




**SUSTAINABLE
BY DESIGN**

2023 Environmental, Social,
and Governance Report

Cadence Design Systems, Inc.

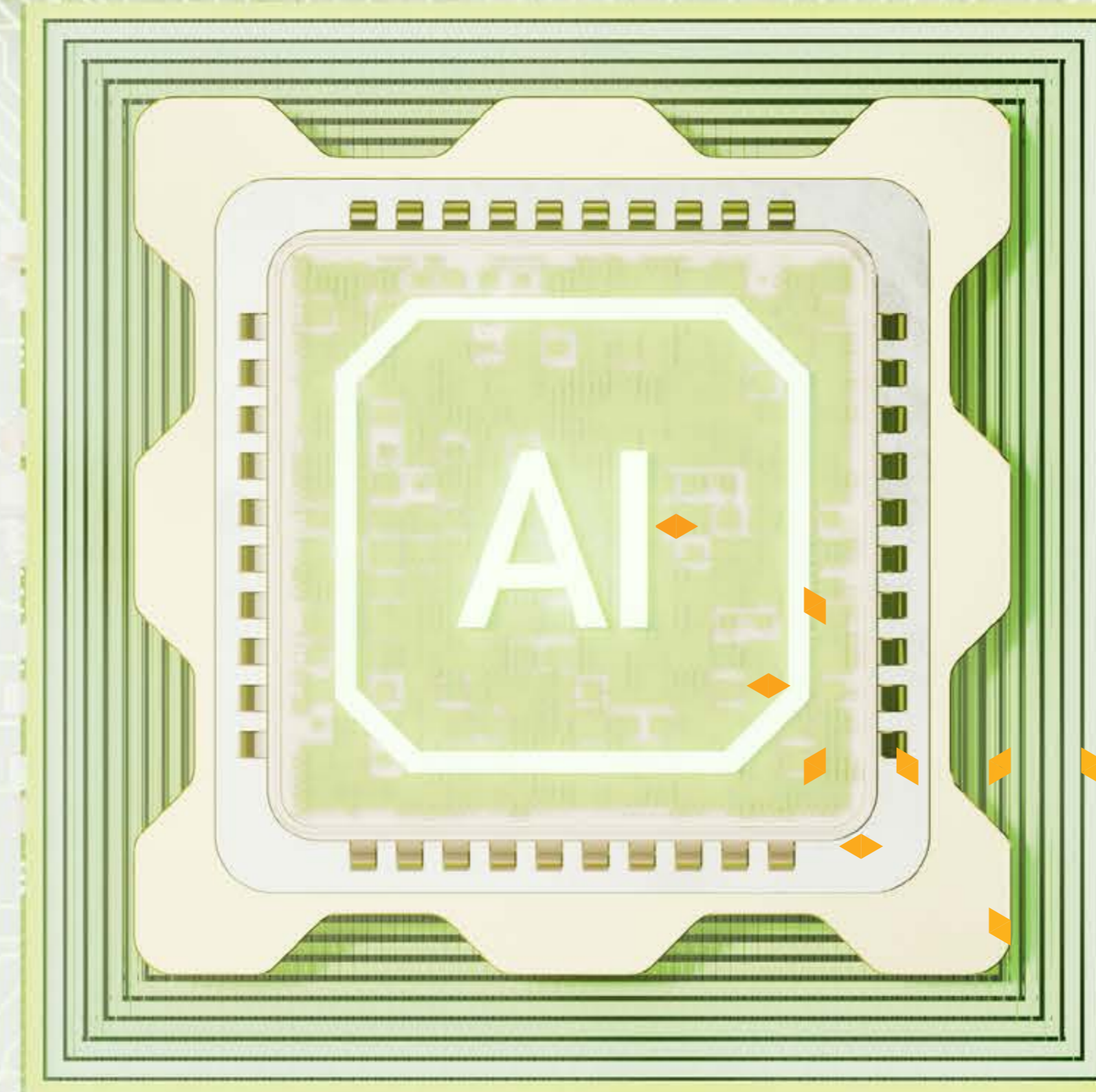
cādence[®]



Cadence has a mission to help solve technology's toughest challenges to make a lasting, positive impact on our world.



Anirudh Devgan, PhD
President and Chief Executive Officer, Cadence



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A Message from Our CEO

Embracing socially responsible business practices is not just ethical, it's pivotal for our industry and our world.



We are living in a period of extraordinary change in nearly all aspects of life. At Cadence our focus is on enabling the world's leading companies to innovate technology that improves the lives of people around the globe. For over 30 years, Cadence has advanced the electronics revolution, enabling customers to design products with a sustainable mindset and transforming nearly every aspect of our daily experiences.

The technology industry is rapidly growing due to an unprecedented combination of drivers impacting multiple industry segments. Within this, Cadence is transforming the world of electronic systems with generative AI solutions and leading the computational software convergence through our Intelligent System Design™ strategy. We enable design of end-to-end systems from devices to the cloud and are uniquely positioned to make a significant impact as a leader in computational software and hardware solutions for today's challenges.

In 2023, we continued to build our generative Cadence.AI portfolio, comprising the industry's broadest AI offerings spanning chip to board to system and delivering exceptional optimization and productivity benefits. We introduced Virtuoso® Studio and Allegro® X AI to bring AI to custom/analog and PCB designs, Voltus™ InsightAI to automatically address voltage drop violations, and most recently, the revolutionary Millennium M1 platform, the industry's first accelerated multi-physics supercomputing platform, to deliver an unprecedented 20X energy efficiency and up to a 100X design impact. Accelerating momentum of our Cadence.AI portfolio has led to an almost tenfold increase in customers adopting our generative AI solutions in 2023, as they embrace the technology to develop optimized products much more efficiently.

We also made strategic acquisitions which further increase the impact of our innovation on sustainability for system design. These acquisitions expand Cadence's solutions further into system design in key high-growth verticals, including automotive, aerospace and defense, and turbo machinery, extending our system innovation portfolio for high-fidelity CFD simulation. Additionally, with OpenEye Scientific, Cadence Molecular Sciences, we are accelerating drug discovery with the industry's first SaaS-based cloud-native platform. In this report, we highlight how innovators around the world are using Cadence tools to create products with a lower carbon footprint.

Climate change is one of the most significant challenges of our time, and we are committed to our target to reach Net-Zero by 2040. Early on we aligned our carbon reduction targets with the goal of limiting global warming to the Paris Agreement's 1.5°C pathway, and we are on track to halve greenhouse gas (GHG) emissions by 2030.

In 2023, we submitted our GHG reduction targets to the Science Based Targets Initiative (SBTi) for validation, procured 97% renewable energy for our global operations, and are a CarbonNeutral® certified company for the third year in a row. In early 2024, we strengthened our transition to long-term renewable energy and commitment to purchaser-caused renewable electricity by signing a virtual power purchase agreement (VPPA) to help finance a to-be-built solar farm in the U.S. Once operational, we expect our portion of the project will deliver solar power to the grid equivalent to our entire U.S. electric load and approximately half of our global Scope 2 emissions. While we're excited by our progress, we continue to invest in value chain engagement around decarbonization through our full value chain to achieve Net-Zero by 2040.

I'm proud of our One Team culture that drives our innovation engine and attracts the best and brightest talent in the industry. This year, we welcomed over 1,600 new employees and interns and we received over 30 global awards for our high-performance, inclusive culture.

As part of our partnership with the Great Place to Work Institute, we joined the Great Transformation Initiative to work with other top companies on how we can accelerate diversity, equity, and inclusion for all. We're honored to be recognized for our One Team culture, including #9 on Fortune's World's Best Workplaces list, The Wall Street Journal's Best-Managed Companies, the Human Rights Campaign Equality 100 Award for LGBTQ inclusion, and Global Semiconductor Alliance's (GSA) Designing the Difference Award.

The Cadence Giving Foundation focuses on investments that drive impact and create a more just and equitable world for our communities. In 2023, the Cadence Giving Foundation invested in practices that will mitigate and reduce rising temperatures in communities most impacted by climate change. The Foundation partnered with the Clinton Health Access Initiative (CHAI) to provide funding and technology for an effort expected to mitigate 60GT of CO2 emissions by 2050—a year's worth of current emissions for the entire planet. The Foundation also launched its FEM.AI initiative, building an ecosystem to support women to access and thrive in tech careers. And, our eighth annual Season of Giving included nearly 2,000 employees from 37 cities volunteering 5,700 hours for 50 volunteer projects.

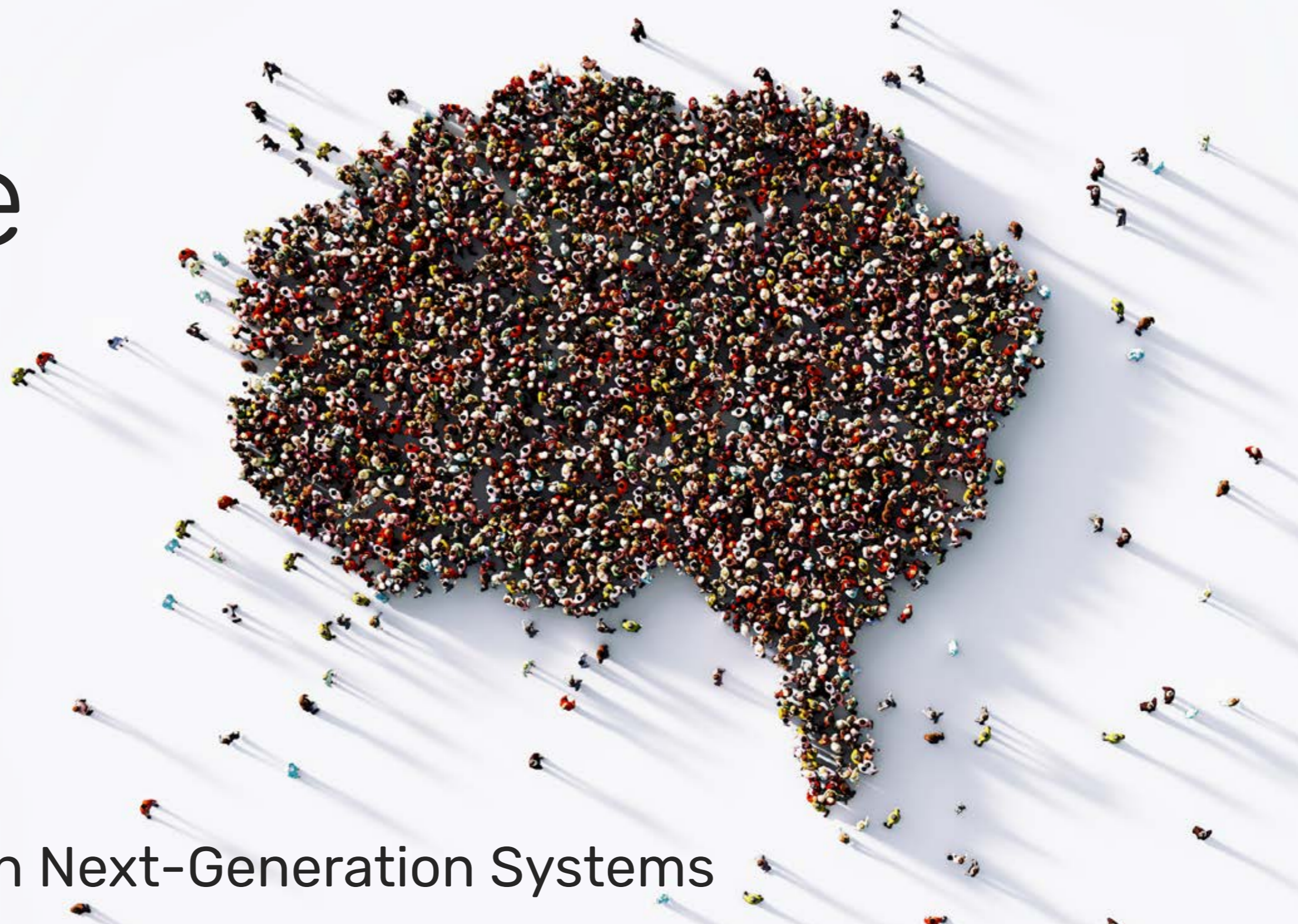
I am proud to share our 2023 Environmental, Social, and Governance (ESG) Report with you, which details our strategies and highlights our significant progress in each of these areas. I also want to thank our customers, partners, and employees for inspiring us and supporting our commitment to creating a more sustainable world.

Sincerely,



Anirudh Devgan, PhD
President and Chief
Executive Officer, Cadence

About Cadence



Transforming the Way People Design Next-Generation Systems

Cadence is a leading provider of Intelligent System Design solutions—software, hardware, and IP that turn design concepts into reality.

Cadence provides the expertise, tools, IP, and hardware required for the entire electronics design chain, from chip design to chip packaging to boards and systems. We are leading the computational software convergence through our Cadence® Intelligent System Design™ solutions, enabling end-to-end systems from devices to the cloud, for our customers to create innovative products that transform the way people live, work, and play.

With comprehensive “chips-to-systems” generative AI technologies, 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, life sciences, and other market segments. With OpenEye Scientific, Cadence Molecular Sciences, we are accelerating drug discovery with computational software, the industry’s first SaaS-based cloud-native platform.

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. 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.



1988
Year Founded



\$4.09B
Revenue
(15% increase over 2022)



~11,200
Employees
full-time (9.5% increase compared to 2022)



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

About the Report

This report aligns with who we are as a company—sustainable by design—and highlights the progress we made in our environmental, social, and governance (ESG) strategies in 2023. 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 2023, 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 of internal leaders in Human Resources, Facilities, Finance, Procurement, Marketing, and Legal. Each leader 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 continued to conduct benchmark analyses considering industry peers. While we address sustainability issues across the materiality spectrum, our cross-functional team identified the following topics as particularly significant to our company in our latest materiality assessment.

The terms “material” and “materiality” as used in this report and our materiality assessment differ from the concept of materiality under securities laws and as used in the context of filings with the U.S. Securities and Exchange Commission (SEC). Matters that are considered material for purposes of this report or our materiality assessment may not be considered material for SEC reporting purposes.



Aligning with the 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 the Goals through our programs.

Topic	SDG Targets and Cadence Indicators	Goals		
Innovation	7.3 Energy intensity (GJ/\$MM revenue)			
	8.1 YOY revenue growth (%)			
	9.A Charitable giving (\$MM)			
	9.4 GHG intensity (metric tons CO2e)/\$MM revenue)			
	9.5 R&D spend as a proportion of revenue (%)			
	12.2 Energy use (GJ)			
Environmental Sustainability	7.2 Renewable electricity (%)			
	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)			
Workforce	3.7, 3.8 FTEs offered health insurance that includes reproductive health-care services (%)			
	5.1, 8.5, 10.3 Pay equity			
	5.5 Proportion of women board members (%)			
	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 (%)			
	Governance		12.6 Annual ESG reporting	
			16.3 Annual Code of Conduct certification rate for FTEs (%)	
16.5 Annual anti-corruption training completion rate for FTEs (%)				
Responsible Supply Chain	8.3, 10.2 Total procurement spend on diverse suppliers (%)			
	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](https://www.un.org/sustainabledevelopment/) website.

2023 Highlights



Innovation

Launched several significant innovative products, including building out our generative AI portfolio, and completed key strategic acquisitions that we expect to be key drivers of future growth, enabling the next wave of sustainable innovation



Fast Company Most Innovative Companies 2024

Cadence was recognized as #6 in the Most Innovative Design Companies of 2024 sector for using natural language AI to design AI chips



Net-Zero GHG by 2040

For the third year, Cadence received CarbonNeutral® company certification across our global operations, including our Palladium Cloud offering

Submitted both near-term and Net-Zero GHG reduction targets to the Science Based Targets Initiative (SBTi) for validation

In early 2024, we strengthened our transition to long-term renewable energy and our commitment to purchaser-caused renewable energy by signing a virtual power purchase agreement to help finance a to-be-built solar farm in the U.S.



Investor's Business Daily Top 100 ESG Companies

Recognized by Investor's Business Daily as one of IBD's 100 Best ESG Companies of 2023



Cadence Giving Foundation

Donated \$5 million through the Cadence Giving Foundation in 2023 to impact environmental sustainability, STEM workforce equity, and additional local and global initiatives

The Cadence Giving Foundation focuses on investments that drive impact, activate employee engagement opportunities, and create a more just and equitable world for our communities



30+ Best Workplace Recognitions

Across 13 countries, including Fortune's 100 Best Companies to Work For, Fortune's World's Best Workplaces, Forbes' America's Best Employers, and Wall Street Journal's Best-Managed Companies



Diversity, Equity, and Inclusion

Hosted Cadence Women Conferences (CWCs) around the world, giving us the opportunity to connect, learn, and celebrate the women of Cadence

We are also proud to receive the Designing the Difference Award from the GSA Women's Leadership Initiative, that recognizes companies who are making a meaningful impact on advancing the semiconductor industry through DEI



Workplace Leader for LGBTQ+ Equality

Recognized with the Equality 100 Award by the Human Rights Campaign Foundation

Progress on Our 2023 ESG Strategies



Innovation

Cadence is a leading provider of Intelligent System Design solutions—software, hardware, and IP that turn design concepts into reality. We provide the expertise and tools, IP, and hardware required for the entire electronics design chain, from chip design to chip packaging to boards and systems. Cadence is leading the computational software convergence through our Intelligent System Design solutions, enabling end-to-end systems from devices to the cloud, for our customers to create innovative products that transform the way people live, work, and play.

With comprehensive “chips-to-systems” generative AI technologies, our products are used in extraordinary electronic products for the most dynamic market applications including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, healthcare, molecular sciences, and other market segments.

Smart and Efficient Growth Drivers

We launched several significant innovative products, including building out our generative AI portfolio, extending our system innovation portfolio targeting high-fidelity CFD simulation, and completed key strategic acquisitions. These acquisitions expand Cadence’s computational software core competency in key high-growth verticals, including aerospace and defense. Additionally, with OpenEye Scientific, Cadence Molecular Sciences, we are accelerating drug discovery with Computational Software Industry’s first SaaS-based cloud-native platform.



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.

Supporting Diversity, Equity, and Inclusion

We expanded our efforts to build a more diverse and inclusive team through expanding our recruitment pipeline, career support, retention, development, and community-building. Based on these efforts, the proportion of women at Cadence has increased for the tenth year in a row.

We also participated 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. Based on the TGT experience and resulting recommendations, Cadence implemented programs to enhance how we listen to, and empower, the voices of employees from underrepresented groups.

In addition, for the fifth year in a row, we achieved 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 reduce the environmental impact of our facilities and business operations. Our Environmental Policy and Environmental Management System frames our commitments around climate change and water. 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.

Committed to Net-Zero by 2040

We submitted both near-term and Net-Zero GHG reduction targets to the Science Based Targets Initiative for validation.

For the third year, Cadence received CarbonNeutral® company certification across our global operations, including our Palladium Cloud offering.

In early 2024, we strengthened our transition to long-term renewable energy by signing a virtual power purchase agreement (VPPA) to help finance a to-be-built solar farm in the U.S. Once operational, we expect our portion of the project will deliver solar power to the grid equivalent to our entire U.S. electric load and approximately half of our global Scope 2 emissions.



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 ESG program. In our annual engagement with stockholders, we discuss our ESG efforts as well as 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 are pleased that in May 2023, Mary Louise (ML) Krakauer assumed the role of Board Chair, reinforcing our commitment to advancing DEI.



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.

Improved Cyber Resilience and Expanded Zero-Trust Security Model

We focused on improving security operations and cyber resilience by minimizing the time required to detect and respond to security incidents while continuously improving our security intelligence and analytics platform across hybrid environments. We expanded our Zero-Trust security model to include data protection chambers and we received external validation of our commitment to providing secure cloud-based products by achieving SOC 2 Type 1 attestation.



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.

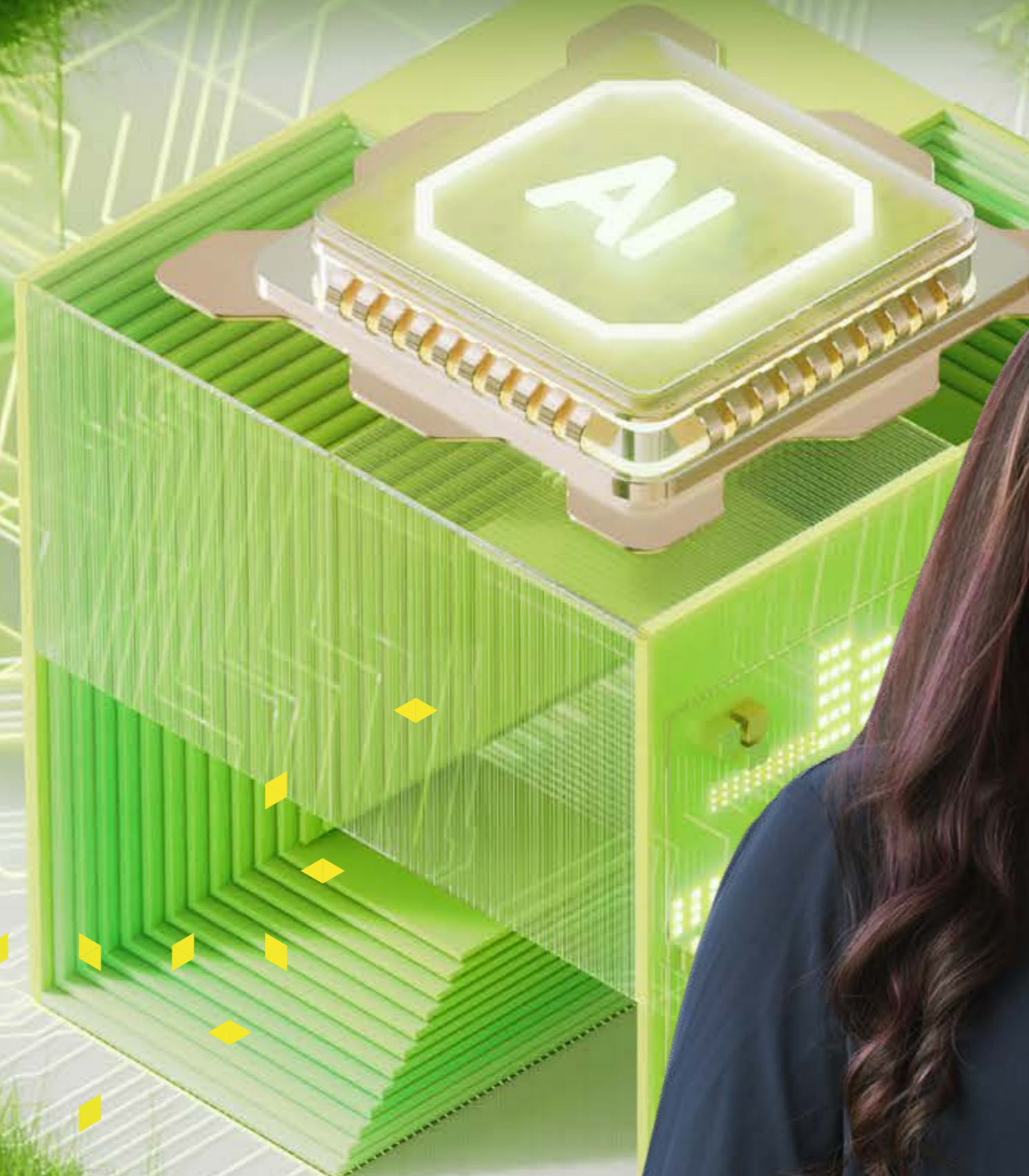
Focus on Climate and Diversity

To demonstrate our commitment to climate progress, we completed a full assessment of emissions throughout our value chain for all 15 Scope 3 categories—reporting emissions from hardware product use and end-of-life for the first time. Through partnering with suppliers, more than half of our 2023 upstream Scope 3 emissions are now calculated using supplier’s reported emissions, up from one-third in 2022.

We continued to identify and promote diversity in our supply chain as well as to extend our rigorous governance standards across our value chain. In 2023, we updated our Supplier Code of Conduct (SCOC) to align with RBA Code of Conduct 7.0 and initiated compliance of our top suppliers to the updated SCOC.

Innovation

For Engineers.
By Engineers.



The Impact of EDA on a Better World

Sustainability has become an increasingly important expectation in the electronics industry. 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.

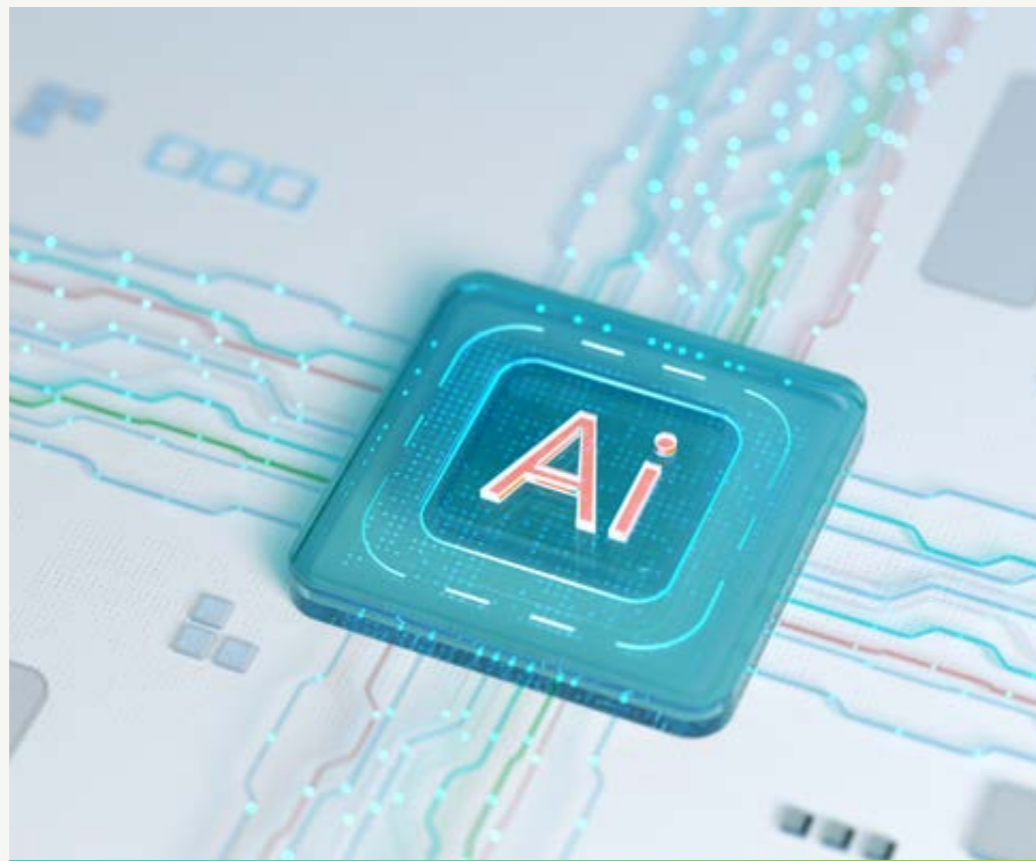


We have a great responsibility to create sustainable innovation in intelligent system design, enabling the next wave of technology advancements across the tech industry.

