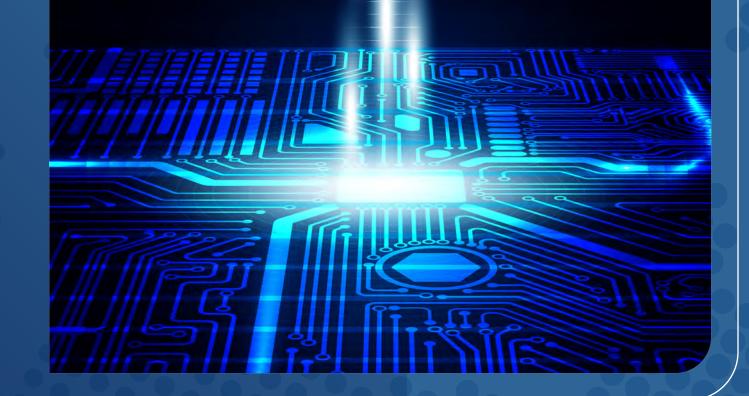
## **CORPORATE**

**SOCIAL** 

**RESPONSIBILITY** 

**REPORT 2021** 







# **TABLE** of **CONTENTS**

Business Overview  Business Mix and Key Metrics  Key Product Highlights	05
Environment  Environmental Management System	10 11

	Social14
KK /	Culture and Values15
	Diversity, Equity, and Inclusion16
	Employee Engagement, Training, and Development18
	Occupational Health and Safety20
	COVID-1921
	Product Safety22
	Supply Chain23
	Community Involvement and Charitable Giving24
7	Corporate Governance25
il,	Board Member Demographic Highlights26
	Board of Directors Oversight of CSR and Risk Management
	CSR Policies28
	About this Report and Indices29
	Sustainable Accounting Standards Board (SASB) Framework
	Task Force on Climate-related Financial Disclosures (TCFD) Framework33





at the control of the

MKS' mission is to be the innovation leader and trusted partner who pushes the boundaries of possibility. Our success has been built upon our ability to work closely with our customers to understand their critical issues and then develop the appropriate solutions together. We are delighted to share with you our first Corporate Social Responsibility (CSR) Report, which highlights our commitment to environmental, social, and governance issues.

2020 was a trying and complex year. Unprecedented challenges arose – from a global pandemic to a pivotal awakening to the realities of systemic racism. 2020 tested our corporate mission and guiding principles and made us reassess our commitments to our stakeholders. Our foremost priorities continue to be supporting the safety and well-being of our global workforce and fostering diversity, equity, and inclusion in our work places. To that end, we implemented COVID-19 safety protocols and shifted to a "work from home" environment for a significant portion of our workforce. In 2020, our leaders around the globe completed a diversity training program and our goal is to extend diversity training to all our employees. We also embarked on several initiatives to drive more diversity in our external hiring – and we are already seeing positive results.

We acknowledge that the effects of climate change will continue to cause costly disruptions to our society. We are proud of the broad range of applications for our products. In particular, our products contribute to driving positive environmental and social impact and progress, including through supporting the development of renewable energy infrastructure, enhancing public health and safety, and increasing energy and water efficiencies in certain production processes. Our products enable our customers to be more successful, our planet more sustainable, and our communities safer and more productive.

This is our first year reporting on greenhouse gas (GHG) emissions, energy usage, and water usage, and we intend to continue to improve our data collection and reporting. We plan to evaluate setting environmental targets and developing programs for environmental and social management as we collect more data from our operations.

We believe it is critical to create relationships with our stakeholders that support responsible and ethical business practices, conduct, and compliance, which in turn benefits our employees, our environment, and our business.

Frilly Z

John T.C. Lee

President and Chief Executive Officer





## BUSINESS MIX AND KEY METRICS

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. These innovations have driven accelerated roadmaps for Semiconductor, Industrial, Life and Health Sciences, Research, and Defense markets.

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.



We currently have over 2,100 patents worldwide.

\$2.3 billion<sup>2</sup>

2020 revenue

\$853 million

2010 revenue



20+

Acquisitions



32,000+

**Products Offered** 



5,400+

Global Employees -Workforce Doubled Since 2010

## Three divisions



LIGHT & MOTION (L&M)



Our products are derived from our core competencies in:

- » Pressure measurement and control
- » Flow measurement and control
- » Gas and vapor delivery
- » Gas composition analysis
- » Electronic control technology
- Reactive gas generation and delivery
- » Power generation and delivery

- » Vacuum technology
- » Lasers
- » Photonics
- » Optics
- Fiber optic temperature sensing
- » Precision motion control
- » Vibration control
- Laser-based manufacturing systems solutions

Innovation is our underlying growth engine – inventions lead to new product

introductions, which lead to design wins, which lead to long-term revenue.

