

Advanced Micro Devices (“AMD”)

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Our Approach to Corporate Responsibility

Overview

At AMD, we develop semiconductor technology that helps to enable the future. Our high-performance processors power the servers for modern data centers, personal computers, game consoles, industrial devices and more. Our technologies help open possibilities for creators, researchers, inventors and explorers to tackle some of the world's toughest challenges.

That's why we are focused on creating the next generation of products that will positively benefit society and the planet. We aspire to embed environmental stewardship across our business, ensure safe and responsible workplaces in our global supply chain and promote stronger communities where we live and work.

The concept of responsibly developing and delivering cutting-edge technologies that enable a better world is deeply rooted in our culture. For twenty-six years, AMD has been publicly reporting on the company's corporate citizenship. Corporate responsibility (CR) represents an integral aspect of our business, which aims to generate shared value with our employees, customers, suppliers, investors and communities.

Message from our President and CEO

In 2020 and into 2021, we significantly accelerated the growth of the AMD business and increased our strategic focus on environmental, social and governance (ESG). This included new priorities and goals spanning digital impact, environmental stewardship, supply chain responsibility, and diversity, belonging and inclusion.

AMD in 2020 reached key environmental milestones set in 2014, including the bold "25x20" goal to deliver at least 25 times more energy efficiency by 2020 in our mobile processors. We also reduced our absolute greenhouse gas (GHG) emissions from AMD operations (scope 1 and 2) by 38 percent over the same timeframe – well ahead of our 20 percent goal.

Early in 2020, AMD moved quickly to navigate the challenges of the COVID-19 pandemic, implementing best practices to mitigate the spread of the virus, protect the health and safety of our employees, maintain business continuity for our customers, and support our communities by applying our essential technology and resources in the fight.

To accelerate COVID-related research, we created the AMD COVID-19 High Performance Compute (HPC) Fund and donated high-performance systems powered by AMD EPYC™ CPUs and AMD Instinct™ GPUs to key research institutions in Canada, France, Germany, India, Italy, United Kingdom and the United States. With 12 petaflops of total supercomputing capacity donated, the combined compute capacity would rank among the fastest supercomputers in the world.

Through our combined COVID-19 response efforts, we provided more than \$26 million USD to universities, research institutes and community organizations, including donations of technology, personal protective equipment, and corporate and employee giving (as of June 2021).

The pandemic necessitated the rapid acceleration of digital transformation in businesses, governments, schools and the home. It is now clear high-performance computing is essential to our daily lives and how we work, how we learn and how we connect with each other. AMD high-performance computing products now power many of the most important cloud services enabling digital transformation, supporting billions of people around the world every day.

In 2020 we also faced painful reminders of the work still ahead to create a more just and equitable society. AMD remains committed to helping increase the number of women and underrepresented groups in the technology industry, and to support efforts to effect lasting change.

Looking ahead, AMD has set multiple new goals for 2025 and beyond to drive meaningful impact across our value chain. These goals include 70 percent of our employees participating in AMD employee resource groups and/ or other AMD inclusion initiatives; increasing energy efficiency by 30x for AMD processors powering servers in AI-training and high-performance computing applications; and pursuing science-based GHG emission reductions for AMD operations. And by 2025, through AMD and AMD Foundation philanthropy and partnerships that enable STEM education, scientific research and the workforce of the future, we aim to benefit 100 million people.

Throughout this report, you can learn about our corporate responsibility programs and initiatives that are driving positive impacts for our society, environment, employees and customers. And as always, AMD will continue delivering the technology and products that are essential to solving our toughest challenges ahead, whatever they may be.

Dr. Lisa Su
President and CEO

[Meet the AMD Executive Team](#)

AMD Corporate Responsibility in Action

The global challenges of 2020 shared lessons across the world, including the power of resiliency, hope and common vision. The year also reinforced the important role of businesses in contributing toward a more inclusive and sustainable world through environmental, social and governance (ESG) efforts. AMD recognizes our responsibility to help address global challenges in a way that drives value for our stakeholders. We recognize it is not just what our technology can do that matters, but also how we responsibly develop and deliver it. An important part of our approach includes conducting materiality assessments to evaluate ESG-related impacts on society and our business. We engage our stakeholders to understand their views, clearly communicate our strategies and positions, and be responsive as issues evolve.

Over the past year, in partnership with Ceres and a diverse set of stakeholders, we listened to input and reflected in refreshing our strategic focus areas in ESG. The process has been instrumental in informing our long-term strategic priorities as well as our goals, reporting and transparency efforts. As a result, across our business we have new priorities in digital impact; environmental stewardship; supply chain responsibility; and diversity, belonging and inclusion. With impact-driven efforts in these areas, we can

help create a better future for the people who design, make and use our products, and for the communities where we live and work.

We continue to embed ESG performance and transparency into our business. For 2021, increased diversity representation is a component of our company's strategic metrics and milestones to inform our incentive plan. And to accelerate internal coordination, we formalized an ESG Executive Steering Committee. Our next chapter includes welcoming Xilinx as part of the AMD team, upon final regulatory approvals and deal closing, and then reassessing our collective ESG opportunities and goals.

I thank AMD employees for their resiliency and commitment last year. Through their can-do spirit, we delivered for our customers while supporting the well-being of our workforce, supply chain and local communities. I am inspired by the far-reaching potential of AMD technologies to power high-performance computing solutions that help solve global challenges today and in the future.

Susan Moore

Corporate Vice President, Corporate Responsibility and International Government Affairs
President, AMD Foundation

Who We Are

AMD is a global semiconductor company that designs and delivers:

- x86 microprocessors for servers, notebooks, workstations and desktop PCs, and x86 microprocessors with integrated graphics for notebook and desktop PCs;
- Graphics processing units (GPUs) for notebooks, desktop PCs, workstations and the data center; and
- Embedded and semi-custom processors for game consoles, displays, thin clients, storage systems and other products.

Founded in 1969 as a Silicon Valley start-up, the AMD journey began with dozens of employees focused on leading-edge semiconductor products. From those modest beginnings, AMD has grown into a global company achieving many important industry firsts along the way. We are proud of our culture of bold technology bets, ambitious product roadmaps, deep partnerships and excellence in execution.

We operate in over [35 locations](#) worldwide, including engineering facilities, sales and business service sites, and corporate offices.

What We Power

Data Center, Cloud + High-Performance Computing

AMD EPYC™ processors and AMD Instinct™ accelerators power supercomputers as well cloud services that enable today's digital experiences for remote working and learning, entertainment and communications.

Consumer and Commercial PCs

AMD continues to drive innovation in today's PCs with AMD Ryzen™ processors and AMD Radeon™ graphics, bringing performance, efficiency and modern security features to gamers, creators, consumers and enterprises.

Gaming

High-performance AMD computing and graphics technologies and software power immersive gaming experiences for high-performance PCs, the latest game consoles and cloud gaming services.

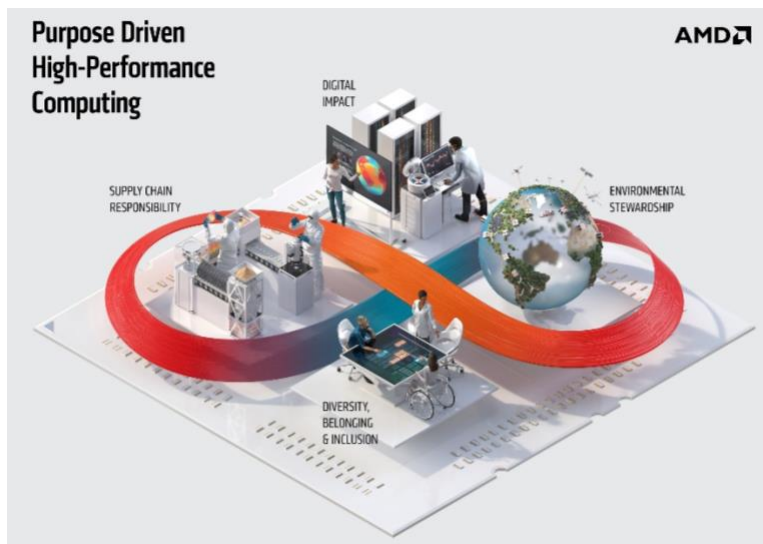
Embedded

AMD EPYC™ Embedded processors and AMD Ryzen™ Embedded processors serve a broad spectrum of markets, from industrial solutions, networking and communications to aerospace, medical imaging and digital signage.

Our CR Strategy

Our CR strategy will continue to evolve, but our core belief remains the same - we can create shared value with our shareholders while contributing positively to society and protecting the planet. We look at CR through the lens of the environment, social and governance (ESG) issues, which allows us to prioritize where we need to focus our efforts to have the most impact and operationalize our goals into the business. We use [materiality assessments](#) to prioritize ESG-related issues, set our strategy and improve our engagement with [key stakeholders](#). This approach also guides our [reporting and transparency efforts](#) on the issues that matter most to our business and our stakeholders.

While we address a wide range of ESG-related issues, based on the materiality assessment we conducted in 2020, we are elevating four strategic areas important to our stakeholders and business: **digital impact, environmental stewardship, supply chain responsibility, and diversity, belonging and inclusion.**



Our approach is grounded in business ethics, security and transparency. We continue to map our priority issues to the [UN Sustainable Development Goals](#) — showing how advancing our key initiatives

helps to address global challenges. We recognize no one company can effectively address these challenges alone, which is why we embrace strategic industry partnerships and cross-sectoral collaborations to help advance technological solutions to issues facing our industry and society at large.

- **Digital Impact** – We are passionate about designing products that help improve people’s lives through high-performance computing solutions spanning healthcare, education, manufacturing, scientific research and other critical needs.
- **Environmental Stewardship** – We are steadfast in our commitments to sustainability by sourcing renewable energy, engaging our employees and suppliers on environmental initiatives, and helping end-users reduce energy use and emissions.
- **Supply Chain Responsibility** – We work with our suppliers to deliver high-quality products while also helping ensure that working conditions are safe, workers are treated with respect and manufacturing processes are environmentally responsible.
- **Diversity, Belonging and Inclusion** – Innovation is at the core of our culture. We encourage and support creative minds from diverse backgrounds to work together in an engaging and open environment.

CR Management and Governance

Our products help enable others to change the world. This comes with a commitment to do the right thing and conduct our business ethically. Our approach to corporate responsibility (CR) management and governance applies to all aspects of our business spanning product design, supply chain, AMD operations and employee engagement. In other words, CR at AMD is not an “add-on” consideration, but rather a “how-to” approach.

We look at CR through the lens of environmental, social and governance (ESG) issues, which allows us to prioritize where we need to focus our efforts to have the most impact and operationalize our initiatives and goals into the business. Through ESG executive leadership, cross-functional team coordination, transparent disclosure and external stakeholder engagement, we can set clear objectives, track progress and promote accountability.

- **The AMD Board of Directors:** The highest level of ESG oversight at AMD is the AMD Board of Directors, which receives reports from and engages with management at least quarterly on ESG issues, practices and reporting. In 2020, the AMD Board formally added oversight of ESG to the Nominations and Governance Committee who receive additional updates.
- **The AMD Executive Team (AET):** The AET receives regular updates, at least monthly, on ESG topics, needs and proposals throughout the year. AET members actively participate in setting ESG strategic priorities and goals for their departments, while providing the necessary company investments and resources to demonstrate progress.
- **The AMD ESG Executive Steering Committee (ESC):** Our new ESG Executive Steering Committee is responsible for overseeing progress on the company’s ESG priorities, goals and disclosures

while regularly communicating with the AET. The Committee is comprised of cross-functional leaders (Director level or higher) from Finance, Global Operations, Human Resources, Investor Relations, Legal, Public Affairs and other departments.

- **The AMD Corporate Responsibility (CR) Team:** The CR team works cross-departmentally to help operationalize the day-to-day management of many ESG-related policies, practices and infrastructure. The team also leads ESG reporting and communications. In their role, the CR team regularly engages with other AMD departments such as EHS, Engineering, Global Operations, Human Resources, Investor Relations, Legal and Quality to help ensure we are effectively and efficiently managing environmental and social issues. CR resides within Public Affairs and reports to our Senior Vice President, General Counsel and Corporate Secretary, who reports to the CEO.

AMD is committed to publicly reporting clear and transparent ESG data while continuing to evolve our internal processes and external disclosures to meet stakeholder expectations. For example, in 2020, we expanded our external reporting of climate data and risks to align with the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). Our scope 1 and 2 greenhouse gas (GHG) emissions data has also been verified and validated to the level of limited assurance by an independent third party.

[See Our ESG Disclosures](#)

[Download Our CR Report Summary](#)

Risk Management

AMD takes a multi-faceted approach to ESG-related risk management. For example, a cross-functional team focused on product energy efficiency meets bi-weekly to discuss regulatory and standards developments that may pose short, medium or longer-term risks (or opportunities). The team is led by our Corporate Vice President of Government Affairs and Corporate Responsibility, with the participation of product engineers and business teams.

Business continuity planning is another area of risk management that brings together Environmental, Health and Safety, Finance, Human Resources, Global Operations, Information Technology and other teams to identify and plan for events that could disrupt AMD operations and/or supplier operations.

Ethics and Compliance

Senior leadership, starting with our CEO, communicates to all employees the importance of acting in concert with our core values. All employees are assigned ethics and compliance training on anti-corruption, harassment, import/export compliance, insider trading, conflicts of interest and antitrust. Additionally, our leadership teams, including Corporate Vice President positions and above, are surveyed twice a year about possible conflicts of interest.

The Corporate Compliance Committee is responsible for oversight of the AMD Worldwide Standards of Business Conduct (WWCBC) and related policies/procedures (e.g., compliance with the U.S. Foreign Corrupt Practices Act and conflict of interest rules). The Committee provides quarterly activity reports of

ethics and compliance cases to the Board and a program overview annually. All employees are required to complete the WWSBC training when hired and every three years thereafter.

We maintain a process for reporting misconduct and encourage employees to raise questions or concerns. Employees and other stakeholders are informed of our non-retaliation policy. [AMD Aware](#) is a multilingual web portal and telephone service that accepts anonymous reports about suspected illegal activity or violations of the AMD WWSBC, as permitted by law. AMD Aware is available to all AMD employees and third parties worldwide, 24 hours a day and seven days a week. The Board of Directors receives summaries of all reports. Consistent concerns are addressed through senior management discussions, employee communications, process and controls improvements and individual corrective action measures, where appropriate.

Governance Guidelines and Policies

- [Code of Ethics](#)
- [Climate Policy](#)
- [Conflict Minerals Policy](#)
- [Environmental Health and Safety \(EHS\) Policy](#)
- [Export Policy](#)
- [Human Rights Policy](#)
- [Product Quality Policy](#)
- [Supplier Code of Conduct](#)
- [Worldwide Standards of Business Conduct](#)

Public Policy

As a global company, we believe corporate responsibility includes being an informed, active participant in the development of public policies that affect our business, industry and customers in the countries and communities in which we operate. Good public policy begins with diverse stakeholders participating in open and transparent proceedings to carefully examine issues and offer different perspectives that promote effective solutions.

Our company works with governments and authorities, non-governmental organizations (NGOs), industry associations and other groups to deepen our understanding of issues and viewpoints and to share our experience and expertise as part of an informed public policy development process.

Some of the public policy priorities for AMD include:

- Environmental Protection
- Movement of Goods/IP
- Product Energy Efficiency
- Responsible Mineral Sourcing
- Secure Technology
- Trade, Competition and Market Access
- Workforce Talent

Stakeholder Engagement

Our key stakeholders include our workforce, customers, investors and analysts, local communities, suppliers, key non-government organizations (NGOs) and governmental bodies. We work with our stakeholders and strive to create shared value by understanding their interests, communicating our strategies and positions clearly, and being responsive as issues evolve. It is not just what our technology can do that matters to our stakeholders, but also how we responsibly develop and deliver it.

Engaging Our Key Stakeholders

Investors increasingly care about the long-term sustainability of a company, which includes evaluating how well a company's purpose is integrated with its value proposition and financial performance. Investors are also assessing the company's strategy and performance on environmental, social and governance (ESG) issues. We continue to engage in these important conversations with our ESG-minded investors and believe our company is well-positioned to participate in growing markets that prioritize ESG disclosures and performance. Learn more about our [ESG Disclosures and Reporting](#).

Employees want to work on compelling semiconductor technology that simultaneously allows them to develop their own professional careers and livelihoods. They also value a purpose-driven culture where diversity, belonging and inclusion are celebrated. We offer our employees the opportunity to work for a company that innovates and makes important contributions to the world while also upholding business ethics and integrity. Learn more about [diversity, belonging and inclusion](#) at AMD.

Communities expect companies to positively contribute to economic growth and employment while also being good neighbors. This is an ideal we embrace in over 35 locations worldwide. More broadly, our technology can help enable successful communities to connect remote locations and deliver services to their citizens. Our technology can also help bring together and support virtual communities from gamers to doctors to scientists. Learn more about how we support our [global community sites](#).

Customers are looking for more options and choices that will help them achieve their visions. AMD collaborates with our customers to create innovative products that meet emerging needs and tackle some of the world's toughest challenges spanning medical advances, advanced engineering, data analytics, scientific breakthroughs, education and more. Partnering with customers is how we bring to life our purpose: to enable the world's creators, researchers, inventors and explorers to transform the lives of those around them through high-performance computing.

Suppliers help make AMD a strong business. We work with our suppliers to deliver high-quality products and to help ensure that working conditions are safe, workers are treated with respect and manufacturing processes are environmentally responsible. We recognize collaboration with our supply chain partners is necessary to achieve our business and sustainability goals. Through our membership in the Responsible Business Alliance (RBA) we work together on short and long-term goals as well as address industry challenges and work toward solutions. This partnership approach enables us to strategically collaborate and continually improve performance. Learn more about our [Supply Chain Responsibility](#) program.

Governmental Bodies are important stakeholders developing and implementing public policies affecting our business, industry and customers. That is why we actively engage in key efforts by participating in open, transparent proceedings that may involve decision-makers, industry peers, customers, suppliers or civil society organizations. We strive to carefully understand the issues, listen to different perspectives and share our experiences to promote effective solutions. Topics vary around the world including deployment of technology to deliver public services, research, trade, product energy efficiency, renewable energy, supply chain security and continuity of supply chains during the COVID-19 pandemic.

Stakeholder Panel

“By investing and engaging in multi-stakeholder collaborations, companies can enable systems-level change to help solve shared environmental and social challenges. AMD actively engages diverse stakeholders as a regular part of its strategic planning, leveraging this engagement and its unique position in the industry to advance collaboration and bring innovation to scale.”

- Kristen Lang, Senior Director, Company Network, Ceres

One of the most important ways we gain insight and understanding into our stakeholders’ interests is through focused dialogue. Working with Ceres, a leading nonprofit organization focused on business and sustainability, we receive valuable input on our corporate responsibility strategy and strategic focus areas from a diverse set of stakeholders. This panel includes experts from industry partners, advocacy groups and socially responsible investment firms. We meet annually to share our progress against goals and to gain a deeper understanding of how we can improve our corporate responsibility strategy, initiatives and performance.

In 2020, Ceres supported AMD in conducting a [materiality assessment](#) to solicit thoughtful stakeholder feedback that has informed our long-term strategic priorities across environmental, social and governance (ESG) issues. In previous years, we have worked with Ceres to convene groups of external subject matter experts to have frank conversations with AMD decision-makers about the opportunities and risks presented in topics such as artificial intelligence (AI) and blockchain technologies, human rights and labor, product energy efficiency. These discussions and the subsequent internal reviews help inform our ongoing strategies and considerations.

Collaboration

AMD embraces collaboration and innovation in the technology sector. We recognize meaningful improvement in corporate citizenship requires collaboration on a global scale, which, when done well, can be transformative. Working with industry peers, government regulators, civil society organizations and other groups allow for our collective efforts to exceed what any of us could do as individual organizations. The following table highlights some of the groups with whom we engage in corporate responsibility initiatives.

Organization	Engagement areas
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CDP	AMD participates in CDP's annual disclosure system for climate and water surveys to share strategies, data and progress across our operations, supply chain and products.
Ceres	AMD is a member of Ceres, a nonprofit organization that provides advisory services across environmental, social and governance (ESG) issues and facilitates stakeholder engagement efforts for AMD.
China Electronics Standardization Association (CESA)	AMD is a member of CESA, which promotes social responsibility in the electronic information industry in Greater China. AMD shares best practices in corporate responsibility to help inform upstream and downstream enterprises in the industrial supply chain.
DigitalEurope	We participate in meetings led by DigitalEurope, including product compliance and sustainability topics, to support a regulatory environment in Europe that enables public agencies, citizens and businesses to prosper from digital technologies.
Environmental Protection Agency (EPA) Green Power Partner	AMD has been an EPA Green Power Partner since 2000 by sourcing renewable energy in the U.S. and reporting procurement amounts each year.
Information Technology Industry Council (ITI)	We are a member of ITI and actively participate in several committees such as Environment and Sustainability, Product Stewardship, The Green Grid and the Climate Task Group.
Responsible Business Alliance (RBA)	AMD is an elected Board member of the RBA and holds full membership. The company actively participates in several working groups including the Environmental Sustainability Workgroup.
Responsible Labor Initiative (RLI)	To promote diligence in our supply chain, we actively participate in the RLI, a multi-industry, multi-stakeholder initiative focused on ensuring that the rights of workers vulnerable to forced labor in global supply chains are respected.
Responsible Minerals Initiative (RMI)	We have been a member of the RMI since its founding and continue to actively participate in industry dialogues to advance the use of shared tools and resources to support responsible mineral production and sourcing on a global scale.
Semiconductor Industry Association (SIA)	AMD President and Corporate Executive Officer (CEO), Dr. Lisa Su, serves on the SIA Board of Directors and AMD staff participate in SIA committees to promote through public policy a responsible, vibrant semiconductor industry with its contributions in health, travel, communication, scientific discovery, education and more.

Note: The above table does not include all organizations with whom AMD collaborates in corporate responsibility efforts.

Our Value Chain

Leading companies take an expanded view of their social and environmental responsibilities. They look beyond just their own operations to work closely with value chain partners and other key stakeholders. By doing so, these companies deepen their understanding of social and environmental issues and create opportunities to accelerate meaningful action.

At AMD, we embed corporate responsibility across our value chain. Our approach extends from how we design and manufacture our products and packaging to assembly, shipping and the use of our technology by customers and end-users.

Embedding Corporate Responsibility Across Our Value Chain

We have mapped our corporate responsibility programs and initiatives to the primary activities of our value chain.

DESIGN

AMD engineers design the circuitry for microprocessors, graphics, embedded devices and accelerated processing units. Our employees work at more than 35 locations worldwide.

