

A close-up photograph of a smiling woman with dark skin and hair, wearing a red and blue plaid shirt. She is holding a young child with dark skin, who is wearing a pink headscarf and a light brown shirt. The background is blurred, suggesting an outdoor setting. The overall tone is warm and positive.

Genomics for Good

Illumina Corporate Social Responsibility Report CY'22

illumina®



This Is the Genome Era™

At Illumina, we are driven by the power of genomics to positively impact the world and shape a more sustainable and equitable future for all.

Our fourth annual Corporate Social Responsibility Report documents the evolution of our environmental, social, and governance (ESG) program from January 1 through December 31, 2022.

This report reflects the progress we have made and looks to the future with our continued commitment to deepen our impact on human health by serving as a champion for patients, our communities, our people, and our planet.

[Learn more in About this Report →](#)

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Message from the CEO

2023 marks Illumina's 25th anniversary. For more than two decades, we have been committed to improving human health by unlocking the power of the genome. Yet today, the need is more urgent than ever to help build a healthier, more sustainable world where all people can thrive.

Genomics has the ability to improve global health care, sustainability, and equity through better diagnosis and treatment; better representation in genomic data; greater access to personalized medicine; and a deeper understanding of the world.

This is the genome era, and the last few years have shown the promise that exists around us.

Genomics enables the world to act quickly and mitigate the spread of infectious diseases.

The world's first mRNA vaccine roll-out ignited a wildfire of genomic innovation and breakthroughs that will improve human health beyond the pandemic. There will always be new pathogens, but what matters is our ability to identify and control their spread. Effective global surveillance, backed by collaboration and adoption, can prevent the next pathogenic outbreak from becoming another global pandemic.

Genomics is transforming personalized medicine and saving lives. The science is being applied to every step of cancer care and reducing the diagnostic odyssey for those suffering from rare genetic diseases. Revolutionary therapies are hitting the clinic and reinventing how we fight an expanding number of conditions.

Genomic data has become the blueprint for everything from diagnostics to precision therapeutics. Each day, researchers are learning more about genetic variants that will help unravel the world's most devastating diseases and public health challenges. Yet, genomic data is glaringly imbalanced — underrepresenting the diversity of global populations. Together with our partners, we aim to increase the diversity of genomic data and help every patient access groundbreaking therapies.

Genomics is being brought to bear against the climate crisis. We are already using genomics to understand which seeds will be most productive or most resilient to drought and disease. CRISPR gene-editing technology is starting to bolster the natural ability of plants and soil microbes to both capture and store atmospheric carbon. Genomics will be an essential tool to fight food insecurity for millions of people around the world.

“This is the genome era, and the last few years have shown the promise that exists around us. Yet, the need is more urgent than ever to help build a healthier, more sustainable world where all people can thrive.”

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Francis deSouza
Chief Executive Officer

Message from the CEO

Guided by our mission, we are taking bold, meaningful steps through our business strategy to accelerate access to genomics, empower our communities, integrate environmental sustainability, nurture our people, and operate responsibly.

Accelerate Access to Genomics

We are delivering breakthrough innovations that redefine the possibilities in genomics and accelerate impactful health advances globally. We reduced the cost of next-generation sequencing (NGS) by more than 99%, further democratizing the technology and helping patients, communities, and whole populations access the benefits of genomics. We introduced several new innovations, including the NovaSeq™ X – our most powerful and sustainable sequencing system yet. We extended our philanthropic [iHope](#) model, partnering with the March of Dimes Birth Defects Foundation of China. We continued our philanthropic support for the Pathogen Genomics Initiative (PGI), providing critical public health capabilities in Africa and Southeast Asia. And we partnered on population genomics projects including [Precision Health Research](#) to launch the SG100K Project, aiming to map the DNA of 100,000 people in Singapore.

Empower Our Communities

The future of genomics depends on the curiosity, ingenuity, and passion of today's STEM students. This year, Illumina joined the STEMM Opportunity Alliance (SOA) in collaboration with the White House Office of Science and Technology Policy to drive

transformative change across the American science, technology, engineering, math, and medicine (STEMM) ecosystem, with the aim of removing systemic barriers and elevating STEMM equity. I personally signed an open letter pressing state governments and education leaders to make computer science a foundational part of K-12 curriculum.

