

Environmental, Social, Governance Report 2022



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Letter from the President and Chief Executive Officer

I am pleased to present our second annual ESG report, which highlights the progress we have made on our commitments to environmental, social, and governance (ESG) issues. This year, we changed the name of our program from Corporate Social Responsibility (CSR) to ESG to reflect changes in nomenclature we've seen across our stakeholders and investors. However, whether called CSR or ESG, our commitment to operating our business in an environmentally and socially responsible manner, in tandem with our employees, customers, suppliers and communities, remains unwavering.

For MKS, achieving a more sustainable future means drawing upon our culture of human ingenuity to solve problems and deliver solutions. Cutting edge science and engineering are starting points for us. Equally important is how we listen, collaborate, and solve our customers' hardest technology challenges by working together. We are inspired to build trust through collaboration and to embrace the diverse talent necessary to accomplish our goals.

In August, we acquired Atotech Limited, a global leader in process chemicals, equipment, software and services for printed circuit boards, semiconductor IC packaging and surface finishing. With roots going back to the 1800s, Atotech has a rich history of innovation as a key enabler of electronic device advancement and next generation technologies across a wide array of industries that are critical to our daily lives.

We are pleased to have the Atotech team join MKS. Like us, Atotech is committed to bringing environmental sustainability and social responsibility to the forefront of its operations as well as its customer value proposition, and we look forward to reaching new heights in our ESG journey together. While this ESG report focuses mainly on MKS' performance in 2021, and therefore does not include Atotech, we intend to present future updates and reports on a consolidated basis as one company.

Our key ESG achievements in this report include:

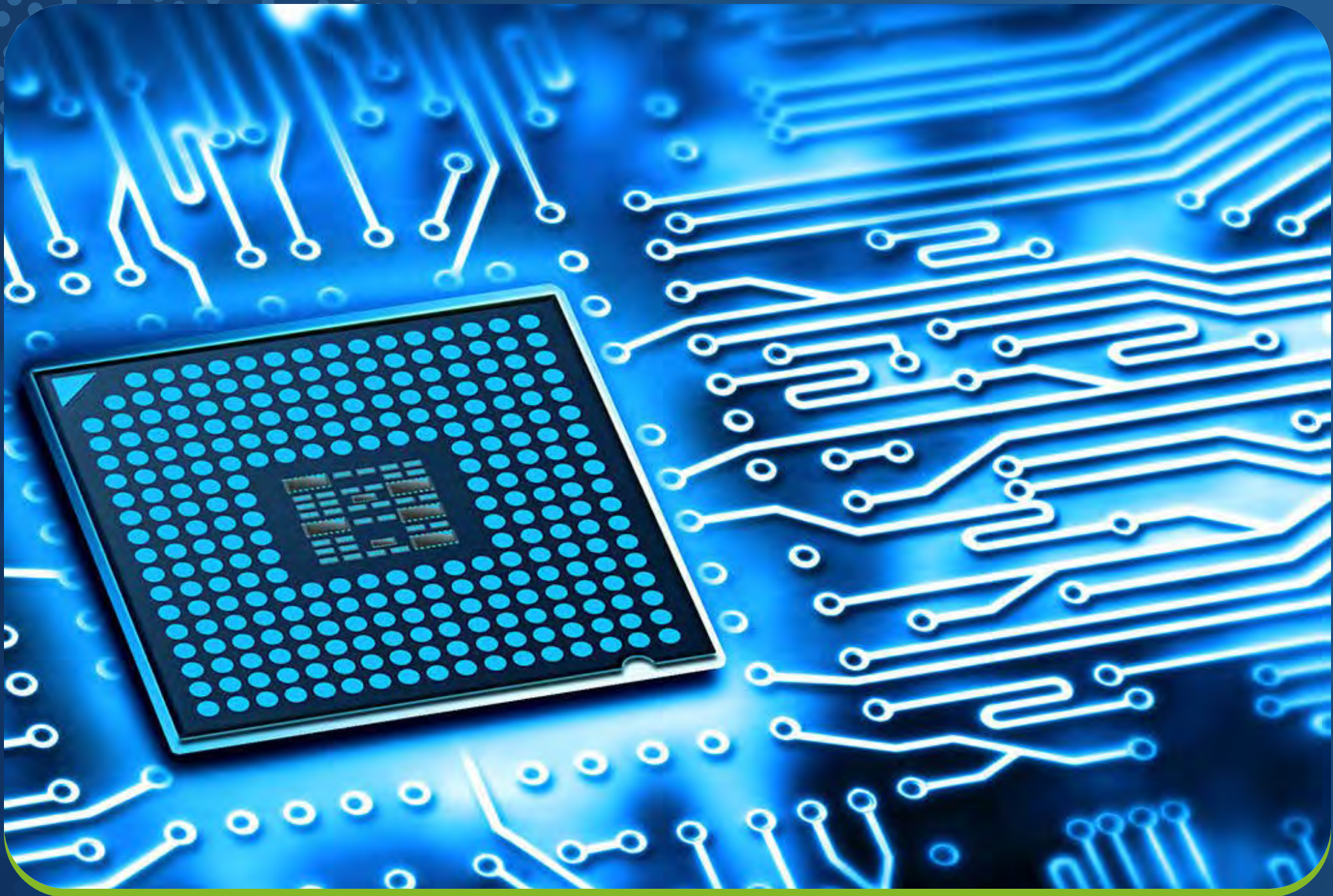
- Instituting a formal Global MKS Management System for Environmental, Health, and Safety (MEHS) to protect MKS' employees, other stakeholders, and the environment. We are implementing this strong foundation for MKS' corporate Environmental Health and Safety system in a stepwise process across the organization into 2026.
- Expanding our data collection of environmental metrics to cover 95% of our total operational electric usage (excluding recently acquired Atotech)
- Expanding disclosure of Scope 3 emissions and tracking additional Scope 3 categories (excluding recently acquired Atotech) to understand our emissions impact across our value chain.
- Expanding Diversity, Equity and Inclusion (DE&I)-specific training to MKS leaders around the world and expanded diversity training to all employees globally.
- Setting DE&I goals for executives.
- Conducting an analysis of our global employees' compensation that resulted in equitable pay for our employees.
- Rolling out our first annual employee engagement survey with encouraging results across several key categories.

As we look ahead, we believe a key driver of our success continues to be building relationships with our stakeholders on a foundation of integrity, trust, and collaboration. Over the past few years, MKS' business has evolved, and with the acquisition of Atotech, continues to grow in ways that we believe drive value for our stakeholders. While there have been many exciting developments at MKS, one goal remains the same: developing products that enable our customers to be more successful, our planet more sustainable, and our communities safer and more productive. We look forward to sharing what is to come.



A stylized, handwritten signature in black ink, appearing to read 'John T.C. Lee'.

John T.C. Lee
President and Chief Executive Officer



Business Overview

ENVIRONMENTAL, SOCIAL, GOVERNANCE REPORT 2022



About MKS

At MKS, we have a long history of leveraging our collective curiosity to understand and develop solutions that are at the core of many key technological innovations. We deliver foundational technology solutions to leading edge semiconductor manufacturing, advanced electronics and specialty industrial applications. We apply our broad science and engineering capabilities to create instruments, subsystems, systems, process control solutions and specialty chemicals technology that improve process performance, optimize productivity and enable unique innovations for many of the world's leading technology and industrial companies.

MKS was founded in 1961 in Burlington, Massachusetts to develop advanced measurement instruments. Our first product was the Baratron® capacitance manometer, which measures gas pressure within a semiconductor wafer fabrication chamber. The MKS name is derived from this early focus on measuring the basics of distance, weight, and time: Meter, Kilogram, and Second.

In August 2022, MKS acquired Atotech and together we are advancing frontiers. Atotech brings a rich history that is critical to our technological solutions and applications, including a long standing commitment to sustainability.