- [Product Stewardship](#)
- [Responsible Minerals Sourcing](#)

SILICON MANUFACTURING

AMD designs are manufactured on a silicon wafer. A typical wafer is made from pure silicon that is formed into cylindrical ingots. These ingots are then sliced into wafers about 0.75 mm thick. Each wafer undergoes multiple steps in the fabrication process to produce an AMD-designed processor or “die.” The working die from the silicon wafer is cut and sent to be assembled into a chip.

- [Supply Chain Responsibility](#)
- [Responsible Minerals Sourcing](#)

ASSEMBLY AND TEST

In the assembly process, each die is attached to metal connectors so it can function with other devices on a circuit board. The die is then assembled into a protective package to dissipate heat and protect it from other elements. Once fully assembled, each chip is tested for functionality.

- [Supply Chain Responsibility](#)
- [Responsible Minerals Sourcing](#)

PRODUCT SHIPPING

Qualified chips are then packaged for shipping to our customers. AMD works with channel partners to sell “processors in a box” direct to the computer enthusiast community and Original Equipment Manufacturers (OEMs) that integrate our technology into their branded devices.

- [Product Stewardship](#)
- [Anti-Counterfeit](#)

END PRODUCT MANUFACTURING

AMD technology powers millions of intelligent devices made by our customers, including personal computers, game consoles, servers and industrial devices. These products are defining the new era of instinctive and immersive computing.

- [Product Security](#)
- [Industry Collaboration](#)

CUSTOMER USE

AMD solutions enable people everywhere to realize the full potential of their favorite devices and applications to push the boundaries of what is possible. The world’s creators, researchers, inventors and

explorers are using high-performance computing to tackle challenges in science, medicine, manufacturing and other areas to transform the lives of those around them.

- [Digital Impact](#)
- [Product Energy Efficiency](#)

PRODUCT END OF USE

Proper reuse, recycling and disposal of electronic products are important in protecting the environment and moving toward a more circular economy. And by engineering our products for longer life, and in some cases making them backward compatible with our customers' existing systems, we can help make better use of our planet's limited natural resources.

- [Product Lifecycle Management](#)
- [Reducing Hazardous Substances](#)

Our COVID-19 Response

For generations to come, the COVID-19 pandemic and learnings from it will be an integral aspect of conversations around capitols, offices and boardrooms, family tables and classrooms. The pandemic's stress on health care systems, supply chains, education, small business and elsewhere cannot be overstated. Yet we also witness a resilience among people that is equally inspiring. We see entrepreneurial thinkers adjust supply chains to deliver personal protective equipment and critical products, neighbors reach out to help one another and employers nimbly support employees. During this time, AMD remains focused on delivering the company's latest generation processors and solutions to power technology that helps connect people, enable scientific research, and strengthen economies for these future generations. We don't take this role lightly.

Since early 2020, AMD has worked diligently to navigate the uncertainty seen in our world. We continue to assess the unfolding situation taking necessary steps to maintain business continuity while protecting the health and safety of our employees, and supporting our customers, supply chain workers, and communities. We also actively deploy our technology and resources to fight the pandemic.

Our Workforce

Although certain offices remained open during 2020 with limited capacity to perform essential business functions per local guidelines, most of our employees worked from home. To support them during this challenging time, AMD provided resources and benefits to help balance the demands of work, school, home and parental care. For example, as part of our global Employee Assistance Program, we offered free, confidential short-term counseling, personalized coaching and wellness resources for caregiving, education and parenting.

We also engaged our Caregiver Employee Resource Group, a collaborative community of employees that are caring for children or the elderly, to share useful tools, tips and perspectives for balancing work and family successfully. We hosted a series of back-to-school events on topics such as *Balancing Work and Family Successfully*, *Setting Up Your Home for Successful Learning* and *Raising Resilient Kids*. In addition, we provided e-Learning work-from-home resources on how to stay productive while

working from home, maintain a balance and manage a work-from-home plus school-from-home environment.

Our Supply Chain

Our partnership with our suppliers is critical to the reliable delivery of our products and the protection of workers. We continually monitor our supply chain and work closely with our suppliers to assess risks, enable training and validate progress. For example, our supply chain operations adjusted delivery dates and quantities as well as planned for extended lead times when reasonably possible. We also shifted production load from countries with COVID-19 outbreaks and collaborated with suppliers to reroute materials and finished goods to lanes and locations that best enabled delivery to customers.

[Learn about our Supply Chain Responsibility Program](#)

Our Global Communities

Through our combined COVID-19 response efforts, we provided more than \$26 million USD to universities, research institutes and community organizations, including donations of technology, personal protective equipment, and corporate and employee giving (as of June 2021).

For example, AMD and employees donated money for COVID-19 medical support and humanitarian relief through grants and special matching gift programs for communities worldwide. We also prioritized and expedited product shipments for our medical customers, including AMD embedded processors used in ventilators and respirators.

To accelerate COVID-related medical research, we established the AMD COVID-19 High Performance Compute (HPC) Fund to provide universities and research institutions with HPC technology and resources. We aim to help leading institutions not only deepen their understanding of COVID-19 but also improve their ability to respond to future potential threats to global health.

As of June 2021, 23 grantees across seven countries are benefitting from the fund. Research projects of grantees range from evolutionary modeling of the COVID-19 virus to understanding the virus spike protein activation that occurs before the first interaction between the coronavirus and human cell and large-scale fluid dynamics simulations of COVID-19 droplets as they travel through the air.

Additionally, AMD contributes as a member of the [COVID-19 High-Performance Computing Consortium](#). This private-public effort is spearheaded by the White House Office of Science and Technology Policy, the U.S. Department of Energy and IBM. It brings together government, industry and university leaders to provide access to the world's most powerful high-performance computing resources in support of COVID-19 research.

As we continue to navigate the uncertainty of the pandemic, AMD remains focused on providing strong and unwavering support to our employees, customers and the communities around the world we call home.

[See our latest COVID-19 Updates](#)

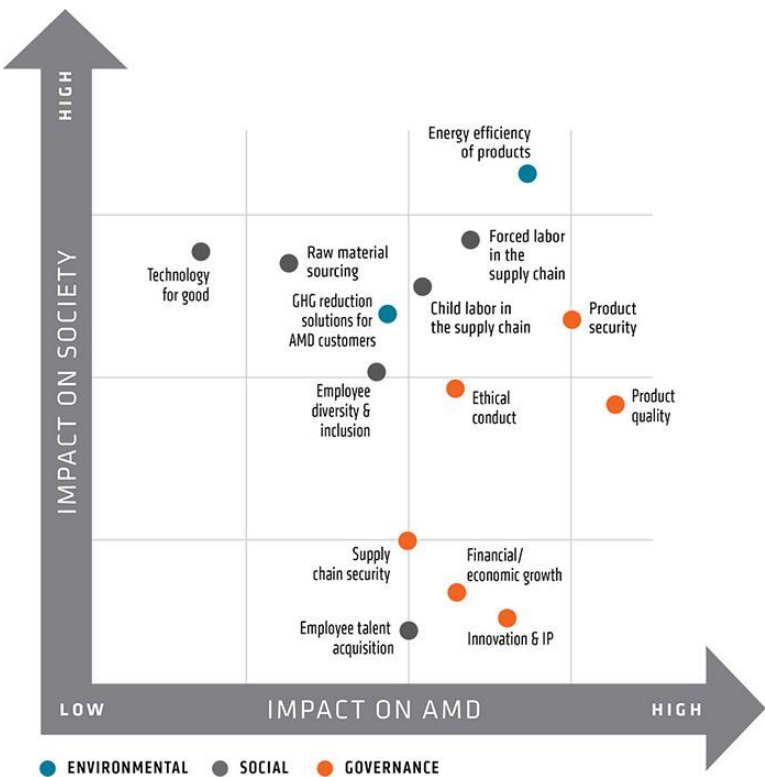
Our Material ESG Issues

Our Materiality Matrix

Materiality analysis helps us to prioritize environmental, social and governance (ESG) issues within our approach and goal setting, as well as to guide our engagement with key stakeholders. It also helps us focus our reporting and transparency efforts on the issues that matter most.

As a leading company in the semiconductor industry, AMD impacts – and is impacted by – a wide variety of ESG-related issues. While we continuously monitor and respond to a broad range of concerns, we also conduct periodic evaluations to better understand the overall landscape, set priorities and evolve our practices, policies and programs accordingly.

In 2020, we partnered with [Ceres](#), a leading nonprofit organization focused on sustainable business, to complete an updated materiality assessment, building on the previous assessment that was conducted in 2017. The resulting materiality matrix highlights our most material issues based on their current or potential impact on stakeholders and society and our company’s business.



[See How These Issues Correspond to the United Nations SDGs](#)

Assessment Results

While results were generally aligned with those of the previous assessment, there were notable shifts in the ranking of some issues, reflecting the evolution of societal expectations and concerns, as well as specific emerging risks and opportunities for AMD.

For example, the analysis found that social equity and workforce issues, including employee diversity and inclusion as well as tech equity, are increasingly important to stakeholders and our business. It also highlighted nuances in the evolution of some issues, such as stakeholders’ increased focus on different dimensions of climate change as it relates to information technology. Such topics include product energy efficiency, operational energy use, risks to the supply chain, and computing’s role as both a driver of greenhouse gas (GHG) emissions and a lever for reducing them across the wider economy.

Taking account of the complete analysis, including the interdependence of key issues, we worked with Ceres to identify four strategic focus areas that are both important to stakeholders and critical to the success of our business:



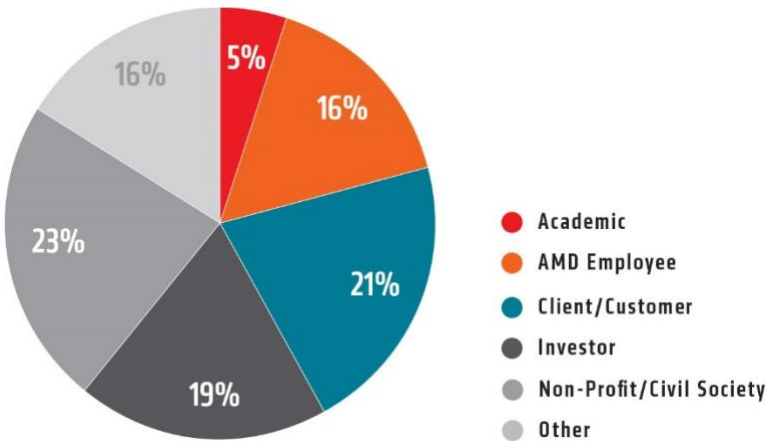
We also consider several of the issues noted in the matrix as part of our foundational approach to conducting business responsibly. These issues include ethical conduct, financial performance, innovation, intellectual property protection, product quality and security (cyber, product and supply chain).

[Learn more about Our Approach](#)

Assessment Methodology

To refine our understanding of key issues and update our strategic focus areas, we undertook a thorough assessment process consisting of the following key steps.

- 1. **Identification:** Ceres conducted desk research to identify and characterize a comprehensive list of ESG issues and topics relevant to our business and the broader semiconductor industry. Among other things, the research took note of:
 - a. The increasing number and diversity of ESG inquiries we receive from customers, investors and other stakeholders;



- b. The issues and expectations highlighted by external frameworks and initiatives such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Taskforce on Climate-related Financial Disclosures (TCFD) and the United Nations Sustainable Development Goals (SDGs); and
 - c. The evolution of other companies' priorities and responses to key issues within and beyond our industry.
2. **Survey & Analysis:** Next, AMD and Ceres conducted a survey to gather internal and external stakeholder feedback on the relative importance of identified issues, as well as their insights on the context and challenges faced by AMD. We then compiled and analyzed the results to identify the most strategic issues and potential areas for increased focus and investment.
3. **Validation & Prioritization:** Finally, we reviewed and validated the results of the analysis in discussions with investors and members of the AMD executive team. Insights and recommendations from these conversations provided the basis for final prioritization and determination of the core issues, and in turn, for updating and refining our practices, policies and programs. The results of this final step are critical inputs to our most recent report and forward-looking approach in terms of defining its substance and informing our goals.

Digital Impact

Why It Matters

Computing is ubiquitous and more powerful than ever. Every single day, whether it's in the electronics we rely on at home and work, the advanced data centers and networks that connect us all or the supercomputers used to drive research and innovation in numerous fields, computing makes the previously impossible possible.

Semiconductor technology creates the potential for new insights, experiences and solutions with the power to transform lives and communities for the better. For example, our advances in high-performance computing (HPC) help society unlock opportunities around scientific research; science, technology, engineering and math (STEM) education; energy and climate; healthcare and other exciting fields.

However, such advances also bring the potential for abuse and unintended consequences. The same technologies that promote equity and increase efficiency can also be deployed in ways that potentially disadvantage or exploit vulnerable communities or contribute to environmental degradation. As a leader in the semiconductor industry, AMD has both the opportunity and responsibility to help apply digital tools to create a better world and to help avoid or limit their potential risks.

Our Approach

Understanding our customers' and industry partners' goals and sharing their visions are critical to how we operate. With these insights, we can see the challenges and opportunities ahead, which allows us to continue to develop groundbreaking innovations and help improve lives. But technology alone cannot achieve societal progress. Rather, it's the people that put high-performance computing to work and spark new ideas that benefit society as a whole. That is why we engage and collaborate with our customers, industry and other stakeholders to design world-class high-performance computing solutions

to tackle some of the toughest challenges facing society and to mitigate the potential negative impacts of technology.

Our goal is that 100 million people will benefit from AMD and AMD Foundation philanthropy and partnerships that enable STEM education, scientific research and the workforce of the future (2020-2025).¹ We plan to achieve our goal by fostering strategic relationships with researchers, educators and students that are positioned to expand horizons and develop the groundbreaking innovations of tomorrow. Whether it is donating technology to help students' sense of discovery or to help scientists responsibly push the boundaries of what is possible, we believe that when processing power meets brainpower, the future comes alive.

Key Activities and Initiatives

We see great potential for high-performance computing (HPC) to benefit society and the planet. Through our digital impact initiatives, strategic investments and partnerships, we aim to help others tackle important global challenges.

Scientific Research

Together with industry and research partners, AMD is helping to deliver a new generation of supercomputers² that cross the exascale performance barrier for the first time, with the ability to perform more than 10 to the 18th or more (or one *quintillion*) calculations per second. These pathbreaking machines will enable researchers to employ exponentially more powerful models and simulations with the potential to create breakthroughs in areas such as climate science, biomedical engineering and the development of new materials.

We are also helping to put the power of HPC solutions to work on advancing scientific research. Most recently, for example, our technology is being used to accelerate COVID-19 vaccine development and therapeutics. The [AMD COVID-19 High Performance Compute \(HPC\) Fund](#) launched in April 2020 and provides universities and research institutions with computing resources to accelerate medical research on COVID-19 and other diseases.

New York University, the Massachusetts Institute of Technology and Rice University were the first universities named to receive complete AMD processor-powered HPC systems. We also contributed technology and technical resources to nearly double the peak performance of the "Corona" system at Lawrence Livermore National Laboratory. Additionally, in 2021, we donated HPC clusters to the University of Toronto, University of Cambridge, High-Performance Computing Center Stuttgart, Leibniz Supercomputing Centre, Grand Equipement National de Calcul Intensif and the Council of Scientific and Industrial Research Fourth Paradigm Institute. These new HPC systems are dedicated to COVID-19 mitigation efforts and furthering future healthcare research at these leading international institutions.

¹ For each year during the goal period, data includes a) students, faculty or researchers with direct access to AMD-donated technology, funding or volunteers; and b) individuals with a reasonable likelihood of receiving research data formulated through AMD-donated technology and potentially gaining useful insights or knowledge.

² <https://www.amd.com/en/products/exascale-era>

By helping accelerate research in areas such as genomics, vaccine development, disease transmission and epidemiological modeling³, the HPC Fund has not only supported a worldwide mobilization in response to COVID-19 but also built capacity to respond to future global health threats. AMD will continue to support world-class research institutions across the globe with our talent and resources to accelerate science in the public interest.

[Learn more about AMD COVID-19 HPC Fund](#)

STEM Education

As we imagine a future enhanced by what computing offers, we must also empower the next generation of citizens and leaders to continue innovating and making constructive use of its capabilities. We are passionate about enabling the imagination and creativity of the next generation. Technology in their hands encourages exploration, imagination and learning that opens doors to new careers and possibilities. That is why we partner with schools, educators and local nonprofit organizations to provide AMD processor-based equipment to outfit four AMD Learning Labs to help inspire students to pursue science, technology, engineering and math (STEM) education. We currently have sites in Markham, Canada; Shanghai, China; and Austin, Texas and San Jose, California in the United States. These labs support the expansion of STEM curricula and opportunities for underserved students to gain hands-on experience with computer hardware and software, with additional ongoing engagement from AMD employee volunteers. For some students, this may lay the groundwork for a future technical career, while for others it can support the development of reasoning and other skills they can use to thrive in a range of pursuits.

In 2020, when local schools were closed due to the pandemic, the Boys & Girls Clubs' Silicon Valley Alviso Club was open and supporting hundreds of kids. The AMD learning lab was essential in advancing STEM programming as members learned various technical skills such as 3D modeling, robotics and programming with Scratch and Python. Access to computers helps to reduce the digital divide and improve Club members' chances of graduating from high school, moving on to post-secondary education and discovering a career in STEM.

Through member surveys and evaluations, 91 percent of Club youth reported the program improved their understanding of computers/technology, 92 percent reported the program improved their confidence interfacing with computers/technology, and 85 percent reported an interest in pursuing a career in STEM.

"Through AMD's support, we can ensure the highest quality delivery of the STEM components in the 21st Century Learning Initiative, which is our suite of STEM, literacy, college and career readiness programs." Max Duganne, CEO of Boys & Girls Clubs of Silicon Valley.

[Learn more about AMD Learning Labs](#)

Energy and Climate

Exponential increases in computing performance open the doors for exploration and research. But this demand, particularly in data centers, requires increasing energy consumption and greenhouse gas emissions (GHG) by users. That's why AMD has set a new, bold goal to increase the energy

³ HLRS Receives Donation to Support COVID-Related Research and Urgent Computing, High Performance Computing Centre Website: <https://www.hlr.de/news/detail-view/2021-04-19/>

efficiency for AMD processors and accelerators powering servers for artificial intelligence-training and high-performance computing by 30x from 2020 to 2025.⁴ This goal equates to a 97 percent reduction in energy use per computation and represents more than a 2.5x acceleration of the industry trends from 2015-2020 as measured by the worldwide energy consumption for these computing segments.

Our [world-record-setting](#) energy-efficient EPYC™ server processors can help reduce GHG emissions and may require fewer servers. Of the top ten Green500 Supercomputers⁵, eight of ten are powered by AMD EPYC CPUs.

At the same time, the performance delivered from AMD-powered servers plays an important role in advancing research on climate change. By analyzing massive and complex data sets, researchers and scientists are better able to understand the causes of climate change and predict the impacts of extreme weather. One example highlighted in the case studies below is the climate research being done out of [Goethe University Frankfurt](#). Another example, from the July 2021 update of Top 500 Supercomputers is the Meteo France supercomputer used for weather and climate research.⁶

Healthcare

Early in the COVID-19 pandemic, we were honored to help expedite the delivery of our embedded processors used in ventilators. We also design processors used to power medical imaging systems such as mobile and cart-based ultrasound systems, endoscopy systems, and high-end MRI and CT scanners. From diagnostic imaging to imaging-assisted medical procedures, the ability to maximize visual clarity and fidelity is vitally important.

Internet of Things (IoT) and Industrial Solutions

Pushing the outermost boundaries of computing includes making more powerful, energy-efficient and security-minded processing available across a wider spectrum of devices and applications. For example, the AMD Embedded product portfolio provides the performance and power efficiency to enable a variety of Edge computing platforms, meaning closer to the end-user and source of the data.

We are also paving the way for a new generation of industrial solutions enabling intelligent factories. Our solutions serve a wide range of market segments while helping customers realize a future where things run seamlessly, keeping employees productive while they interact more naturally and intuitively with the technology around them. For example, AMD processor-powered industrial PCs are optimized for exceptional, power-efficient processing and graphics performance with integrated CPU and GPU, multi-display support and other advanced features.

Limiting Potential Negative Impacts of Technology

While we work to enhance and accelerate the possible benefits of our technology, we also remain mindful of the potential for negative impacts. Potential risks to our industry and society associated with technology use include increased energy consumption, threats to online privacy and security, human rights abuses and addictive behaviors.

⁴ Includes AMD high performance CPU and GPU accelerators used for AI training and High-Performance Computing in a 4P hosted configuration. Goal calculations based on performance scores as measured by standard performance metrics (HPC: Linpack DGEMM kernel FLOPS with 4k matrix size. AI training: lower precision floating point math GEMM kernels such as FP16 or BF16 FLOPS operating on 4k matrices) divided by the rated power consumption of a representative accelerated compute node including the CPU host + memory and 4 GPU accelerators.

⁵ <https://www.top500.org/lists/green500/2021/06/>

⁶ <https://www.top500.org/site/48356/>

As a component supplier of semiconductor solutions, AMD is limited in our ability to direct or influence how our products are ultimately used by end consumers. Yet we recognize the seriousness of these risks and that we have an important role to play in addressing and taking action to minimize them. Our ongoing efforts include monitoring and disclosing risks to processor security, increasing power efficiency in the data center and collaborating with industry partners to provide input to policy frameworks and standards. For example, AMD actively engages in industry dialogues on these and other technological challenges through forums such as the Information Technology Industry Council (ITI), the International Standards Organization (ISO) and the Institute of Electrical and Electronics Engineers (IEEE).

We will continue working to better understand and collaborate on these and other important issues so that the computing we enable transforms our world for the better.

[How we engage with our stakeholders](#)

Case Studies: AMD Technology Enabling a Better World

At AMD, we dare to imagine a better world and we take inspiration from our customers to deliver innovative solutions to the challenges and possibilities of our digital age. We do not create technology for technology's sake; we innovate for our customers and what they can achieve. This set of case studies provide examples of applications of our core technology that benefit society.

Durham University and DiRAC deepen understanding of the universe with AMD EPYC CPUs

Researching the big cosmological questions, such as the origin of the universe, takes massive amounts of computing power. The Distributed Research utilizing Advanced Computing (DiRAC) facility at Durham University is using the AMD EPYC processor to enable largescale cosmological simulations of the universe.

[Read Case Study](#)

Goethe University Frankfurt delivers a broad range of scientific research with AMD

The Center for Scientific Computing (CSC) at Frankfurt Institute for Advanced Studies (FIAS), located at Goethe University, is using AMD solutions to push the boundaries of theoretical science and further our understanding of fundamental natural phenomena. 2nd Gen AMD EPYC processors and AMD Radeon Instinct™ MI50 accelerators power discoveries in particle physics, climate research, digital medicine and more.