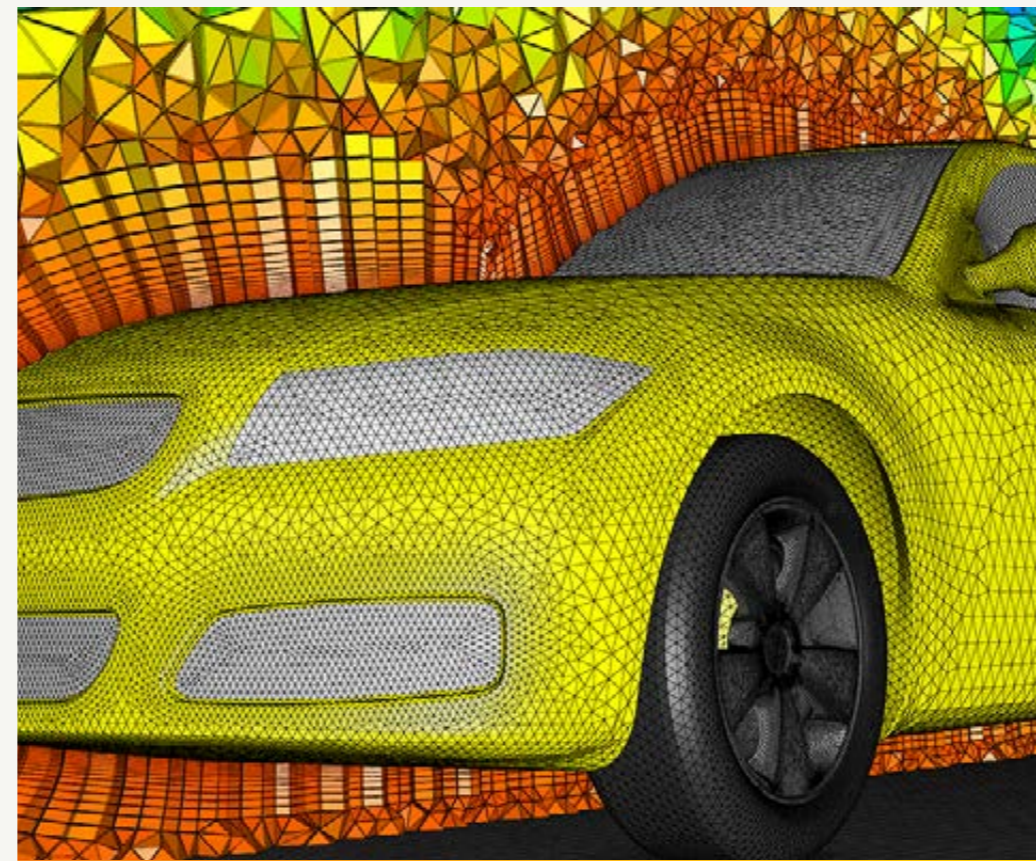
Anirudh Devgan, PhD

President and Chief Executive Officer, Cadence

Cadence High Impact for Sustainability



AI-driven Low Power Chip, PCB, and System Design Tools



Chip to System Simulation to reduce thermal generation and cooling energy

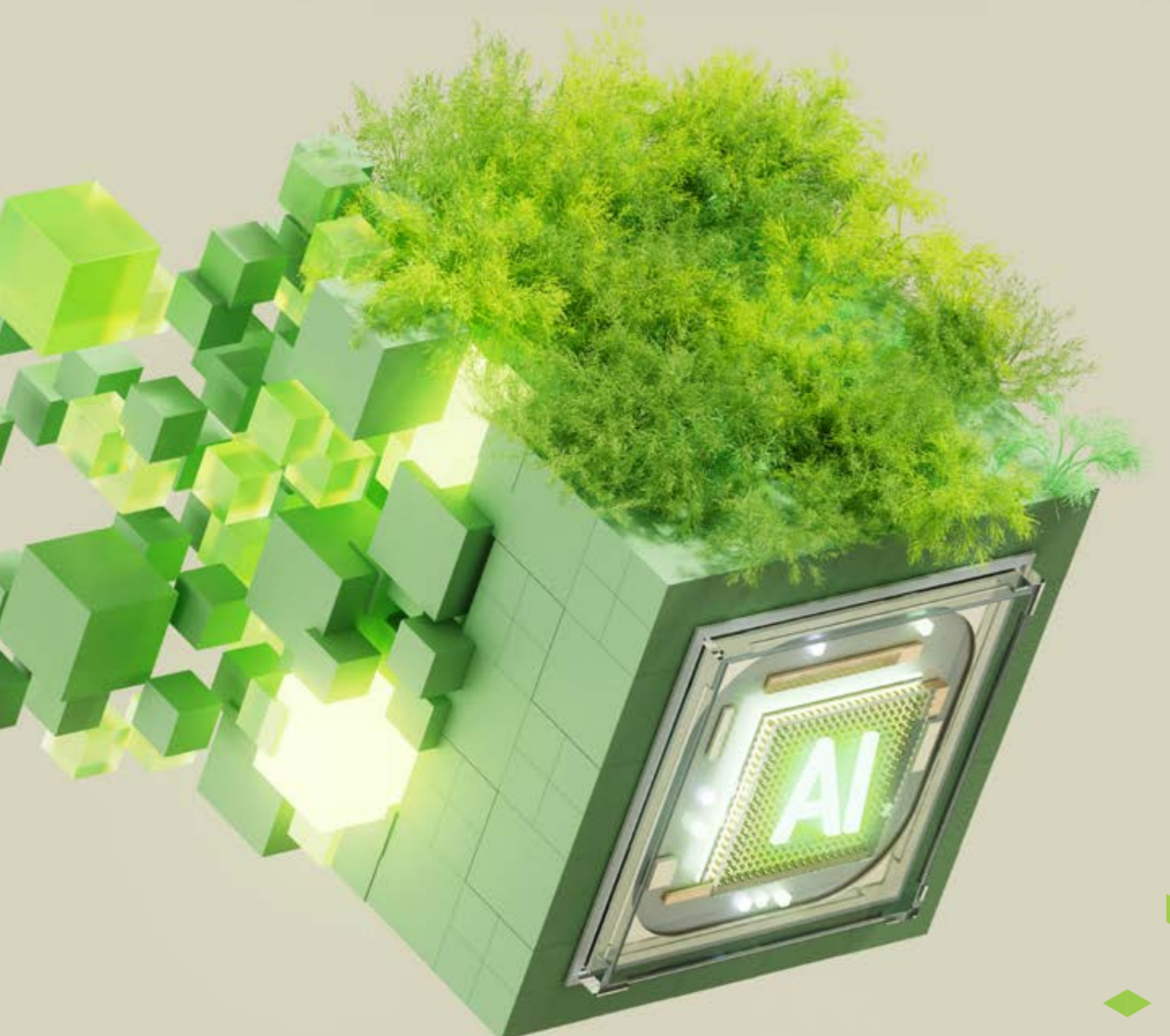


Digital Twins to reduce data center overprovisioning and stranded capacity

Optimize power consumption to reduce carbon footprint



AI is rapidly transforming our world by finding new and unique solutions that reduce the power consumption of our electronic systems and is critical to bridge the engineering resource gap looming for our industry. Cadence is building the future of sustainable system design with generative AI-driven solutions.



As a leader in electronic system design, Cadence provides design solutions for innovators building the world’s AI infrastructure.

In addition to enabling a more sustainable AI infrastructure, Cadence is transforming the solutions we provide with AI. Cadence’s portfolio of generative AI solutions spans all aspects of chip and system design—digital implementation, analog/custom design, functional debug and verification, PCB design, and Multiphysics optimization. These AI-enhanced solutions address the productivity and performance challenges of the leaders delivering the silicon, systems, and data centers of the world.

As AI unlocks new opportunities in the world, it similarly enhances the innovations and solutions that Cadence provides. Using AI to help coordinate, predict, and discover new solutions, we are entering new market spaces beyond the traditional semiconductor and electronic system space. We can leverage our computational software and hardware solutions to neural physics, life sciences, and data center digital twins. This will enable Cadence and our partners to help address society’s most significant challenges.

Cadence AI-driven solutions enable exploration of more energy-efficient architectures, realize new advances with 3D-IC and chiplet-based designs, and deliver lower-power GPUs, CPUs, custom silicon, printed circuit boards (PCB), electronic systems and data centers.



Computational software is poised to revolutionize the upcoming era. We’re tackling some truly intricate challenges, and our objective is to formulate solutions that positively impact a wide range of areas, from microchips to cancer research.

Nimish Modi

Senior Vice President and General Manager, Strategy and New Ventures, Cadence

Cadence Impact on Sustainable Design

Innovators around the world are using Cadence tools throughout the electronic system design flow, to create products—chips to printed circuit board to systems and datacenters with a demonstrated impact on lowering their carbon footprint



Digital Design

30%

Digital low-power design flow enables up to **30% total power consumption reduction** for customer SoCs

AI-Driven Chip Design

35%

Cadence Cerebrus reduces chip leakage power by up to 35%, up to 10X increased productivity, and reduces compute resources

Emulation Efficiency

40%

Palladium power efficiency improvement in watts/million gates in Z2 architecture

Hybrid Simulation

90%

Hybrid Simulation with **Palladium and Helium™** platforms reduces emulation time and therefore power consumption, up to 90% when booting Android

Power Improvement High-Level Synthesis

50%

Stratus™ technology automates the critical process of mapping an algorithm to code, which can be physically implemented into an integrated circuit (RTL code). Using Stratus HLS to explore the design space and experiment with different architectures can yield up to **50% lower power designs** for the same input algorithm

Computational Fluid Dynamics

17X Less Energy

Our CFD technologies, when running on GPUs, complete analysis with **9X** more compute throughput for the same cost, which also consumes **17X** less energy

Data Centers

10%

Customers using our Digital Twin solution for data center operations management can reduce stranded capacity from an estimated 30% to **as low as 10%**

Thinking Big: Helping Data Centers Prepare for a Greener Future

Data centers power the digital services that we have grown to expect as a part of everyday life, and as our lives continue to become increasingly digital in nature, the demand for digital services will continue to grow. These services—both personal and professional—come at a price, including to our environment. The data center industry is estimated to account for 1-1.5% of global electricity use and 1% of energy-related greenhouse gas emissions.* Compliance with environmental regulations, like the recent Energy Efficiency Directive, is also an increasing consideration for data center professionals.

The Juggling Act and Increasing Density

Data centers are tasked with running their facilities as efficiently as possible, while ensuring deployment speed, IT safety, and smart budgeting. Maximizing data center performance in this way is easier said than done due to the conflicting demands currently facing the data center industry.

The proliferation of high-density IT equipment and high-performance applications places additional demands on data center systems. Data centers are tasked with delivering more processing throughput, in less space, and in a sustainable fashion.

*<https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks>

Performance and Sustainability

Many owner/operators, colocation providers, and hyperscalers use data center digital twin technology with Cadence® DataCenter Design Software and Insight Platform™ to uncover how changes will impact design and operations, empowering them to prioritize energy efficiency while maximizing performance.

Customized reports and dashboards display carbon usage analytics and energy efficiency metrics, including a power usage breakdown of the cooling system, power system, and IT equipment. Our data center software also calculates the power usage effectiveness (PUE), a commonly used ratio of the energy used by the facility compared to the energy used by IT equipment, and the data center's total IT carbon footprint.

Thésée DataCenter, a French colocation data center provider, is a prime example of an organization that overcame the current challenges facing the data center industry using Cadence data center software. It needed to reconcile seemingly contradictory technical objectives, such as:

- ▶ Attaining Uptime Institute Tier IV high availability certification
- ▶ PUE target of 1.2 even at partial load
- ▶ Managing higher electrical densities for AI and data analytics use cases
- ▶ Prioritizing energy performance and a minimal environmental impact

Thésée DataCenter achieved these objectives by using a scalable modular design coupled with a complex cooling system, the placement and tuning of which are validated by Cadence's CFD simulation capabilities. We are proud to support this innovative company, and others like it, in achieving their ambitious sustainability initiatives through our data center software.



Cadence Reality DC Digital Twin will allow us to know the real capacities of our infrastructures, anticipate the arrival of new projects, test and propose the best locations for pre-sales projects, and finally maximize the commercial potential of our campus.

Christophe Bouniol

President, Thésée DataCenter

Partnering to Enable Sustainable Innovation

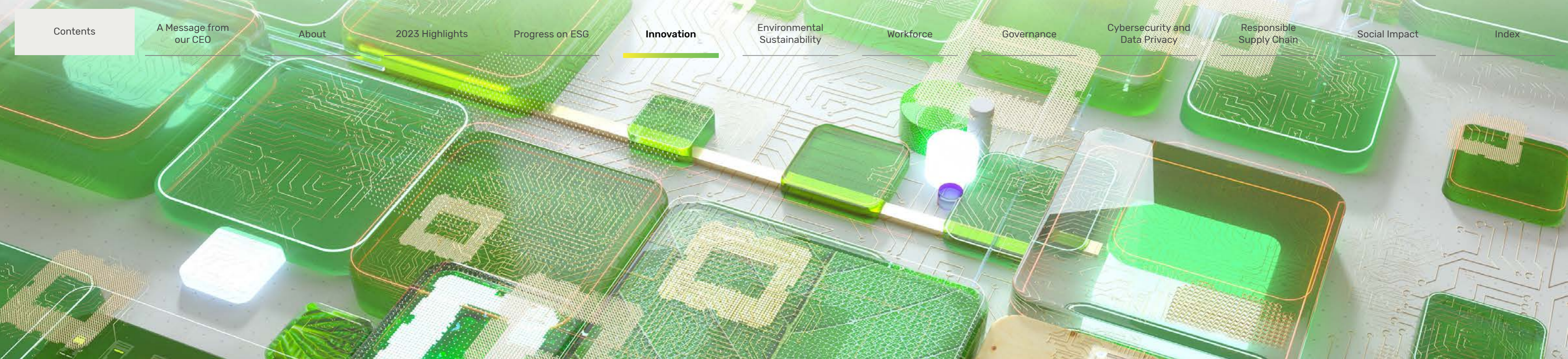
Innovation in Power

50% Power Reduction Through Low-Power Optimization with Stratus HLS

Products designed with **Stratus HLS** technology can be found in your home, automobile, and pockets. Most widely used for image processing, wireless, and machine learning (ML) applications, Stratus HLS automates the critical process of mapping an algorithm, whether in C or MATLAB, to code that can be physically implemented into an integrated circuit (RTL code). Traditionally, this is a complex, manual process and designers are only able to explore a limited number of RTL solutions before they must proceed with implementation. However, this step has great potential for power and energy optimization in the design flow. Using Stratus HLS to explore the design space and experiment with different architectures can yield up to **50% lower power designs** for the same input algorithm. Stratus HLS leverages the same engines as the Cadence Digital Full Flow for power, timing, and area analysis, so designers can confidently choose the best RTL architecture.

Stratus HLS has recently implemented a process as a part of the high-level synthesis flow which creates RTL, resulting in minimal leakage power and greater design productivity. This can allow design teams to target lower power more aggressively, without requiring specialized talent or longer schedules. Ultimately, it helps democratize advanced low-power design techniques and lowers the power consumption by semiconductors and electronic systems worldwide.





Creating Battery-free MCUs with Cadence Full Flow

The team at OniO envisioned an internet of things (IoT) future with zero batteries, so they created ONiO.zero—a microcontroller unit (MCU) that operates 100% on energy from its surroundings. ONiO.zero is a RISC-V microcontroller that represents a significant leap in low power consumption and stands at the intersection of cutting-edge technology and sustainable development. This remarkable piece of technology marks a significant advancement in ultra-low power consumption and distinguishes itself by operating completely battery-free.



Cadence was our first choice of tools; when we benchmarked available software packages, Cadence won. Also, having the local support of the Cadence team was instrumental. The team is known well in our region and trusted. The scalability and flexibility in the Cadence start-up program allowed us to get design work started quickly and scale as the company grows.

Vemund Bakken
CTO, ONiO

ONiO uses a full Cadence flow from analog and digital design capture, layout and simulation, extraction, chip floorplan, and signoff. ONiO chose Cadence as their single EDA tool vendor for chip development because the tools are fully integrated, which is essential for these complex designs.

ONiO designs all IPs internally and uses Cadence's tools, including the **Virtuoso** platform with **Spectre** family of simulators for analog and mixed-signal design and simulation, **Xcelium** for digital verification, **Genus** for synthesis, **Innovus** for digital implementation, **Tempus** for static timing analysis and **Conformal**, **Voltus**, and **PVS** for final sign-off. ONiO performs a lot of simulations in analog and mixed-signal environments, where Cadence has a forte when it comes to simulation speed. Using Cadence tools means that ONiO can get results faster with great accuracy.

ONiO.zero's sophisticated integration of energy-harvesting capabilities eliminates the need for multiple external components typically required for power management and provides unprecedented cost savings in production while fostering an eco-friendly, economical, and efficient technology standard for IoT applications. [Learn more about how OniO creates sustainable, battery-free solutions with Cadence technology.](#)

Many applications can benefit from ONiO.zero, including:

- ▶ Smart Home Devices
- ▶ Wearable Health Tech
- ▶ Agriculture
- ▶ Retail
- ▶ Environmental Monitoring
- ▶ Smart Cities
- ▶ Industrial IoT
- ▶ Logistics and Tracking
- ▶ Energy Sector

Dukosi Revolutionizes Batteries with Cadence Design Solutions

Dukosi is at the forefront of battery system innovation and enables a step change in safer and more efficient batteries to power the electric future. Their unique technology is transforming the performance, safety, efficiency, and sustainability of battery systems for a wide range of applications including electric vehicles, industrial transportation, and energy storage systems.

Their intelligent chip-on-cell solution with novel contactless communication transforms the way batteries are designed and monitored. By capturing and storing lifetime data for each cell, enabling full traceability throughout the cell's lifecycle, battery utilization and safety can be improved also in second- and third-life use—e.g., in energy storage systems—to end of use life and recycling. Dukosi's solution is helping to create a sustainable battery value chain and circular economy—reduce, reuse, recycle.

Dukosi's chip-on-cell sensing platform with unique contactless communication is suitable for all battery management system (BMS) topologies and allows for simpler, safer, and smarter batteries. Dukosi's solution uses a bus antenna for contactless communication with every Cell Monitor IC, eliminating complex wiring harnesses and other components typically found in traditional wired architectures. Eliminating the majority of wiring and connectors in the battery reduces potential failure points and results in smaller, lighter, safer, and more scalable battery systems.

The Dukosi team used Cadence EDA tools for the design and verification of their wireless battery monitoring solution including **Virtuoso Studio** for analog design, **Genus Synthesis** and **Innovus Implementation** for the integrated digital flow, **Quantus™ Extraction**, **Tempus Timing**, and **Voltus IC Power Integrity** for the timing and power signoff, as well as **Pegasus™ Physical Verification** for DRC and LVS signoff. Their use of the **Cadence Managed Cloud Service** allowed Dukosi to get every designer up to speed rapidly and enabled them to scale quickly to handle changing project requirements and support a growing design team.

Battery technology is poised for exciting advancements in the coming years, and Dukosi is proud to be at the forefront of this innovation, working to improve efficiency and reduce waste in the industry. [Learn more about how Dukosi is revolutionizing batteries using Cadence tools.](#)



The integrated Cadence flow maximized our team's productivity, helped us meet our PPA goals, and delivered successful results on our target technology.

Simon Foster

Analog ASIC Team Leader, Dukosi



Sustainable Innovation in the Automotive Industry

Cadence CFD solutions use computational fluid dynamics to predict real-world product and system performance, which is key to optimizing and increasing vehicle efficiency and achieving regulatory compliance. As a partner to several of the world's major automotive manufacturers, Cadence CFD Solutions ensure engineers can evaluate designs quickly and reliably.

Covering modeling, simulation, and analysis for domains including aerodynamics and thermal management for electric vehicles (including batteries), Cadence CFD solutions serve to maximize critical performance and user experience metrics such as vehicle endurance, driving range, and fuel efficiency.



The automotive industry is witnessing transformative changes driven by electrification. OEMs that historically focused on internal combustion engine (ICE)-based powertrains are now transitioning their product lines to offer a blend of ICE, mild hybrid electric vehicle (mHEV), plug-in hybrid electric vehicle (PHEV), and fully battery electric vehicle (BEV) powertrains. The additional investment needed to facilitate electrification has required OEMs to optimize cost of development by replacing physical testing with simulation technology more aggressively.

Kumar Srinivasan

Senior Technical Director for CFD Solutions, Cadence



Innovation in Healthcare

Cadence Molecular Sciences (OpenEye)—a business unit of Cadence—will provide OpenEye’s molecular design software to power the open-science AI-driven Structure-enabled Antiviral Platform (ASAP) Discovery Consortium in support of an innovative effort to rapidly develop antivirals to prevent future pandemics. ASAP Discovery Consortium aims to deliver multiple drug candidates ready for evaluation in humans in the event of an ongoing or emerging pandemic threat. The project will maximize the use of an open science model that prioritizes global, equitable and affordable access to antiviral medicine, generating a wealth of antiviral data shared rapidly and openly.

OpenEye’s Applications, Toolkits and Orion® platform—which include ROCS®, FastROCS™, BROOD, OMEGA, OEChemTK, Grapheme™, Nonequilibrium Switching (NES) Free Energy Calculations and other tools—enable computational chemists working with the ASAP Discovery Consortium to build a robust antiviral drug discovery pipeline using technology, structural biology, AI, ML, and computational chemistry.



Open-science drug discovery against future pandemics is an essential public service. We are thrilled to have access to OpenEye’s industry-leading software in this effort. The OpenEye Toolkits have long been the backbone of our computer-aided drug discovery infrastructure, and access to the Orion NES Free Energy workflows allows us to run free energy calculations in mere hours.

John D. Chodera, PhD

Lab head, Memorial Sloan Kettering Cancer Center (MSKCC)



Neurinnov Is Transforming Tetraplegic Patient Care with Cadence

Neurinnov is using Cadence tools in their work to create implantable neurostimulation solutions, restoring hand movements for patients with complete tetraplegia following high-level spinal cord injury. Neurinnov's first clinical indication is focused on restoring hand grasping for these patients, giving them back autonomy by enabling them to manipulate objects and perform daily activities.

Each patient is unique, so the technology and settings must be personalized for each individual. Additionally, the solution must be easy for surgeons to implant to make the surgery as fast and efficient as possible. Neurinnov is working hard to address both of these challenges.

Last year, Neurinnov began production of their technology and is now around 60% complete with industrialization. The key component of Neurinnov's implantable device is an integrated circuit designed using Cadence tools.

To achieve selective stimulation of the nerves, Neurinnov needs high-level technology and a dedicated circuit that can focus the currents and shape them in 3D with complex waveforms. ASIC development is the only way to achieve this, and Cadence is the critical software used to develop the ASIC and surrounding components. The result is an efficient, small, and energy-efficient system that meets the high standards of safety and reliability required for medical devices.



We use Cadence for all our microelectronic research and development. At the core of our implant is an integrated circuit that is key to our technological innovation. This integrated circuit was built from the ground up using Cadence tools. Many of the Neurinnov team had prior experience with Cadence tools, and we knew Cadence would be a critical component for developing the complex circuitry needed for selective stimulation of the nerves.

Milan Demarcq

R&D Engineer, Cadence Lead User, Neurinnov

Throughout the design and development process, Neurinnov is using Cadence tools for RTL coding, digital schematic input, synthesis, and place and route with **Virtuoso Design Platform, Virtuoso Digital Implementation**, and full-chip analog/mixed-signal simulation. By restoring movement to the hands, Neurinnov hopes to give patients some autonomy and reduce their dependence on caregivers for daily activities.

Learn more about [how Neurinnov is transforming tetraplegic patient care with Cadence](#).

Innovation for a Safer World

Leveraging Computational Fluid Dynamics to Predict, Model, and Mitigate Tsunamis for a Safer Tomorrow

Predicting and modeling outcomes of climate change using advanced simulation tools can be a positive stride in the fight against climate change. Cadence CFD tools can help predict and model the generation, propagation, and mitigation of tsunamis for a safer tomorrow, especially targeting the safety of the inhabitants and building clusters around the coastal regions.

CFD simulation is used in geophysics and ocean wave studies for its versatility, accuracy, and turnaround time. With climate change at the forefront of discussions, CFD finds its space in landslide and tsunami modeling. Cadence Fidelity Fine Marine can generate hydrodynamic flow simulations of tsunami wave height and their corresponding effects on coastal building clusters. These simulations are based on Reynolds-averaged Navier-Stokes equations using turbulence models at full tsunami

scale with wave breaking. Understanding the impacts allows the development of various strategies to reduce casualties:

- ▶ Design of coastal structures
- ▶ Future tsunami mitigation
- ▶ Establishment of standard parameters for coastal building construction
- ▶ Pre-defined evacuation routes



Innovation for Sustainable Food Supply

Reduce Aquaculture Biological Footprint with Fluid-Structure Interaction Simulations

Aquaculture is gaining widespread recognition for its potential to provide sustainable fish products, and it is considered the go-to method for fish farmers to satisfy the growing demand for seafood and freshwater fish. In aquaculture farming, choosing the right location is substantial for healthy breeding, such as having continuous flow and away from high sound pressure—i.e., underwater radiated noises—which can be four times higher than in air. Fluid-structure interaction studies can help design robust and sustainable fish cage nets that minimize stagnation and ensure successful fish production while reducing the aquaculture biological footprint.

The adverse effects of pollution, parasitic infections, and insufficient oxygen levels can contribute to a stressful environment for fish, resulting in poor health and heightened vulnerability to infections. Therefore, it is imperative to create fish farms designed to dissolve waste and avoid water stagnation. Control units, such as flow meters, pH meters, etc., can effectively maintain an environment that supports healthy breeding.

Reduce Stagnation in Fish Cages with Fluid-Structure Interaction Studies

By using computer analysis and simulation, potential risks can be identified early in the process when designing a fish cage, which is more cost-effective than constructing physical models. For modeling, simulating, and analyzing fluid-structure interactions in fish cage nets, CFD and finite element analysis (FEA) are the most effective tools. These tools can help decide on the best fish cage material to withstand extreme weather conditions and optimize the nets' arrangement, i.e., the distance between the cages and the number of cages in a row—to avoid stagnation and enhance fish production.

[Cadence CFD solutions](#) offer dedicated, virtual naval architecture and marine design tools for unparalleled free surface modeling and scalable, highly automated optimization processes. Our tools can be used for fluid-structure interaction studies in fish cages and for optimizing the design of aquaculture cages with multiple objectives and constraints.

Advancing the Next Generation Innovators

Investing in Women in STEM

Cadence is an official technology partner of the McLaren Formula 1 Team. In 2023, McLaren Racing created an initiative to encourage and support the next generation of women leaders in STEM, empowering 60 aspiring women leaders of tomorrow and opening pathways to a career in STEM.

Cadence, along with Google and Cisco, partnered with McLaren Racing to develop an exclusive series of masterclasses designed to inspire and equip women with the knowledge for a future in STEM.



STEM has never been so relevant to some of the traditional industries to see how they can evolve, such as electrification of vehicles. It's an exciting time for women in STEM, and we're thrilled to have partnered with McLaren Racing, Google, and Cisco to create a program for female leaders on a career path in STEM.

Rebecca Dobson

Corporate Vice President, Worldwide Field Operations, Cadence



The McLaren 60 Scholars Programme is a place where women are inspired to pursue careers in STEM, bringing their unique perspectives, challenging stereotypes, breaking barriers, and being a part of exciting advancements that make a difference in the world.

Tal Zigman

Group Director, Academic Partnerships, Cadence

From Learners to Innovators with the Cadence Certified Training Partner Program

According to the U.S. Bureau of Labor Statistics, by 2032, employment in STEM occupations is projected to grow by about 1 million, and several governments and international organizations have realized the importance of developing their own chip industries to reduce reliance on a global supply chain. Setting up a chip industry requires a highly trained workforce, and new engineering graduates become productive faster by quickly bridging the gap between academic knowledge and industry-standard state-of-the-art tools, technologies, and design methodologies. The Cadence Certified Training Partner Program is at the heart of bridging that gap between academia and industry.

Cadence has partnered with Entuple Technologies of Bengaluru, India, to offer high-quality training solutions to help students become productive faster with industry-standard tools and design methodologies, including all five of the technology areas currently offered by Cadence: Digital Physical Design, Synthesis and Static Timing Analysis, Signoff Timing and Power Analysis, Simulation, Coverage Debug, and Languages and Methodologies. By leveraging their respective strengths, the companies have created a unique training experience that imparts domain knowledge and fosters a spirit of innovation among the learners.

Impact on the Industry

The Cadence Training Partner program will accelerate the emergence of a skilled talent pool equipped with knowledge of the latest tools and methodologies, which will contribute to accelerating product development cycles, reducing time to market, and improving overall design quality.

Academic Network Supports University Design Teams

Penn Electric Racing

Penn Electric Racing, the University of Pennsylvania's Formula Electric SAE team, is one of the first electric Formula SAE teams in North America and has broken multiple records, including the North American acceleration record at Formula SAE Lincoln. Formula SAE (Society of Automotive Engineers) is a series of international competitions where university teams compete to design and manufacture the best-performing racecars.

The team is focused on validation and making sure that all their circuits are optimized to be the best that they can be. To do that, they are using Cadence technology.

Unlike the other teams who use pre-built modules or battery systems, Penn Electric Racing builds their batteries themselves to get every performance metric they can. One of the most important factors when designing a battery is its thermals. The higher the heat gets, the greater the resistance. High resistance can make the system less efficient and also more dangerous. That is why keeping the battery cool is extremely important, not just for the operation of the battery but also for ensuring safety.

Cadence's Celsius Thermal Solver allows Penn Electric Racing to look at the chips on the PCBs in the battery packs and see how hot they are getting over an endurance run, and then make the necessary changes to ensure all the components are getting adequate cooling. They are also using Cadence AWR software for all of their high-frequency, high-speed RF designs, which include their data acquisition board.



Without [Cadence AWR software], we would have to go back into the lab, order a PCB, wait weeks for it to arrive, solder it, and then test whether a small part of the circuit works without knowing whether or not it's going to work. It would be a lot more trial and error. But with AWR, we are able to reliably know that our circuit will work before we even test it.