Key Business Metrics

3,800+

patents worldwide

\$4.4B

pro forma revenue*

24

leading product categories**

2,000+

engineers and scientists

141

global sites

~10,000

employees worldwide

33K+

customers across the globe

Our products are derived from our core competencies and products in:

Pressure and Vacuum
Control Solutions

Materials Delivery Solutions

Power Solutions

Plasma and Reactive
Gas Products

Laser Products

Photonics Products

Laser-based systems for
PCB manufacturing

Multi-layer Ceramic Capacitor
("MLCC") Test Systems

Process Chemistry Solutions



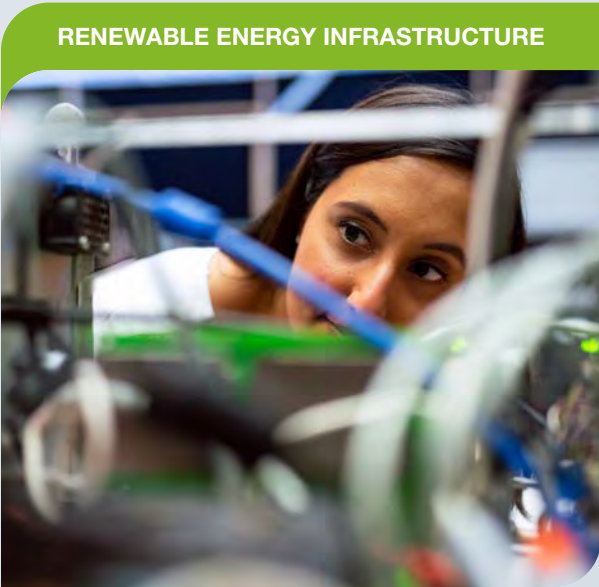
*Pro forma revenue consists of revenue for FY2021 for MKS and Atotech

**We estimate that we are #1 or #2 in leading product categories

Product Applications

Innovation is a key part of our ability to sustain our product differentiation and increase our relevance to customers. Our key technological innovations have driven accelerated roadmaps for our primary markets set forth below and are applied in areas that support development of renewable energy infrastructure, enhance health and safety, and increase efficiency during production across our primary markets:

- Semiconductor
- Advanced Electronics
- Specialty Industrial



RENEWABLE ENERGY INFRASTRUCTURE



ENHANCE HEALTH AND SAFETY



INCREASE EFFICIENCY

In the research and development process, we aim to foster innovation. In 2019, MKS created an annual President’s Technology Incubator Grant (PTIG) program that funds technical innovations across the company. The goal of the program is for these ideas and innovations to develop into new products and solutions that address the critical needs of our customers. We look forward to seeing the progress of the five projects we decided to fund in 2022, following a rigorous selection process by the Office of the Chief Technology Officer (OCTO).

One of the areas we support is the generation of renewable energy. We manufacture products that are critical to the renewable energy manufacturing process. We are proud to house and manage one of the few commercial photovoltaic (PV) and calibration test laboratories in the world, which uses state-of-the-art equipment in order to provide traceable certifications that meet international standards for PV cells efficiency and performance.

Key Product Highlights

SEMICONDUCTOR MANUFACTURING



LIQUOZON® Dissolved Ozone Delivery System

Our LIQUOZON® dissolved ozone delivery system provides a “green alternative” to the traditional sulfuric peroxide mix (SPM) washing process, which uses toxic acids and requires careful disposal. Ozone is an alternative cleaning agent that naturally breaks down to oxygen and water. Given the increased need for water efficiency in semiconductor fabrication, we have designed a solution that recycles dissolved ozone from existing equipment and combines it with fresh dissolved ozone to reduce water usage in the washing process. In 2021, we deployed our first system with a large semiconductor manufacturing customer, and we have seen growing interest in our solution.

INCREASED EFFICIENCY

AUTOMOTIVE EMISSIONS



MultiGas™ Fourier Transform Infrared (FTIR)

Our MultiGas™ FTIRs measure pollutants, such as nitrogen oxide, carbon monoxide, ammonia and hydrocarbon, from light-duty and heavy-duty automobiles during the engine and catalyst development phases, which enhances the health and safety of the power generation process.

ENHANCED HEALTH AND SAFETY

AUTOMOTIVE EMISSIONS



Cirrus™ 3 Atmospheric Gas Analyzer

Our Cirrus™ 3 Atmospheric Gas Analyzer is a powerful analytical tool for a wide range of laboratory and industry-based gas analysis applications. Automotive companies use these tools to monitor gases in car exhaust, not only optimizing engine performance for hydrogen fuel sources, but also reducing pollution emissions.

INCREASED EFFICIENCY

ENHANCED HEALTH AND SAFETY

Key Product Highlights

SOLAR ENERGY



Lasers and Photonics

Our lasers and photonics components are used in solar panel manufacturing to improve solar panel sunlight-to-electricity conversion efficiencies compared to traditional processes. Our lasers' high power levels at rapid pulsing rates, short pulse widths and short wavelengths with precise energy control and near-perfect focus are necessary for high-throughput, high-yield manufacturing of high-efficiency PV cells.

RENEWABLE ENERGY INFRASTRUCTURE

SOLAR ENERGY



G-Series Mass Flow Controller (MFC) & Pressure Controller

Our G-Series pressure controllers provide pressure control for the delivery of liquid precursors in the fabrication of PV cells. Accurate delivery of these deposition precursors is dependent on the precise control of pressure in the material delivery system. This is a complement to our G-Series MFCs, which provide accurate, precise and repeatable delivery for gaseous species used in the PV process. Precise measurement, management, and control of gas pressures are imperative to PV cell fabrication.

RENEWABLE ENERGY INFRASTRUCTURE

Sustainable and Ethical Synthetic Diamond Manufacturing

We also continue to innovate and develop our products to support the growth of breakthrough industries, including synthetic diamonds. In this application, our products provide energy to the chemical vapor deposition (CVD) chamber to facilitate synthetic diamond growth. Our Microwave Generators are an example of such products. Lab-created diamonds are chemically and optically identical to their mined counterparts, are responsibly sourced in accordance with international human rights and labor standards, and are CarbonNeutral® product certified.



Improved MKS ESG Ratings

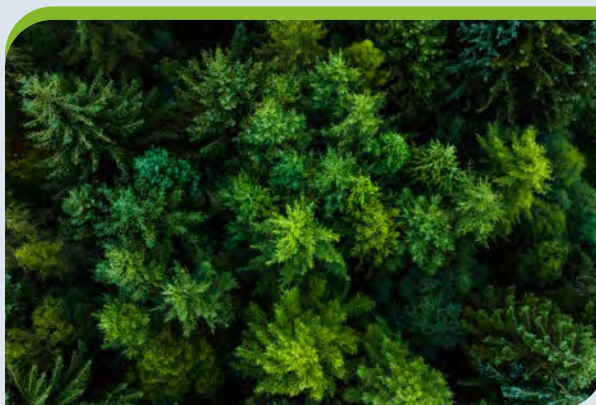
MKS is proud to announce the improvement in its MSCI and Sustainalytics ESG ratings since 2020.



MSCI ESG Rating

MSCI uses a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and assess how well they manage those risks relative to peers.

MKS' MSCI ESG Rating improved from a "B" in December 2020 to a "BBB" in February 2022. MSCI ESG Ratings range from a low of "CCC" to a high of "AAA."



Sustainalytics ESG Rating

Sustainalytics' impact methodology and reporting framework is based on the most globally acknowledged reporting guidelines, such as the Greenhouse Gas Protocol.

MKS' ESG Risk Rating improved from 12.2 in November 2020 to 11.6 in April 2022, corresponding to a "Low Risk" rating. Sustainalytics ESG Risk Ratings are on a 0-40+ descending scale, in which risk ratings are categorized from "Negligible" to "Severe". According to Sustainalytics, MKS' ESG Risk Rating is estimated to be among the top 7% of companies in the United States / Canada and among the top 7% of MKS' industry peers worldwide, as defined by Sustainalytics.



Institutional Investor Award (Best ESG)

We are proud that MKS' executive and investor relations leadership was recognized by Institutional Investor in their 2022 All-America Executive Team rankings. MKS ranked #1 across all categories among Midcap companies in the "IT Hardware & Electronics Manufacturing Services (including technology supply chain)" sector.

The All-America Executive Team survey captures market feedback and aggregates the level of stakeholders' trust in their equity assets. Over 3,400 money managers and sell-side analysts offered their candid opinions in exchange for anonymity in the All-America Executive Team rankings. These rankings gauge the quality of U.S. investor relations programs as well as CEO, CFO and ESG performance.



Board of Directors Demographic Highlights

Our Board of Directors is comprised of 33% female members. We have been recognized for our commitment to advancing women's representation among Boards of Directors and are proud that our Lead Director is a woman.

