SUSTAINABLE BY DESIGN

2022 Environmental, Social, and Governance Report

Cadence Design Systems, Inc.

cadence®

Cadence has a mission to help solve technologies' toughest challenges in order to make a lasting, positive impact on our world.

Anirudh Devgan, PhD
President and Chief Executive Officer, Cadence

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As the impact of climate change intensifies, Cadence is increasingly providing creative solutions to reduce power consumption and enable more sustainable innovation across the tech industry.

A Message from Our CEO

For over 30 years, Cadence has been innovating leading-edge, groundbreaking electronic design technology that improves the lives of people around the world. We enable the world's leading electronics providers to optimize their power, space, and energy needs to create products with a lower carbon footprint. Cadence's computational software expertise and innovative software, hardware, and IP products uniquely position us to solve some of our customers' toughest design challenges including the impact of electronics on our environment. In addition, the company's One-Team culture is a force in the industry, where Cadence is a champion for diversity, equity, and inclusion and improving opportunities for under-represented people in STEM.

Our technology is applied across a wide array of critical market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, healthcare, and life sciences. In 2022, Cadence launched nine significant products that enable the next wave of technology advancements and sustainable innovation in intelligent system design. We also made strategic acquisitions which further increase the impact of our innovation on sustainability including technology that optimizes energy performance for data center design. In this report, we highlight how our customers and the next generation of innovators at universities around the world are creating products with a lower carbon footprint.

We also remain committed to investing our resources to improve our own operational footprint. In 2022, Cadence achieved CarbonNeutral® company certification in accordance with The CarbonNeutral Protocol, the leading global framework for carbon neutrality. We also achieved 100% renewable energy for our global operations. We expanded the breadth, depth, and transparency of our environmental sustainability program as evidenced by our reporting to the TCFD recommendations. While we're excited about our progress, we remain focused on our full value chain to achieve Net-Zero by 2040.

Our employees are at the center of everything we create and the business success we achieve. Cadence is committed to maximizing innovation by fostering an environment where all employees have an equal opportunity to share their ideas and to be heard. Fostering a high-performing, inclusive culture is a foundational tenet of our business strategy. This includes extending diversity through inclusive business practices for recruiting, training, career advancement support, supply chain, pay equity, and enabling inclusive communities. We are also doing meaningful work to empower the next generation of STEM talent in partnership with our local communities and universities. Our employees are driven by a shared sense of purpose to do good for our customers, communities, and each other.

To expand the impact of our Environmental, Social, and Governance (ESG) work, I am excited to announce that we have joined the Pledge 1% Alliance. Cadence is committed to contributing 1% of employee time, technology, and net profit to benefit our communities. As part of this pledge, the Cadence Giving Foundation will leverage these assets to support critical needs in our global communities like diversity, equity, and inclusion, environmental sustainability, and STEM education.

I am proud to share with you our 2022 Environmental, Social, and Governance Report which details our strategies and highlights our significant progress in each of these areas. I also want to thank our customers, partners, and employees for inspiring us and supporting our commitment to creating a more sustainable world.

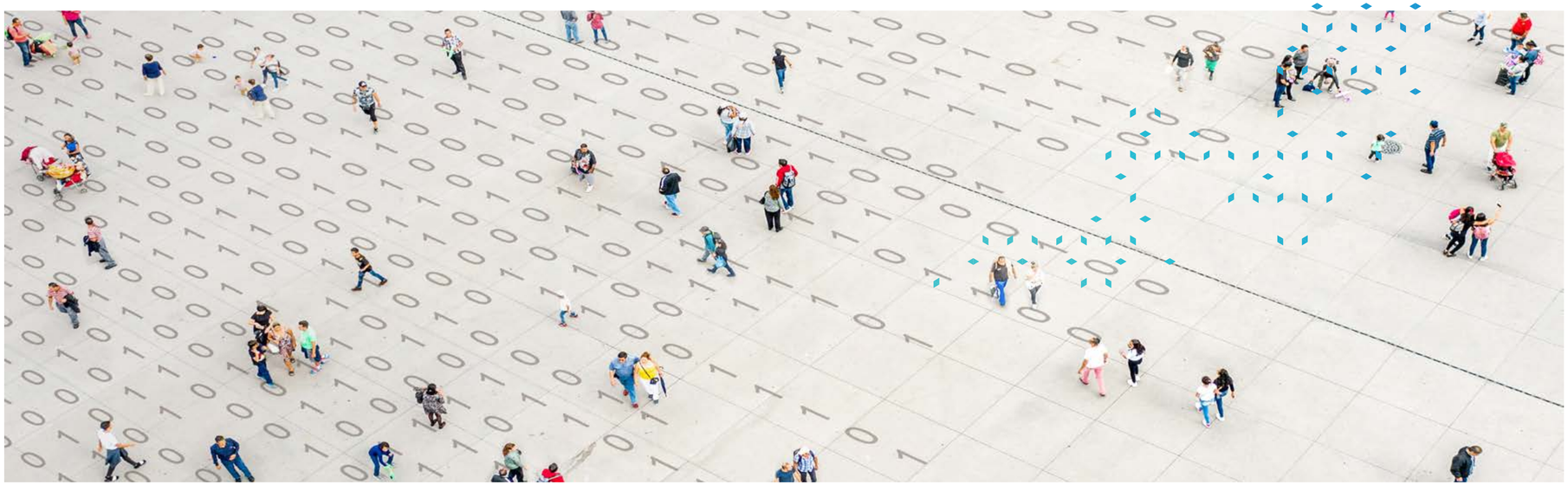
Sincerely,

Anirudh Devgan

Anirudh Devgan, PhD

President and Chief Executive Officer, Cadence

About Cadence



1988
Year Founded

$3.562B
Revenue
(19% increase compared to 2021)

~10,200
Employees
full time (9.5% increase compared to 2021)

San Jose
Headquarters
California

25+
Countries
where our employees live

Customers
Electronic systems and semiconductor companies located worldwide

CDNS
Stock Exchange / Trading Symbol
Nasdaq Global Select Market

Transforming the Way People Design Next-Generation Systems

Cadence provides the expertise and tools, IP, and hardware required for the entire electronics design chain, from chip design to chip packaging to boards and systems. We are a pivotal leader in computational software and enable electronic systems and semiconductor companies to create innovative products that transform the way people live, work, and play. Our products are used in extraordinary electronic products from chips to boards to complete systems for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, healthcare, and other market segments.

Our Cadence® Intelligent System Design™ strategy guides everything we do, from our product lineup to the expertise and services we offer our customers and the partnerships we develop with other industry leaders. It enables us to deliver software, hardware, and IP that turn design concepts into reality. We believe that giving our customers a systems-level perspective throughout the design cycle pays off in faster and better design, shorter verification cycles, software that works with the hardware, and new product leadership.

About the Report

The purpose of this report is to share with our stakeholders the progress we made in our environmental, social, and governance (ESG) strategies in 2022. The content of this report is informed by feedback from key stakeholders: employees, investors, customers, and industry partners and associations.

Materiality Assessment

Stakeholder input informs our priorities as we strive for continuous improvement towards a sustainable future. During 2022, we built on stakeholder engagement and materiality review processes that were initiated in 2019.

Our senior group director of Corporate Social Responsibility chairs a cross-functional team consisting of internal leaders in Human Resources, Facilities, Finance, Procurement, Marketing, and Legal. Each of these leaders raises ESG priorities for implementation and reporting based on stakeholder feedback. This feedback informs our sustainability and reporting strategy.

To validate our priorities, we conduct gap analysis referencing SASB, TCFD, and GRI Standards, CDP, ISS, RBA, and Nasdaq questionnaires. Further we conducted benchmark analyses considering industry peers. While we address sustainability issues across the materiality spectrum, our cross-functional team identified the following materiality topics as particularly significant to our company in our latest materiality assessment that considered alignment to the United Nations Sustainable Development Goals (SDGs).

Aligning with the United Nations Sustainable Development Goals (SDGs)

Across each of our material topics, our sustainability programs are aligned with the UN's Sustainable Development Goals (SDGs), and we continue our work to harmonize targets and indicators with the SDGs. We partner with strategic stakeholders to achieve these goals through our programs.

Materiality Topic	SDG Targets and Cadence Indicators		Goals
Environmental Sustainability	7.2	Renewable electricity (%)	7, 8, 12, 13, 15
	8.4	Energy use per employee (GJ/FTE)	
	12.2	Water consumption and withdrawals in water stressed areas (%)	
	13.2	GHG emissions, Scope 1 and 2 market-based (Metric tons CO2e)	
	15.a	Investments in biodiversity and ecosystems ($US)	
Innovation	7.3	Energy intensity (GJ/$MM Revenue)	7, 8, 9, 12
	8.1	YOY revenue growth (%)	
	9.4	GHG intensity (Metric tons CO2e/$MM Revenue)	
	9.5	R&D spend as a proportion of revenue (%)	
	9.a	Charitable Giving ($MM)	
	12.2	Energy use (GJ)	
Governance	12.6	Annual ESG reporting	12, 16
	16.3	Annual Code of Conduct certification rate for FTEs (%)	
	16.5	Annual Anti-corruption training completion rate for FTEs (%)	
Workforce	3.7, 3.8	FTEs offered health insurance that includes reproductive health-care services (%)	3, 5, 8, 10, 16
	5.1, 8.5, 10.3	Pay equity	
	5.5	Proportion of women board members (%)	
	8.3	Percent female employees (%)	
	8.5	YOY FTE growth rate (%)	
	8.8	Injury rate (%)	
	8.b	Early career hires (%)	
	10.2	Employees by race (%)	
	16.b	Annual non-discrimination training completion rate for FTEs (%)	
Responsible Supply Chain	8.3, 10.2	Total procurement spend on diverse suppliers (%)	8, 9, 10, 12, 13, 16
	8.7	Completion rate for UK Modern Slavery Act training (%)	
	9.3	Total procurement spend on small business (%)	
	12.7	New suppliers screened using social and environmental criteria (%)	
	13.2	GHG emissions, Scope 3 (Metric tons CO2e)	
	16.3	Suppliers that responded to conflict minerals survey (%)	
		Suppliers that have company policies to adhere to local laws and regulations (%)	

The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States. Please visit the United Nations Sustainable Development Goals website.

2022 Highlights

Innovation

Launched nine significant innovative products and completed key strategic acquisitions, which we expect to be drivers of future growth and enabling the next wave of sustainable innovation

Net-Zero GHG by 2040

Formally committed to the Science Based Targets initiative and provision of our plan by 2025

Achieved CarbonNeutral® company certification across our global operations, and CarbonNeutral® product certification of our Palladium Cloud offering

Joined The Climate Pledge to partner with ~400 companies who share our commitment to reach Net-Zero by 2040

Cadence Giving

We are proud to have donated more than $3.7 million through the Cadence Giving Foundation in 2022 to impact environmental sustainability, access to STEM education, and additional local and global initiatives

To expand our commitment to community giving, Cadence has recently joined the Pledge 1% alliance to contribute 1% of employee time, Cadence technology, and profit to drive meaningful change in our core focus areas

Diversity, Equity, and Inclusion

Our Black, Latinx, Veteran, LGBTQ+ and Women employee groups expanded participation globally and we introduced three new employee inclusion groups in the U.S.—Asian and Pacific Islander, Indian and South Asian, and employees who are neurodivergent and/or have disabilities

30+ Best Workplace Recognitions

Across 14 countries, including Fortune's 100 Best Companies to Work For, Fortune's World's Best Workplaces, and Forbes America's Best Employers

Newsweek's Most Responsible Companies

Recognized as #87 on Newsweek's 500 Most Responsible Companies and #8 among 50 companies in our industry

Best Workplace for LGBTQ+ Equality

Named one of the Best Places to Work for LGBTQ+ Equality by the Human Rights Campaign Foundation

Investor's Business Daily Top 100 ESG Companies

Recognized by Investor's Business Daily as one of IBD's 100 Best ESG Companies of 2022

Progress on Our 2022 ESG Strategies

SUSTAINALYTICS a Morningstar company ESG INDUSTRY TOP RATED 2022

SUSTAINALYTICS a Morningstar company ESG REGIONAL TOP RATED 2022

Corporate ESG Performance Prime RATED BY ISS ESG

Innovation

Cadence is a pivotal leader in electronic design, building upon more than 30 years of computational software expertise. Our advancements in computational software provide the foundation for the next-generation electronic design of chips, boards, and systems enabling smarter, smaller, and more power-efficient products. Cadence applies its underlying Intelligent System Design strategy to deliver software, hardware, and IP that enables our customers to turn design concepts into reality. Our products and services enable our customers to design tomorrow's products today and help drive advancements in sustainability across industries including Consumer, Hyperscale, Mobile, Communications, Automotive, Aerospace/Defense, Industrial, Healthcare, and Molecular Sciences.

Smart and Efficient Growth Drivers

We introduced nine significant innovative products and completed strategic acquisitions which we expect to be key drivers of our future growth. These acquisitions expand Cadence's computational software core competency to molecular modeling and simulation in life sciences. By doing so, we broadened our multiphysics system analysis and computational fluid dynamics (CFD) portfolios and extended our system innovation portfolio with the addition of technology and expertise that specifically targets high-fidelity CFD simulation.

Workforce

People come to Cadence to do meaningful work with a global impact. Each day with Cadence offers exciting opportunities to create a better, more connected world. We are leading the charge to solve technology's toughest challenges. Our High-Performance Culture sets us apart as a community of passionate, bold, and creative people and outlines the values and behaviors that will enable our employees to succeed at Cadence. These values influence our practices for hiring, goal setting, development, promotion, retention, and recognition. The Great Place to Work Institute recognizes Cadence as an exceptional employer in many regions around the world. Our diverse team of passionate and talented employees go above and beyond for our customers, our communities, and each other.

Efforts to Increase Diversity

We expanded our efforts to build a more diverse and inclusive team through recruitment, career support, retention, development, and community-building for underrepresented groups. Based on these efforts, the proportion of women at Cadence has increased for the ninth year in a row. We also increased participation in our inclusion groups by creating employee inclusion groups for Asian American and Pacific Islanders, Indian and South Asians, and employees who are neurodivergent and/or have disabilities. In addition, for the fourth year in a row, Cadence maintained global salary pay parity based on gender and U.S. salary pay parity based on race and ethnicity.

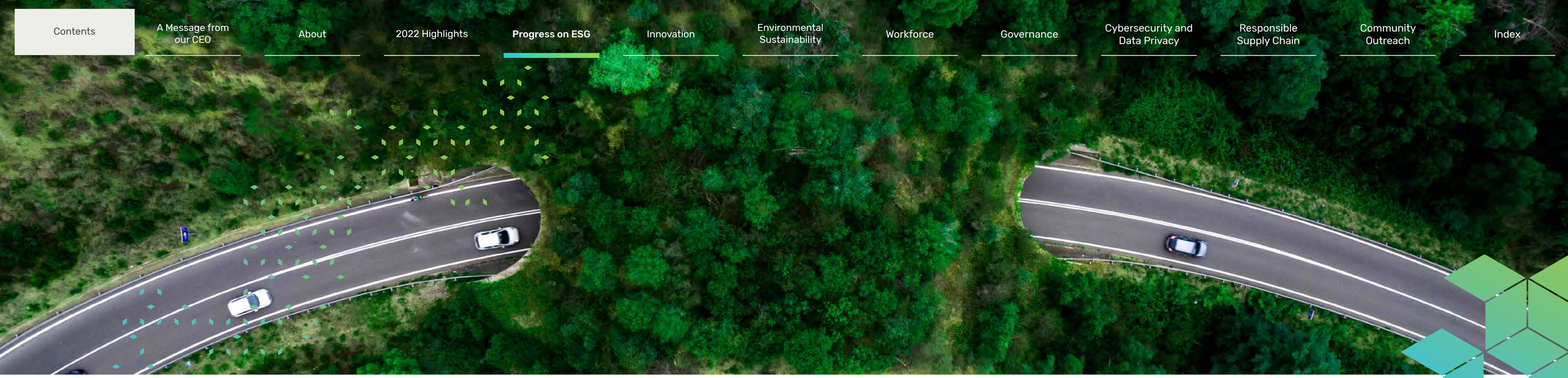
Environmental Sustainability

We are committed to investing our resources to combat climate change and taking steps to lessen the environmental impact of our facilities and business operations. Cadence monitors its performance on energy, emissions, waste, and water to conserve resources and reduce costs. Our culture inspires employees to participate in environmental initiatives that improve the sustainability of communities where we operate.

Expanding our Programs and Disclosures

Our Environmental Policy and Environmental Management System frames our commitments around climate change and energy. In addition to making progress towards our Net-Zero carbon target and achieving CarbonNeutral® company certification, we expanded the breadth and depth of our environmental sustainability programs and disclosures.

Reporting to the TCFD recommendations included an increased focus on climate-related risk assessments, which we expanded upon in the reporting year. In conjunction with our first CDP Water Security disclosure, we calculated water footprints and are working to establish a baseline through improved tracking systems for water use.



Governance

Our corporate governance is founded on Cadence's values and is an integral part of our culture. It is aligned with our stakeholders' best interests and the requirements of the law. Our commitment to efficient company management, protection of stockholders' interests, and the transparency of corporate communications is vital to gaining and retaining the trust of our stakeholders. The Board, through its Corporate Governance and Nominating Committee, regularly reviews our corporate social responsibility program. In our annual engagement with stockholders in 2022, we discussed our ESG efforts as well as to our Board's composition and diversity of background.

Tone at the Top

We reported to our Board of Directors on our ESG efforts and initiatives, including review of our decarbonization progress, diversity, equity, and inclusion (DEI) initiatives, and the Cadence Foundation signature programs. We added one new director to our Board in January 2022, bringing the board to 11 members.

Cybersecurity and Data Privacy

Cadence supports enhanced privacy and data cybersecurity initiatives. We are committed to the protection of our customers, vendors, partners, and employees' personal information. Our Information Security team works to identify and prevent risks to the protected data we collect. Our Chief Information Security Officer administers our data privacy and cybersecurity program, with oversight from our Board's Audit Committee.

Expanded Cloud-Based Offerings and Enhanced Network Security

We focused on securely expanding our cloud-based product offerings while also continuing our relentless pursuit of providing secure remote access with endpoint security controls and infrastructure resiliency to support our hybrid workforce. We enhanced our monitoring and detection controls to further protect our networks and cloud services from cyber threats, and we utilized cybersecurity incident response procedures to address related security risks.

Responsible Supply Chain

Cadence is committed to doing business honestly and ethically and we expect the same from our suppliers. To ensure our relationships with our suppliers meet and support these expectations, we are members of the Responsible Business Alliance as an Affiliate Member since 2018.

Focus on Climate and Diversity

To demonstrate our commitment to climate progress, we joined The Climate Pledge and partnered with several key suppliers to improve the accuracy of carbon emissions calculations. We continue to track and analyze key suppliers' carbon reduction goals and disclosures, and 100 of our key suppliers were included in our climate-risk assessment to better understand our upstream climate-related risk and opportunities.

We continued to identify and promote diversity in our supply chain as well as to extend our Supplier Code of Conduct across our value chain.

Innovation

For Engineers.
By Engineers.

The Impact of Electronic Design Automation on a Better World

Electronic Design Automation (EDA), in combination with advances in semiconductor technology, optimizes the power consumption of electronics while enabling significant performance increases.

Cadence is a pivotal leader in electronic systems design and applies its underlying Intelligent System Design strategy to deliver computational software, hardware, and IP that turn design concepts into reality.

Our customers, the world's most innovative companies, use Cadence technology to optimize power, space, and energy needs from chips to boards to complete systems to sustainably design extraordinary products with a lower impact on the environment for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, and healthcare, and molecular sciences.

As the impact of climate change intensifies, meaningful work at Cadence increasingly involves creating solutions that reduce power consumption and promote more sustainable innovation across the tech industry.

Anirudh Devgan, PhD

President and Chief Executive Officer, Cadence

Innovation at Cadence

Cadence Cerebrus Intelligent Chip Explorer

Cadence is revolutionizing sustainable electronics by reducing semiconductor power consumption with new AI-based innovative solutions for chip design. Cadence Cerebrus™ is one of our generative AI solutions that automatically optimizes tool and chip design options to deliver better power, performance, and area (PPA) with significantly less engineering effort and overall time to tapeout. Our customers are realizing notable power savings in their designs using Cadence Cerebrus.

MediaTek, a fabless semiconductor company that designs chips that power more than 2 billion devices, is an example of the impact of Cadence Cerebrus on reducing power.

At MediaTek, we are resolute in delivering optimal PPA, making the Cadence Cerebrus AI-based solution the most logical choice for our latest, advanced-node projects. On an SoC block, the Cadence Cerebrus floorplan optimization feature shrunk the die area by 5% and reduced power by more than 6%. After experiencing the compounded benefits of improved productivity, better PPA and ease of integration into the MediaTek CAD flow, we've deployed Cadence Cerebrus in our production flows.

Harrison Hsieh

Senior General Manager of Silicon Product Development
MediaTek

Renesas, a leading provider of microcontrollers, analog, and power devices to the automotive, industrial, infrastructure, and IoT industries, is another example of Cadence Cerebrus' innovative technology impact for reducing power.

We needed automation methodologies that improve PPA across a variety of nodes and design types. By deploying and optimizing Cadence Cerebrus to fit all our unique needs, we've had many notable design wins already. On an advanced-node CPU design, we experienced better performance with a 75% improvement in total negative slack (TNS). In addition, Cadence Cerebrus slashed the leakage power on a critical MCU design. We expect to further improve performance and productivity and reduce time to tapeout with Cadence Cerebrus.

Toshonori Inoshita

Vice President of the shared R&D EDA division
Renesas Electronics Corporation

Cadence Integrity 3D-IC Platform

Cadence is the leader in 3D-IC design and analysis solutions that enable extending the performance of semiconductor devices beyond Moore's Law while reducing power consumption and improving performance. The Cadence Integrity 3D-IC platform is a unified platform for system planning, multi-die implementation and analysis and provides a seamless interface for Cadence system analysis tools for early power delivery network (PDN) and thermal analysis via the Cadence Voltus™ IC Power Integrity Solution and Celsius™ Thermal Solver, which extends the customers' ability to optimize their product design from chip to chiplet to package.

Cadence Integrity 3D-IC Platform is the only complete solution for 3D-IC devices combining chiplet implementation and PPA optimization, package design, physical verification and electromagnetic and electro-thermal analysis. With an automated platform that streamlines processes, Integrity 3D-IC helps customers anticipate and avoid costly chip design issues, improve productivity, and ensures products are brought to market efficiently.

Cadence Integrity 3D-IC Platform is the industry's preeminent full-flow solution certified for leading foundries:

TSMC's 3DFabric technology includes a new 3Dblox standard, which streamlines key aspects of design methodologies and allows chiplet reuse

Reference flows featuring the Cadence 3D-IC Platform, Sigrity/Clarity/Celsius system-level electrical/thermal analysis, and Allegro packaging are enabled for Samsung CUBE™ packaging technologies

Voltus-XFi Custom Power Integrity Solution

Cadence is enabling sustainable electronics by reducing semiconductor power consumption with tools like the new Cadence Voltus™-XFi Custom Power Integrity Solution. The Voltus-XFi is a custom electromigration and IR drop (EM-IR) solution that delivers improved ease of use with minimal tuning and enables the development of efficient, low-power integrated circuits.