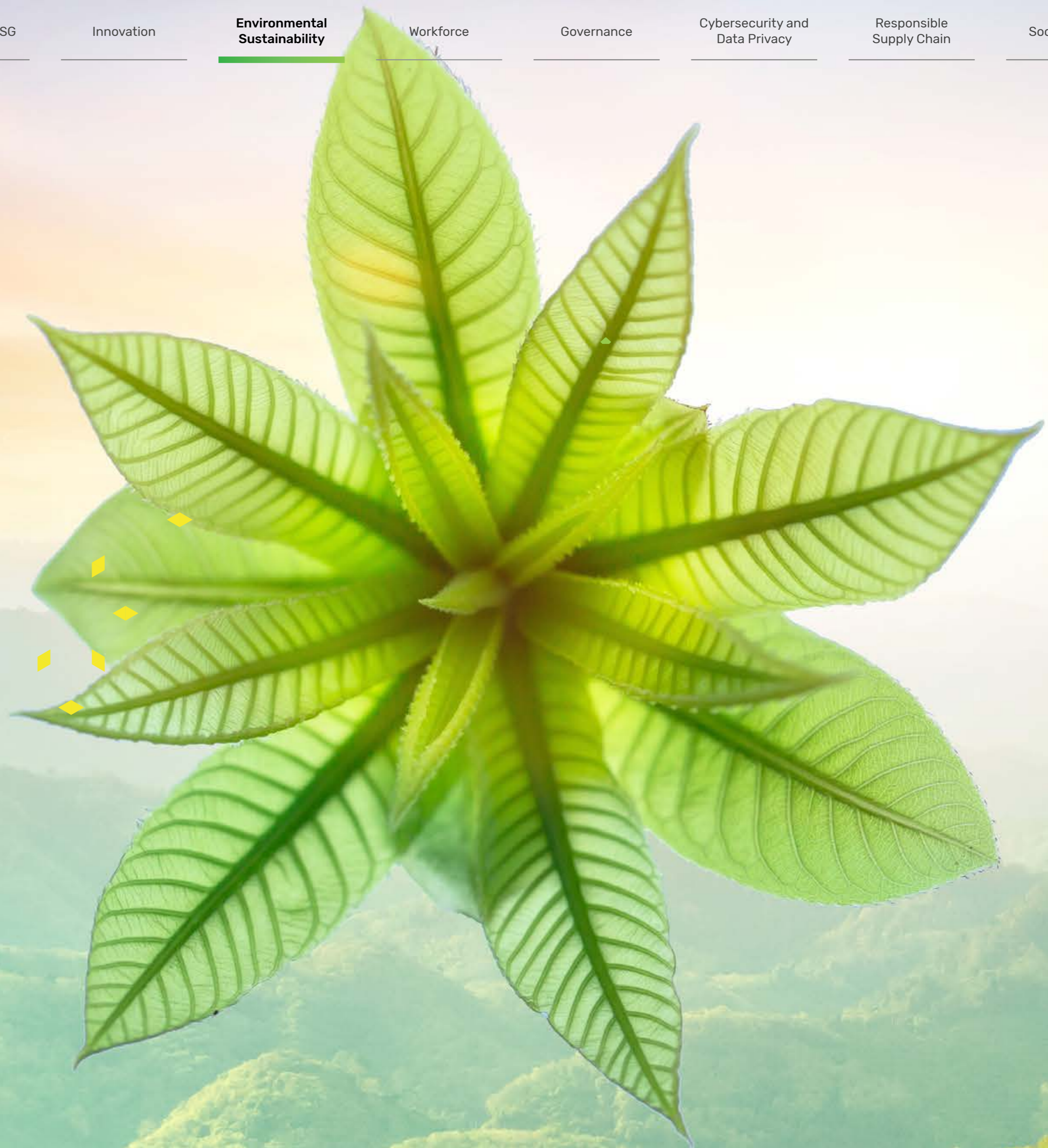
Richard Prescott

The Electrical Co-Lead at Penn Electric Racing

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 offers online training, remote development options, design services, and mentorship and networking opportunities to the startups participating in this program.

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, suppliers, and customers. Advancing the sustainability impact of our products and services is a key component of our innovation process.

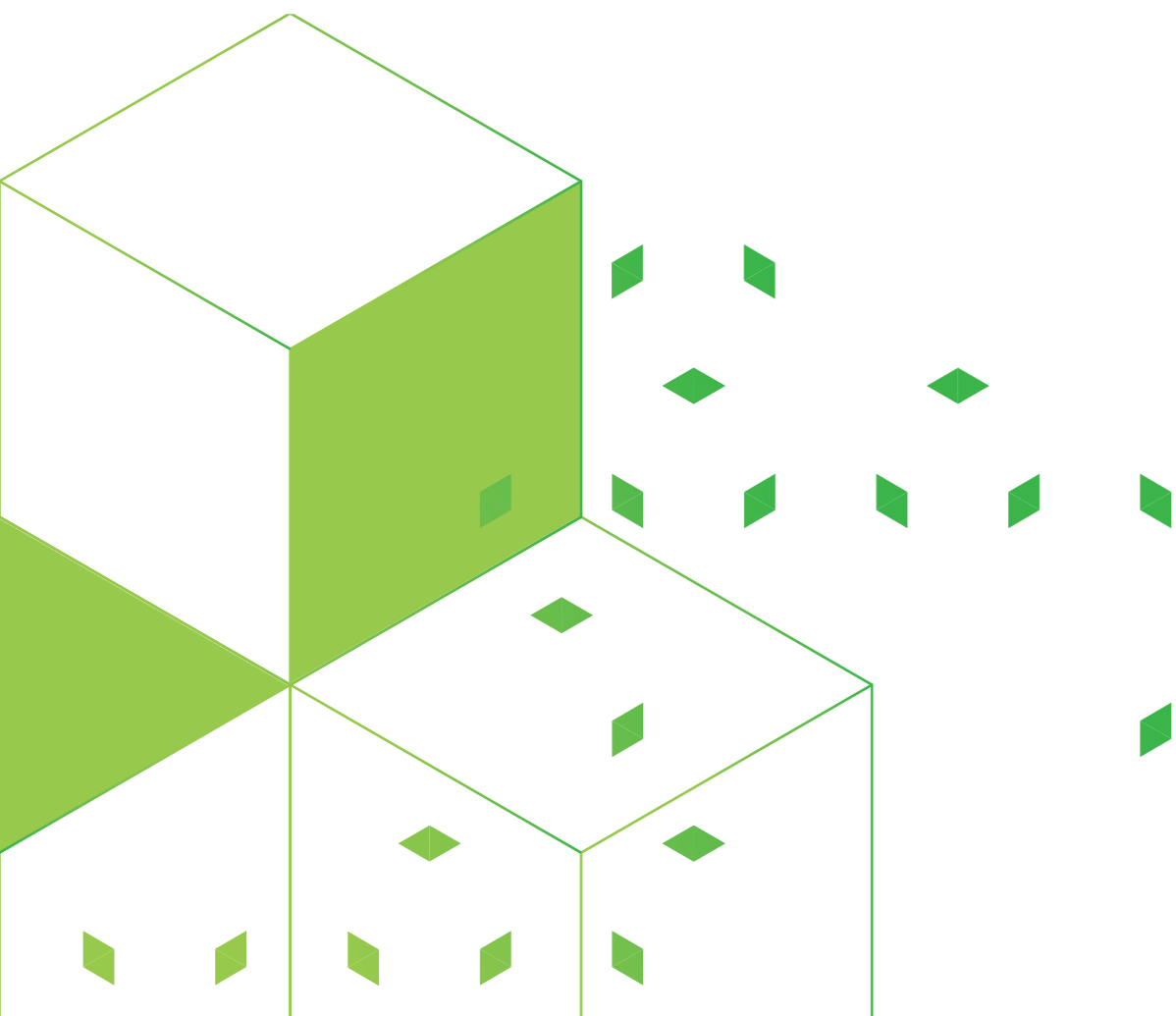
Environmental Strategy

Our environmental strategy is informed by climate-related risk assessments, stakeholder feedback, and regulations. Our goals are framed in our Environmental Management System (EMS) and summarized in our [TCFD Index](#). Progress on our goals is tracked, measured, and reported annually.

EMS

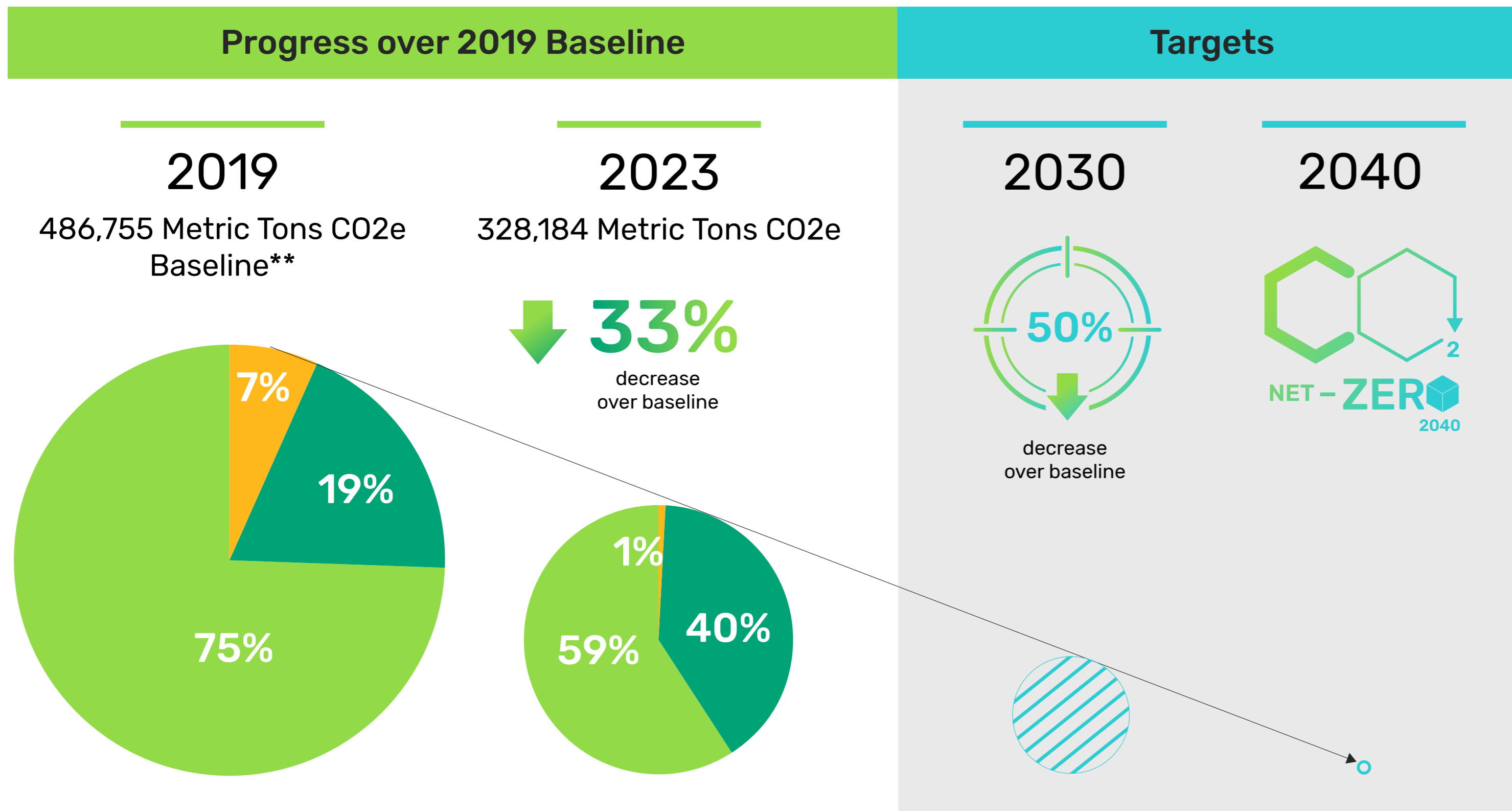
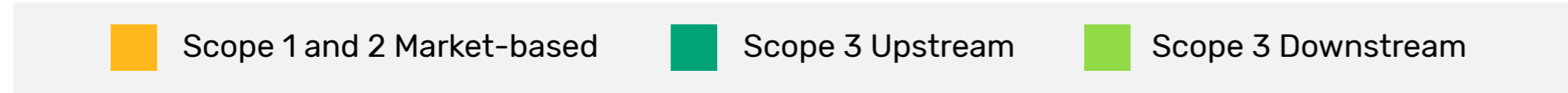
Cadence's Environmental Management System ([EMS](#)) is designed to set, manage, and achieve our environmental sustainability goals. Priorities are informed by continuous stakeholder engagement and our climate risk assessments. Our environmental programs are validated by internal reviews and external 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



Committed to Net-Zero by 2040

Our long-term decarbonization strategy is to reach Net-Zero emissions by 2040 for our global operations and full value chain. Since 2019, we aligned our carbon reduction targets with the goal of limiting global warming to 1.5°C above preindustrial levels, and have decreased combined Scope 1, 2, and 3 emissions by more than one third, and are on track to achieve our 2030 goal to halve emissions.*



Science Based Targets

In 2023, we submitted our GHG reduction targets to the Science Based Targets initiative (SBTi) for validation. These Net-Zero and mid-term reduction targets cover both our own operations and extend across our full value chain—Scope 1, 2, and 3 Upstream and Downstream. In 2023, we expanded our emissions reduction commitments to capture 100% of our total base-year Scope 3 emissions.

Our decision to seek validation from the SBTi required an update to our Scope 3 emissions calculations. We also took this opportunity to refresh historical Scope 3 emissions, including the 2019 baseline, to incorporate the new Scope 3 categories included in our targets as well as improvements in emission factors and calculation methodologies.



Committed to setting science-based targets with the Science Based Targets initiative

* Scope 1, Scope 2 (market-based), and Scope 3 Categories 1-8, 11, 12, and 15. Calculated in accordance with the GHG Protocol and 3rd party verified to the ISO 14064-3 Standard. Scope 1 and 2 includes our owned and leased properties, as well as our co-located data centers; estimations applied where actual data was unavailable.

** 2019 emissions updated due to changes in methodology supporting SBTi requirements.

Cadence Net-Zero Plan

Targets

Net-Zero full value chain emissions by 2040, 50% reduction in emissions from full value chain and own operations by 2030 over 2019 baseline (Scope 1, 2, and 3)

50% reduction in emissions from our own operations by 2030 over 2019 baseline (Scope 1 and 2)

2030 and 2040 targets pending validation from the SBTi

Signed onto the Climate Pledge to partner with like-minded companies taking steps to achieve Net-Zero by 2040

Progress

33% reduction in full value chain emissions over the 2019 baseline

88% reduction in emissions from own operations over 2019 baseline (Scope 1 and 2)

97% renewable electricity for operations in 2023

Secured long-term renewable energy through a purchaser-caused VPPA to supply renewable electricity expected to cover our entire U.S. electricity load

Launched Supplier Engagement Program

Investments in biodiversity, forestry maintenance, and organic carbon removals

CarbonNeutral® company certified since 2021

Strategy to Reach Net-Zero

Track progress against 2030 and 2040 targets

Target 100% renewable electricity and continue the transition to long-term, renewable energy procurement contracts

Continue strategic partnerships with suppliers who have committed to Net-Zero emissions

Encourage partners that have not yet set GHG reduction targets to do so

Continue to track and measure customer progress towards Net-Zero emissions

Neutralize remaining emissions with high-quality carbon removals

Decarbonizing Operations and Data Centers

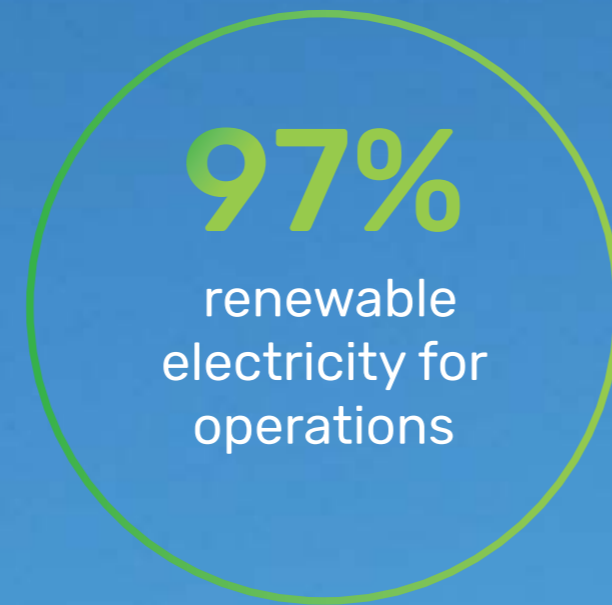
In 2023, we procured 97% renewable electricity through the combination of renewable energy tariffs and high-quality renewable energy attribute certificates (EACs).

We continue to seek opportunities 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). In early 2024, we strengthened our transition to long-term renewable energy and commitment to purchaser-caused renewable electricity by signing a virtual power purchase agreement (VPPA) to help finance a to-be-built solar farm in the U.S. Once operational, we expect our portion of the project will deliver solar power to the grid equivalent to our entire U.S. electric load and approximately half of our global Scope 2 emissions.

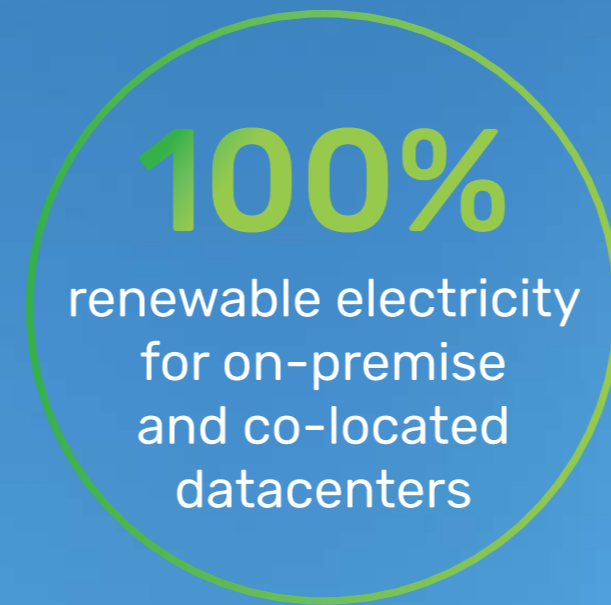
Renewable Electricity

Before taking renewable electricity into account, heating, cooling, and electricity use in our own operations and co-located data centers accounted for 9% of our full value chain carbon footprint. Through the goal of 100% renewable electricity procurement, we aim to reduce emissions from electricity to zero.

Our data center decarbonization strategy revolves around energy-efficient design features and the procurement of 100% renewable electricity for our on-premises, co-located, and cloud-based data centers. As we continue the process of shifting capacity to efficient co-located and cloud-based data centers, we are prioritizing partners that have their own goals to be powered by 100% renewable electricity.

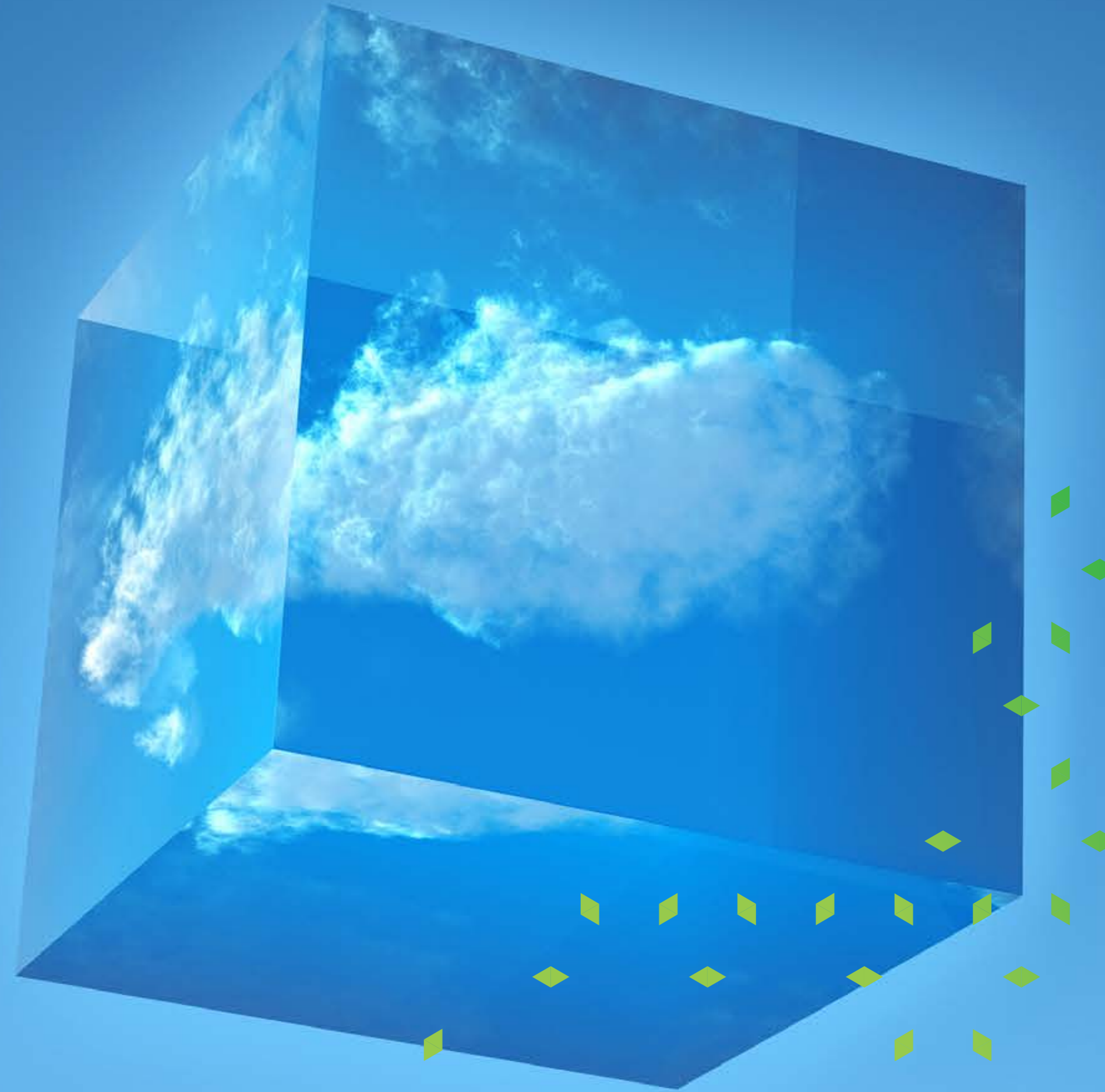


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CarbonNeutral.com

Palladium Cloud is CarbonNeutral® certified

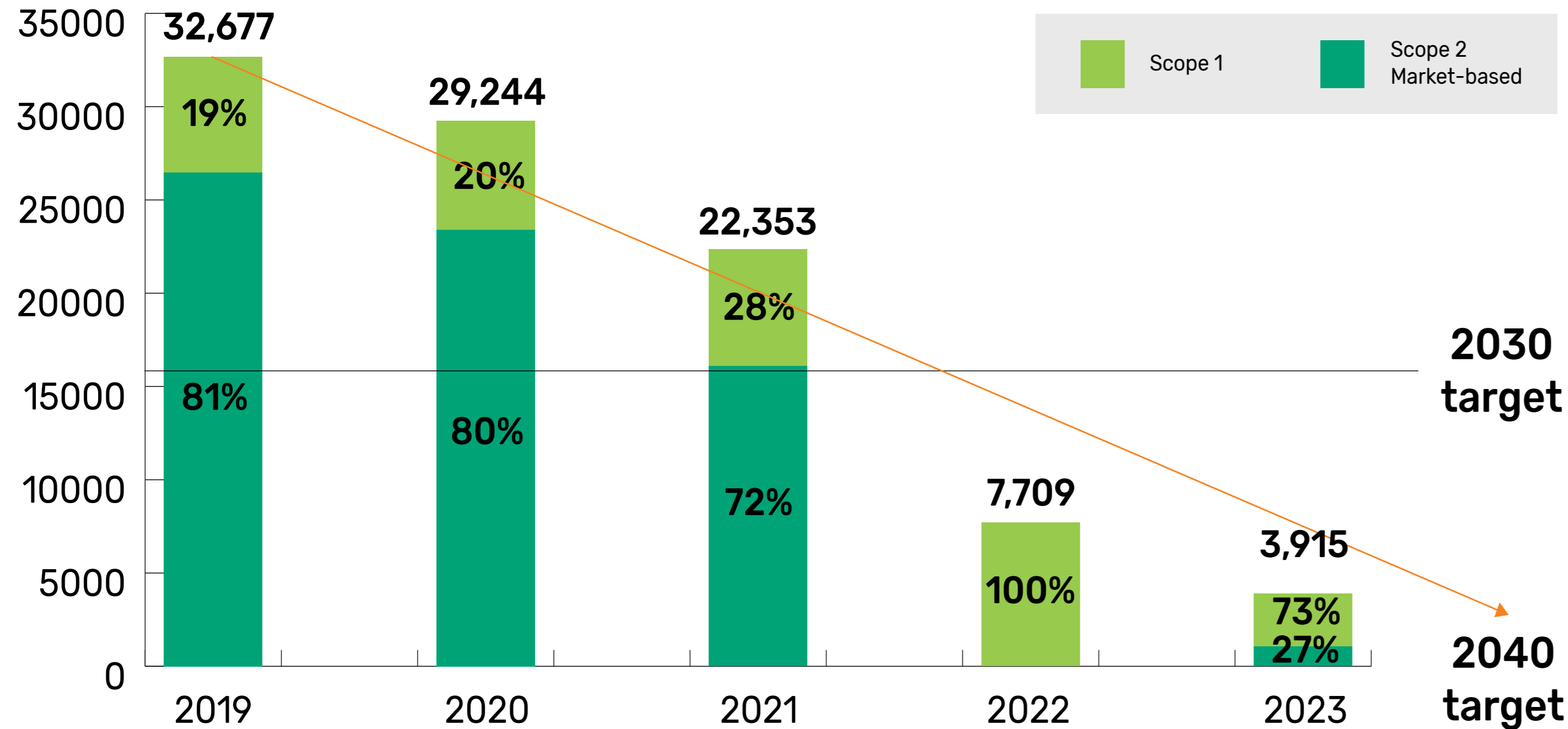


Global Operations

Emissions from our own operations account for only 1% of our full value chain emissions once 97% renewable electricity has been taken into account. Further, significant investments in refrigeration systems upgrades have contributed to an overall 88% decrease in GHG emissions from our own operations and co-located data centers over the 2019 baseline. As our Net-Zero plan evolves, we will continue to seek meaningful ways to decarbonize the sources of Scope 1 emissions.

Scope 1 and 2 Emissions Trend

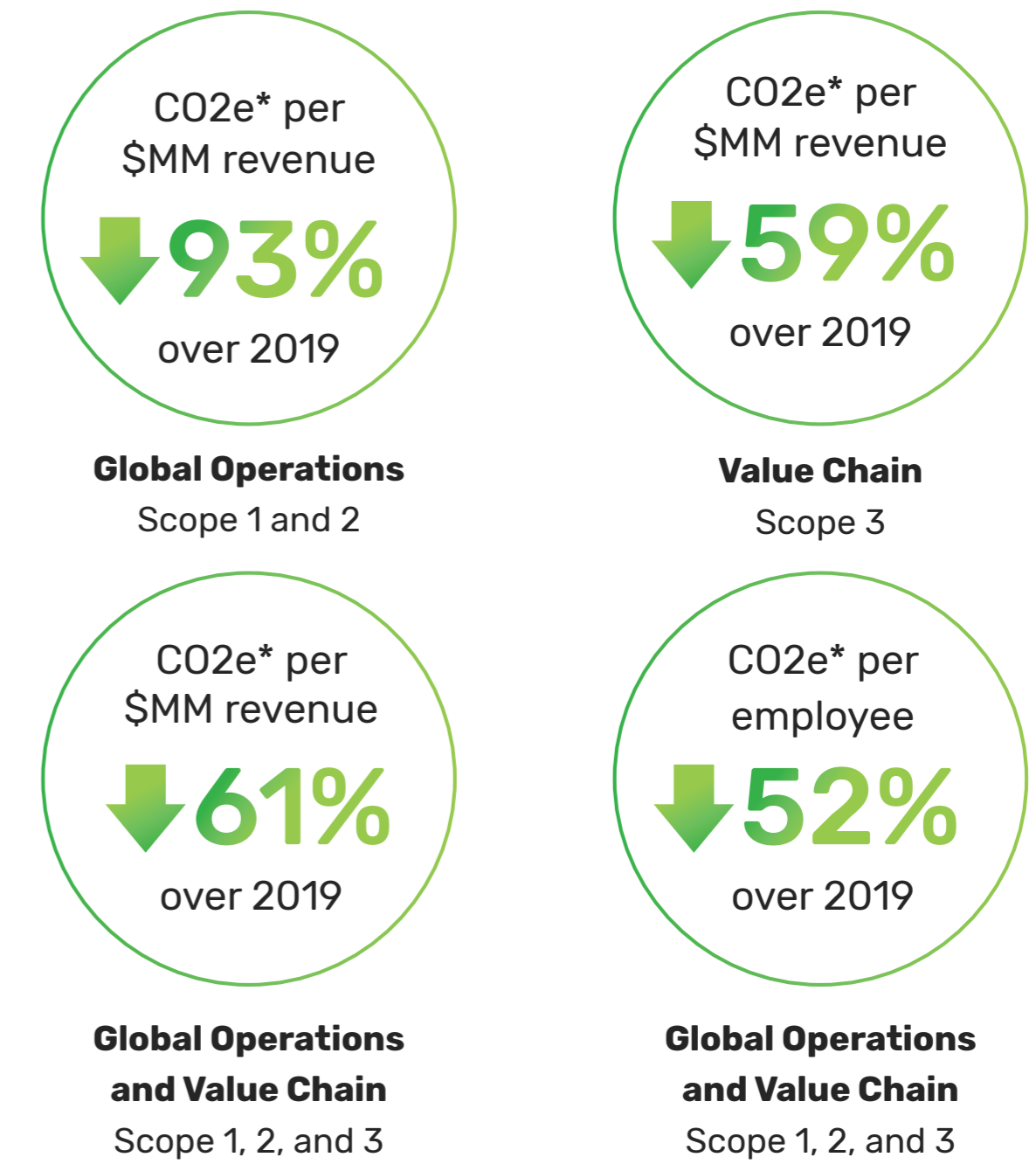
Metric Tons CO2e



*Calculated in accordance with the GHG Protocol and 3rd party verified to the ISO 14064-3 Standard. Scope 1 and 2 includes our owned and leased properties, as well as our co-located data centers; estimations applied where actual data was unavailable.