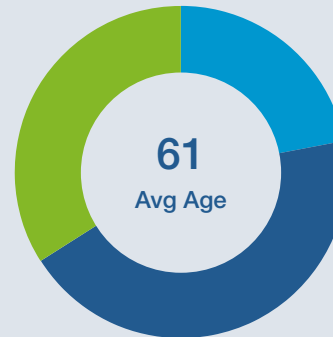
These demographic ratio graphs capture key data for our Board of Directors (as of 9/30/2022):

Tenure



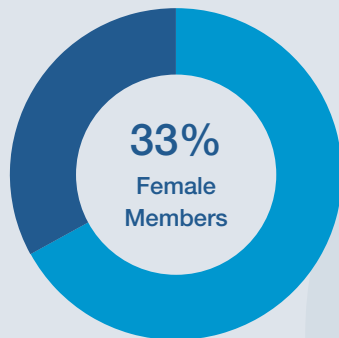
0-3 years: **5**
4-7 years: **2**
8+ years: **2**

Age



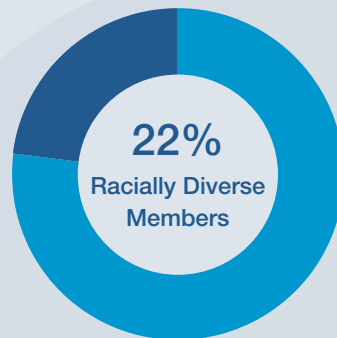
<56 years: **2**
56-64 years: **4**
65+ years: **3**

Gender



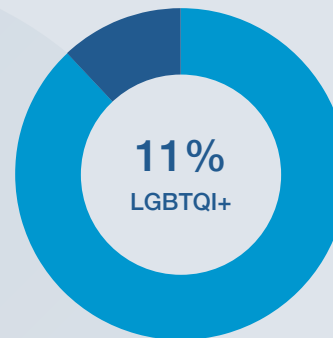
Male: **6**
Female: **3**

Race / Ethnicity



Caucasian: **7**
People of Color: **2**

Other Demographic Diversity



Non-LGBTQI+: **8**
LGBTQI+: **1**

**50 WOMEN
50 ON BOARDS**

In 2021, MKS was recognized by 50/50 Women on Boards™, for having a significant share of women directors on our board, highlighting our board's gender balance and diversity.

50/50 Women on Boards™, the leading global education and advocacy campaign driving gender balance and diversity on corporate boards, designated MKS as a "3+"* company in the 50/50 Women on Boards Gender Diversity Directory™ on their website.

*Denotes that MKS has 3 or more women on our Board of Directors.

Oversight of ESG and Risk

ESG Management Structure

ESG is a key priority for MKS and our leaders. As such, our ESG Program is overseen by the CEO and the Nominating and Corporate Governance Committee of our Board of Directors.

BOARD OF DIRECTORS

Nominating and Corporate Governance Committee

Oversees ESG Program's approach and direction

EXECUTIVE SPONSOR

President & CEO

Champions the ESG Program efforts; conduit to the Nominating and Corporate Governance Committee of our Board of Directors

ESG STEERING COMMITTEE

VP, Investor Relations

(Program Leader)

SVP & General Counsel

SVP & CHRO

SVP, Operations &

Corporate Marketing

Sr Director, MarCom

Sets program strategy, defines annual objectives, and provides guidance on high-level tactics to achieve the stated objectives, communicates ESG Program and monitors ESG industry trends

GLOBAL TEAM

Representatives from

HR, Legal, Operations, EHS, Finance, and Marketing

Develops plans and tactics to achieve annual ESG objectives, ensure compliance with ESG policies and monitor ESG industry trends

Risk Management

MKS maintains a robust, ongoing Enterprise Risk Management (ERM) process to identify, assess, prioritize, and respond to risks, which includes a formal risk assessment approximately every two years.

After a formal risk assessment is completed, an action plan is developed for each top risk and progress on the risk response is shared quarterly with the CEO.

In partnership with our property insurance provider, FM Global, we have conducted climate-risk assessments on windstorm, flood, wildfire, and earthquake exposure for some of our sites. For more information on how we consider climate-related risks and opportunities, please see our [Task Force on Climate-Related Financial Disclosures \(TCFD\) index](#).

In addition, our Audit Committee oversees cybersecurity risk management and financial risk management.

Stakeholder Relationships

Strong relationships are built on a solid foundation of integrity and trust. We strive to create and maintain stakeholder relationships that promote a network for voicing thoughts around issues, products, and/or operations that are important to MKS. We ensure our ESG program activities are aligned and supported across our organization by engaging our stakeholders on core values and expectations.

Our key stakeholders include:



Policies

Our ESG policies are overseen by our CEO and the Nominating and Corporate Governance Committee of our Board of Directors.



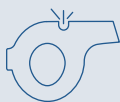
Code of Business Conduct and Ethics

Our Code of Business Conduct and Ethics links our mission and guiding principles with standards of professional conduct that we expect of our Board, management team and employees across the globe. We also require our sales representatives and distributors to follow appropriate codes of conduct in our agreements with them. These practices reflect our commitment to integrity with respect to our employees, business partners and the communities in which we work. Examples of some of the key topics covered in our Code of Business Conduct and Ethics are described below. Please see our full [Code of Business Conduct and Ethics](#) for further details.



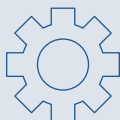
Preventing Bribery and Corruption

As a global company, we take our obligation to comply with international anti-corruption laws seriously. MKS employees may never offer, give, solicit, or receive any form of bribe or kickback, directly or indirectly.



Whistle-Blower Hotline

Our Code of Business Conduct and Ethics outlines our grievance process for anyone who believes an employee has engaged or is engaging in conduct that violates our Code of Conduct. We provide all employees with access to a confidential, anonymous, 24/7 MKS Compliance Hotline, operated by a third-party.



MKS Human Rights and Labor Standards Policy

MKS is committed to uphold the human rights of workers, and to treat employees with dignity and respect as understood by the international community. This applies to all workers including temporary, migrant, student, contract, and direct employees, and any other type of worker. Please see our [MKS Human Rights and Labor Standards Policy](#) for further details.



Human Trafficking and Modern Slavery

We are committed to conducting business in an ethical and responsible manner and we have a zero-tolerance policy relating to human trafficking and forced labor. We are committed to maintaining and improving our systems and processes to ensure we comply with all national and international rules and regulations regarding human trafficking and any type of forced labor in our operations and supply chain. Please see our [Statement on Human Trafficking and Modern Slavery](#) for further details.



Harassment/Sexual Harassment Prevention

We are committed to providing a work environment that is free from harassment based on race, color, religion, sex (including pregnancy and pregnancy-related conditions), sexual orientation, gender identity and expression, national origin, age, ancestry, disability, marital status, veteran or military status, genetic information, political affiliation, union membership, or any other characteristic protected by law, including sexual harassment.