[Read Case Study](#)

Medico teams up with HPE and AMD to transform IT for hospitals in Indonesia

Using the HPE ProLiant DL385 Gen10 Server with AMD EPYC 7251 Processor, Medico's hospitals can easily process patients' administration and billing arrangements ensuring the hospital's critical focus and time are spent caring for patients. The data center system also features enhanced security features to help protect patient data confidentiality.

[Read Case Study](#)

MyComputerCareer enhances education with AMD Ryzen™ Mobile

MyComputerCareer has a vision about how to improve education in information technology skills. And providing the best possible laptop for students is central to its core strategy. Through laptop provider Lenovo and service company vision21 solutions, MyComputerCareer found that AMD Ryzen Mobile Processors delivered exactly what was needed to give students the best possible opportunity to complete their studies successfully.

[Read Case Study](#)

Nikhef empowers subatomic physics research with AMD technologies

Dutch National Institute, Nikhef, is at the forefront of delivering processing capabilities for subatomic physics research and concentrates on deepening our understanding of the universe. The Institute is using AMD EPYC CPUs to enhance its data throughput for the next generation of subatomic physics research workloads. It's also deployed AMD Radeon Instinct™ GPUs to accelerate machine learning.

[Read Case Study](#)

Symmetric Computing discovers new drugs faster with AMD EPYC and Radeon Instinct technology

Finding cures for the most common and life-threatening diseases takes a huge amount of time and effort – devising theories and designing potential drug regimens followed by years of testing their efficacy and readiness for patients. Employing AMD EPYC processors and Radeon Instinct accelerators, Symmetric Computing has been able to vastly speed up the process of finding potential drugs for the treatment of Alzheimer's, Parkinson's, diabetes and other diseases.

[Read Case Study](#)

UZ Brussel boosts hospital services with AMD EPYC CPUs

Running a hospital takes an increasing amount of computing power, particularly for those institutions that also supply IT services to external facilities. When the University Hospital in Brussel was planning its next infrastructure upgrade, Dell EMC PowerEdge servers with AMD EPYC processors delivered the performance and security features required for medical applications.

[Read Case Study](#)

Washington University tackles massive data analysis with AMD EPYC CPUs

Washington University is using AMD EPYC processors in Advanced Clustering Technologies compute nodes to analyze massive data sets from more than 100 Folding@home simulation projects accelerating research on COVID-19, cancer and neurodegenerative diseases.

[Read Case Study](#)

Find more case studies on [science, technology and healthcare](#)

Environmental Stewardship

Why It Matters

According to the World Economic Forum's 2021 *Global Risks Report*, "climate action failure" is the most

impactful, and second most likely, long-term risk facing the world today.⁷ This is not only a future challenge – the related issues are already manifesting. Globally, 2020 was the hottest year on record, effectively tying 2016, the previous record.⁸ Temperatures are increasing due to human activities, specifically emissions of greenhouse gases (GHGs), per experts. The International Panel on Climate Change has stated that an average temperature increase of 1.5°C is the threshold for dangerous global warming. Beyond this, they foresee risk severely destabilizing social and economic structures across the world, which would have a disproportionately negative impact on vulnerable communities.⁹

An immediate and meaningful global response is required to address the climate crisis. The technology sector plays a critical role through maximizing product energy efficiency and enabling solutions that provide energy and greenhouse gas emissions (GHG) reduction opportunities for all sectors of society. Accelerating the transition to a sustainable low-carbon economy will produce multiple benefits for economic growth, public health, increasing resilience to natural disasters and the health of the global environment.¹⁰

Our Approach

As designers of microprocessors during a period of amazing growth in technology, we embrace the responsibility to protect our planet and the opportunity to help others save energy and reduce GHG emissions. Our environmental programs and initiatives extend across our value chain, including AMD operations, supply chain manufacturing and product stewardship. And we set ambitious goals and publicly report on our progress annually.

We also engage with industry peers, government regulators, civil society organizations and other groups to advance environmental stewardship across our value chain. The collective efforts and innovations stemming from the technology sector exceed what any of us could do as individual organizations.

[Learn more about our Stakeholder Engagement](#)

Learn more about how we manage environmental issues:

- [EHS Policy](#)
- [Climate Change Policy](#)
- [GRI Standards Index](#)
- [CDP Climate Change Submission](#)
- [CDP Water Submission](#)
- [SASB & TCFD Disclosures](#)

2020 Goals and Progress

We are proud to state that thanks to the engagement and support of our employees and suppliers, we were able to achieve our operations and product goals and three out of five supply chain goals (2014-

⁷ <https://reports.weforum.org/global-risks-report-2021/>. Climate Action Failure is defined by WEF as “Failure of governments and businesses to enforce, enact or invest in effective climate-change adaptation and mitigation measures, preserve ecosystems, protect populations and transition to a carbon-neutral economy”.

⁸ <https://www.nasa.gov/press-release/2020-tied-for-warmest-year-on-record-nasa-analysis-shows>

⁹ <https://www.ipcc.ch/sr15/chapter/spm/>

¹⁰ <https://www.itic.org/policy/environment-sustainability>

2020). The two shortfalls were namely due to a higher manufacturing index (MI)¹¹ over the goal period for manufacturing AMD wafers compared to the industry average. MI is an industry-standard measure of complexity and production that includes the average number of mask layers, wafer size and wafer output. Final performance still significantly exceeded comparable industry averages although falling short of our own goals.

Value Chain Stage	2020 Goal		2020 Performance	Result
AMD Operations	Reduce absolute GHG emissions by 20 percent from a 2014 baseline (scope 1 & 2)		38 percent below 2014 baseline	●
Wafer Suppliers	GHG emissions (scope 1)	75 percent below SIA average per MI	73 percent below SIA average per MI	●
	Electricity use	40 percent below SIA average per MI	28 percent below SIA average per MI	●
	Water use	40 percent below SIA average per MI	54 percent below SIA average per MI	●
	Hazardous waste recycling rate	65 percent or higher	80 percent recycling rate	●
	Injury and illness rate	Reduce year over year	20 percent below 2019 rate	●
Product Use	Deliver at least 25x more energy efficiency in our processors for mobile products, from a 2014 baseline		31.7x	●

● ACHIEVED ● PARTLY (>80%) ACHIEVED ● NOT ACHIEVED

Future Goals

We recognize 2020 as an inflection point within our company that merits looking back to take stock of both successes and challenges. And we are looking ahead with ambition. 2020 was also a turning point globally, well beyond our business, because as a society we see the connectedness of people, industries, communities and ecosystems. We recognize that our environmental stewardship ambitions must continue to go beyond slowing growth in GHG emissions. We have the opportunity to help reduce absolute emissions across industries and the associated negative ecosystem impacts.

That is why AMD is charting a bold path to advance energy efficiency for accelerated computing applications; setting a science-based GHG emissions reductions goal for our operations (aligned with a 1.5 degree Celsius scenario); and working with suppliers to increase efficient use of resources and renewable energy.

Our 2025/2030 Environmental Goals

Value Chain Stage	Goal
AMD Operations (scope 1 and 2 emissions)	50 percent reduction in absolute GHG emissions from AMD operations by 2030 (base year 2020)

¹¹ A manufacturing index is an industry-standard measure of production calculated by square centimeters of silicon x masking layers x wafers per year. The AMD goals compare the Semiconductor Industry Association (SIA) average MI to AMD MI.

AMD Product Energy Efficiency (scope 3 emissions)	30x increase in energy efficiency for AMD processors and accelerators powering servers for artificial intelligence-training and high-performance computing from 2020-2025 ¹²
Supply Chain Manufacturing (scope 3 emissions)	100 percent of manufacturing suppliers have public emissions reduction goals by 2025 80 percent of manufacturing suppliers source renewable energy by 2025

Environmental Performance

Our commitment to environmental stewardship is reflected in our long-standing corporate values and culture. For over twenty-five years, we have been transparently reporting on our environmental initiatives and performance. As AMD outsourced manufacturing operations over several years, we expanded the scope of our environmental goals beyond our global operations to also include supply chain (wafer) manufacturing as well as product (mobile) energy efficiency.

Operations

AMD operates in over 35 locations worldwide, including engineering facilities, sales and business service sites and corporate offices. Across the facilities in which we operate, we strive to apply the highest level of integrity and stewardship for environmental performance.

2020 Operational Performance Summary (compared to a 2014 baseline):

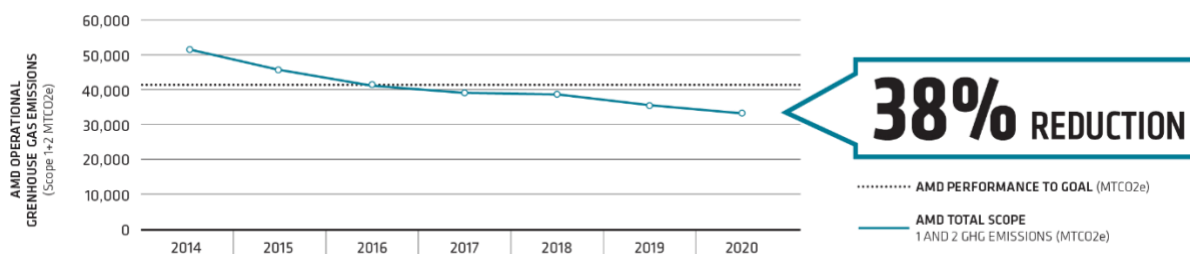
- 17 percent reduction in energy consumption
- 38 percent reduction in GHG emissions
- 23 percent reduction in water use
- 58 percent reduction in waste generated

See [data tables](#) for complete data and footnotes.

Energy and GHG Emissions

Within our operations, our offices and data centers account for the greatest energy use and associated GHG emissions. To manage related impacts, we source renewable energy and implement energy conservation projects, such as equipment upgrades or optimizations. In 2020, performance against our 20 percent scope 1 and 2 GHG emissions reduction goal was a 38 percent reduction from the 2014 goal baseline, and 20 percent below 2019. Our 2020 scope 1 and 2 GHG emissions underwent third-party review (limited assurance).

¹² Includes AMD high performance CPU and GPU accelerators used for AI training and High-Performance Computing in a 4P hosted configuration. Goal calculations based on performance scores as measured by standard performance metrics (HPC: Linpack DGEMM kernel FLOPS with 4k matrix size. AI training: lower precision floating point math GEMM kernels such as FP16 or BF16 FLOPS operating on 4k matrices) divided by the rated power consumption of a representative accelerated compute node including the CPU host + memory and 4 GPU accelerators.



"EPA applauds AMD for its leadership position in the green power marketplace. AMD is an excellent example for other organizations in reducing greenhouse gas emissions through green power investment and use."

James Critchfield, Program Manager of EPA's Green Power Partnership

We have reduced energy use by 17 percent since 2014 and by 2 percent from 2019-2020. Although most of our employees worked remotely during most of 2020 due to Covid-19, many essential staff continued to work from our offices following local guidelines for business continuity, and therefore electricity was still required. Meanwhile, we continued to procure renewable energy in 2020, sourcing 34 million KWh in renewable energy certificates (RECs)

in the U.S. (Green-E certified wind) and China (iRECs wind) which represented 28 percent of our global energy use, enough to power approximately 4,420 homes in the U.S. for a year.¹³

Water

In 2020, water use in our operations decreased by 14 percent compared to 2019 and by 23 percent since 2014. Water consumption was lower this year, in part due to the reduced onsite workforce during Covid-19. We continue to utilize rainwater harvesting and reuse gray water at facilities in Austin, Texas and Bengaluru and Hyderabad, India. In 2020, more than 12,000 million liters of rainwater were harvested, which is equivalent to 23 percent of the combined annual water use across these sites.

Waste and Effluents

We manage effluents and waste at AMD operations, including limited amounts of water discharges and hazardous waste. For example, the volume of wastewater measured at our Austin, Texas site (only one requiring a wastewater permit) decreased 60 percent from 2019-2020.

Our total amount of waste generated in 2020 was 493 metric tons, 29 percent below 2019 and 58 percent below 2014. The non-hazardous waste diversion rate, or the amount kept out of the landfill, was 82 percent in 2020, compared to 62 percent in 2019. Less waste was generated in 2020, in part due to Covid-19 and a more remote workforce. The reduced amount to landfill far outweighed the reduced amount to recycling, thereby improving the overall waste diversion rate. The amount of regulated hazardous waste generated, namely in product testing labs, remained flat at about 3 metric tons in 2020.

SUPPLY CHAIN

¹³ EPA GHG Equivalencies Calculator - <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

We work with our manufacturing suppliers¹⁴ to advance environmental sustainability across a variety of metrics, namely purchased goods and services (scope 3 emissions). Silicon wafer manufacturing represents the bulk of our environmental footprint within the company's supply chain.

Starting in 2014, we partnered with our wafer suppliers to establish “best-in-class” environmental, health and safety (EHS) goals for AMD wafer production through 2020. These goals were designed to significantly outperform industry averages across EHS performance metrics. Each quarter, we tracked progress toward these goals, which cover energy, GHG emissions, water, hazardous waste recycling and injury and illness rates. Three out of five of the 2014-2020 wafer foundry goals were met and all performance metrics were well ahead of the industry average.

Looking ahead to 2025, we continue to work with our wafer foundry suppliers on several key performance indicators and goals, which AMD reviews quarterly. We will annually track progress across all our manufacturing suppliers to increase renewable energy use and commit to public GHG goals.

Energy and GHG Emissions

GHG emissions in our supply chain are primarily generated at silicon wafer manufacturing facilities directly from fuel use (scope 1) or indirectly from electricity consumption (scope 2). In 2020, these foundry partners outperformed industry averages for GHG emissions (scope 1) and electricity use by 73 percent and 28 percent respectively, based on an AMD manufacturing index (MI).¹¹ Looking ahead, we are working with our wafer manufacturing suppliers to outpace the industry average and to reduce their scope 1 and 2 GHG emissions by 5 percent or more per MI from 2020 to 2025. More advanced technology nodes require more electricity, so the aim is to increase renewable energy sourcing from these suppliers by 2x from 2020-2025.

Of our suppliers representing the top 80 percent of annual manufacturing spend, 71 percent source renewable energy and 86 percent undergo third-party certification of their scope 1 and 2 GHG data in 2020. Furthermore, 100 percent hold ISO 14001 Environmental Management Systems certifications and 86 percent hold 50001 Energy Management System certifications.

Water

Across our value chain, the highest use of water and generation of effluents occur at the contracted wafer manufacturing stage. AMD works closely with our foundry wafer partners to understand water risks at the locations where AMD products are manufactured and to track and manage water use. This includes a public goal to maintain water use at 40 percent below the industry average per MI. In 2020, these foundries were 54 percent below the industry average. Looking ahead to 2025, we are working with our wafer manufacturing suppliers to continue surpassing the industry average and to reduce water use by 5 percent or more per MI from 2020. More advanced technology nodes require more water use, so these suppliers are working to increase the capacity for water reclamation.

Of the top 80 percent of manufacturing suppliers by spend, 79 percent have water reclamation

¹⁴ Manufacturing suppliers are those suppliers who contribute materials and/or services that directly impact and become a part of AMD products. This includes wafer, outsourced assembly and test (OSAT), direct materials (substrates, lids, capacitors, memory) and boards inclusive of components.

processes in place and 86 percent have plans to implement a process within the next 3 years. We continue to work with our manufacturing suppliers to promote water conservation, particularly with factories in high water risk regions¹⁵ where we expect suppliers to demonstrate water conservation and risk mitigation efforts.

Waste

To address our supply chain waste generation, we worked closely with our wafer foundry suppliers to establish and track progress on a public goal to recycle 65 percent or more of hazardous waste at the wafer manufacturing stage from 2014 to 2020. During 2020, our wafer manufacturing suppliers achieved an 80 percent recycling rate, compared to a 67 percent rate during 2019, thereby meeting the goal. AMD continues to work with these suppliers to track and improve waste diversion rates for both hazardous and non-hazardous materials.

Of the top 80 percent of AMD annual manufacturing spend, 100 percent of the suppliers have material reuse programs in place. We continue to work with suppliers to promote material reuse and waste minimization and diversion programs.

PRODUCT STEWARDSHIP

We design innovative technologies that power millions of intelligent devices, from personal computers to servers and more. We strive to create products that improve people's lives while minimizing environmental impacts and energy use.

Product Energy Efficiency

Maximizing the computing performance delivered per watt of energy consumed is a vital aspect of our business strategy. Our products' cutting-edge chip architecture, design and power management features have resulted in significant energy efficiency gains. In 2020, in pursuit of our aggressive AMD [25x20 Energy Efficiency Initiative](#), we achieved a 31.7x improvement in energy efficiency for our mobile processors from 2014-2020.¹⁶ The results of achieving this goal reflect a doubling of historical efficiency trends predicted by Koomey's Law,¹⁷ based on an 84 percent reduction in typical energy use and an up to 80 percent reduction in computing time for a given task from 2014 to 2020. That means an enterprise that upgrades 50,000 AMD-based laptops from 2014 models to 2020 models would achieve approximately 5 times more computing performance and reduce the associated laptop energy consumption by approximately 1.4 million kilowatt-hours over a three-year service life. This

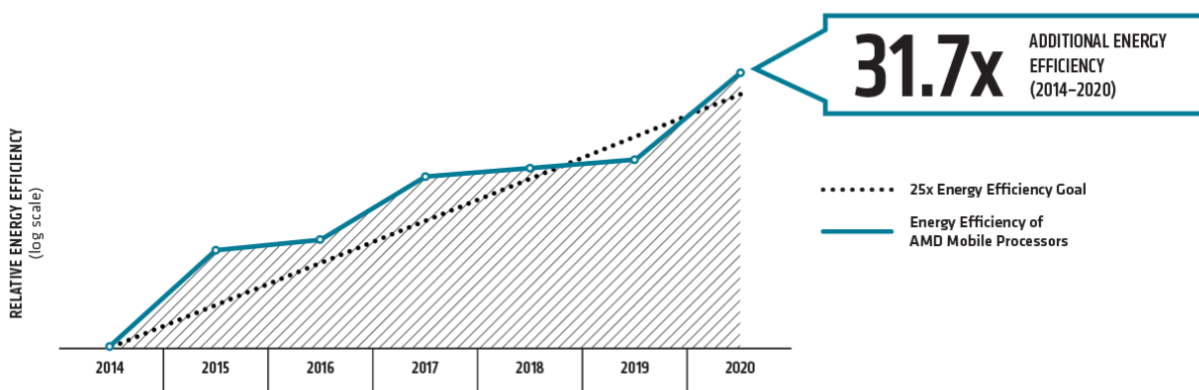
¹⁵ Based on WRI Aqueduct tool - <https://www.wri.org/aqueduct>

¹⁶ Testing by AMD Performance Labs as of April 15, 2020. Processors tested: AMD FX-7600P, AMD FX-8800P, AMD FX-9830P, AMD Ryzen 7 2700U, AMD Ryzen 7 2800H, AMD Ryzen 7 3750H and AMD Ryzen 7 4800H. 25x20 program tracked against Energy Star Rev 6.1 8/12/2014 and 3DMark® 2011 P-Score and Cinebench R15 nT. Results may vary with drivers and BIOSes. RVM-108

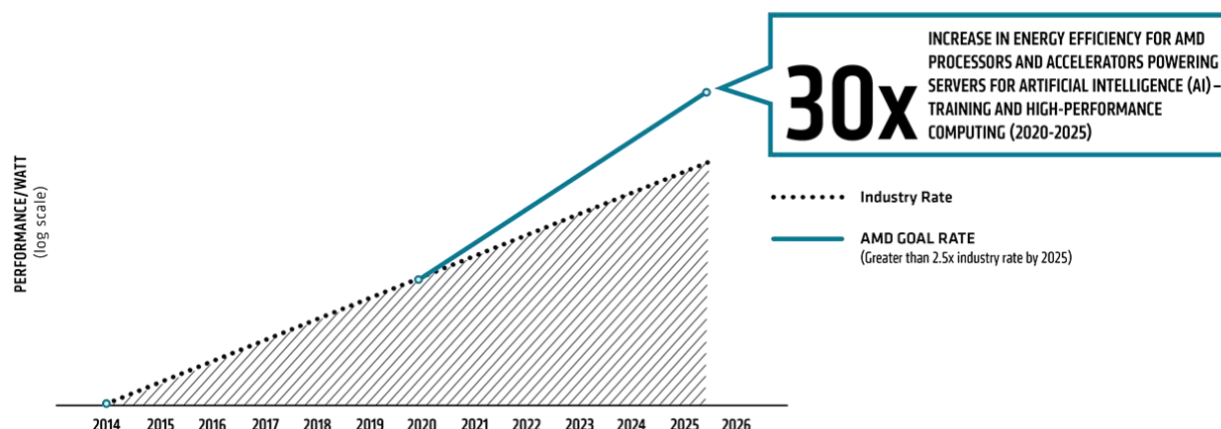
¹⁷ AMD achieved a 31.7x increase in typical use energy efficiency from 2014-2020, or ~2x compared to what would be the historical rate of increase (doubling every 1.57 years) during the same timeframe of 14.1x. RM3H-43

achievement is equivalent to avoiding nearly 1 million kilograms of carbon emissions or 16,000 trees grown for 10 years.¹⁸

For our achievements in product energy efficiency, in 2021 AMD was named to *Fortune's Change the World* list that recognizes outstanding efforts by companies to tackle society's unmet needs.



Building on the momentum of 25x20, AMD set a new bold goal, a 30x increase in energy efficiency for AMD processors and accelerators powering servers for artificial intelligence-training and high-performance computing (2020-2025).¹² Furthermore, we have launched AMD EPYC [total cost of ownership \(TCO\) calculator](#) tools to illustrate how AMD-powered servers can help reduce GHG emissions and may require fewer servers.



[Read about our Energy Efficiency Goal and data center sustainability efforts](#)

Reducing Hazardous Substances

¹⁸ Emissions reduction estimates for an enterprise upgrading 50,000 AMD laptops from 2014 to 2020 models are based on entering estimated electricity savings into the U.S. EPA Greenhouse Gas Calculator on March 23, 2020 (<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>). AMD estimated annual electricity savings based on ENERGY STAR typical use energy consumption between the 2014 notebook processor and power supply and the 2020 processor and power supply over a 3-year service life and multiplied by 50,000 units.

First and foremost, AMD is committed to compliance with international laws and regulations. Furthermore, we recognize the need to restrict the use of hazardous substances in semiconductor products. That is why AMD works with customers, suppliers and industry groups to implement chemicals management and to address industry standards targeting lead and other chemicals of concern for electronic products.

For more information, please visit our [Product Environmental Compliance](#) page.

Product Packaging

Packaging materials are used for the shipping and handling of our products, both processors in a box (PIBs) and graphics cards. AMD specifies the packaging materials used for our products, including recyclability of materials and use of recycled content. We offer packaging that meets the amended requirements of the EU Packaging Directive (94/62/EC).