Our relentless focus on innovation starts with taking the time to truly understand our customers' most complex problems – and then designing



Our primary served markets include semiconductor, industrial technologies, life and health sciences, and research and defense.



# When our cus

#### INTEGRITY STARTS WITH TRUST

innovative solutions to solve them.

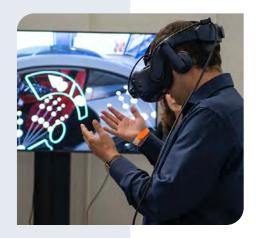
LEADING THE WAY THROUGH INNOVATION

When our customers have a complex problem to solve, they turn to MKS as a trusted partner. We are proud of the strong relationships we have thoughtfully cultivated over years of technical and application collaboration. Because of this solid foundation built on mutual trust, our customers, who have strong pipelines, engage us in their new programs. We consider this a high honor. We also partner closely with our suppliers. It is the way we do business, and it is our investment in ensuring that our supply chain can deliver critical products when our customers need them.



## **PUSHING THE BOUNDARIES OF POSSIBILITY**

The solutions we create bring the future to life – that is what pushing the boundaries of possibility is all about. Today's most exciting technologies such as 5G wireless communications, artificial intelligence, augmented reality, renewable energy, and autonomous vehicles are all enabled by our broad portfolio of vacuum products, power solutions, gas delivery products, plasma generation solutions, ozone solutions, analytical control solutions, lasers, photonics, precision optics, motion, fiber optic sensing solutions, and PCB laser processing equipment.





## **KEY PRODUCT HIGHLIGHTS**

Cutting edge science and engineering are starting points for us. Equally important in our desire to help our customers succeed is how we listen, collaborate, and solve the hardest technology challenges together.

Our products are used in a broad range of industries and applications. In particular, 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, enabling environmental safety compliance, and increasing energy and water efficiencies in certain production processes.

#### RENEWABLE APPLICATION



#### **G-Series Mass Flow Controller (MFC)**

Our G-Series MFC controls and delivers gas species used in the fabrication of photovoltaic (PV) cells. Precise measurement, management, and control of gas pressures are imperative to PV cell fabrication.



#### Talon® Lasers

Our Talon ultraviolet and green pulsed lasers are used in the fabrication of photovoltaic (PV) cells. The Talon laser's high energy levels at rapid pulsing rates with precise energy control and near-perfect focus are necessary for high-throughput, high-yield manufacturing of high-efficiency PV cells.

### **INCREASED EFFICIENCY**



#### **LIQUOZON® Ozonated Water Delivery System**

Our LIQUOZON water delivery system provides a "green alternative" to the traditional sulfuric peroxide mix (SPM) washing process, which uses toxic acids and must be carefully disposed of. Ozone is an alternative cleaning agent that naturally breaks down to oxygen and water. In fact, 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. We have already installed our first unit in a large semiconductor fab.



#### ENHANCED HEALTH AND SAFETY



#### **Lasers for Implantable Medical Device Manufacturing**

Some of our lasers are used in the manufacturing process of medical devices, such as the laser cutting of implantable stents and hole drilling in catheters, and enable the manufacturing of these devices with fine dimensions and features, and with no or minimal post processing.



#### **Optical Filters for DNA Sequencing**

A polymerase chain reaction (PCR) machine (thermal cycler or DNA amplifier) can produce thousands or millions of DNA copies (RNA) of a specific segment. Our precision optical filters are used in PCR applications such as medical diagnostic testing, including for COVID-19, gene analysis, evolutionary study between organisms, diagnosing long term diseases with help of DNA structure, and forensics.

## **ENVIRONMENTAL SAFETY AND COMPLIANCE**



#### **AIRGARD® Ambient Air Monitoring**

Our AIRGARD analyzers provide ambient air monitoring to detect pollutants and toxic chemicals near critical public infrastructure as well as industrial plants.



#### MultiGas<sup>™</sup> Fourier Transform Infrared (FTIR)

Our MultiGas FTIRs provide Chemical Emission Stack monitoring of nitrogen oxide, carbon monoxide, sulfur dioxide, ammonia, hydrochloric acid, hydrofluoric acid, and volatile organic compounds from power generation and incineration sources to ensure regulatory compliance.