Cadence continues to create fast and accurate power and analysis tools like the Voltus-XFi to ensure our customers can push the boundaries of low-power design, which enables new and revolutionary capabilities for power reduction. Developing low-power designs is critical to optimizing power consumption and we expect to continue to develop groundbreaking technologies that improve people's lives.

With the continuous innovation in low-power designs, there is an ever-increasing demand for power integrity solutions. We continue to collaborate with Cadence on innovative technologies such as the Voltus-XFi solution to enable low-power design and verification. Together, we develop leading-edge products that reduce power consumption and make our world greener.

Sangyun Kim

Vice President of the Foundry Design Technology Team
Samsung Electronics

Cadence OnCloud SaaS and eCommerce Platform

In support of Cadence's sustainability goals, in 2022, we introduced the Cadence OnCloud software-as-a-service (SaaS) and e-commerce platform for companies adopting a "cloud-first" approach for design and analysis solutions that can be accessed anywhere from any device.

Cadence OnCloud contributes to lowering the overall carbon footprint by enabling the transition of development tools from enterprise data centers to best-in-class carbon-optimized cloud data centers for which research has shown improved sustainability. Cadence OnCloud eliminates the need for costly on-premises compute and server resources that require high levels of maintenance and operational overhead and consume high levels of power. Cadence OnCloud eases the design process and delivers global collaboration, significant productivity, time-to-market, and scalability benefits. This new e-commerce platform offers instantaneous access to purchase and deploy products in minutes and already has thousands of early users.

Cadence OnCloud is targeted for those with limited infrastructure or resources and offers comprehensive support options, including self-help and a broad range of SaaS delivery options addressing global demands and peak usage.

The Cadence OnCloud platform provides a number of system design and analysis packages incorporating OrCAD™, Allegro, Clarity™, Sigrity™, Celsius, and Fidelity™ Computational Fluid Dynamics (CFD) technologies for instantaneous access in the cloud, including to our customers leveraging Cadence products for advancing their sustainable innovation goals.

CERTIFIED CARBON NEUTRAL® cloud services
CarbonNeutral.com

Palladium Cloud is certified CarbonNeutral®

As NC State's first solar vehicle team, our big goal is to show the world that solar energy can be used to power a car in a sustainable, efficient, and powerful way. Leveraging the cutting-edge Fidelity CFD meshing and simulation packages from Cadence built on the Cadence OnCloud SaaS and e-commerce platform will enable us to simulate the performance of our solar vehicle to achieve our goals for sustainability, efficiency, and power.

Ben Nichols

Technical Director of SolarPack, The Solar Vehicle team
North Carolina State University

Future Facilities and Data Centers

Future Facilities' data center digital twin solution enables the performance optimization of data centers to ensure they run as efficiently as possible while minimizing risk of downtime.

Hyperscale compute, using high-performance connected processors, continually transforms our lives as more and more applications rely on this type of compute. At the heart of this hyperscale revolution are data centers.

Energy demand from data centers and data transmission networks each account for 1-1.5% of global electricity use and data centers and data transmission networks are responsible for nearly 1% of energy related GHG emissions.* The increase in demand comes with pressure from government regulators, consumers, and business owners on the industry to create and run sustainable initiatives, especially regarding the impact of data centers on carbon emissions, power consumption, and water use.

Improvements in energy-efficient systems have helped to moderate growth in energy demand from data centers and data transmission networks, but there is still considerable work to be done. Cadence's acquisition of Future Facilities demonstrates our commitment to have an immediate impact on data center energy efficiency.

Future Facilities, a pioneer in the data center digital twin space, expands our Computational Fluid Dynamics (CFD) and thermal analysis portfolio by extending it to data centers. In addition to electronics cooling analysis, Future Facilities' innovative solutions enable customers to optimize thermal, power, and capacity efficiencies in the data center using physics-based 3D digital twins, thereby helping reduce our customer's carbon footprint.

Colocation provider Kao Data used Future Facilities' 6SigmaDCX software suite to design a high-performance, high-efficiency, industrial-scale data center with a Power Usage Effectiveness (PUE) of 1.2 even at low IT utilization without any mechanical refrigeration. The data center's sustainable design meets the ASHRAE TC 9.9 environmental guidelines and ensures long-term OPEX savings for both Kao Data and its customers.

The entire data center campus is powered by 100% certified, renewable energy under standard operating conditions. The architecture has received the Building Research Establishment's (BRE) BREEAM excellence certification in construction for building energy efficiency, environmental, and sustainability competency.

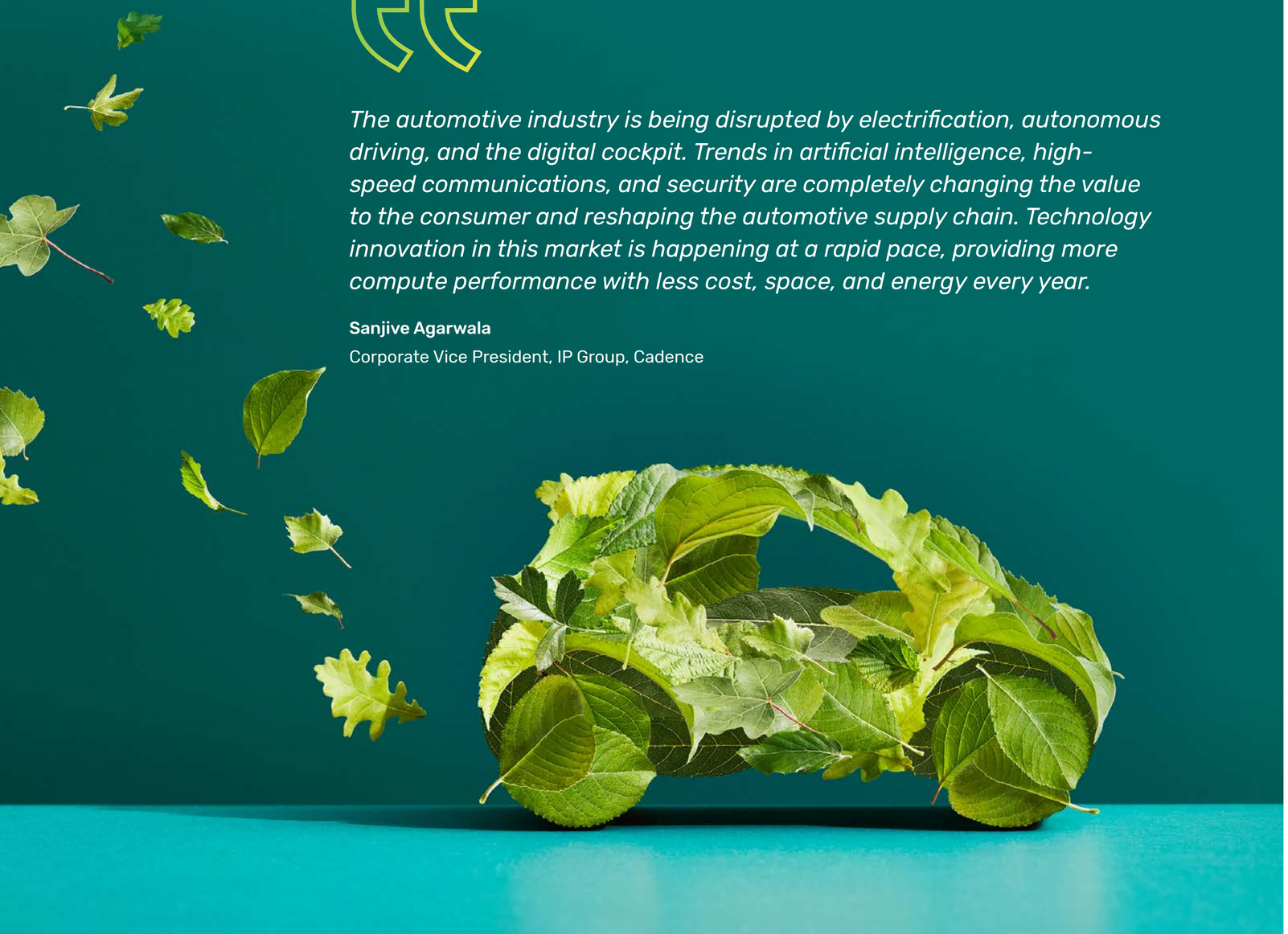
From inception, Kao Data was precision-engineered for industrial scale computing; those found in high performance computing (HPC), artificial intelligence (AI), and supercomputing environments. Due to the demanding power and cooling requirements of these GPU-powered systems, it's essential that they're as sustainable as possible, which requires pinpoint operational efficiency, alongside ultra-efficient design and use of renewables. Future Facilities' CFD analysis played a crucial role in helping us achieve this.

Paul Finch
COO, Kao Data

*https://www.iea.org/reports/data-centres-and-data-transmission-networks

The automotive industry is being disrupted by electrification, autonomous driving, and the digital cockpit. Trends in artificial intelligence, high-speed communications, and security are completely changing the value to the consumer and reshaping the automotive supply chain. Technology innovation in this market is happening at a rapid pace, providing more compute performance with less cost, space, and energy every year.

Sanjive Agarwala
Corporate Vice President, IP Group, Cadence



Cadence and EDA's Impact on the Automotive Industry

The automotive industry is being disrupted by changing consumer preferences, technological innovations, and global supply chains. Demand for new automotive capabilities is growing, making it critical for companies to adapt. Semiconductors are an increasingly critical aspect of automotive innovation and value delivery.

Not only is there growing interest from consumers in electric vehicles (EVs), but the United States Federal Government announced in 2022 several initiatives supporting EV use, including a goal to have EVs be 50% of all vehicles sold in the U.S. in 2030. Automakers are expected to spend up to $515B by 2030 on EV and battery production.*

* https://www.reuters.com/business/autos-transportation/exclusive-global-carmakers-now-target-515-billion-evs-batteries-2021-11-10/

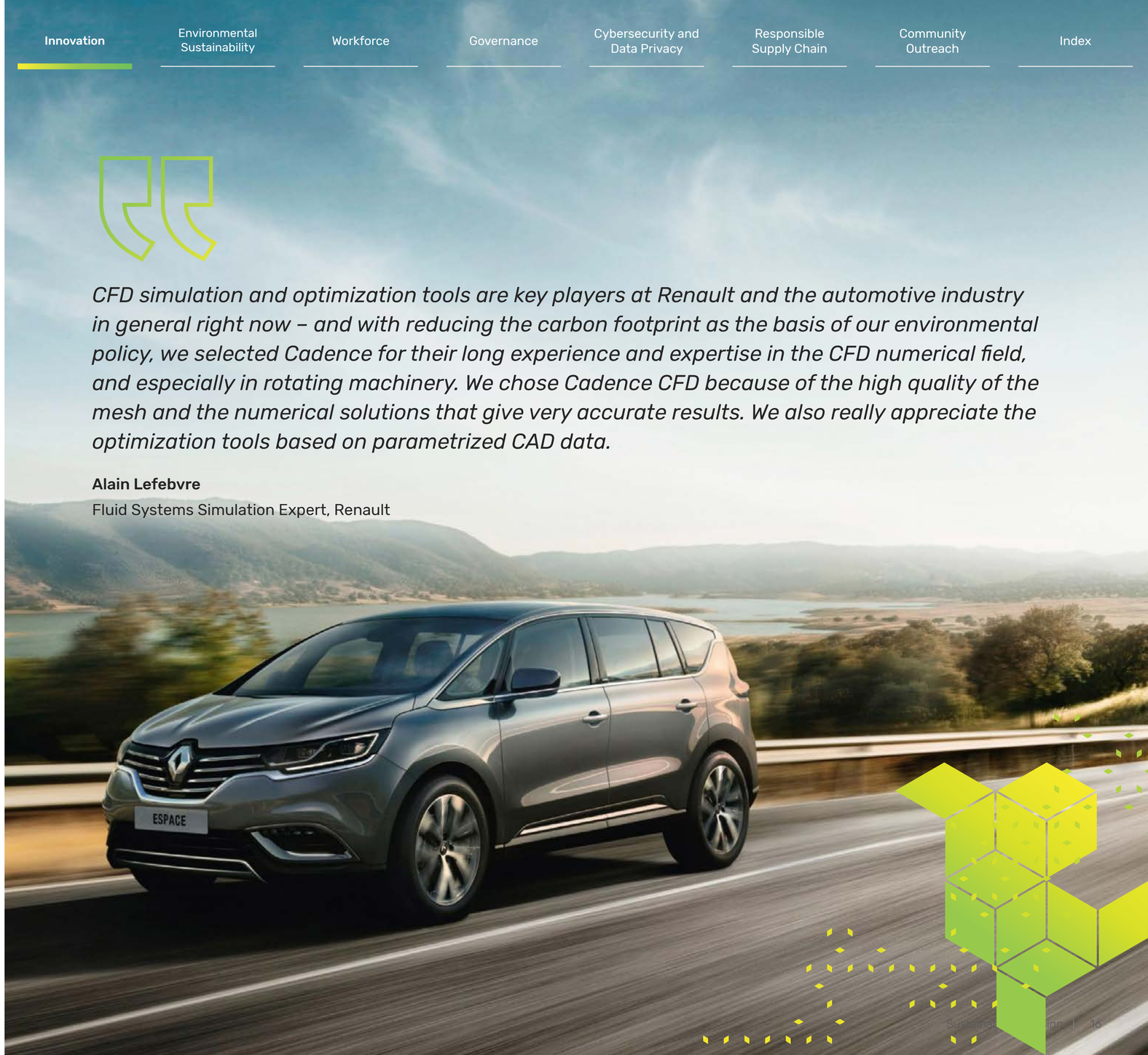
Partnering to Enable Sustainable Innovation

Customer Highlight: Renault

In response to fast-changing market demands and environmental pressures to reduce CO2 emissions, car manufacturer Renault pushes the designs of every component of their engines to maximum efficiency with minimum consumption using computational fluid dynamics (CFD) for the optimization of pumps, turbochargers, fans, and more—everything to obtain maximum performance with minimum fuel.

One of the projects Renault used the Cadence Fidelity™ CFD solution for is the optimization of the water pump of an internal combustion engine. These pumps can also be found in plug-in hybrid and battery electric vehicles.

Thanks to 3D simulation of the water pump using CFD, CO2 emissions could be decreased, gaining +5 to +8 efficiency points at average to low power and without any efficacy loss at maximum capacity.



CFD simulation and optimization tools are key players at Renault and the automotive industry in general right now – and with reducing the carbon footprint as the basis of our environmental policy, we selected Cadence for their long experience and expertise in the CFD numerical field, and especially in rotating machinery. We chose Cadence CFD because of the high quality of the mesh and the numerical solutions that give very accurate results. We also really appreciate the optimization tools based on parametrized CAD data.

Alain Lefebvre
Fluid Systems Simulation Expert, Renault

Cadence and McLaren's Technology Partnership

In 2022, Cadence was named an Official Technology Partner of the McLaren Formula 1 Team.

McLaren Racing's commitment to addressing sustainability through both its environmental and social areas of impact align with Cadence's own commitments, amplifying the impact of each of our efforts through our partnership.

McLaren has access to Cadence Fidelity CFD Software, which provides innovative aerodynamic prediction tools that can help accelerate the team's path toward victory and sustainability.

The more we push for sustainability within our sport, the greater the opportunity we have to inspire innovations that drive demand for sustainable supply chains and spark positive behavioral change on a global scale.

Zak Brown

CEO, McLaren Racing

F1's net-zero goal incorporates plans to power cars with 100% sustainable drop-in fuels, as well as advancing battery technologies for the next generation of the hybrid power unit, all of which pave the way for disruptive developments in the transport, shipping, aviation, and EV industries.

Kim Wilson

Director of Sustainability, McLaren Racing

Advancing the Next Generation Innovators

Cadence Incubator Program for Sustainable Innovation

The Cadence University Incubator program supports university incubators and early-stage startup companies through their design-to-prototyping journey. By sharing design excellence practices and tapeout know-how, and by providing affordable access to industry-grade Cadence technology, the Cadence University Incubator program reduces cost and time in achieving a proof of concept. Cadence provides online training, remote development options, design services, and mentorship and networking opportunities to the startups participating in this program.

Academic Network Supports University Design Teams

Through our Academic Network, Cadence is fostering the next generation of innovators by supporting student design teams who are working together to tackle technical challenges and find innovative solutions to reduce the carbon footprint of the transportation industry. Cadence is committed to providing the commercial grade tools and training necessary to accelerate these teams to the finish line. Team members gain real-world practical experience managing a project by meeting deadlines and design deliverables, preparing them to launch a career in the electronics industry with Cadence or our customers.

AeroDelft

AeroDelft is a student-led team situated at the Delft University of Technology (TU Delft) with a mission to develop the world's first liquid hydrogen-powered aircraft. AeroDelft sees liquid hydrogen as a sustainable alternative to conventional aviation fuels, and hopes to inspire the aviation industry to make the change on a scale that will result in worldwide sustainable aviation, supported by Cadence tools.

One of the main requirements for developing hydrogen-powered aircraft is to get the aerodynamics exactly right in order to minimise energy consumption. This is where AeroDelft's partnership with Cadence comes in. To achieve the optimum aerodynamic design, AeroDelft uses the Fidelity™ Computational Fluid Dynamics solution to investigate the impact of design changes on fuel consumption and for risk assessment.

Fidelity Hexpress was used for cleaning the CAD geometry and meshing. Cadence OnCloud, which eliminates the need for costly on-premises compute and server resources that require high levels of maintenance and operational overhead and consume high levels of power, was a great benefit to the team as part of the simulations could not be run on personal laptops. Safety is also an important aspect of such an innovative project. In case of over-pressurization in the hydrogen tank, hydrogen is vented out into the atmosphere. Fidelity PBS (Pressure Based Solver) is used to investigate the risk of hydrogen ignition at such high pressure.

In 2022, the maiden flight of the prototype aircraft was successfully performed, and the manned full-scale aircraft was revealed and taxied for the first time. Learn more.

Environmental Sustainability

Environmental sustainability is important to Cadence, our employees, and our stakeholders. With the endorsement of our executive management and Board of Directors, our senior group director of Corporate Social Responsibility oversees our environmental programs – collaborating with internal and external stakeholders to produce results. Our cross-functional ESG team identifies and manages climate-related risks and opportunities related to our operations, data centers and suppliers, and our innovation process includes evaluation of sustainability opportunities related to our products and services.

Environmental Strategy

In the reporting year, we framed our commitments in our Environmental Policy and Environmental Management System (EMS) while also expanding our climate-related risk assessments—the result of which can be found in our TCFD Index.

Environmental Policy

Cadence has a mission to help solve technologies' toughest challenges in order to make a lasting, positive impact on our world. Our products enable the world's leading electronics providers to optimize power, space, and energy needs for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, healthcare, and molecular sciences.

Climate change continues to be one of the greatest challenges of our time and we are committed to doing our part to invest in the health of the planet.

Anirudh Devgan, PhD
President and Chief Executive Officer, Cadence

Cadence's Environmental Management System (EMS) aims to achieve our goals through:

- Pursuing continuous improvement in environmental and social performance.
- Managing energy and greenhouse gas (GHG) emissions from our global operations and supply chain.
- Incorporating environmental sustainability and decarbonization considerations into our business strategy, processes, and product design and development.

Specifically, we will:

- Identify, measure, and manage the environmental impacts of our operations and products.
- Establish targets to reduce our environmental impact, report on these targets annually, and strive for continuous improvement.
- Comply with all applicable environmental laws and regulations.
- Encourage and promote responsible sustainability throughout our value chain, aligning ourselves with other best-in-class companies that are committed to combatting climate change and engaging in decarbonization actions.
- Communicate this policy and our environmental programs to employees and other stakeholders.
- Plan to provide education and training to employees on environmental issues and the environmental effects of our activities.

EMS

Cadence's Environmental Management System (EMS) is designed to set, manage, and achieve our environmental sustainability goals. Priorities are informed by continuous stakeholder engagement and our climate risk assessments. We exercise due diligence in our environmental programs including internal reviews and external verification of GHG data.

Identify, measure, and manage the environmental impacts of our operations and products against goals and targets, continually improving our environmental performance

Stakeholder input informs our priorities

GHG and Energy Management
- Global Operations
- Supply Chain

Decarbonization and Environmental Sustainability
- Business Strategy
- Process
- Design
- Development

Progress Reports
- 10-K
- Proxy
- Annual ESG Report
- CDP
- TCFD

Our Commitment to Decarbonization

We are aiming for Net-Zero emissions by 2040 for Scopes 1, 2, and 3 (market-based). To demonstrate our commitment, we signed The Climate Pledge in 2022 joining likeminded companies who commit to regular reporting, carbon elimination, and credible offsets as we all work toward the same Net-Zero goal.

Target

CO_2

NET-ZERO 2040

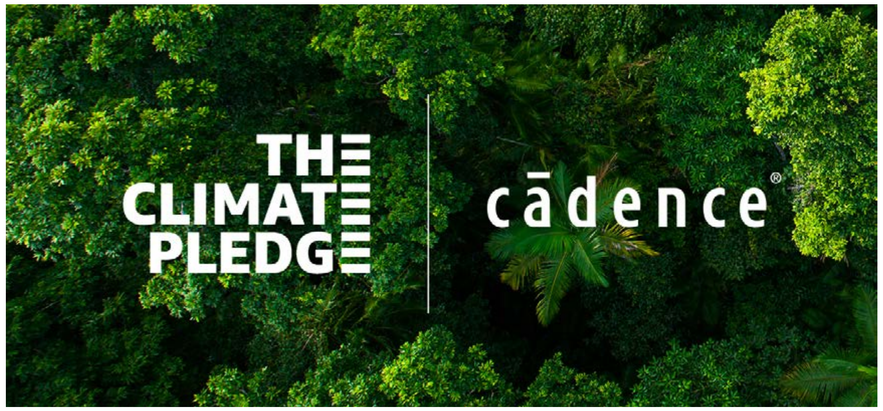
Scope 1, 2, and 3 (market-based)

Status

Scope 1, 2, and 3 emissions

28%

reduction over 2019 baseline



Our Net-Zero Plan

GHG Emissions	Innitiatives
Scope 1	▸ Neutralize emissions with high-quality offsets ▸ Identify and implement opportunities for GHG removals through system upgrades, replacement, and electrification
Scope 2	▸ 100% renewable electricity first through EACs then through long-term high-quality contracts that provide additionality ▸ Shift to cloud computing
Scope 3	▸ Continue the transition from spend-based estimations to actual supplier GHG data ▸ Partner with suppliers that have committed to Net-Zero emissions and encourage partners that have not to set GHG reduction targets ▸ Neutralize remaining emissions with high-quality offsets

Progress

Although our medium-term target to halve our market-based Scope 1 and 2 emissions by 2030 was exceeded in 2022, we will continue to track progress against this goal until 2030. Considerable decreases in CO2e intensity demonstrate that we are decarbonizing our business.

