee and retiree volunteer hours (in millions)/volunteerism rate	1.0/24%	1.0/20%	0.85/20%	0.91/20%	1.2/39%
Worldwide charitable giving (dollars in millions)[6]	$81.5	$94.2	$76.0	$80.4	$75.1

[1] Rate based on 100 employees working full time for one year; data is as of January 12, 2024.

[2] Including Scope 1 and Scope 2 market-based method.

[3] We define water withdrawals, or water usage, as total water used that is from fresh water sources.

[4] Net positive water % represents the total volume of 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 country reaches its specific target. Refer to "2023 Water Inventory by Location and Source" in the Appendix for net positive water progress by region.

[5] Note for 2023-2024 the percentage composition of our Board of Directors is on a binary basis.

[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 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.

SASB

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) 0.85 million metric tons CO_2e (2) 297,000 metric tons CO_2e	2023-24 Corporate Responsibility Report, p 75 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, targets, performance, and long history of goal setting and reductions. We have also avoided 82% of our cumulative Scope 1 and 2 GHG emissions over the last decade.	2023-24 Corporate Responsibility Report, p 73-76 2023 Intel Annual Report on Form 10-K, p 18, 62 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) 39.0 million gigajoules energy consumed (2) 84% grid electricity (3) 99% renewable energy globally.	2023-24 Corporate Responsibility Report, p 73, 77-79
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) 43.8 million m^3 withdrawn (2) 9.9 million m^3 consumed. See Appendix for detail on water metrics by location, including information on baseline waster stress by location.	2023-24 Corporate Responsibility Report, p 81-82, 114-115 2023 Intel Annual Report on Form 10-K, p 18-19 2024 Proxy Statement, p 37
Waste Management	(1) Amount of hazardous waste from manufacturing, (2) percentage recycled	TC-SC-150a.1	(1) 85,000 metric tons (2) 85% recycled.	2023-24 Corporate Responsibility Report, p 83-84, 108 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 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.	2023-24 Corporate Responsibility Report, p 42, 91
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.	2023-24 Corporate Responsibility Report, p 117

[1] The "Intel Metric or Qualitative Disclosure" column references the specific disclosure(s) included in the 2023-24 Corporate Responsibility Report and therefore may vary from the breadth and context of disclosure(s) included in the 2023 Intel Annual Report on Form 10-K and 2024 Proxy Statement, if applicable.

SASB and TCFD Framework Alignment, continued

SASB, continued

Topic	Accounting Metrics	Code	Intel Metric or Qualitative Disclosure	Disclosure Location[1]
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. 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.	2023-24 Corporate Responsibility Report, p 57
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.	2023-24 Corporate Responsibility Report, p 29, 30 Material Declaration Data Sheet (MDDS) database
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.	2023-24 Corporate Responsibility Report, p 86-89
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.	2023-24 Corporate Responsibility Report, p 48, 49 SEC Conflict Minerals Filing Intel Corporation Statement on Combating Modern Slavery and Ensuring Transparent Supply Chains
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.	2023 Intel Annual Report on Form 10-K, p 108-111 Investor Relations website

[1] The "Intel Metric or Qualitative Disclosure" column references the specific disclosure(s) included in the 2023-24 Corporate Responsibility Report and therefore may vary from the breadth and context of disclosure(s) included in the 2023 Intel Annual Report on Form 10-K and 2024 Proxy Statement, if applicable.

SASB and TCFD Framework Alignment, continued

TCFD. The Task Force on Climate-Related Financial Disclosures (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.