#### SUSTAINABLE AND ETHICAL APPLICATION



### Microwave Generators for 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. Labcreated diamonds are chemically and optically identical to their mined counterparts and are responsibly sourced in accordance with international human rights and labor standards as well as being CarbonNeutral® product certified.







## **ENVIRONMENTAL MANAGEMENT SYSTEM**

Environmental issues relevant to MKS are managed by our cross-functional Corporate Social Responsibility (CSR) Steering Committee that meets throughout the year. This Committee reviews progress on our global CSR initiatives, including environmental initiatives, and provides updates and recommendations to the executive leadership team and the Board of Directors' Nominating and Corporate Governance Committee. MKS management holds the responsibility and 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.

Furthermore, we are committed to complying with all applicable product environmental laws and regulations as per the application of the following council directives:

- + CE markings, including Electromagnetic Compatibility (EMC), Low Voltage (LVD), Medical Device (MD), Restriction of Hazardous Substances (RoHS), etc.
- + REACH (Registration, Evaluation, & Analysis of Chemicals) Regulation EC 1907/2006, Article 33
- + China CCC Mark

### We are committed to:



Operating our business in an environmentally and socially responsible manner



TEST .

Conserving natural resources and reducing the environmental burden of waste generation and emissions to the air, water, and land

Working together with our employees, customers, communities, and other interested parties to continuously improve our environmental programs

Four of our sites are certified to ISO14001-2015. We are continuing to evaluate certification for additional sites and are enhancing our corporate-wide Environmental Management System (EMS).



## PRODUCTS AND 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 semiconductor, industrial, life and health sciences, and research and defense markets, and are applied in areas that support development of renewable energy infrastructure, enhance health and safety, and increase efficiency during production.

To facilitate innovation, 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

Vision Vi

innovations to develop into new products and solutions that address the critical needs of our customers.

For instance, given the world's need to transition to a low carbon economy, we have seen accelerated adoption and manufacture of technology to generate renewable energy – in other words, energy that does not contribute to greenhouse gas emissions. We recognize the demand for renewable energy will only continue to grow. As such, supporting renewable energy development is important to us, especially in the products that we bring to market.

Although we do not directly manufacture renewable energy products, we manufacture products that are critical to the renewable energy manufacturing process, such as our flow, valve, and pressure measurement products, mass spectrometers, lasers, photonics components, and solar simulators. These products are used by manufacturers to optimize processes in the fabrication of PV solar cells and solar panels, and overall help improve solar panel sunlight-to-electricity conversion efficiencies compared to traditional processes.





Our products contribute to improving energy efficiency in the manufacturing of LED or solid-state lighting and carbon-fiber materials for transport.

They also help improve the efficiency and reduce the environmental impact of our customers' manufacturing processes. For instance, our ultra-high concentration dissolved ozone systems are used in the photoresist strip market as an environmentally friendly alternative to aggressive acid mixes. Please see our **Supporting Green Energy Development** page for further details on our product applications.



## 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 product, 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. Furthermore, during our products' life cycles, we provide ongoing service while the products are still being manufactured.

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. Tradein 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 in particular, found in vacuum valves for instance, is separated out and sent back to our local scrap dealers.

## Geode<sup>™</sup> CO<sub>2</sub> via drilling system for HDI PCB manufacturing and integrated circuit packaging

The Geode  $\mathrm{CO}_2$  via drilling system applies our laser processing and engineering expertise to deliver breakthrough levels of productivity and yield. It is the most advanced drilling solution for precision processing, using a laser drilling system that combines a powerful  $\mathrm{CO}_2$  laser with a set of expert control capabilities. Furthermore, the Geode  $\mathrm{CO}_2$  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  $\mathrm{CO}_2$  via drilling system to our customers.





## ENVIRONMENTAL METRICS

This is our first year reporting environmental metrics for our operations and facilities.

This year, we collected data from our offices and facilities, mostly in the U.S., on our GHG emissions, energy consumption, and water consumption. We strive to continue collecting this data across more of our MKS sites globally and plan to introduce new metrics (i.e. waste) in the future. For 2020, we collected Scope 3 data for business travel but plan to evaluate how best to capture other Scope 3 emissions categories, including product usage. We plan to evaluate setting future environmental targets and developing programs for operational energy, water, and waste management.