Integrate Sustainability

We know improving human health is directly tied to creating a healthier planet, both through our own operations and the impactful work of our partners. We are one of the first companies in the world and the first genomics company to receive [verification of our 2050 net-zero emissions targets](#) by the Science Based Targets initiative [Corporate Net-Zero Standard](#). We integrated environmental design into our newest sequencing platform, the NovaSeq™ X, resulting in 90% less packaging, 50% less plastic, and a 61% reduction in climate change impact. We also awarded our annual Agricultural Greater Good Initiative Grant to Brazil's SENAI Innovation Institute for Biosynthetics, where they are exploring the genetic potential for carbon sequestration, environmental services, and food security.

Nurture Our People

An extraordinary mission requires extraordinary people and leaders at every level. Illumina employees are the engine of innovation and key to powering genomics for good. To foster an inclusive culture where innovation and creativity thrive, we practice

diversity and equity in all that we do. For the fourth consecutive year, we achieved a zero net pay gap. We have increased the percentage of female executives for the third consecutive year, and our US workforce includes 52 percent minority representation. We filed a record 193 new patents and we continue to have two times the number of female inventors compared to the US national rate. We launched a new employee resource group supporting employees affected by visible or invisible disability and neurodiversity. And I signed the [Disability:IN CEO Letter on Disability Inclusion](#) urging my peers to advance equality and inclusion.

Operating Responsibly

Our role as a genomics pioneer brings with it the responsibility to enable innovation for good, ensuring the technology we create and the data we collect are used safely, ethically, and responsibly. We have expanded the remit of the Nominating/Corporate Governance Committee to assist the Board in overseeing the company's material ESG matters, except as specifically delegated to another Board committee. We also achieved ISO 27701 certification for Illumina's six cloud based products for privacy information management.

The Future of Genomics Starts Now

For 25 years, we have shown the world the promise of genomics and the power of collaboration. Working with our customers, partners, and genomics advocates around the globe, we know what is possible. Now is the time to push the boundaries and extend the benefits of genomics to all. That means ensuring genomics data reflects the diversity of a global population. It means bringing genomics into the clinic and extending its applications.

As we look to the future, it means reaffirming our commitment to be the best employer, the best environmental steward, and the best corporate citizen we can possibly be.

Many thanks to our customers, partners, and employees around the world for helping advance our lifesaving work, giving back to our communities, supporting one another, and bringing our mission to life.



Francis deSouza

Chief Executive Officer

“ Guided by our mission, we are taking bold, meaningful steps through our business strategy to accelerate access to genomics, empower our communities, integrate environmental sustainability, nurture our people, and operate responsibly. ”



Introduction

2022 CSR Highlights



Accelerate Access to Genomics

1.2 billion lives covered

\$11 million in-kind donations to support Pathogen Genomics Initiative

30,000+ medical education learners reached

74 new genomic startups funded since inception

\$200 genome introduced with NovaSeq™ X launch

Launched iHope China

\$1 billion and **22%** revenue R&D investment



Empower Our Communities

\$17.7 million total donations

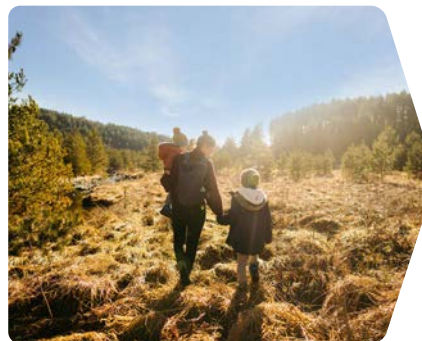
50% employee participation in giving and volunteer programs

> 1.2 million STEM learners reached since 2019

20,662 volunteer hours donated

1,747 causes supported

Community investment in **46** countries



Integrate Sustainability

First genomics company to have **net zero targets** verified by SBTi

100% of global electricity consumption came from renewable sources

100% of our strategic suppliers committed to minimize their environmental footprint

61% climate impact reduction with NovaSeq™ X compared to NovaSeq™ 6000



Nurture Our People

Maintained a **zero net pay gap**

52% minority representation in the US workforce

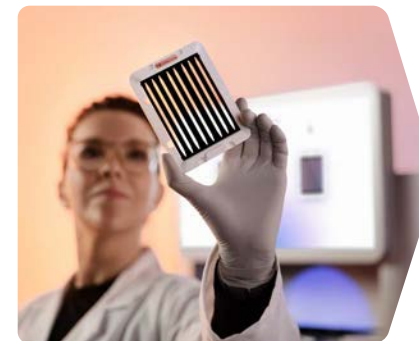
45% global female workforce

5% increase in female executive leadership representation in the last three years