TCFD

Disclosure Area	TCFD Recommended Disclosure	Intel Metric or Qualitative Disclosure	Disclosure Location
Governance	Disclose the organization's governance around climate-related risks and opportunities.	The Board's Corporate Governance and Nominating Committee (Governance Committee) has the primary responsibility for the company's initiatives related to corporate responsibility and sustainability performance matters, except to the extent specifically allocated to another committee of the Board. We believe an integrated strategy and embedding corporate responsibility across the company is the most effective management approach to drive continuous improvements in our performance. Read more about our governance in this report and on the Report Builder website. We do not underestimate the challenges ahead—particularly the risks and opportunities that we and the global community will face due to climate change. Our Climate Transition Action Plan demonstrates our past and future commitment to the advancement of technologies that help us achieve our climate goals in every capacity that our business touches.	2023-24 Corporate Responsibility Report, p 73-77 Climate Transition Action Plan 2024 Proxy Statement, p 10, 37, 40 CDP Climate Change Survey
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 82% of our cumulative Scope 1 and 2 GHG emissions over the last decade. In 2023, 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 publish our formal Climate Transition Action Plan.	2023-24 Corporate Responsibility Report, p 10, 37, 40 2024 Proxy Statement, p 40 2023 Intel Annual Report on Form 10-K, p 18-19, 62 Intel Climate Change Policy CDP Climate Change Survey Climate Transition Action Plan
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 in our CDP Climate Change report. This includes detail regarding our investments in renewable electricity, energy conservation, and product energy efficiency. We continued 100% renewable electricity for our US, Europe, Israel, and Malaysia operations, and we achieved 100% renewable electricity in Vietnam and China for the first time. We are also approaching 100% in Costa Rica—bringing the global total to 99% as of the end of 2023. 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. In 2023, we published our first formal Climate Transition Action Plan.	2023-24 Corporate Responsibility Report, p 73-77 Climate Transition Action Plan 2024 Proxy Statement, p 40 2023 Intel Annual Report on Form 10-K, p 18-19, 62 Intel Climate Change Policy CDP Climate Change Survey
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. In 2023, subject matter experts across the organization collaborated to further drive the integration of climate change considerations into our processes for assessing risks and opportunities and published our formal Climate Transition Action Plan.	2023-24 Corporate Responsibility Report, p 73-80 CDP Climate Change Survey Climate Transition Action Plan

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.

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. In 2022, for the first time, we met our commitment to reach more than $2 billion in annual spending with diverse suppliers.[1] In 2023, we spent $1.6 billion with diverse-owned suppliers despite a significant reduction in overall procurement spending that resulted in a corresponding impact to diverse supplier spending. We continue to 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.

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. In 2023, we published a formal Climate Transition Action Plan. We also extended our commitment to reduce Scope 3 GHG supply chain emissions by 30% from what they would be in the absence of action by 2030 and set our ambition to achieve net-zero upstream Scope 3 GHG emissions by 2050. 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 and the industry. 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.

[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.

Non-GAAP Financial Measures

Below are reconciliations of non-GAAP financial measures used in this presentation to the most comparable GAAP financial measures. Please refer to "Explanation of Non-GAAP Measures" in our earnings release dated January 25, 2024 for a detailed explanation of the adjustments made to the comparable GAAP measures, the ways management uses the non-GAAP measures, and the reasons why management believes the non-GAAP measures provide investors with useful supplemental information.

Years Ended (In millions, except per share amounts)	Dec. 30, 2023	Dec. 31, 2022
Net Revenue	**$54,228**	**$63,054**
Non-GAAP Net Revenue	**$54,228**	**$63,054**
Gross Margin Percentage	**40.0%**	**42.6%**
Acquisition-related adjustments	2.3%	2.1%
Share-based compensation	1.3%	1.0%
Patent settlement	–	0.3%
Intel® Optane™ technology inventory impairment	–	1.1%
Non-GAAP Gross Margin Percentage	**43.6%**	**47.3%**
Earnings per Share Attributable to Intel – Diluted	**$0.40**	**$1.94**
Acquisition-related adjustments	0.33	0.37
Share-based compensation	0.77	0.76
Patent settlement	–	0.05
Optane inventory impairment	–	0.18
Restructuring and other charges	(0.01)	–
(Gains) losses on equity investments, net	(0.01)	(1.04)
(Gains) losses from divestiture	(0.04)	(0.28)
Adjustments attributable to non-controlling interest	(0.02)	–
Income tax effects	(0.37)	(0.31)
Non-GAAP Earnings per Share Attributable to Intel – Diluted	**$ 1.05**	**$1.67**