GHG Emissions	Data Coverage	
Scope 1 Emissions	2,316 mTCO2e	34%¹
Scope 2 Emissions (Location-Based)	29,033 mTCO2e	66%¹
Scope 3 Business Travel Emissions	1,611 mTCO2e	100%²
Total Scope 1, 2, and 3 Emissions	32,960 mTCO2e	-



Energy Management	
Electricity Usage	87,130 MWh
Fuel Usage (Natural Gas & Propane)	11,476 MWh
Energy Usage	98,605 MWh
Data Coverage (by square feet area)	Electricity: 66% / Fuels: 34%



Water Management		
Water Usage	60,783 kgal	
Data Coverage (by square feet area)	47%	

<sup>&</sup>lt;sup>1</sup> 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 as a percent of MKS worldwide sites' total square feet area. We do not currently track Scope 1 emissions from potential refrigeration leakages. See Energy Management table for additional detail on data coverage.

<sup>&</sup>lt;sup>2</sup> Data coverage for Scope 3 emissions includes all US-based employees only.





## CULTURE AND VALUES

Great people make all the difference between a good company and a great company. We invest in empowering our people to be leaders and thinkers who push the envelope on new ideas and innovation. We honor mutual respect and constructive candor and we are committed to diversity, equity, and inclusion (DEI) across our global operations. We believe our diverse, dedicated, and talented team differentiates us and gives us a competitive advantage.









### **GROW**

We strive to deliver sustainable and profitable growth by focusing on three key areas: solving our customers' most critical problems, identifying and investing in high growth areas, and leading in financial performance.

#### WIN

We believe in the power of collaboration. To win as a team, we encourage decision-makers to work together and think holistically about the impact of each choice on the enterprise, the group, and individual team members.

### **INNOVATE**

Innovation requires a blend of curiosity and courage. We empower our people to question, challenge, and think beyond what we've always done. "What if" is a welcomed phrase at MKS. Our teams are always exploring new ideas and approaches to drive an accelerated cadence and inspire breakthroughs; we stay vigilant for new opportunities and potential disruptions.

#### **OWN**

We all have a stake in our company's success, reflected in our commitment to our customers and suppliers. We focus on being accountable at both the team and individual levels, and we strive for continuous improvement to ensure we deliver with excellence every day.



## **DIVERSITY, EQUITY, AND INCLUSION**

At MKS, our dedication to diversity, equity and inclusion (DEI) is core to our culture. Celebrating who we are fuels innovation, generates strong results, and enables our employees to succeed.

MKS is committed to providing opportunities for employment and advancement to all employees and applicants. To that end, we are focused on building inclusive business processes and a work environment that fosters respect and belonging. See our **Code of Business Conduct and Ethics** ("MKS Code of Conduct") for more detail on our Equal Employment Opportunity commitment.

## **Our Workforce Diversity**

As part of our approach to ensure we hire and develop a diverse workforce, we are focused on recruiting talent across all backgrounds.





In addition to hiring diverse external candidates, 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.

Our commitment to diversity, equity and inclusion in recruiting, internal development, and talent retention is further supported by our efforts to ensure pay equity throughout the organization, both within the U.S. 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 and other diversity factors within comparator groups to detect any existing disparities within base and total compensation, and we have taken prompt and effective action to correct any identified disparities. We are proud that our most recent analysis of U.S. employees' compensation has, with minimal required adjustments, resulted in full pay equity for our U.S. employees. MKS is excited to have kicked off our 2021 pay equity analysis for employees located outside of the U.S.





## **Diversity Training**

We recognize that fostering an inclusive work environment involves dedication and buy-in from all of our leaders and employees. To support our team's effort to identify bias, in 2020, over 120 of our top leaders around the world completed a six-week diversity, equity and inclusion program hosted by a best-in-class DEI consulting firm. We

received overwhelmingly positive feedback from participants and rolled out the training to an additional 120 leaders in the spring of 2021. In addition, in 2021 we rolled out a Global Diversity course to all employees worldwide and are now launching bias awareness training for our global Talent Acquisition team.



## EMPLOYEE ENGAGEMENT, 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.

## **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, a series of courses designed to support our employees as they advance in management. Two courses have been launched through this program: **Management Foundations**, a course regarding common successful management and leadership practices and approaches used globally, and **Management Essentials**, a course focused on management basics for newly hired and newly promoted managers.

We are also launching **Leadership Academy** – **Emerging Leaders,** a program focused on high potential managers and senior managers. This is a one-year program that involves team projects, business simulation, and leadership development practices.