Target

2019 → 2030: **%50** reduction in GHG emissions* by 2030 over 2019 baseline

Status

2019 → 2022: **76%** reduction in GHG emissions* by 2022 over 2019 baseline

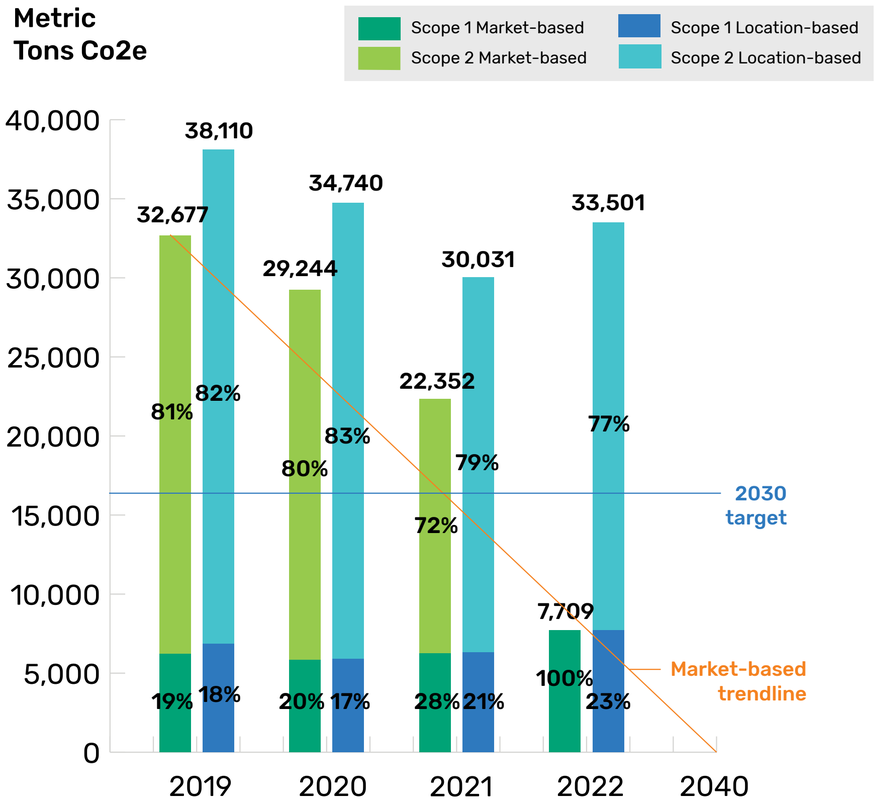
CO2e* per $M revenue: ↓**85%** over 2019

CO2e* per employee: ↓**81%** over 2019

*Scope 1 and 2 market-based

↓**100%** of Scope 2 emissions reduced through renewable electricity procured

Scope 1 and 2 Emissions Trend



*Calculated in accordance with the GHG Protocol and 3rd party verified to the ISO 14604-3 Standard for years 2020, 2021, and 2022. Includes our owned and leased properties, as well as our co-located data centers; estimations applied where actual data was unavailable.

2022 Carbon Footprint**

Compared with our 2019 baseline we've reduced combined Scope 1, 2, and 3 emissions 28% (market-based). In 2022, through growth and increased business activity, our carbon footprint increased 49% overall between 2021 and 2022. Scope 3 emissions from our supply chain make up the vast majority of our carbon footprint.

Trend Analysis	2022	2021	2020	2019 (baseline)
	Metric tons $CO2^e$	Metric tons $CO2^e$	Metric tons $CO2^e$	Metric tons $CO2^e$
Scope 1, 2, 3 market-based*	249,554	167,970	451,271	347,436
Scope 1	7,709	6,281	5,951	6,314
Scope 2 location-based	25,792	23,750	28,789	31,796
Scope 2 market-based*	0	16,072	23,293	26,363
Scope 3	241,845	145,618	422,027	314,759

**Calculated in accordance with the GHG Protocol and 3rd party verified to the ISO 14064-3 Standard. Includes our owned and leased properties, as well as our co-located data centers; estimations applied where actual data was unavailable.

Carbon Neutral

We achieved CarbonNeutral® company certification in 2022 through our investments in decarbonization including energy efficiency measures, procurement of 100% renewable energy through utility contracts and high-quality Energy Attribute Certificates (EACs), onsite solar installations and high-impact carbon avoidance/removal offsets. We secured Gold Standard Verified Emissions Reduction credits (VERs) to offset Scope 1 emissions and Scope 3 emissions in required categories.

CERTIFIED CARBON NEUTRAL® company

CarbonNeutral.com

CarbonNeutral® company across our operations including Scope 1, Scope 2, and select Scope 3 emission sources. Cadence is certified as a CarbonNeutral® company in accordance with The CarbonNeutral Protocol.

100% Renewable Electricity

In 2022, we procured 100% renewable electricity. Through the combination of renewable energy tariffs and high-quality renewable energy attribute certificates (EACs) we reduced our market-based Scope 2 emissions to zero. Before taking renewable energy purchases into account, emissions from electricity use accounted for 9% of our 2022 total Scope 1, 2 and 3 footprint (location-based). In 2022, we have taken steps to shift our electricity supply to long-term renewable energy virtual power purchase agreements (VPPAs).

	Location-based*		Market-based*	
Scope	**$CO2^e$** (metric tons)	**%**	**$CO2^e$** (metric tons)	**%**
Scope 1	7,709	3%	7,709	3%
Scope 2	25,792	9%	0	0%
Scope 3	241,845	88%	241,845	97%

*Market-based emissions reflect clean energy purchases that Cadence has purposefully chosen. Location-based clean energy purchases reflect the average emissions intensity of grids on which energy consumption occurs.

Investing in a Low Carbon and Environmentally Friendly Future

For 2022, we neutralized Scope 1 and 3 emissions through high-quality offsets that had benefits beyond carbon reductions.

- **Rainier Gateway Project**
  Our investment in the Rainier Gateway Project offset our Scope 1 emissions for 2021 and 2022. This project, located in the forests surrounding Mount Rainier in Washington State, preserves old-growth forests and ensures their proper management. In addition to storing carbon dioxide, benefits of this project include helping to maintain consolidated ownership of the land by those native to it, promoting sustainable job creation, contributing to the conservation of old-growth forests, reducing the risk of forest fires, and maintaining habitats for wildlife.
- **Orb Household Solar**
  Our VERs originate from an Orb Household Solar project in India. This project brought over 160,000 reliable solar power and solar water heating systems to customers throughout India, while cutting approximately 55,000 metric tons of CO2e a year by replacing the use of kerosene or electricity from a grid reliant on fossil fuels. Orb Household Solar, India, supports the UN Sustainable Development Goals and is a value chain partner aligned with our own goals.

We also worked with key partners in India to improve environmentally friendly practices:

- **Solid Waste Management**
  Working with our partner, Saahas, in Bangalore, India, we implemented a source segregation of waste program impacting 4,000 households and 200 shops in the Koramangala Village 8th Block. The impact of managed collection of waste provides cleaner and healthier communities and better living conditions. The household segregation level increased from 4% to approximately 53%, and waste dumping was reduced by 40%.
- **Clean and Healthier Cooking Practice**
  Working with our partner, CARE India, Cadence enabled 5,000 households to switch from traditional fuel sources for cooking to clean and environmentally friendly alternatives in Bangalore, India. The impact is an estimated carbon emission reduction of 15,000 metric tons over a period of three years.

Net-Zero Value Chain Collaboration

As the majority of our emissions stem from the supply chain, our Net-Zero plan relies on collaboration with stakeholders including utility providers, real estate managers, co-located and cloud data center partners, manufacturing partners, other key suppliers, and customers.

Continued investments in value chain engagement and low carbon initiatives are focused on:

- Decarbonizing operations
- Decarbonizing data centers
- Decarbonizing our supply chain
- Decarbonizing compute activities

Decarbonizing Operations

Decarbonization and energy management go hand in hand. As our business grows organically and through acquisitions, our electricity consumption may increase. While we continue to evaluate and implement energy optimization projects throughout our operations, securing long-term contracts for renewable energy will continue to be a priority for Cadence.

We seek to support the development of new renewable energy sources in markets where we operate through long-term contracts with utility providers and high-quality power purchase agreements (PPAs). As our climate transition plan evolves, we will continue to seek meaningful ways to decarbonize the sources of Scope 1 emissions.

Decarbonizing Data Centers

Cadence products that involve data storage are powered by an increasing amount of renewable electricity whether on-premise, or at co-located or cloud-based data centers. Our data center decarbonization strategy includes energy efficient design features on-premise, continuing the process of shifting to efficient co-located and cloud-based data centers, partnering with co-located and cloud-based data center partners that have goals to be 100% renewable electricity powered, and purchasing high-quality RECs to reduce emissions that remain.

Our co-located data centers run on 100% renewable electricity and our German co-located data center also maintains ISO14001 and ISO50001 certification. Our on-premise data centers in San Jose, CA runs on 100% renewable electricity and servers have been upgraded to increase our computing power while implementing energy-efficient design features, such as automated mister controls for extreme hot weather, a building management system (BMS) digital control network, and free cooling economizers to temper the increase in electricity consumption as our business continues to grow. Outside air and water cooling is used to cool servers. Our Uninterruptible Power Sources (UPSs) are Energy Star Certified and when selecting back-up generators, we aim to reduce environmental impacts and noise pollution and follow Bay Area Air Quality Management District (BAAQMD) norms.

Palladium Cloud is certified CarbonNeutral®

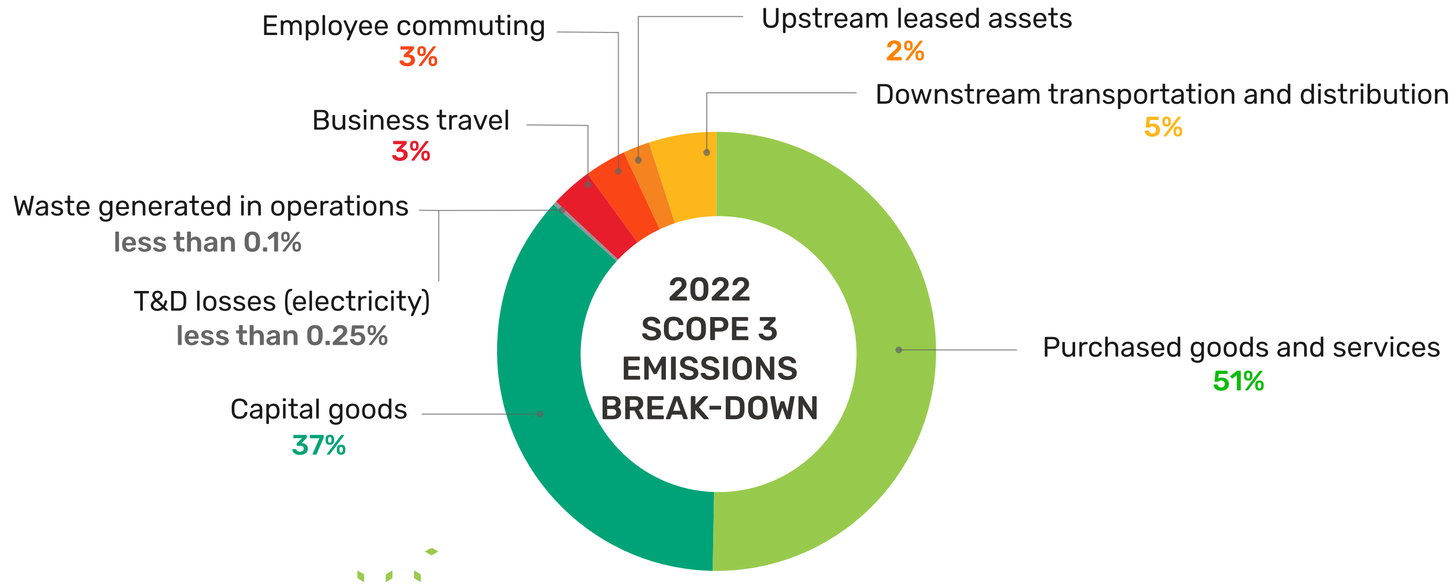
CERTIFIED CARBON NEUTRAL® cloud services
CarbonNeutral.com

Decarbonizing our Supply Chain

Scope 3 emissions account for the majority of our total Scope 1, 2, and 3 carbon footprint - 88% using the location-based method and 97% using the market-based method. Combined emissions from Purchased Goods & Services and Capital Goods categories account for most of our total Scope 3 emissions.

Year over year, an increase in overall spend due to growth and business activity drove a 66% increase in our Scope 3 emissions compared to 2021. During 2022, we invested in construction and computer hardware, two emissions intensive categories.

We continue to improve the accuracy of our Scope 3 calculations. Using the GHG Protocol Hybrid Method, roughly one third of our 2022 Scope 3 emissions are calculated using supplier's reported emissions. The remainder are estimated based on industry average emissions and economic models.



*All figures around rounded to the nearest decimal

Decarbonizing Compute Through Energy Optimization

Our customers, the world's most innovative companies delivering extraordinary products from chips to boards to systems, use Cadence technology to design sustainable innovation that optimizes the power, space, and energy needs of end products. Through our suite of products and services, we aim to decarbonize compute activities and support our customers to develop energy-optimized products and services for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, healthcare, and molecular sciences. Several examples of Cadence product sustainability impact are shown here:

Cadence Cerebrus	Voltus-XFi	Cadence OnCloud	Fidelity CFD Platform			Future Facilities
Cadence Cerebrus Intelligent Chip Explorer is one of our generative AI solutions that automatically optimizes tool and chip design options to deliver better power, performance, and area (PPA) with significantly less engineering effort and overall time to tapeout	Enabling the development of efficient, low-power integrated circuits, the Voltus-XFi solution is a custom EM-IR technology that delivers improved ease of use with minimal tuning	Cadence OnCloud contributes to lowering the overall carbon footprint by enabling the transition of development tools from enterprise data centers to best-in-class carbon-optimized cloud data centers	Cadence's innovative CFD solutions enable customers to optimize thermal, power, and capacity efficiencies in the data center using physics-based 3D digital twins that enable the calculation of the thermal profile, including airflow and cooling, thereby helping to optimize energy use and carbon footprint	Fidelity CFD software is used in the automotive industry to push engines to maximum performance with minimum battery or fuel consumption and CO2 emissions	Fidelity Automesh's Hexpress tool accelerates low-carbon innovation in the aviation industry including the successful prototype of the world's first liquid hydrogen-powered aircraft by AeroDelft	Future Facilities' innovative solutions enable customers to optimize thermal, power, and capacity efficiencies in the data center using physics-based 3D digital twins, helping reduce our customer's carbon footprint

University of Michigan's Electric Boat Racing Team

University of Michigan's Electric Boat (UM-EB) racing team is committed to conservation through working with local organizations as a part of their deep-seated commitment to sustainability. The team was established to advance and promote sustainable technology, and they represent the University of Michigan in the Promoting Electric Propulsion for Small Craft competition.

UM-EB is tackling the technical challenge of redesigning their traditional catamaran vehicle to a hydrofoil vessel. To ensure stability and seamless design, it is critical that the team model and simulate their foils before launching their boat, which they are doing using Cadence CFD Software.

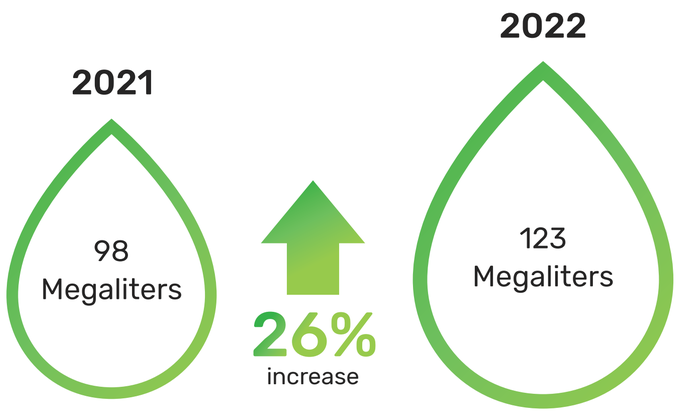
Hydrofoil vessels reduce drag and thus increase the battery range and overall efficiency of the electric vessel. This team is playing a valuable role in developing the technology that will positively impact energy use by the transportation industry. Learn more.

Managing Water Resources

Flooding, drought, and water stress are climate-related issues that our employees, customers, and investors care about. In 2022, we took a deeper look at our water usage and risks, completed our first global water footprint, and disclosed the details in the 2022 CDP Water Security questionnaire.

At all of our offices, freshwater is used for drinking, sanitation, and wash services. Conservation measures are implemented across our operations, including automated taps and sensor technology. Water is consumed through irrigation at our San Jose, California and Noida, India campuses, and some of our on-premise data centers use water cooling and mister technology.

Water Footprint



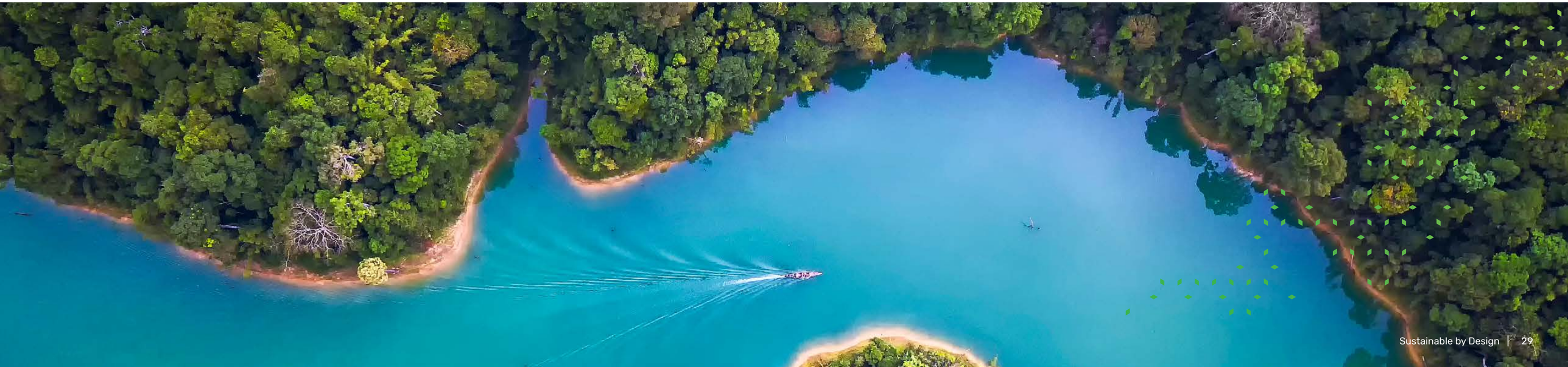
26% increase attributable to increased business activity, head count, acquisitions, and increased office occupancy around the globe.

To ensure we are not using more than our fair share of water in communities where we operate, we are monitoring water usage, consumption, and recycling closely, with a focus on our owned campuses. In particular, we focus on areas with current or future water stress.

5%
water withdrawn in water stressed areas

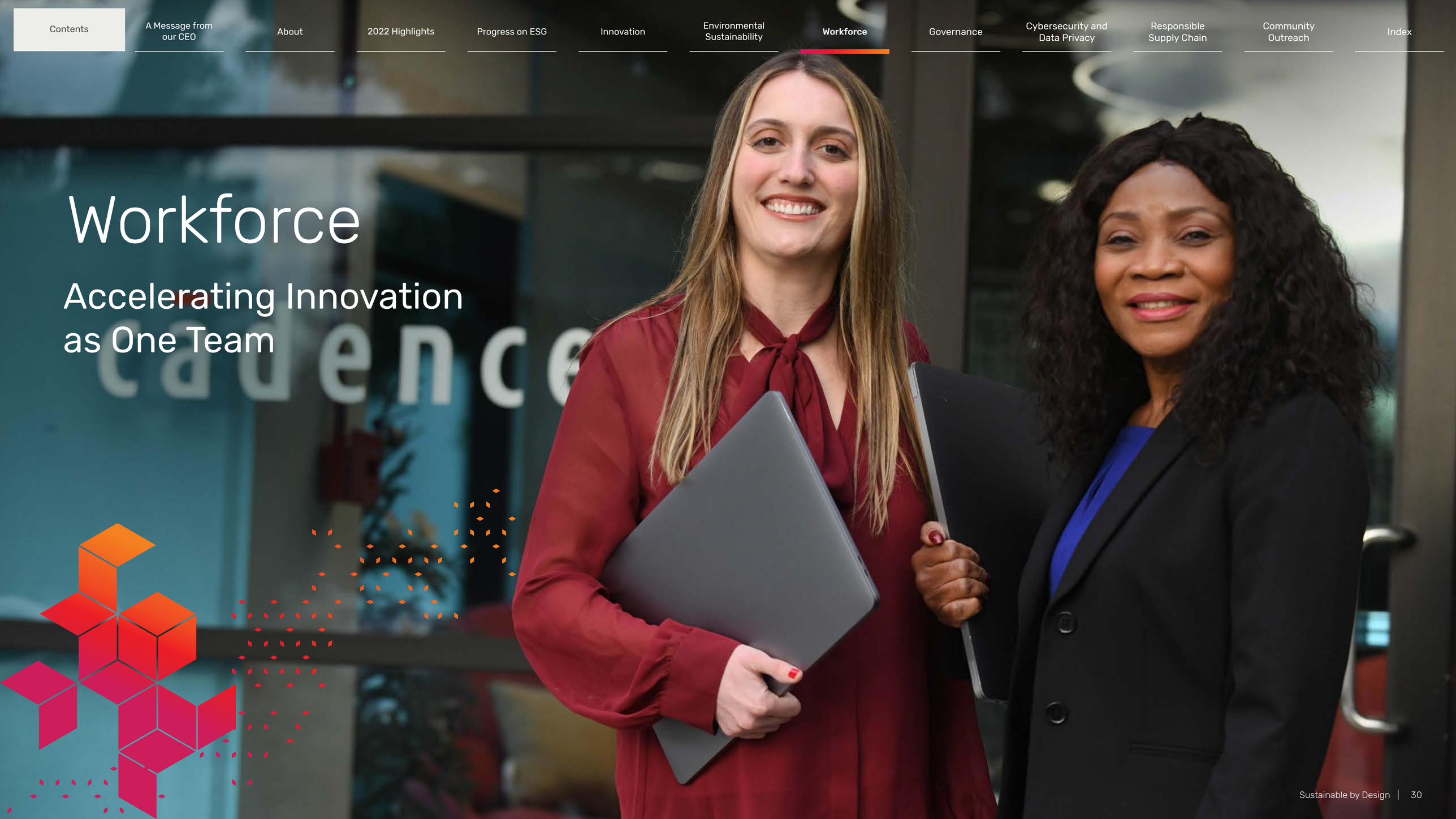
0%
of water consumption withdrawn in water stressed areas

Currently, our owned office locations are not located in high or extremely high water stressed areas. However, both San Jose and Noida areas are expected to be water stressed by 2030. We are monitoring water use more closely and making plans for future water conservation.