2023 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 10.5 billion gallons (39,604 megaliters) in 2023. 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 Discharged (Return)[3]	Water Consumption	Water Conserved	Water Restored (Watershed projects)	Net Positive Water Progress (% returned & restored)	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)								
		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)										
China	Chengdu[5]	689	–	–	–	–	–	**689**	**689**	332	358	–	**0**	**48%**	Surface	Surface	Yangtze
Costa Rica	San Jose	–	447	–	–	–	16	**463**	**463**	126	338	0	**456**	**130%**	Ground	Surface	San Juan
India	Bangalore: Airport Rd[4]	3	–	–	–	–	–	**3**	**3**	–	3	2	**372**	**295%**	Surface	N/A (Zero discharge)	Cauvery
	Bangalore: Sarjapur[4]	115	–	–	–	9	–	**124**	**124**	–	332	96					
Ireland	Leixlip	8,640	–	–	–	–	–	**8,640**	**8,640**	7,938	702	3,053	**0**	**92%**	Surface	Surface	Liffey
Israel	Haifa[5]	32		126	–	–	–	**32**	**158**	63	95	6	**0**	**54%**	Sea (Primary); Surface & Ground (Secondary)	Sea (Primary); Third-Party Reuse (Secondary)	Mediterranean Sea (Coastal aquifer)
	Petach Tikva[5]	7		26	–	–	–	**7**	**33**	23	10	1					
	Qiryat Gat[5]	758		3,033	–	–	–	**758**	**3,792**	2,083	1,709	5,744					
Malaysia	Kulim	1,091	–	–	–	–	–	**1,091**	**1,091**	873	218	226	**167**	**89%**	Surface	Surface	Muda
	Penang	568	–	–	–	20	–	**588**	**588**	455	134	28					
Mexico	Guadalajara	–	58	–	–	–	–	**58**	**58**	44	15	36	**275**	**547%**	Ground	Ground	Lerma-Santiago
Poland	Gdansk	–	20	–	–	–	–	**20**	**20**	15	5	1	**0**	**75%**	Ground	Sea	Wisla

[1] We follow established internal procedures and thresholds to determine which sites are included in the inventory.

[2] Third-party water withdrawals represent water purchased from the local municipality.

[3] Third-party water discharges/returns represent water sent to the local municipality for reuse or surface/groundwater recharge.

[4] Sites located in area experiencing extremely high water stress, based on WRI's Aqueduct Water Risk Atlas (2023).

[5] Site located in area experiencing high water stress, based on WRI's Aqueduct Water Risk Atlas (2023).

2023 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 Discharged (Return)[3]	Water Consumption	Water Conserved	Water Restored (Watershed projects)	Net Positive Water Progress (% returned & restored)	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)								
		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[5]	1,327		–	–	–	–	**1,327**	**1,327**	1,105	222	407	**10,620**	**120%**	Surface, Ground	Ground; Third Party	Colorado/ Salt/Verde
	Arizona: Ocotillo[5]	9,594		–	967	–	–	**9,594**	**10,561**	8,666	1,896	12,472					
	California: Bowers - Santa Clara	210	–	–	–	–	–	**210**	**210**	142	67	24			Surface	Surface to Sea	Santa Clara
	California: Folsom	370	–	–	–	–	–	**370**	**370**	68	302	–					
	California: Mission – Santa Clara	580	–	–	37	–	–	**580**	**617**	435	182	–					
	New Mexico: Rio Rancho	–	75	–	–	–	3,010	**3,086**	**3,086**	2,756	330	2,202			Ground	Surface	Rio Bravo
	Oregon: Aloha	1,045	–	–	–	–	–	**1,045**	**1,045**	846	200	206			Surface	Surface	Columbia
	Oregon: Hawthorn Farm	94	–	–	–	–	–	**94**	**94**	70	23	32					
	Oregon: Jones Farm	341	–	–	–	–	–	**341**	**341**	256	85	54					
	Oregon: Ronler Acres	9,919	–	–	–	–	–	**9,919**	**9,919**	7,658	2,262	13,756					
	Texas: Austin	71	–	–	–	–	–	**71**	**71**	53	18	–			Surface	Surface	Colorado
Vietnam	Ho Chi Minh City[5]	494	–	–	–	–	–	**494**	**494**	140	354	100	**0**	**28%**	Surface	Surface	Dong Nai
Total		**36,548**		**3,185**	**1,004**	**29**	**3,026**	**39,604**	**43,794**	**34,147**	**9,860**	**38,476**	**11,890**	**110%**			

[1] We follow established internal procedures and thresholds to determine which sites are included in the inventory.