We are a global company, and we are proud of the wealth of experience our employees collectively hold. Some of the best mentors for our employees are other MKS employees and we strive to facilitate these relationships. For instance, as part of the company's International Women's Day celebrations, we offered virtual speed mentoring sessions. These sessions provide mentees with opportunities to meet multiple mentors throughout the company, develop internal connections, and pose career development questions.

## **Employee Engagement**

Our dedicated, talented, and creative team of employees is our competitive advantage and enables MKS to provide an exceptional customer experience. Engagement with our global workforce has been vital to our success. As we deal with the challenges of COVID-19, we have relied on this high level of engagement and worked hard to successfully maintain it. Our executive leadership team has continued to conduct quarterly calls with employees around the world to help ensure employees are

connected and have visibility to the progress of the company. During the ongoing pandemic, we have conducted checkins through employee surveys to gather valuable feedback on how employees are handling remote work changes and how management can increase employee engagement. Based on survey feedback, we now offer training courses focusing on working and managing remotely, and we have developed new policies that allow our employees to better manage their work and personal lives, including a global flexible work policy that will extend beyond

COVID-19. In addition, over the summer of 2021 we launched virtual coffee chats with executives and groups of employees from around the globe. See the COVID-19 section of this report for further details.

Finally, we are proud to have rolled out our first global employee engagement survey in 2021. The results of this survey will be thoroughly assessed, and key takeaways will be shared with the CEO and the executive leadership team to drive the company's employee engagement strategy going forward.





## **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 **Equal Employment Opportunity and Harassment Prevention**. Our Open-Door Policy has both formal and informal communications options. In all cases, employee concerns are handled in a timely and confidential manner.

## Compensation Philosophy and Employee Recognition

MKS is committed to providing a total compensation package that attracts, motivates, and retains applicants and employees. Additionally, we are committed to recognizing and rewarding each employee's sustained performance and results. This includes an annual performance bonus and/or profit sharing program for most employees.



We are committed to ensuring our total compensation packages are competitive in support of our business plans and strategies. 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, which is consistently at or below market averages.

In 2020, we launched a pilot Employee Recognition

and Reward Program for all U.S. 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 MKS' Guiding Principles and nominated employees are rewarded via a third-party point-based system. We will be exploring the extension of this program globally in 2022.



**Adoption Assistance** 



Continuation of Benefits



Health and Welfare Benefits



Holidays
Religious Holiday
Observance



Meals and Breaks
Lactation Breaks
Prayer Breaks



Memorial Scholarships
For children of
employees



**Overtime** 



**Patent Awards** 



Professional Development Assistance



Retirement Savings Plan



Service Awards and Recognition Programs



**Shift Differential** 



Sick Time



**Vacation** 



Workers' Compensation





## OCCUPATIONAL HEALTH AND SAFETY

MKS recognizes the importance of the health and wellness of our employees and their families and provides support to help our employees live healthy lives.

## Occupational 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. Eligible family members include spouses, dependent children, parents, and parents-in-law. Employees and eligible family members can find a wide selection of tools online or by contacting a counselor directly.

### **Programs:**

- » MKS has incorporated the Vitality US wellness program into company benefits to help educate, motivate, and assist employees in realizing the value of making healthy choices and adopting healthy behaviors.
- » The Mental Health Advocate program offered a webinar on understanding how to identify and cope with stress and anxiety and how to seek help when needed.

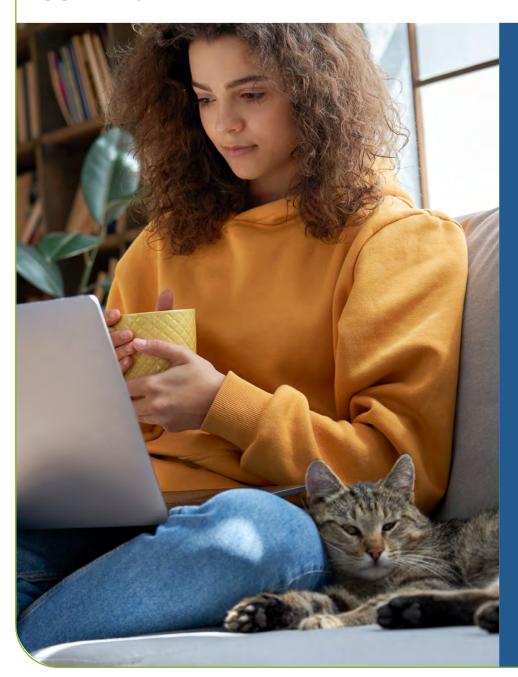
## **Employee Safety**

MKS is committed to providing a safe and healthy 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.