Political Contributions Policy

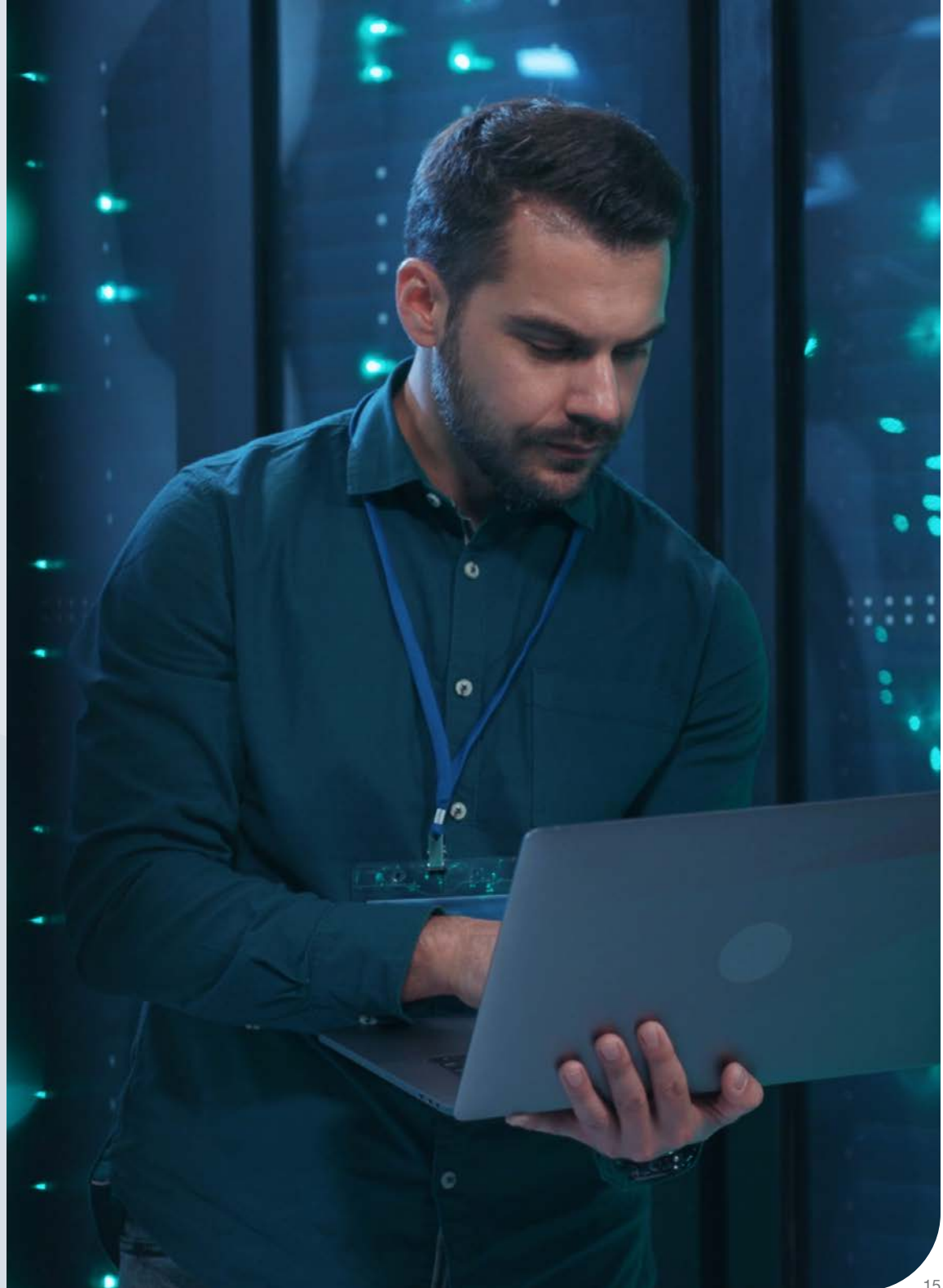
MKS funds, assets, and personnel may not be used to make any political contribution or render assistance to any political party or candidate for political office. Examples of prohibited contributions include cash contribution to political candidates or political parties or other political organizations, using or loaning Company personnel or property for political party work or campaign activities, or guaranteeing the debt of a political party. This does not prohibit individual political contributions or activity by MKS personnel acting on their own behalf, on their own time and without utilizing MKS resources.

Cybersecurity and Data Privacy

At MKS, we believe we have a competitive advantage by using technology to enhance operations, increase efficiency, and take advantage of data to improve strategic decision-making. However, we are also aware this makes our company vulnerable to security breaches. The recent increase of cybersecurity incidents has proven to be a significant risk facing corporate organizations and is likely to continue.

To identify and mitigate cybersecurity risks, including data within our organization that must be protected, MKS conducts risk assessments. We have personnel devoted to data security and engage external auditors to perform audits based on top information security standards. Additionally, MKS carries cyber insurance as part of our overall insurance program to reduce the impact of risks to our business. We also have a Global Data Privacy Policy, which provides rules and principles to ensure the safe handling of personal data across our organization. MKS' IT Department and MKS' Business Continuity Plan prepare us for a broad range of potential outcomes and helps us better able to respond and continue operations during and after a cyberattack. In addition, MKS' Audit Committee oversees cybersecurity risk management.

We ensure everyone at MKS understands and complies with our cybersecurity and data privacy policies. To that end, MKS provides a robust, annual training program for our employees on safe and secure user practices, recognizing security threats, understanding applicable data privacy laws and regulations and following our Data Privacy policies. Employees are encouraged to report any actual or suspected data security breaches and privacy breaches to the MKS IT Department and the MKS Legal Department. Please see our statement on [Data Privacy and Information Security](#) for further details.





Environment

Environmental Management System

Our cross-functional ESG Steering Committee meets throughout the year to review progress on our environmental initiatives and provide updates and recommendations to our executive leadership team and the Nominating and Corporate Governance Committee of our Board of Directors. MKS management is responsible for and takes a leadership role in providing training, enforcement, and direct support for our internal MKS efforts to ensure that environmental concerns are identified, openly communicated, and addressed in a timely manner as part of our overall business strategy.

Five of our 46 global production sites have a formalized Environmental Management System (EMS) certified to ISO 14001-2015. ISO 14001 is the internationally recognized gold standard framework that sets out the requirements for an environmental management system. It supports organizations in improving their environmental performance, for instance when it comes to the efficient use of resources and reduction of waste. We are continuing to evaluate certification for additional sites and are enhancing our corporate-wide EMS.

MKS uses our corporate-wide EMS as a set of processes and practices that enable us to reduce our environmental impacts and increase our operating efficiency. Steps of our EMS follow the Plan, Do, Check, Act (PDCA) methodology, which includes:

Reviewing our
environmental goals

Analyzing our environmental
impacts and compliance
obligations

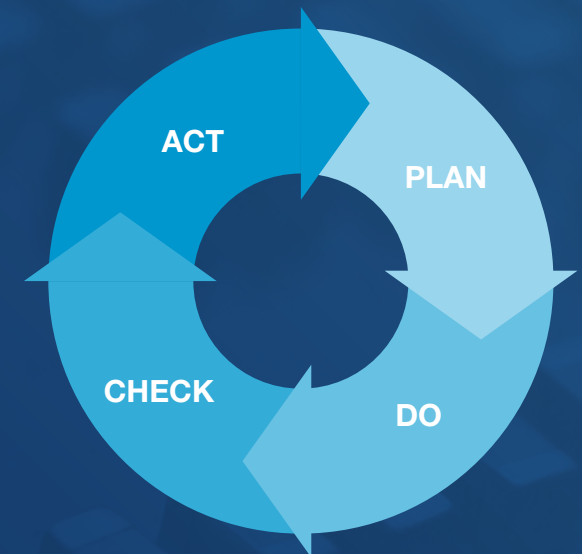
Setting environmental
objectives and targets to
reduce environmental impacts

Establishing a comprehensive
ESG program to meet these
objectives and targets

Monitoring and measuring
progress in achieving our
objectives

Ensuring employees' environmental
awareness and competence

Reviewing progress
of our EMS



Environmental Metrics

In 2021, our second year of reporting environmental metrics for our operations and facilities, we were able to significantly increase the data coverage of our collection efforts for our greenhouse gas (GHG) emissions, energy usage and water usage across our sites. We continue to strive to collect this data globally across our MKS sites. As we integrate Atotech into our business, we aim to track and include environmental metrics from its sites as well. We are in the process of onboarding a data management system that can support us in our ongoing efforts to track these environmental metrics, as well as support us in exploring collection of new metrics, such as waste.

We also recognize the importance of tracking environmental impact across the value chain. For 2021, we assessed the Scope 3 emissions categories relevant to MKS and collected and calculated Scope 3 emissions metrics for not only business travel, but also upstream transportation and distribution. We aim to continue evaluating and reporting on additional Scope 3 emissions categories that are applicable to MKS' business.



GHG EMISSIONS		DATA COVERAGE ¹ (BY SQUARE FEET AREA)
Scope 1 Emissions	3,575 mtCO ₂ e	82% ¹
Scope 2 Emissions (Location-Based)	65,185 mtCO ₂ e	97% ¹
Total Scope 1 and 2 Emissions	68,760 mtCO ₂ e	-
Scope 3 Emissions²		
Category 4: Upstream Transportation and Distribution	30,688 mtCO ₂ e	
Category 6: Business Travel	1,482 mtCO ₂ e	
Total Calculated Scope 3 Emissions	32,170 mtCO ₂ e	
ENERGY MANAGEMENT		
Electricity Usage	122,695 MWh	97% (+31% in data coverage YOY)
Fuel Usage (natural gas and propane)	18,251 MWh	82% (+48% in data coverage YOY)
Energy Usage	140,946 MWh	-
WATER MANAGEMENT		
Water Usage	41,000 kgal	69% (+22% in data coverage YOY)

¹ Data coverage for Scope 1 and 2 emissions includes coverage of emissions from energy sources, namely electric and fuel; they are represented as total data collected and estimated as a percentage of MKS worldwide sites' total square feet area. We do not currently track Scope 1 emissions from potential refrigeration leakages.