[2] Third-party water withdrawals represent water purchased from the local municipality.

[3] Third-party water discharges/returns represent water sent to the local municipality for reuse or surface/groundwater recharge.

[4] Sites located in area experiencing extremely high water stress, based on WRI's Aqueduct Water Risk Atlas (2023).

[5] Site located in area experiencing high water stress, based on WRI's Aqueduct Water Risk Atlas (2023).

2023 Scope 1 and 2 Greenhouse Gas Inventory by Location and Category

In support of our commitment to transparency, the following table details our 2023 Scope 1 and Scope 2 GHG emissions (metric tons of carbon dioxide equivalent, CO_2e) 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 GHG emissions 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_2e)						Scope 2		Total Scope 1 &2 GHG Emissions (metric tons CO_2e)
		Fluorinated GHGs	Combustion/ Fuels	Heat Transfer Fluids	N_20	Other[2]	Total Scope 1	GHG[3] Emissions (metric tons CO_2e)	% Renewable Electricity	
China	Chengdu	0	300	5,000	0	1,800	**7,100**	0	100%	**7,100**
Costa Rica	San Jose	0	100	700	0	300	**1,100**	100	91%	**1,200**
India	Bangalore, Airport Rd	0	100	0	0	13	**100**	3,300	0%	**3,400**
	Bangalore, Sarjapur	0	1,000	0	0	24	**1,000**	36,000	0%	**37,000**
Ireland	Leixlip	31,300	48,900	500	32,900	4,200	**117,800**	0	100%	**117,800**
Israel	Haifa	0	0	0	0	2,800	**2,800**	0	100%	**2,800**
	Petach Tikva (PTK)	0	0	0	0	2,300	**2,300**	0	100%	**2,300**
	Qiryat Gat	77,200	28,400	0	30,300	3,500	**139,400**	0	100%	**139,400**
Malaysia	Kulim	0	200	9,200	0	300	**9,700**	0	100%	**9,700**
	Penang	0	200	6,900	0	200	**7,300**	0	100%	**7,300**
Mexico	Guadalajara	0	0	0	0	100	**100**	8,500	0%	**8,600**
Poland	Gdansk	0	800	0	0	8	**800**	0	100%	**800**
United States	Arizona: Chandler	100	10,400	3,800	0	600	**14,900**	0	100%	**14,900**
	Arizona: Ocotillo	92,300	84,000	15,400	36,500	2,000	**230,200**	0	100%	**230,200**
	California: Bowers – Santa Clara	0	4,400	0	0	17	**4,400**	0	100%	**4,400**
	California: Folsom	0	2,800	0	0	100	**2,900**	0	100%	**2,900**
	California: Mission – Santa Clara	0	1,700	0	0	800	**2,500**	0	100%	**2,500**
	New Mexico: Rio Rancho	21,300	23,300	1,100	8,100	200	**54,000**	0	100%	**54,000**
	Oregon: Aloha	3,100	9,600	0	1,100	100	**13,900**	0	100%	**13,900**
	Oregon: Hawthorn Farm	0	1,700	0	0	0	**1,700**	0	100%	**1,700**
	Oregon: Jones Farm	0	1,900	0	0	0	**1,900**	0	100%	**1,900**
	Oregon: Ronler Acres	72,000	93,900	7,500	38,700	1,900	**214,000**	0	100%	**214,000**
	Texas: Austin	0	100	0	0	0	**100**	0	100%	**100**
Vietnam	Ho Chi Minh City	0	200	14,200	0	600	**15,000**	0	100%	**15,000**
Total		**297,000**	**314,000**	**64,000**	**148,000**	**22,000**	**845,000**	**48,000**	**99%**	**893,000**

[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.