Workforce

Accelerating Innovation as One Team



Our Strategy

At Cadence, our people are at the center of our success and drive the new innovations that are enabling next-generation technologies. Cadence technology is highly specialized and deeply technical computational software, and our team represents some of the best and brightest in their fields. Our inclusive, One Team culture is at the center of the employee experience and allows us to attract and retain top talent in our industry.

Our talent strategy is led by our Senior Vice President of Global Human Resources with oversight from the CEO and involvement from all employees. HR provides quarterly reports to the Compensation Committee of the Board of Directors. In February 2023, the Compensation Committee was amended to add that the committee is responsible for overseeing Cadence's human capital management practices.

Our Team

Our employees represent the best and brightest in the industry. The talent we select to join our team defines Cadence's culture, innovation, and success—now and in the future. Our ability to attract and retain high-performing talent has led to 42% headcount growth over the last five years and high average tenure of 6.5 years. We have built our largest-ever team of approximately 10,200 employees globally, even with increased attrition in the company and across the industry.

99% Full-time

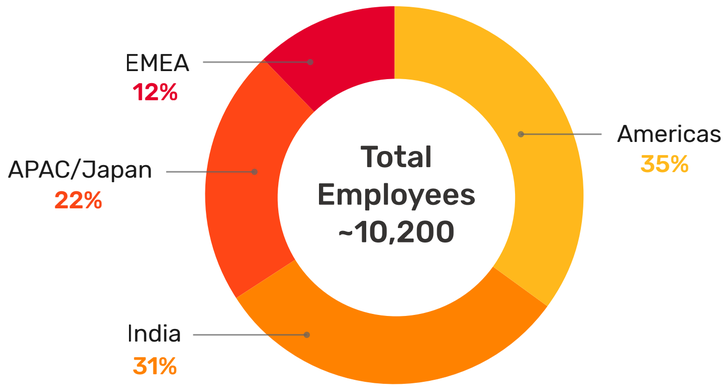
85% Technical

6.5 Years Average tenure

1% Part-time

15% Non-technical

13% Voluntary turnover



Our Culture

Our people-first One Team culture drives the employee experience. We support our workforce throughout the employee lifecycle, including talent acquisition, onboarding, career development, total rewards, and wellness. Our programs foster high trust, collaboration, inclusiveness, and teamwork. We are dedicated to creating an environment where employees of all backgrounds can have a meaningful career and achieve their full potential.

A Great Place to Work

Cadence prides itself on being a great place to work and building a high-trust culture. A highly engaged workforce is critical to the foundation of our business success. We have been recognized as one of the top places to work by Fortune magazine for the past eight years and by the Great Place to Work Institute in 14 countries where we participate.

To measure engagement and the health of our workforce, Cadence partners with the Great Place to Work Institute to annually administer global engagement surveys to all employees in all countries where Cadence has employees. The surveys provide valuable insight into our employees' experiences, give the employees an opportunity to share ideas for improvement, and benchmark us against some of the best companies in the world. Employee feedback informs us on what is important to them and enables us to make appropriate adjustments so that we can continue to be a company where employees thrive.

The Great Transformation

Cadence is participating in an innovative three-year research project called The Great Transformation (TGT) in partnership with Great Place to Work®. Alongside a small cohort of Fortune 100 Best Companies, we aim to accelerate the progress of diversity, equity, inclusion (DEI), and belonging in our respective organizations, and in the world.

We surveyed employees participating in Inclusion Groups, organized focus sessions with our Inclusion Groups and Inclusion Group leaders, and conducted a detailed analysis of representation across the company in order to:

Learn
About the current state and best practices of the Inclusion Groups

Listen
To employee perspectives on the state of DEI within Cadence

Explore
Ways of addressing areas of opportunity

TGT has compiled their findings and shared recommended programs that would make the biggest impact on DEI at Cadence based on our employee data.

President and Chief Executive Officer, Anirudh Devgan, PhD attributes Cadence's stellar performance to its "One Team" philosophy, which aims to cultivate employees' sense of purpose and a genuine belief that their work benefits people and the planet.

93%

of employees surveyed say they are proud to tell others they work at Cadence.

90%

of employees surveyed say Cadence is a great place to work.

Our Employees Say We're a Great Place to Work

Based on our employees' feedback in surveys like these, Cadence received 39 total "best workplace" recognitions from reputable publications in 2022. This includes Fortune's World's Best Workplaces, Fortune's 100 Best Companies to Work For, People's Companies That Care, the Economist's Best Workplaces in Europe, and Forbes America's Best Employers (mid-size).

Life at Cadence

To be one high-performing team and accelerate the pace of innovation, building a sense of belonging for our employees is essential. Our people-first culture is rooted in empowering our employees and appreciating the many strengths and talents they bring to the workplace. We look at the entire employee experience, so employees feel supported to do their best work, surrounded by the best team.

Hiring

We actively identify candidates with expertise and values-based attributes that can contribute to our success. It is important to us that we build a diverse pipeline of candidates, and we do this through robust recruiting partnerships and by posting requisitions to sites that are focused on diverse backgrounds, experiences, and skills. Because our management team is central to the success of our hiring and retention strategies, we have invested in management training, including unconscious bias workshops and diversity leadership training, to enable thoughtful decision making.

47%

Early Career Hires

College Hire and Intern Program

We believe interns and recent college graduates are the future of Cadence, and we invest in them to carry out our mission of innovation. In 2022, 47% of all Cadence hires were early career employees.* We provide mentorship, scholarships, and access to Cadence technology to many students, including those from underrepresented groups. We recruit recent graduates at top universities around the world, including those that historically serve a higher number of Black and Latinx students.

Cadence employees participate in tech talks, career fairs, academic sponsorships, and university contests, and we work to facilitate a network between the technology industry and academia. We also partner with schools to build relationships with departments and professors who connect Cadence to the best and brightest students. In 2022, more than 500 global Cadence interns and new college graduates** participated in our College Hires and Internship program (CHIPs).

*Early Career employees are under the age of 30 working in entry-level positions
**New college graduates are employees within two years of their last graduation date

Building Careers

As employees advance their careers at Cadence, the core expectations and capabilities increase in scope and purpose. To help employees succeed, we foster an environment and culture of learning—both on the job and through formal training programs. On average, our employees complete 25 hours of training annually.

Employees can utilize learning resources through our High-Performance Culture portal that includes Harvard University's ManageMentor, a mini-MBA program, and a comprehensive online Learning Management program, accessed by 75% of our employees in 2022, with training and development tools on a broad range of topics and skills. We include LinkedIn Learning in our online Learning Management program, which provides more than 11,000 on-demand professional courses with new courses added monthly. Cadence also offers up to $5,000 of tuition reimbursement annually to employees continuing in fields relevant to their job.

In support of our company values, and the commitments we have made to our stakeholders, each year all of our employees, including management, are required to complete mandatory training on various critical topics, such as our Code of Business Conduct, anti-corruption, inclusion and harassment prevention, protection of confidential information, data security, affirmative action, export compliance, and human rights.

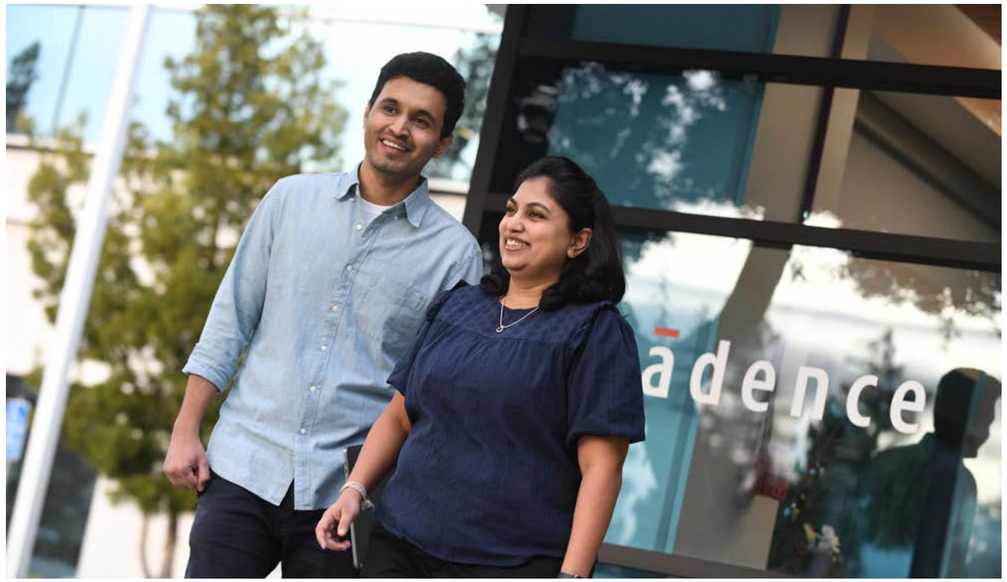
Compensation

To inspire and recognize our employees, Cadence offers competitive compensation and benefits programs. Cadence's compensation programs link employee compensation to Cadence's business and individual performance. We also offer a semi-annual bonus program, 401(k) match, newly expanded Employee Stock Purchase Plan, and equity compensation. In addition, 76% of our employees received monetary awards from their colleagues through our peer-to-peer recognition program in 2022 for exploring what's possible, elevating the team, executing with quality, exceeding customer expectations, and demonstrating our One Team values.

25 hours of training completed per employee in 2022

17 hours Technical

8 hours Non-technical



Health and Well-Being

Over the last two years, we have proven our ability to adapt and work effectively outside the office and, in doing so, also learned the value of the flexibility that comes with remote work. We also believe being together in person deepens our connections to one another and enhances our ability to ideate, collaborate, and align. This year we have shifted to a hybrid approach that balances the benefits of in-person collaboration with the flexibility of remote work.

Our employees' physical and mental health and well-being remain a top priority at Cadence. We offer a variety of unique benefits in addition to traditional health insurance. Globally, we have an Employee Assistance Program that is specifically designed to promote mental wellness, offering free sessions with a mental health professional and a bereavement leave policy that allows employees more time to grieve should they lose a loved one. In the U.S., we have a flexible vacation time policy that allows employees to request time off whenever they deem it appropriate, subject to manager approval, rather than accruing vacation hours. Additionally, we provide employees with Global Recharge Days to unplug and focus on themselves and their families. We firmly believe that time away from work is key to our employees' health and wellness, enabling them to recharge and continue performing at a high level. Our U.S. health and well-being benefits include fertility benefits, coverage for transgender employees undergoing medical treatment, expanded new parent leave, adoption and surrogacy benefits, financial planning and coaching services, and legal services.

In addition to structured learning programs and compliance training, we provide training and tools for stress management, time management, conflict resolution, and cultural and emotional intelligence.

We provide employees with access to back-up childcare, elder care, and additional family support, giving employees the flexibility and freedom to better care for their loved ones. Employees are provided resources for mindfulness and meditation to help reduce stress and improve focus in their daily lives. When in the office, our employees can also enjoy peaceful space to focus on personal wellness in our Wellness or Quiet rooms.

Safety

Cadence is committed to providing a safe and healthy work environment for our employees and non-Cadence personnel. We have a cross-functional Emergency Response Team trained to quickly respond to emergency or crisis situations at Cadence. The Emergency Response Team conducts periodic simulation trainings that cover various applicable situations, so they are prepared for an emergency or a crisis.

As provided in our Code of Business Conduct, our employees are expected to perform their work in compliance with health and safety laws, regulations, and policies of their work location. When working at customer locations, our employees must follow the customer's health and safety requirements. Workplace injuries, illnesses, or unsafe conditions, including conditions that are likely to result in injury or illness, must be immediately reported to a supervisor or Human Resources partner.

Below is our 2022 OSHA Recordable Injury Rate and our Lost-Time Injury Rate for our employees in the U.S.:

0.1%
Injury Rate per 100 Employees in the U.S.

0
Lost Work Days

Diversity, Equity, and Inclusion

It is important to the success of Cadence that we provide the support our employees need to thrive. This includes fostering an environment based on trust, cooperation, respect, and equitable treatment. We believe a diverse team can create a competitive advantage by contributing unique perspectives that advance high performance, innovation, and teamwork.

Gender and racial disparities remain a challenge in the technology field, and as a tech company with a high proportion of technical employees, Cadence is deeply committed to addressing this issue. A diverse and inclusive culture improves team dynamics and cultivates the innovation needed to develop Cadence's suite of innovative products and services.

We are leaders in innovation, and it is indisputable that diversity of thought fuels innovation. Therefore, we want to be leaders in the area of diversity, equity, and inclusion, as a competitive differentiator that drives business results.

Tina Jones

Senior Vice President, Global Human Resources, Cadence

Establishing a culture that embraces diversity, equity, inclusion, and belonging is the heartbeat of our success as a company. We have created an inclusive culture based on trust and integrity, where everyone has an equal opportunity to contribute and bring their authentic selves to work. Our strength as a company comes from encouraging diversity of thought and fostering a culture that inspires our people to genuinely care for each other.

K.T. Moore

Vice President, Marketing, Executive Sponsor of DEI, Cadence

Our Approach

Cadence believes that leadership is crucial to embedding inclusion and equity within company culture. This year, Cadence introduced a compensation incentive for leaders to improve the diversity of its workforce: we tied ~20% of 100 senior leaders' bonuses to driving a high-performing inclusive culture, including advancing DEI, top talent and sustainability priorities. Our goal with this compensation strategy is to create meaningful incentives to drive change.

Nine years ago, we developed a program to help support gender diversity at Cadence. Our Women@Cadence program created a strong community to better understand and address challenges faced by women in technology and business. Further, our Women in Technology (WiT) and Women of Worldwide Field Operations (WoW) provide specialized development opportunities for women in technical and sales roles. Based on these efforts, the proportion of women at Cadence has increased in each of the last nine years. In 2022, 25% of all new hires were women and 26% of our early career and intern hires were women.

Pledge for Gender Equity

To show our commitment to diversity in the semiconductor industry and the broader community, President and CEO Anirudh Devgan, PhD signed the Global Semiconductor Alliance's Women's Leadership initiative's CEO Pledge, taking a stand with other industry leaders to make a substantial impact on the advancement of women in the semiconductor industry. By signing this pledge, Anirudh and Cadence have committed to prioritizing gender diversity through recruitment, retention, and development, and offering dedicated opportunities for women to advance in their careers.

6 Key Focus Areas

Recruitment and advancement
Increase diverse representation and inclusion across all levels

Community
Foster trust and belonging within Cadence

Brand
Bring awareness to our One Team culture and employees

Equity
Maintain equitable policies and pay practices

Education
Bring awareness to barriers, like unconscious bias, and enable allyship

Partnership
Partner to make an impact inside Cadence and in our communities

Recruitment and Advancement

We regularly monitor the diversity of our current workforce and candidate pool. We partner with national engineering organizations, and colleges with diverse student enrollment, to conduct recruiting, outreach, and engagement with diverse communities. In addition, Cadence supports a 16-week returnship program to help bring talented employees back into the workforce, especially women and caregivers who left to support their families. To engage U.S. employees in this effort, we offer a bonus to employees for referring candidates who identify as Black, Latinx, Native American, Pacific Islander, two or more races, women in technical fields, or person with a disability.

We sponsor focused development through an Advanced Leadership Program for top women talent, and for top Black and Latinx talent which provides specialized coaching, workshops, and career opportunities. In addition, our IMPACT mentorship program provides women and U.S. Latinx and Black employees an opportunity to choose a mentor based on their career goals.

Education

We continue to provide unconscious bias resources to managers to challenge ourselves and improve diversity and inclusiveness at Cadence. 89% of U.S. managers have participated in unconscious bias training as of June 30, 2022. In 2023, we have additional unconscious bias training planned for those newly hired or promoted to a U.S. management role.

The Returnship Program opened the door for me to come back to the EDA and semiconductor industry. It's a positive and empowering experience to overcome self-doubts and challenges through learning and hard work, while being supported by coworkers.

Diana Kuai

Lead Application Engineer, Cadence

Cadence valued the necessity and importance of the break for me and they valued my previous experience. The Returnship Program brought back my confidence.

Madhu Comandur

Lead Application Engineer, Cadence

At Cadence, we understand words matter. Our "One Cadence—One Team" culture builds and fosters DEI. We embrace and respect all backgrounds, experiences, and ideas to help us solve technology's toughest challenges, allowing our customers to transform lives worldwide.

In response to changes in the industry and conversations with our customers, partners, and employees, we formed the Words Matter Initiative, led by a cross-functional team with members from all business groups and inclusion groups. The team focused on the language and terminology in our materials to ensure our communications are respectful and reflect our DEI values. The team compiled a respectful language list based on input from tech groups, DEI authorities, and feedback from Cadence employees, and we are actively removing terms deemed inappropriate for use in our code and content. Further, we provide employees with resources to identify bias in the terms we use every day to ensure we create an environment where all groups feel included and welcome.

Equity

In July 2022, we performed a detailed review of our compensation practices in all countries where Cadence has employees. We are proud to report that Cadence maintained global salary pay parity based on gender and U.S. salary pay parity based on race and ethnicity, again in July 2022. This is the fourth year in a row we have achieved pay parity.

Our Equal Employment Opportunity Policy governs our conduct at Cadence. As stated in our Code of Business Conduct, we prohibit discrimination on the basis of age, race, color, religion, sex, ancestry, national origin, sexual orientation, or disability globally.

Partnership

To encourage students and professionals of underrepresented groups to develop their skills and pursue careers in science, technology, engineering, and math (STEM), we provide donations to Girls Who Code, Technovation, SMASH, Black Girls CODE, Latinas in Tech, Out in Tech, and Vets in Tech.

To learn more about how we partner with our supply chain to support inclusive practices in line with our Code of Conduct, see page 51.

Brand

To support advancing diversity in the technical talent pool, we offer a Women in Technology Scholarship, a Black Students in Technology Scholarship, and a Latinx Students in Technology Scholarship to bachelor's, master's, and PhD students at accredited universities in the United States. In 2022, we have awarded scholarships to 38 incredibly talented students to support their careers in technology.

We have also been named one of the Best Places to Work for LGBTQ+ Equality by the Human Rights Campaign Foundation for the second year in a row. With a perfect score of 100, we were included as part of their Corporate Equality Index, which is the national benchmarking tool on corporate policies and practices pertinent to lesbian, gay, bisexual, transgender and queer employees.

Community

We currently support global Cadence Inclusion Groups for Black, Latinx, LGBTQ+, Veterans, and Women employees and allies. This year in the U.S., we launched three new employee inclusion groups: Asian and Pacific Islander, Indian and South Asian, and employees who are neurodivergent and/or have disabilities. These forums encourage dialogue for sharing and connecting, promoting awareness of experiences and the impact of bias.

Our Inclusion Groups are empowered to host events throughout the year to celebrate and recognize the importance of diversity, equity, and inclusion at Cadence, in our industry, and in our world. This includes Women's History Month, Black History Month, Pride, Juneteenth, Latinx Heritage Month, and Veteran's Day, among others. We organize social activities that allow employees to learn about our groups' histories, languages, foods, and other elements of their culture.

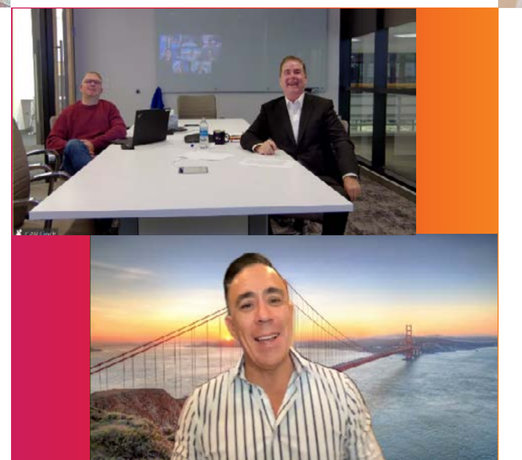
We regularly host thought leaders from Cadence, the industry, and the community, to help bring awareness to important topics. We believe that the human connection, personal storytelling, and real experiences better connect us to each other's journeys. Here are a few of the activities that were organized by our inclusion groups this year:

Black Inclusion Group: Dr. Ibram X. Kendi, one of America's foremost historians and leading antiracist scholars, discussed what it means to be antiracist and the impact we can make as a global community.

Latinx Inclusion Group: Elaine Montilla, Chief Technology Officer (CTO) for US School Assessment at Pearson, shared practical advice for Hispanic and Latinx employees in tech and effective strategies to create more inclusive cultures.

LGBTQ+ Inclusion Group: Judy and Dennis Shepard, founders of the Matthew Shepard Foundation, shared the powerful story of losing their son Matthew to an anti-gay hate crime and how they established the foundation in his name to support the LGBTQ+ community.

Veteran Inclusion Group: Guillermo Diaz, Jr., Chairman of the Hispanic Technology Executive Council (HITEC), shared about his time in the United States Navy, earning a military scholarship that led to a Bachelor of Science degree. He also spoke to his experience as former Chief Information Officer at Cisco, where he was the executive sponsor for their Veteran and Latinx employee resource groups.



Women's Inclusion Group: Pratima Rao Gluckman, author of *Nevertheless, She Persisted: True Stories of Women Leaders in Technology*, discussed her book in which she chronicles the leadership journeys and mindsets of successful women technologists. In a fireside chat, she discussed the importance of sponsorship and mentorship, acknowledging one's unconscious bias, allyship, and overcoming the fear of failure based on her learnings and experiences as a woman in tech.