In 2020, we reduced the size of our packaging for select Ryzen PIBs by an average of 50 percent compared to the previous generation.¹⁹ And by May 2021 we reduced the size of our packaging for Radeon PRO (W6800) graphics cards by up to 59 percent compared to the previous generation (W5700)²⁰. Smaller packaging conserves natural resources and reduces shipping fuel use and emissions per unit. All our packaging is made of recyclable materials, such as paperboard. Our packaging designers continuously seek out environmentally preferable packing materials, including recycled materials and non-toxic dyes.

Lifecycle Management

In addition to more energy-efficient computing and less packaging material, AMD reduces the lifecycle impacts of our products in several key ways, starting by minimizing the number of devices potentially needed in the first place. For example, a 2P AMD EPYC 7763 powered server, to deliver 10,000 units of integer performance, takes 33 percent fewer servers, 50 percent less space, 42 percent less power, and has a 36 percent lower 3-yr TCO than a 2P based Intel Xeon Platinum 8380.²¹

¹⁹ PIB reduction based on transitioning from Full SR1 Ryzen CUBE to ½ sized SR1 PIB Boxes - 134 mm (H) x 134 mm(W) x 134 mm(L) to 134 mm(H) x 69 mm(W) x 134 mm(L)

²⁰ Calculations conducted by AMD as of May 2021 on the double slot, full height Radeon PRO W6800 and comparable previous generation Radeon PRO W5700 retail boxes.

²¹ MLNTCO-003a: This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for informational purposes only, and not used as a basis for decision making over actual testing. This estimate compares the selected AMD EPYC™ and Intel® Xeon® CPU based server solutions required to deliver a TOTAL_PERFORMANCE of 10000 units of integer performance based on the published scores for Intel Xeon and AMD EPYC CPU based servers. This analysis is based on AMD EPYC™ BARE METAL SERVER TCO ESTIMATION TOOL; VERSION: 05/21/2021 1.6 Master4. This estimation reflects a 3-year time frame. This analysis compares a 2P AMD EPYC EPYC_7763 powered server with a SPECrate®2017_int_base score of 839 (1ku price \$7,890), <https://spec.org/cpu2017/results/res2021q1/cpu2017-20210219-24936.pdf>, compared to a 2P Intel Xeon Platinum_8380 based server with a SPECrate®2017_int_base score of 565 (list price \$8,099), <https://spec.org/cpu2017/results/res2021q2/cpu2017-20210510-26021.pdf>. Both AMD EPYC and Intel-based servers

Another example is cloud computing, which is forecasted to prevent emissions of more than 1 billion metric tons of CO₂ from 2021-2024.²² AMD EPYC processors are used to power cloud instances ranging from big data analytics to virtual desktops. As more enterprises move their computing applications from on-premises data centers to cloud-based data centers, the server utilization rate increases significantly while power and cooling operations are more efficiently managed.

And by engineering our products for longer life and, in some cases, making them backward compatible with our customers' existing systems, we can help make better use of our planet's limited natural resources.

Employees and the Environment

Our award-winning, global employee environmental program, Go Green, engages and inspires AMD employees to reduce their environmental impact and improve their quality of life through sustainable practices. The AMD Go Green program targets three areas where employees can make a difference and help the environment: at home, during their commutes to and from work and in the workplace. In 2020, Go Green activities were limited in nature due to COVID-19 but included a home solar webinar, Earth Day activities and virtual volunteerism in communities.

Home

AMD encourages employees to practice sustainability at home and in the community. For example, the AMD U.S. Employee Solar Program provides free home solar assessments, an online portal for

use the same cost for the following elements of the analysis: server chassis size of 2RU at a cost of \$2,500 per chassis; internal storage \$380; physical servers managed per admin: 30; fully burdened cost per admin \$110,500; server rack size of 42; space allowance per rack of 27 sq feet; monthly cost of data center space \$20 per sq foot; cost per kW for power \$0.12; power drop per rack of 8kW; and a PUE (power usage effectiveness) of 2. The EPYC powered solution estimates are: 12 total 2P EPYC_7763 powered servers at a hardware only acquisition cost of \$18,988 per server, which includes total system memory of 64GB, which is 0.5GB of memory / core and a total system memory cost of \$328; internal storage cost of \$380. The total estimated AMD EPYC hardware acquisition cost for this solution is \$227,856. Each server draws ~423 kWh per month. For the 3 years of this EPYC powered solution analysis the: total solution power cost is ~\$43,857 which includes the PUE factor; the total admin cost is ~\$132,600, and the total real estate cost is ~\$19,440, requiring 1 rack. The total 3 TCO estimate for the AMD solution is \$423,753. The Intel based solution requires 18 total 2P Platinum_8380 powered servers at a hardware only acquisition cost of \$19,406 per server, which includes total system memory of 64GB, which is 0.8GB of memory / core and a total system memory cost of \$328; internal storage cost of \$380. The total estimated Intel hardware acquisition cost for this solution is \$349,308. Each server draws ~484 kWh per month. For the 3 years of this Intel based solution analysis the: total solution power cost is ~\$75,273 which includes the PUE factor; the total admin cost is ~\$198,900, and the total real estate cost is ~\$38,880, requiring 2 racks. The total 3 TCO estimate for the Intel solution is \$662,361. Delivering 10000 of estimated SPECrate®2017_int_base performance produces the following estimated results: the AMD EPYC solution requires 33 percent fewer servers [1-(AMD server count / Intel server count)]; 50 percent less space [1-(AMD rack count / Intel rack count)]; 42 percent less power [1-(AMD power cost / Intel power cost)]; providing a 36 percent lower 3-year TCO [1-(AMD TCO / Intel TCO)]. AMD processor pricing based on 1KU price as of February 2021. Intel® Xeon® Scalable processor data and pricing from <https://ark.intel.com> as of September 2020. All pricing is in USD. Product and company names are for informational purposes only and may be trademarks of their respective owners. SPECrate® scores as of 05/12/2021. SPEC®, SPECrate® and SPEC CPU® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information. AMD EPYC performance numbers based on AMD measured internal estimates and are subject to change based on actual results.

²² IDC, [Worldwide CO₂ Emissions Savings from Cloud Computing Forecast, 2021–2024](#): A First-of-Its-Kind Projection, Doc #US47426420, March 2021

competitive bidding and a \$1,000 discount on home solar system installations. Since launching the program in 2014, AMD employees have generated more than 400,000 kilowatt-hours of solar power, equal to avoiding about 283,000 kilograms of GHGs from burned coal.²³

Commute

AMD encourages employees to use alternative transportation (i.e., rideshare, transit, cycling) when commuting to and from work. We also provide incentives such as discounts to bike shops, pre-tax purchases of transit and vanpool passes, carpool matching and parking and telework. Each September, we promote Commute Solutions Month to encourage AMDers around the globe to try sustainable commuting options. Additionally, electric vehicle (EV) charging stations at AMD North American sites support over 350 employee EV drivers and have avoided over 300,000 kilograms of GHGs since 2010. This savings is equivalent to planting 7,765 trees and letting them grow for 10 years.²⁴ We are proud to be externally recognized for our effective employee commuter benefits, including being named a 2020 Best Workplace for Commuters in the U.S.

Work

At the office, Go Green participants are encouraged to join AMD activities to advance sustainability and make a difference. In 2020, aligned with the 50th anniversary of Earth Day, we launched our employee Go Green Ambassador Program. These volunteer leaders across the globe help organize, lead and participate in various activities throughout the year focused on sustainable actions. Although Go Green activities in 2020 were limited and virtual due to COVID-19, several employee events were organized to raise awareness about personal opportunities to practice sustainability.

For example, in October 2020 AMD employees again participated in a global campaign called the People's EcoChallenge that encourages individuals to adopt more sustainable practices. Team AMD participants committed to environmental actions such as eating local organic food, carpooling, recycling and turning off equipment when not in use. Employees set goals, tracked actions and shared ideas with others. Throughout the program's history at our company, hundreds of AMD employees across several countries have completed over 8,000 actions.

Measurable savings for 2016-20 include:²⁵

- 141,000+ liters of water saved
- 30,700+ kilograms of CO2 emissions avoided
- 22,100+ kilometers of commutes traveled by carpool, bus, bicycle, or walking
- 5,050+ plastic cups and straws diverted from landfills

Data Center Sustainability

Advancing Data Center Sustainability

²³ Electricity savings based on reported employee participation and GHG savings based on EPA Greenhouse Gas Equivalencies Calculator - <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

²⁴ Estimate from ChargePoint's administrative reporting feature for AMD

²⁵ Estimates provided by People's Ecochallenge.org reporting feature

Modern data centers are continuously striving for greater efficiency and scalability while delivering increased performance and security. As designers of cutting-edge server CPUs and GPUs, we recognize our important role in addressing these critical priorities. We are focused on accelerating server energy efficiency, lowering data center total cost of ownership (TCO) and delivering high-performance computing (HPC) to help tackle some of the world's toughest challenges.

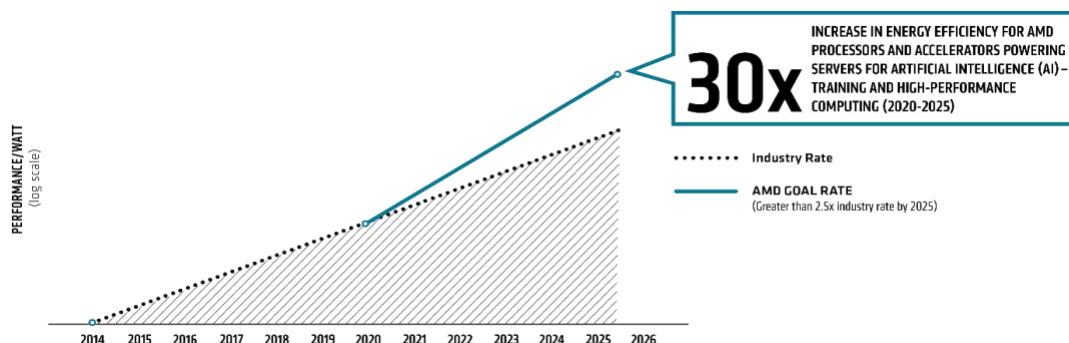
Our goal is to deliver a 30x increase in energy efficiency for AMD processors and accelerators powering servers for Artificial Intelligence (AI)-training and HPC from 2020-2025.²⁶ These important and growing computing segments represent some of the most demanding workloads. This goal represents more than a 2.5x acceleration of the industry trends from 2015-2020 as measured by the worldwide energy consumption for these computing segments.²⁷

Even with continued advances in process manufacturing, the slowdown in Moore's Law is clear. Energy efficiency gains from process node advances are now smaller and less frequent. Therefore, a larger fraction of improvements needs to come from silicon architecture and packaging innovations in addition to expected gains from silicon process technology.

Read the [Goal Announcement Press Release](#)

Goal Pathway

From 2020-2025, our high-performance AMD EPYC™ CPUs and AMD Instinct™ GPU accelerators aim to achieve 30 times increase in energy efficiency for AI training and HPC.



Societal Benefits

Accelerated computing is used for scientific research and large-scale simulation HPC workloads that require demanding computing resources. HPC makes some of the most important scientific breakthroughs possible across many fields including material sciences, climate predictions, genomics, drug discovery and alternative energy. Accelerated nodes are also integral for training AI neural networks that are currently used for activities including speech recognition, language translation and expert recommendation systems with similar promising uses over the coming decade.

²⁶ Includes AMD high-performance CPU and GPU accelerators used for AI training and High-Performance Computing in a 4-Accelerator, CPU hosted configuration. Goal calculations are based on performance scores as measured by standard performance metrics (HPC: Linpack DGEMM kernel FLOPS with 4k matrix size. AI training: lower precision training-focused floating-point math GEMM kernels such as FP16 or BF16 FLOPS operating on 4k matrices) divided by the rated power consumption of a representative accelerated compute node including the CPU host + memory, and 4 GPU accelerators.

²⁷ Based on 2015-2020 industry trends in energy efficiency gains and data center energy consumption in 2025.

A recent example is our HPC technology being used to accelerate COVID-19 vaccine development and therapeutics. Launched in 2020, the AMD COVID-19 High Performance Compute (HPC) Fund provides universities and research institutions with computing resources to accelerate medical research on COVID-19 and other diseases. As of June 2021, the HPC Fund is benefiting 23 grantees in seven countries.

Learn about the [AMD HPC Fund](#)

Environmental Benefits

Our 30x energy efficiency goal equates to a 97 percent reduction in energy use per computation from 2020-2025. If all AI and HPC server nodes globally were to make similar gains, billions of kilowatt-hours of electricity could be saved in 2025 relative to baseline trends.

In addition to the environmental benefits of this goal, our [world-record](#) setting energy-efficient AMD EPYC server processors can help reduce energy and greenhouse gas (GHG) emissions across a broad range of workloads and may require fewer servers. For example, to deliver 10,000 units of integer performance using 2P AMD EPYC 7763 powered servers compared to 2P Intel Xeon Platinum 8380 powered servers can result in 33 percent fewer servers using 50 percent less space and 42 percent less power while delivering up to 36 percent lower 3-yr total cost of ownership (TCO).²⁸

²⁸ MLNCO-003a: This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for informational purposes only, and not used as a basis for decision making over actual testing. This estimate compares the selected AMD EPYC™ and Intel® Xeon® CPU based server solutions required to deliver a TOTAL PERFORMANCE of 10000 units of integer performance based on the published scores for Intel Xeon and AMD EPYC CPU based servers. This analysis is based on AMD EPYC™ BARE METAL SERVER TCO ESTIMATION TOOL; VERSION: 05/21/2021 1.6 Master4. This estimation reflects a 3-year time frame. This analysis compares a 2P AMD EPYC EPYC_7763 powered server with a SPECrate®2017_int_base score of 839(1ku price \$7,890), <https://spec.org/cpu2017/results/res2021q1/cpu2017-20210219-24936.pdf>; compared to a 2P Intel Xeon Platinum_8380 based server with a SPECrate®2017_int_base score of 565 (list price \$8,099), <https://spec.org/cpu2017/results/res2021q2/cpu2017-20210510-26021.pdf>. Both AMD EPYC and Intel-based servers use the same cost for the following elements of the analysis: server chassis size of 2RU at a cost of \$2500 per chassis; internal storage \$380; physical servers managed per admin: 30; fully burdened cost per admin \$110500; server rack size of 42; space allowance per rack of 27 sq feet; monthly cost of data center space \$20 per sq foot; cost per kW for power \$0.12; power drop per rack of 8kW; and a PUE (power usage effectiveness) of 2. The EPYC powered solution estimates are: 12 total 2P EPYC_7763 powered servers at a hardware only acquisition cost of \$18988 per server, which includes total system memory of 64GB, which is 0.5GB of memory/core and a total system memory cost of \$328; internal storage cost of \$380. The total estimated AMD EPYC hardware acquisition cost for this solution is \$227856. Each server draws ~423 kWh per month. For the 3 years of this EPYC powered solution analysis the: total solution power cost is ~\$43857 which includes the PUE factor; the total admin cost is ~\$132600, and the total real estate cost is ~\$19440, requiring 1 rack. The total 3 TCO estimate for the AMD solution is \$423753. The Intel-based solution requires 18 total 2P Platinum_8380 powered servers at a hardware only acquisition cost of \$19406 per server, which includes total system memory of 64GB, which is 0.8GB of memory / core and a total system memory cost of \$328; internal storage cost of \$380. The total estimated Intel hardware acquisition cost for this solution is \$349308. Each server draws ~484 kWh per month. For the 3 years of this Intel-based solution analysis the: total solution power cost is ~\$75273 which includes the PUE factor; the total admin cost is ~\$198900, and the total real estate cost is ~\$38880, requiring 2 racks. The total 3 TCO estimate for the Intel solution is \$662361. Delivering 10000 of estimated SPECrate®2017_int_base performance produces the following estimated results: the AMD EPYC solution requires 33% fewer servers [1-(AMD server count / Intel server count)]; 50% less space [1-(AMD rack count / Intel rack count)]; 42% less power [1-(AMD power cost / Intel power cost)]; providing a 36% lower 3 year TCO [1-(AMD TCO / Intel TCO)]. AMD processor pricing based on 1KU price as of February 2021. Intel® Xeon® Scalable processor data and pricing from <https://ark.intel.com> as of September 2020. All pricing is in USD. Product and company names are for informational purposes only and may be trademarks of their respective owners. SPECrate® scores as of

We have launched the AMD EPYC™ Bare Metal and Greenhouse Gas Emissions TCO Estimation Tool to illustrate how AMD-powered servers can help reduce GHG emissions. You can find this new tool on the [EPYC Tools home page](#).

Read more about our [Environmental Stewardship initiatives](#).

Industry Perspectives

“The energy efficiency goal set by AMD for accelerated compute nodes used for AI training and High-Performance Computing fully reflects modern workloads, representative operating behaviors and accurate benchmarking methodology.”

~ **Dr. Jonathan Koomey, President, Koomey Analytics**

“With computing becoming ubiquitous from edge to core to cloud, AMD has taken a bold position on the energy efficiency of its processors, this time for the accelerated compute for AI and High-Performance Computing applications. Future gains are more difficult now as the historical advantages that come with Moore’s Law have greatly diminished. A 30-times improvement in energy efficiency in five years will be an impressive technical achievement that will demonstrate the strength of AMD technology and their emphasis on environmental sustainability.”

~ **Addison Snell, CEO of Intersect360 Research**

Select Data Center Case Studies

Northern Data

Northern Data nearly halved the cost per ML training cycle while reducing power consumption by 30-40 percent with servers powered by AMD EPYC™ CPUs and AMD Instinct™ GPUs versus comparable cloud services.

[Learn More](#)

Nikhef

Nikhef enhanced its data throughput using AMD EPYC processors with Radeon Instinct GPUs for machine learning to handle the increasing amounts of experimental data from subatomic physics experiments.

[Learn More](#)

Oak Ridge National Laboratory

ORNL deployed the HIP API to easily port scientific workloads to AMD Instinct™ MI100 GPUs, providing faster performance and readiness to run on the Frontier supercomputer in 2021.

05/12/2021. SPEC®, SPECrate® and SPEC CPU® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information. AMD EPYC performance numbers based on AMD measured internal estimates and are subject to change based on actual results.

[Learn More](#)

Supply Chain Responsibility

Why It Matters

With an estimated 80 percent of global trade passing through them, supply chains continue to be one of the most important levers for businesses to create a positive impact in the world.²⁹ By working together, companies and their suppliers can make a significant impact in advancing human rights, fair labor practices and environmental progress.

The COVID-19 pandemic highlighted the interdependency of global supply chains across industries and magnified risks that can arise from the many interconnected challenges, such as inequality and forced and child labor. The link between ethical and sustainable supply chains, resilience and value to the business is clear, now more than ever.

Consequently, stakeholder expectations for supply chain responsibility are evolving with growing demands for transparency and data-driven results. Companies are increasingly expected to manage supply chain-related social and environmental impacts, including sourcing minerals responsibly, ensuring safe working conditions and upholding human rights protections. In addition, environmental metrics and initiatives are expected around the efficient use of water, energy, chemicals and materials.

Although we adhere to the highest standards, we know these issues are persistent and real. With the growing number of electronic devices being used globally comes the responsibility to ensure that we are doing the right thing and conducting our business ethically. We are committed to delivering high-quality products and helping ensure that working conditions throughout our supply chain are safe, workers are treated with respect and dignity and the manufacturing processes of our products are environmentally responsible.

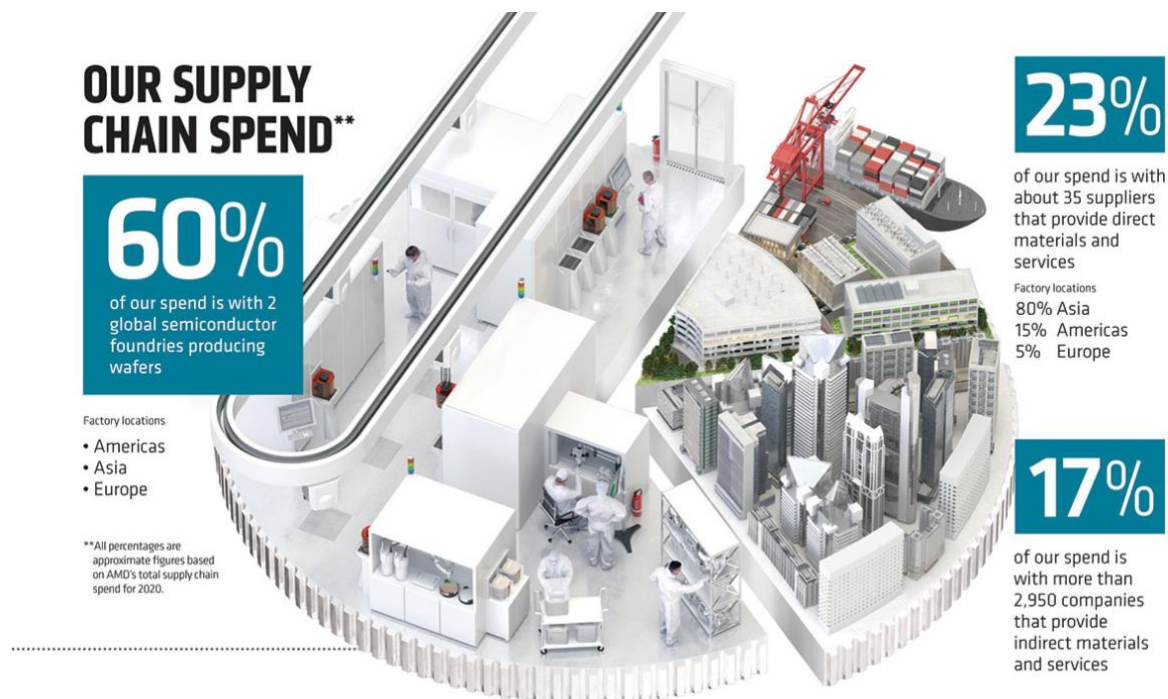
Our Approach

As a fabless semiconductor company, our manufacturing operations are wholly outsourced to a carefully selected network of suppliers. The scope of the AMD Supply Chain Responsibility program encompasses the manufacturing of our products by suppliers located in Asia, Europe and the United States and the sourcing of raw materials.

We aim to work with our manufacturing suppliers³⁰ to advance supply chain resiliency, respect for human rights and environmental sustainability. We take a partnership approach with our suppliers to promote continuous improvement and drive positive change across our value chain.

²⁹ United Nations Global Compact <https://www.unglobalcompact.org/take-action/action-platforms/decent-work-supply-chains>

³⁰ Manufacturing suppliers are those suppliers who contribute materials and or services that directly impact and become a part of AMD products. This includes wafer, outsourced assembly and test (OSAT), direct materials (substrates, lids, capacitors, memory) and boards inclusive of components.