² Scope 3 emissions cover the following: Category 1. Purchased Goods and Services, Category 2. Capital Goods, Category 4. Upstream Transportation and Distribution (MKS-paid freight costs for transportation between MKS sites), Category 6. Business Travel (represents travel for all US-based employees only).



Approach to Reducing Emissions

With a better understanding of MKS’ Scope 1 and 2 emissions baseline in 2021, we are engaging with our internal teams to develop a plan for how to reduce our operational emissions across the business. We have begun conversations to evaluate potential emissions reduction targets for MKS. We have made considerable progress in data collection for our Scope 1 and 2 emissions and, given our recent acquisition of Atotech, we plan to develop a full combined baseline for Scope 1 and 2 emissions and plan to set a combined target in the future.

In the meantime, we are working closely with our corporate Facilities and Environmental, Health, and Safety teams to evaluate opportunities across our sites where we can:



Implement energy efficiency measures



Explore on-site energy generation projects



Procure renewable energy through utility providers



Purchase renewable energy certificates (RECs) through a Virtual Power Purchase Agreement (VPPA)

Product Life Cycle

We aim to address the environmental impact of our products at each stage in their life cycle, including material sourcing and production, use life of our products, and end of life.

Material Sourcing & Production

MKS works with customers and suppliers in evaluating declarable substances in alignment with the REACH framework, which aims to improve the protection of human health and the environment through improved identification of properties within chemical substances. We will also evaluate setting future environmental targets to manage metrics in production processes, such as energy, emissions, water, and waste. We attempt to make our products as lightweight as possible to reduce associated transportation emissions.

Use Life of Our Products

Our products are designed to withstand typical wear and tear, allowing them to have extended useable lifespans. As part of our dedication to quality, we encourage our employees to improve the reliability of our products through our internal Reliability Awards program. Employees that are able to detect wear outs, prevent problems, and increase count/updates of actual failure modes are recognized with monetary awards on an annual basis. Not only does our employees' vigilance allow us to continue to maintain our high-quality standards, but it also allows our products to attain long lifespans. We provide ongoing service during the use life of our products.

We are dedicated to our customers and provide servicing of all products through the duration of their commercial availability. For some products, even after they are no longer being manufactured, a notice is sent to all relevant customers that servicing procedures may be extended and lifetime of the products potentially prolonged.

End of Life

Once a product has become obsolete and can no longer be serviced, our refurbishment program accepts return of older products and replaces parts to resell updated products to customers. Trade-in materials are then salvaged and sold on the recycling market where possible. Although the recyclability of our products varies, scrapping of an entire unit happens very rarely. Every product that comes into our service centers has a certain level of scrap that can be salvaged. Stainless steel, found in vacuum valves for instance, is separated out and sent back to our local scrap dealers.



Geode™ via drilling system for HDI PCB manufacturing and integrated circuit packaging

The Geode via drilling system applies our laser processing and engineering expertise to deliver breakthrough levels of productivity and yield. It is an advanced drilling solution for precision processing, using a laser drilling system that combines a powerful laser with a set of expert control capabilities.

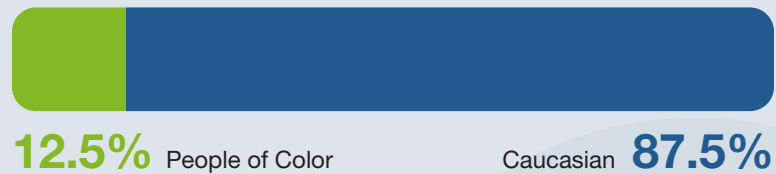
Furthermore, the Geode via drilling system is more compact, lightweight, and easier to service than other products on the market, leading to less emissions produced transporting the Geode via drilling system to our customers.



Workforce Metrics

At MKS, we are focused on building inclusive business processes and a work environment that fosters respect and belonging across all 10,000 of our employees. See our [Code of Business Conduct and Ethics](#) (“MKS Code of Conduct”) for more detail on our Equal Employment Opportunity commitment.

Executive Team Breakdown (as of 9/30/2022)



Employee Turnover

As employee turnover is an indicator of employee satisfaction, we monitor turnover globally. MKS has a stable and committed workforce, as evidenced by low voluntary turnover. Our 12-month rolling average for voluntary turnover at the end of 2021 was 7%. Our employee average tenure at the end of 2021 was more than 10 years.



In 2021, MKS became a corporate sponsor of Women in Manufacturing®, the only national trade association dedicated to supporting, promoting, and inspiring women in the manufacturing industry. Women in Manufacturing® has 10,000+ members from 2,000 manufacturing companies in 35 countries.

Diversity, Equity and Inclusion

Our commitment to diversity, equity and inclusion in recruiting, internal development, and talent retention is core to MKS. As part of our approach to ensure we hire and develop a diverse workforce, we are focused on recruiting talent across all backgrounds. We continue to enhance our efforts to provide our hiring managers with diverse candidate slates in our employee recruiting process. We are pleased to have expanded this work globally in 2021. New programs in 2021 and 2022 include:

- DE&I-focused partnerships and relationships with colleges, universities, STEM organizations and manufacturing organizations, which advocate for under-represented groups.
- Expanded outreach for multi-region candidate engagement including population-specific career fairs and marketing campaigns.
- Investments in new tools that increase proactive diversity sourcing, posting on diverse job boards, and providing resources for community outreach.

We also ensure pay equity throughout the organization, both within the United States and globally. We believe that an equitable pay system allows us to recruit and retain the best talent, boost participation of historically underrepresented groups in the workforce, and show our employees we value each of their contributions. MKS regularly conducts robust analyses of pay practices across gender globally and other diversity factors within the United States to detect any existing disparities within base and total compensation, taking prompt and effective action to correct any identified disparities. We are proud to report that our most recent analysis of our global employees' compensation has, with minimal required adjustments, resulted in equitable pay for our employees.

Additionally, our executives that report to the CEO have DE&I objectives as part of their annual goals.

Diversity Training

To support our team's effort to identify bias, in 2021, 150 of our top leaders around the world completed a six-week DE&I program designed by McKinsey & Company, a best-in-class consulting firm. In addition, we rolled out a Global Diversity course to all employees worldwide and have completed bias awareness training for our global Talent Acquisition team.



HIGHLIGHT

Since 2020, MKS has sponsored the participation of approximately 240 leaders in the Unlocking the Potential of Women course, facilitated by McKinsey & Company. By the end of 2022, an additional 125 leaders will have participated in this initiative. We are also committed to a partnership with the Society of Women Engineers – the world's largest advocate and catalyst for change for women in engineering and technology. These collaborative efforts are vital in creating lasting and meaningful change.



HIGHLIGHT

In 2021, Talent Management launched a "DE&I Discussion Series", a new diversity, equity, and inclusion learning and discussion opportunity, on the MKS company intranet. Each quarter, a DE&I-focused discussion series is released to activate an organization-wide dialogue on topics of inclusion and belonging, bias awareness and mitigation, diversity, and many others.



HIGHLIGHT

During 2021, MKS created a Change Agent Network, made up of 17 individuals from across the company and around the world, who took part in a rigorous 16-hour training to become certified trainers of The Change Cycle, which identifies the predictable stages that individuals experience with change. The focus in 2022 has been around building capabilities within the business community on 'Managing Change' in teams. The change agent network members created a calendar of learning offerings for stakeholders across the globe to help coach on 'How to Manage Change' within an organization and during day-to-day operations. MKS also launched a Change Management Handbook for leaders.

The results of the 2021 engagement on change management were 76% positive, which put MKS in the top quartile of benchmarked companies.

76%
Positive

Employee Learning and Development

At MKS, we believe our employees are the greatest investment in our future success. We continually invest in new ways to develop our people, encourage mutual respect, inspire innovative thinking, and create new opportunities for growth.

We are focused on internal development and advancement and providing professional growth opportunities for all of our employees. All MKS employees complete an annual performance evaluation to review strengths and areas of improvement, as well as to assess progress against career development goals.

Talent Development

As an employer, it is essential that we provide our employees with opportunities to grow professionally. To that end, we have developed a Management Academy, which consists of a series of courses designed to strengthen our employees' business skills as they advance in management. Two multi-day courses have been launched through this program: Management Foundations, a course about essential elements and skills needed for effective people management, and Management Essentials, a course focused on training new managers to understand the role and expectations of a new manager. We also launched our Leadership Academy, designed to develop the skills needed for our current and future leaders. The first course we offered under our Leadership Academy is our Emerging Leaders course, a one-year program focused on early career high potential professionals. This program includes executive leadership interaction, team projects, 360 feedback and individual coaching, business simulation, and leadership development practices.