Demographics

As of December 31, 2022, the ethnicity of our U.S. population, and gender diversity of our global population was as follows:

Gender (Global)	Overall	Technical	Non-Technical	Management
Women	24%	20%	46%	17%

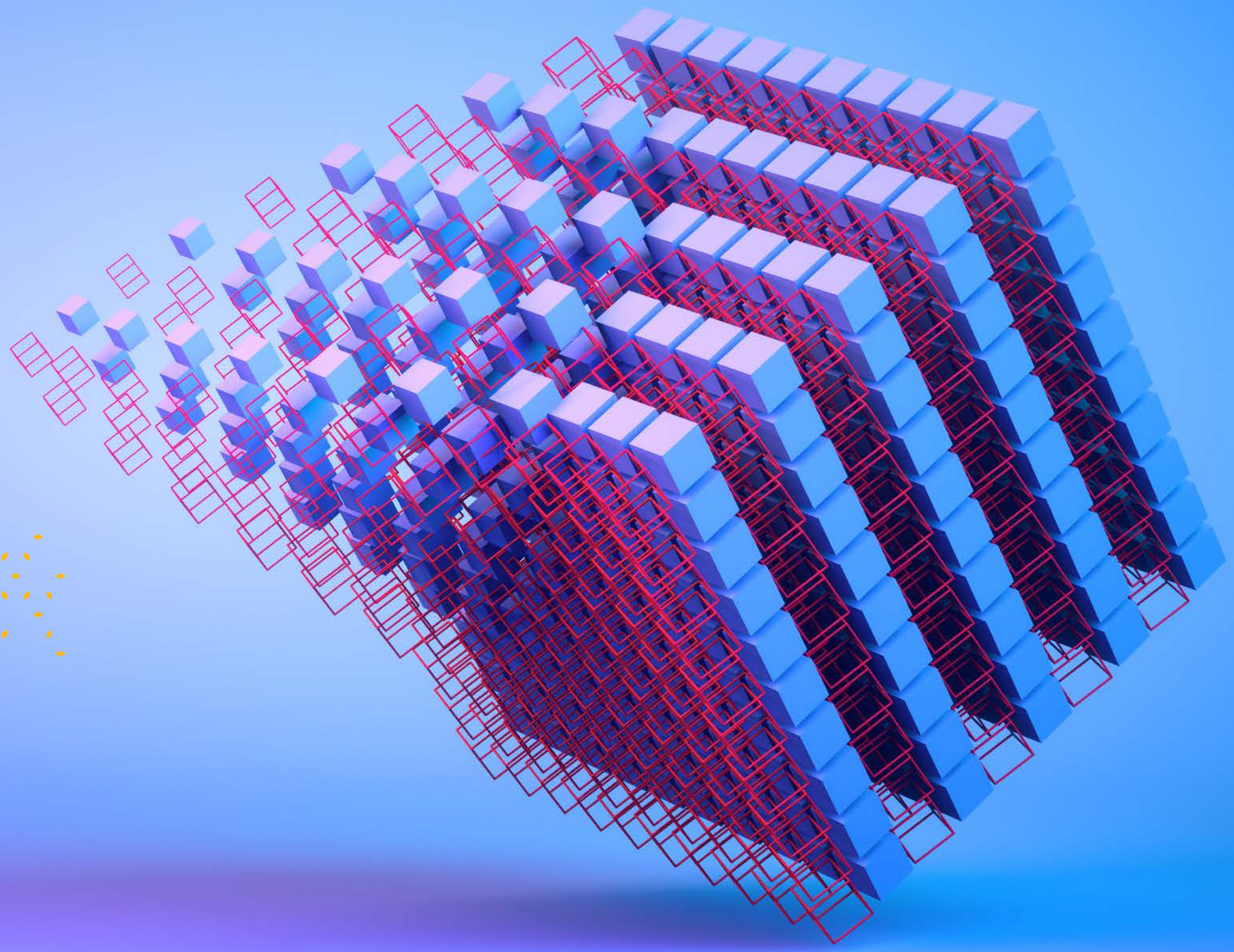
Ethnicity (US)	Overall	Technical	Non-Technical	Management
Asian & Indian	52%	57%	38%	52%
Black or African American	1%	1%	3%	1%
Hispanic and Latinx	3%	2%	6%	2%
Other*	2%	1%	3%	1%
Undisclosed	6%	6%	5%	6%
White	36%	33%	46%	38%

Our 2021 EEO-1 Report can be found here. The EEO-1 report requires the use of job categories that do not align with our internal job categories, and we encourage you to review the information in our 2022 ESG Report to get a better understanding of our practices and workforce demographics.

*Hawaiian/Pacific Islander, American Indian/Alaskan Native, two or more races

**All figures are rounded to the nearest decimal

Governance



Cadence is committed to conducting business with the highest standards of ethical conduct and integrity as we recognize these are foundational to our culture and critical to our long-term success.

Board Governance

As of December 31, 2022, our Board of Directors was comprised of eleven individuals, nine of whom are independent as determined pursuant to the Nasdaq Stock Market's listing standards.

Board Leadership

The Board is currently led by an Executive Chair and a Lead Independent Director. Fully independent committees of the Board oversee audit, remuneration, and nomination. Inspired by Cadence's Words Matter Initiative, the Board elected in 2022 to name all Board and Committee leaders "Chairs," eliminating the use of chairman. In May 2022, Ita Brennan was appointed Chair of the Corporate Governance and Nominating Committee.

In February 2023, Lip-Bu Tan notified our Board that he will not seek re-election at our annual stockholders meeting in May 2023 when his current term as Executive Chair expires. Following his retirement from our Board, the Board will return to an independent, non-executive leadership Structure and ML Krakauer will become Chair.

Board Refreshment

In January 2022, the Board appointed ML Krakauer to the Board and since March 2020, the Board has added five directors, each of whom enhances the diversity of our Board through their distinct personal experiences, gender, and ethnicity. The Board remains committed to seeking diverse leaders who can apply their unique and valuable experiences to the stewardship of our company.

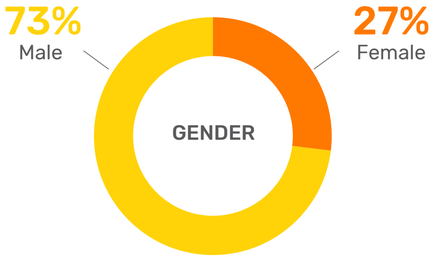
Corporate Governance Guidelines

Our Board's Corporate Governance Guidelines cover various topics relating to the Board and its responsibilities. The Corporate Governance Guidelines reflect the Board's commitment to monitor its effectiveness and decision-making at the Board and management level and outline the authority and practices in place to review and evaluate Cadence's business operations as needed and make decisions that are independent of Cadence's management.

Commitment to Diversity on the Board

The Board's Corporate Governance Guidelines reflect Cadence's commitment to having leaders on the Board with diverse backgrounds. In addition, the Corporate Governance and Nominating Committee's charter requires consideration of a director nominee's integrity, experience, judgment, diversity of background (including, among other factors, race, ethnicity, and gender), independence, financial literacy, and ability to commit sufficient time and attention to Board activities. Skills such as an understanding of electronic design, semiconductor and electronics systems technologies, international background, and other relevant characteristics are also considered. The Corporate Governance and Nominating Committee regularly discusses and annually reviews, both as a committee and with the Board, the appropriate experience, skills, and characteristics required of directors in the context of the current composition of the Board and its committees. In seeking diversity of background, the Corporate Governance and Nominating Committee seeks a variety of occupational and personal backgrounds and race, ethnicity, and gender diversity on the Board in order to obtain a range of viewpoints and perspectives. This annual assessment enables the Board to update the skills and experience it seeks in the Board as a whole and in individual directors, as Cadence's needs evolve and change over time, and also enables the Board to assess the effectiveness of its policy to seek a diversity of background on the Board.

Board of Directors Diversity: Gender



Board of Directors Diversity: Ethnicity

*This data is as of January 31, 2023

Director Nominee Qualifications, Skills, and Experience

The Corporate Governance and Nominating Committee has determined that it is important for an effective Board to have directors with a balance of the qualifications, skills and experience set forth in the table below.

Summary of Qualifications, Skills and Experience		Mark W. Adams	Ita Brennan	Lewis Chew	Anirudh Devgan	Mary Louise Krakauer	Julia Liuson	James D. Plummer	Alberto Sangiovanni-Vincentelli	John B. Shoven	Young K. Sohn	Lip-Bu Tan
Compensation / Talent Management	Experience in compensation, organizational management, leadership, talent development, and identifying, recruiting and motivating top talent	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Corporate Governance	Experience in providing oversight and support of the goals of the Board and management and experience in protection of stockholder interests	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Cybersecurity	Understanding cybersecurity risks in enterprise operations		✓	✓	✓	✓	✓		✓	✓		
Financial Expertise	Experience in evaluating financial statements and capital structures and overseeing financial reporting and internal controls	✓	✓	✓	✓	✓		✓		✓	✓	✓
Government / Regulatory / Public Policy	Experience in or working with governmental and regulatory organizations		✓	✓						✓		
International	Experience with global businesses, operations, strategy, and customer bases	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Marketing	Experience in marketing and branding of products and services and identifying and developing new markets for products and services	✓	✓	✓	✓	✓	✓				✓	✓
Operations	Current or former executives with significant operating experience, who are able to provide insight into developing, implementing and assessing an enterprise's operating plan, business, and strategy	✓	✓	✓	✓	✓	✓				✓	✓
Risk Management	Experience in overseeing risk management and understanding risks faced by enterprise operations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Strategic Planning	Experience in providing insight into developing, implementing, and assessing businesses and strategy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technology / Semiconductor / Electronic Design Automation	In-depth understanding of electronic design automation, semiconductor and electronics systems technologies; ability to understand and oversee the overall business and strategy, including product development and the acquisition of businesses that offer complementary products, technologies or services	✓			✓	✓		✓	✓		✓	✓

Mark W. Adams | Ita Brennan | Lewis Chew | Anirudh Devgan | Mary Louise Krakauer | Julia Liuson | James D. Plummer | Alberto Sangiovanni-Vincentelli | John B. Shoven | Young K. Sohn | Lip-Bu Tan

Board Oversight of the Corporate Social Responsibility Program

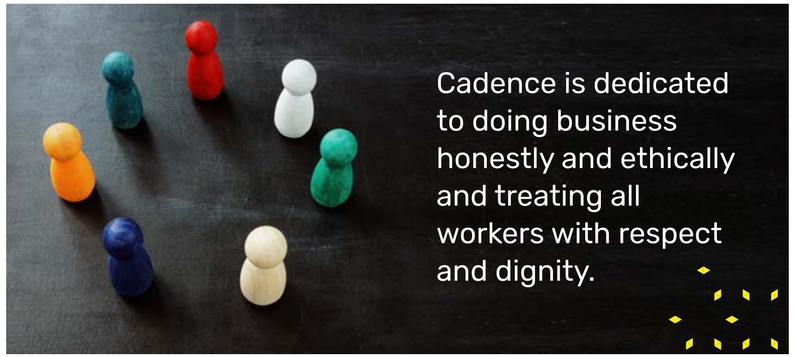
Our Board, through its Corporate Governance and Nominating Committee, oversees our corporate social responsibility program and the progress of our environmental (including climate-related risks and opportunities), social (including health, wellness, and safety), and governance efforts, matters, and initiatives. The Corporate Governance and Nominating Committee formally reviews our environmental, social, and governance efforts and climate-related issues within the organization at every regular meeting and regularly reports to the Board on such programs. In 2022, the Corporate Governance and Nominating Committee held three meetings. The Board and its Compensation Committee formally review the benefits provided to our employees, including health and wellness, once a year.

100%

employees completed compliance training

Ethical Conduct: Code of Business Conduct

Our Code of Business Conduct provides standards for ethical conduct in how we work with each other at Cadence and with our customers, suppliers, government officials, and other stakeholders. Our Code of Business Conduct also reflects our values of integrity, innovation, agility, and quality, and it applies worldwide to our Board, officers, employees, and certain contractors and consultants. In 2022, we added a Human Rights Policy to our Code of Business Conduct, reflecting our commitment to respect all internationally recognized human rights.



Cadence is dedicated to doing business honestly and ethically and treating all workers with respect and dignity.

Compliance with our Code of Business Conduct is the responsibility of all employees and a condition of continued employment. Our employees are required to annually certify that they have reviewed and understand the Code of Business Conduct and annually complete training that covers areas in the Code of Business Conduct, such as accuracy of records, conflicts of interest, and raising concerns or reporting possible misconduct. Our Code of Business Conduct is translated for our employees in the following local languages: Dutch, Portuguese, French, German, Hebrew, Chinese, Polish, Russian*, Korean, Taiwanese, Japanese, Malay, and Vietnamese.

The Chief Executive Officer and the General Counsel of Cadence, under the supervision of the Board, actively monitor and audit compliance of the Code of Business Conduct. Our General Counsel periodically provides reports to the Board or its Audit Committee that include information on alleged violations of and the actions taken under the Code of Business Conduct.

*Russian operations ceased during the reporting year

Business Ethics: Anti-Corruption

Integrity is the foundation of our High-Performance Culture. It is important to Cadence that we operate ethically and transparently, avoiding conflicts of interest, competing fairly and legally, and complying with the rules and regulations of the regions where we do business. Our Code of Business Conduct and our Anti-Corruption Policy are the foundation of our robust corporate governance and compliance programs. Any material losses or legal action regarding anti-competitive behavior or violation of anti-trust and monopoly legislation required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission (SEC) would be reflected in our filings with the SEC.

Cadence has no tolerance for bribery in connection with any of its business dealings. Our Anti-Corruption Policy provides rules and procedures for providing or accepting gifts, entertainment, meals, travel-related expenses or anything of value, and charitable and political contributions. The General Counsel of Cadence oversees our Anti-Corruption Policy.

Our Anti-Corruption program at Cadence is extensive and all employees, including management, are required to complete annual refresher training and certify that they have reviewed our Anti-Corruption Policy.

Political Contributions

Any contributions or donations on behalf of Cadence to a political party, candidate, action committees, initiative, campaign, or advocacy on behalf of Cadence must receive pre-approval from the General Counsel and the Chief Financial Officer of Cadence.

Cadence did not contribute to political parties, candidates, or political action committees or for the purposes of political advocacy in 2022.

Reporting Concerns

Our employees are required to promptly report possible misconduct, including illegal activities, unethical business practices, violations of the Code of Business Conduct or our other policies, and any other concerns about corporate governance, accounting, internal accounting controls, or audit matters. As provided in our Code of Business Conduct, our employees can report possible misconduct or raise their concerns to their supervisor, Human Resources partner, office of the General Counsel, or anonymously via our whistleblower hotline. All concerns reported through our whistleblower hotline are reviewed by our Board through the Chair of the Audit Committee.

Cybersecurity and Data Privacy:

Relentless Pursuit of Security

Approach

Our products and services involve storage, including cloud-based storage, and transmission of our proprietary information and that of our customers. Effectively managing cybersecurity and protecting the sensitive data that Cadence obtains from its customers, partners, and employees is vital to our business continuity. With offices throughout the world, including key research and development locations outside of the United States, our business continuity is also dependent upon the connectivity of our global operations and is subject to a number of risks outlined in our current Annual Report on Form 10-K filed with the Securities and Exchange Commission.

We proactively manage cybersecurity and data privacy risks by leveraging:

- Industry security frameworks and best practices
- Advanced security analytics consisting of artificial intelligence and machine learning
- Learnings from past or currently known cyber threats

2022 Focus

In 2022, we focused on securely expanding our cloud-based product offerings while also continuing our relentless pursuit of providing secure remote access with endpoint security controls and infrastructure resiliency to support our hybrid workforce. We enhanced our monitoring and detection controls to further protect our networks and cloud services from cyber threats and we utilized cybersecurity incident response procedures to address related security risks.

Structure and Compliance

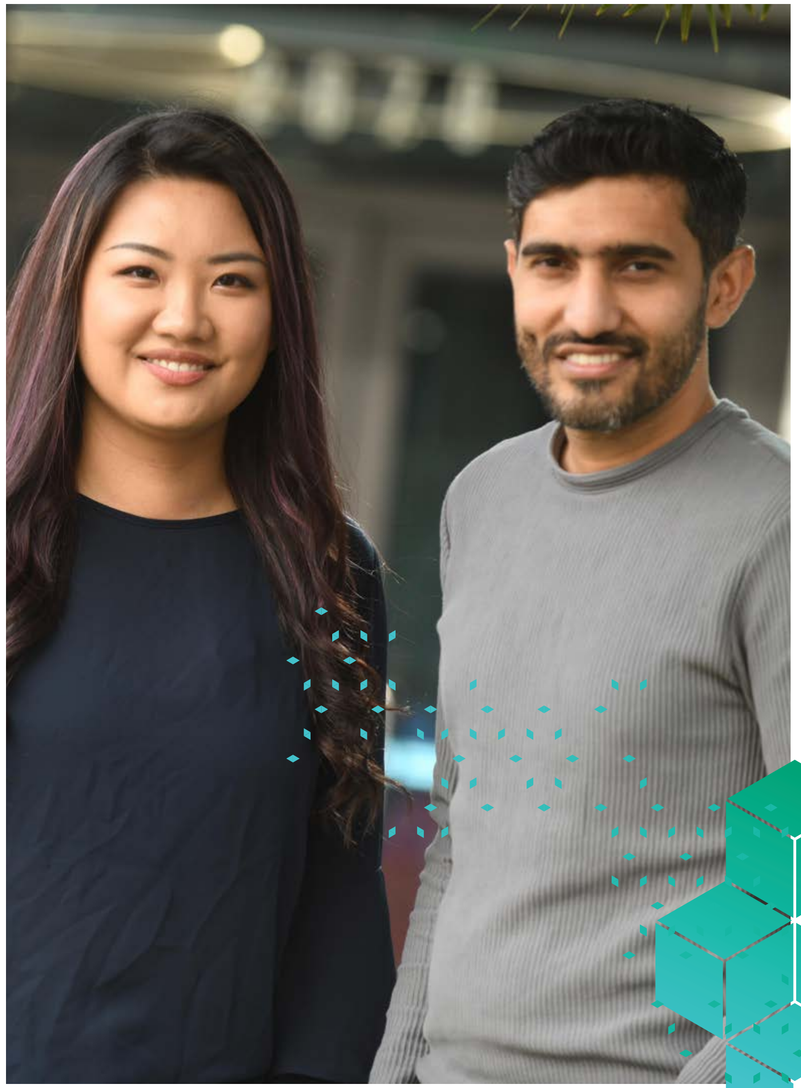
We structure our data privacy and cybersecurity program to align with the EU, National Institute of Standards and Technology (NIST), and ISO 27001 and ISO 27017 standards. We are pleased to report that we received formal certification of our compliance with ISO 27001 and ISO 27017 in 2022. Our program includes security controls to detect and mitigate risks that could compromise data that Cadence obtains from its customers, partners, and employees. We have procedures in place for compliance with the General Data Protection Regulation and the California Consumer Privacy Act. We perform regular internal and external security assessments to identify potential vulnerabilities and, in the event of a data breach, we have documented response procedures and trained staff to execute our emergency protocol.

Our Chief Information Security Officer administers our data privacy and cybersecurity program, with the assistance of our Information Security team and with oversight from the Audit Committee of the Board of Directors. We provide regular updates to our Board of Directors on our cybersecurity risk profile and on the performance of our data privacy and cybersecurity program.

Cadence's Privacy Policy explains how and when we collect personal data and the types of information the policy covers. The policy also outlines our data disclosure policy, opt out procedures, location and retention policies, user rights, and contact information for reporting questions or concerns.

To ensure all Cadence employees are aware of our policies and procedures on data privacy and cybersecurity, an annual training for data privacy and cybersecurity is mandatory. The training covers topics such as data protection, classification and privacy, cybersecurity, phishing, and other pertinent topics.

Any data breaches, law enforcement requests for user information, or other issues associated with data security and user privacy would be disclosed in our filings with the U.S. Securities and Exchange Commission (SEC) if such disclosure is required pursuant to SEC regulations.



Responsible Supply Chain

We partner with suppliers that share our values and aim to build long-lasting relationships that are mutually beneficial – creating value for society beyond our respective organizations.

Supply Chain Description

Our supply chain is composed of a mix of professional services, goods, and contract manufacturing of computer hardware. For contract manufacturing we work with a limited number of trusted partners with which we maintain close, long-term relationships. These partners manage the relationships with second-tier suppliers for parts and raw materials.

Partnering with suppliers that support our values

We expect our suppliers to conduct themselves with the same High-Performance Culture values of integrity, innovation, agility, and quality, to which we hold ourselves. The process approach and principle of continual improvement govern the sustainability of our supply chain.

Supplier Code of Conduct

Through our Supplier Code of Conduct (SCOC), launched in 2020, we aim to extend our ESG-aligned governance standards discussed in this report to our supplier partners. We continue to inform suppliers of our SCOC and our expectations for ethical and responsible practices.

Targeted Engagement

Building on our supplier engagement survey, we map ESG-related risks and opportunities in our supply chain. We target high impact areas for direct engagement with key suppliers around issues relating to climate change, data security, ethics, and integrity, including human rights.

To identify to what extent suppliers are aligned with our decarbonization strategy, we track which suppliers have set carbon reduction targets and respond to CDP.

100%

of our direct suppliers are RoHS compliant

100%

of our new suppliers have been notified of our Supplier Code of Conduct

32%

of our spend is with suppliers that have set science-based targets to reduce GHG emissions

44%

of our spend is with suppliers that are CDP responders

Emissions in the Supply Chain

Our Scope 3 emissions consistently account for ~90% of our total carbon footprint. In 2022, with growth and increased business activity, we saw a 66% increase in our Scope 3 emissions compared to 2021. Business demand for our hardware product line drove an increase in production spend which resulted in a commensurate increase in emissions. Further, we invested in construction at our owned properties which is also an emissions intensive category. Overall, this spend resulted in a 12% year over year increase in the average rate of CO2 emissions per million dollars spend. Yet even with this increase, through actions and engagement focused on our Supply Chain, we have reduced Scope 3 emissions by 23% over our baseline year of 2019.

2019

24%

decrease in Scope 3 emissions since 2019

2022

Decarbonizing the Supply Chain

We focus our climate engagement with suppliers of purchased goods and services, including capital goods, because 85% of our total Scope 1, 2, and 3 emissions stem from these categories.

Working with consulting partners, we have extended our climate-related risk assessment to include key suppliers in 2022. Their analysis validated our focus on tracking key supplier's decarbonization plans and GHG data. For partners in high emitting industries, lack of an adequate climate transition plan could result in long-term transition risks which is why we are initiating engagement discussions with the relevant suppliers.

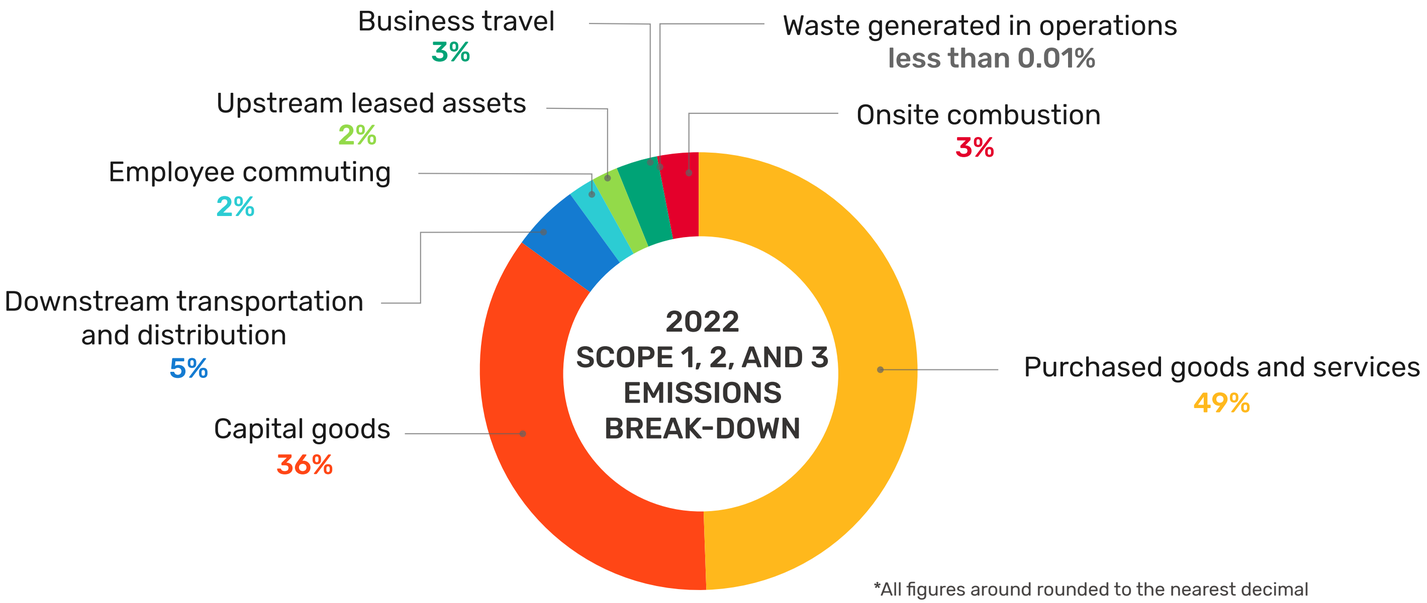
In 2023, we plan to continue expanding our climate-related supply chain engagement activities with key suppliers, prioritizing engagement based on carbon intensity and the amount of spend with a supplier.