Progress

In 2023, we had an absolute reduction of 88% over Scope 1 and Scope 2 combined emissions compared to the 2019 baseline. In addition, significant decreases in emissions per employee and per million dollars of revenue demonstrate that we are decarbonizing our business while we grow.

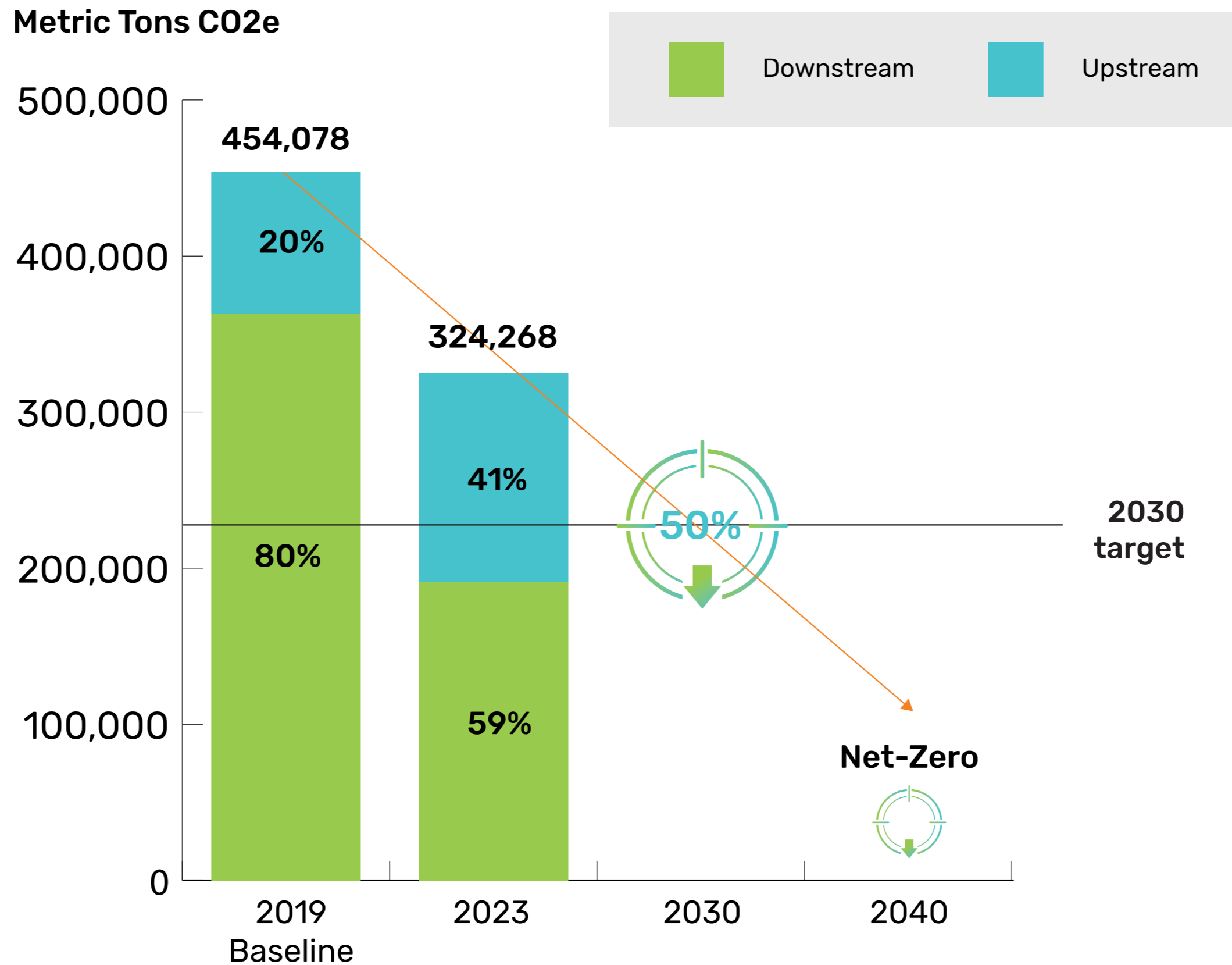


Decarbonizing our Value Chain

Our Net-Zero commitment is a compelling opportunity to partner with our suppliers and customers to reduce emissions associated with the business we do together. Our value chain plays an increasingly important role in our Net-Zero journey. We engage with our customers and suppliers to improve the accuracy of our Scope 3 calculations and reflect the work these companies are doing to reduce their own carbon footprints.

Scope 3 Emissions Trend

Metric Tons CO2e



*Scope 3 Categories 1-8, 11, 12, and 15 calculated in accordance with the GHG Protocol and 3rd party verified to the ISO 14064-3 Standard. We use the US EPA Environmentally-Extended Input-Output Models (EEIO) factors for current and baseline Scope 3 calculations.

We are committed to our target to reach Net-Zero by 2040.

As part of that journey, in 2023 we submitted near-term and Net-Zero targets to the SBTi for review and validation. Aligning with SBTi methodology, we expanded our GHG emissions inventory for Scope 3 emissions to include downstream emissions categories calculating for the use phase of our hardware products over the entirety of their useful life.

Customer Engagement

In measuring our Scope 3 downstream emissions, we take customers' existing renewable electricity and Net-Zero targets into consideration in our calculations and will continue to engage with customers on these topics as we work to Net-Zero. Since 2019, downstream Scope 3 emissions have decreased by nearly half (47%), largely due to our customers' investments in renewable electricity and carbon reductions in their own operations.

Supplier Engagement

Overall business growth, including demand for our hardware product family, are drivers for overall supply-chain spend. Since 2019 we have focused on climate engagement with suppliers of goods and services, including capital goods, and business travel. Through this engagement program, we have seen increased data quality from our supply chain, improving the accuracy of supply chain emissions calculations. Supplier response to our engagement program has been positive, with roughly half of our 2023 upstream Scope 3 emissions calculated using suppliers reported emissions, increasing from one third in 2022. We will continue to engage with key suppliers to align on emissions reduction strategies and encourage them on their Net-Zero journeys.

Employee Engagement

Mission Sustainable – Live the Brand Sustainably

Cadence launched a global employee challenge based on our 2022 Environmental, Social, and Governance (ESG) Report, aiming to engage all employees deeply into our ESG programs, grow awareness, and through participation create a learning experience for all employees.

With this, Cadence invited all employees to contribute innovative ideas to further our sustainability objectives. These are not just company goals; they are our shared responsibility. Submissions spanned areas of Water Management, Zero Waste, Energy Efficiency, Product Innovation, and Supply Chain Efficiency. The outcome resulted in a wave of enthusiasm across our global team.

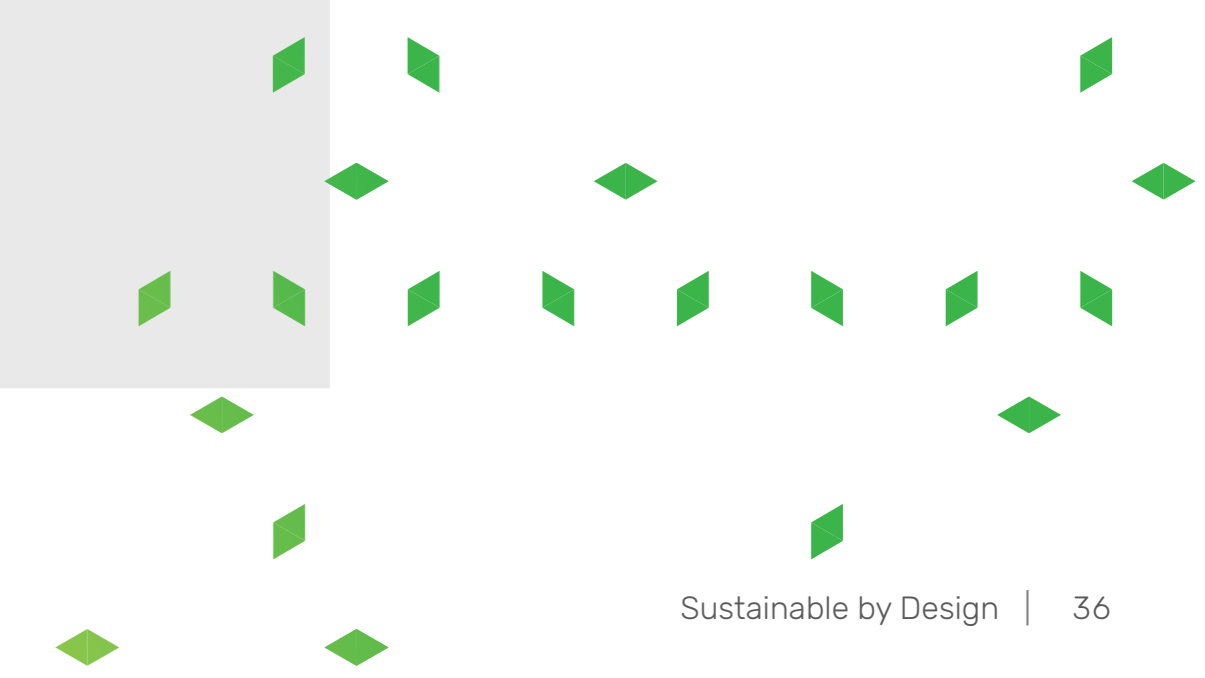


Decarbonizing Compute Through Energy Optimization

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. Examples of the sustainability impact of Cadence products include:

Cadence Cerebrus	Voltus-XFi	Cadence OnCloud	Fidelity CFD Platform		Cadence Reality DC Digital Twin	
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>	<p>Fidelity CFD software is used in the automotive industry to push engines to maximum performance with minimum battery or fuel consumption and CO2 emissions</p>	<p>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</p>	<p>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</p>



Carbon Neutral

We achieved CarbonNeutral® company certification again in 2023 through our investments in decarbonization, including energy efficiency measures, procurement of 97% renewable energy through utility contracts, high-quality Energy Attribute Certificates (EACs), onsite solar installations, and high-impact carbon removals. We secured Gold Standard Verified Emissions Reduction credits (VERs) to offset Scope 1 and Scope 3 emissions in required categories.



Investing in a Low Carbon and Environmentally Friendly Future

For 2023, we neutralized Scope 1 and a portion of 3 emissions through high-quality carbon offsets that had benefits beyond carbon reductions. We partner with Climate Impact Partners, leaders in carbon market solutions for climate action.

Cadence supports Climate Impact Partners' Clean Energy Portfolio that finances clean energy projects across the globe that displace electricity powered by fossil fuels. Energy generation is one of the biggest emitters of greenhouse gases, and renewable energy investment is a fast and effective solution to reduce these emissions all while improving energy security.

In addition to delivering emissions reductions to take climate action (SDG 13), the projects deliver a number of other benefits:

- ▶ **Affordable and Clean Energy:** Contributes to increasing the share of renewable energy in the global energy mix.

- ▶ **Work and Economic Growth:** Contributes to the local economy and livelihood of residents through the creation of jobs.
- ▶ **Industry, Innovation, and Infrastructure:** Supports the development of sustainable and resilient energy infrastructure, helping reduce shortages of electricity during peak hours of demand.

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

Solid Waste Management We worked with our partner, Saahas, in Bangalore, India, to implement a source segregation of waste program impacting 4,000 households and 200 shops in the Koramangala Village 8th Block. The impact of managed waste collection provides cleaner and healthier communities and better living conditions. This is a three-year program, from 2021 through 2024, with carbon avoidance of 1,000 tons.



Give Me Trees – Noida, India

Give Me Trees Trust is one of the largest community-based voluntary tree planting and conservation movements in India, having facilitated the plantation and preservation of more than 23 million trees all over the country in the last 45 years, with more than 17,000+ volunteers working all across India.



We are so thankful to Cadence in supporting the Give Me Trees Trust team in creating a permanent green space in sector 47, Noida (district Gautam Budh Nagar, Uttar Pradesh). This land parcel was reserved for permanent Green Belt in sector 47, but we did not have any financial or CSR partner for the same. Cadence has helped us with 12,000 plants to create a very beautiful biodiversity zone in the heart of a residential area.

Cadence support has brought in 32 species of butterflies, 47 species of birds (resident and migrant), and mammals such as squirrels, mongoose, and reptiles such as monitor lizard, garden lizard, rat snake, and common sand boa. The residents are delighted by the presence of such a big green cover in their sector, and are using it often for activities, walks, cultural meet ups, yoga sessions, and group meditations. The shelter area, pathways, and open grass areas are very popular. Pond and the greenery around it have been very well appreciated by the residents and all who visit this Cadence plantation site.

We will continue to maintain it, develop, and beautify this space and make it even more useful for the community and the biodiversity which has made it their permanent home.

Swami Prem Parivartan
Founder of Give Me Trees



Managing Water Resources

Although not a primary input to our products, we recognize that water is a vital resource. With this in mind, we have updated our [EMS](#) statement to include the identification, measurement, and management of environmental and water-related impacts of our operations and products. We also added a Water Resource Management section to our EMS where we outline our water challenges, goals, and management approach.

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.

At all our offices, fresh water 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 and Noida campuses, and some of our on-premises data centers use water cooling and mister technology.

Flooding, drought, and water stress are climate-related issues that our employees, customers, and investors care about. Our annual water risk assessment shows that the proportion of our use and consumption of water in high or extremely high water stressed areas increased this year due to changes in the natural environment. Our efforts to use water efficiently are informed by our annual water risk assessment. Details on our analysis and performance can be found in our annual CDP Water Security questionnaire response.

Water Footprint



Workforce

Accelerating Innovation
as One Team



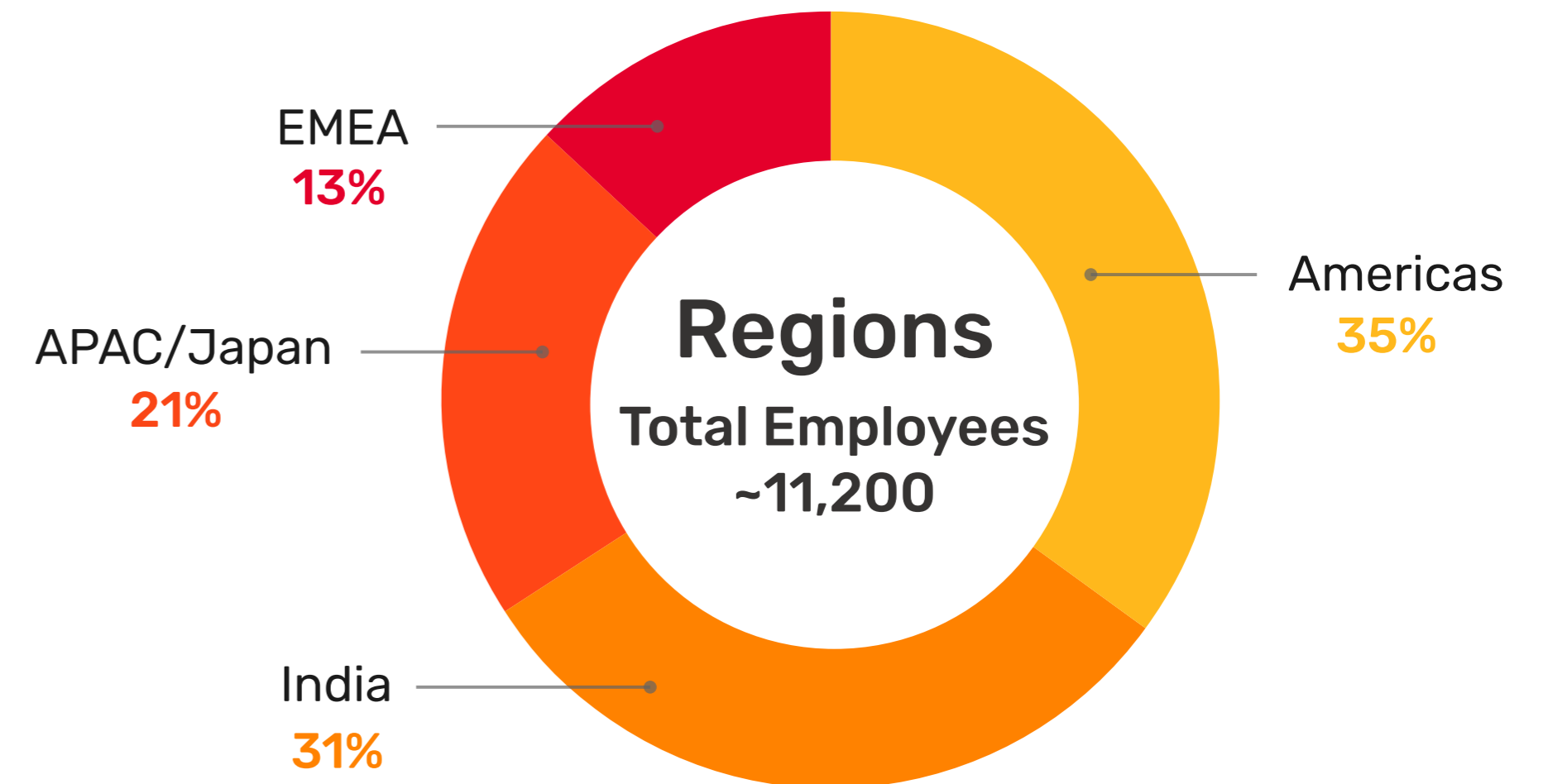
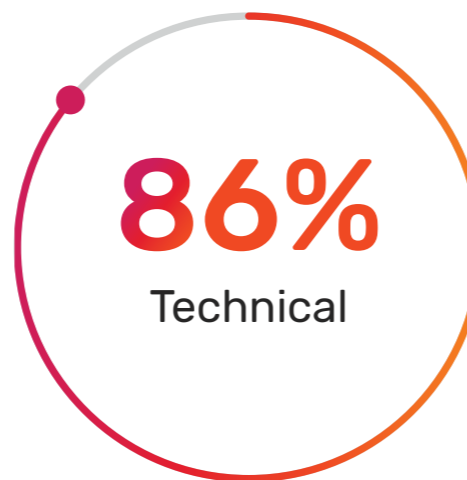
Our Strategy

At Cadence, our people are at the center of our success and drive the 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 central to 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. Our HR department provides reports to the Compensation Committee of the Board of Directors at every regular meeting of the Compensation Committee. In February 2023, the Compensation Committee Charter was amended to add that the committee is responsible for overseeing Cadence’s human capital management practices.

Our Team

Our people are our greatest asset and are integral to our company’s growth. 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 49% headcount growth over the last five years and a high average tenure of 6.9 years. We are proud to have built our largest-ever team of approximately 11,200 employees globally.



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.

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 meaningful careers 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 nine years and by the Great Place to Work Institute in 13 countries where we participate.

To measure engagement and the health of our workforce, Cadence partners with the Great Place to Work Institute to administer global engagement surveys annually to all employees in all countries where Cadence has employees. The surveys provide valuable insight into our employees’ experiences, allow our employees an opportunity to share ideas for improvement, and benchmark us against some of the best companies in the world. This feedback provides us insight into what our employees value 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 intend to promote 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:



TGT has compiled its findings and shared recommended approaches that could make a positive impact on DEI at Cadence based on our employee data. Based on their recommendations, Cadence created an initiative to listen to and empower the voices of underrepresented employees. Through these efforts, we are making strides in our approach to hiring, growing, and retaining talented people, regardless of their gender, background, beliefs, or unique life experiences.



94%

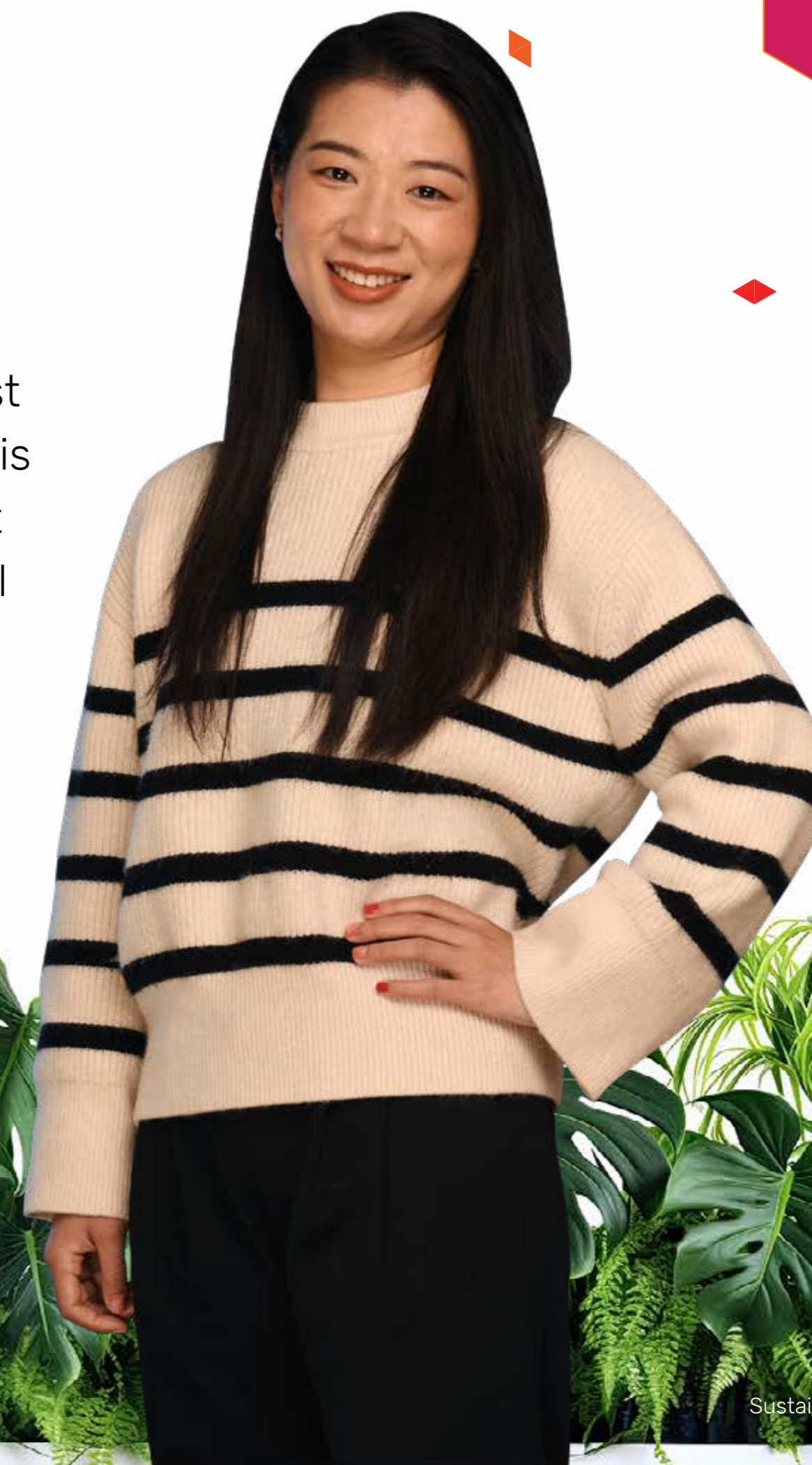
of employees surveyed say they are proud to tell others they work at Cadence.

93%

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, Cadence received 30+ "best workplace" recognitions from reputable publications in 2023. This includes Fortune's World's Best Workplaces, Fortune's 100 Best Companies to Work For, People's Companies That Care, the Wall Street Journal's Best-Managed Companies List, 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 that can contribute to our high-performance culture and 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 invest in management training, including unconscious bias workshops and diversity leadership training, to enable thoughtful decision-making.

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 2023, 48% 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 2023, more than 660 global Cadence interns, U.S. new college graduates**, and U.S. early career employees participated in our Career Catalyst program. Through this initiative, Cadence interns and employees deepened their understanding of our technology and expanded their skills through increased training and networking opportunities.



*"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

To help employees succeed in their career, we foster an environment that supports their continued learning and growth—both on the job and through formal training programs.

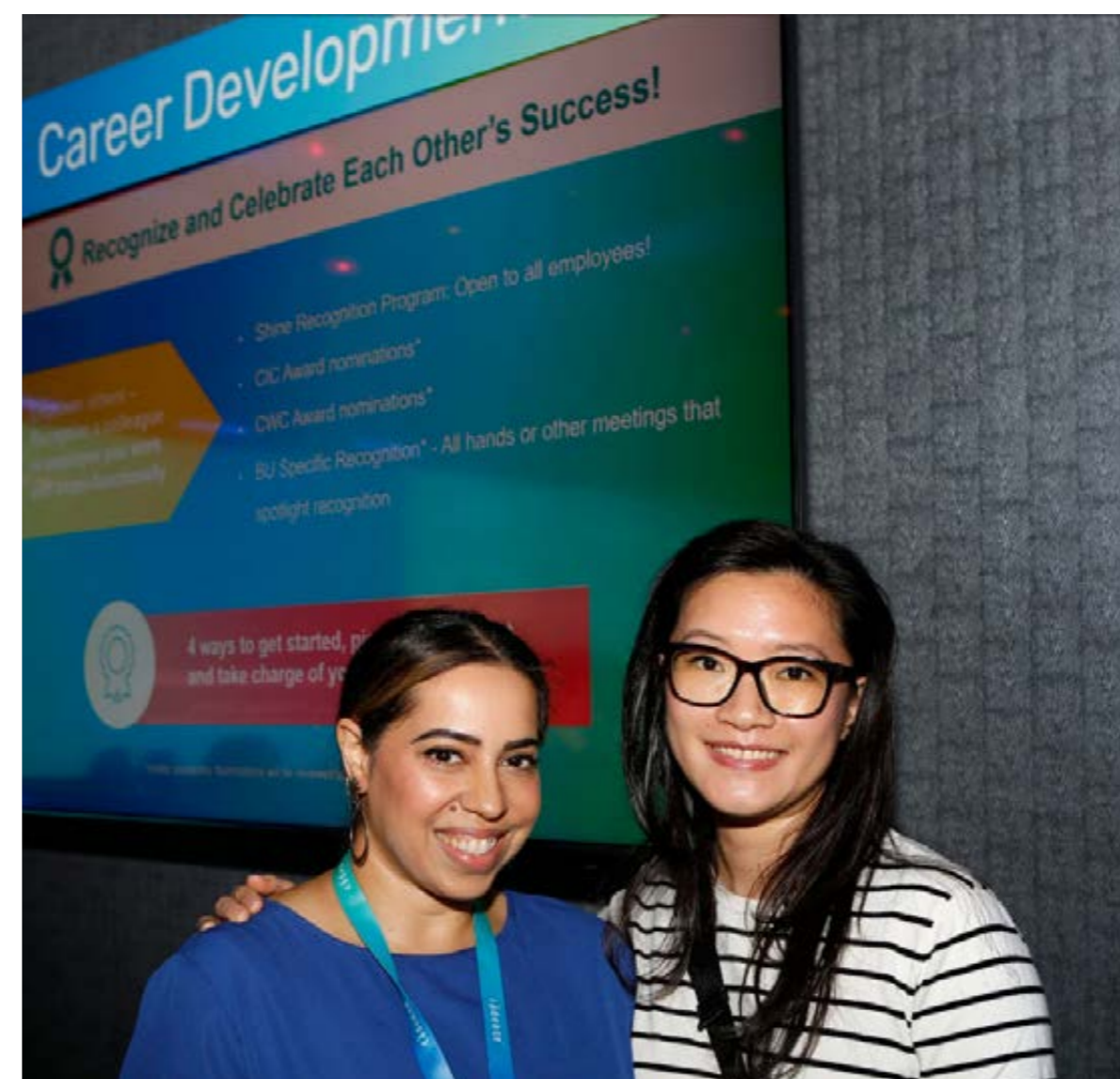
Employees can utilize learning resources through our High-Performance Culture portal that provides a comprehensive online Learning Management platform, accessed by 92% of our employees in 2023, and other training and development tools on a broad range of topics and skills. This includes LinkedIn Learning, which provides more than 20,000 on-demand professional courses with new courses added monthly, and leadership development programs with reputable organizations like UC Berkeley. Cadence also offers up to \$5,000 of tuition reimbursement annually to employees continuing their education 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. This year, we added unconscious bias training so more employees and managers receive training on this important topic to support a culture of inclusion.

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. Employees participate in an annual performance management process that begins with setting individual goals that align with company and business goals. Employees and managers are encouraged to check in quarterly on these goals and have a performance conversation. At the end of the year, employees complete a self-evaluation, and their manager assigns a performance rating that supports annual promotion and equity compensation decisions.

We also offer a bonus program, 401(k) match, Employee Stock Purchase Plan, and equity compensation. In addition, in 2023, 77% of our employees received monetary awards from their colleagues through our peer-to-peer recognition program for exploring what's possible, elevating the team, executing with quality, and exceeding customer expectations.



Health and Well-Being

We support a hybrid work approach that gives most employees the opportunity to work both in the office and remotely. We believe being together in person deepens our connections to one another and enhances our ability to ideate, collaborate, and align. We also value the flexibility that comes with working remotely.

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. This year, all employees had access to a new wellness program that provides awards for completing health-based activities. Additionally, we provide employees with Global Recharge Days to unplug and focus on themselves and their families. We firmly believe that work-life balance and time away from work are key to our employees' health and wellness, enabling them to recharge and continue performing at a high level.

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. 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. We also now offer caregiver leave to allow time away when family members require care.

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 2023 OSHA Recordable Injury Rate and our Lost-Time Injury Rate for our employees in the U.S.:



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. 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 deeply committed to advancing equality and providing opportunities that impact our company's success. As leaders in innovation, we strive to be leaders in diversity, equity, and inclusion and foster a connected One-Team culture that supports thriving, transformative careers.