MKS Graduate Student Program

2022 marks the third year of our MKS Graduate Student Program, and the first year the program is global. Over 30 Graduate Student Interns interned with us in eight different countries. 70% of our U.S. Graduate Student Interns became full-time MKS employees in 2021. We plan to continue to offer the program in 2023.

Employee Engagement and Recognition

Employee Engagement

Our global workforce is vital to our success. We are proud of our high level of engagement and we work hard to successfully maintain it.

Our executive leadership team conducts monthly calls with employees around the world to help ensure employees feel connected and have visibility into the progress of the company. We also conduct check-ins through employee surveys to gather valuable feedback on how employees are handling remote work changes and how management can increase employee engagement. We continue to offer training courses focused on working and managing remote teams. We also offer employees a global flexible work policy, which is subject to the ability of a job to be done remotely.

In 2021, we rolled out our first global employee engagement survey, and were pleased to have a 74% participation rate. Our positive results in the categories below compared to the top quartile benchmark data (listed in blue):

(Top Quartile Benchmark)

80% MKS (81%)
Trust

79% MKS (81%)
Involvement & Belonging

76% MKS (76%)
Change Management

76% MKS (78%)
Work/Life Balance

74% MKS (78%)
Manager Effectiveness

74% MKS (82%)
Diversity & Inclusion

These scores are very encouraging considering it was our first engagement survey. We still have more work ahead of us to create an environment that remains competitive in the top quartile of companies with the best engagement results. To respond to our survey, we chose three key areas to focus on globally: MKS Vision – tying our daily work to the corporate vision; Diversity, Equity, and Inclusion – implementation of new learning programs; and Innovation – everyone can innovate.

Our second annual survey launched in August 2022, and we achieved 84% overall participation in just two weeks, a significant increase in the number of employee voices heard. We are now reviewing the results and will be developing high level global and detailed divisional action plans. We plan to continue soliciting employee feedback by deploying an engagement survey every year.



Open-Door Policy

Our Open-Door Policy helps ensure that all voices are heard by encouraging employees to reach out to any member of management or Human Resources to raise concerns. This policy is incorporated into all our employee handbooks and is part of other policies, such as our policy on Equal Employment Opportunity and Harassment Prevention. Our Open-Door Policy has both formal and informal communications options. Employee concerns are handled in a timely and confidential manner.



Employee Recognition

We have an Employee Recognition and Reward Program for all employees that allows recognition by peers and by managers for exceptional performance and significant contributions to MKS. Employees are encouraged to nominate co-workers who display our Guiding Principles in their approach to work and then selected employees are recognized with a cash bonus.

Employee Benefits and Well-being

MKS recognizes the importance of the health, well-being, and safety of our employees and their families and provides support to help our employees live healthy lives.

Compensation and Benefits

MKS is committed to providing a total compensation package that attracts, motivates, and retains applicants and employees. This includes rewarding employees' sustained performance and results with an annual performance bonus and/or profit-sharing program for most employees.

Some key benefits that we provide our employees include:



Adoption assistance



Memorial scholarships for children of employees



Professional development assistance



Holiday, vacation, and sick time off



Health and welfare benefits



Retirement savings plan



Health and Wellness

We offer all MKS employees and eligible family members a full range of health and wellness programs, as well as many clinical and administrative services, through the Employee Assistance Plan (EAP) Health Advocate.

MKS has incorporated the Vitality US wellness program into its benefits program to help educate, motivate, and assist employees in realizing the value of making healthy choices and adopting healthy behaviors. Our Mental Health Advocate program offers webinars on understanding how to identify and cope with stress and anxiety and how to seek help when needed.



Employee Safety

MKS is committed to providing a safe workplace for all employees. We accomplish this through compliance with applicable laws and regulations regarding workplace safety, including recognition and control of workplace hazards, tracking injury and illness rates, and maintaining detailed emergency and business continuity plans.

MKS provides mandatory environmental, health, and safety training to ensure all employees are provided with the knowledge to perform their jobs safely and to protect the environment. We have a quarterly safety review in place and have standardized safety training across our divisions to facilitate safer work environments and enable us to track safety metrics on a global level.

HIGHLIGHT

In 2021, we developed a formalized Global MKS Management System for Environmental, Health, and Safety to protect MKS' employees, other stakeholders, and the environment. In 2021 and into 2022, our EHS team developed a strong foundation and structure for MKS' corporate EHS system that will be implemented in a stepwise process across the organization into 2026.

The objectives of MEHS are to:

1.

Ensure compliance with MEHS legal requirements and MKS's Global EHS Requirements (referred to as "Process & Compliance").

2.

Ensure that facility EHS processes are managed using the ISO 14001 and ISO 45001 risk-based EHS management approach.

3.

Drive ownership of EHS management through cross-functional leadership and engagement of all employees (referred to as Culture), and improve EHS performance (referred to as Results).

Strategic Dimensions of our MEHS Program

People & Environment Sustainability

A

Foundations & Structure

B

Operational Discipline

C

Mindset & Culture

D

Governance & Compliance

EHS Golden Rules

The 10 EHS Golden Rules are meant to ensure that our employees are working in a safe environment. We require a commitment from all of our employees to fully understand and embrace these rules.

1. Leadership & Accountability
2. Lockout – Tagout (LOTO)
3. Ergonomics
4. Machinery Safety, including Laser Safety
5. Traffic Vehicles, Forklifts, Pedestrians
6. Hazardous Substances Management
7. Permit to Work – (PTW)
8. Personal Protective Equipment
9. Site Emergency Preparedness
10. Sustainability, Waste & CSR

See our [Environmental Health and Safety Policy](#) here for further details.

To measure the effectiveness of our safety program, we track global safety metrics. We break down these metrics by region, incident root causes, injury type, etc. to facilitate better understanding of opportunities for improvement at specific regions or sites.

2021 GLOBAL SAFETY METRICS

Total Recordable Incidents	53
Lost Time Incidents	42
Total Recordable Incident Rate*	0.96
Lost Time Incident Rate**	0.76



*TRIR = (Lost Time Cases + Recordable Cases + First Aids) / worked hours * 200,000

**LTIR = (Lost Time Cases * 200,000) / worked hours

Product Safety

Product safety considerations are fundamental to our business practices. We target product and operator safety requirements to the highest level required in the different regions in which we operate.

Our three business divisions are vastly different in terms of product portfolio and safety considerations are unique to each product. MKS' products are designed, manufactured, and tested for safety to conform with essential requirements of customers, regulations, and other safety testing standards. Examples of measures we designed and implemented to enhance the safety of our customers and technicians interacting with our products include:

- For laser safety, we incorporate interlocks, laser beam paths, and other processes behind the equipment where possible for operator safety. We attempt to enclose the laser beam path as much as possible with tubes around different sections to limit reach and enhance serviceability and safety for maintenance teams and operators.
- For Multi-Layer Ceramic Capacitors (MLCC), high voltage testing is completed and a specially designed plate is manufactured into the machine for operator safety and to ensure the taking of regular test points can be done without risking operator safety. We have manufactured a whole subset of safety circuits and systems with redundancies in the unlikely event of a failure.
- For the Geode™ via drilling system, we prioritized the product's design to enable greater safety for technicians during preventative maintenance. We designed the height of the system to offer operators accessibility to the machine's interior without having to use a ladder.