We share our expectations with our manufacturing suppliers in our annual Supplier Acknowledgement Letter. Our standard contractual terms and conditions for the procurement of goods and services require conformance to applicable laws and regulations and reinforce our expectations regarding responsible social, ethical and environmental conduct. Training is made available to suppliers through the e-Learning Academy of the Responsible Business Alliance (RBA). Topics cover social and environmental issues and are assigned to suppliers based on identified knowledge gaps.

Over the next five years, we plan to expand our work with suppliers to drive a positive impact for the people who work across our value chain and the planet which we all share. Our 2025 goals include:

- **100 percent of AMD supplier manufacturing factories will have a Responsible Business Alliance (RBA) audit or equivalent**
- **80 percent of AMD manufacturing suppliers by spend will participate in a capacity building activity**

Our [value chain](#) starts with the design process. Our wafer foundry suppliers source raw materials and create a silicon wafer. The wafer is fabricated into chips, assembled into a package, tested and shipped as a semiconductor ready to be used by our customers. The majority – approximately 60 percent – of our supplier spend is with two foundries that supply these wafers. Another 23 percent of our spend is with approximately 70 factories that manufacture a range of inputs needed to create our products. This concentration of supplier spend allows us to take a long-term approach with key suppliers, which is paramount to our success.

Aligning with Industry Standards

We hold ourselves to high ethical standards and expect our suppliers to do the same. AMD is a full member of the [Responsible Business Alliance](#) (RBA). Our [commitment letter can be read here](#). In 2021, AMD was elected to the Board of Directors to help guide the RBA's strategic direction to achieve its mission and vision. In addition, we collaborate with other industry groups, peers, suppliers and other stakeholders to make supply chains across the industry more ethical and sustainable.

AMD adopts the RBA Code of Conduct as our [Supplier Code of Conduct](#) ("The Code"). The Code is aligned with international norms and standards including the Universal Declaration of Human Rights, ILO International Labor Standards and the OECD Guidelines for Multinational Enterprises. It outlines our standards for labor, health and safety, environment, ethics and management systems. The AMD [Worldwide Standards of Business Conduct](#) outlines our expectations for our ethical conduct and these standards extend to our business partners. We further expect that each supplier will, in turn, communicate to their suppliers the same expectations and implement reasonable mechanisms to monitor their compliance.

[How we engage with industry groups](#)

Risk Assessment

At AMD, we take a risk-based approach to managing our supply chain. We utilize third-party risk analytics to conduct an overall supply chain risk analysis. Through our annual analysis, we gain deeper insights into inherent geographical risks in our supply chain on labor, health and safety, environment, business ethics and management systems. We use the results of the analysis to assign risk assessment tools and prioritize suppliers within our audit program.

In 2020, 100 percent of our suppliers submitted the RBA supplier self-assessment questionnaire (SAQ). The score is an additional input used to assign a risk level to the supplier.

Supplier Audits

Based on the results of the risk assessment, AMD decides which tool will be the most effective to evaluate the supplier based on its risk profile. For example, we may require an RBA Validated Assessment Program (VAP) on-site audit to learn more. Suppliers identified as presenting a high-risk of forced labor may be required to submit a specialized assessment designed to identify the risk of forced labor at the employment site.

In 2020, 47 percent of AMD manufacturing suppliers had a valid [RBA VAP audit](#) (conducted within two years). The average initial RBA VAP audit score for AMD suppliers was 39 percent better than the overall RBA average.

[See our Supplier Audit Summary Results](#)

Remediation

We track audit findings, including nonconformances, from the release of the audit report through closure. As warranted, suppliers are required to create a Corrective Action Plan (CAP) and submit it to AMD per the deadlines and requirements informed by the RBA VAP Protocol, including onsite third-party closure audits.

In 2020, two Priority non-conformities were detected in the VAP audits. The suppliers put a CAP in place per the RBA timelines.

Accountability

We use supplier scorecards to hold suppliers accountable for their performance against supply chain responsibility expectations. Employees from Procurement and Corporate Responsibility teams participate in supplier business reviews which include a discussion on the scorecard. Performance metrics include:

- Social and environmental commitment and management
- RBA audit performance
- Closing nonconformance timing
- Environmental management and performance

Additionally, AMD procurement staff are trained on supply chain responsibility. In 2020, 100 percent of AMD Sourcing Managers completed this training.

Respecting Human Rights

At AMD, we respect human rights throughout our company, operations and supply chain. We work to uphold the relevant fundamental rights and freedoms of all people across the business, in line with the United Nations Universal Declaration of Human Rights (UDHR) and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises.

In 2021, we updated our Human Rights Policy to reflect our commitment to the United Nations Guiding Principles on Business and Human Rights (UNGPs). The policy extends to our supply chain and the AMD Supplier Code of Conduct further incorporates human rights requirements set out in international norms and standards. We are a signatory to the [United Nations Global Compact](#), the world's largest corporate sustainability initiative, affirming our commitment to aligning our strategy and operations to [ten universally accepted principles](#) in the areas of human rights, labor, environment and anti-corruption.

Read our [Human Rights Policy](#)

Assessing Impact and Opportunities

The AMD Corporate Responsibility and Procurement teams are responsible for establishing and coordinating the policies, programs and processes governing our approach to human rights. In our most recent [materiality assessment](#), we identified salient human rights, including forced labor and child labor in the supply chain. Our efforts to identify human rights risks and impacts, if they

occur, include a thoughtful selection of AMD suppliers and due diligence within our supply chain. Through assessments of manufacturing suppliers, we have identified working hours and health and safety as salient human rights risks.

Unfortunately, in the electronics supply chain, some workers are at risk of conditions that contribute to forced labor including recruitment fees, unethical recruitment practices and a lack of transparency about their actual working conditions. Migrants and other vulnerable workers are particularly at risk. We require suppliers to commit to freely chosen employment and monitor risks that could lead to forced labor conditions. Our Supplier Code of Conduct includes a standard on freely chosen labor, including prohibiting workers from paying recruitment fees.

In 2020, one nonconformance on freely chosen employment was detected. The VAP audit found that workers had paid employment-related fees. The supplier put in place a new system to ensure workers do not pay fees and reimbursed the workers.

Stakeholder Engagement

We believe we will have the most impact on addressing the systemic causes of forced and bonded labor by working together with multi-stakeholder initiatives and leveraging relationships with our manufacturing suppliers. We partner with industry and stakeholders through the [Responsible Labor Initiative](#) to help address the root causes of forced labor and prevent, detect and remediate forced labor if found in our supply chain. Priority audit nonconformances and identified risks of forced labor are reviewed at the executive level at least once per year.

Additionally, we work with our suppliers and our industry through the [Responsible Mineral Initiative](#) to ensure the responsible sourcing of raw minerals, focusing on those from conflict-affected and high-risk areas.

We continuously seek opportunities to align with best practices on how we operate and collaborate with our suppliers to create positive impacts on human rights through our products.

Environmental Stewardship in our Supply Chain

We are steadfast in our commitments to environmental stewardship and that includes working with our manufacturing suppliers to evaluate and continuously improve performance. Given the amount of energy and water necessary in the wafer fabricating process, silicon wafer manufacturing represents the bulk of our environmental footprints in our supply chain. We have set 2025 targets for our two primary wafer foundry suppliers and track the impacts of water use, energy use, greenhouse gas emissions and waste. Additionally, we work with a broader set of strategic suppliers that includes outsourced assembly and test (OSAT) facilities to review metrics and progress annually.

See our [Supply Chain goals and initiatives](#)

Responsible Minerals Sourcing

We are committed to the responsible sourcing of minerals used in our products. Tin, tantalum, tungsten and gold (3TG), defined as conflict minerals under U.S. law, are used in everyday consumer goods and

are integral to electronic products. The mining, sale and use of minerals from Conflict-Affected and High-Risk Areas, including the Democratic Republic of Congo and its adjoining countries, have been associated with negative social and environmental impacts.

Although AMD does not directly purchase minerals from raw material providers, we support ethical, social and environmental sourcing through ongoing multi-stakeholder programs and dialogue. For example, AMD has been a member of the [Responsible Minerals Initiative](#) (RMI) since 2008.

Learn more about our [Responsible Minerals Program](#)

Health and Safety for Workers in our Supply Chain

We value the health and safety of workers in our supply chain. With our two primary wafer foundry suppliers, we aim to see a year-over-year reduction of the cumulative reportable injury and illness case rate. In 2020, the rate decreased by 20 percent compared to 2019, meeting our 2020 goal. Extending to our other manufacturing suppliers, we utilize RBA audits to identify any health and safety code violations, which most often relate to emergency preparedness.

See our [Supplier Audit Summary Results](#)

AMD Supplier Code of Conduct

We have adopted the Responsible Business Alliance (RBA) [Code of Conduct](#) as the AMD Supplier Code of Conduct. The Code of Conduct is a set of social, environmental and ethical industry standards encompassing many frameworks, such as the Universal Declaration of Human Rights, International Labour Organization standards, OECD Guidelines for Multinational Enterprises, and ISO and SA standards.

We believe this industry-wide standard is an efficient and effective way to integrate social, environmental and ethical responsibilities into our supply chain. The RBA Code is reviewed and updated every three years by RBA members and stakeholders to ensure its applicability to international norms and relevant supply chain issues.

AMD expects our suppliers, as well as ourselves, to operate in accordance with the Code of Conduct and its expectations and requirements, which span labor, health and safety, environment, ethics and management systems.

Learn about [Supply Chain Responsibility at AMD](#)

Elements of the RBA Code:

Labor

- Freely chosen employment
- Young workers
- Working hours
- Wages and benefits
- Humane treatment

- Non-discrimination/Non-harassment
- Freedom of association

Health and Safety

- Occupational safety
- Emergency preparedness
- Occupational injury and illness
- Industrial hygiene
- Physically demanding work
- Machine safeguarding
- Sanitation, food and housing
- Health and safety communication

Environment

- Environmental permits and reporting
- Pollution prevention and resource reduction
- Hazardous substances
- Solid waste
- Air emissions
- Materials restrictions
- Water management
- Energy consumption and greenhouse gas emissions

Ethics

- Business integrity
- No improper advantage
- Disclosure of information
- Intellectual property
- Fair business, advertising and competition
- Protection of identity and non-retaliation
- Responsible sourcing of minerals
- Privacy

Management Systems

- Company commitment
- Management accountability and responsibility
- Legal and customer requirements
- Risk assessment and risk management
- Improvement objectives
- Training
- Communication
- Worker feedback, participation and grievance
- Audits and assessments
- Corrective action process
- Documentation and records
- Supplier responsibility

Read about the [Responsible Business Alliance](#)

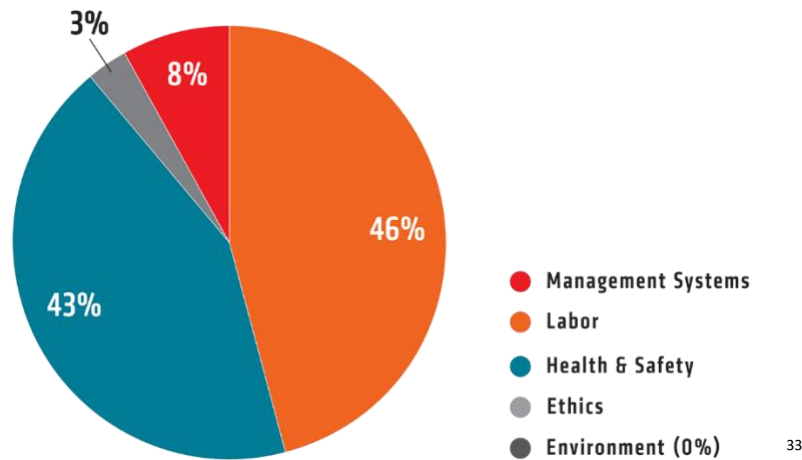
Supplier Audit Summary Results

Overview

AMD manufacturing suppliers³¹ are audited to verify compliance with the RBA Code of Conduct, which we adopt as the [AMD Supplier Code of Conduct](#). In 2020, twelve RBA Initial VAP audits were conducted at supplier manufacturing factories, which is significantly lower than previous years due to the constraints caused by the COVID-19 pandemic. These audits reached 23,538 workers in our supply chain. Additionally, 44 percent of AMD supplier manufacturing factories were eligible for the [VAP Recognition Program](#) in 2020, which means they are recognized by the RBA for their commitment to social and environmental responsibility.³²

Audits conducted by region, 2020		
Region/Country	#Initial Audits	#Closure Audits
Greater China	9	2
South Korea	1	1
Singapore	1	2
United States	1	0
Malaysia	0	0
Thailand	0	1
TOTAL	12	6

The VAP audit categorizes nonconformances (NCs) to the protocol by severity as “minor,” “major” or “priority.” All three categories of findings have specified periods during which the facility in question must remedy the findings and implement systems to prevent reoccurrences. When a major or priority NC is identified, suppliers are required to implement a corrective action plan (CAP), which is verified with a follow-up audit.



Labor

³¹ AMD manufacturing suppliers are those suppliers who contribute materials and or services that directly impact and become a part of AMD products. This includes wafer, outsourced assembly, and test (OSAT), direct materials (substrates, lids, capacitors, memory) and boards inclusive of components.

³² Data includes all AMD manufacturing suppliers with eligible VAP Recognition Program data in 2020-2022. VAPs are valid for two years.

³³ Data is from full, initial VAP audits conducted in 2020. AMD aggregates all nonconformances (NCs) across all audits to determine NCs by RBA category.

Labor represented 46 percent of all NCs in 2020 with the majority of the issues related to working hours, wages and benefits. All suppliers were required to complete corrective actions for identified issues. In 2020, factories faced the challenge to keep up with demand while also implementing COVID-19 safety protocols. Working hours had the highest rate of NCs. Through the CAP process, we work with suppliers to improve compliance by providing resources to address working hours management systems.

Because freely chosen employment is an indicator of forced labor, these findings were escalated and we worked directly with the supplier to remediate the issue. The NC on freely chosen employment is related to a lack of an onboarding procedure to obtain necessary reimbursement information from new workers. This resulted in a delay in repayment of medical examination fees. The supplier completed a CAP to address the root cause and reimbursed the workers.

Health and Safety

Health and safety represented approximately 43 percent of all NCs in 2020, with the majority of the issues related to emergency preparedness, occupational safety, and injury and illness. The bulk of the NCs were related to emergency preparedness, specifically a lack of adequate fire detection, emergency exits or certification. Immediate containment action was completed within the RBA timeline and closure audits were completed where required.

Of all NCs in 2020, two Priority NCs were identified, representing .05 percent of all NCs. One related to working hours and the second concerning emergency preparedness.³⁴ Suppliers were required to complete a corrective action plan and undergo a closure audit for the identified issue.

Major NCs represent 68 percent of all NCs. All suppliers were required to complete a corrective action plan for the identified issues. Minor findings are not reported as they do not represent systemic issues. Major NCs³⁵ included:

- Working hours
- Wages and benefits
- Occupational safety
- Emergency preparedness
- Occupational injury and illness
- Industrial hygiene
- Food, sanitation and housing
- Freely chosen employment

Nonconformances by Type, Initial Audits, 2020					
	Priority NCs	Major NCs	Minor NCs	Total	Percentage
Labor				17	46.0%
Freely chosen employment	0	1	0	1	
Young workers	0	0	0	0	

³⁴ Data represents global rates of all NCs of sites audited in 2020.

³⁵ Data represents global rates of all NCs of sites audited in 2020.

Working hours	1	11	0	12	
Wages and benefits	0	4	0	4	
Humane treatment	0	0	0	0	
Non-discrimination	0	0	0	0	
Freedom of association	0	0	0	0	
Health and safety				16	43.2%
Occupational safety	0	3	0	3	
Emergency preparedness	1	3	2	6	
Occupational injury and illness	0	1	2	3	
Industrial hygiene	0	1	0	1	
Physically demanding work	0	0	0	0	
Machine safeguarding	0	0	1	1	
Food, sanitation and housing	0	1	1	2	
Health and safety communication	0	0	0	0	
Environment				0	
Environmental permits and reporting	0	0	0	0	
Pollution prevention and resource reduction	0	0	0	0	
Hazardous substances	0	0	0	0	
Solid waste	0	0	0	0	
Air emissions	0	0	0	0	
Materials restrictions	0	0	0	0	
Water management	0	0	0	0	
Energy consumption and greenhouse gas emissions	0	0	0	0	
Ethics				1	2.7%
Business integrity	0	0	0	0	
No improper advantage	0	0	1	1	
Disclosure of information	0	0	0	0	
Intellectual property	0	0	0	0	
Fair business, advertising and competition	0	0	0	0	
Protection of identity and non-retaliation	0	0	0	0	
Responsible sourcing of minerals	0	0	0	0	
Privacy	0	0	0	0	
Management system				3	8.1%
Company commitment	0	0	0	0	
Management accountability and responsibility	0	0	0	0	
Legal and customer requirements	0	0	1	1	
Risk assessment and risk management	0	0	0	0	
Improvement objectives	0	0	1	1	

Training	0	0	0	0
Communication	0	0	0	0
Worker feedback and participation	0	0	0	0
Audits and assessments	0	0	0	0
Corrective action process	0	0	0	0
Documentation and records	0	0	0	0
Supplier responsibility	0	0	1	1
TOTAL				37 100.0%

Nonconformances by Region/Country, Initial Audits, 2020						
Region/Country	Labor	Health and safety	Environment	Ethics	Management systems	Total
Greater China	17	13	0	1	3	34
South Korea	0	3	0	0	0	3
Singapore	0	0	0	0	0	0
United States	0	0	0	0	0	0

Responsible Minerals Sourcing

AMD is committed to the responsible sourcing of minerals used in our products and expects our suppliers to conduct business in accordance with the AMD [Worldwide Standards of Business Conduct](#) and [Supplier Code of Conduct](#).

Tin, tantalum, tungsten and gold (3TG), commonly referred to as conflict minerals, are used in everyday consumer goods and are integral to electronic products. The mining, sale and use of minerals from Conflict-Affected and High-Risk Areas (CAHRAs), including the Democratic Republic of Congo and its adjoining countries, have been associated with negative social and environmental impacts. This includes the funding of violent groups associated with committing human rights abuses.

Through industry initiatives, we work to support the responsible sourcing of minerals from CAHRAs. Our efforts to break the link between minerals trade and conflict in the Democratic Republic of Congo began in 2010. In 2017, we expanded our focus on 3TG to include cobalt.

Multistakeholder Collaboration

AMD does not directly purchase minerals from raw material providers. Therefore, our strategy is to support the enablement of ethical, social and environmental sourcing through ongoing multi-stakeholder programs and dialogue.

AMD has been a member of the [Responsible Minerals Initiative](#) (RMI) since it was founded in 2008. Through RMI, we connect with industry members, governments, non-profits and other stakeholders to contribute to mitigating the salient social and environmental impacts of the extraction and processing of minerals in supply chains.

Our Approach

Our approach is based on the five steps of the Organization for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance). These steps include:

1. **Establishing strong management systems:** Our [Worldwide Standards of Business Conduct](#), [Supplier Code of Conduct](#), [Human Rights Policy](#) and [Conflict Minerals Policy](#) govern responsible mineral sourcing initiatives at AMD. These policies are aligned with international frameworks such as the Universal Declaration of Human Rights, International Labour Organization standards and OECD Guidelines for Multinational Enterprises.
2. **Identifying and assessing risks:** Each year, we utilize shared industry reporting templates designed by the RMI to facilitate the transfer of information through the supply chain regarding mineral country of origin and the smelters and refiners being utilized. AMD works with our suppliers to identify the smelters and refiners of origin within our supply chain for 3TG and cobalt utilizing the standardized tracing processes developed by the RMI. We compare those smelters and refiners to the list of facilities that conform to RMI's [Responsible Minerals Assurance Process](#) (RMAP). This information is used to identify potential risks associated with our mineral supply chain.
3. **Managing risks:** Our approach to responsible sourcing is grounded in continuous improvement. Disengaging with a supplier can have unintended economic and humanitarian consequences for local communities. We leverage our participation in RMI to encourage responsible parties to implement corrective actions and to take the necessary steps to comply with industry standards.
4. **Assessments:** Through RMI, AMD supports independent third-party assessment of smelter/refiner management systems and sourcing practices validated to conformance with [RMAP standards](#).
5. **Reporting.** We publish an annual [Conflict Minerals Report](#) and include more about our responsible sourcing of minerals progress on our [Responsible Minerals Program](#) website.

Our Progress

AMD continually monitors and supports our supply chain partners to ensure responsible sourcing of the minerals used in our products. We evaluate risks present in mineral sourcing from areas including but not limited to conflict-affected and high-risk areas and include them in our program per industry best practice. Cobalt is one example. We will continue to support industry collaboration as the means to

evolve business practices to enable responsible mineral production. We report our progress on sourcing from RMI conformant smelters and refiners in our [Conflict Minerals Report](#).

[Learn more](#)

Diversity, Belonging and Inclusion

Why It Matters

Diversity and inclusion are key drivers that contribute to our ability to build great products that accelerate next-generation computing experiences. Research shows that businesses with diverse teams are more innovative, make better decisions and achieve higher performance. And inclusion initiatives foster a work environment that enables all employees to participate and thrive, which in turn creates a sense of community and purpose – what we at AMD call “belonging.”

As the technology industry and our role in society continue to grow, it is essential that we support the next generation of innovators whose diverse backgrounds can help create technological solutions for some of the world’s toughest challenges. In particular, Black and Hispanic workers remain underrepresented in the science, technology, engineering and math (STEM) workforce compared with their share of all workers. Women are also significantly underrepresented in STEM occupations, making up a quarter or fewer of workers in computing and engineering.³⁶ While the tech sector has taken steps to make progress in recent years, it still has significant work to do.

At AMD, we see it as both a challenge and an opportunity for us to create a diverse workforce and promote a culture of belonging and inclusion.

Our Approach

We are committed to growing diversity, belonging and inclusion (DB&I) in our workforce to help embrace different viewpoints and experiences, foster innovation, challenge the status quo when needed, and drive business performance. To achieve our aspirations, we need a strong culture that reaches across all aspects of our business. That’s why we have set a goal that 70 percent of employees participate in AMD Employee Resource Groups and/or other AMD inclusion initiatives by 2025.³⁷

Additionally, we are committed to increasing the percentage of global female hires in engineering roles and the percentage of under-represented group hires within our U.S. workforce year over year. For 2021, we have made these efforts a component of our company’s strategic metrics and milestones to inform our incentive plan.

To achieve our &I goals, we will focus on:

- Listening to our employees in our annual Employee Satisfaction Survey and curated groups;
- Deepening our relationships in the United States with historically Black colleges and universities and Hispanic-serving institutions;

³⁶ <https://www.aauw.org/resources/research/the-stem-gap/>

³⁷ These are voluntary initiatives in which an employee chooses to actively participate in one or more employee engagement programs that foster a culture of belonging, psychological safety and meaningful connection to AMD.