Tina Jones

Senior Vice President, Global Human Resources, Cadence



Fostering an environment that celebrates our diverse workforce is a core element of Cadence's culture and helps drive our innovation. We encourage all employees to be their authentic selves, treat everyone with dignity and respect, and see diversity, equity, and inclusion as a pillar of strength for our company. Equal opportunity and diversity of thought continue to lift employee contributions to new heights and accelerate business success. We are proud to build our Cadence community through trust, integrity, and the sharing of our unique and vibrant backgrounds.

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. Cadence has a compensation incentive for leaders to support a high-performing, inclusive culture: ~20% of 100 senior leaders' bonuses consider culture, top talent, and sustainability priorities. Our goal with this compensation strategy is to create meaningful incentives to drive change.

Ten years ago, we developed a program to help support gender diversity at Cadence. Our programs for women and their allies have created a strong community to better understand and address challenges faced by women in technology and business. Furthermore, specialized Business Unit groups provide development opportunities to support women in technical and sales roles. These efforts have contributed to our culture of inclusivity, and the proportion of women at Cadence has increased in each of the last ten years.

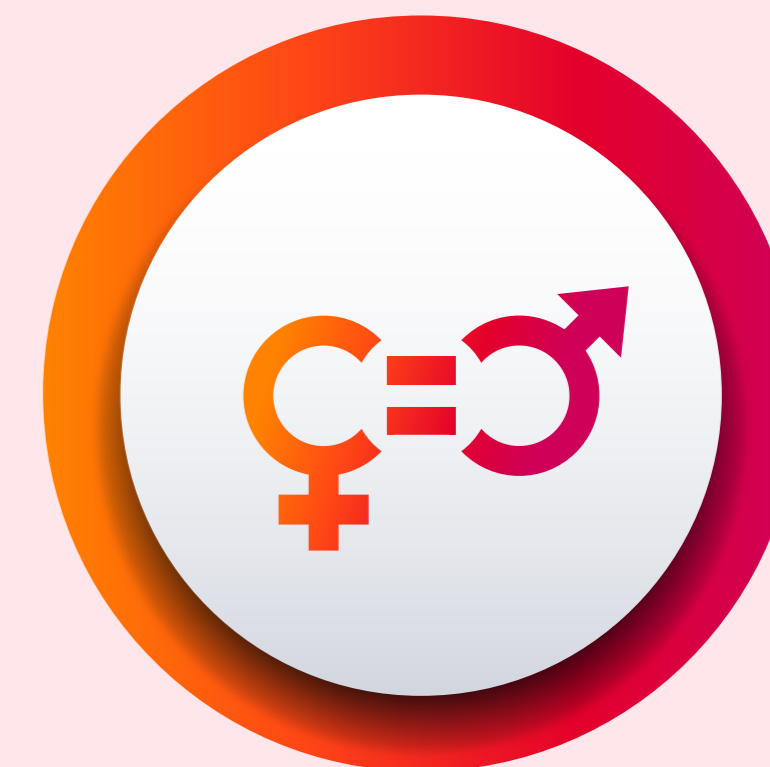
Cadence Women's Conference

In 2023, we launched our first global Cadence Women's Conference (CWC) to celebrate achievements, hear from key experts in the field of technology, and participate in conversations on topics that matter most to women in the workplace. Since then, we have hosted CWC events all over the world to connect, learn, and celebrate the women of Cadence. In total, more than 700 women attended these conferences, and 49 employees received recognition for their impact on the company. To continue the energy and extend the learnings to more people in our community, we have hosted in-person CWC recap events open for all employees at local sites around the globe.



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 support for women to equitably 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



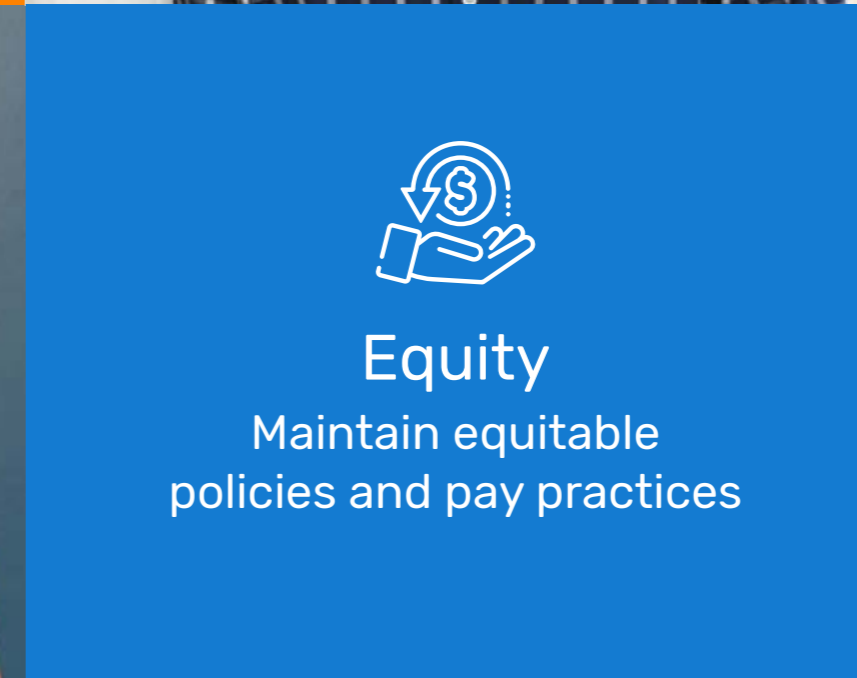
Brand

Bring awareness to our One Team culture globally



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 caregivers who left to support their families.

In 2023, 25% of all global new hires were women, and 32% of our early career and intern hires were women. In addition, 6% of all U.S. new hires were Black, Latinx, or from other historically underrepresented ethnic groups in technology, and 13% of all U.S. early career employees were Black, Latinx, or from other historically underrepresented ethnic groups in technology.

Among several programs for all Cadence employees, we sponsor focused development through inclusive leadership programs for top Black, women, and Latinx talent which provides specialized coaching and workshops. In addition, our IMPACT mentorship program provides women and U.S. Latinx and Black employees with the opportunity to choose a mentor based on their career goals.

Awareness and Enabling a Mindful Culture

We continue to provide resources to employees to challenge ourselves and our perspectives to improve diversity and inclusiveness at Cadence. 100% of employees have participated in unconscious bias training. In addition to global employee unconscious bias training, we invested in training for all global managers on supporting equity in management decisions.

In addition, we believe that human connection, personal storytelling, and real-world experiences better connect us to each other's journeys, and we regularly host thought leaders from Cadence, the industry, and the community to help bring awareness to unconscious bias. By highlighting their expertise, sharing advice for allies, and giving examples of inclusive practices, speakers help educate employees on the importance of moving the needle in diversity, equity, and inclusion.

Words Matter

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 2023, we performed a detailed review of our compensation practices in all countries where Cadence has employees. We are proud to report that Cadence has maintained global salary pay parity based on gender and U.S. salary pay parity based on race and ethnicity, again in July 2023. This is the fifth 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, including 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 organizations such as Girls Who Code and Out in Tech.

We partner with our supply chain to support inclusive practices in line with our Supplier Code of Conduct.

Branding

We have been named one of the Best Places to Work for LGBTQ+ Equality by the Human Rights Campaign Foundation (HRC) for the third time. With a perfect score of 100, we received the Equality 100 Award and 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. This year, we were honored to join HRC's Business Coalition for the Equality Act to further support fairness regarding gender identity and sexual orientation in the workplace.



In 2023, we received the Designing the Difference award from the Global Semiconductor Alliance Women's Leadership Initiative, which recognizes companies making a measurable and significant impact on diversity, equity, and inclusion.



Community

We currently support global Inclusion Groups for Black, Latinx, LGBTQ+, Veterans, and Women employees and their allies, in addition to supporting U.S. Inclusion Groups for Asian American and Pacific Islander employees, employees who are neurodivergent or have disabilities, and their allies. Each of these forums encourages dialogue for sharing and connecting, promoting belonging in the workplace and 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 DEI at Cadence, in our industry, and in our world. This includes Women’s History Month, Black History Month, AAPI Heritage Month, LGBTQ+ Pride Month, Juneteenth, Latinx Heritage Month, Veteran’s Day, and International Day of Persons with Disabilities. We organize social activities that allow

employees to learn about our groups’ histories, languages, foods, and other elements of their community.

Here are a few of the activities that were coordinated by our Inclusion Groups this year:



Asian American and Pacific Islander Inclusion Group:

Lori Nishiura Mackenzie, Lead Diversity, Equity, and Inclusion strategist for the Stanford Graduate School of Business, joined us to discuss her experiences and impacts made within the AAPI community.



Latinx Inclusion Group: Anna Dapelo-Garcia, founder of Lean In Latinas and

DEI leader at Stanford Health Care, presented an inspiring session on how to advocate for yourself and others.



Veteran Inclusion Group: Dr. David Smith, PhD, Associate Professor

at Johns Hopkins Carey Business School, and former U.S. Navy pilot, closed out our Veterans Day celebrations by connecting his military command experience to his research in workplace allyship.



Abilities Inclusion Group: Richie Parker, Chief of Staff for the University of

Virginia’s football program and former Engineering Manager with Hendrick Motorsports, was our inaugural speaker in recognition of International Day of Persons with Disabilities. He shared his message of resiliency and the importance of a growth mindset.



Black Inclusion Group: Carin Taylor, Chief Diversity Officer at Workday,

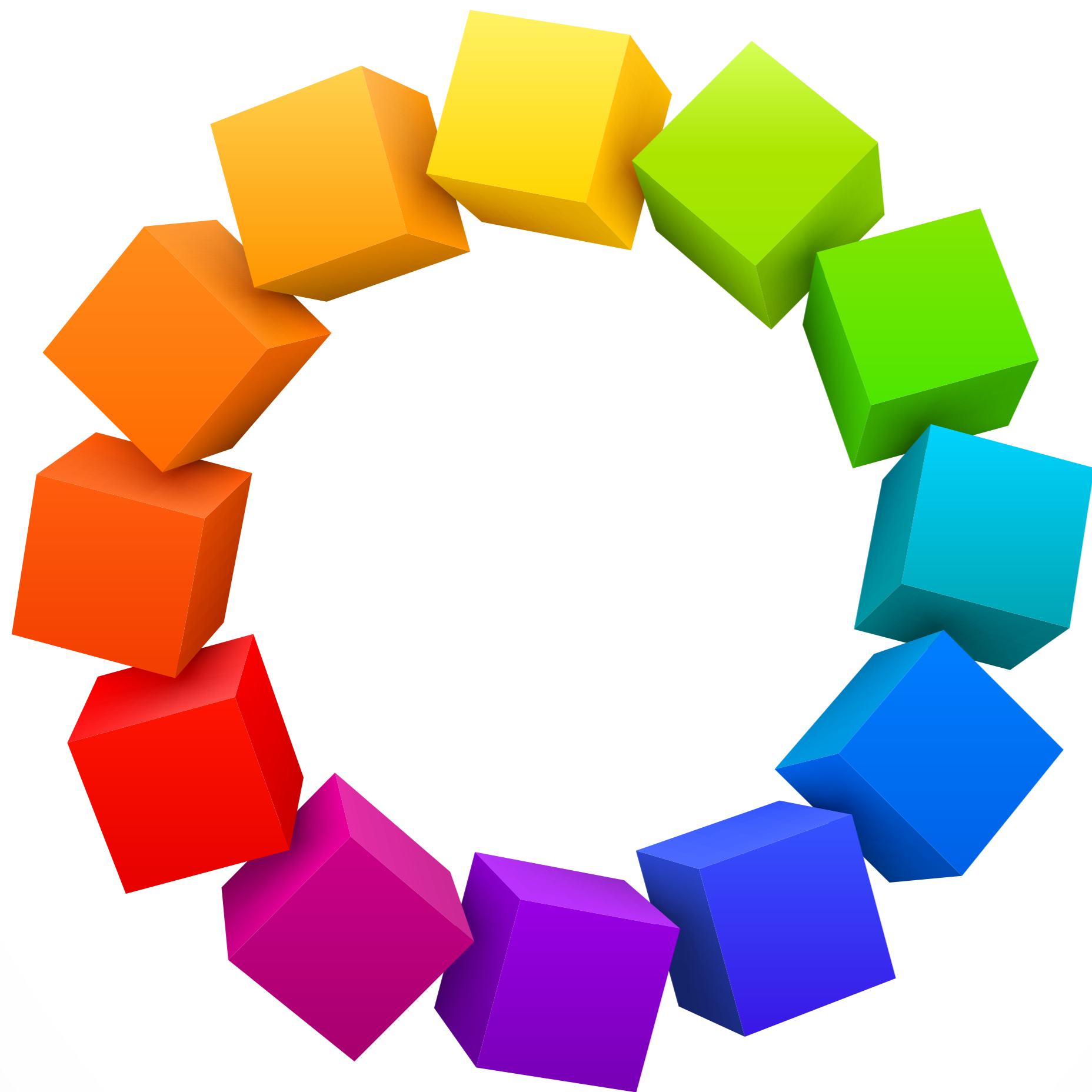
delivered an uplifting keynote on how she and other leaders in the technology industry are moving the needle on diversity, equity, and inclusion.



LGBTQ+ Inclusion Group: Elizabeth Birch, former CEO of

the Human Rights Campaign and LGBTQ+ attorney-activist, kicked off Cadence Pridefest by sharing her incredible journey as a champion for the LGBTQ+ community and successes ushering in an era of supportive policies for LGBTQ+ employees everywhere.





Demographics

As of December 31, 2023, the ethnicity of our U.S. population, and gender diversity of our global population was as follows:

Gender (Global) and Ethnicity (U.S.)	Overall	Technical	Non-Technical	Management	Executive Leaders
Women	24%	21%	45%	18%	20%
Asian & Indian	54%	56%	39%	53%	30%
Black or African American	1%	1%	3%	1%	-
Hispanic and Latinx	3%	2%	5%	2%	-
Other*	2%	1%	2%	1%	-
Undisclosed	6%	7%	5%	3%	-
White	34%	31%	43%	37%	70%

Our current 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 2023 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, 2023, our Board of Directors was comprised of ten individuals, nine of whom are independent as determined pursuant to the Nasdaq Stock Market’s listing standards. Fully independent committees of the Board oversee audit, remuneration, and nomination.

Board Leadership

In May 2023, Mary Louise (ML) Krakauer assumed the role of Board Chair. ML, an independent director of the Board who joined in January 2022, previously held various executive roles at global technology companies.



Cadence’s growth has been phenomenal over the past several years, and I’m ready to explore new market opportunities and drive strategic initiatives to further advance the company’s position in the computational software industry. I share Anirudh’s passion for innovation and customer success, and I look forward to collaborating with Anirudh and the executive team to build upon Cadence’s strong foundation and take the company to new heights.

ML Krakauer
Board Chair, Cadence

Board Refreshment

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

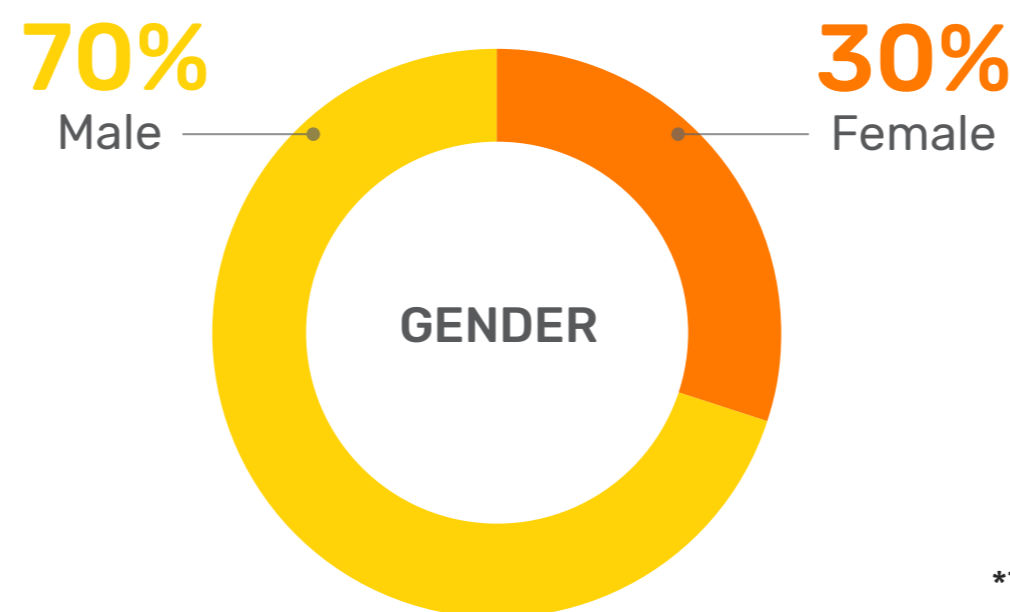
The Board’s Corporate Governance Guidelines cover various topics relating to the Board and its responsibilities. The Corporate Governance Guidelines reflect the Board’s commitment to monitor its effectiveness and decision-making at the Board and management level and outline the authority and practices 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

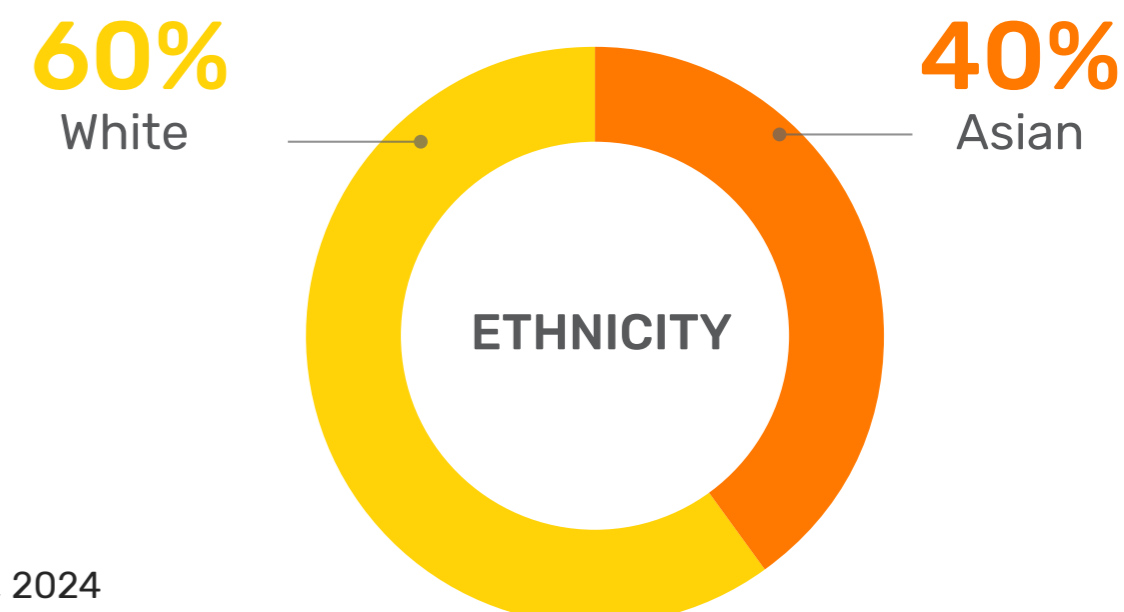
The Board’s Corporate Governance Guidelines reflect Cadence’s commitment to having leaders on the Board with diverse backgrounds. In addition, the Corporate Governance and Nominating Committee’s charter requires consideration of a director nominee’s integrity, experience, judgment, diversity of background (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, 2024



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
Compensation / Human Capital Management	Experience in compensation, organizational management, leadership, talent development and identifying, recruiting, and motivating top talent	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Corporate Governance	Experience in corporate governance and compliance at the public company board level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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 corporate growth strategy, including through acquisitions and other business transactions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technology / Semiconductor / Electronic Design Automation	Understanding of electronic design automation, semiconductor and electronics systems technologies and related industries; ability to understand and oversee the overall business and strategy of Cadence as an industry leader	✓			✓	✓		✓	✓		✓



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

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 2023, the Corporate Governance and Nominating Committee held three meetings and in the quarter it did not meet, it received and reviewed materials relating to ESG. The Compensation Committee formally reviews the benefits provided to our employees, including health and wellness, once a year.



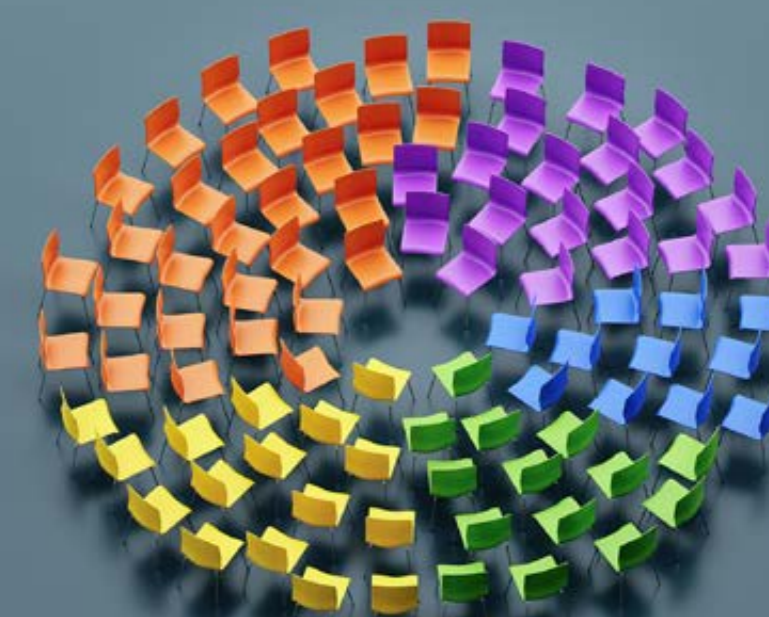
Ethical Conduct: Code of Business Conduct

Our Worldwide 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. The Human Rights Policy within our Code of Business Conduct reflects our commitment to respect all internationally recognized human rights.

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: Chinese, Dutch, French, German, Hebrew, Japanese, Korean, Malay, Polish, Portuguese, Taiwanese, 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.

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.



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 be pre-approved by 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 2023.



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 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

We have developed and implemented a cybersecurity risk management program intended to protect the confidentiality, integrity, and availability of our critical systems and information. 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, vendors, 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
- ▶ Continuous security assessments and vulnerability management
- ▶ Learnings from past or currently known cyber threats

2023 Focus

In 2023, we made exciting advancements to our cybersecurity program, including:

- ▶ Improving security operations and cyber resilience by minimizing the time required to detect and respond to security incidents while continuously improving our security intelligence and analytics platform across hybrid environments
- ▶ Expanding our Zero-Trust security model to include data protection chambers
- ▶ Receiving external validation of our commitment to providing secure cloud-based products by achieving SOC 2 Type 1 attestation



Structure and Compliance

Our data privacy and cybersecurity program is guided by frameworks promulgated by the EU, National Institute of Standards and Technology (NIST), Cloud Security Alliance (CSA), and International Organization for Standardization/International Electrotechnical Commission (ISO/IEC). We maintain formal certification of our compliance with ISO/IEC 27001:2013 and ISO/IEC 27017:2015. 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.

Our cybersecurity risk management program is integrated into our overall risk oversight strategy and utilizes common reporting channels and governance processes that apply across other risk areas. 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 (Audit Committee). 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. Our Board of Directors is responsible for overseeing our enterprise risk management activities in general, and our Board committees assist with certain aspects of risk oversight. With respect to cybersecurity risk, our Board of Directors shares certain of the oversight responsibilities and processes with the Audit Committee. The Audit Committee oversees our annual enterprise business risk assessment, which includes the review of cybersecurity risks we face and our associated risk mitigation measures, and receives semi-annual reports from management on cybersecurity matters, including areas such as threat intelligence, major cybersecurity risk areas, regulations, and cybersecurity incidents. In addition, management updates the Audit Committee, as necessary, regarding any material cybersecurity incidents, as well as any incidents with lesser impact potential.

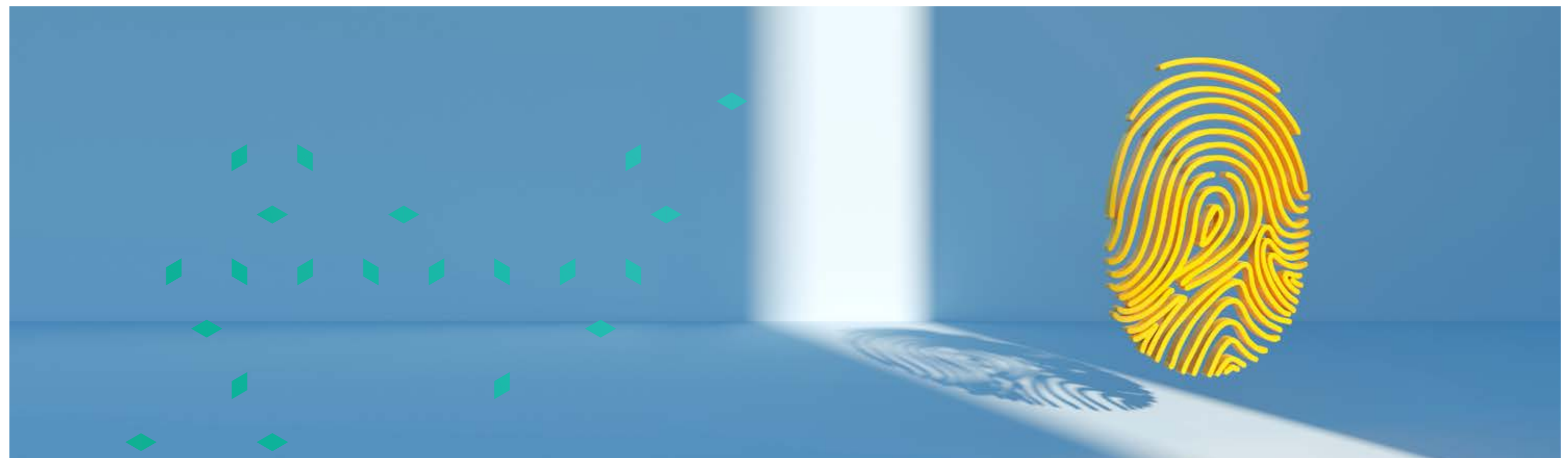
Our cybersecurity risk management program includes:

- ▶ A security incident response plan that includes procedures for responding to cybersecurity incidents;
- ▶ Risk assessment processes designed to help identify cybersecurity risks to our critical systems, information, products, services, and our broader enterprise IT environment;
- ▶ Our Information Security team, principally responsible for identifying and mitigating cybersecurity risks, and managing our security controls and our response to cybersecurity incidents;
- ▶ The use of external service providers, where appropriate, to assess, test, or otherwise assist with certain aspects of our security controls and under certain circumstances;
- ▶ A cybersecurity insurance policy to cover certain losses from a data breach; and
- ▶ A third-party risk management process, including risk assessment and risk rating, for service providers, suppliers, and vendors.

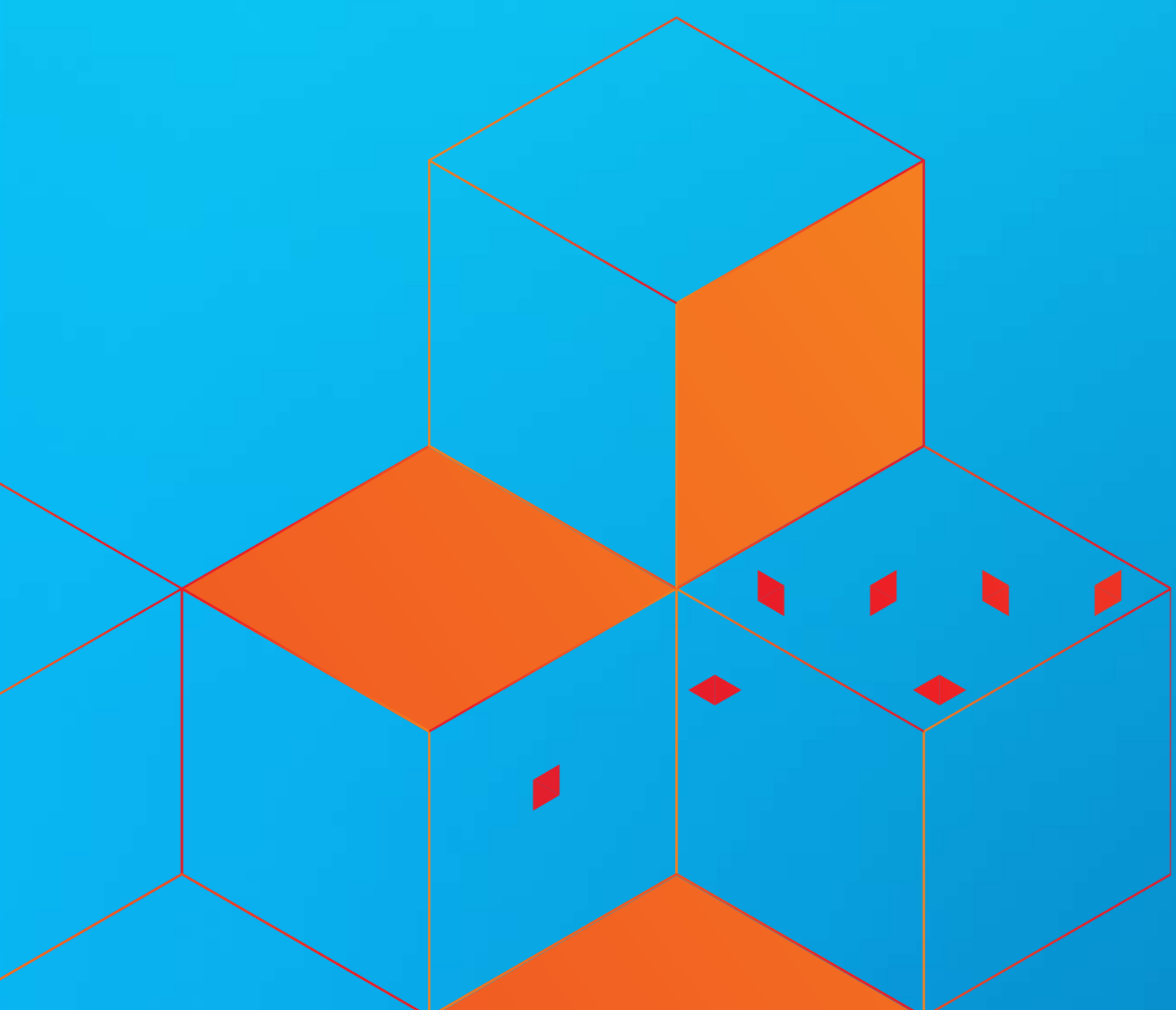
Cadence's Privacy Policy explains how and when we collect personal data and the types of information the policy covers. The policy also outlines our data disclosure policy, opt-out procedures, location and retention policies, user rights, and contact information for reporting questions or concerns.