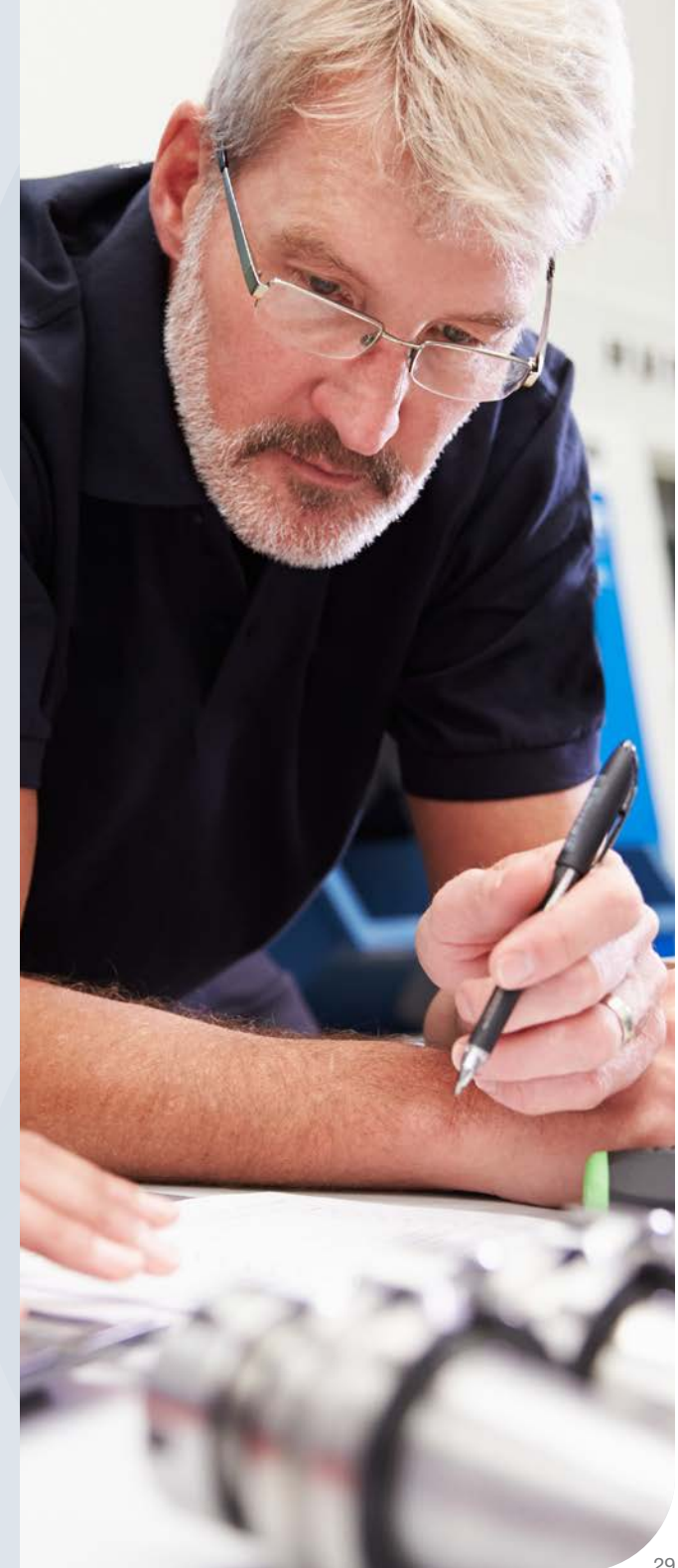
Product Quality

At MKS, we have a focus of continuous improvements toward zero defects and a mission to provide high-quality and reliable products through design and operational excellence. Our Quality Management System (QMS) is compliant with the ISO Standard. We utilize a QMS system maturity model that results in high and consistent levels of business process performance and customer satisfaction.

We utilize more advanced QMS maturity tools that evaluate business processes against four specific requirements:



Our continuous improvement program includes driving product and process performance enhancements using structured problem solving methods (K-T, 5-why & 8-D) with data driven solutions. Key metrics of our products and QMS program are reviewed monthly and quarterly at all levels, including across MKS Senior Management.





Supply Chain

A critical part of our business strategy is cultivating strong relationships with our supply chain. As part of our responsible and sustainable sourcing strategy, we are committed to working in partnership with our suppliers to set clear expectations in how we work together. Our goal is to create partnerships that support responsible and ethical business practices, conduct, and compliance with applicable laws and regulations, resulting in better outcomes for our employees, our businesses, and our environment.

Responsible Business Alliance Code of Conduct

MKS has adopted the industry standard Responsible Business Alliance (“RBA”) Code of Conduct as its Supplier Code of Conduct. The Supplier Code of Conduct provides standards and guidelines of conduct for all suppliers doing business with any MKS organization worldwide. MKS also provides a reporting mechanism for suppliers to report any violations or suspected violations of the Supplier Code of Conduct. MKS’ reputation is built on honesty, integrity, quality, and trust. We expect our supply chain partners to conduct themselves in the same manner, regardless of local business practices or social customs. We are actively evaluating processes to better manage our supply chain and ensure our suppliers are complying with our Supplier Code of Conduct. Please see our [Supplier Code of Conduct](#) for further details.

We recently engaged a third party to help us understand our suppliers’ ESG initiatives and policies. Later in 2022, we plan to send a survey to our top suppliers on several different topics and use this as a baseline to understand where our suppliers stand today.

Conflict Minerals

MKS is committed to identifying any of its suppliers who source “Conflict Minerals” from the Democratic Republic of the Congo (DRC) region from conflict sources. We expect our suppliers to partner with us in this endeavor, regardless of whether they are subject to the Conflict Minerals Rule (as defined below), by providing us with all necessary declarations as set forth under Section 1502 of the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act (Conflict Minerals Rule). Please see our [Conflict Minerals Policy](#) for further details.

Community Involvement and Charitable Giving

MKS empowers our global sites to give back to the communities where our employees live and work.

Some 2021 initiatives that MKS participated in include:

- Making a charitable contribution to the International Committee of the Red Cross to support their efforts in aiding civilians and providing essential services in Ukraine.
- Helping families after tornadoes hit Western Kentucky, causing catastrophic damage. Employees packed boxes with toiletries, necessities, and stuffed animals for children.
- Making a charitable contribution to the Human Rights Campaign, one of the world's largest LGBTQ+ advocacy organizations.
- Making a charitable contribution to the National Society of Black Engineers, to honor Black leaders and their achievements throughout our history.

MKS Memorial Scholarships

MKS provides four college scholarships dedicated in the memory of four long-term employees who lost their lives to cancer. Their work ethic, dedication, loyalty, and willingness to go the extra mile reflected the very best of MKS tradition, and these same qualities are sought in scholarship recipients.





About This Report and Indices

ENVIRONMENTAL, SOCIAL, GOVERNANCE REPORT 2022



About This Report

This 2022 ESG report is MKS' second report and was prepared in alignment with the Sustainability Accounting Standards Board (SASB) for our industry and incorporates the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) into our ESG reporting strategy and transparency efforts.

See our [SASB index](#) for more information.

See our [TCFD index](#) for more information.

The quantitative environmental footprint metrics included in this report cover MKS owned and leased facilities with available data for the 2021 calendar year. Given the Atotech acquisition was completed in 2022, environmental footprint metrics for Atotech are not included in this report. Please refer to the Environmental Metrics page of this report for specific data coverage information. All information, data, and statistics provided by third parties have not been verified. MKS engaged HXE Partners to support with content development, quantitative data collection and calculations, and report design. Our environmental information included in this report is preliminary, unaudited, and subject to revision.

This report contains forward-looking statements regarding MKS, including statements about our strategy, our goals, and our commitments. These statements are subject to a number of risks and uncertainties and are not guarantees of future performance. Actual events or results may differ materially from those in these forward-looking statements. Factors that could cause actual events to differ materially from those in these forward-looking statements are described in Exhibit 99.1 to MKS' Current Report on Form 8-K filed with the SEC on August 17, 2022, and any subsequent Quarterly Reports on Form 10-Q. All forward-looking statements are based on MKS' current estimates, projections, and assumptions, and we assume no obligation to update them.

Sustainability Accounting Standards Board (SASB) Framework



SASB standards enable businesses around the world to identify, manage and communicate financially-material sustainability information to their investors. SASB provides a complete set of 77 globally applicable industry-specific standards that identify the minimal set of financially-material sustainability topics and their associated metrics for the typical company in an industry. The following table references topics from the “Electrical & Electronic Equipment” industry standards. Upon reviewing both industry standards, we included relevant topics to our strategy and operations.