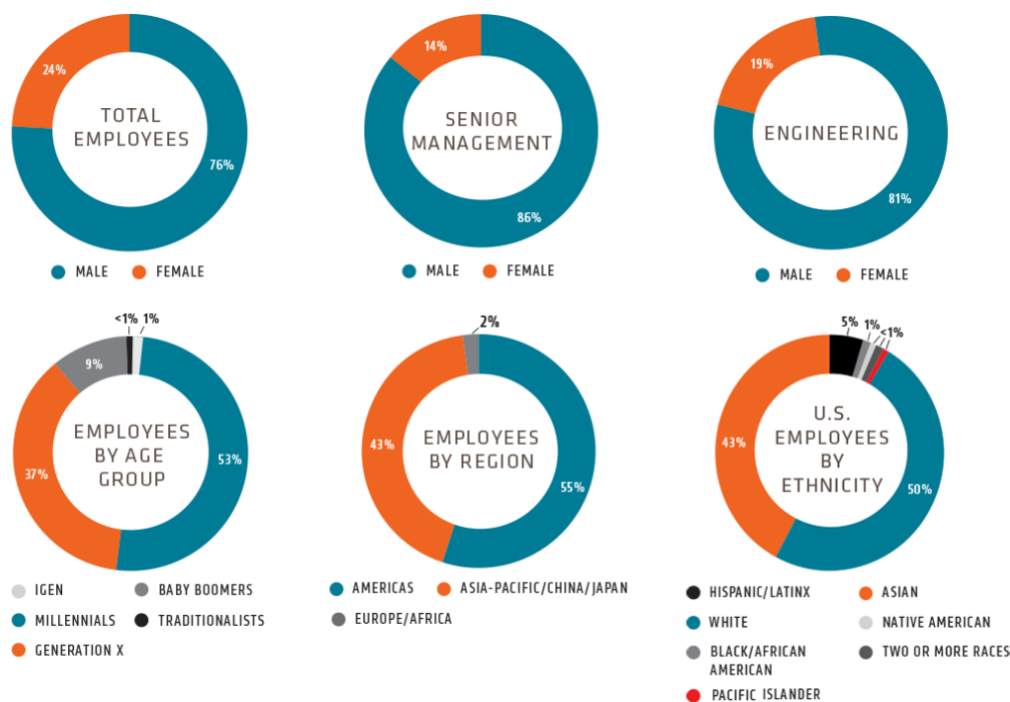
- Working to reduce unconscious bias in the workplace by educating our global workforce on the power of multiple voices in the interviewing and promotions processes;
- Evaluating employee compensation programs annually so that colleagues performing similar work in the same geography at the same level have equitable compensation opportunities;
- Ensuring that every AMDer across the globe has the opportunity to amplify their unique voice to contribute to our company's success; and
- Offering mentors to new employees from our employee resource groups.

By building a diverse talent pipeline, encouraging a culture of respect and belonging, and increasing the inclusion of under-represented groups, we will make AMD stronger. We also will elevate our talent and improve business outcomes by encouraging employees to bring their whole selves to work. Our Multi-Voice Initiative encourages and supports all AMDers who champion, and when needed, challenge and change our company culture with their unique perspective.

What we're doing is working. In our annual AMDer Survey, we ask multiple questions on how our culture and processes support our commitment to DB&I. The responses to those questions and the overall index, score in the top 10 percent of global companies within the tech industry. In 2020, we were also recognized by the Best Places to Work for LGBTQ Equality, the Bloomberg Gender-Equality Index and Forbes most Just U.S. Companies.

Our Global Workforce

AMD publishes workforce diversity statistics as part of our annual corporate responsibility reporting. The diversity summary data below is based on calendar 2020 data and a total of 12,600+ AMD employees.



Since 2016, AMD has published the gender composition of our engineering and management teams repeatedly. Since 2018, we annually review our Diversity, Belonging and Inclusion strategies and metrics with members of the AMD Board of Directors. We are constantly striving to improve our gender and diversity numbers through specific programs.

See our [gender, diversity and other employee-related data](#)

Talent Attraction and Retention

There is currently intense competition for talent in the semiconductor industry, with companies vying to attract and retain skilled individuals who will help them achieve their long-term goals. Our goal is to be an employer of choice, with passionate, innovative, fully engaged employees.

AMD is proud to be an equal opportunity employer that is committed to creating an inclusive environment for employees across the globe.

Recruitment

We recognize the challenge of increasing the representation of women and underrepresented groups in engineering and other roles. We continue our efforts to recruit diverse talent and foster an inclusive and innovative culture, where the best ideas “win” regardless of the individual’s identity.

In 2020, as part of our university recruitment efforts, we continued efforts to increase the number of female hires at AMD. For example, we engaged in events that brought together our female engineers to represent AMD at Tech Talks, AMD Lobby Days and Women in Engineering Events at the University of Texas at Austin and the University of Illinois. We also participated in a Women’s Hackathon for Bay Area universities in California.

To offer opportunities to other diverse candidates, we continued to partner with leaders at historically black colleges and universities (HBCUs) and Hispanic-serving institutions (HSIs) in the U.S. to invite underrepresented students to learn about AMD and join the future generation of engineers. For example, regarding HBCUs in 2020, we held recruitment events at North Carolina A&T State University, including an AMD Lobby Day and a STEM career fair. In addition, a member of the AMD Research team was appointed to their Board of Computational Data Science and Engineering. This appointment has allowed us to deepen our partnerships and discuss desired skillsets with faculty, allowing students to learn what will make them successful at AMD. We also participated in STEM career fairs at Howard University and Prairie View A&M University.

Our engagement with HSIs was equally strong in 2020 as we attended STEM career fairs at the University of Texas at San Antonio, Texas State University, the University of Texas at Austin and San Diego State University.

We continue working with the Society of Hispanic Professional Engineers and the National Society of Black Engineers to reach a broader audience and connect with students outside of the universities with which we currently partner.

To support these new hires when they join AMD, we implemented an employee resource group (ERG) Sign Up feature within our New Hire Onboarding platform. New hires may view and select ERGs they would like to join. Employees who help lead an ERG at a given site serve as cultural ambassadors – welcoming the new hire, communicating our company’s commitment to belonging and inviting them to attend events. This unique but simple process enables new hires to have access to our ERGs immediately. Through this connection, ERGs introduce new hires to the benefits of membership such as building their network outside of their team and finding mentors to grow in their careers.

Additionally, we are committed to helping students and graduates expand and apply their theoretical knowledge while building on-the-job skills. Interns with our AMD University Relations program are encouraged to display their talents, build professional networks, participate in real-life engineering challenges and apply for full-time opportunities upon graduation.

Total Rewards

Our Total Rewards programs reflect our commitment to having an equitable and inclusive environment that enriches the total wellbeing of our employees. We support our employees with competitive rewards including excellent compensation; comprehensive healthcare coverage; retirement savings plans with company matching; paid holiday and vacation time; and life and disability insurance. Our benefits packages also include fertility, adoption and surrogacy as well as transgender-inclusive benefits. Additionally, we offer a variety of work/life balance programs, including family care, global parental leave and alternative work plans. And our employees have access to employee assistance programs to help resolve personal and professional issues.

Employee Education and Training

We promote an environment of continued learning at AMD. Employee education and training are provided in different forms and vary by country. In some countries, we offer tuition assistance programs and other learning programs such as Leadership Training, Skillsoft Learning, Ted Talks and Microsoft. We also have a pay-for-performance management and assessment process that encourages, recognizes and supports high-performing individuals and teams, which is reported annually to the Board of Directors.

Employee Performance Management

Under our pay-for-performance philosophy and guiding principles, we reward not only those team members who demonstrate the highest level of contribution to the company, but also those who continually improve their capabilities. This ensures that rewards are differentiated based on the impact the employee’s performance has on the company as well as how they get their work done.

Talent Management

Our talent management activities support the complex and dynamic nature of our business, but our goal is simple: deliver our strategy by having the right talent in place now and in the future. Throughout the year, our CEO and senior executives hold cross-functional discussions about our top talent and the leadership and technology skills our business requires.

Employee Engagement

We know that AMDers do their best when they are fully engaged and able to bring their full selves to work. For example, our YouTube series “[I Am AMD](#)” highlights our employees sharing their stories and why they feel they belong at AMD. This series features AMDers in various roles across the company bringing their passion for technology and their unique backgrounds together to create an amazing work environment and innovative products.

Our employee resource groups (ERGs) encourage employee engagement and are an important part of our company’s culture. While we had affinity groups for years – most notably the AMD Women’s Forum – we introduced a corporate ERG policy in 2016 to clarify the process and encourage the formation of other groups. ERGs create a space for employees who share a common identity and their allies to meet and support one another in building their community and sense of belonging in the workplace.

Our ERGs include the following:

- **AccessAbility:** Serves AMDers living with disabilities personally and professionally by creating a culture of inclusivity through shared experiences, helpful resources and participating in activities together.
- **AMD AAF African American Forum:** Strengthens African American employees at AMD through professional development, career management and mentoring that will enable retention and growth.
- **AMD Asians Making a Difference:** Provides an inclusive environment where members have the chance to develop strong professional relationships, build community and promote the education of Asian cultures and topics.
- **AMD Caregivers:** Empowers AMDers with knowledge, means and encouragement to make sound decisions concerning the health, happiness and well-being of family members. **AMD Emerging Leadership Forum:** Develops next-generation leaders in AMD and equips them with the resources to develop their careers and drive value for AMD.
- **AMD Go Green:** Connects employees and the environment to educate and inspire AMDers around the globe to conserve resources, save money and improve their quality of life.
- **AMD Impacto:** Empowers and elevates the AMD Latino/Hispanic community and it advocates to promote diversity and inclusion at AMD.
- **AMD Pride:** Promotes an inclusive employee environment, regardless of sexual orientation or gender identity, via education, networking and collaboration.
- **AMD Salute:** Provides awareness and support to current and former military, transitioning military, military spouses, dependents and general supporters of the armed forces globally.
- **U-AMD:** Promotes the exchange of skills and learning directly from AMD employees or industry experts to expand AMD knowledge sharing.
- **AMD Women's Forum:** Strives to recruit, retain and promote women at AMD through impactful programming and advocacy to create a stronger, more successful company.

Listening to Our Employees

AMD employees are our most important stakeholder group. We know that employees are increasingly seeking employers with values matching their own. We periodically survey our employees worldwide to

understand their overall satisfaction, specifically asking them about their impressions of our corporate responsibility programs. Our most recent AMDer Survey was completed in 2020. We invited 100 percent of our employees to participate, and 96 percent responded.

The survey consists of 65 questions across 10 dimensions:

- Clarity of Direction
- Pride in Company
- Continuous Improvement
- Teamwork and Collaboration
- Recognition and Reward
- Resources and Support
- Direct Manager Relationship
- Performance Management
- Growth and Development
- Employee Empowerment

The survey also measures our performance using three indexes that group existing individual questions with common themes from the dimensions listed above:

- Engagement Index – An emotional and intellectual commitment to AMD, your team and your job.
- Manager Quality Index – Management engaging hearts and minds with day-to-day interactions and decisions.
- Belonging & Inclusion Index – A work environment in which all individuals are treated fairly, have equal access to opportunities and resources and can contribute fully to our success. Personal views and values are respected, allowing you to be your true self at work.

Our AMDer Survey scores have increased steadily and significantly over the past several years. In 2020, we saw our highest scores to date. Results for every survey dimension and index listed above hit all-time highs in 2020 and scored above external benchmarks for high-performing companies within the tech industry. While we are pleased with these results, we strive for continuous improvement in all areas of AMD employee experience by respecting and leveraging the voice of our employees.

Employee Health and Safety

For more than a decade, our Global Environmental, Health and Safety (EHS) Standards have established excellence as the benchmark for AMD sites around the world. In addition to requiring all of our facilities to meet applicable local, regional and national regulations, we set standards that go beyond legal requirements and establish premier practices to protect employee safety and health. Health and safety-related areas addressed under the Global EHS Standards include injury and illness prevention, employee well-being, ergonomics, emergency preparedness and response, as well as electrical, equipment and chemical safety.

Our company's workforce injury and illness case rate remains below the industry average, due in part to our focus on training and early reporting of injury and illnesses. Our worldwide case rate for 2020 was 0.04 per 200,000 work hours – compared to OSHA's 2019 Private Industry case rate of 2.8, according to the U.S. Bureau of Labor Statistics. We also track health and safety metrics for our wafer foundry suppliers aimed at improving safety performance year over year.

At the beginning of the COVID-19 pandemic, AMD responded quickly by implementing safety and health protocols globally. These efforts included establishing a health team of registered nurses that lead contact tracing efforts and implementing quarantine protocols to limit the potential for workplace transmission. To address potential ergonomic issues encountered by employees working from home, we provided additional work from home training, virtual assessments and equipment allowance.

See our [Health and Safety data](#)

Community Involvement

Strengthening AMD Communities Worldwide

AMD makes an impact in our communities worldwide through philanthropic investments, partnerships and employee volunteerism.

For nearly four decades, AMD has invested money, time and technology in organizations that help strengthen communities worldwide. Additionally, our employees continue to make their communities a better place by donating their time, talent and money to charitable causes. We work closely with community organizations to measure the shared value created through our work. We annually survey our employees worldwide to understand their overall satisfaction, specifically asking them about their impressions of our community engagement programs.

Through our AMD Community Corps program, employee volunteers contribute to local communities through company-sponsored volunteerism and employee-directed donations. We provide grants to non-profit organizations in our global site communities based on recommendations from employee-led community affairs councils, local needs and strategic fit. Our corporate giving efforts focus on education, community development and environmental stewardship.

2020 was a year of change. COVID-19 impacted lives across the world with many uncertainties and pivots along the way, but one thing that remained constant was AMD and our employees' spirit of giving. Amid the backdrop of the pandemic, AMD and employees increased philanthropic community support and donations for COVID-19 relief and other needs throughout our site communities worldwide. These donations included, for instance, more than \$318,000 USD for social justice programs in the United States addressing equity issues along with other funding for disaster relief and recovery related to wildfires in Colorado and California. In addition, we offered multiple matching gift programs to further amplify the generosity of our employees. Our efforts resulted in more than \$2.5 million USD in combined corporate and employee monetary donations in 2020.

We also established the AMD [COVID-19 High Performance Compute \(HPC\) Fund](#) to help accelerate medical research and provided leading global universities and research institutions with HPC resources. And we helped procure and deliver personal protection equipment for first responders in multiple global site communities. Despite the year's challenges, AMD employees around the world expressed their desire to give back and made virtual volunteerism a priority.

“My volunteer experiences have helped shape my professional development through the years. Community service has given me the opportunity to collaborate with a diverse set of colleagues from teams across AMD and this has influenced how I approach situations at the office.”

Diane Welker, AMD, Director of Field Application Engineering

While employees look forward to once again volunteering together in person, virtual volunteering has come with added benefits such as bridging geographic differences, enabling networking across AMD sites, and connecting with new nonprofit organizations doing incredible work. This year’s AMD Cares VIRTUAL Day of Service also created a new opportunity for AMD and its employees to continue fulfilling our global commitment as a responsible and good neighbor in our communities.

AMD Community Volunteering

More than 3,100 employees volunteered over 7,000 hours in 2020, including judging science fairs, participating in STEM activities, conducting online coding classes and raising money for local food banks. Employees also spearheaded item drives to stock diapers and hygiene products for community pantries, connected with seniors through virtual games to reduce isolation and loneliness and wrote notes of encouragement to individuals experiencing hardships.

	2016	2017	2018	2019	2020
Volunteer Hours	7,280	10,257	15,234	15,193	7,057
Number of Volunteers	2,084	2,451	2,838	3,098	3,110
Number of AMD- Sponsored Events	127	138	154	160	71

Learn about [AMD Funding Guidelines](#)

See our [Community Investment Data](#)

Partnering with Central Texas Food Bank to Help Feed Our Neighbors in Need

At AMD, we place a high value on giving back with our time and resources. This not only strengthens the communities in which we live, but also strengthens our employees and teams, giving them ways to connect outside the office and gain perspective.

AMD supports basic needs and social services where our employees live and work. Together, AMD and our employees have engaged in helping ensure that our communities are fed - whether rolling up sleeves to plant and harvest food-producing gardens, distributing food to families or hosting food drives for local food banks. One meaningful example of this work and impact is through our long and enduring relationship with the Central Texas Food Bank in Austin, Texas.

In 2020, AMD was recognized by the Central Texas Food Bank with the Hunger Hero Award for more than 30 years of partnership in the fight against hunger. In 1994, the Central Texas Food Bank broke ground on a visionary facility to accommodate a rapidly expanding city, and AMD contributed \$190,000 USD to help make that vision a reality. Twenty years later, AMD again stepped up with a capital campaign gift when the Central Texas Food Bank needed an even bigger building to accommodate the continued growth of a booming tech town.

AMD corporate donations are only one part of this story. The heart of this successful partnership is the AMD employees who step up and make sure families are fed during the worst of times - hurricanes, recessions, and most recently, a pandemic and a historic winter storm. In the last ten years, AMDers have volunteered more than 4,500 hours sorting food in the warehouse and preparing meals in the kitchen. And they donated nearly 419,000 pounds of food - enough to feed a family of four three meals per day for nearly eighty years. With company-sponsored food drives and matching gift programs, AMD and our employees have contributed more than \$2 million in financial support since 2004 to fund essential programs and help end hunger in Central Texas.

Read more about our [volunteering efforts](#)

AMD Learning Labs

Partnering with local organizations to bring AMD-powered technology to students around the world.

[Learn More](#)

AMD Volunteering

Across the globe, AMD volunteers, also known as AMD Community Corps, are easily recognized by the bright green volunteer t-shirts we wear. These shirts have become synonymous with a culture of hard-working, generous and committed colleagues ready to roll up their sleeves, share their expertise, or hold

"It is so inspiring to look back on all we have been able to do together and imagine everything we can do in the future to make sure everyone in our community gets the food they need. Our relationship with AMD is a full-spectrum partnership that has continued for decades, engaged thousands of employees, and created millions of meals for Central Texans in need. This is exactly what we hope for when partnering with a company, and we could not be more grateful for the amazing generosity AMD as a company and individual AMD employees have shown."

**Amelia Long, Community Engagement Director
for the Central Texas Food Bank**

a hand when needed. AMD Community Corps is dedicated to strengthening our communities worldwide.

AMD Volunteers in Action

Despite unexpected stresses in their own lives throughout 2020, employees shifted to participating in the company's virtual volunteer program. AMD promoted fundraisers and item drives for basic needs, info-sessions to develop awareness and action for community issues, and virtual educational activities to inspire and motivate students. In 2020, employees logged over 7,050 volunteer hours and collectively donated nearly \$400,000. The momentum of kindness continues with new volunteer opportunities offered on an ongoing basis.

Feeding Communities: In 2020, food insecurity increased dramatically, even doubling in many communities. The increased demand coupled with tighter restrictions for in-person volunteerism left food banks struggling with inventory and distribution concerns. Multiple AMD sites led online fundraising drives to help provide food for their neighbors' tables.

Support for Women and Children: The AMD Women's Forum Employee Resource Group (ERG) in Austin, Texas led fundraising efforts and item drives for two organizations dedicated to the success of women. Saint Louise House works with clients overcoming homelessness and Dress for Success offers support to clients seeking jobs and financial security. The Impacto and African American Forum ERGs promoted back-to-school drives benefiting Communities in Schools, a nonprofit dedicated to helping students stay in school and graduate.

Folding@Home: AMDers donated individual computing power from their developer workstations and high-performance PCs to aid Stanford University's research efforts for new treatments for COVID-19.

Virtual Career Fairs: In recorded sessions, AMDers shared personal journeys in discovering their careers and gave advice to students interested in professions like engineering, law and marketing.

EcoChallenge: In our annual, worldwide EcoChallenge event, employees joined an interactive session and pledged to practice environmentally-friendly habits at home to help preserve our planet for future generations.

Wildfire Disaster Preparedness Training: AMD Santa Clara, in California, hosted a virtual training with the American Red Cross. Employees learned ways to reduce danger and better protect themselves and their families during a wildfire.

Virtual Charity Runs, Walks and Rides: While practicing social distancing, AMDers from India, China, Canada and the United States stayed active and supported local causes. Participants raised over \$9,000 USD for multiple local charities.

Holiday Cheer for the Chen Su Lan Methodist Children's Home in Singapore: Employees coordinated a gift drive to help light up hearts during the holiday season for children receiving shelter and care.

[Environmental, Social and Governance Data Tables](#)

The following tables provide data on our global workforce including employee diversity, new hires, turnover, parental leave, well-being and volunteerism.

Global Workforce Data

(Headcount, year-end)	2017	2018	2019	2020
Total Workforce³⁸	12,751	14,988	16,746	18,376
Employees	8,904	10,141	11,421	12,637
Temporary Workers and Contractors	3,847	4,847	5,325	5,739
Employees By Region				
Americas	53%	54%	54%	55%
Asia-Pacific/China/Japan	45%	44%	44%	43%
Europe/Africa	2%	2%	2%	2%
Temporary Workers and Contractors by Region				
Americas	38%	32%	29%	28%
Asia-Pacific/China/Japan	56%	63%	65%	65%
Europe/Africa	6%	5%	6%	7%
Employees by Gender³⁹				
Male	76%	76%	76%	76%
Female	24%	24%	24%	24%
Employees by Age Group				
iGen (born 1997 or later)	0%	<1%	<1%	1%
Millennials (born 1981-1996)	46%	49%	51%	53%
Generation X (born 1965-1980)	42%	40%	39%	37%
Baby Boomers (born 1946-1964)	12%	11%	10%	9%
Traditionalists (born 1927-1945)	<1%	<1%	<1%	<1%
Employees by Work Status				
Full-Time Employees	100%	100%	100%	100%
Part-Time Employees	<1%	<1%	<1%	<1%

See [AMD U.S. EEO-1 Report](#)

Senior Management⁴⁰

(Headcount, year-end)	2017	2018	2019	2020
Male	88%	87%	87%	86%
Female	12%	13%	13%	14%

Engineering

³⁸ Reported data includes AMD employees, temporary workers and contractors.

³⁹ Reported employee data exclude unknown gender.

⁴⁰ Director-level positions and above. Reported employee data excludes unknown gender.