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.

We have not identified risks from known cybersecurity threats, including as a result of any prior cybersecurity incidents, that have materially affected or are reasonably likely to materially affect us including our business strategy, results of operations, or financial condition. 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, mutually beneficial relationships—creating value for society beyond our respective organizations.

Supply Chain Description

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

Partnering with Suppliers Who Support Our Values

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

Through partnering with suppliers, more than one-half of our 2023 upstream Scope 3 emissions are now calculated using suppliers' reported emissions, up from one-third in 2022.

Supplier Code of Conduct

In 2020, we launched our Supplier Code of Conduct (SCOC) with the aim of extending our ESG-aligned governance standards discussed in this report to our supplier partners. In 2023 we updated our SCOC to align with RBA Code of Conduct 7.0 and initiated compliance of our top suppliers to the updated SCOC. Suppliers that do not meet our SCOC will be managed through an action plan to reach compliance.

100%

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

59%

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

56%

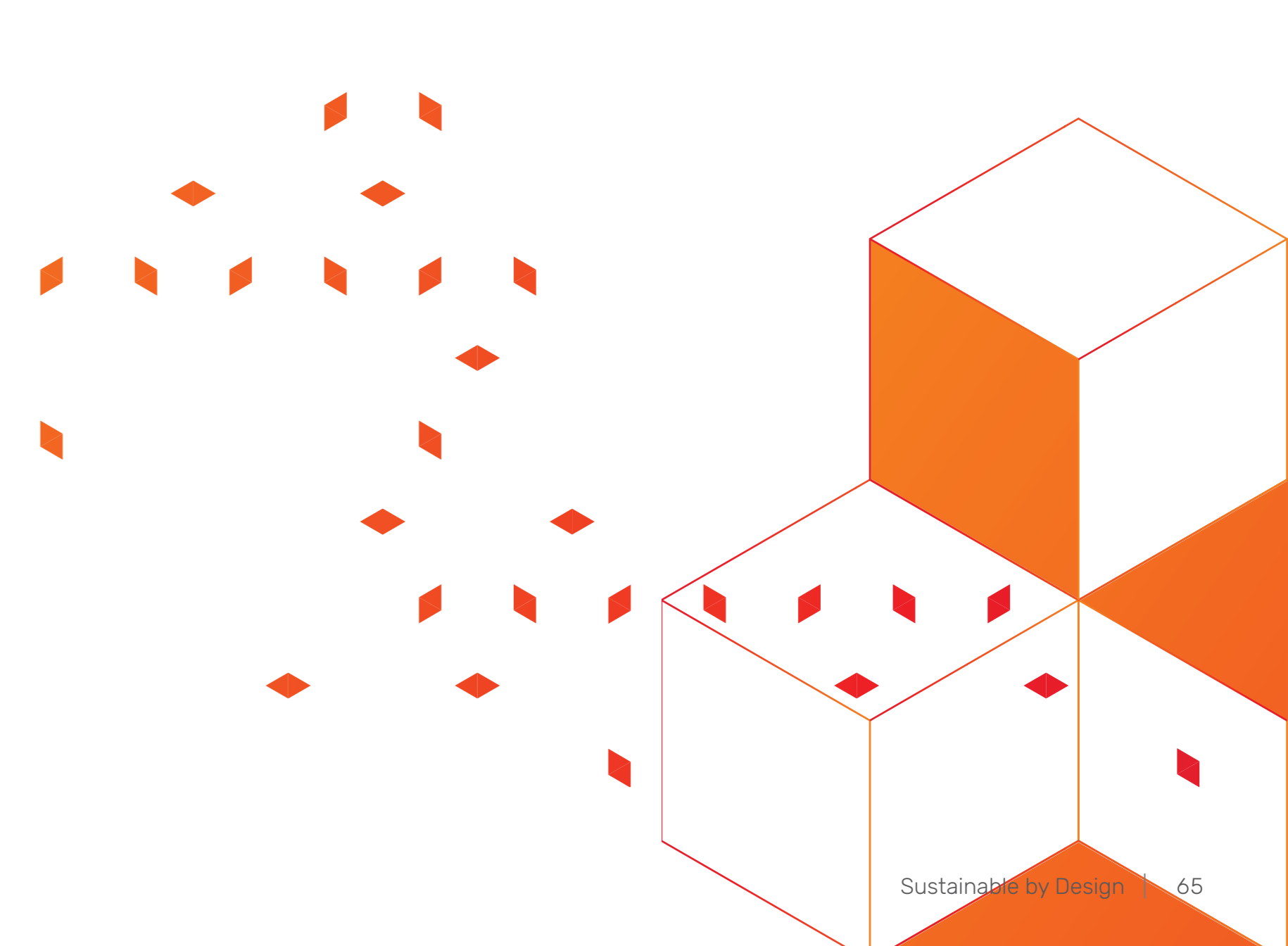
of our spend is with suppliers that respond to CDP



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, ethics, and integrity including human rights.

In 2023, we expanded our climate-related supply chain engagement activities with key suppliers, prioritizing engagement based on carbon intensity and spend volume with a supplier. To measure alignment with our decarbonization strategy, we track which suppliers have set or committed to set carbon reduction targets and respond to CDP.

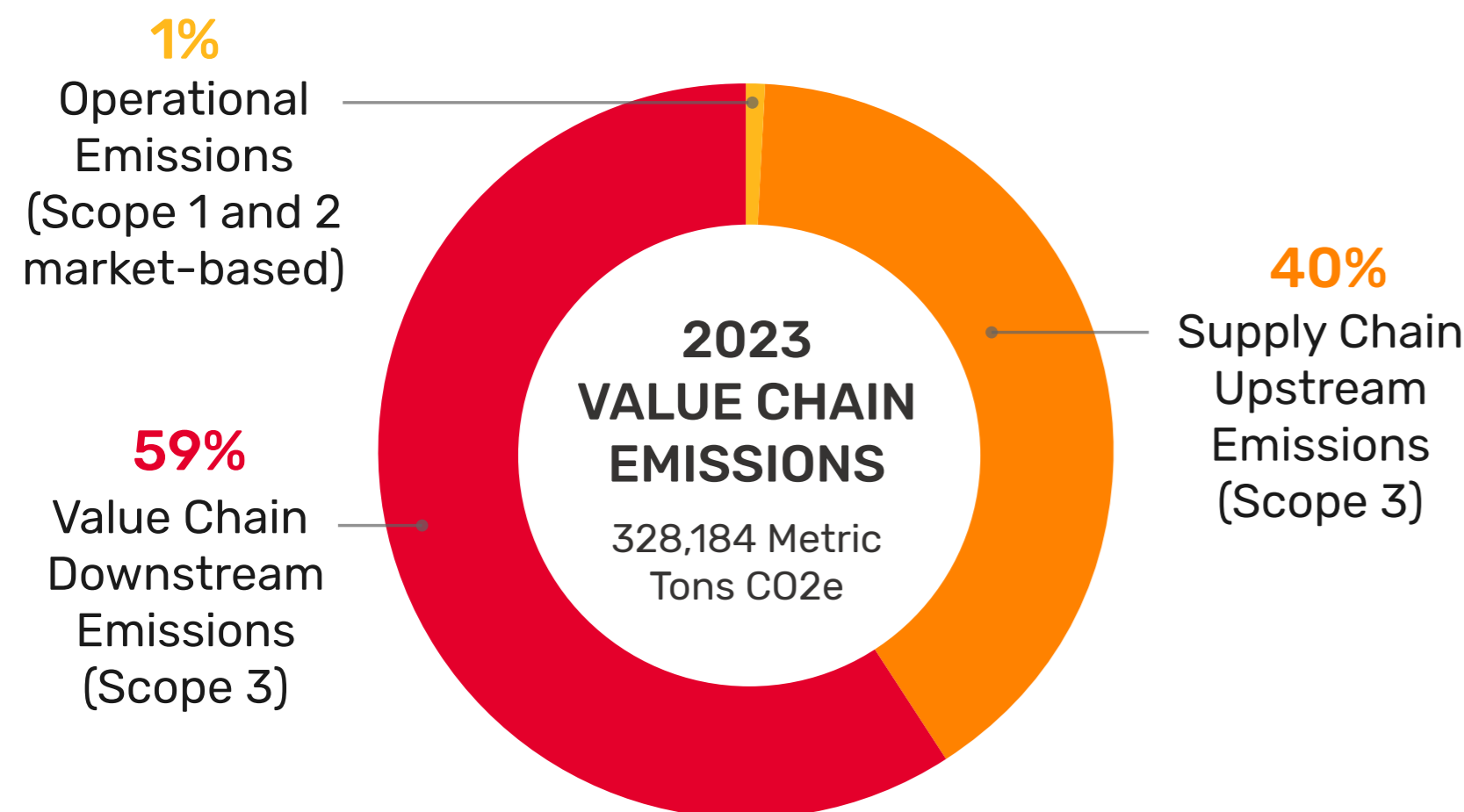


Decarbonizing the Supply Chain

In conjunction with our SBTi target validation, we performed a complete assessment of value chain emissions for all 15 Scope 3 categories, and refreshed historical scope 3 emissions, including the 2019 baseline, to incorporate improvements in emission factors and calculation methodologies. In 2023, upstream, value chain activities in our supply chain accounted for 40% of total Scope 1, 2, and 3 emissions.

Value Chain Emissions Breakdown

Overall business growth and increased demand for our hardware product line are drivers for supply-chain spend. Our climate-related supply-chain engagement focuses on suppliers of goods and services, including capital goods, because the majority of supply chain emissions stem from these categories. We will continue to engage with key suppliers to align on emissions reduction strategies and encourage them on their Net-Zero journeys.



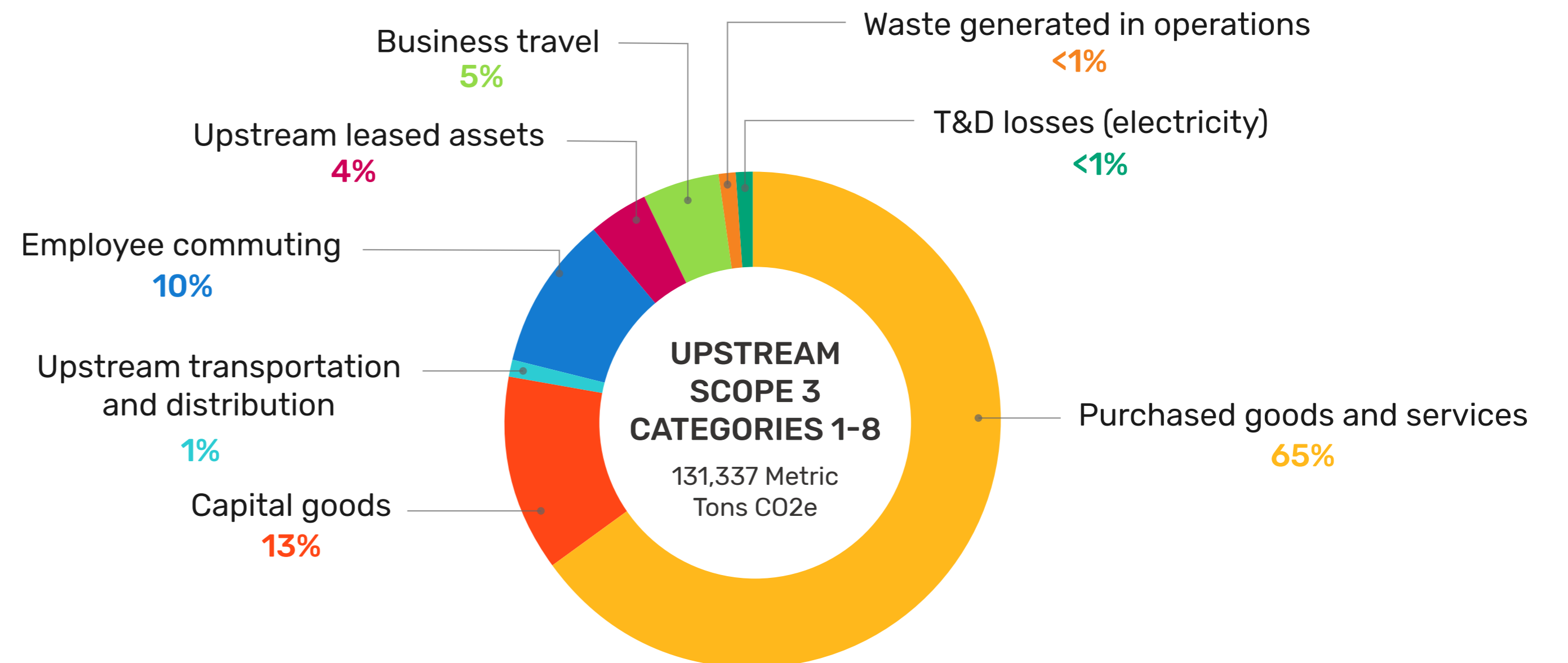
Climate-Related Supply Chain Engagement

Through our engagement activities with suppliers, we have seen improved accuracy of supply chain emissions calculations. Overall, roughly one-half of our 2023 upstream Scope 3 emissions are calculated using supplier's reported emissions, up from one-third in 2022. By using actual data, we are able to reflect the work our valued suppliers are doing to reduce their own carbon footprints in our Scope 3 calculations. For the other half, we estimate emissions based on spend and industry average emissions factors from US EPA Environmentally-Extended Input-Output Models (EEIO).

We worked with several of our product and service providers to obtain verifiable product and service specific emissions. This work continues in 2024. For suppliers who do not yet disclose GHG emissions, we provide suggestions on why and how to get started with carbon accounting.

Contract Manufacturing Partners

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.

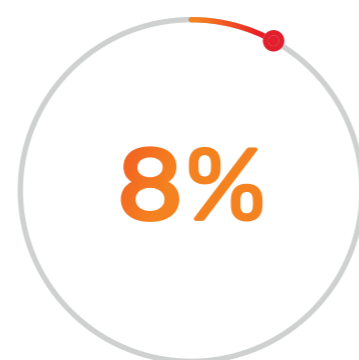


Climate Risk Assessment

We extended our climate-related risk assessment to include key suppliers to more closely track their GHG data and decarbonization plans. This is vital as a lack of adequate reduction plans by key suppliers could result in long-term transition risks to Cadence.

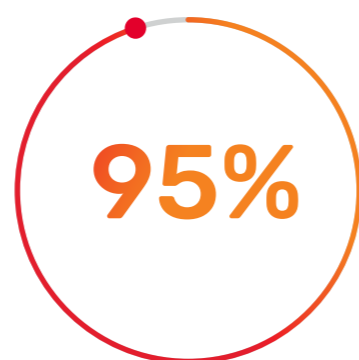
Supplier Diversity

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.

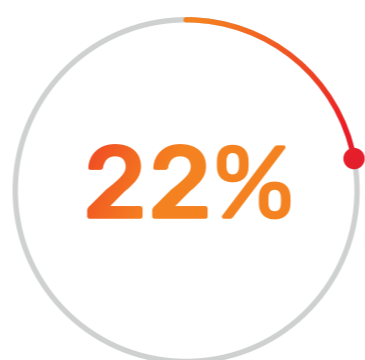


Of 2023 global spend was with diverse suppliers (certified by an independent third party)

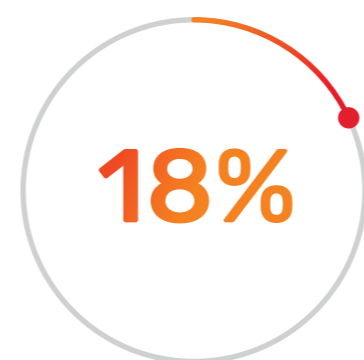
Of active diverse suppliers:



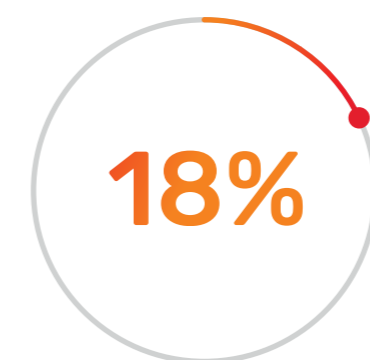
Small Business



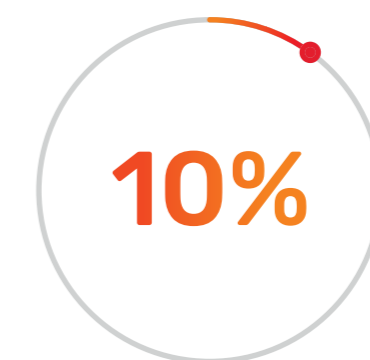
Small Disadvantaged Business



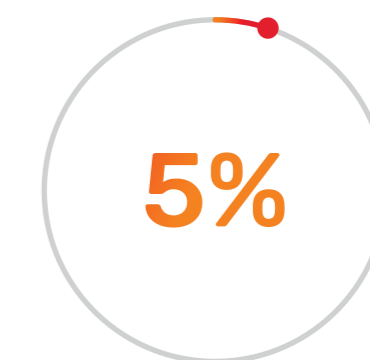
Minority-Owned Business



Woman-Owned Business

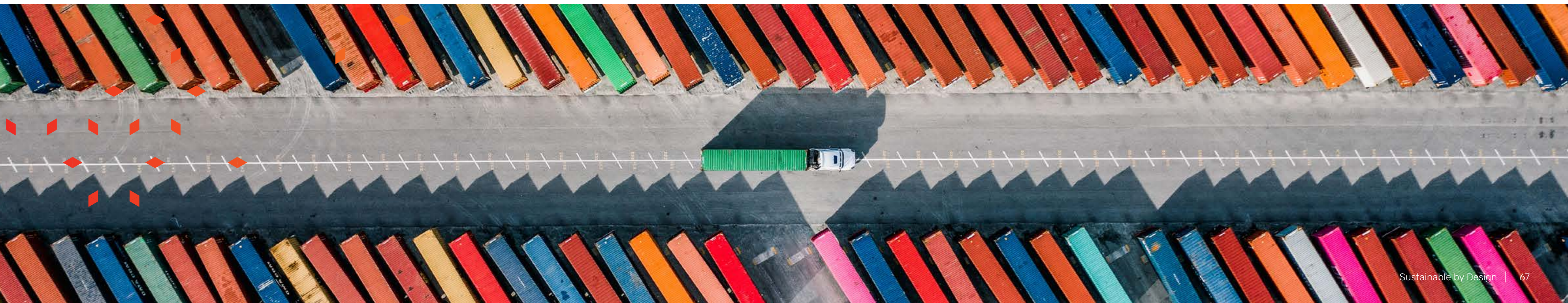


Women-Owned Small Business



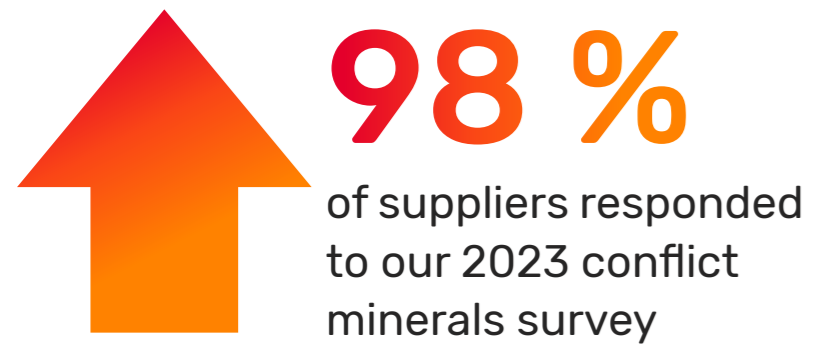
Veteran-Owned Business

*All figures around rounded to the nearest decimal



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.



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 treating 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.



Social Impact





2023 Social Impact 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, in 2021, 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 STEM education. In 2023, the Cadence Giving Foundation supported \$5M in philanthropic gifts, 14,000 hours of employee volunteering and \$898,462 in matching gifts.

The Giving Foundation is managed by the director of social impact, who is supported by a team of leaders from across the organization. By leveraging their knowledge of the environment, STEM education, Cadence technology, and our partnerships, the Giving Foundation team brings a wealth of diverse experiences to its decisions to best benefit our communities.



It has been thrilling to see the impact the Cadence Giving Foundation has made over just the past year. Seeing the strategic partnerships develop in our communities to drive solutions to issues of climate change and DEI in STEM careers has been an exciting development for Cadence and our employees.

Tina Jones

Senior Vice President, Global Human Resources, Cadence

The Cadence Giving Foundation focuses on three key pillars—the environment and sustainability, DEI in science, technology, engineering, and math (STEM) access, and impact in the communities where we live and work.

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. Additionally, this year we launched our Dollars for Doers and Impact Grants to allow employees to access Cadence Giving Foundation funds for the causes they are passionate about.

Pledge 1% Alliance

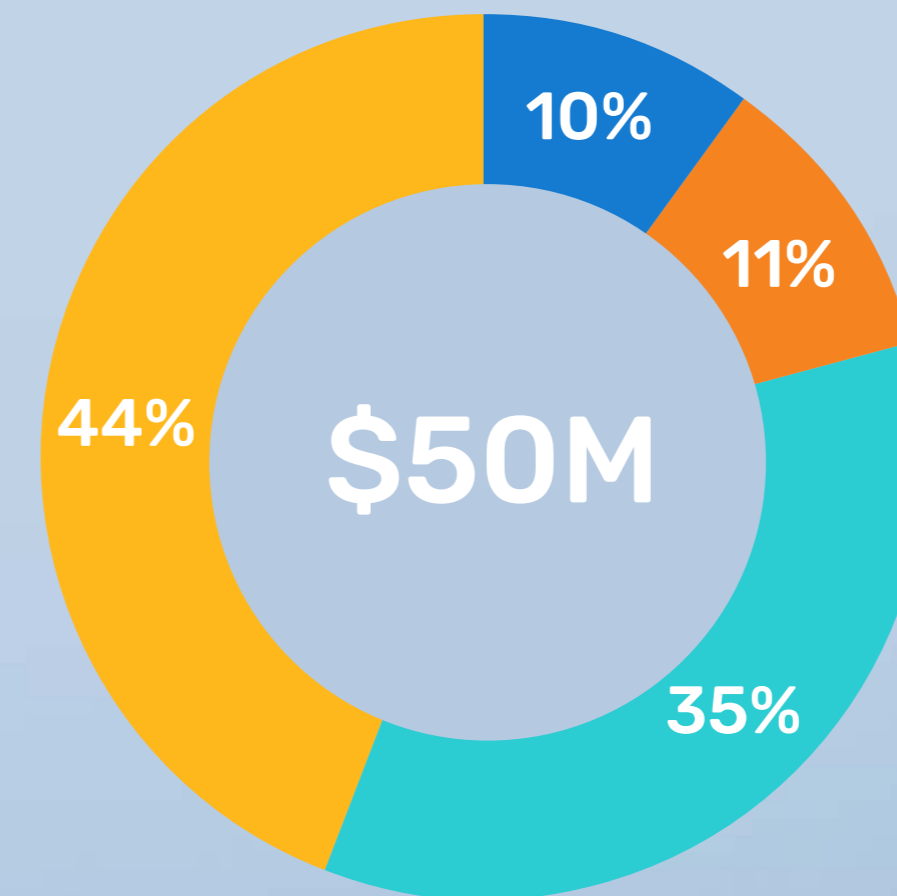
In 2023, we have continued our commitment to the Pledge 1% alliance, a global movement to inspire, educate, and empower companies to effectively leverage their financial assets, employee time, and individual technology for positive social impact. We are proud to be in partnership with other leading companies that are committed to driving change and equity.



How Cadence’s \$50 Million Investment to Support Racial Equity is Making an Impact

Last year, Cadence made a \$50 million purpose-driven investment in an impact investment program managed by RBC Global Asset Management (RBC GAM) to address racial wealth inequities in affordable housing, home ownership, and small businesses. Additionally, a portion of Cadence’s investment will be focused internationally on projects aimed at supporting women, people of color, and climate justice initiatives.

- \$5M for Small Business financing growth and job creation in underserved communities in the U.S. A portion of the businesses invested in are Black, Indigenous, and People of Color (BIPOC), female, or veteran owned.
- \$6M to Global Development supporting: small businesses in Honduras; hospital construction in Turkey; small businesses in Nigeria that are women-led, women-supporting, or women-employing; mobile/broadband network expansion in four African nations; solar power generation facility in Zambia.
- \$17M to Affordable Homeownership for low-to-moderate income families in underserved communities in the U.S.
- \$22M for Multi-family Affordable Housing to provide safe and affordable rental housing for low-income families in the U.S.



It has been exciting to see how our investment with RBC has been so quickly put into real action in our communities. We are also inspired by the other companies that have joined our impact investing with RBC to create real change for those that need it most.

John Wall
Chief Financial Officer, Cadence

HOUSING—Pines of Edgewater, Phase I, Chicago, IL

- ▶ Multi-family housing community offering 279 units
- ▶ 100% are reserved for those who earn 50% or less of area median income (AMI)
- ▶ 65% of renters are BIPOC and 70% are women head of household
- ▶ The average income of tenants is \$13,312 per year

SMALL BUSINESS—Printing Shop, Charlotte, NC

- ▶ Printing shop specializing in premium apparel by using direct-to-garment (DTG) printing
- ▶ Through their print jobs, they help businesses market their company, mobilize fans, and build culture through the use of uniforms
- ▶ Located in a low-income neighborhood where 91% of the population is BIPOC

CLIMATE JUSTICE INITIATIVE—U.S. international Development Finance Corporation, Zambia

- ▶ Financed through the US International Development Finance Corporation (DFC), the Bangweulu Power Company in Zambia will develop, construct and operate a solar photovoltaic power project with a generating capacity of approximately 55 MW (DC) that will sell electricity to ZESCO, the government-owned power utility
- ▶ Project will support Zambia’s growing economy and is expected to create employment throughout its construction and operation phases

Season of Giving

In 2023, Cadence was excited to expand our Season of Giving company-wide volunteer campaign. More than 1,900 employees in 37 Cadence locations came together to volunteer 5,700 hours to causes they were passionate about. Our sites partnered with over 60 charitable organizations around the world to participate in philanthropic activities ranging from packing and distributing food, improving community facilities, and sustaining natural habitats. Together, Cadence employees donated over \$275,000 to their charitable partners.



Immersive Service Volunteering

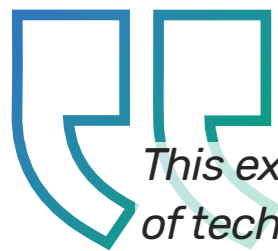
Team4Tech

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

Cadence and Team4Tech

Barefoot College International, India

Visiting the BCI campuses and Digital Community Schools in the states of Rajasthan and Himachal Pradesh, India, Cadence volunteers supported teachers as they worked through their goals of integrating technology into the curriculum and improving the EduBox solution. The EduBox is the BCI in-house assembled Solar Powered Projector. This is an easy-to-use one-switch solution to transform a community space into a digital classroom. Volunteers also supported the integration of virtual reality and interactive content into BCI's Digital Community School curriculum and identified more efficient ways to create videos and other content using tools that leverage artificial intelligence. The contributions of the volunteers provided a foundation for BCI to produce more educational content in a shorter amount of time, enhance learning, and expand its curriculum. With the integration of new methods and tools, this project has the potential to transform education for learners in rural areas throughout India.



This experience with Cadence and BCI has reaffirmed my belief in the potential of technology to revolutionize education and create opportunities for learners around the world. It has ignited a passion within me to continue exploring innovative ways to merge technology and education, making a lasting impact on the lives of individuals and communities.

Renan Moreira
Software Engineer I, Cadence
[LinkedIn Post](#)

Women in Technology Uganda (WITU)

We are pleased to have built upon our collaboration with Women in Technology Uganda (WITU) this year by bringing together a global group of ten Cadence employees from ten different offices in four countries for another impactful Team4Tech project, which aimed to empower young Ugandan women through technology and entrepreneurship.