We are actively engaged with all of our contract manufacturing partners on climate and have engaged in discussions with other suppliers in the manufacturing supply chain on GHG accounting, including exploring collaborations on product specific GHG emissions calculations.

Active engagement on climate

100%

of contract manufacturing partners



*All figures around rounded to the nearest decimal

Collaborating on Carbon Accounting

To improve the accuracy of our Scope 3 calculations and reflect the work our valued suppliers are doing to reduce their own carbon footprints, we use the GHG Protocol Hybrid Method. Indeed, the average carbon intensity of Cadence Scope 3 emissions for partners that supply actual GHG emissions is significantly below the overall average rate for all Scope 3 emissions.

During the reporting year we worked with several of our product and service providers on obtaining verifiable product and service specific emissions. This work continues in 2023.

For suppliers who do not yet disclose GHG emissions, we provide suggestions on why and how to get started with carbon accounting.

Carbon Intensity Rates

Carbon intensity for suppliers that report actual GHG emissions*

97%

lower than the average of our total Scope 3 emissions

Carbon intensity for spend-based GHG estimations

30%

higher than the average of our total Scope 3 emissions

*Through CDP or their own publications

GHG Calculations

Spend-based Estimates higher than Actual Data

GHG Emissions using spend and Industry Average Emissions Intensity

27%

GHG Estimate using actual booked tickets

GHG Emissions using spend and Industry Average Emissions Intensity

85%

GHG Estimate using actual supplier GHG data disclosed through CDP

Supplier Diversity

We engage with and empower diverse value chain partners. In line with our commitment to diversity and inclusion, we are developing programs to grow our share of diverse suppliers including taking steps to design programs to help current suppliers achieve certification.

6%

Of 2022 global spend was with diverse suppliers
(certified by an independent third party)

Of active diverse suppliers:

55%
Small Business

14%
Small Disadvantaged Business

12%
Minority-Owned Business

10%
Woman-Owned Business

4%
Women-Owned Small Business

Human Rights

Committed to responsible sourcing of materials and avoiding the use of conflict minerals that may finance or benefit armed groups that engage in human rights abuses, we survey our suppliers on conflict minerals compliance annually. Cadence supports industry efforts to enable conflict-free mineral sourcing, and we expect the same from our suppliers.

95%

of suppliers responded to our 2022 conflict minerals survey

The 2015 UK Modern Slavery Act informs our management of forced labor, slavery and human trafficking. To reduce the possibility of any form of these issues occurring in our supply chain, we require supplier partners to be bound by obligations to comply with all applicable laws.

Detailed information on our programs can be found in:

Human Rights Policy

Form SD – Specialized Disclosure Report on Conflict Minerals

Conflict Minerals Policy Statement

UK Modern Slavery Act Statement

Cadence is committed to upholding the human rights of workers, and to treat them 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 in our supply chain. Our Supplier Code of Conduct outlines our expectations for suppliers on freely chosen employment, young workers, working hours, wages and benefits, humane treatment and non-discrimination. We recognize the importance of workplace safety. In addition to minimizing the incidence of work-related injury and illness, a safe and healthy work environment enhances the quality of products and services, consistency of production, and worker retention and morale.

Manufacturing Partners

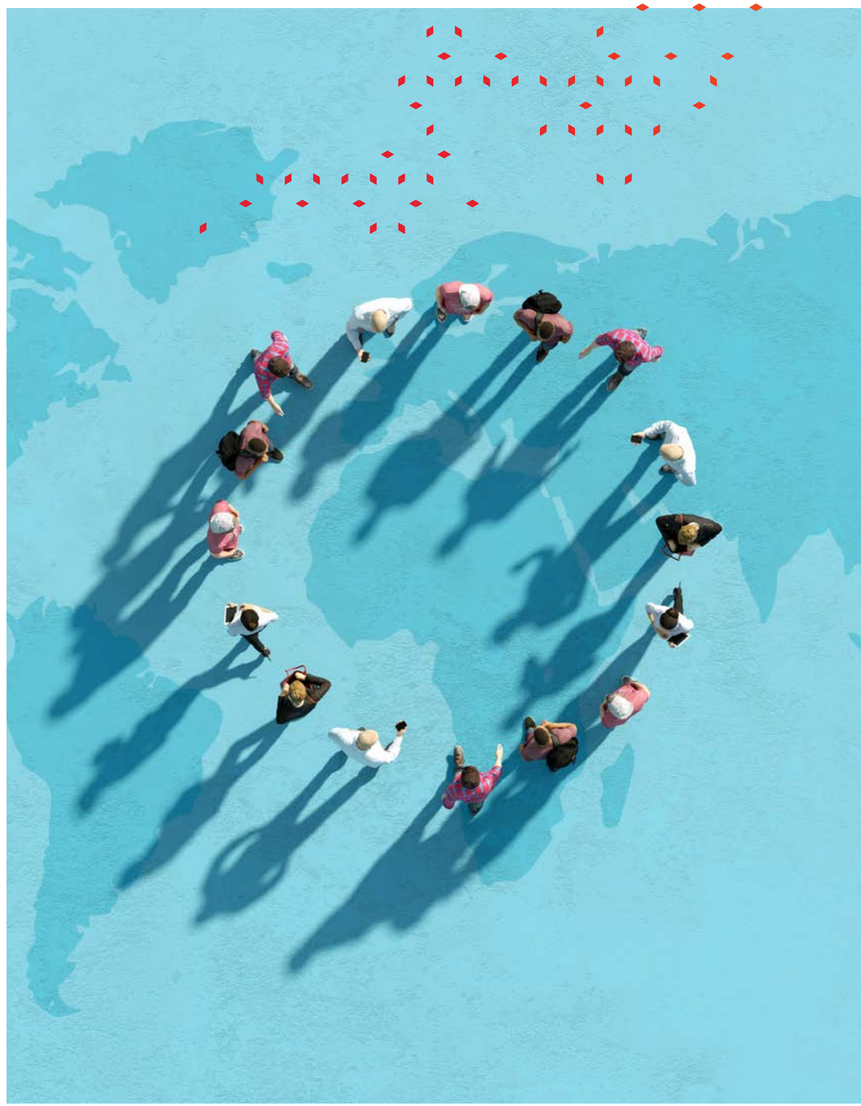
100%

track conditions for manufacturing workers against ILO standards including that the workweek is limited to 60 hours*

100%

have company policies to protect workers from exposure to safety hazards while on the job*

* Of suppliers that responded to our latest supplier sustainability survey that have a manufacturing workforce



Community Outreach

2022 Community Outreach Highlights

The Cadence Giving Foundation

Cadence understands that the success of our business depends upon the success of our employees and the communities in which we live and work. To expand the impact, commitments, and legacy of our company giving initiatives, we formed the Cadence Giving Foundation. The Cadence Giving Foundation promotes the power of technology to support critical needs in our global communities like diversity and inclusion, environmental sustainability, and education.

The Giving Foundation is managed by the Director of Social Impact, who is supported by a global advisory panel comprised of leaders from across the organization. All contributions are reviewed by foundation Officers and approved by the foundation Board. By leveraging their knowledge of the environment, STEM education, Cadence technology, and our partnerships, thoroughly vetted decisions are made to best benefit our communities.

Our programs promote science, technology, engineering, and math (STEM) education among youth, with a special focus on underrepresented groups, including Veterans, Black, Latinx, LGBTQ+, and women communities, to create a future pipeline of diverse talent. We have also demonstrated a strong commitment to combatting climate change and taking steps to support environmental initiatives that improve the sustainability of our communities. We are proud to have donated more than $3.7 million in 2022.

The Cadence Giving Foundation is blending technological innovation and philanthropy to make a lasting and positive impact on the world. The initiative will support critical needs in climate and sustainability but also contribute to areas like diversity, equity, and inclusion and access to STEM education.

Anirudh Devgan, PhD

President and Chief Executive Officer, Cadence

Pledge 1% Alliance

To expand our commitment to community giving, Cadence has recently joined the Pledge 1% alliance, a global movement to inspire, educate, and empower companies to effectively leverage their financial assets, employee time, and individual technology for positive social impact. Cadence will join industry leaders to commit to contributing 1% of employee time, Cadence technology, and profit* to benefit our communities.

Cadence has a strong culture of community involvement around the world, a commitment to utilizing our technology for good, and the desire to formalize our giving through Pledge 1%. By joining other companies in the Pledge 1% movement, we have the opportunity to add further collaboration and gain more visibility on the issues that are most critical to tackle.

Nicole Johnson

Group Director, Social Impact, Cadence

2022 People COMPANIES THAT CARE

We believe it is important that we create meaningful opportunities for employees to connect and contribute to their community. We provide 40 hours of paid volunteer time off annually, charitable contribution matching, company-wide volunteer campaigns, and international service immersion projects.

*On average annually, we will provide cash donations equal to 1% of the prior 3-year average GAAP net income

$50 Million to Support Racial Equity

Cadence is making a $50 million USD purpose-driven investment in an impact investment program managed by RBC Global Asset Management (RBC GAM) to address racial wealth inequities in affordable housing, homeownership, and small business. In partnership with RBC GAM, Cadence will invest in an impact investment strategy that seeks to positively support underserved Black and Latinx individuals and communities nationally, including those in the San Francisco Bay Area, CA; Austin, TX; Columbia, MD; the New York Metropolitan Area; Boston and Burlington, MA; Research Triangle Park in Raleigh, NC; and Pittsburgh, PA—locations where Cadence has significant operations and a community presence. Additionally, a portion of Cadence's investment will be focused internationally on projects aimed at supporting women and people of color as well as climate justice initiatives.

Fostering diversity, equity and inclusion is at the core of who we are as a company and collaborating with RBC GAM to advance racial equity and community development was a very easy choice. We are dedicated to making a difference and look forward to seeing the impact that our partnership will have on Black and Latinx communities across the United States as well as on the international initiatives focused on supporting women, people of color and climate justice.

Anirudh Devgan, PhD

President and Chief Executive Officer, Cadence

Season of Giving

This year Cadence was excited to host our Season of Giving company-wide volunteer campaign. More than 1,000 employees in 32 Cadence locations came together to volunteer 4,000 hours to causes they were passionate about. Our sites partnered with 47 charitable organizations around the world to participate in charitable activities ranging from packing and distributing food, improving community facilities, and sustaining natural habitats. Together, Cadence employees donated over $200,000 to their charitable partners.

Enabling Education for Disadvantaged Students

Team4Tech

For the fourth year, we have partnered with Team4Tech to give our time, talent, and resources to support quality STEM education for disadvantaged youth, helping develop critical skills that can enable their career and give them opportunities for a brighter future.

S.O.U.L Foundation, Uganda

In 2022, Cadence had our eighth project with Team4Tech and S.O.U.L. Foundation in Uganda, a nonprofit to foster sustainable and vibrant Ugandan communities through unique partnerships focused on education, women's empowerment, food security, and maternal health. A team of 16 Cadence employees from Brazil, India, and the United States volunteered virtually to create online access to its learning materials for their sponsorship program, tailoring class, and maternal health class by supporting ICT training. One of the sub-teams developed an online/offline learning platform that integrates into S.O.U.L. Foundation programs which impact 40 local communities, 14,000 Ugandans across two rural districts, and 1,000+ students within the mentorship program.

RefuSHE, Kenya

In Fall 2022, Cadence employees teamed up with RefuSHE, a nonprofit based in Kenya, to support refugee girls and women by developing two important projects: a new e-learning and wellness website that is also mobile-friendly and revamping their flagship education model, the Girl's Empowerment Program. RefuSHE supports vulnerable women refugees through unique programs that provide equal access to safety, education, and economic prosperity. A group of six employees developed a fully functioning e-learning and wellness platform for RefuSHE users with low literacy levels. This platform will help participants learn the foundations of running a small business, vocational skills, and introduce them to the importance of mental health support. In parallel, the other cohort worked collaboratively to redesign the Girl's Empowerment Program with the development of a detailed three-year roadmap. By designing new programmatic, operational, and fundraising recommendations and building sustainable exit strategies, this group of volunteers was able to improve a program that will have a lasting impact on the RefuSHE community. The RefuSHE project impacted over 450 learners, totaling over 2,000 hours of pro bono consulting, valued at $420,000.

Concern India Foundation

In India, Cadence has implemented several programs that serve local children with the greatest needs, including the differently abled and those without families. In partnership with the Concern India Foundation, Cadence connects thousands of children to important resources that support their health and education, including enhanced educational support to underprivileged children, special education for children with disabilities, athletics programs, technical skills training, healthcare, counseling, and other essentials like food and clothing. For seven years, Cadence has supported scholarships for high school graduates from low socio-economic backgrounds to encourage them to continue their education and improve their livelihoods. More than 422 scholars were supported, and 109 successfully found employment in 2022. These students receive regular mentorship from Cadence employees who motivate them to achieve their career goals.

MAHATMA AWARD
Dedicated to Bapu by Amit Sachdeva

Mahatma Awards

Awards for COVID 19 Humanitarian Efforts and excellence in Corporate Social Responsibility in India for 2022

CSR TIMES AWARDS
CSR TIMES

India CSR Times Award

The Cadence India Scholarship Program was recognized by the CSR Times

Supporting Diversity, Equity, and Inclusion

Cadence made contributions to a number of nonprofits with programs that create opportunities for underrepresented groups, including students of color, low-income students, first-generation college students, women and girls, veterans, and LGBTQ+ students to pursue careers in technology. The efforts of our nonprofit partners will help build a more diverse pipeline in tech.

Cadence Inclusion Group Donations

This year, our Inclusion Groups also nominated organizations that make direct impacts to their communities as donation recipients.

Cadencia, our Latinx Inclusion Group, chose the Cesar Chavez Foundation, which enriches the lives of low-income families, helping to meet human and cultural needs, and develop future leaders though elementary age STEM programs. Hands for Global Health was also selected, in support of their mission to improve the welfare of Indigenous Peoples of Latin America by empowering healthcare students from the U.S. to engage in public health interventions that reach the previously unreachable.

Our Veterans Inclusion Group selected the Wounded Warrior Project and Veterans of Foreign Wars, two organizations that are dedicated to fighting for the rights, entitlements, and empowerment of United States service members and their families. These donations also provide funding for crucial programs such as career counseling and rehabilitation for those injured during conflict.

On behalf of the LGBTQ+ Inclusion Group, for the second year in a row, Cadence sponsored Silicon Valley Pride. Our contribution helped support their annual LGBTQ+ Parade and Festival.

We also made a special donation to the Matthew Shepard Foundation in honor of National Coming Out Day. The Matthew Shepard Foundation was established after Judy and Dennis Shepard lost their son, Matthew, to an anti-gay hate crime. The Foundation is dedicated to working toward social justice, diversity awareness and education, and equality for gay, lesbian, bisexual, and transgender people. Through their appearances across the country, and around the world, Judy and Dennis Shepard are changing hearts and minds by sharing Matt's story and highlighting the importance of standing up for the LGBTQ+ community and anti-hate action.

Through Cadence's Global Gift Matching program, additional contributions made by individual employees were matched by Cadence at 100%.

American Heart Association

Cadence has joined the American Heart Association, the world's leading non-profit organization focused on heart and brain health, to support driving equitable health for all and help at-risk, under-resourced individuals receive education for blood pressure management. We hosted a four-part workshop series for employees on health equity, the first of which was hosted by Cadence's VP of Corporate Marketing, KT Moore. Cadence President and CEO Anirudh Devgan, PhD has also been named as chair of the 2023 Heart of the Bay campaign. This effort, of which Cadence will be a top sponsor, is set on raising funds to provide access to high-quality health care for under-resourced members of the community, especially regarding blood pressure and heart disease.

Brady Campaign

Cadence has partnered this year with the Brady Campaign to support efforts to reduce all forms of gun violence for all communities, especially Black and Brown communities which are disproportionately affected. Cadence was the top sponsor at their San Francisco fundraiser in October 2022.

Girls Who Code

For the fifth year in a row, we partnered with Girls Who Code to provide an entirely virtual Summer Immersion program. Cadence hosted 56 students in a virtual classroom, conducting workshops where they learned comprehensive coding skills such as HTML, CSS, and JavaScript. Additionally, we provided mentorship opportunities for our employees, and Cadence women from across the globe had the chance to speak with the girls and share their experiences as women in technology. We also sponsored Girls Who Code's Hiring Summit to assist thousands of women seeking technical roles in computer science.

Out in Tech

Cadence joined Out in Tech's corporate council to unite with a network of companies dedicated to fostering inclusion for the LGBTQ+ community. Our contributions also help fund their 16 chapters as well as programming for 40,000+ members, giving our employees opportunities to participate in learning and development events and mentor LGBTQ+ youth.

Black Girls CODE

We support Black Girls CODE and their network of girls interested in pursuing careers in STEM. Black Girls CODE provides their students with crucial opportunities to engage in STEM programs and workshops through local schools.

Vets in Tech

We support Vets in Tech in their mission to provide transitioning military, Veterans, and spouses with re-integration services and to connect them to the national technology ecosystem.

Team4Tech & Women in Tech Uganda (WITU)

In 2019, Nick Heaton, a distinguished engineer at Cadence, joined other Cadence employees to volunteer with Women in Tech Uganda (WITU), a nonprofit that provides women and girls with the skills they need to gain employment and lift themselves from poverty. Nick was so inspired by this immersive experience that he joined the Board of Directors at WITU. In 2022, in partnership with WITU, Nick piloted a one-year internship program for young women engineers at Cadence and selected five talented Ugandan women to receive technical training and participate in hands-on projects using Cadence software to gain skills that can help jumpstart their careers. A year later, four of the five interns will continue their development with Cadence for an additional 12 months, working on Python programming. While facing early challenges with unstable internet and no face-to-face contact with Cadence staff, these women have already managed to contribute content that expands Product Validation of Verisium Debug as well as create user extensions to the Cadence System Performance Analyzer for regression-based performance checking. Starting in October, the women were provided with Cadence laptops and have high-speed internet access for the first time. Additionally, for the first time since 2019, Nick spent two weeks in November 2022 to help ramp their skills further and increase contacts within Cadence, enabling them to make an even more significant impact.

Cristo Rey

Cristo Rey San José Jesuit High School, a private high school in San Jose, CA that provides a work-study program for low-income families, has been a partner of Cadence for the past four years. Cadence has supported a program for 29 students over that time where Cadence employees volunteer to mentor and guide students on real Cadence business projects. The program provides a safe space for the students to develop their professional skills while exposing them to the experience of a corporate work environment.

OpenEye, Cadence Molecular Sciences Northern New Mexico Foodshed Initiative 2022

Robust regional food systems are key to enhancing environmental and nutritional health as well as decreasing food insecurity in the community. OpenEye, Cadence Molecular Sciences in Santa Fe launched the #nm-foodshed initiative to increase access to local food by strengthening producer supply chains across the Southwestern United States and connecting our employees directly to farmers, producers, and food-waste services. Santa Fe operations support local agriculture in New Mexico by providing farm-to-table lunches and delivering in-season flowers to co-working spaces. Additionally, food waste diversion to composting facilities is planned for the near future. In 2022, the employee-led working group dedicated time and charitable contributions to our non-profit partners Food Is Free, Albuquerque, which gleaned and distributed 17,720 pounds of fresh food from urban trees and gardens to people under-served by conventional food systems, and to ReUnity Resources farm and soil yard for their continued efforts toward food security for New Mexico's Pueblo communities and educational partnerships with Santa Fe Indian School.

Innovating for Sustainability

Extreme Tech Challenge

Cadence is devoted to introducing and promoting technology to the global community for the good of future generations. In 2022, we again sponsored the Extreme Tech Challenge (XTC), which funds new ventures whose missions align with the United Nations Sustainable Development Goals. This year, KT Moore, VP of Corporate Marketing, attended the XTC Bootcamp and spoke on the importance of diversity, equity, and inclusion in corporate sustainability. XTC's ongoing global effort will help pave the way for technology leaders and entrepreneurs of the future to deliver the breakthroughs necessary to help address the world's biggest problems and realize a sustainable future.

EXTREME TECH CHALLENGE

AmazoniaHack

Cadence was a proud sponsor of AmazoniaHack, a virtual open hardware hackathon to learn about and explore creative applications of hardware solutions to contribute to the global fight against deforestation.

Cadence provided tool access to the Cadence OnCloud, a SaaS software platform for system design and simulation needs that can operate on any hardware, removing the requirement to run and maintain expensive infrastructure hardware. Cadence employees from Brazil were available to provide support to hackathon participants through online mentoring during the event.

I believe the Amazon belongs to humanity. This means we have a responsibility to care for and preserve it. When this project presented itself, I understood it as being a good opportunity to do my part. In order to help solve some of the forest's problems, I wanted to encourage youth around the globe to think about the forest. So, I joined the project and registered as a Mentor.

The fact that so many people got involved showed me how important the Amazon is to others and gave me hope that we may be able to find a solution that helps us preserve the forest. During the event, I spoke with some groups and saw great ideas being proposed that made use of technology for solving such problems. I enjoyed being part of this gathering of intelligent people who used their creativity for this noble endeavor.