2023 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 2023, government officials made more than 220 visits (including audits and inspections) to Intel sites across the globe, including over 80 health and safety agency inspections, nearly 40 fire protection agency inspections, and more than 90 environmental agency inspections. Details on NOVs and our subsequent corrective actions are provided in the table below:

Detailed NOVs

Location	Violation	Fine	Intel's Corrective Action
Ronler Acres, Oregon	The Hillsboro Fire Department performed an inspection of the site and issued findings related to material storage, exit obstructions, sprinklers, and hot work setup.	$0	The site performed a comprehensive review and implemented corrective actions.
Ocotillo, Arizona	A boiler compliance test preliminary result showed an exceedance of the NOx Best Available Control Technology limit.	$0	Intel notified Maricopa County Air Quality Department, and completed a review of the event. Procedures have been updated to ensure the units are tuned for lowest emissions before returning to service.
Santa Clara, California	The California Department of Public Health (CDPH) reviewed the site's ionizing radiation protection program and issued a finding related to documentation of the annual program review.	$0	Intel submitted documentation to the CDPH demonstrating closure.
Ronler Acres, Oregon	The wastewater outfall pH fell below the limit due to incorrect valve positioning during a maintenance activity.	$1,700	The event was reviewed, procedures were updated, and personnel were retrained.
Austin, Texas	The City of Austin Fire Department conducted an inspection and issued findings related to testing per the National Fire Protection Association (NFPA) standard.	$0	Preventative maintenance procedures were updated to ensure alignment with NFPA.
Jones Farm, Oregon	The Hillsboro Fire Department (HFD) conducted an inspection and issued a finding related to a temporary e-waste disassembly area.	$0	E-waste activities were ceased and the temporary e-waste disassembly area was removed.
Ronler Acres, Oregon	During a planned maintenance procedure, a pH probe in one scrubber was inadvertently left in "hold" mode after preventative maintenance.	$30,816	When discovered, the pH probe was immediately restored to the correct operating mode and the event was reported to the Oregon Department of Environmental Quality, per the requirements of the air permit. A review was performed to understand the root cause of the event and measures were implemented to prevent a reoccurrence.
Ronler Acres, Oregon	The wastewater outfall fell below the limit due to low pH water that discharged from a section of piping after a tank diversion.	$2,500	A full review of the waste diversion process was conducted, and corrective actions were implemented.
San Jose, California	The San Jose Fire Department issued findings related to self-reported inspection, testing, and maintenance items at the site.	$0	The site replaced back-up batteries, a smoke detector, and a part for a power supply.
Aloha, Oregon	An anomaly was discovered in the external lab data for the copper levels at the wastewater outfall that exceeded the concentration maximum limit for total copper.	$0	The site conducted a review, updated plans, established automated wastewater constituent limit alerts with the lab, and performed an asset label audit.
Santa Clara, California	The Santa Clara Fire Department performed an inspection and issued findings related to ceiling tiles and exit sign lighting.	$0	All exit signs were inspected and select ceiling tiles were replaced.
Galati, Romania	The Inspectorate for Emergency Situations performed an inspection and identified findings related to the lease contract for the site, emergency response training, and a hydrant light.	$0	An addendum was added to the lease contract, and the site conducted emergency response training and hydrant light repairs.
Nangang Station, Taiwan	The government performed an inspection and issued findings related to the number of occupational health and safety (OHS) staff members employed at the site.	$0	The site is implementing the correct ratio of OHS employees to employed workers at the site.
San Jose, California	The San Jose Fire Department performed an inspection and identified findings related to notification of a hand soldering station location change.	$0	The chemical inventory was updated and submitted to the fire department.

Top 100 Production and Service Suppliers

These companies represented approximately 77.4% of Intel's total supply chain spends in 2023.