This year's Cadence volunteers collaborated virtually for ten weeks, and then spent an intensive two weeks on-site at WITU's office and at a local high school in Kampala, Uganda. The project was divided into three sub-teams, each focusing on a specific area. The first sub-team developed a new website, the WITU Digital Jobs Center, to connect WITU women with employment opportunities. The second sub-team planned and organized a hackathon event at a local high school to get students excited about coding and STEM and has prepared a myriad of materials to help WITU repeat this with other schools and to participate in even bigger global challenges. The third sub-team focused on building out a Makerspace for WITU with hands-on tech learning opportunities including 3D printers, virtual reality, and Micro:Bit electronics.



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 essential resources that support their health and education, including enhanced educational support for underprivileged children, special education for children with disabilities, athletics programs, technical skills training, healthcare, counseling, and other essentials like food and clothing. For 8 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 514 scholars have been supported, and 92 were newly enrolled in 2023. Of those, 58 successfully found employment in 2023. These students receive regular mentorship from Cadence employees who motivate them to achieve their career goals.



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+ individuals 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 directly impact their communities as donation recipients.

Cadencia, our Latinx Inclusion Group, chose the Cesar Chavez Foundation, which enriches the lives of low-income families, helps to meet human and cultural needs, and develops future leaders through elementary-age STEM programs. Additionally, we sponsored the Hispanic Foundation Ball through the Hispanic Foundation of Silicon Valley.

Our Black Inclusion Group supported two important non-profit partners: United Negro College Fund and Black Women for Wellness. Both non-profits help to drive change and impact in the Black community.

In honor of AAPI Heritage Month, our AAPI Inclusion Group donated to the organizations Stop AAPI Hate, Asian Law Alliance, and APA Family Support Services.

Our Veterans Inclusion Group made donations to the Pat Tillman Foundation and Wings of Hope, organizations that are dedicated to giving back to the Veteran community through scholarship funding and medical equipment transportation.

Our Cadence Women’s Group donated and volunteered with Habitat for Humanity, building playhouses for families and family shelters in Silicon Valley.

For the third year in a row, Cadence sponsored Silicon Valley Pride on behalf of the LGBTQ+ Inclusion Group. 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

In 2023, Cadence was proud to be a sponsor of 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. Cadence President and CEO Anirudh Devgan was chair of the 2023 Heart Ball, which raised \$1.1M to provide access to high-quality health care for under-resourced members of the community, especially regarding blood pressure and heart disease.

Cadence and Peninsula Healthcare

Peninsula Healthcare Connection (PHC) Clinic, has been providing comprehensive healthcare services for people living unhoused and low-income households in Santa Clara County and southern San Mateo County for over 17 years, serving up to 500 patients annually. Supported by funding from Cadence, the American Heart Association has collaborated with PHC Clinic to adopt and implement a Self-Measured Blood Pressure (SMBP) Program and a Validated Device Procurement Policy to better diagnose and treat their patients with hypertension.

The SMBP Program will help to improve the diagnosis and treatment of hypertension among Peninsula Healthcare Connection Clinic’s patients through its ongoing outreach to community members via its resource center, pop-up events, and backpack medicine visits. Many of these encounters—up to 40 per week—lead to people becoming patients at Peninsula Healthcare Connection, where all adult clinic patients are screened for hypertension and, if so, are referred to participate in the SMBP Program.

Once clinical staff identifies hypertensive patients, they provide a validated blood pressure monitor during the evaluation period and utilize the AMWELL telehealth platform to provide continuation of care for patients with transportation issues. Patients record and provide the home blood pressure readings to clinic staff who enter the data into the EMR for follow-up. The SMBP machines are also made available to individuals who need to check out and return the BP cuffs as needed; the cuffs are offered in the community resource area for use on-site as well.



Brady Campaign

Cadence has partnered for the second time 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 a sponsor at their San Francisco fundraiser in October 2023.

Girls Who Code

For the sixth year in a row, we partnered with Girls Who Code to provide an entirely virtual Summer Immersion program. Cadence hosted 51 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 employees from across the globe had the chance to speak with the girls and share their experiences as women in technology.



Investing in Sustainable Innovation

Catalyst Funding and Technology Partner for Clinton Health Access Initiative

We are proud to have announced a multi-year partnership with Clinton Health Access Initiative (CHAI) to address the impacts of climate change through the research and design of next-generation air conditioning units with the goal of reshaping the global air conditioning market. The partnership supports the proliferation of affordable, clean cooling technology in low- and middle-income countries facing the highest burden of heat-related threats due to climate change.

The global demand for residential air conditioning, like window units, is expected to skyrocket as the world continues to warm due to climate change. Of the 2.8 billion people living in the hottest parts of the world, only 8% currently possess air conditioners. However, access to cooling is becoming a matter of life and death in many regions, where more and more people are subject to acute heat stress. The number of air conditioners in the hottest parts of the world is expected to reach 5.6 billion by 2050, up from two billion units.

The Cadence Giving Foundation will act as a catalyst investor for this initiative, and Cadence will also provide access to the Cadence Fidelity CFD technology, a powerful fluid simulation tool used to aid in the continued research and development of climate solutions.



CHAI's origin lies in addressing market failures that kept people living with HIV from accessing the treatment they needed. We look forward to working with Cadence to use this proven approach to bring more affordable, less polluting ACs to emerging markets to reduce one of the largest drivers of CO2 emissions, save billions in energy costs, and protect millions of families from the negative health effects of extreme heat.

Dr. Neil Buddy Shah
CHAI CEO



The Cadence Giving Foundation is dedicated to providing Cadence's innovative technology, talent, and resources to promote positive change in climate and sustainability globally. Through this collaboration with the Clinton Health Access Initiative, we will be jointly working to find solutions to alleviate the global climate crisis and make a positive impact. By turning to cutting-edge technologies, such as the Cadence CFD offerings, we can drive a powerful transformation in at-risk communities and help lower carbon emissions.

Dr. Anirudh Devgan
President and CEO, Cadence



Extreme Tech Challenge

Cadence was proud to sponsor the Extreme Tech Challenge on their Deep Tech Climate Challenge at CES this year. Cadence supported the efforts of innovative climate technology start-ups through sponsorship and employee expertise on panels and as judges. Participants of the challenge are working to address the critical issue of climate change through new technologies and applications and are key innovators in addressing the climate challenge. This year's winner, EarthEn, is using carbon dioxide-based technology to provide flexible energy storage for 24/7 power, increasing grid resiliency and enabling a fully renewable grid.



GRI Index



GRI Content Index

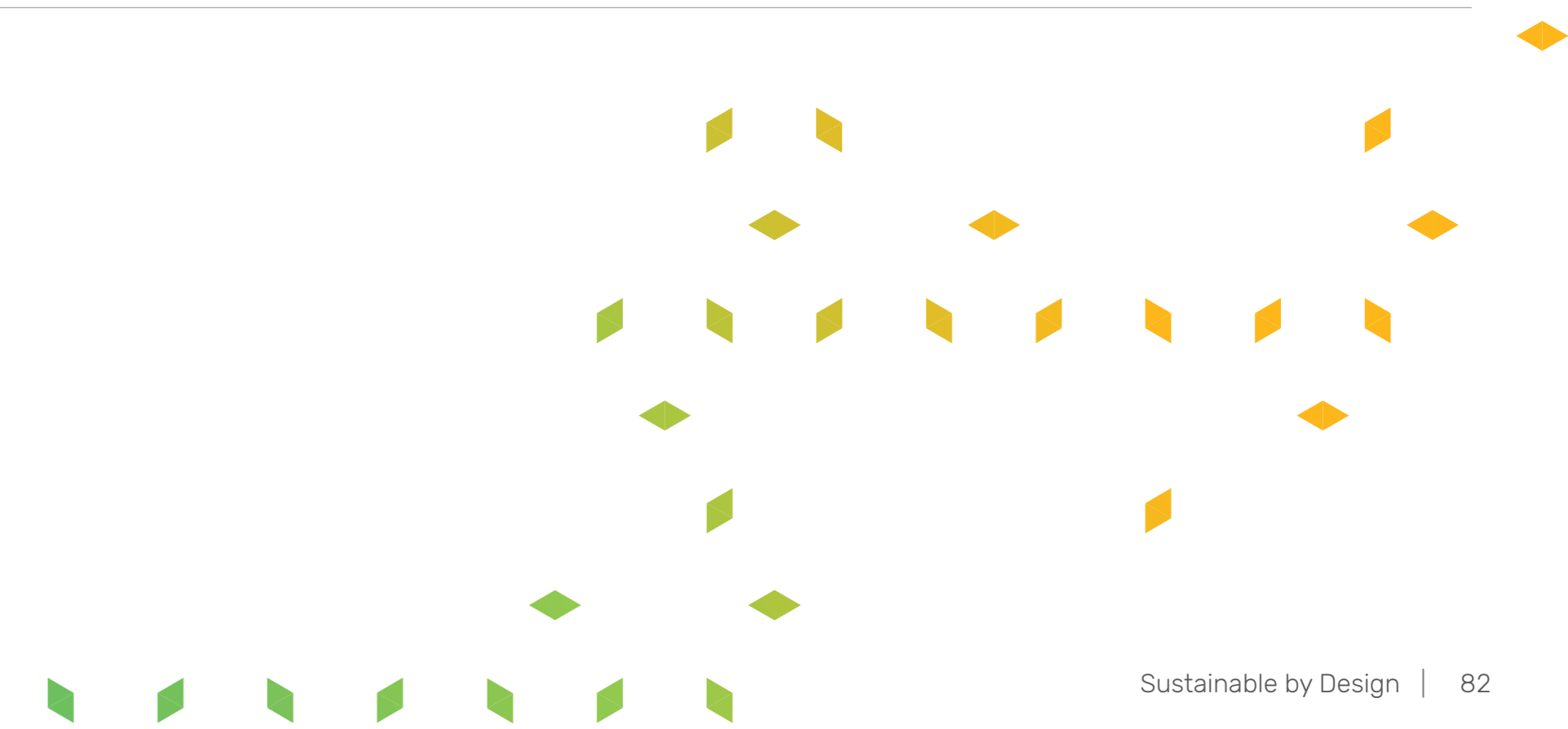
Statement of use	Cadence Design Systems has reported in accordance with the GRI Standards for the period January 1, 2023 and December 31, 2023
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	N/A

GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
GRI 2: General Disclosures 2021	Disclosure Title		
Section 1: Organization & Reporting Practice	2-1 Organizational details	<p>Legal name: Cadence Design Systems, Inc.</p> <p>Traded on NASDAQ: CDNS</p> <p>Headquarters: 2655 Seely Avenue, San Jose, California, 95134</p> <p>Countries of operation: Belgium, Brazil, Canada, Cayman Islands, China, Cypress, Finland, France, Germany, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Malaysia, The Netherlands, Russia*, Singapore, South Korea, Sweden, Switzerland, Taiwan, United Kingdom, United States, Vietnam</p> <p>*Russian operations ceased during 2022</p>	<p>2023 ESG Report - Cover, p. 1, About Cadence, p. 6</p> <p>Cadence 2023 Form 10-K - Exhibit 21.01: Cadence Design Systems, Inc. Subsidiaries of the Registrant</p>
	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.	<p>2023 ESG Report - About Cadence, p. 6</p> <p>Cadence 2023 Form 10-K - Note 2. Summary of Significant Accounting Policies</p>
	2-3 Reporting period, frequency and contact point	<p>Reporting period: 2023 Fiscal Year, January 1, 2023 - December 31, 2023</p> <p>Reporting cycle: Annual</p> <p>Publication date: March 2024</p> <p>Contact point for questions: csr-esg@cadence.com</p>	2023 GRI Index Only
	2-4 Restatements of information	2019 GHG data for Scope 3 Categories 1, 2, 5, 6, 8, 11, 12, and 15 have been updated from previously published data due to changes in methodology supporting SBTi validation requirements. Updated figures have been 3rd party verified to the ISO 14064-3 Standard.	2023 ESG Report - Committed to Net-Zero by 2040, p. 30
	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.	2023 ESG Report - EMS, p. 29

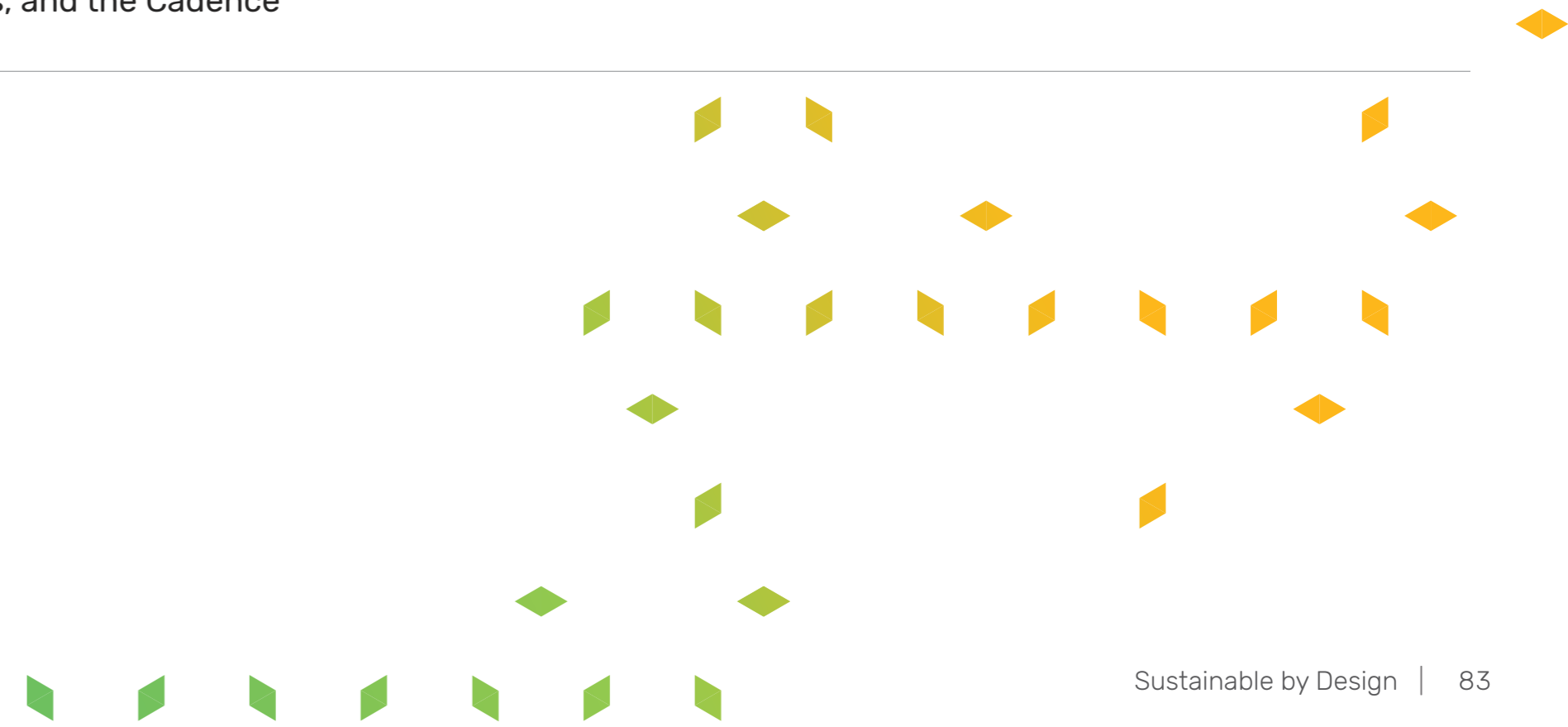
GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission										
Section 2: Activities & Workers	2-6 Activities, value chain and other business relationships	<p>Cadence is a leading provider of electronic system design software and intellectual property (“IP”), building upon more than 35 years of computational software expertise. Our Intelligent System Design™ strategy allows us to deliver essential computational software, hardware, and IP that our customers use to turn their design concepts into reality.</p> <p>We group our products into categories related to major design activities, and all of our product categories have generative AI solutions that augment the core product offering:</p> <ul style="list-style-type: none"> ▶ Custom IC Design and Simulation; ▶ Digital IC Design and Signoff; ▶ Functional Verification; ▶ IP; and ▶ System Design and Analysis <p>Our supply chain is composed of a mix of professional services, goods, and contract manufacturing of our hardware products. 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.</p>	<p>2023 ESG Report – Transforming the Way People Design Next-Generation Systems, p. 6, Innovation, p. 11-26, Supply Chain Description, p. 64</p> <p>Cadence 2023 Form 10-K – Item 1. Business</p>										
2-7 Employees		<table border="1"> <tr> <td data-bbox="1136 971 1392 1018">99%</td> <td data-bbox="1392 971 2312 1018">Percentage Full Time (Global)</td> </tr> <tr> <td data-bbox="1136 1018 1392 1065">1%</td> <td data-bbox="1392 1018 2312 1065">Percentage Part Time (Global)</td> </tr> <tr> <td data-bbox="1136 1065 1392 1112">11,262</td> <td data-bbox="1392 1065 2312 1112">Full Time (Global)</td> </tr> <tr> <td data-bbox="1136 1112 1392 1159">72</td> <td data-bbox="1392 1112 2312 1159">Part Time (Global)</td> </tr> <tr> <td data-bbox="1136 1159 1392 1215">49%</td> <td data-bbox="1392 1159 2312 1215">Headcount growth over the last five years</td> </tr> </table>	99%	Percentage Full Time (Global)	1%	Percentage Part Time (Global)	11,262	Full Time (Global)	72	Part Time (Global)	49%	Headcount growth over the last five years	2023 ESG Report – Our Team, p. 41
99%	Percentage Full Time (Global)												
1%	Percentage Part Time (Global)												
11,262	Full Time (Global)												
72	Part Time (Global)												
49%	Headcount growth over the last five years												
2-8 Workers who are not employees		27	Contingent workers (Agency temps and Interns) GRI Index Only										




GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
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.	2023 ESG Report - Board Governance, p. 55 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.	2023 ESG Report - Commitment to Diversity on the Board, p. 56, Director Nominee Qualifications, Skills, and Experience, p. 57 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.	2023 ESG Report - Board Governance, p. 55 Cadence Corporate 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, and the CGN Committee 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 2030, and 2040. The Committee also approved our net-zero and 2030 carbon reduction targets.	2023 ESG Report - Board Oversight of the Corporate Social Responsibility Program, p. 58 2023 TCFD Index



GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
Section 3: Governance	2-13 Delegation of responsibility for managing impacts	<p>With the endorsement of our executive management and Board of Directors, our senior group director of Corporate Social Responsibility oversees our ESG 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, suppliers, and customers. Advancing the positive impact of our products and services is a key component of our innovation process.</p> <p>The Senior Group Director of Corporate Social Responsibility reports to the Board of Directors Corporate Governance and Nominating Committee on ESG priorities at every regular meeting, and on climate-related issues specifically, three times a year.</p>	<p>2023 ESG Report - Materiality Assessment, p. 7, Environmental Sustainability, p. 27-39, Board Oversight of the Corporate Social Responsibility Program, p. 58</p> <p>2023 TCFD Index</p>
	2-14 Role of the highest governance body in sustainability reporting	<p>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.</p> <p>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.</p>	<p>2023 ESG Report - Board Oversight of the Corporate Social Responsibility Program, p. 58</p> <p>2023 TCFD Index</p>
	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.	2023 ESG Report - Reporting Concerns, p. 59
	2-17 Collective knowledge of the highest governance body	<p>Details on the qualifications, skills and experience of the Board of Directors can be found in our 2023 ESG report.</p> <p>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.</p>	2023 ESG Report - Director Qualifications, Skills and Experience, p. 57



GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
Section 3: Governance	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.	Compensation Committee Charter Annual Proxy Statement
	2-21 Annual total compensation ratio	151:1 Ratio	Annual Proxy Statement
Section 4: Strategy, policies and practices	2-22 Statement on sustainable development strategy	For over 30 years Cadence has advanced the electronics revolution, enabling customers to design products with a sustainable mindset, and transforming nearly every aspect of our daily experiences. We enable design of end-to-end systems from devices to the cloud and are uniquely positioned to make a significant impact as a leader in computational software and hardware solutions for today's challenges. Climate change is one of the greatest challenges of our time and we are committed to our target to reach Net-Zero by 2040. Early on we aligned our carbon reduction targets with the goal to limit global warming to the Paris Agreement's 1.5°C pathway and we are on track to halve greenhouse gas (GHG) emissions by 2030.	2023 ESG Report - A Message From Our CEO, p. 4
	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 Supplier Code of Conduct Equal Opportunity Policy Human Rights Policy UK Modern Slavery Act Statement Conflict Minerals Policy Statement	Cadence Corporate Governance 

GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
Section 4: Strategy, policies and practices	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 Worldwide 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. All concerns reported through our whistleblower hotline are reviewed by our Board through the Chair of the Audit Committee.	2023 ESG Report - Reporting Concerns, p. 59
	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 2023 Form 10-K - Item 3. Legal Proceedings
	2-28 Membership associations	<p>Cadence is an affiliate member of the Responsible Business Alliance (RBA), a member of Responsible Minerals Initiative (RMI), and maintains additional Industry Memberships detailed on our website.</p> <p>Cadence partners with the following Economic, Environmental and Social initiatives: American Heart Association, Barefoot College International (BCI), Concern India Foundation, Brady Campaign, Clinton Health Access Initiative (CHAI), Global Semiconductor Alliance’s Women’s Leadership Initiative’s CEO Pledge, The Great Transformation (TGT), Team4Tech, Great Place to Work Institute, National Society of Black Engineers, Pledge 1% Alliance, 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, Women in Technology Uganda (WITU).</p>	2023 ESG Report - Partnership p. 51, Supplier Code of Conduct p. 64, Human Rights p. 68, Social Impact - p. 70-78; 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.	2023 ESG Report - About the Report, p. 7, Targeted Engagment, p. 65
	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 total employees covered by collective bargaining agreements.

GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
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GRI 3: Material Topics 2021			
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3-1 Process to determine material topics	<p>The content of this report is informed by feedback from key stakeholders: employees, investors, customers, and industry partners and associations. During 2023, 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.</p>	<p>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 analysis considering industry peers.</p>	2023 ESG Report - About the Report, p. 7, Materiality Assessment, p. 7
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3-2 List of material topics	<p>Innovation (GRI: Direct economic value generated and distributed)</p> <p>Environmental Impact (GRI: Energy, Emissions)</p> <p>Workforce (GRI: Diversity and Equal Opportunity, Employee Engagement, Occupational Health and Safety, Training and Education)</p> <p>Cybersecurity and Data Privacy (GRI: Customer Privacy & Data Security)</p> <p>Governance and Ethical Business Practices (GRI: Anti-corruption, Anti-Competitive Behavior)</p> <p>Responsible Supply Chain (GRI: Supplier Environmental Assessment, Supplier Social Assessment)</p>		2023 ESG Report - Materiality Assessment, p. 7
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GRI Standard/Other Source	Disclosure Title	Disclosure	Location or Omission
Economic Performance			
GRI 3: Material Topics 2021	3-3 Management of Economic Performance	The discussion of our fiscal 2023 consolidated results of operations include year-over-year comparisons to fiscal 2022 for revenue, cost of revenue, operating expenses, operating margin, other non-operating expenses, income taxes and cash flows.	Cadence 2023 Form 10-K - Item 1. Business and Item 7. MD&A
GRI 201-1	Direct Economic Value Generated and Distributed	4,090 Revenue (\$MM)	Cadence 2023 Form 10-K - Cadence Design Systems, Inc. Consolidated Income Statements
		3,132 Direct economic value distributed (Operating costs including employee wages and benefits + payments to providers of capital + payments to government + community investments) (\$MM)	2023 ESG Report - About Cadence, p. 6
		958 Economic Value retained (Revenue - Direct economic value distributed) (\$MM)	
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.	2023 TCFD Index 2023 CDP Climate Change Investor Response - C2.3b, C2.4a
Anti-Corruption			
GRI 3: Material Topics 2021	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 2023 ESG Report - Business Ethics: Anti-Corruption, p. 59
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 2023.	2023 ESG Report - Business Ethics: Anti-Corruption, p. 59
Anti-Competitive Behavior			
GRI 3: Material Topics 2021	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 2023 ESG Report - Ethical Conduct: Code of Business Conduct, p. 58, Business Ethics: Anti-Corruption, p. 59
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 2023 Form 10-K - Item 1A. Risk Factors

GRI Standard/Other Source	Disclosure Title	Disclosure		Location or Omission
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Energy

GRI 3: Material Topics 2021	3-3 Management of Energy	Cadence’s Environmental Management System (EMS) is designed to set, manage, and achieve our environmental sustainability goals.		2023 ESG Report - EMS, p. 29, Decarbonizing Operations and Data Centers, p. 32
GRI 302-1	Energy consumption within the organization	279,880	Gigajoules (GJ)	2023 GRI Index Only
		97%	Percentage Renewable Energy	2023 ESG Report - Decarbonizing Operations and Data Centers, p. 32
		3%	Percentage Non-renewable Energy	2023 GRI Index Only
GRI 302-3	Energy intensity	25	GJ per employee	2023 GRI Index Only
GRI 302-4	Reduction of energy consumption	5%	% change from 2022 to 2023	2023 GRI Index Only

Emissions

GRI 3: Material Topics 2021	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.		2023 ESG Report - Decarbonizing Operations and Data Centers p. 32
305-1	Scope 1 Emissions	2,853	Metric Tons (MT) CO2e	2023 ESG Report - Committed to Net-Zero by 2040, p. 30, Decarbonizing Operations and Data Centers, p. 32, Decarbonizing our Value Chain, p. 34
305-2	Scope 2 Emissions (market-based)	1,062	Metric Tons (MT) CO2e	
305-2	Scope 2 Emissions (location-based)	25,510	Metric Tons (MT) CO2e	
305-3	Scope 3 Emissions	324,269	Metric Tons (MT) CO2e	
305-4	Emissions Intensity	1	MT CO2e / Million USD Revenue (Scope 1 + Scope 2 market-based)	
		0.3	MT CO2e per employee (Scope 1 + Scope 2 market-based)	
305-5	Reduction of GHG Emissions	-88%	% reduction in (Scope 1 + Scope 2 market-based) GHG emissions in 2023 from the baseline year (2019)	
		-33%	% reduction in (Scope 1 + Scope 2 market-based + Scope 3) GHG emissions in 2023 from the baseline year (2019)	2023 ESG Report - Committed to Net-Zero by 2040, p. 30, Decarbonizing Operations and Data Centers, p. 32, Decarbonizing our Value Chain, p. 34
305-6	Emissions of ozone-depleting substances	There are no such emissions in our operations.		2023 GRI Index Only
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	There are no such emissions in our operations.		2023 GRI Index Only



GRI Standard/Other Source	Disclosure Title	Disclosure		Location or Omission
Employment				
GRI 3: Material Topics 2021	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. Our HR department provides reports to the Compensation Committee of the Board of Directors at every regular meeting of the Compensation Committee.		2023 ESG Report - Our Strategy, p. 41
401-1 a	Total number of new employee hires	1,682	Total hiring	2023 GRI Index Only
	Total rate of new employee hires	49%	Headcount growth over last 5 years	2023 ESG Report - Our Team, p. 41
	Total number new employee hires by gender	427	Female	2023 GRI Index Only
		1,255	Male	2023 GRI Index Only
	Rate of new employee hires by gender	25%	Female	2023 ESG Report - Recruitment and Advancement, p. 50
		75%	Male	2023 GRI Index Only
	Total number of new employee hires by career stage group	807	Early Career Talent	2023 GRI Index Only
		161	Intern Talent	2023 GRI Index Only
		48%	Rate, Early Career	2023 ESG Report - Hiring, p. 44
		52%	Rate, More Senior	2023 GRI Index Only
	Total number of new employee hires by gender and career stage group	239	Female, Early Career	2023 GRI Index Only
		568	Male, Early Career	2023 GRI Index Only
		63	Female, Intern	2023 GRI Index Only
		98	Male, Intern	2023 GRI Index Only
31%		Rate Female, Early Career and Intern	2023 ESG Report - Recruitment and Advancement, p. 50	
69%		Rate Male, Early Career and Intern	2023 GRI Index Only	
401-1 b	Average employee turnover	6.9	Years	2023 ESG Report - Our Team, p. 41
Occupational Health and Safety				
GRI 3: Material Topics 2021	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.		2023 ESG Report - Safety, p. 46
403-9	Work related injuries	0.10	Injuries/100 workers	2023 ESG Report - Safety, p. 46

GRI Standard/Other Source Disclosure Title Disclosure Location or Omission

Training and Education

GRI 3: Material Topics 2021	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 in their career, we foster an environment that supports their continued learning and growth—both on the job and through formal training programs. 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. This year, we added unconscious bias training so more employees and managers receive training on this important topic to support a culture of inclusion.		2023 ESG Report - Building Careers, p. 45
404-1	Average hours of training per year	20	Hours, All Employees	2023 ESG Report - Building Careers, p. 45
		12	Hours, Technical	
		8	Hours, Non-technical	
	Percentage of employees to access online learning management system	92%	Percentage	2023 ESG Report - Building Careers, p. 45
Percentage of employees who have completed unconscious bias training	100%	Percentage	2023 ESG Report - Building Careers, p. 45	