Gabriel Almeida

Senior Application Engineer, Cadence, Belo Horizonte, Brazil

GRI Index

GRI Content Index

Statement of use	Cadence Design Systems has reported in accordance with the GRI Standards for the period January 1, 2022 and December 31, 2022
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	N/A

GRI Standard/ Other Source	Disclosure Title	Disclosure	Location or Omission
GRI 2: General Disclosures 2022	**Disclosure Title**		
Section 1: Organization & Reporting Practice	2-1 Organizational details	Legal name: **Cadence Design Systems, Inc.** Traded on NASDAQ: **CDNS** Headquarters: **2655 Seely Avenue, San Jose, California, 95134** Countries of operation: **Belgium, Brazil, Canada, Cayman Islands, China, Cypress, Finland, France, Germany, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Malaysia, Netherlands, Poland, Russia*, Singapore, South Korea, Sweden, Switzerland, Taiwan, United Kingdom, United States, Vietnam** *Russian operations ceased during the reporting year	2022 ESG Report - Cover, About Cadence, p. 5 Cadence 2022 Form 10-K - Exhibit 21.01: Cadence Design Systems, Inc. Subsidiaries of the Registrant
	2-2 Entities included in the organization's sustainability reporting	Cadence Design Systems, Inc. and subsidiaries as per consolidated financial statements. The consolidated financial statements include the accounts of Cadence and its subsidiaries after elimination of intercompany accounts and transactions. All consolidated subsidiaries are wholly owned by Cadence.	2022 ESG Report - About Cadence, p. 5 Cadence 2022 Form 10-K - Note 2. Summary of Significant Accounting Policies
	2-3 Reporting period, frequency and contact point	Reporting period: 2022 Calendar Year; Historically, Cadence's fiscal years have been 52- or 53-week periods ending on the Saturday closest to December 31. Fiscal 2022 and fiscal 2021, were both 52-week fiscal years, compared to 2020, which was a 53-week fiscal year. Reporting cycle: **Annual** Publication date: **March 2023** Contact point for questions: csr-esg@cadence.com	Cadence 2022 Form 10-K - Note 2. Summary of Significant Accounting Policies 2022 GRI Index Only
	2-4 Restatements of information	No restatements	2022 GRI Index Only
	2-5 External assurance	Annual process to assure Scope 1, 2, and 3 GHG emissions by an independent third party to a limited assurance standard.	2022 ESG Report - EMS, p. 20, 2022 Carbon Footprint, p. 23

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
Section 2: Activities & Workers	2-6 Activities, value chain and other business relationships	Cadence is a leader in electronic design, building upon more than 30 years of computational software expertise. The company applies its underlying Intelligent System Design strategy to deliver software, hardware and IP that in turn design concepts into reality. We group our products into categories related to major design activities: ▸ Custom IC Design and Simulation; ▸ Digital IC Design and Signoff; ▸ Functional Verification; ▸ IP; and ▸ System Design and Analysis Our supply chain is composed of a mix of professional services, goods, and contract manufacturing of computer hardware. For contract manufacturing we work with a limited number of trusted partners with which we maintain close, long-term relationships.		2022 ESG Report - Transforming the Way People Design Next-Generation Systems, p. 5, The Impact of Electronic Design Automation on a Better World, p. 11, Supply Chain Description, p. 51 Cadence 2022 Form 10-K - Item 1. Business
	2-7 Employees	99%	Percentage Full Time (Global)	2022 ESG Report - Our Team, p. 31, Demographics, p. 42
		1%	Percentage Part Time (Global)	2022 ESG Report - Our Team, p. 31
		10,200	Full Time (Global)	2022 ESG Report - Our Team, p. 31
		77	Part Time (Global)	2022 ESG Report - Our Team, p. 31
		42%	Headcount growth over the last five years	2022 ESG Report - Our Team, p. 31
	2-8 Workers who are not employees	282	Contingent workers (Agency temps and Interns)	GRI Index Only
Section 3: Governance	2-9 Governance structure and composition	The four current committees of the Board are the Audit Committee, Compensation Committee, Corporate Governance and Nominating Committee, and Finance Committee. Learn more about our Corporate Governance policies, our Board of Directors and our Board composition on our Corporate Governance website.		2022 ESG Report - Board Governance and Recent Changes to the Board, p. 44 Cadence Corporate Governance
	2-10 Nomination and selection of the highest governance body	The Board's Corporate Governance Guidelines reflect Cadence's commitment to having leaders on the Board with diverse backgrounds. In addition, the Corporate Governance and Nominating Committee - as required in its charter - regularly discusses and annually reviews the appropriate skills and characteristics required of directors (such as integrity, experience, judgment, diversity of background (including, among other factors, race, ethnicity and gender), independence, ability to commit sufficient time and attention to Board activities, and understanding of Cadence's products, technologies and strategy.		2022 ESG Report - Commitment to Diversity on the Board, p. 44 Cadence Corporate Governance Annual Proxy Statement
	2-11 Chair of the highest governance body	The Board is led by an Executive Chair and a Lead Independent Director. Our Board's Corporate Governance Guidelines cover various topics relating to the Board and its responsibilities. The Corporate Governance Guidelines reflect the Board's commitment to monitor its effectiveness and decision-making at the Board and management level and outline the authority and practices in place to review and evaluate Cadence's business operations as needed and make decisions that are independent of Cadence's management.		2022 ESG Report - Board Governance, p. 44 Cadence Corporate Governance

GRI Standard/ Other Source	Disclosure Title	Disclosure	Location or Omission
Section 3: Governance	2-12 Role of the highest governance body in overseeing the management of impacts	Our Board, through its Corporate Governance and Nominating Committee, oversees our corporate social responsibility program and the progress of our environmental (including climate-related risks and opportunities), social (including health, wellness, and safety), and governance efforts, matters, and initiatives. The Corporate Governance and Nominating Committee formally reviews our environmental, social, and governance efforts and climate-related issues within the organization at every regular meeting and regularly reports to the Board on such programs.	2022 ESG Report - Board Oversight of the Corporate Social Responsibility Program, p. 46 Annual Proxy Statement
	2-13 Delegation of responsibility for managing impacts	With the endorsement of our executive management and Board of Directors, our senior group director of Corporate Social Responsibility oversees our ESG programs and chairs our cross functional ESG team. This cross-functional ESG team consists of internal leaders in Human Resources, Facilities, Finance Procurement, Marketing, and Legal, who identify, raise, and manage ESG priorities for implementation and reporting. The Senior Group Director of Corporate Social Responsibility reports to the Board of Directors Corporate Governance and Nominating Committee on climate-related issues at least half-yearly.	2022 ESG Report - Materiality Assessment, p. 6, Environmental Sustainability, p. 20 2022 CDP Climate Change Investor Response - C1.2a
	2-14 Role of the highest governance body in sustainability reporting	Our Board, through its Corporate Governance and Nominating Committee, oversees the Company's policies and practices regarding corporate social responsibility and sustainability programs, including climate-related, environmental, social and governance matters and initiatives, and reports to the Board on these programs. Our Board oversees risks related to the Company's corporate governance including climate-related issues. Further, the Committee regularly reviews the plans and progress of our environmental program, including climate-related risks and opportunities, and is informed on Cadence's carbon footprint breakdown and the strategy to achieve greenhouse gas emissions reduction targets by 2025, 2030, and 2040. The Committee also approved our net-zero and 2030 carbon reduction targets.	2022 CDP Climate Change Investor Response - C1.1a 2022 TCFD Index - Governance Annual Proxy Statement
	2-15 Conflicts of interest	The Board has adopted the Related Party Transaction Policies and Procedures for the review, approval and ratification of Related Party Transactions.	Related Party Transaction Policy
	2-16 Communication of critical concerns	As provided in our Code of Business Conduct, our employees can report possible misconduct or raise their concerns to their supervisor, Human Resources partner, office of the General Counsel, or anonymously via our whistleblower hotline. All concerns reported through our whistleblower hotline are reviewed by our Board through the Chair of the Audit Committee.	2022 ESG Report - Reporting Concerns, p. 47 Cadence 2022 Form 10-K
	2-17 Collective knowledge of the highest governance body	Details on the qualifications, skills and experience of the Board of Directors can be found in our 2022 ESG report. We reported to our Board of Directors on our ESG efforts and initiatives, including review of our decarbonization progress, diversity, equity, and inclusion (DEI) initiatives, and the Cadence Foundation signature programs.	2022 ESG Report - Progress on Our 2022 Environmental, Social and Governance Strategies, p. 8-9, Director Qualifications, Skills and Experience, p. 45

GRI Standard/ Other Source	Disclosure Title	Disclosure	Location or Omission
	2-18 Evaluation of the performance of the highest governance body	The Board is committed to reviewing its performance through an annual evaluation process. Through the evaluations, the Board assesses its processes, meetings, planning and overall effectiveness. The directors provide feedback on the Board and its committees through questionnaires and interviews with an independent third party. Any findings that require additional consideration are addressed at subsequent Board and committee meetings, as appropriate.	Annual Proxy Statement
	2-19 Remuneration policies	An executive officers' total direct compensation is based on Cadence's performance and on the performance of the individual executive officer, as well as the level of compensation sufficient to attract, motivate and retain qualified executives. Cadence does not have a pre-established policy or target for allocating compensation between fixed and variable pay elements or for allocating among the different types of variable compensation, although the allocation is influenced by the Compensation Committee's assessment of the compensation practices of the companies in our Peer Group and Cadence's short-term and long-term strategic objectives. The executive officers' compensation is weighted towards at-risk, variable incentive awards — short-term cash incentives and equity grants — rather than base salaries.	Compensation Committee Charter Annual Proxy Statement
	2-20 Process to determine remuneration	The Compensation Committee of the Board of Directors, among other things, determines, approves and reports to the Board on all policies of compensation for the executive officers and directors of Cadence, as per the Cadence Compensation Committee Charter.	Cadence Compensation Committee Charter Annual Proxy Statement
	2-21 Annual total compensation ratio	292:1 Ratio	Annual Proxy Statement
Section 4: Strategy, policies and practices	2-22 Statement on sustainable development strategy	Cadence has a mission to help solve technologies' toughest challenges in order to make a lasting, positive impact on our world. Our products enable the world's leading electronics providers to optimize power, space, and energy needs for the most dynamic market applications, including consumer, hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, and healthcare, and molecular sciences. Climate change continues to be one of the greatest challenges of our time and we are committed to doing our part to invest in the health of the planet.	2022 ESG Report - A Message From Our CEO, p. 4, Environmental Policy, p. 20-21
	2-23 Policy commitments	Many of our commitments to responsible business and respect for human rights, as well as oversight mechanisms can be found on the Cadence Design Systems Corporate Governance page. **Policies include:** Our Code of Business Conduct, including Human Rights Policy Supplier Code of Conduct Equal Opportunity Policy Human Rights Policy UK Modern Slavery Act Conflict Minerals Policy Statement	Corporate Governance Cadence Code of Business Conduct Supplier Code of Conduct Equal Opportunity Policy

GRI Standard/ Other Source	Disclosure Title	Disclosure	Location or Omission
	2-24 Embedding policy commitments	Our Code of Business Conduct also reflects our values of integrity, innovation, agility, and quality, and it applies worldwide to our Board, officers, employees, and certain contractors and consultants.	Code of Business Conduct
	2-25 Processes to remediate negative impacts	Our Code of Business Conduct provides standards for ethical conduct in how we work with each other at Cadence and with our customers, suppliers, government officials, and other stakeholders.	Code of Business Conduct
	2-26 Mechanisms for seeking advice and raising concerns	Our employees are required to promptly report possible misconduct, including illegal activities, unethical business practices, violations of the Code of Business Conduct or our other policies, and any other concerns about corporate governance, accounting, internal accounting controls, or audit matters. As provided in our Code of Business Conduct, our employees can report possible misconduct or raise their concerns to their supervisor, Human Resources partner, office of the General Counsel, or anonymously via our whistleblower hotline.	2022 ESG Report - Reporting Concerns, p. 47 Code of Business Conduct
	2-27 Compliance with laws and regulations	Any legal action or material losses required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the U.S. Securities and Exchange Commission.	Cadence 2022 Form 10-K - Item 3. Legal Proceedings
	2-28 Membership associations	Cadence is an affiliate member of the Responsible Business Alliance (RBA), member of the Responsible Minerals Initiative (RMI), and also takes part in the following Economic, Environmental and Social initiatives: Team4Tech; Great Place to Work Institute; National Society of Black Engineers; Society of Hispanic Professional Engineers; Out in Tech; Society of Women Engineers; Extreme Tech Challenge; Girls Who Code; LEAP Science and Math Schools; the National GEM Consortium, and Kidspire. For more details visit Industry Memberships on our website.	Cadence Industry Memberships
Section 5: Stakeholder Engagement	2-29 Approach to stakeholder engagement	Stakeholder input informs our priorities as we strive for continuous improvement towards a sustainable future. Key stakeholders include: employees, investors, customers, and industry partners and associations. This feedback informs our sustainability and reporting strategy.	2022 ESG Report - About the Report, p. 6, Targeted Engagment, p. 51
	2-30 Collective bargaining agreements	Employees are generally not covered by collective bargaining agreements, only as required by certain local European Country laws (such as France).	Omitted - Information unavailable/incomplete - Cadence does not track the percentage of employees covered by collective bargaining agreements.

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
GRI 3: Material Topics 2022				
	3-1 Process to determine material topics	The content of this report is informed by feedback from key stakeholders: employees, investors, customers, and industry partners and associations. During 2022, we built on stakeholder engagement and material review processes that were initiated in 2019. Our senior group director of Corporate Social Responsibility chairs a cross-functional team consisting of internal leaders in Human Resources, Facilities, Finance Procurement, Marketing, and Legal. Each of these leaders raises ESG priorities for implementation and reporting based on stakeholder feedback. To validate our priorities, we conduct gap analysis referencing SASB, TCFD, and GRI Standards, CDP, ISS, RBA, and Nasdaq questionnaires. Further we continued to conduct benchmark gap analyses considering industry peers.		2022 ESG Report - About the Report, p. 6
	3-2 List of material topics	**Innovation** (GRI: Direct economic value generated and distributed) **Environmental Impact** (GRI: Energy, Emissions) **Workforce** (GRI: Diversity and Equal Opportunity, Employee Engagement, Occupational Health and Safety, Training and Education) **Cybersecurity and Data Privacy** (GRI: Customer Privacy & Data Security) **Governance and Ethical Business Practices** (GRI: Anti-corruption, Anti-Competitive Behavior) **Responsible Supply Chain** (GRI: Supplier Environmental Assessment, Supplier Social Assessment)		2022 ESG Report - Materiality Assessment, p. 6
Economic Performance				
GRI 3: Material Topics 2022	3-3 Management of Economic Performance	The discussion of our fiscal 2022 consolidated results of operations include year-over-year comparisons to fiscal 2021 for revenue, cost of revenue, operating expenses, operating margin, other non-operating expenses, income taxes and cash flows.		Cadence 2022 Form 10-K - Item 1. Business and Item 7. MD&A
GRI 201-1	Direct Economic Value Generated and Distributed	3,562	Revenue ($MM)	Cadence 2022 Form 10-K - Cadence Design Systems, Inc. Consolidated Income Statements, Interest Expense, Consolidated Statements of Cash Flows 2022 ESG Report - About Cadence, p. 5
		2,651	Direct economic value distributed (Operating costs including employee wages and benefits + payments to providers of capital + payments to governement + community investments) ($MM)	
		911	Economic Value retained (Revenue - Direct economic value distributed) ($MM)	

GRI Standard/ Other Source	Disclosure Title	Disclosure	Location or Omission
Economic Performance			
GRI 201-2	Financial implications and other risks and opportunities due to climate change	We have not identified any climate-related risks with the potential to have a substantive financial or strategic impact on Cadence. We have identified opportunities for development and/or expansion of low emission goods and services and opportunities for our customers to develop new products or services through R&D and innovation that may increase revenues resulting from increased demand for products and services.	2022 TCFD Index 2022 CDP Climate Change Investor Response - C2.3b, C2.4a
Anti-Corruption			
GRI 3: Material Topics 2022	3-3 Management of Anti-Corruption	Our Code of Business Conduct and our Anti-Corruption Policy are the foundation of our robust corporate governance and compliance programs. Our Anti-Corruption program at Cadence is extensive and all employees, including management, are required to complete annual refresher training and certify that they have reviewed our Anti-Corruption Policy.	Cadence Code of Business Conduct 2022 ESG Report - Business Ethics: Anti-Corruption, p. 47
GRI 205-2	Communication and training about anti-corruption policies and procedures	Cadence enables and requires all employees to receive training regarding ethics and anti-corruption policies and procedures on an annual basis. These policies and practices are reviewed annually and agreed upon by signature. We achieved a 100% completion rate for all our employees globally on this training in 2022.	2022 ESG Report - Business Ethics: Anti-Corruption, p. 47
Anti-Competitive Behavior			
GRI 3: Material Topics 2022	3-3 Management of Anti-Competitive Behavior	Our Code of Business Conduct and our Anti-Corruption Policy are the foundation of our robust corporate governance and compliance programs.	Cadence Code of Business Conduct 2022 ESG Report - Business Ethics: Anti-Corruption, p. 47
GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly activities	Any material losses or legal action regarding anti-competitive behavior or violation of anti-trust and monopoly legislation required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the U.S. Securities and Exchange Commission.	Cadence 2022 Form 10-K - Item 1A. Risk Factors

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
Energy				
GRI 3: Material Topics 2022	3-3 Management of Energy	Cadence's Environmental Management System (EMS) is designed to set, manage, and achieve our environmental sustainability goals.		2022 ESG Report - EMS, p. 20-21
GRI 302-1	Energy consumption within the organization	266,401	Gigajoules (GJ)	2022 GRI Index Only
		100%	Percentage Renewable Energy	2022 ESG - Report Progress, p. 22
		0%	Percentage Non-renewable Energy	2022 GRI Index Only
GRI 302-3	Energy intensity	24,755	kBTU per employee	2022 GRI Index Only
GRI 302-4	Reduction of energy consumption	3%	% change from 2021 to 2022	2022 GRI Index Only
Emissions				
GRI 3: Material Topics 2022	3-3 Management of Emissions	Cadence's Environmental Management System (EMS) is designed to set, manage, and achieve our environmental sustainability goals. We are decarbonizing our business – aiming for Net-Zero emissions by 2040 for scopes 1, 2, and 3.		2022 ESG Report - EMS, p. 20, Our Commitment to Decarbonization, p. 21
305-1	Scope 1 Emissions	7,709	Metric Tons (MT) CO2e	2022 ESG Report - 2022 Carbon Footprint, p. 23
305-2	Scope 2 Emissions (market-based)	0	Metric Tons (MT) CO2e	
305-2	Scope 2 Emissions (location-based)	25,792	Metric Tons (MT) CO2e	
305-3	Scope 3 Emissions	238,953	Metric Tons (MT) CO2e	
305-4	Emissions Intensity	2	MT CO2e / Million USD Revenue	GRI Index Only
305-4		3	MT CO2e per employee (Scope 1 + Scope 2 market-based)	GRI Index Only
305-5	Reduction of GHG Emissions	-76%	% reduction in (Scope 1 + Scope 2 market-based) GHG emissions in 2022 from the baseline year (2019)	2022 ESG Report - Progress, p. 22
305-6	Emissions of ozone-depleting substances	There are no such emissions in our operations.		2022 GRI Index Only
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	There are no such emissions in our operations.		2022 GRI Index Only

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
Employment				
GRI 3: Material Topics 2022	3-3 Management of Employment	Our inclusive, One Team culture is at the center of the employee experience and allows us to attract and retain top talent in our industry. Our talent strategy is led by our Senior Vice President of Global Human Resources with oversight from the CEO and involvement from all employees. HR provides quarterly reports to the Compensation Committee of the Board of Directors.		2022 ESG Report - Accelerating Innovation as One Team, p. 30-41
401-1 a	Total number of new employee hires	2,229	Total hiring	2022 GRI Index Only
	Total rate of new employee hires	42%	Headcount growth over last 5 years	2022 ESG Report - Our Team, p. 31
	Total number new employee hires by gender	555	Female	2022 GRI Index Only
		1,674	Male	2022 GRI Index Only
	Rate of new employee hires by gender	25%	Female	2022 ESG Report - Our Approach, p. 38
		75%	Male	2022 GRI Index Only
	Total number of new employee hires by career stage group	1,041	Early Career Talent	2022 GRI Index Only
		457	Intern Talent	2022 GRI Index Only
		47%	Rate, Early Career	2022 GRI Index Only
		53%	Rate, More Senior	2022 GRI Index Only
	Total number of new employee hires by gender and career stage group	271	Female, Early Career	2022 GRI Index Only
		770	Male, Early Career	2022 GRI Index Only
		121	Female, Intern	2022 GRI Index Only
		336	Male, Intern	2022 GRI Index Only
		26%	Rate Female, Early Career and Intern	2022 GRI Index Only
		74%	Rate Male, Early Career and Intern	2022 GRI Index Only
401-1 b	Average employee turnover	6.5	Years	2022 ESG Report - Our Team, p. 31
Occupational Health and Safety				
GRI 3: Material Topics 2022	3-3 Management of Occupational Health and Safety	Cadence is committed to providing a safe and healthy work environment for our employees and non-Cadence personnel. We have a cross-functional Emergency Response Team trained to quickly respond to emergency or crisis situations at Cadence.		2022 ESG Report - Safety, p. 36
403-9	Work related injuries	0.10	Injuries/100 workers	2022 ESG Report - Safety, p. 36

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
Training and Education				
GRI 3: Material Topics 2022	3-3 Management of Training and Education	As employees advance their careers at Cadence, the core expectations and capabilities increase in scope and purpose. To help employees succeed, we foster an environment and culture of learning–both on the job and through formal training programs.		2022 ESG Report - Building Careers, p. 35
404-1	Average hours of training per year	25	Hours, All Employees	2022 ESG Report - Building Careers, p. 35
		17	Hours, Technical	
		8	Hours, Non-technical	
	Percentage of employees to access online learning management system	75%	Percentage	2022 GRI Index Only
	Percentage of managers who have completed unconscious bias training	89%	Percentage (US Managers Only)	2022 ESG Report - Education, p. 39
Diversity and Equal Opportunity				
GRI 3: Material Topics 2022	3-3 Management of Diversity and Equal Opportunity	We regularly monitor the diversity of our current workforce and candidate pool. We partner with national engineering organizations, and colleges with diverse student enrollment, to conduct recruiting, outreach, and engagement with diverse communities.		2022 ESG Report - Recruitment and Advancement, p. 39
405-1. a	Diversity of governance bodies	27%	Percentage Female Board Members	2022 ESG Report - Commitment to Diversity on the Board, p. 44
	Diversity of governance bodies	73%	Percentage Male Board Members	
	Diversity of governance bodies	45%	Percentage Asian Board Members	
	Diversity of governance bodies	55%	Percentage White Board Members	
	Diveristy of management	17%	Percentage Female Managers or More Senior	2022 ESG Report - Demographics, p. 42
	Diveristy of management	83%	Percentage Male Managers or More Senior	Index Only
405-1. b	Diversity by employee categories	20%	Percentage Female Technical Workforce	2022 ESG Report - Demographics, p. 42
	Diversity by employee categories	80%	Percentage Male Techical Workforce	Index Only
	Diversity by employee categories	46%	Percentage Female Non-technical Workforce	2022 ESG Report - Demographics p. 42
	Diversity by employee categories	54%	Percentage Male Non-techical Workforce	Index Only
405-2	Ratio of basic salary and remuneration of women to men	Parity	We are proud to report that Cadence maintained global salary pay parity based on gender and U.S. salary pay parity based on race and ethnicity, again in July 2022. This is the fourth year in a row we have achieved pay parity.	2022 ESG Report - Equity, p. 40