(Headcount, year-end)		2017	2018	2019	2020
Male		83%	82%	82%	81%
Female		17%	18%	19%	19%

Diversity of Board of Directors

(Headcount, year-end)		2017	2018	2019	2020
Generation X (born 1965-1979)	Male	11%	11%	12.5%	12.5%
	Female	11%	11%	12.5%	12.5%
Baby Boomers (born 1946-1964)	Male	67%	67%	62.5%	62.5%
	Female	11%	11%	12.5%	12.5%

New Employee Hires and Employee Turnover

(Headcount, year-end)		2017	2018	2019	2020
Total New Hires		1,388	2,107	2,100	1,996
New Hires as % of Prior Year Employee Count		17%	24%	21%	17%
New Hires Distribution by Region					
Americas		52%	51%	52%	53%
Asia-Pacific/China/Japan		46%	47%	46%	45%
Europe/Africa		2%	2%	2%	2%
New Hires Distribution by Gender³⁸					
Male		77%	76%	76%	79%
Female		23%	24%	24%	21%
New Hires Distribution by Age Group					
iGen (born 1997 or later)		<1%	<1%	1%	7%
Millennials (born 1981-1996)		63%	66%	68%	63%
Generation X (born 1965-1980)		31%	27%	26%	26%
Baby Boomers (born 1946-1964)		6%	6%	5%	4%
Traditionalists (born 1927-1945)		0%	<1%	0%	0%

(Headcount, year-end)		2017	2018	2019	2020
Total Terminations		686	860	817	778
Total Turnover as % of Prior Year Employee Count		8%	10%	8%	7%
Total Turnover Rate by Region					
Americas		6%	7%	7%	6%
Asia-Pacific/China/Japan		11%	13%	10%	8%
Europe/Africa		6%	5%	7%	7%
Total Turnover Rate by Gender³⁸					
Male		8%	10%	8%	7%

Female		8%	9%	7%	6%
Total Turnover Rate by Age Group					
iGen (born 1997 or later)		n/a	n/a	n/a	6%
Millennials (born 1981-1996)		10%	13%	11%	8%
Generation X (born 1965-1980)		7%	7%	5%	5%
Baby Boomers (born 1946-1964)		5%	6%	7%	7%
Traditionalists (born 1927-1945)		n/a	n/a	n/a	n/a
Parental Leave⁴¹					
(Headcount, year-end)		2017	2018	2019	2020
Employees that were entitled to parental leave ⁴²	Male	6,793	7,670	8,532	9,333
	Female	2,099	2,407	2,714	2,965
	Total	8,904	10,141	11,421	12,637
Employees that took parental leave	Male	175	334	436	403
	Female	114	155	189	183
	Total	289	489	625	586
Employees that returned to work in the reporting period after parental	Male	155	315	409	376
	Female	83	139	166	163
	Total	238	454	575	539
Employees that returned to work after parental leave ended that were still employed 12 months after their return to work	Male	149	295	385	363
	Female	80	131	162	161
	Total	229	426	547	524
Return to work rates of employees that took parental leave (%)	Male	89%	94%	94%	93%
	Female	73%	90%	88%	89%
	Total	82%	93%	92%	92%
Retention rates of employees that took parental leave (%)	Male	85%	88%	88%	90%
	Female	70%	85%	86%	88%
	Total	79%	87%	88%	89%

⁴¹ Based on employees who were on LOA Parental / Maternity with a start date in that year and if returned to work after the LOA end date (with Voluntary or Family reasons). Reported data is for AMD employees.

⁴² AMD offers paid parental leave globally to its FTE employees. "Parental leave" can encompass various types of leaves in different countries; it provides time off for parents to nurture their families and make necessary life adjustments.

Well-Being⁴³

	2017	2018	2019	2020
Worldwide Injury and Illness Case Rate (per 200,000 work hours)	0.06	0.06	0.02	0.04
AMD U.S. Injury and Illness Case Rates (per 200,000 work hours)	0.08	0.08	0	0.1
OSHA Case Rate - Private Industry	2.7	2.8	2.8	n/a
OSHA Case Rate - Computer/Electronic Product Manufacturing	1.0	1.2	1.1	n/a
OSHA Case Rate - Technical/Engineering Services	0.6	0.6	0.8	n/a
U.S. Lost Work Days Case Rate (per 200,000 work hours)	0.0	0.0	0.0	0.02

Volunteerism⁴⁴

	2017	2018	2019	2020
AMD Volunteers	2,451	2,838	3,098	3110
AMD Volunteer Hours	10,257	10,257	15,324	7057
Number of Volunteer Events	127	138	154	71

Environmental Performance Indicators

AMD collects environmental data about AMD locations worldwide and contracts suppliers with wafer fabrication sites or assembly and test operations. The following table provides data on energy use, electricity use, carbon equivalent emissions, water use, waste generation and compliance. Our scope 1 and 2 greenhouse gas (GHG) emissions data from the calendar year 2020 has been verified and validated to the level of limited assurance by an independent third party.

	2014	2015	2016	2017	2018	2019	2020
Energy							
Absolute Energy Use (GWh)	149	126	124	129	121	127	124
Atlanta	18	22	23	25	25	24	24
Austin	25	22	22	24	23	25	25
Bengaluru	3	3	3	3	4	4	4

⁴³ Our reporting guidelines are based on OSHA reporting criteria. Minor (first aid level) injuries are not included. Lost days are calculated based on scheduled workdays.

⁴⁴ Reported data include contributions from AMD employees and contractors.

Cyberjaya	10	8	9	9	8	6	<1 ⁴⁵
Hyderabad	5	5	5	6	6	6	6
Markham	32	22	18	20	21	26	25
Santa Clara	n/a	n/a	n/a	n/a	5	6	7
Shanghai	6	6	6	8	7	8	10
Singapore	21	19	20	17	15	17	17
Sunnyvale	18	12	11	13	n/a	n/a	n/a
Other sites combined	11	6	6	5	5	5	5
Renewable Energy Use (GWh)⁴⁶	34	34	29	37	27	42	34
Atlanta	5	12	6	13	19	24	24
Austin	25	22	22	24	0	6	0
Shanghai	0	0	0	0	7	8	10
Other	<1	<1	<1	<1	<1	3	<1
Non-Renewable Energy Use (GWh)	115	92	95	92	94	85	82
Total Energy/Revenue (kWh/\$)	0.027	0.032	0.029	0.024	0.019	0.019	0.013
Electricity (Indirect Energy, GWh)	142	118	117	122	116	120	116
Atlanta	18	22	23	25	25	24	24
Austin	25	22	22	24	23	24	25
Bengaluru	3	3	3	3	3	4	4
Cyberjaya	10	8	9	9	8	5	<1 ⁴⁵
Hyderabad	5	5	5	5	6	6	6
Markham	29	19	16	18	18	21	21
Santa Clara	n/a	n/a	n/a	n/a	4	4	5
Shanghai	6	6	6	8	7	8	10
Singapore	21	19	20	17	15	17	17
Sunnyvale	15	8	7	8	n/a	n/a	n/a
Other sites combined	31	23	6	5	5	5	4
Energy Use (Direct, GWh)	7	8	7	7	5	6	7
Atlanta	<1	<1	<1	<1	<1	<1	<1
Austin	<1	<1	<1	<1	<1	<1	<1
Cyberjaya	<1	<1	<1	<1	<1	<1	<1
Markham	3	3	3	2	3	4	4
Santa Clara	n/a	n/a	n/a	n/a	1	1	2
Singapore	<1	<1	<1	<1	<1	<1	<1
Sunnyvale	3	4	3	5	n/a	n/a	n/a
Other sites combined	<1	<1	<1	<1	<1	<1	<1

⁴⁵ AMD decommissioned a data center in Cyberjaya, Malaysia in 2020.

⁴⁶ AMD procures third-party verified renewable energy credits (RECs) in the US (Green-e certified) and China (international renewable energy credits, or iRECs).

Scope 1 GHG Emissions⁴⁷ (MTCO2e)	3,497	3,480	3,005	4,076	3,207	3,358	2,335
Atlanta	4	8	55	24	27	27	43
Austin	816	128	255	421	214	73	38
Bengaluru	66	115	64	57	115	107	50
Cyberjaya	0	30	80	14	147	149	n/a ⁴⁵
Hyderabad	42	48	36	22	16	18	18
Markham	658	633	549	515	598	908	1,151
Santa Clara	n/a	n/a	n/a	n/a	295	240	343
Singapore	1,353	1,881	1,293	2,105	1,770	1,834	814
Sunnyvale	556	638	671	917	n/a	n/a	n/a
All other sites combined	2	<1	1	<1	25	2	2
Scope 2 GHG Emissions⁴⁸ (MTCO2e)	48,686	42,509	38,542	35,511	36,279	30,725	29,916
Atlanta	6,962	5,620	8,334	5,439	2,730	0	0
Austin	0	0	0	0	9,837	7,650	10,505
Bengaluru	3,070	2,855	2,238	2,288	2,403	2,789	2,585
Cyberjaya	6,355	6,904	5,693	5,530	5,540	3,887	n/a ⁴⁵
Hyderabad	4,614	4,486	3,744	3,972	4,538	4,786	4,420
Markham	5,230	3,397	2,257	2,527	2,428	2,812	2,680
Santa Clara	n/a	n/a	n/a	n/a	793	989	1,183
Shanghai	4,413	4,217	3,999	4,677	0	0	0
Singapore	11,119	10,134	7,920	6,631	5,923	6,414	6,333
Sunnyvale	4,621	2,094	1,771	1,937	n/a	n/a	n/a
All other sites combined	3,085	2,802	2,586	2,510	2,088	1,399	2,211
Total Scope 1 and 2 GHG Emissions (MTCO2e)	52,183	45,990	41,547	39,587	39,487	34,083	32,251

⁴⁷ AMD scope 1 emissions from fuel use represent just under 10 percent of our total scope 1 and 2 GHG emissions. Emission factors for refrigerants and natural gas were updated using 2018 IPCC data and applied to the 2016-2020 reporting years. The gases include hexafluoroethane (HFE) and hydrofluorocarbons (HFCs). Emission factors for chemical use are based on the GHG Protocol Calculation Tool (Global Warming Potential Values) and IPCC Assessment Report Table 2.14, also updated with 2018 values and applied to 2016-2020 reporting years. The scope is based on operational control (i.e., AMD-occupied facilities). We follow the GHG Protocol, the internationally recognized standard for the corporate accounting and reporting of GHG emissions. The method includes Site Metrics Coordinators entering the monthly amount of fuel and chemicals use, by type, into AMD's central database, and then applying the emission factors.

⁴⁸ The method for estimating scope 2 emissions includes Site Metrics Coordinators entering the amount of electricity used each quarter into AMD's central database. AMD follows the Greenhouse Gas Protocol, the internationally recognized standard for the corporate accounting and reporting of GHG emissions. Emission factors for locations in the U.S. are based on eGRID total output emission rates, and for outside the U.S. are based on International Energy Agency (IEA) national electricity emission factors. If electricity use data is not available, as for small offices, then an average value for U.S. office buildings is used for all AMD locations (16.9 kWh/sq ft) based on EIA CBECS results for the average administrative office, and the emission factor for the location is applied. AMD purchases renewable energy credits (Green-E certified wind) from the U.S. and applies them to AMD sites in the U.S., as well as purchases international renewable energy credits for China and applies them to AMD sites in China.

Reduction Goal by 2020 (MTCO ₂ e) ⁴⁹	n/a	41,746	41,746	41,746	41,746	41,746	41,746
Goal Performance (% reduction from 2014)	n/a	12%	20%	24%	24%	35%	38%
GHG Emissions/Revenue (Scope 1 and 2 gCO ₂ e/\$USD)	9.5	11.5	9.7	7.4	6.1	5.1	3.3
Estimated SCOPE 3 GHG Emissions (MTCO₂e)	1,576,205	876,513	810,266	906,431	922,000	987,039	5,554,692⁵⁰
Purchased goods and services	340,448	383,066	394,824	468,718	463,647	497,241	1,278,479
Capital Goods	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel-and energy-related activities (not in scope 1+2)	n/a	n/a	n/a	n/a	n/a	n/a	12,565
Upstream transportation and distribution	13,578	7,599	7,305	9,116	13,253	24,005	39,488
Waste generated in operations	n/a	n/a	n/a	n/a	n/a	n/a	48
Business travel	13,679	12,061	10,316	11,518	12,354	11,660	2,429
Employee commuting	10,618	10,379	8,729	9,906	12,372	13,381	2,788
Use of sold products	1,197,882	463,408	389,092	407,173	418,969	440,752	4,217,421
End of Life treatment of sold products	n/a	n/a	n/a	n/a	n/a	n/a	1,475
Water							
Water Use (million liters)	195	141	160	200	192	175	151
Atlanta	23	27	29	32	29	30	28
Austin	11	8	9	9	10	11	4
Bengaluru	7	7	8	7	5	5	4
Cyberjaya	14	14	11	9	9	7	n/a ⁴⁵
Hyderabad	n/a	n/a	7	7	8	7	4
Markham	41	26	33	53	83	80	81
Santa Clara	n/a	n/a	n/a	n/a	27	14	13
Singapore	17	8	9	8	7	8	5

⁴⁹ The goal is a 20 percent reduction in absolute scope 1 and 2 GHG emissions from 2014 – 2020. The baseline value is 52,183 MTCO₂e and the goal value is 41,746 MTCO₂e. In 2020, performance against the goal was 38 percent below the baseline based on scope 1+2 emissions of 32,251 MTCO₂e.

⁵⁰ In 2020, AMD expanded the estimations for scope 3 reporting. Our value chain emissions are estimated following the guidance from the GHG protocol. Category 1: purchased goods and services: emissions from foundries and OSAT are calculated using scope 1 and 2 emissions collected from top suppliers. Emissions are allocated to AMD products from wafer manufacturing and final assembly manufacturing using a manufacturing index to account for product complexity, size, and volume. Emissions from other vendors including marketing, professional services, real estate, software providers, telecom and networking providers and other semiconductor manufacturing services are calculated following a spend-based method. Category 3: emissions are calculated using fuel and electricity data from our sites globally and emission factors from DEFRA and IEA. Category 4: upstream transportation and distribution: emissions are based on a combination of a supplier-specific footprint from two of our shipping providers and logistics spend. Category 5: Waste data is collected from our sites and emissions are calculated using DEFRA factors per waste type. Category 6: business travel: emissions are calculated following a spend-based method and were normalized for 2020 to reflect limited travel due to COVID-19. Category 7: employee commuting: emissions from our 5 largest campuses are calculated using a distance-based method, again normalized due to COVID-19 workplace protocols. Category 11: use of sold products: emissions are calculated based on total sales volume, average product energy consumption, and average product lifetime for each product category. IEA emission factors are weighted by sales and used to calculate emissions.

Sunnyvale	72	40	42	62	n/a	n/a	n/a
Other sites combined	<1	<1	<1	<1	<1	<1	<1
Contract Manufacturing (million liters) ⁵¹	3,311	3,800	3,844	3,622	4,960	6,511	6,457
Water Use/Revenue (ML/\$USD)	35.3	35.3	37.5	37.5	29.7	26.0	15.4
Waste							
Non-Hazardous Waste (NHW) Generated (metric tons)	1,175	597	573	658	640	695	488
Atlanta	n/a	n/a	1	8	<1	<1	<1
Austin	244	205	230	243	302	329	163
Bengaluru	n/a	2	1	2	2	2	1
Hyderabad	n/a	3	2	4	9	10	4
Markham	349	154	152	157	199	221	228
Santa Clara	n/a	n/a	n/a	n/a	66	67	35
Singapore	90	59	50	50	53	56	55
Sunnyvale	493	174	129	187	n/a	n/a	n/a
Other sites combined	n/a	5	8	6	9	11	2
NHW Recycled (metric tons)	881	427	406	455	415	429	402
NHW Landfilled (metric tons)	433	231	167	203	225	265	86
NHW Landfill Diversion Rate (%)	75%	72%	71%	69%	65%	62%	82%
Hazardous Waste (HW) Generated (metric tons)	1	5	5	8	3	3	3
Austin	<1	<1	2	1	2	1	2
Markham	<1	3	<1	5	<1	1	1
Santa Clara	n/a	n/a	n/a	n/a	<1	<1	<1
Sunnyvale	<1	2	2	1	n/a	n/a	n/a
Singapore	<1	<1	<1	<1	<1	<1	<1
HW Recycled/Reused (metric tons)	0	1	2	1	<1	<1	1
HW Treated Off-Site (metric tons)	1	3	1	<1	<1	<1	<1
HW Incinerated (metric tons)	<1	<1	2	6	1	1	<1
HW Landfilled (metric tons)	0	3	1	1	1	1	1
Total Waste Generated (NHW+HW)(metric tons)	1,176	602	573	666	643	697	491
Total Waste Generated per Revenue (g/\$USD)	0.21	0.15	0.13	0.12	0.10	0.10	0.05

⁵¹ AMD receives estimated data on energy use, GHG emissions, water use, hazardous and non-hazardous waste from our wafer foundries and outsourced semiconductor assembly and test (OSAT) providers that are attributed to AMD products based on a manufacturing index.

Contract Manufacturing HW Generated (metric tons) ¹⁴	14,805	13,840	10,261	12,156	14,310	21,512	30,725
Wastewater							
Wastewater Discharge ⁵² (million liters)	26	22	21	22	9	10	4
Austin	10	8	8	8	9	10	4
Sunnyvale	16	14	13	14	n/a	n/a	n/a
Wastewater generated per Revenue (ML/\$)	4.75	5.52	4.97	4.17	1.45	1.52	0.42
Air Emissions ⁵³							
Ozone Depleting Substances (MTCO2e)	2,140	2,009	1,614	2,548	2,099	2,019	962
Compliance							
Number of Environmental Non-Compliances	2	0	1	1	0	0	0
Number of Health or Safety Non-Compliances	0	0	0	1	0	0	0
Fines (USD)	0	0	0	0	0	0	0

Economic Performance Indicators

The following tables provide information about AMD's corporate revenues and our social investment.

Financial Data

	2016	2017	2018	2019	2020
Total Revenue (in millions USD) ⁵⁴	\$4,319 ⁵⁴	\$5,253 ⁵⁴	\$6,475	\$6,731	\$9,763
Research and Development (in millions USD) ⁵⁵	\$1,008	\$1,196 ⁵⁴	\$1,434	\$1,547	\$1,983
Net Income (loss) (In millions USD) ¹⁷	(\$498)	(\$33)	\$337	\$341	\$2,490

⁵² AMD generates a limited amount of wastewater that requires treatment by the municipal wastewater treatment plant, in accordance with water quality permitting.

⁵³ Fugitive emissions from greenhouse gases are included as part of total carbon equivalent emissions.

⁵⁴ ASC 606 Restatement

⁵⁵ Economic data for current and past years are updated annually to reflect AMD's most recent financial reports.

Social Investment

	2016	2017	2018	2019	2020
AMD Foundation	\$12,000	\$49,400	\$117,200	\$153,000	\$91,814
Cash and In-Kind Giving (USD)	\$159,474	\$158,716	\$149,050	\$297,218	\$8,274,090 ⁵⁶
Total	\$171,474	\$208,116	\$266,250	\$450,218	\$8,365,904
Breakdown by Region					
Americas	\$122,114	\$178,069	\$225,538	\$374,908	\$7,819,239
Europe/Africa	\$ -	\$ -	\$ -	\$ -	\$104,105
Asia-Pacific/China/India	\$49,360	\$30,047	\$40,712	\$75,310	\$442,560
Breakdown by Category					
Education	\$44,792	\$113,152	\$82,935	\$263,754	\$194,026
Community Development	\$126,682	\$94,964	\$183,315	\$186,464	\$1,823,860
Scientific Research	n/a	n/a	n/a	n/a	\$6,348,018

Political Action Committee (PAC)

	2016	2017	2018	2019	2020
Disbursements ⁵⁷ (USD)	\$0	\$0	\$500	\$0	\$30,600

n/a = not available.

Values shown in italics represent adjusted data and are different from values shown in previous Corporate Responsibility Report.

⁵⁶ 2020 increase based in large part on contributions from the AMD COVID-19 High Performance Compute (HPC) Fund. The program details are available on the AMD HPC Fund website.

⁵⁷ Totals shown are US disbursements made by the AMD PAC and available on the FEC website.

GRI Sustainability Reporting Standards

AMD GRI Content Index

The [Global Reporting Initiative](#) (GRI) is an international independent organization that helps businesses, governments and other organizations understand and communicate the impact of business on critical sustainability issues such as climate change, human rights, corruption and many others. GRI's Sustainability Reporting Standards are the world's most widely used standards on sustainability reporting and disclosure, enabling businesses, governments, civil society and citizens to make better decisions based on information that matters.

Our 2020-21 Corporate Responsibility Report has been prepared in accordance with the GRI Standards: Core option.

GRI 102: General Disclosures (2016)	
Disclosure	Page Reference or Response
102-1 Name of the organization	Advanced Micro Devices, Inc ⁵⁸ (AMD)
102-2 Activities, brands, products, and services	<p>AMD is a global semiconductor company that designs and delivers:</p> <ul style="list-style-type: none"> • x86 microprocessors for servers and desktop PCs, and x86 microprocessors with integrated graphics for notebook and desktop PCs; • Graphics processing units (GPUs) for desktop PCs, workstations and the data center; and • Embedded and semi-custom processors for game consoles, displays, thin clients, storage systems and more. <p>Periodically, we may also sell or license portions of our intellectual property (IP) portfolio.</p> <p>About AMD Our Approach to Corporate Responsibility</p>
102-3 Location of headquarters	Santa Clara, California, U.S.A.
102-4 Location of operations	<p>Our global operations span the world in more than 35 locations, including R&D facilities, data centers and international sales offices.</p> <p>Our Locations</p>
102-5 Ownership and legal form	AMD is incorporated in the United States and is a public listed company traded on the NASDAQ Global Select Market.
102-6 Markets served	2020 AMD Annual Report , pages 8-9

⁵⁸ Advanced Micro Devices, Inc. may be referenced as AMD and may or may not include subsidiaries, affiliates, joint ventures or other business partnerships.