Safety training programs in 2021 addressed hazard communication, lockout tagout, machine guarding, hazardous waste generator, personal protective equipment, hearing conservation, and respiratory protection. We have a monthly safety review in place. We are in the process of standardizing safety training across our divisions to facilitate safer work environments and enable us to track safety metrics on a global level. See our **Environmental Health and Safety Policy** here for further details.



## COVID-19



MKS' top priority during the ongoing COVID-19 pandemic has been protecting the health and safety of our employees and their families, our customers, and our communities.

Our commitment to this effort is evidenced by the extensive planning and numerous actions MKS swiftly took to respond to the pandemic, including the development of an infectious disease playbook, a work from home program, health check protocols for those working on site, new process workflows at sites to ensure reduced contact, contact tracing, quarantining, and testing for exposure, travel guidelines, and phased return-to-work plans. MKS continues to maintain workplace flexibility such as working remotely where possible to reduce the number of people who are on site each day.

In May 2020, we launched a worldwide survey of our people to better understand how remote workers were doing during the pandemic. The results of this survey have informed our continued response to COVID -19 and were shared with all our employees. The results also provided valuable information on how employees were handling changes necessitated by the pandemic and how management could increase engagement with employees in

a remote environment. Based on survey feedback, we offered training courses focused on working and managing remotely, and to foster employee well-being, we conducted a summer 2020 pilot of a "no meetings Friday" policy. After a follow-on survey, MKS implemented "no meetings Friday" for the summer of 2021 as well.

Communication has been key to employee engagement in the remote work environment. Since the onset of COVID-19, CEO John T.C. Lee has provided regular written and video communications to the global workforce. MKS also established a formal mechanism for employees to share concerns and questions and receive answers related to COVID-19, and created an online site to provide regular updates by location, as well as updates on company communication, videos from leaders and updates on new policies, such as Flexible Work. Our executive leadership team also includes COVID-19 updates as needed during the quarterly calls with employees around the world.



## **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 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 safety testing standards we adhere to include:

- + Electromagnetic Compatibility Directive (EMCD) 2014/30/EU
- + Low Voltage Directive (LVD) 2014/35/EU
- + European Pressure Equipment Directive (PED) 2014/68/EU
- + Machinery Directive 2006/42/EC
- + Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU
- + MKS RoHS Position Statement
- + Product-specific regulations (NRTL, ETL, UL, CSA, Semi)
- + Other applicable safety testing standards (OSHA/CDRH)

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 CO<sub>2</sub> 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.



## **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.

## **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 Regulation, by providing us with all necessary declarations. This is specifically emphasized for Conflict Materials as defined 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 has over 90 global sites which are all empowered to give back to the communities where our employees live and work.

## Philanthropy and Volunteerism

See below for a selection of initiatives our MKS sites participated in recently.

» Northwest branch of the Conference on Undergraduate Women in Physics (CUWiP) at the University of Washington in Seattle

Continuing our effort to reach out to women and minorities in STEM fields, we cosponsor the Northwest branch of the Conference on Undergraduate Women in Physics (CUWiP) at the University of Washington in Seattle. The three-day conference hosts approximately 200 undergraduate women and includes research talks, panel discussions about graduate school and careers in physics, a poster session, and a career exploration fair.

### » MKS Memorial Scholarships

MKS has 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. Scholarship recipients are granted \$6,000 over four years.

### » Fix-Up Festival in Bozeman, Montana

The annual **Fix-Up Festival** in Bozeman, Montana brings the community together for one day each year to provide minor repairs for low-income neighbors, making their homes safer, more accessible, and more energy efficient. In the spirit of neighbors helping neighbors, homeowners receive labor and materials at no cost thanks to MKS contributions and support.

Furthermore, MKS is a proud sponsor of the Boston Club's 2020 Corporate Salute. The Boston Club is a community of executives and professionals invested in elevating women to leadership positions across all walks of business.