GRI Standard/ Other Source	Disclosure Title	Disclosure		Location or Omission
Employee Engagement				
ISS 306	Quantitative metrics for employee engagement including a percentage value	93%	Percentage of employees surveyed say that Cadence is a Great Place to Work	2022 ESG Report - A Great Place to Work, p. 33
Supply Chain				
GRI 3: Material Topics 2022	3-3 Management of Supply Chain	We continue to map ESG-related risks and opportunities in our supply chain to target high impact areas for direct engagement with suppliers. We plan to continue to expand on our climate-related supply chain engagement activities with a focus on emission intensive activities.		2022 ESG Report - Targeted Engagment, p. 51, Decarbonizing the Supply Chain, p. 52
308-1	New suppliers that were screened using environmental criteria	100%	Percentage	2022 GRI Index Only
414-1	New suppliers that were screened using social criteria	100%	Percentage	2022 GRI Index Only
Customer Privacy				
GRI 3: Material Topics 2022	3-3 Management of Customer Privacy	We structure our data privacy and cybersecurity program to align with the EU, National Institute of Standards and Technology (NIST), and ISO 27001 and ISO 27017 standards. We are pleased to report that we received formal certification of our compliance with ISO 27001 and ISO 27017 in 2022.		2022 ESG Report - Relentless Pursuit of Security, p. 49
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Any data breaches, law enforcement requests for user information, or other issues associated with data security and user privacy resulting in material monetary losses to Cadence that would be required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the Securities and Exchange Commission.		Cadence 2022 Form 10-K - Item 1A. Risk Factors

SASB Index

SASB Content Index

Company name: **Cadence Design Systems, Inc.**

Reporting Period: **2022**

SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
Environmental Footprint of Hardware Infrastructure	TC-SI-130a.1.	(1) Total energy consumed	266,401 Gigajoules (GJ)	SASB Index only
	TC-SI-130a.1.	(2) Percentage grid electricity	99.7 %	SASB Index only
	TC-SI-130a.1.	(3) Percentage renewable	100 %	2022 ESG Report - Decarbonizing Operations, p. 25
	TC-SI-130a.2.	(1) Total water withdrawn	123 Megaliter (ML)	SASB Index only
	TC-SI-130a.2.	(2) % withdrawn in in regions with High or Extremely High Water Stress	5 %	2022 ESG Report - Managing Water Resources, p. 29
	TC-SI-130a.2.	(3) Total water consumed	24 Megaliter (ML)	SASB Index only
	TC-SI-130a.2.	(4) % consumed in in regions with High or Extremely High Water Stress	0 %	2022 ESG Report - Managing Water Resources, p. 29
	TC-SI-130a.3.	Discussion of the integration of environmental considerations into strategic planning for data center needs	Cadence products that involve data storage are powered by an increasing percentage of renewable electricity whether on-premise, or at co-located or cloud-based data centers. We continue the process of shifting to co-located and cloud-based data centers.	2022 ESG Report - Decarbonizing Data Centers, p. 25
Data Privacy & Freedom of Expression	TC-SI-220a.1.	Description of policies and practices relating to behavioral advertising and user privacy	Cadence's Privacy Policy explains how and when we collect personal data and the types of information the policy covers. The policy also outlines our data disclosure policy, opt out procedures, location and retention policies, user rights, and contact information for reporting questions or concerns.	2022 ESG Report - Structure and Compliance, p. 49 Cadence Privacy Policy
	TC-SI-220a.3.	Total amount of monetary losses as a result of legal proceedings associated with user privacy	Any data breaches, law enforcement requests for user information, or other issues associated with data security and user privacy resulting in material monetary losses to Cadence that would be required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the Securities and Exchange Commission.	2022 ESG Report - Structure and Compliance, p. 49 Cadence 2022 Form 10-K
	TC-SI-220a.4	(1) Number of law enforcement requests for user information (2) number of users whose information was requested (3) Percentage resulting in disclosure	Any data breaches, law enforcement requests for user information, or other issues associated with data security and user privacy resulting in material monetary losses to Cadence that would be required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the Securities and Exchange Commission.	2022 ESG Report - Structure and Compliance, p. 49 Cadence 2022 Form 10-K

SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
Data Security	TC-SI-230a.1.	(1) Number of data breaches (2) percentage involving personally identifiable information (PII) (3) number of users affected	Any data breaches, law enforcement requests for user information, or other issues associated with data security and user privacy resulting in material monetary losses to Cadence that would be required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the Securities and Exchange Commission.	2022 ESG Report - Structure and Compliance, p. 49 Cadence 2022 Form 10-K
	TC-SI-230a.2.	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	We structure our data privacy and cybersecurity program to align with the EU, National Institute of Standards and Technology (NIST), and ISO 27001 and ISO 27017 standards. We are pleased to report that we received formal certification of our compliance with ISO 27001 and ISO 27017 in 2022. Our program includes security controls to detect and mitigate risks that could compromise data that Cadence obtains from its customers, partners, and employees. We have procedures in place for compliance with the General Data Protection Regulation and the California Consumer Privacy Act. We perform regular internal and external security assessments to identify potential vulnerabilities and, in the event of a data breach, we have documented response procedures and trained staff to execute our emergency protocol.	2022 ESG Report - Structure and Compliance, p. 49 Cadence Privacy Policy
Recruiting & Managing a Global Diverse & Skilled Workforce	TC-SI-330a.1.	Percentage of employees that are located offshore	68 %	SASB Index only
	TC-SI-330a.2.	Employee engagement as a percentage	93 % of our employees surveyed say they are proud to tell others they work at Cadence.	2022 ESG Report - Our Culture, A Great Place to Work, p. 32
	TC-SI-330a.3.	Board of Directors by gender	27 % Female	2022 ESG Report - Commitment to Diversity on the Board, p. 44
		Board of Directors by gender	73 % Male	
		Board of Directors by racial/ethnic group	45 % Asian	
		Board of Directors by racial/ethnic group	55 % White	
		Managers or more senior by gender	17 % Female	2022 ESG Report - Demographics, p. 42
		Managers or more senior by gender	83 % Male	
		Technical staff by gender	20 % Female	
		Technical staff by gender	80 % Male	
		US-based Employees by racial/ethnic group	52 % Asian and Indian	
		US-based Employees by racial/ethnic group	1 % Black and African American	
		US-based Employees by racial/ethnic group	3 % Hispanic and Latinx	
		US-based Employees by racial/ethnic group	2 % Other	
		US-based Employees by racial/ethnic group	6 % Undisclosed	
		US-based Employees by racial/ethnic group	36 % White	

SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
Intellectual Property Protection and Competitive Behavior	TC-SI-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Any material losses or legal action regarding anti-competitive behavior or violation of anti-trust and monopoly legislation required to be disclosed pursuant to the regulations of the U.S. Securities and Exchange Commission would be reflected in our filings with the U.S. Securities and Exchange Commission.	2022 ESG Report - Business Ethics: Anti-Corruption, p. 47 Cadence 2022 Form 10-K
Managing Systemic Risks for Technology Disruptions	TC-SI-550a2.	Description of business continuity risks related to disruptions of operations	Please see our 10-K item 1a for a description of business continuity risks related to disruptions of services.	2022 ESG Report - Cybersecurity and Data Privacy, p. 48 Cadence 2022 Form 10-K

TCFD Index

TCFD Index

Company name: **Cadence Design Systems, Inc.**

Reporting Period: **2022**

Cadence applies its underlying Intelligent System Design strategy to deliver software, hardware, and IP that enables our customers to turn design concepts into reality. Our products and services enable our customers to design products for tomorrow—today and help drive advancements in sustainability. We continue to innovate and provide technology to achieve the ideal combination of low power with high performance in smaller form factors—a strategy we believe is resilient in the face of climate change. We continue to invest in climate risk assessment, as well as climate change mitigation and adaptation across our operations and value chain. We believe we are well positioned to capture climate-related opportunities and that our Intelligent System Design strategy is resilient. This Index contains summaries of the recommended TCFD disclosures and sources for more detailed information.

Recommendations	Disclosure	More Details
Governance		
Describe the board's oversight of climate-related risks and opportunities	Through its Corporate Governance and Nominating (CGN) Committee, Cadence's Board of Directors oversees the Company's policies and practices regarding corporate social responsibility and sustainability programs and reports to the Board on these programs at least annually. The CGN Committee is regularly informed on Cadence's carbon footprint breakdown, strategy to achieve greenhouse gas emissions reduction targets and progress. Climate-related issues are considered when reviewing and guiding company strategy and major plans of action. In 2022, the CGN Committee held three meetings.	2022 Environmental, Social, and Governance Report, p. 46
Describe management's role in assessing and managing climate-related risks and opportunities	Representatives of our Executive Management Team (EMT) that lead Strategy and Governance functions at Cadence have responsibility for climate-related issues. Briefed regularly on our ESG programs by our Senior Group Director of Corporate Social Responsibility, these executives review and accept new proposals and approve major actions. Our Senior Group Director of Corporate Social Responsibility chairs a cross-functional team consisting of internal leaders in Human Resources, Facilities, Finance, Procurement, Marketing, and Legal. These leaders identify and assess climate-related risks and opportunities, as well as establish ESG priorities within their areas. Our Senior Group Director of Corporate Social Responsibility also briefs the CGN Committee on ESG priorities at every regular meeting, and on climate-related issues specifically, at least twice a year.	2022 Environmental, Social, and Governance Report, p. 46

Recommendations	Disclosure	More Details
Strategy		
Describe the climate-related risks (and opportunities) the organization has identified over the short, medium, and long term.	We have not identified any climate-related risks with the potential to have a substantive financial or strategic impact on Cadence. We have conducted assessments to identify acute and chronic physical risks, as well as transitional climate-related risks for Cadence in the short-term (0-3 years), medium-term (3-5 years), long-term (5-10 years) timeframes that align with our business strategy. However, our climate-related risk assessments extend beyond those timeframes, in some cases through 2050 and beyond. We continue to expand our evaluation processes of climate-related risks.	2022 CDP Climate C2.1-C2.3b

Potential Risks Assessed

Risk Category	Description
Physical - Acute	Estimated average annual loss of asset value due to wildfire, tropical cyclones, coastal and fluvial flooding
Physical - Chronic	Estimate average annual loss of asset value due to temperature extremes, drought, water stress
Transitional - Policy	Impact of future carbon prices on company financials
Transitional - Market	Changes in revenue mix and increased supplier costs on company financials
Transitional - Reputation	Challenges regarding talent attraction and retention, long-term customer relationships, license to operate, and access to capital, due to stakeholder concern or negative feedback
Transitional - Technology	Substitution of existing products and service with lower emissions options, and costs to transition to lower emission technologies
Transitional - Regulatory	Costs associated with climate-related risks relating to current and emerging legislation

Recommendations	Disclosure	More Details
Strategy		
	We have identified opportunities for development and/or expansion of low emission goods and services and opportunities for our customers to develop new products or services through R&D and innovation that may increase revenues resulting from increased demand for products and services. We continue to expand our evaluation processes of climate-related opportunities with a focus on: ▸ Decarbonizing compute ▸ Energy optimization through our low-power solution	2022 Environmental, Social, and Governance Report, p. 11-18, 27-28, and 2022 CDP Climate C2.4, C2.4a
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Climate-related risks and opportunities have influenced our financial planning in terms of revenues, direct costs, and capital expenditures. Our customers, the world's most innovative companies delivering extraordinary electronic products from chips to boards to systems, use Cadence technology to design sustainable innovation that optimizes power, space, and energy needs of end products for the most dynamic market applications, including consumer, hyperscale computing, 5G communications, automotive, mobile, aerospace, industrial, and healthcare. Tools from across all business groups are used to create products with an impact on the world's carbon footprint. As global efforts to achieve the Paris Agreement targets accelerate, decarbonization-related innovations are expected across sectors. This may have a positive effect on our revenues resulting from increased demand for our products and services that our customers use to develop new products through research and development. Our short to mid-term strategy including acquisition and research and development investment has been influenced by this demand. We expect to continue to invest in our own research and development to support our customers, as well as climate change mitigation and adaptation across our operations and value chain. A dedicated budget for energy efficiency and investments in emissions reduction activities is in place.	2022 CDP Climate C3.3, C3.4

Potential Opportunities Under Assessment

Opportunity Category	Description
Resource efficency	Estimated savings from more efficient buildings and reduced water usage and consumption
Energy Source	Estimated savings from use of lower-emission sources of energy
Product and Services	Increased revenues from development and/or expansion of low emission goods and services and development of new products or services through R&D and innovation
Resilience	Increased market valuation through participation in renewable energy programs and adoption of energy efficiency measures

Recommendations	Disclosure	More Details
Strategy		
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Cadence's Intelligent System Design strategy positions us well to capture climate-related opportunities. An evolving transition plan which aligns with a 1.5°C world is in place. Based on our current risk assessments and scenario analysis, we believe our strategy is resilient. In the reporting year, we expanded our climate-related scenario analysis to include transition risks including market risk, policy/regulatory risk, reputation risk, and technology risk. Additionally, we broadened the scope of our analysis of physical risks to include temperature extremes, tropical cyclones, and wildfire, in addition to water stress, drought, and flooding (coastal and fluvial). We have analyzed the market risk due to Cadence's suppliers potentially being subject to increased carbon taxes and passing those increases to Cadence. In 2022, we analyzed our top 100 suppliers, by GICS industry and based on activity to determine the potential risk to their EBITDA for 2025, 2030 and 2050. Policy/regulatory risk exposure in the form of increased pricing of regulated GHG emissions and increased operating costs was analyzed in five-year intervals from 2025 through 2050. Reputation risk exposure was assessed through Cadence's S&P Global ESG Climate Strategy score and by comparing Cadence's carbon intensity against the S&P Carbon Global Standard, as well as the alignment of our carbon reduction targets with the Paris agreement through 2030 vis-à-vis a peer set. Technology risk exposure was assessed based on current low carbon service offerings and R&D spend for relevant EU taxonomy activity areas, as well as evidence of low-carbon CAPEX, OPEX and value chain spend. The RCP 4.5 and RCP 8.5 climate-related scenarios were used to assess potential physical risks related to our operations by decade from the 2020s through the 2090s using business as usual, optimistic, and pessimistic conditions. High, Moderate and Low Carbon Price Scenarios based on research by OECD and IEA (2017) were used to analyze market and policy risks, compared to a business as usual scenario.	2022 CDP Climate C3.1-C3.2b

Recommendations	Disclosure	More Details
Risk Management		
Describe the organization's processes for identifying and assessing climate-related risks	Climate-related risks are identified and assessed by the cross-functional ESG Team at Cadence with a focus on: ▸ Decarbonizing operations ▸ Decarbonizing data centers ▸ Decarbonizing our supply chain ▸ Decarbonizing compute activities In the reporting year, we worked with consulting partners to expand our climate-related risk identification and assessment process. The following risk types are considered: acute and chronic physical risk, current and emerging regulations, legal, market, reputation, and technology. For physical risks our process consists of mapping asset level data, quantifying climate hazard exposure, applying asset specific impact functions, and quantifying modeled financial impact. For transitional risks our process consists of mapping macro-level transition risks to our operations and value chain, quantifying the impact of carbon pricing risk exposure, applying future carbon price scenarios, quantifying potential financial or strategic impact on Cadence's business. Relative risk is assessed through industry and peer benchmarking, as well as against the science-based climate transition pathway.	2022 Environmental, Social, and Governance Report, p. 20
Describe the organization's processes for managing climate-related risks	Through innovation, aggressive investment and collaboration with value chain partners, we anticipate reaching Net-Zero emissions across our value chain by 2040. Although our Paris-aligned 2030 target to halve our market-based Scope 1 and 2 emissions by 2030 was exceeded in 2022, we will continue to track progress against this goal until 2030. While our targets will be primarily measured and achieved through power-consumption efficiency and procuring clean energy, we also invest in projects that provide other benefits such as organic carbon storage, ecosystem restoration, safe water, clean air, and wildlife and habitat protection. We achieved company-wide Carbon Neutral certification in 2022 through our investments in decarbonization including energy efficiency measures, procurement of 100% renewable energy through utility contracts and high-quality Energy Attribute Certificates (EACs), onsite solar installations and high-impact carbon avoidance/removal offsets. In 2022, we have taken steps to shift our electricity supply to long-term renewable energy virtual power purchase agreements (VPPAs). Robust business continuity programs are in place to mitigate risk factors for various uncertainties that could adversely affect our business, financial condition, or results of operations, including acute, physical, climate-related risks.	2022 Environmental, Social, and Governance Report, p. 22
Describe how processes for identifying, assessing, and managing climate-related risks are integrated into overall risk management	Process(es) for identifying, assessing, and responding to climate-related risks and opportunities in our direct operations are integrated into our multi-disciplinary company-wide risk management process. When potential climate-related risk factors are identified, we assess the potential impact they may have on our operations and whether the identified risk may have the potential to impede our ability to develop new or improved existing products, deliver on our commitments to clients, or harm our reputation.	2022 CDP Climate C2.2

Recommendations	Disclosure	More Details
Targets and Metrics		
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	Metrics used to manage risks and opportunities include: ▸ Scope 1, 2, 3 GHG emissions ▸ Progress towards GHG reduction targets ▸ Carbon intensity relative to revenue and full-time employees ▸ Percentage of renewable energy used ▸ Proportion of executive management remuneration linked to climate considerations	2022 Environmental, Social, and Governance Report, p. 21-22
Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Details of our Scope 1, 2, and 3 GHG emissions are reported in our 2022 Environmental, Social, and Governance Report and our 2023 CDP Response. We have not identified climate-related risks with the potential to have a substantive financial or strategic impact on the business. We continue to assess and refine our evaluation processes of climate-related risks that may impact Cadence.	2022 Environmental, Social, and Governance Report, p. 20 2022 CDP Climate C2.3b
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	We use the following targets to manage climate-related risks and opportunities: SBT 2025: 2°C, Scope 1 and 2 (market-based) 15% GHG reduction by 2025 over the 2019 baseline Goal achieved in 2021: 32% reduction SBT 2030: 1.5°C, Scope 1 and 2 (market-based) 50% GHG reduction by 2030 over the 2019 baseline 2022 Performance: 76% reduction Net-zero 2040: 1.5°C, Scope 1, 2, and 3 (market-based) Net-zero GHG by 2040 2022 Performance: 28% reduction	2022 Environmental, Social, and Governance Report, p. 21-22

SDG Index

SDG Index

Company name: **Cadence Design Systems, Inc.**

Reporting Period: **2022**

Materiality Topic	SDG	SDG Target	SDG Indicator	Cadence KPI	Metric	Unit
Innovation	**Affordable and Clean Energy**	7.3	7.3.1	Energy Intensity	75	Gigajoule/$MM Revenue
	Decent Work and Economic Growth	8.1	8.1.1	Annual revenue growth rate	19	%
	Industry, Innovation and Infrastructure	9.4	9.4.1	GHG Emissions, Scope 1 & 2 market-based per million $ of revenue	2	Metric tons CO2e/$MM Revenue
		9.5	9.5.1	R&D spend as a proportion of revenue	35	%
		9.a	9.a.1	Charitable giving	32.84	$MM
	Responsible Consumption and Production	12.2	12.2.1	Energy use	266,401	Gigajoule, GJ

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Please visit United Nations Sustainable Development Goals web site.

Materiality Topic	SDG	SDG Target	SDG Indicator	Cadence KPI	Metric	Unit
Environmental Sustainability	7 AFFORDABLE AND CLEAN ENERGY **Affordable and Clean Energy**	7.2	7.2.1	Renewable electricity	100	%
	8 DECENT WORK AND ECONOMIC GROWTH **Decent Work and Economic Growth**	8.4	8.4.1	Energy use per employee	26	Gigajoule/FTE
				GHG emissions per employee (Scope 1, 2 market-based)	0.8	Metric tons CO2e/FTE
	12 RESPONSIBLE CONSUMPTION AND PRODUCTION **Responsible Consumption and Production**	12.2	12.2.1	Percentage of water withdrawals in extremely-high and high water stressed areas	5	%
				Percentage of water consumed in extremely-high and high water stressed areas	0	%
	13 CLIMATE ACTION **Climate Action**	13.2	13.2.2	GHG Emissions (Scope 1, 2 market-based)	7,709	Metric tons CO2e
	15 LIFE ON LAND **Life on Land**	15.a	15.a.1	Capital invested in biodiversity and ecosystems	$186,977	$US

Materiality Topic	SDG	SDG Target	SDG Indicator	Cadence KPI	Metric	Unit
Workforce	Good Health and Wellbeing	3.7	3.7.1	FTEs offered health insurance that covers reproductive health services	100	%
		3.8	3.8.1	Proportion of employees covered by health insurance	100	%
	Gender Equality	5.1	5.1.1	Gender pay equity ratio	Parity	Parity
		5.5	5.5.2	Proportion of women board members	27%	%
				Proportion of female managers and above	17%	%
	Decent Work and Economic Growth	8.5	8.5.1	Year-over-year (YOY) change in FTE	9	%
			8.8.1	5 Year growth in FTE	42	%
		8.8	8.8.1	Injury rate per 100 workers	0.1	%
		8.b	8.b.1	Percent of early career hired	47	%
		8.3	8.3.1	Percent female employees	24	%
				Percent male employees	76	%
	Reduced Inequalities	10.2	10.2.1	Percentage of U.S. Asian and Indian	52	%
				Percentage of U.S. Black and African American	1	%
				Percentage of U.S. Hispanic and Latinx	3	%
				Percentage of U.S. Other	2	%
				Percentage of U.S. Undisclosed	6	%
				Percentage of U.S. White	36	%
		10.3	10.3	Pay equity	Parity	Parity
	Peace, justice and strong institutions	16.b	16.b.1	Annual non-discrimination training completion rate for FTEs	100	%

Materiality Topic	SDG	SDG Target	SDG Indicator	Cadence KPI	Metric	Unit
Governance	**Responsible Consumption and Production**	12.6	12.6.1	Annual ESG reporting		2022 Environmental, Social, and Governance Report 2022 GRI Index 2022 SASB Index 2022 CDP Climate Climate Change Investor Response 2022 CDP Water Security Investor Responses 2022 TCFD Index
	Peace, justice and strong institutions	16.3	16.3.3	Completion rate for annual Code of Conduct training for all FTEs	100	%
		16.5	16.5	Completion rate for annual ethics and anti-corruption policies training for all employees globally	100	%

Materiality Topic	SDG	SDG Target	SDG Indicator	Cadence KPI	Metric	Unit
Responsible Supply Chain	**Decent Work and Economic Growth**	8.3	8.3.1	Procurement spend on diverse suppliers	6	%
		8.7	8.7.1	Completion rate for UK Modern Slavery Act training	100	%
	Industry, Innovation and Infrastructure	9.3	9.3.1	Procurement spend on small businesses	6	%
	Reduced Inequalities	10.2	10.2.1	Procurement spend on diverse suppliers	6	%
	Responsible Consumption and Production	12.7	12.7.1	New suppliers screened using social and environmental criteria	100	%
	Climate Action	13.2	13.2.2	GHG emissions (Scope 3)	248,845	Metric Tons CO2e
	Peace, justice and strong institutions	16.3	16.3.3	Relevant suppliers that responded to conflict minerals survey	95	%
				Key suppliers that have company policies to adhere to local laws and regulations	100	%

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This document includes forward-looking statements, and actual results could differ materially. Risk factors that could cause actual results to differ are set forth in the “Risk Factors” section in Cadence’s most recent reports on Form 10-K and Form 10-Q, including Cadence’s future filings.

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