102-7 Scale of the organization	Total assets: 2020 Annual Report , Item 6, page 38 Beneficial ownership: 2021 Proxy Statement , page 30-32 Net revenues: 2020 Annual Report , Item 6, page 38 Costs/Expenses: 2020 Annual Report , page 49-50 Total number of employees by country or region: ESG Data Tables, Social Performance Indicators
102-8 Information on employees and other workers	ESG Data Tables, Social Performance Indicators
102-9 Supply chain	Our Value Chain Supply Chain Responsibility , Why It Matters and Our Approach
102-10 Significant changes to the organization and its supply chain	There were no significant changes to our organization or supply chain in 2020.
102-11 Precautionary Principle or approach	AMD SASB and TCFD Disclosures 2020 AMD CDP Climate Change Submission
102-12 External initiatives	Stakeholder Engagement
102-13 Membership of associations	Stakeholder Engagement
102-14 Statement from senior decision-maker	CEO Message and Leadership Letter , pages 3 and 4
102-15 Key impacts, risks and opportunities	Our Material ESG Issues Digital Impact Environmental Stewardship Supply Chain Responsibility Diversity, Belonging and Inclusion AMD SASB and TCFD Disclosures
102-16 Values, principles, standards and norms of behavior	Worldwide Standards of Business Conduct Governance Code of Ethics
102-18 Governance structure	Board of Directors CR Management and Governance Principles of Corporate Governance
102-20 Executive-level responsibility for economic, environmental and social topics	CR Management and Governance
102-21 Consulting stakeholders on economic, environmental and social topics	Stakeholder Engagement CR Management and Governance
102-26 Role of highest governance body in setting purpose, values and strategy	AMD Nominating and Corporate Governance Committee
102-29 Identifying and managing economic, environmental and social impacts	CR Management and Governance Our Material ESG Issues

102-30 Effectiveness of risk management processes	CR Management and Governance
102-31 Review of economic, environmental and social topics	CR Management and Governance
102-32 Highest governance body's role in sustainability reporting	CR Management and Governance
102-40 List of stakeholder groups	Stakeholder Engagement
102-41 Collective bargaining agreements	AMD estimates that up to 15 percent of employees are covered by national or industry collective bargaining agreements in 2020.
102-42 Identifying and selecting stakeholders	Stakeholder Engagement
102-43 Approach to stakeholder engagement	Stakeholder Engagement
102-44 Key topics and concerns raised	Stakeholder Engagement Our Material ESG Issues
102-45 Entities included in the consolidated financial statements	Advanced Micro Devices, Inc AMD Annual Report (10-K filing)
102-46 Defining report content and topic boundaries	Our Material ESG Issues
102-47 List of material topics	Our Material ESG Issues
102-48 Restatements of information	Any figures in <i>italics</i> in the Data Tables (link) are restated from the previous year and are footnoted where necessary.
102-49 Changes in reporting	Our Material ESG Issues
102-50 Reporting period	Calendar year 2020
102-51 Date of most recent report	2019
102-52 Reporting cycle	Performance data and other relevant information is updated annually.
102-53 Contact point for questions regarding the report	CorporateResponsibility@AMD.com
102-54 Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option.
102-55 GRI content index	Our GRI Standards Index has been prepared in accordance with GRI Disclosure 102-55.
102-56 External assurance	We engaged EcoAct Inc. to provide independent third-party verification, using the verification standard ISO 14064-3:2019, of our Scope 1 and Scope 2 greenhouse gas (GHG) emissions for the calendar year 2020. This information is included in our ESG Data Tables, Environmental Performance Indicators . EcoAct's full statement, including a summary of the work they performed, is available here .

Material Topic	GRI Standard	Management Approach (103:1-3)	Specific GRI Disclosures	Page Reference	Omissions
Digital Impact	GRI 413: Local Communities (2016)	Our Approach Community Involvement AMD Foundation	413-1 Operations with local community engagement, impact assessments and development programs	ESG Data Tables, Economic Performance Indicators	None
Environmental Stewardship	GRI 302: Energy (2016)	Our Approach	302-1 Energy consumption within the organization	ESG Data Tables, Environmental Performance Indicators	None
			302-2 Energy consumption outside of the organization	2020 AMD CDP Climate Change Submission	None
			302-3 Energy intensity		None
	GRI 305: Emissions (2016)	Our Approach	305-1 Direct (Scope 1) GHG emissions	ESG Data Tables, Environmental Performance Indicators	none
			305-2 Energy indirect (Scope 2) GHG emissions		None
			305-3 Other indirect (Scope 3) GHG emissions		None
			305-4 GHG emissions intensity		None
	GRI 306: Effluents and Waste (2018)	Our Approach	306-3 Waste generated	ESG Data Tables, Environmental Performance Indicators	None
			306-4 Waste diverted from disposal		None
	GRI 307: Environmental Compliance (2016)	Our Approach	307-1 Non-compliance with environmental laws and regulations	No non-compliances were reported in 2020. ESG Data Tables, Environmental Performance Indicators	None
Supply Chain Responsibility	GRI 308: Supplier Environmental	Our Approach	308-2 Negative environmental impacts in the	AMD Supplier Audit Summary Results	None

	Assessment (2016)		supply chain and actions taken		
	GRI 407: Freedom of Association and Collective Bargaining (2016)	Our Approach AMD Human Rights Policy AMD Supplier Code of Conduct	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	AMD Supplier Audit Summary Results	None
	GRI 408: Child Labor (2016)	Our Approach AMD Human Rights Policy AMD Supplier Code of Conduct Conflict Minerals Policy	408-1 Operations and suppliers at significant risk for incidents of child labor	AMD Supplier Audit Summary Results	None
	GRI 409: Forced or Compulsory Labor (2016)	Our Approach AMD Human Rights Policy Worldwide Standards of Business Conduct AMD Supplier Code of Conduct	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	AMD Supplier Audit Summary Results	None
	GRI 414: Supplier Social Assessment (2016)	Our Approach AMD Supplier Code of Conduct	414-2 Negative social impacts in the supply chain and actions taken	AMD Supplier Audit Summary Results AMD Modern Slavery Statement	None
Diversity, Belonging and Inclusion	GRI 401: Employment	Our Approach Compensation and Leadership Resources Committee	401-1 New employee hires and employee turnover	ESG Data Tables, Social Performance Indicators	None
			401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Talent Attraction and Retention, Total Rewards	None
			401-3 Parental leave	ESG Data Tables, Social Performance Indicators	None

	GRI 405: Diversity and Equal Opportunity (2016)	Our Approach Worldwide Standards of Business Conduct , pages 16-17	405-1 Diversity of governance bodies and employees	ESG Data Tables, Social Performance Indicators	None
	GRI 406: Non-discrimination (2016)	Worldwide Standards of Business Conduct , page 17	406-1 Incidents of discrimination and corrective actions taken	No corroborated incidents were found during 2020.	None
Conducting Business Responsibly	GRI 201: Economic Performance (2016)	AMD Annual Report (10-K)	201-1 Direct economic value generated and distributed	AMD Annual Report (10-K) ESG Data Tables, Economic Performance Indicators	None
	GRI 205: Anti-corruption (2016)	AMD's Internal Audit Department performs comprehensive risk analyses (including corruption) of all AMD sites/departments. Worldwide Standards of Business Conduct , pages 23-26 AMD Code of Ethics	205-1 Operations assessed for risks related to corruption	Worldwide Standards of Business Conduct , pages 23-26	None
			205-2 Communication and training about anti-corruption policies and procedures	Worldwide Standards of Business Conduct , page 23-26	None
			205-3 Confirmed incidents of corruption and actions taken	AMD is unaware of any such incidents during 2020 related to corruption.	None
	GRI 206: Anti-competitive Behavior (2016)	Worldwide Standards of Business Conduct , pages 9-10	206-1 Legal actions for anti-competitive behavior, anti-trust and monopoly practices	There were no legal actions for anti-competitive behaviors, antitrust or monopoly practices brought against the company in 2020. Any material legal proceedings	None

				involving AMD would be discussed in our 2020 Annual Report on Form 10-K .	
	GRI 415: Public Policy (2016)	CR Management and Governance	415-1 Political contributions	ESG Data Tables, Economic Performance Indicators	None
	Supply chain and Product Security	To safeguard product integrity, AMD has established an extensive set of controls to help ensure parts are securely manufactured, assembled, tested, uniquely tracked, marked, stored and transported from manufacture to authorized distribution.	n/a	Data Privacy & Security AMD Processor Security Updates	n/a
	GRI 419: Socioeconomic Compliance (2016)	Worldwide Standards of Business Conduct, page 18 Environmental, Health and Safety (EHS) Policy Statement	419-1 Non-compliance with laws and regulations in the social and economic area	ESG Data Tables, Environmental Performance Indicators	AMD does not report cases brought through dispute resolution mechanisms.

Sustainability Accounting Standards Board (SASB) Disclosures

(<https://www.amd.com/system/files/documents/2020-21-sasb-tcfd-disclosures.pdf>)

The Sustainability Accounting Standards Board (SASB) has developed voluntary industry-specific disclosure standards to enable businesses globally to identify, manage and communicate financially-material sustainability information to their investors. These Standards identify the subset of environmental, social and governance (ESG) issues most relevant to financial performance in 77 industries.

We have outlined below how our existing disclosures as of December 31, 2020, align with the recommended metrics for the SASB Technology and Communications Sector: Semiconductor Standard.

TOPIC	SASB ACCOUNTING METRIC	CODE	AMD DISCLOSURE
Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions (2) amount of total emissions from perfluorinated compounds	TC-SC-110a.1	(1) ESG Data Table , Scope 1 Emissions (2) AMD does not separately report emissions from perfluorinated compounds due to low usage.
	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	> Environmental Stewardship
Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity (3) percentage renewable	TC-SC-130a.1	> ESG Data Table , Energy Use
Water Management	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	TC-SC-140a.1	> ESG Data Table , Water > Information on water stress regions is reported in our CDP Water Survey
Waste Management	Amount of hazardous waste from manufacturing, percentage recycled	TC-SC-150a.1	> ESG Data Table , Waste
Employee Health & Safety	Description of efforts to assess, monitor and reduce exposure of employees to human health hazards	TC-SC-320a.1	> Environmental, Health and Safety (EHS) policy > Training and initiatives for AMD employees > Supplier Code of Conduct
	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	TC-SC-320a.2	> Zero in 2020, ESG Data Table , Social Performance

TOPIC	SASB ACCOUNTING METRIC		AMD DISCLOSURE
Recruiting and Managing a Global and Skilled Workforce	Percentage of employees that are (1) foreign nationals and (2) located offshore	TC-SC-330a.1	We do not report this metric, but we do report a breakdown of our workforce by geographic region. ESG Data Table , Social Performance
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	TC-SC-410a.1	AMD provides Material Declaration Datasheets (MDDS) upon email request to eCI.Administrator@amd.com .
	Processor energy efficiency at a system-level for: (1) servers (2) desktops (3) laptops	TC-SC-410a.2	AMD does not report system-level energy efficiency metrics due to the variety of customers' systems in which our processors are incorporated and the numerous components in those systems that are unrelated to our technology. We address processor energy efficiency in each of our product lines, including but not limited to servers, desktops and laptops. > Environmental Stewardship
Materials Sourcing	Description of the management of risks associated with the use of critical materials	TC-SC-440a.1	> Responsible Minerals Sourcing
Intellectual Property Protection and Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	TC-SC-520a.1	We disclose information on legal proceedings in our Annual 10-K Report available at https://ir.amd.com/sec-filings .

Task Force on Climate-related Financial Disclosures

The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information. TCFD's disclosure recommendations are structured around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets. These thematic areas are intended to interlink and inform each other.

We have outlined below how our existing disclosures as of December 31, 2020, align with the recommended TCFD metrics.





TCFD GOVERNANCE DISCLOSURE	AMD RESPONSE	DISCLOSURE SOURCE
A) Describe the board's oversight of climate-related risks and opportunities.	<p>The highest level of ESG oversight, including climate-related issues, at AMD is the AMD Board of Directors, which receives reports from and engages with management at least quarterly on ESG issues, practices and reporting. In 2020, the AMD Board formally added oversight of ESG to the Nominations and Governance Committee who receive additional updates.</p> <p>Climate-related briefings on strategy and goal performance are scheduled for the full Board of Directors at least annually. The Nominations and Governance Committee receive additional updates as matters arise and warrant additional engagement.</p>	<p>> CR Management and Governance</p> <p>> CDP Climate Change Survey – C1. Governance</p>
B) Describe management's role in assessing and managing climate-related risks and opportunities.	<p>The AMD Executive Team (AET) receives regular updates, at least monthly, on ESG matters - including at least annual briefings on climate goals and progress. AET members actively participate in setting ESG strategic priorities and goals for their departments, while providing the necessary company investments and resources to drive long-term progress.</p> <p>Our new ESG Executive Steering Committee is responsible for overseeing progress on the company's ESG priorities, goals and disclosures while regularly communicating with the AET. The Committee is comprised of cross-functional leaders (Director level or higher) from Finance, Global Operations, Human Resources, Investor Relations, Legal, Public Affairs and other departments.</p> <p>Climate-related issues are managed by the Corporate Responsibility (CR) team, which resides within the Public Affairs department and reports to the General Counsel and Corporate Secretary. Among other responsibilities, the CR team works closely with supply chain, product engineers, regulatory affairs and EHS to coordinate initiatives related to energy use and GHG emissions across the company's value chain. Meetings are held regularly with each group, either bi-weekly, monthly or quarterly, to identify issues and opportunities as well as track progress related to reducing energy use and/or GHG emissions.</p>	<p>> CDP Climate Change Survey Question C1.2a</p>
TCFD STRATEGY DISCLOSURE	AMD RESPONSE	DISCLOSURE SOURCE
A) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.	<p>AMD defines short, medium and long-term time horizons as follows: Short-term: 0 – 3 years Medium-term: 3 – 5 years Long-term: 5 – 15 years</p> <p>We look at corporate responsibility through the lens of environmental, social and governance (ESG) issues, which allows us to prioritize where we need to focus our efforts to have the most impact and operationalize our goals into the business. Our 2020 materiality assessment identified current or potential ESG impacts on our business and from AMD on stakeholders and society. Examples of identified material risks and opportunities include advancing product energy efficiency, helping customers reduce emissions, reducing energy/emissions impacts in the supply chain and sourcing renewable energy. In addition, potential risks to AMD operations, supply chain and product have been identified due to extreme weather events such as floods, heatwaves and freezes.</p>	<p>> Our Material ESG Issues</p> <p>> Environmental Stewardship</p> <p>> CDP Climate Change Survey Question C2. Risks and Opportunities</p>
B) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.	Refer to our CDP Climate Change Survey response.	<p>> CDP Climate Change Survey Section C2. Risk and Opportunities and C3. Business Strategy</p>
C) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	We recognize that our environmental stewardship ambitions must continue to go beyond slowing growth in GHG emissions. This is why AMD is charting a bold path to advance energy efficiency for Accelerated Computing applications; setting a science-based GHG emissions reductions goal for our operations (aligned with a 1.5 degree Celsius scenario); and working with our manufacturing suppliers to increase efficient use of resources and renewable energy.	<p>> CDP Climate Change Survey – C2.3 Risks and Opportunities and C3.2 Business Strategy</p> <p>> Environmental Stewardship</p>





TCFD RISK MANAGEMENT DISCLOSURE	AMD RESPONSE	DISCLOSURE SOURCE
A) Describe the organization's processes for identifying and assessing climate-related risks.	We use materiality assessments to prioritize ESG-related issues, set our strategy and continuously strengthen our engagement with key stakeholders. This approach allows us to prioritize where we need to focus our efforts to have the most impact and operationalize our goals into the business.	
B) Describe the organization's processes for managing climate-related risks.	AMD takes a multi-faceted approach to ESG-related risk management and the advancement of opportunities. For example, a cross-functional team focused on product energy efficiency meets bi-weekly to discuss regulatory and standards developments that may pose short, medium or longer-term risks (or opportunities). The team is led by our Corporate Vice President of Government Affairs and Corporate Responsibility, with the participation of product engineering, corporate responsibility and relevant business teams.	> CDP Climate Change Survey – C2.2 Risks and Opportunities > Our Material ESG Issues
C) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Business continuity planning is another area of risk management that brings together EHS, Finance, Global Operations, Human Resources, Information Technology and other teams to identify and plan for events that could disrupt AMD operations and/or supplier operations.	
TCFD METRICS AND TARGETS DISCLOSURE	AMD RESPONSE	DISCLOSURE SOURCE
A) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<p>AMD reports climate-related metrics and targets in our annual corporate responsibility reporting. Our historical scope 1, 2 and 3 GHG emissions data can be found in our ESG Data Table.</p> <p>Our 2014-2020 environmental goals include:</p> <ul style="list-style-type: none"> > AMD Operations (Scope 1 and 2) <ul style="list-style-type: none"> • 20 percent reduction in absolute GHG emissions from AMD operations > AMD Product Energy Efficiency (Scope 3) <ul style="list-style-type: none"> • 25x increase in energy efficiency in AMD processors for mobile devices > Supply Chain Manufacturing (Scope 3) <ul style="list-style-type: none"> • 75 percent lower GHG emissions per manufacturing index • 40 percent lower electricity use per manufacturing index • 40 percent lower water use per manufacturing index <p>A manufacturing index (MI) is an industry-standard measure of production calculated by square centimeters of silicon x masking layers x wafers per year. The AMD goals compare the Semiconductor Industry Association (SIA) average MI to AMD MI.</p>	> Environmental Stewardship > ESG Data Table – Environmental Performance > CDP Climate Change Survey – C4, Targets and performance, C5, Emissions methodology and C6, Emissions data
B) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Additional information on our scope 1, 2 and 3 GHG emissions and achievement/progress of goals are available in our CDP response (section 4) and environmental disclosures on our Environmental Stewardship page.	
C) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	In 2021, AMD has set new forward-looking 2025/2030 environmental goals, which are included in our 2020-21 Corporate Responsibility Report .	


Advancing the United Nations Sustainable Development Goals




(<https://www.amd.com/system/files/documents/2020-un-sdgs.pdf>)

At AMD, we believe the UN Sustainable Development Goals (SDGs) serve as a useful framework for tackling the world's toughest challenges. Our company and the technology sector as a whole have a critical role to play in enabling the future that the SDGs aspire to create. While not specifically designed around them, our priority areas and initiatives help to advance many of the SDGs. AMD is pleased to be a member of the UN Global Compact to advance the Ten Principles of the UNGCs and to contribute in creating a just, resilient and sustainable world.

SDG	SDG TARGET	AMD SUPPORTING STRATEGIES AND INITIATIVES	AMD ALIGNED GOAL(S)
3 GOOD HEALTH AND WELL-BEING 	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	By helping accelerate research in areas such as genomics, vaccine development, disease transmission, and epidemiological modeling, the AMD High Performance Computing Fund is supporting a worldwide mobilization in response to COVID-19 and is helping to build the capacity to respond to future global health threats. > AMD COVID-19 High Performance Compute Fund	100 million people will benefit from AMD and AMD Foundation philanthropy and partnerships that enable STEM education, scientific research and the workforce of the future (2020-2025) ¹
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	The AMD Embedded product portfolio enables Internet of Things (IoT) solutions capable of processing large quantities of data closer to the end-user. AMD-powered industrial PCs are optimized for exceptional power-efficient processing and graphics performance and are tailored for a variety of automated industrial applications. > AMD Embedded Products	
13 CLIMATE ACTION 	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	AMD-powered servers play an important role in advancing research on climate change. By analyzing massive and complex data sets, researchers and scientists are able to explore the causes of climate change and even better predict the impacts of extreme weather.	
4 QUALITY EDUCATION 	4.7.B By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.	Beginning with sites in Austin, TX and San Jose, CA in the US, Shanghai, China, and Markham, Canada, AMD Learning Labs support the expansion of STEM curricula and opportunities for underserved students to gain hands-on experience with computer hardware and software. > AMD Learning Labs	

SDG	SDG TARGET	AMD SUPPORTING STRATEGIES AND INITIATIVES	AMD ALIGNED GOAL(S)
5 GENDER EQUALITY 	5.C Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	We recognize the challenge of increasing the representation of women in engineering and other roles. We will continue our efforts to recruit diverse talent and foster an inclusive and innovative culture, where the best ideas "win" regardless of the individual's identity.	
10 REDUCED INEQUALITIES 	10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality. 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.	AMD is a workplace where all voices can be heard, and our multi-voice initiative encourages and supports all AMDers who champion, and when needed, challenge and change our company culture with their unique perspective. Employee resource groups encourage employee engagement and are an important part of our company's culture. > AMD Diversity, Belonging & Inclusion	70 percent of our employees participate in AMD employee resource groups and/or other AMD inclusion initiatives (2020-2025) ²
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	12.2 By 2030, achieve the sustainable management and efficient use of natural resources.	We are steadfast in our commitments to environmental stewardship—whether it is by sourcing renewable energy for our offices, demonstrating best-in-class manufacturing with wafer suppliers, or efficiently powering millions of AMD-enabled devices.	30x increase in energy efficiency for AMD processors and accelerators powering servers for artificial intelligence-training and high-performance computing (2020-2025) ²
13 CLIMATE ACTION 	13.2 Integrate climate change measures into national policies, strategies and planning.	AMD is charting a bold path that includes accelerating energy efficiency for advanced computing, setting a science-based greenhouse gas (GHG) emissions reductions goal for our operations (aligned to a below 1.5 degree Celsius scenario), and working with suppliers to increase efficient use of resources and renewable energy. > AMD Environmental Stewardship	50 percent absolute reduction in GHG emissions from AMD operations (Scope 1 and 2) by 2030 (base year 2020) 100 percent of AMD manufacturing suppliers have public GHG emissions reduction goals by 2025 80 percent of AMD manufacturing suppliers source renewable energy by 2025

SDG	SDG TARGET	AMD SUPPORTING STRATEGIES AND INITIATIVES	AMD ALIGNED GOAL(S)
8 DECENT WORK AND ECONOMIC GROWTH 	8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms. 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.	At AMD, we respect human rights throughout our company, operations and supply chain. Our Human Rights Policy reflects our commitment to the United Nations Guiding Principles on Business and Human Rights. The AMD Supplier Code of Conduct outlines the standards and expectations we expect suppliers to uphold including labor standards such as freedom of association and protections for migrant workers. Through the Responsible Mineral Initiative (RMI), we connect with industry members, governments, non-profits, and other stakeholders to contribute to mitigating the salient social and environmental impacts of the extraction and processing of minerals in supply chains. > AMD Responsible Minerals Sourcing Each year we publish the AMD Statement on Forced Labor and Human Trafficking , to comply with various global legislation and to provide transparency on our progress to address forced labor if/when found in our supply chain. We partner with industry and stakeholders through the Responsible Labor Initiative (RLI) to help address the root causes of forced labor and prevent, detect and remediate forced labor if found in our supply chain. > AMD Stakeholder Engagement	100 percent of AMD supplier manufacturing factories will have a Responsible Business Alliance (RBA) audit (or equivalent) (2020-2025) 80 percent of AMD manufacturing suppliers by spend will participate in a capacity building activity (2020-2025)

SDG	SDG TARGET	AMD SUPPORTING STRATEGIES AND INITIATIVES	AMD ALIGNED GOAL(S)
1 NO POVERTY 	1.5A Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.	<div>COMMUNITY INVOLVEMENT</div> <p>Across the globe, AMD, the AMD Foundation and our employees have been supporting our local communities for over 35 years. It takes the form of monetary support and, more importantly, the participation of AMD employees – from interns up to the C-suite. AMDers support feeding communities, supporting women and children, environmental stewardship, among others.</p> <p>> AMD Volunteering > AMD Foundation</p>	<p>70 percent of our employees participate in AMD Employee Resource Groups and/or other AMD inclusion initiatives (2020-2025)²</p>
2 ZERO HUNGER 	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.		
11 SUSTAINABLE CITIES AND COMMUNITIES 	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.		