## **COVID-19 Support**

In 2020, due to the nature of our products and manufacturing capabilities, we were uniquely positioned to leverage our expertise to support efforts to slow the spread of COVID-19. Most significantly, our optical filters are used in polymerase chain reaction (PCR) instruments, which are recognized as one of the most accurate ways to detect COVID-19. We have shipped over two million filters just for these instruments and continue to supply these filters to our customers to help our communities. Other contributions we made specific to COVID-19 include:

- » Donated N95 masks and other PPE to local medical facilities in the Portland, OR and Rochester, NY areas
- » Established United Way matching program for U.S. employees, specifically for local COVID-19 relief in areas where we have an office/facility
- » Facilitated 3D printing of headbands for face shields by employees (on their own time)
- Pressure measurement and valve products were supplied to ASP and Steris, two companies that were approved by FDA to sterilize N95 masks
- » Supplied mass flow controllers to ventilator manufacturers
- » Produced gratings going into hematology analyzers







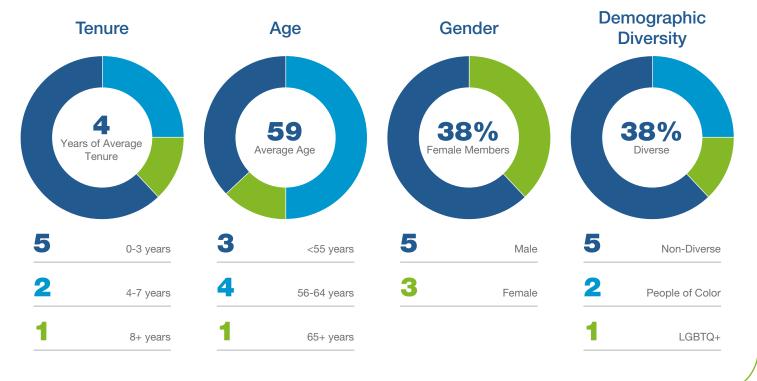


At MKS, we are committed to conducting business with the highest standards of integrity. MKS' Code of Business Conduct and Ethics reflects that commitment with respect to our employees, business partners, and the community. It ensures we are delivering on this commitment every day, with every interaction we have with our customers, suppliers, and colleagues.

## BOARD MEMBER DEMOGRAPHIC HIGHLIGHTS

Our Board of Directors is comprised of 38% female members and is 38% demographically diverse. In addition, our Lead Director is a woman. We have been recognized for our commitment to advancing women's representation among Boards of Directors of public companies in Massachusetts.

The below demographic ratio graphs capture key data for our Board of Directors:





# OUR BOARD OF DIRECTORS OVERSIGHT OF CSR AND RISK MANAGEMENT

## Stakeholder Relationships

Relationships matter, and we build ours on a solid foundation of integrity and trust. How we run our business, including our Corporate Social Responsibility (CSR) activities, is directly related to our core values and our stakeholder expectations. We ensure these activities are aligned and supported across our organization. Our key stakeholders include:



**Customers** 



**Suppliers** 



**Employees** 



**Shareholders** 

## **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. Based on the results of our 2020 risk survey, MKS management concluded our risk-taking culture was appropriately balanced and showed excellent progress from our 2018 survey.

## **CSR Management System Team Structure**

CSR is a key priority for MKS and our leaders. As such, our CSR 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 CSR Program's approach and direction

#### **EXECUTIVE SPONSOR**

**President & CEO** 

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

### **CSR STEERING COMMITTEE**

VP, Investor Relations (Program Leader) Sr VP & General Counsel

Sr VP & General Counse Sr VP & CHRO Sr VP & COO Sr Director, MarCom Sets program strategy, defines annual objectives, and provides guidance on high-level tactics to achieve the stated objectives, communicates CSR Program and monitors CSR industry trends

### **GLOBAL TEAM**

REPRESENTATIVES FROM

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

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



## **CSR POLICIES**

Our CSR 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 we expect of our Board, Management Team and employees across



### Climate-Related Risks

We recognize that climate risk is relevant to our organization, and we are considering more explicitly including climate-related risks into the next ERM cycle beginning in 2022. In partnership with our insurance provider, FM Global, we have conducted preliminary climate-risk assessments on windstorm, flood, wildfire, and earthquake exposure for some of our sites including Irvine, CA, Wilmington, MA, and Beaune-la-Rolande, France. For more information on how we consider climate-related risks and opportunities, please see our **TCFD index**.

the globe. Our Code of Business Conduct and Ethics and adherence to laws are applicable to our sales representatives and distributors and are included 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. You can read 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.

#### **Data Privacy**

We adopted a Global Data Privacy Policy, which provides rules and principles to ensure the safe handling of personal data across our organization. Employees who may have access to personal data receive annual training about data privacy and are expected to report any actual or suspected data privacy breaches to the Legal Department.

## Harassment/Sexual Harassment Prevention

We are committed to providing a work environment that is free from harassment based on race, color, religion, gender, sexual orientation, gender identity, national origin, age, disability, marital status, veteran status, pregnancy, genetic information, or any other characteristic protected by law, including sexual harrassment.