Diversity and Equal Opportunity

GRI 3: Material Topics 2021	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.		2023 ESG Report - Recruitment and Advancement, p. 50, Equity, p. 51
405-1. a	Diversity of governance bodies	30%	Percentage Female Board Members	2023 ESG Report - Demographics, p. 53, Commitment to Diversity on the Board, p. 56
	Diversity of governance bodies	70%	Percentage Male Board Members	
	Diversity of governance bodies	40%	Percentage Asian Board Members	
	Diversity of governance bodies	60%	Percentage White Board Members	
	Diversity of management	18%	Percentage Female Managers or More Senior	2023 ESG Report - Demographics, p. 53
	Diversity of management	82%	Percentage Male Managers or More Senior	2023 GRI Index Only
405-1. b	Diversity by employee categories	21%	Percentage Female Technical Workforce	2023 ESG Report - Demographics, p. 53
	Diversity by employee categories	79%	Percentage Male Technical Workforce	
	Diversity by employee categories	45%	Percentage Female Non-Technical Workforce	
	Diversity by employee categories	55%	Percentage Male Non-Technical Workforce	



GRI Standard/Other Source Disclosure Title Disclosure Location or Omission

Diversity and Equal Opportunity

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 August 2023. This is the fifth year in a row we have achieved pay parity.	2023 ESG Report - Equity, p. 51
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Employee Engagement

ISS 306	Quantitative metrics for employee engagement including a percentage value	94%	Percentage of employees surveyed say that Cadence is a Great Place to Work	2023 ESG Report - A Great Place to Work, p. 42
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Supply Chain

GRI 3: Material Topics 2021	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.		2023 ESG Report - Targeted Engagement, p. 65, Decarbonizing the Supply Chain, p. 66
308-1	New suppliers that were screened using environmental criteria	100%	Percentage	2023 GRI Index Only
414-1	New suppliers that were screened using social criteria	100%	Percentage	2023 GRI Index Only

Customer Privacy

GRI 3: Material Topics 2021	3-3 Management of Customer Privacy	Our data privacy and cybersecurity program is guided by frameworks promulgated by the EU, National Institute of Standards and Technology (NIST), Cloud Security Alliance (CSA), and International Organization for Standardization/International Electrotechnical Commission (ISO/IEC). We maintain formal certification of our compliance with ISO/IEC 27001 and ISO/IEC 27017. 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.		2023 ESG Report - Structure and Compliance, p. 62
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 2023 Form 10-K - Item 1C. Cybersecurity, Item 1A. Risk Factors



SASB Index



SASB Content Index

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

Reporting Period: **2023**

SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
Environmental Footprint of Hardware Infrastructure	TC-SI-130a.1.	(1) Total energy consumed	279,880 Gigajoules (GJ)	2023 SASB Index Only
	TC-SI-130a.1.	(2) Percentage grid electricity	99.0 %	2023 SASB Index Only
	TC-SI-130a.1.	(3) Percentage renewable	97 %	2023 ESG Report - Decarbonizing Operations and Data Centers, p. 32
	TC-SI-130a.2.	(1) Total water withdrawn	108 Megaliter (ML)	2023 ESG Report - Managing Water Resources, p. 39
	TC-SI-130a.2.	(2) % withdrawn in in regions with High or Extremely High Water Stress	41 %	2023 SASB Index Only
	TC-SI-130a.2.	(3) Total water consumed	16 Megaliter (ML)	2023 SASB Index Only
	TC-SI-130a.2.	(4) % consumed in in regions with High or Extremely High Water Stress	33 %	2023 SASB Index Only
	TC-SI-130a.3.	Discussion of the integration of environmental considerations into strategic planning for data center needs	Our data center decarbonization strategy revolves around energy efficient design features and the procurement of 100% renewable electricity - for our on-premise, co-located, and cloud-based data centers. As we continue the process of shifting capacity to efficient co-located and cloud-based data centers, we are prioritizing partners that have their own goals to be powered by 100% renewable electricity.	2023 ESG Report - Decarbonizing Operations and Data Centers, p. 32



SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
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.	2023 ESG Report - Structure and Compliance, p. 62 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.	2023 ESG Report - Structure and Compliance, p. 62 Cadence 2023 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.	2023 ESG Report - Structure and Compliance, p. 62 Cadence 2023 Form 10-K
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.	2023 ESG Report - Structure and Compliance, p. 62 Cadence 2023 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), Cloud Security Alliance (CSA) and ISO 27001 and ISO 27017 standards. We maintain formal certification of our compliance with ISO 27001 and ISO 27017. 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.	2023 ESG Report - Structure and Compliance, p. 62 Cadence Privacy Policy

SASB Topic	SASB Code	SASB Accounting Metric	Disclosure Details	LOCATION
Recruiting & Managing a Global Diverse & Skilled Workforce	TC-SI-330a.1.	Percentage of employees that are located offshore	68 %	2023 SASB Index Only
	TC-SI-330a.2.	Employee engagement as a percentage	94 % of our employees surveyed say they are proud to tell others they work at Cadence.	2023 ESG Report - Our Culture, A Great Place to Work, p. 42
	TC-SI-330a.3.	Board of Directors by gender	30 % Female	2023 ESG Report - Commitment to Diversity on the Board, p. 56
		Board of Directors by gender	70 % Male	
		Board of Directors by racial/ethnic group	40 % Asian	
	TC-SI-330a.3.	Board of Directors by racial/ethnic group	60 % White	2023 ESG Report - Demographics, p. 53
		Managers or more senior by gender	18 % Female	
	TC-SI-330a.3.	Managers or more senior by gender	82 % Male	2023 ESG Report - Demographics, p. 53
		Technical staff by gender	21 % Female	
	TC-SI-330a.3.	Technical staff by gender	79 % Male	2023 ESG Report - Demographics, p. 53
		US-based Employees by racial/ethnic group	54 % 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		
TC-SI-330a.3.	US-based Employees by racial/ethnic group	34 % White	2023 ESG Report - Demographics, p. 53	
	US-based Employees by racial/ethnic group	34 % White		
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.	2023 ESG Report - Business Ethics: Anti-Corruption, p. 59 Cadence 2023 Form 10-K
Managing Systemic Risks for Technology Disruptions	TC-SI-550a.2.	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.	2023 ESG Report - Cybersecurity and Data Privacy, p. 60-62 Cadence 2023 Form 10-K



TCFD Index



TCFD Index

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

Reporting Period: **2023**

For over 30 years Cadence has advanced the electronics revolution, enabling customers to design products with a sustainable mindset, and transforming nearly every aspect of our daily experiences. Our Intelligent System Design™ strategy allows us to deliver essential computational software, hardware and IP that our customers use to turn their design concepts into reality. Our software and services enable our customers to produce products that meet their critical business goals including time-to-market, costs and productivity while responding to growing global environmental concerns including sustainability and carbon emissions—a strategy we believe provides resilience 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 provides resilience. This Index contains summaries of the recommended TCFD disclosures and sources for more detailed information.

Recommendations	Disclosure	More Details
<p>Governance</p> <p>Describe the board’s oversight of climate-related risks and opportunities</p>	<p>Through our 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 the CGN Committee 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 2023, the CGN Committee held three meetings, and in the quarter it did not meet, it received and reviewed materials relating to ESG.</p>	<p>2023 ESG Report - Board Oversight of the Corporate Social Responsibility Program, p. 58; 2023 CDP Climate C1.1, C1.1a, C1.2b</p>
<p>Describe management’s role in assessing and managing climate-related risks and opportunities</p>	<p>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.</p> <p>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. In 2023, the Corporate Governance and Nominating Committee held three meetings and in the quarter it did not meet, it received and reviewed materials relating to ESG.</p>	<p>2023 ESG Report - Materiality Assessment, p. 7; 2023 CDP Climate C1.1b, C1.2</p>



Recommendations

Disclosure

More Details

Strategy

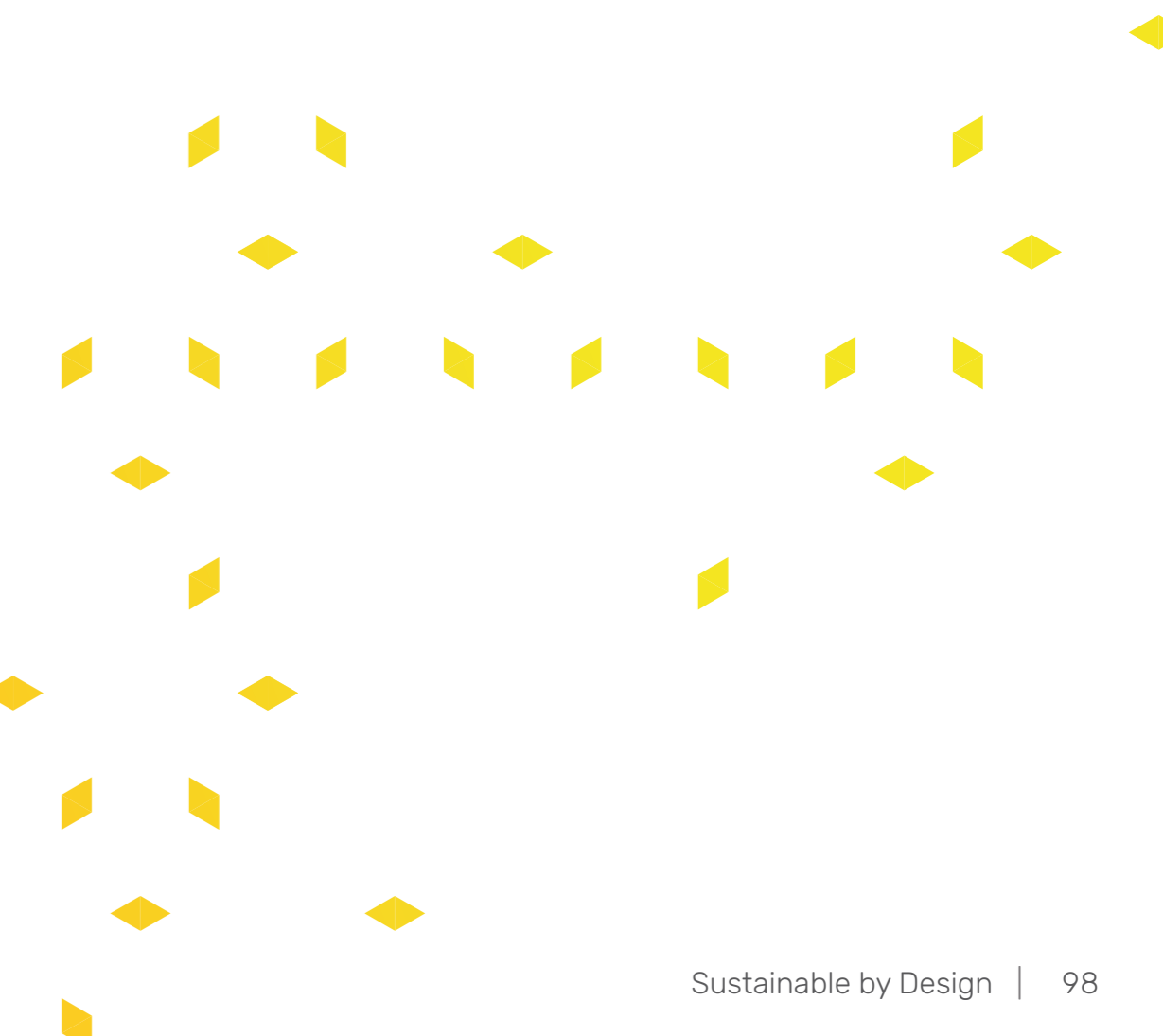
Describe the climate-related risks (and opportunities) the organization has identified over the short, medium, and long term

We have not identified any climate-related risks with the potential to have a substantive financial or strategic impact on Cadence. Assessments have been conducted 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), and 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.

2023 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. Our evaluation processes of climate-related opportunities continues to expand with a focus on:

- ▶ Decarbonizing compute
- ▶ Energy optimization through our low-power solution

2023 ESG Report - Innovation, p. 11-26, Decarbonizing Operations and Data Centers/Renewable Electricity, p. 32

2023 CDP Climate C2.4, C2.4a

Potential Opportunities Under Assessment

Opportunity Category	Description
Resource Efficiency	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

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 automotive, artificial intelligence (“AI”), aerospace and defense, high-performance and mobile computing, hyperscalers, wireless communication, industrial internet of things (“IIoT”) and life sciences.

2023 CDP Climate C2.4a, C3.3, C3.4

Products 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.

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 provides resilience.

2023 CDP Climate C2.2a, C3.1-C3.2b

Our climate-related scenario analysis includes transition risks including market risk, policy/regulatory risk, reputation risk, and technology risk, as well as physical risks including temperature extremes, tropical cyclones, wildfire, water stress, drought, and flooding (coastal and fluvial).

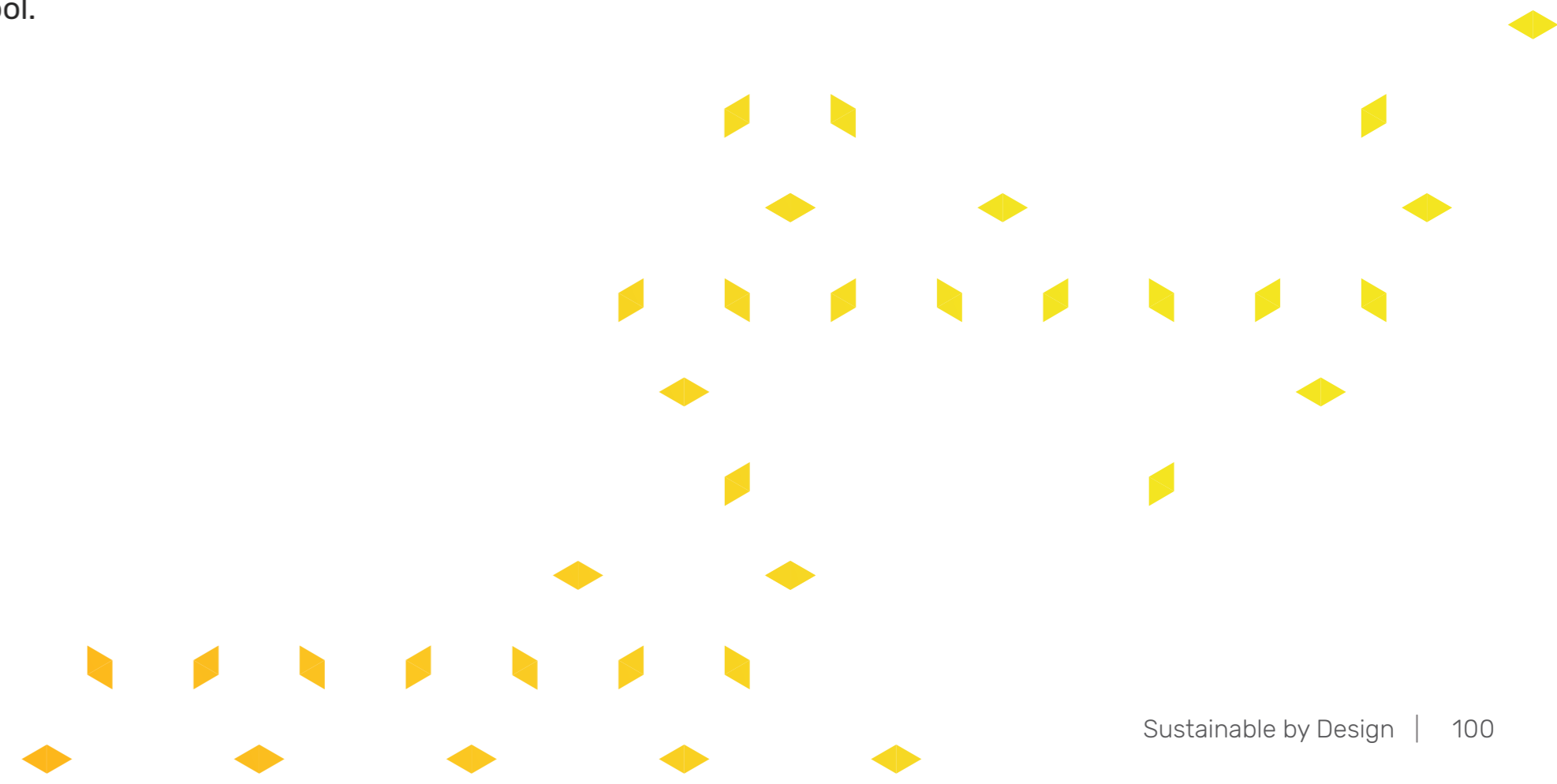
We have analyzed the market risk due to Cadence’s suppliers potentially being subject to increased carbon taxes and passing those increases to Cadence. Our top 100 suppliers, by GICS industry and based on activity have been screened to determine the potential risk to their EBITDA for 2025, 2030 and 2050.

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. In the reporting year, water-related risks were refreshed using the updated WRI Aqueduct Tool.



Recommendations	Disclosure	More Details
<p>Risk Management</p> <p>Describe the organization’s processes for identifying and assessing climate-related risks</p>	<p>Climate-related risks are identified and assessed by the cross-functional ESG Team at Cadence with a focus on:</p> <ul style="list-style-type: none"> ▶ Decarbonizing operations and data centers ▶ Decarbonizing our supply chain ▶ Decarbonizing compute activities <p>In the reporting year, we continued working 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.</p> <p>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.</p>	<p>2023 ESG Report - Decarbonizing Operations and Data Centers, p. 32, Decarbonizing the Supply Chain, p. 66, Decarbonizing Compute Through Energy Optimization, p. 36; 2023 CDP Climate C2.2</p>
<p>Describe the organization’s processes for managing climate-related risks</p>	<p>Through innovation, aggressive investment and collaboration with value chain partners, we anticipate reaching Net-Zero emissions across our value chain by 2040, as well as a 50% reduction in scope 1, 2 and 3 emissions by 2030.</p> <p>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 2023 through our investments in decarbonization including energy efficiency measures, procurement of 97% renewable energy through utility contracts and high-quality Energy Attribute Certificates (EACs), onsite solar installations and high-impact carbon avoidance/removal offsets. We have taken steps to shift our electricity supply to long-term renewable energy virtual power purchase agreements (VPPAs). In early 2024, we strengthened our transition to long-term renewable energy and commitment to purchaser-caused renewable electricity by signing a virtual power purchase agreement (VPPA) to help finance a to-be-built solar farm in the U.S. Once operational, we expect our portion of the project will deliver solar power to the grid equivalent to our entire U.S. electric load and approximately half of our global Scope 2 emissions.</p> <p>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, and transitional climate-related risks.</p>	<p>2023 ESG Report - Committed to Net-Zero by 2040, p. 30, Cadence Climate Transition Plan, p. 31; 2023 CDP Climate C2.2</p>
<p>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into overall risk management</p>	<p>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.</p>	<p>2023 CDP Climate C2.2</p>

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/electricity used
- ▶ Proportion of executive management remuneration linked to climate considerations

2023 ESG Report - Committed to Net-Zero by 2040/Science Based Targets, p. 30, Decarbonizing Operations and Data Centers/Renewable Electricity, p. 32, Decarbonizing Our Business, p. 33

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 2023 Sustainability Report and our annual 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.

2023 ESG Report - Global Operations, p. 33, Decarbonizing Our Value Chain, p. 34; 2023 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 2030: 1.5°C, Scope 1 and 2 (market-based)

50% GHG reduction by 2030 over the 2019 baseline

2023 Performance: 88% reduction

SBT 2030: 1.5°C, Scope 1, 2 and 3

50% GHG reduction by 2030 over the 2019 baseline

2023 Performance: 33% reduction over the 2019 baseline

Net-Zero 2040: 1.5°C, Scope 1, 2 and 3

Net-Zero GHG by 2040

2023 Performance: 33% reduction over the 2019 baseline

2023 ESG Report - Committed to Net-Zero by 2040, p. 30, Global Operations, p. 33, Decarbonizing Our Value Chain, p. 34


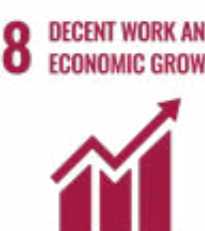


SDG Index




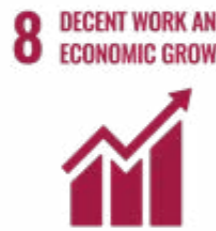



SDG Index






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



Reporting Period: **2023**

Topic	SDG	SDG Target	Cadence KPI	SDG Indicator	Cadence KPI	Metric	Unit
Innovation	 <p>7 AFFORDABLE AND CLEAN ENERGY</p> <p>Affordable and Clean Energy</p>	7.3	Cadence aligns with SDG Target 7.3 to double the global rate of improvement in energy efficiency by 2030 through decreasing energy use per \$ revenue.	7.3.1	Energy Intensity	68	Gigajoule/\$MM Revenue
	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p> <p>Decent Work and Economic Growth</p>	8.1	Cadence aligns with SDG Target 8.1 to increase sustainable economic growth by measuring year-on-year increases in revenue.	8.1.1	Annual revenue growth rate	15	%
	 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> <p>Industry, Innovation and Infrastructure</p>	9.A	Cadence aligns with SDG Target 9.A to facilitate sustainable and resilient infrastructure through charitable giving.	9.A.1	Charitable giving	16	\$MM
		9.4	Cadence aligns with SDG Target 9.4 to decrease GHG intensity through sustainable infrastructure upgrades, increased efficiency, and environmentally sound technologies.	9.4.1	GHG Emissions, Scope 1 & 2 market-based per million \$ of revenue	1	Metric tons CO2e/\$MM Revenue
	9.5	Cadence aligns with SDG Target 9.5 to enhance scientific research and innovation through increased R&D spend as a proportion of revenue.	9.5.1	R&D spend as a proportion of revenue	35	%	
	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> <p>Responsible Consumption and Production</p>	12.2	Cadence aligns with SDG Target 12.2 to achieve the sustainable management and efficient use of natural resources through decreasing energy use while increasing revenues.	12.2.1	Energy use	279,880	Gigajoule, GJ



Topic	SDG	SDG Target	Cadence KPI	SDG Indicator	Cadence KPI	Metric	Unit	
Environmental Sustainability	 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	7.2	Cadence aligns with SDG Target 7.2 to increase the proportion of renewables in the global energy mix through the use of 97% renewable electricity.	7.2.1	Renewable electricity	97	%	
	Affordable and Clean Energy							
	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	8.4	Cadence aligns with SDG Target 8.4 to increase resource efficiency through reductions in energy use and emissions per employee.	8.4.1	Energy use per employee	25	Gigajoule/FTE	
	Decent Work and Economic Growth							
						GHG emissions per employee (Scope 1, 2 market-based)	0.3	Metric tons CO2e/FTE
	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	12.2	Cadence aligns with SDG Target 12.2 to achieve the sustainable management of natural resources through active management of water usage in water-stressed areas.	12.2.1	Percentage of water withdrawals in extremely-high and high water stressed areas	41	%	
Responsible Consumption and Production								
					Percentage of water consumed in extremely-high and high water stressed areas	33	%	
 <p>13 CLIMATE ACTION</p>	13.2	Cadence aligns with SDG Target 13.2 to implement climate change mitigation strategies through our EMS, GHG reduction targets, and decreases in GHG emissions.	13.2.2	GHG Emissions (Scope 1, 2 market-based)	3,915	Metric tons CO2e		
Climate Action								
 <p>15 LIFE ON LAND</p>	15.A	Cadence aligns with SDG Target 15.A to mobilize financial resources to conserve ecosystems through investments in biodiversity, reforestation, and low carbon projects.	15.a.1	Capital invested in biodiversity and ecosystems	\$120,000	\$US		
Life on Land								

Topic	SDG	SDG Target	Cadence KPI	SDG Indicator	Cadence KPI	Metric	Unit	
Workforce	 <p>3 GOOD HEALTH AND WELL-BEING</p>	3.7	Cadence aligns with SDG Targets 3.7 and 3.8 to achieve universal health coverage and reproductive health-care services through offering benefits to all FTEs.	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	%	
	Good Health and Wellbeing							
	 <p>5 GENDER EQUALITY</p>	5.1	Cadence aligns with SDG Target 5.1 to end discrimination against women through programs that advance women in tech, and maintaining gender pay parity.	5.1.1	Gender pay equity ratio	Parity	Ratio	
		5.5	Cadence aligns with SDG Target 5.5 to ensure equal opportunities for leadership through increased percentage of board members and in management positions advancing women in management and board positions.	5.5.2	Proportion of women board members	30	%	
	Gender Equality							
	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	8.5	Cadence aligns with SDG Target 8.5 to provide decent work for women and men through a growing workforce and maintaining global gender pay parity since 2018.	8.5.2	Year-over-year (YOY) change in FTE	10	%	
		8.8	Cadence aligns with SDG Target 8.8 to promote safe and secure working environments for all workers through safety programs that minimize workplace accidents.	8.8.1	Injury rate per 100 workers	0.1	%	
		8.B	Cadence aligns with SDG Target 8.B to improve youth employment through programs, partnerships, and activities that promote early career hires.	8.B.1	Percent of early career hired	48	%	
	Decent Work and Economic Growth							
	 <p>10 REDUCED INEQUALITIES</p>	10.2	Cadence aligns with SDG Target 10.2 to increase inclusion in the workplace through regularly reviewing workforce demographics and investing in programs that foster an ethnically diverse workforce.	10.2.1	Percentage Asian and Indian	54	%	
					Percentage Black and African American	1	%	
					Percentage Hispanic and Latinx	3	%	
					Percentage Other	2	%	
Percentage Undisclosed					6	%		
Reduced Inequalities								
 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	16.B	Cadence aligns with SDG Target 16.B to promote the principles of equality and fairness through mandatory, annual non-discrimination training for all employees.	16.B.1	Annual non-discrimination training completion rate for all FTEs	100	%		
Peace, justice and strong institutions								

Topic	SDG	SDG Target	Cadence KPI	SDG Indicator	Cadence KPI	Metric	Unit
Governance	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	12.6	Cadence aligns with SDG Target 12.6 to adopt sustainable practices and to integrate sustainability information into the reporting cycle through annual ESG reporting.	12.6.1	Annual ESG reporting	2023 ESG Report 2023 GRI Index 2023 SASB Index 2023 CDP Climate Change Investor Response 2023 CDP Water Security Investor Responses 2023 TCFD Index	
		16.3	Cadence aligns with SDG Targets 16.3 and 16.5 to respect the rule of law through our Codes of Conduct and anti-corruption and bribery trainings.	16.3.3	Completion rate for annual ethics, anti-corruption, and anti-bribery training for all FTEs	100	%
		16.5		16.5.2	Completion rate for annual ethics, anti-corruption, and anti-bribery training for all FTEs	100	%
	 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>						

Topic	SDG	SDG Target	Cadence KPI	SDG Indicator	Cadence KPI	Metric	Unit
Responsible Supply Chain	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	8.3	Cadence aligns with SDG Target 8.3 to work with diverse suppliers by monitoring spend with small to medium enterprises and diverse suppliers.	8.3.1	Procurement spend on diverse suppliers	8	%
		8.7	Cadence aligns with SDG Target 8.7 to prevent forced labor, modern slavery, and human trafficking through our Codes of Conduct and training programs.	8.7.1	Completion rate for UK Modern Slavery Act training	100	%
	 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	9.3	Cadence aligns with SDG Target 9.3 to increase the access of small-scale enterprises by monitoring procurement spend on small businesses.	9.3.1	Procurement spend on small businesses	8	%
		10.2	Cadence aligns with SDG Target 10.2 to empower and promote economic inclusion by monitoring spend with diverse suppliers.	10.2.1	Procurement spend on diverse suppliers	8	%
	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	12.7	Cadence aligns with SDG Target 12.7 to promote sustainable procurement practices through our Supplier Code of Conduct and ESG screenings for suppliers.	12.7.1	New suppliers screened using social and environmental criteria	100	%
		13.2	Cadence aligns with SDG Target 13.2 to implement climate mitigation strategy by monitoring GHG emissions in the value chain (Scope 3).	13.2.2	GHG emissions (Scope 3)	324,269	Metric Tons CO2e
	 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	16.3	Cadence aligns with SDG Target 16.3 to promote the rule of law through tracking suppliers' company policies to adhere to local laws and regulations and responses to conflict minerals survey.	16.3.3	Relevant suppliers that responded to conflict minerals survey	98	%
					Key suppliers that have company policies to adhere to local laws and regulations	100	%



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This report contains forward-looking statements, including statements regarding expectations for the implementation and impact of Cadence's environmental, social and governance programs, the achievement of Cadence's emissions reduction and other sustainability-related goals, technological advancements, and other statements using words such as "anticipates," "believes," "expects," "intends," "plans," "will," and words of similar import and the negatives thereof. Forward-looking statements are subject to a number of risks, uncertainties and other factors, many of which are outside Cadence's control, and which may cause actual results to differ materially from expectations expressed or implied in the forward-looking statements, including, among others: (i) Cadence's ability to successfully meet corporate governance, environmental and social targets and strategies; (ii) economic, geopolitical and industry conditions, including that of the semiconductor and electronics industries; (iii) changes in environmental or other regulatory landscape; (iv) the continued acquisition of other companies, businesses or technologies or the failure to successfully integrate and operate them; (v) potential harm caused by compromises in cybersecurity and cybersecurity attacks; and (vi) the effects of any litigation, regulatory, tax or other proceedings to which Cadence is or may become a party or to which Cadence or its products, services, technologies or properties are subject. For a detailed discussion of these and other cautionary statements that may cause actual results to differ materially from expectations, please refer to Cadence's filings with the U.S. Securities and Exchange Commission, including its most recent report on Form 10-K, subsequent reports on Form 10-Q and other future filings. All forward-looking statements in this report are based on management's expectations as of the date of this report and, except as required by law, Cadence disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.