- Accenture
- Advanced Semiconductor Engineering
- Advantest America Inc
- AEM Singapore Pte. Ltd.
- AGC, Inc.
- Air Liquide
- Air Products and Chemicals, Inc.
- AM Technical Solutions, Inc.
- Amentum Commercial Operations, Inc.
- Amkor Technology, Inc.
- Analog Devices, Inc.
- Applied Materials Inc.
- ARM Limited
- ASM International N.V.
- ASML
- ASMPT Limited
- AT & S Austria Technologie & Systemtechnik AG
- Avantor, Inc.
- Bechtel Manufacturing & Technology, Inc.
- Broadcom Inc.
- Cadence Design Systems, Inc.
- Carl Zeiss SMT GmbH
- Daifuku Co., LTD
- DB Schenker
- Dentsu Group, Inc.
- Deutsche Post DHL Group
- Disco Corporation
- DPS Engineering Holdings Limited
- DSV A/S
- EBARA Corporation
- Edwards Ltd
- Elitegroup Computer Systems., Ltd.
- Entegris, Inc.
- EV Group GmbH
- Exyte AG
- Fabrinet
- Flex Ltd.
- Fluor Corporation
- FormFactor, Inc.
- FUJIFILM Electronic Materials
- GCON, Inc.
- Gilbane, Inc.
- GLOBALFOUNDRIES
- GlobalWafers Co., LTD.
- HCL Technologies Limited
- Hensel Phelps
- Hewlett Packard Enterprise Company
- Hitachi High-Tech Corporation
- Hoffman Construction
- Honeywell Electronic Materials
- HOYA Corp. USA
- IBIDEN Co., LTD.
- Infosys Limited
- Jacobs Engineering Group, Inc.
- JE Dunn Construction
- JG Ingenieros Asociados, S.A.
- JLL
- JSR Corporation
- KellyOCG
- KLA Corporation
- Lam Research Corporation
- Lasertec Corporation
- Linde plc
- Marvell Technology, Inc.
- Merck KGaA Darmstadt, Germany
- Microsoft Corporation
- Mitsubishi Gas Chemical Company Inc.
- Mitsui Chemicals, Inc.
- Murata Machinery, Ltd.
- Netapp, Inc.
- Nikon Corporation
- Nippon Express Co., Ltd.
- Pegatron Corporation
- Rinchem Company, LLC
- Samsung Electro-Mechanics Co., Ltd.
- Samsung Semiconductor, Inc.
- SAP SE
- SCREEN Semiconductor Solutions Co., Ltd.
- Securitas USA, Inc.
- Shin-Etsu Chemical Co., Ltd.
- Shinko Electric Industries Co. LTD.
- Shunsin Technology Holdings Limited
- Siemens AG
- Siltronic AG
- SIRVA Worldwide, Inc.
- SK hynix Inc.
- Skanska USA Building Inc.
- SSOE, Inc.
- SUMCO Corporation
- Sundt Construction, Inc.
- Super Micro Computer, Inc.
- Synopsys, Inc.
- Taiwan Semiconductor Manufacturing Company Ltd
- Technoprobe S.p.A.
- Thermo Fisher Scientific Inc.
- Tokyo Electron Limited
- Tokyo Ohka Kogyo Co., LTD
- Unimicron Technology Corporation
- UPPRO Ltd.
- UST Holdings Ltd.

Acronym Index

3TG: Tin, tantalum, tungsten, and gold

A

ADAS: Advanced driver-assistance systems

AI: Artificial intelligence

API: Advanced programming interface

ASIC: Application-specific integrated circuit

ASM: Artisanal and small-scale mining

ATM: Assembly test manufacturing

AWS: Alliance for Water Stewardship

B

BIOS: Basic input/output system

BIPOC: Black, indigenous, and other people of color

C

CAHRA: Conflict-affected and high-risk area

CCG: Client Computing Group

CDP: Carbon Disclosure Project – A not-for-profit organization that runs a global disclosure system for investors, companies, cities, states, and regions to manage their environmental impact.