#### **Workplace Violence**

We are committed to maintaining a work environment that is free from violence. Violent, threatening, or intimidating behavior by any employee will not be tolerated and will be dealt with by MKS in the strictest manner up to and including termination.

### **Human Trafficking and 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. See our statement on **Human Trafficking and Slavery** for further details.

#### **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, direct employees, and any other type of worker. See the MKS Human Rights and Labor Standards Policy for further details.





This is MKS' inaugural Corporate Social Responsibility (CSR) report. In this report, we reference CSR reporting frameworks, standards, and industry groups such as the Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD).

The quantitative environmental footprint metrics included in this report cover MKS owned and leased facilities with available data for the 2020 calendar year. Please refer to the Environmental Metrics page of the 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 the report 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 MKS' Annual Report on Form 10-K for the year ended December 31, 2020 and any subsequent Quarterly Reports on Form 10-Q, as filed with the SEC. 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 (2020)
Energy Management	130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	(1) 98,605 MWh (2) 87,130 MWh (3) 0% renewable, although we are beginning to procure renewable electricity from select sites in 2021
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 2020, MKS only had two recalls. One pertianed to multiple controllers that did not turn on an Ion Gauge. This resulted in a recall of about 350 units. The other recall related to a change in wavelength of certain optical filters. This resulted in a recall of approximately 6,000 units. No safety-related issues were reported that corresponded to the recall.
	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.



## Sustainability Accounting Standards Board (SASB) Framework (Continued)



ТОРІС	SASB CODE	DESCRIPTION	RESPONSE (2020)
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 a minority of 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. In particular, 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 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 are able to 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.
Business Ethics	510a.1	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behavior	We have a management system for assessing corruption and bribery risks associated with our business channel partners, including sales representatives and distributors. 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 slavery, and a whistle-blower hotline. Our MKS Human Rights and Labor Standards Policy applies to all of our workers including temporary, migrant, student, contract, and direct employees.
-	510a.2	Total amount of monetary losses as a result of legal proceeding associated with bribery or corruption	\$0
	510a.3	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	\$0
Activity Metrics	000-A	Number of units produced by product category	Proprietary, confidential information.
-	000-B	Number of employees	At year-end 2020, we had approximately 5,400 employees globally and approximately 2,600 employees based in the U.S.



# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) FRAMEWORK

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

managing climate-

related risks and

opportunities

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 2020 calendar year only.

## TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

# TOPIC RESPONSE Strategy

Climate-related risks and opportunities identified over the short, medium, and long term 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.

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.

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 CSR Program. Our Board of Directors is informed of our climate-related risks and opportunities and the actions we are taking with respect to our CSR program. We currently do not have quantitative environmental targets in place as we are only beginning to build out our CSR program, but plan to develop and share these in the next few years.
Describe the management's role in assessing and	The CSR 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

Corporate Governance Committee and our Board of Directors.

CSR Committee Program Leader presents to our Nominating and

Impact of climaterelated 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 are always looking 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 that funds technical innovations across MKS. 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.

**RESPONSE** 



## Task Force On Climate-Related Financial Disclosures (TCFD) Framework (Continued)



Diek	Mana	4000000
HISK	<u>lwanag</u>	jement

**TOPIC** 

## 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 beginning in 2022. 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 the top five 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 climaterelated risks

Climate-related physical risks are assessed by FM Global, our insurance provider. In partnership with our property insurers, we have conducted preliminary climate-risk assessments on windstorm, flood, wildfire, and earthquake exposure topics for some of our sites including Irvine, CA, Wilmington, MA, and Beaune-la-Rolande, 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

MKS maintains a robust, ongoing 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. Based on the results of our 2020 risk survey, MKS management concluded our risk-taking culture was appropriately balanced and showed excellent progress from our 2018 survey.

As stated prior, 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 ERM process in 2022.

## TOPIC

## **Metrics and Targets**

RESPONSE

Metrics used to assess climaterelated 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. 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 2020) Scope 1 Emissions: 2,316 mTCO2e Scope 2 Emissions: 29,033 mTCO2e

Scope 3 Emissions (from business travel): 1,611 mTCO2e

Note these Scope 1, 2, and 3 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.

Targets used to manage climaterelated risks and opportunities and performance against targets This is our first 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 plan to evaluate setting future environmental targets and developing programs for operational energy, water, and waste management as we collect more data from our operations.