TOPIC	SASB CODE	DESCRIPTION	RESPONSE (2021)
Energy Management	130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	(1) 140,946 MWh. (2) 122,695 MWh. (3) We are in the process of tracking the renewable energy procured for select sites in the United States.
Hazardous Waste Management	150a.1	Amount of hazardous waste generated, percentage recycled	We have not disclosed the amount of hazardous waste generated and recycled on a consolidated basis but plan to do so in the next few years.
	150a.2	Number and aggregate quantity of reportable spills, quantity recovered	We do not currently track the number of reported spills on a consolidated basis but are evaluating a process to do so in the future.
Product Safety	250a.1	Number of recalls issued, total units recalled	In 2021, we had 15 recalls for a total of approximately 5,400 units. No safety-related issues were reported that corresponded to the recalls.
	250a.2	Total amount of monetary losses as a result of legal proceedings associated with product safety	\$0 monetary losses as a result of legal proceedings associated with product safety.
Product Lifecycle Management	410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	We do not track products that contain IEC 62474 declarable substances. However, we are in the process of tracking declarable substances according to REACH for certain product lines. We also track RoHS compliance for specific products that fall under the RoHS Directive.
	410a.2	Percentage of eligible products, by revenue, that meet ENERGY STAR® criteria	We do not manufacture products that are eligible for ENERGY STAR.
	410a.3	Revenue from renewable energy-related and energy efficiency-related products	Our products are used in a broad range of industries and applications. Our products contribute to indirectly driving positive environmental and social impact and progress, including through supporting the development of renewable energy infrastructure, enhancing health and safety for the customers who use our products, and their customer’s increasing energy and water efficiencies in certain production processes. We do not publicly disclose revenue generated from renewable energy-related and energy efficiency-related products.
Materials Sourcing	440a.1	Description of the management or risks associated with the use of critical materials	We comply with our regulatory obligations with respect to forced labor and conflict minerals. We have a process to identify if any of our suppliers are on watch lists or have been debarred to ensure that we are doing business with permitted and reputable suppliers, and we require our suppliers to do the same. We have a program that helps identify general supply chain continuity risks. and with this information, we can implement our supplier diversification strategy, particularly for our critical materials. We continue to review supply chain continuity risks for products containing critical materials and will apply risk mitigation steps where needed.

TOPIC	SASB CODE	DESCRIPTION	RESPONSE (2021)
Business Ethics	510a.1	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behavior	Our Code of Business Conduct and Ethics establishes our standards of conduct in key areas, such as: preventing bribery and corruption, data privacy, harassment/sexual harassment prevention, workplace violence, human trafficking and modern slavery, and a whistle-blower hotline. Our Anti-Corruption Policy and Procedures educates our employees regarding their obligations under anticompetition laws to help ensure compliance with these laws, and prohibits payments or anything of value to improperly influence someone to act or refrain from acting in a way that benefits MKS. Our MKS Human Rights and Labor Standards Policy applies to all of our workers, including temporary, migrant, student, contract, and direct employees. We have a management system for assessing corruption and bribery risks associated with our business channel partners, including our sales representatives and distributors.
	510a.2	Total amount of monetary losses as a result of legal proceeding associated with bribery or corruption	\$0 monetary losses as a result of legal proceedings associated with bribery or corruption.
	510a.3	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	\$0 monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations.
Activity Metrics	000-A	Number of units produced by product category	Proprietary, confidential information.
	000-B	Number of employees	At year-end 2021, we had approximately 6,400 employees globally and approximately 50% of employees were based in North America.

Task Force on Climate-related Financial Disclosures



The Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) is a market-driven initiative, set up to develop a set of recommendations for voluntary and consistent climate-related financial risk disclosures in mainstream filings. The work and recommendations of the Task Force help firms understand what financial markets want from disclosure to measure and respond to climate change risks and encourage firms to align their disclosures with investors' needs. The responses below represent our current practices to date, with the exception of our Scope 1, 2, and 3 emissions (under Metrics and Targets), which represent our GHG emissions for the 2021 calendar year only.

TOPIC	RESPONSE
GOVERNANCE	
Describe the board's oversight of climate-related risks and opportunities	Our Nominating and Corporate Governance Committee of our Board of Directors oversees our ESG Program. Our Board of Directors is informed of our climate-related risks and opportunities and the actions we are taking with respect to our ESG program. We currently do not have quantitative environmental targets in place, but plan to develop and share these in the next few years.
Describe the management's role in assessing and managing climate-related risks and opportunities	The ESG Steering Committee meets on a monthly basis and consists of key members of the executive leadership team spanning Operations, Legal, Human Resources, Marketing, and Finance. The Steering Committee reports to the CEO and the ESG Committee Program Leader presents to our Nominating and Corporate Governance Committee and our Board of Directors.
STRATEGY	
Climate-related risks and opportunities identified over the short, medium, and long term	<p>We recognize climate-related risks may impact our business practices. We regularly conduct risk assessments for physical climate-related risks to our direct operations in partnership with our property insurer, but we do not have a process for determining our most material climate-related risks.</p> <p>Given the products we manufacture, we are well-positioned to capture related opportunities that can expand our business and continue to diversify our service offerings. Currently, we have identified renewable energy, particularly solar, as an application that presents opportunities for us. In addition, an increasing number of regulations requiring more stringent management of natural resources, particularly water, are driving demand from our customers for products that can be manufactured using more efficient production processes. Some of our major customers are already beginning to request sustainability-related considerations and attributes in their product specifications.</p>
Impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	We recognize that there are climate-related risks and opportunities relating to our business practices. Due to the opportunities that present themselves in the form of increased demand for renewable energy production and increasingly efficient products, we have developed products applicable to that market and will continue to conduct research and development to expand our capabilities in these areas. We look for ways to apply our products to unique markets and drive innovation. One example of how we facilitate innovation is through our annual President's Technology Incubator Grant (PTIG) program, which funds technical innovations across the Company. The goal of the program is for these ideas and innovations to develop into new products and solutions that address the critical needs of our customers.
Resilience of strategy using a 2°C or lower scenario	We have not conducted a scenario analysis at this time.

TOPIC	RESPONSE
RISK MANAGEMENT	
Processes for identifying and assessing climate-related risks	Although we recognize that climate risk is relevant to our organization, climate-related risks are not currently separated out in our overall risk management practices. However, we plan to include climate-related risks more explicitly into our Enterprise Risk Management (ERM) process in our next ERM cycle. Our ERM process consists of a top-down ranking of corporate risks – with those that are flagged frequently weighted more significantly. A top five emerging risks list and a top five current risks list are developed, and an action plan prescribed. For risks that fall outside of our top five risks, there is not an executive-level of focus. Please see the “Integration of risk processes into overall risk management” section of this framework for further details on our ERM process.
Processes for managing climate-related risks	Climate-related physical risks are assessed by FM Global, our property insurance provider. In partnership with our property insurer, we have conducted preliminary climate-risk assessments on windstorm, flood, wildfire, and earthquake exposure topics for some of our sites, including our sites in Irvine, CA, Wilmington, MA, and Loiret, France. Following these risk assessments, we worked with our property insurer to develop response and mitigation plans. However, we currently do not have a formalized process for managing non-physical climate-related risks.
Integration of risk processes into overall risk management	<p>MKS maintains a robust, ongoing ERM process to identify, assess, prioritize, and respond to risks, which includes a formal risk assessment.</p> <p>After a formal risk assessment is completed, an action plan is developed for each top risk and progress on the risk response is shared quarterly with the CEO. Based on the results of our 2021 risk survey, MKS management concluded our risk-taking culture was appropriately balanced and showed excellent progress from our 2018 survey.</p> <p>As previously stated, climate-related risks are not currently separated out in our overall risk management practices, but we plan to include climate-related risks more explicitly into our future ERM processes.</p>
METRICS AND TARGETS	
Metrics used to assess climate-related risks and opportunities	We currently track environmental metrics for our operations, including our Scope 1 and 2 GHG emissions, energy usage, and water usage. We also track our Scope 3 emissions from business-related travel and upstream transportation and distribution. We plan to continue increasing the data collection for these metrics, as well as begin collecting waste data for our operations and additional Scope 3 metrics.
Scope 1 and 2 GHG emissions (for calendar year 2021)	<p>Scope 1 Emissions: 3,575 mTCO₂e</p> <p>Scope 2 Emissions: 65,185 mTCO₂e</p> <p>Scope 3 Emissions (from Business Travel and Upstream Transportation and Distribution): 32,170 mTCO₂e</p> <p>Note these Scope 1 and 2 emissions represent emissions only from the data we have available. Please see the Environmental Metrics section of this report for more information on our data coverage.</p>
Targets used to manage climate-related risks and opportunities and performance against targets	This is our second year reporting environmental metrics for our operations and facilities. We strive to continue increasing the data collection of our GHG emissions, energy usage, and water usage, and plan to begin collecting waste data next year. We have made considerable progress in data collection for our Scope 1 and 2 emissions; given our recent acquisition of Atotech, we plan to develop a full combined baseline for Scope 1 and 2 emissions and plan to set a combined target in the future.