CEO: Chief Executive Officer

CEPN: Clean Electronics Production Network

CNIS: China National Institute of Standardization

CO: Carbon monoxide

CO_2: Carbon dioxide

CO_2e: Carbon dioxide equivalent

COHE: Control of Hazardous Energies

CPA: Center for Political Accountability

CPO: Chief people officer

CPU: Central processing unit

C-SCRM: Cyber supply chain risk management

CSR: Corporate social responsibility

CTD: Cumulative trauma disorder

CTAP: Climate Transition Action Plan

CTO: Chief technical officer

D

DARPA: Defense Advanced Research Projects Agency

DCAI: Data center and AI Group

DC-MHS: Data Center: Modular Hardware System

DE: DIGITALEUROPE

DRC: Democratic Republic of the Congo

E

EC: European Commission

ECOC: Ethics and Compliance Oversight Committee

ECU: Electrical control unit

EES: Employee Experience Survey

EHS: Environmental, health, and safety

EIS: Employee Inclusion Survey

EMEA: Europe, the Middle East, and Africa

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

EUV: Extreme ultraviolet

EV: Electric vehicle

EVP: Employee Value Proposition

F

F-GHG: Fluorinated greenhouse gas

FL: Federated learning

FPGA: Field-programmable gate array

G

GAAP: Generally Accepted Accounting Principles

GDP: Gross domestic product

GenAI: Generative AI

GHG: Greenhouse gas

GPU: Graphics processing unit

GRI: Global Reporting Initiative

H

HAP: Hazardous air pollutant

HBCU: Historically Black college or university

HRIA: Human rights impact assessment

HVAC: Heating, ventilation, and air conditioning

I

ICT: Information and communications technology

IDAN: Intel Disability and Accessibility Network

IDC: International Data Corporation

IDM: Integrated device manufacturer

IEEE: Institute of Electrical and Electronics Engineers

IEC: International Electrotechnical Commission

IFRS: International Financial Reporting Standards

IFS: Intel Foundry Services

ILO: International Labour Organization

IP: Intellectual property

IPAC: Intel Political Action Committee

IPLC: Intel Pride Leadership Council

IPO: Initial Public Offering

IRTI: Intel RISE Technology Initiative

Intel® SFI: Intel® Skills for Innovation

ISO: International Organization for Standardization

IT: Information technology

ITI: Information Technology Industry Council

K

kWh: Kilowatt-hour

L

LED: Light-emitting diode

LEED: Leadership in Energy and Environmental Design

LGBT+: Lesbian, gay, bisexual, and transgender/transsexual +

LTD: Logic Technology Development

M

MaaS: Mobility-as-a-Service

MG&A: Marketing, general, and administrative

MGM: Million Girls Moonshot

MRC: Management Review Committee

mWh: Megawatt-hour

N

NEX: Network and Edge Group

NGO: Non-governmental organization

NIST: National Institute of Standards and Technology

NOV: Notice of violation

NOx: Nitrogen oxides

NPU: Neural processing unit

NSF: National Science Foundation

O

OCP: Open Compute Project

ODM: Original design manufacturer

OECD: Organisation for Economic Co-operation and Development

OEM: Original equipment manufacturer

OPM: Optimized power mode

OSHA: Occupational Safety and Health Administration

P

PAIA: Product Attribute to Impact Algorithm Consortium

PCF: Product carbon footprints

PFAS: Poly-fluoroalkyl substances

PFC: Perfluorocarbon

PM: Particulate matter

PPA: Public-Private Alliance for Responsible Minerals Trade

PUE: Power usage effectiveness

R

RAI: Responsible artificial intelligence

R&D: Research and development

RBA: Responsible Business Alliance

REACH: 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

S

SASB: Sustainability Accounting Standards Board

SBTI: Science-Based Targets Initiative

SCC: Semiconductor Climate Consortium

SDL: Security Development Lifecycle

SEC: US Securities and Exchange Commission

SDG: Sustainable development goals

SDV: Software-defined vehicle

SIA: Semiconductor Industry Association

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

SVAP: Specialty Validated Assessment Program

T

TCFD: Task Force on Climate-Related Financial Disclosure

TDP: Thermal design power

TGG: The Green Grid

TRI: Technical readiness indicator

U

UCIe: Universal Chiplet Interconnect Express

UN: United Nations

UNESCO: United Nations Educational, Scientific and Cultural Organization

URM: Underrepresented minority

US GAAP: US Generally Accepted Accounting Principles

V

VAP: Validated Assessment Program

VLSI: Very large-scale integration

VOC: Volatile organic compound

X

xPU: A processor that is designed for one of four major computing architectures—CPU, GPU, AI accelerator, and FPGA

Forward-Looking Statement

This 2023-24 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 2023 Intel Annual Report on Form 10-K as updated by our Quarterly Report on Form 10-Q for the quarter ended March 30, 2024. 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 2023 Annual Report on Form 10-K speak as of January 25, 2024. Intel disclaims any duty to update any statement made in this report except to the extent required by law.

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