86% employee engagement index

New disability ERGs **launched**

62 hours average training per employee



Operate Responsibly

100% Illumina core facilities participated in third-party audit programs

18% diverse supplier spend

Achieved Privacy Information Management **ISO 27701 certification**

Expanded **remit of the Nominating/Corporate Governance Committee** to assist the Board in overseeing ESG matters

Recognition 2022

Member of

Dow Jones Sustainability Indices

Powered by the S&P Global CSA

- Workplace

 - Glassdoor Best Place to Work
 - BioSpace Best Place to Work
 - Refinitiv Top 100 Global D&I Index
 - Just Capital Top 100 US Companies Supporting Healthy Communities & Families
 - Just Capital Workforce Equity & Mobility
 - Wall Street Journal Top 250
- Regional

 - SANDAG Green Commute Award San Diego
 - AmCham Cares CSR Singapore
 - MIT Tech Review 50 Smartest Companies in China
 - Water Efficiency Building (WEB) Singapore
 - Best Employer Straits Times Singapore
 - Workplace Safety Award Singapore
- Leadership

 - Most Responsible CEO | Francis deSouza
 - Top Chief Human Resources Officer | Aimee Hoyt
 - Savoy Most Influential Black Exec | Kathrynne Reeves
 - Forbes 50 over 50 | Susan Tousi

About Illumina

Our Mission

To improve human health by unlocking the power of the genome.

Our Purpose

Drive the positive progress of genomics to make it useful for all.

Our Values



Innovation is in our DNA



We are relentless in the creation of great products



We collaborate deeply



We move fast and embrace change



We are open

Driven by our mission, we are committed to making our technology more affordable, accessible, and sustainable, realizing health equity for billions around the world.

Illumina is a global genomics and human health company powering the future of personalized medicine and beyond.

Innovating at the intersection of technology, biology, and health, we are reimagining what is possible for human health and the health of our planet.

We provide the sequencing innovations that enable researchers and clinicians to discover, detect, diagnose, and treat diseases—from cancer to COVID-19, from protecting our natural capital to securing a sustainable food supply.

What if **One Thing** Could Change Everything for the **Better**?

That's Genomics.

- What causes a cancer cell to mutate?

How do you identify a novel virus like COVID-19 and create a vaccine?
- How do we diagnose a rare genetic disease?

How do we safeguard the world's food supply?
- What effect does climate change have on biodiversity?

The answer to these and thousands of life's most pressing questions **can be found in the world of genomics.**

APPLICATIONS As an engine of genomics innovation, we are enabling tomorrow's discoveries.



Oncology



Reproductive Health



Genetic Disease



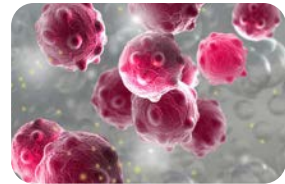
Research/Applied Genomics



Infectious Disease



Drug Discovery



Multi-Omics

Business Overview

Illumina at a Glance

10,200

employees

\$4.55B

2022 revenue

1998

founding year

9,178

patents worldwide

9,500+

customers

\$1B

R&D investment

22%

revenue R&D investment

23,000+

cumulative sequencing installed base

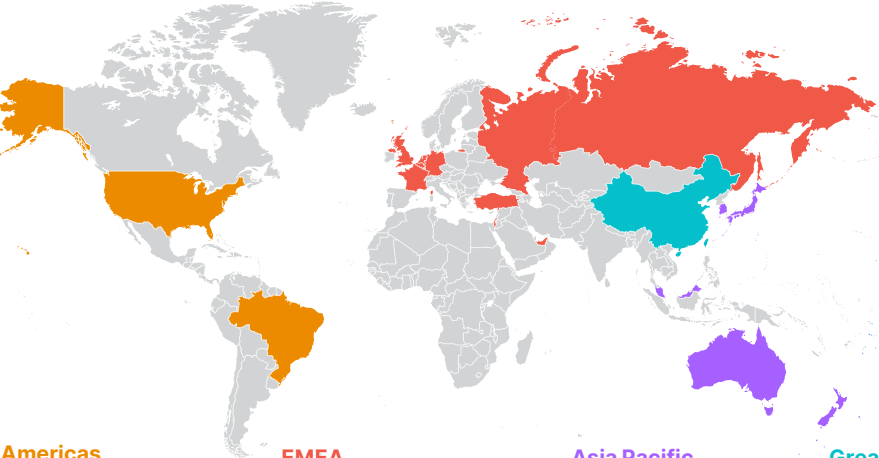
55

customer Net Promoter Score

155

countries receive our products

Where We Operate



- Americas

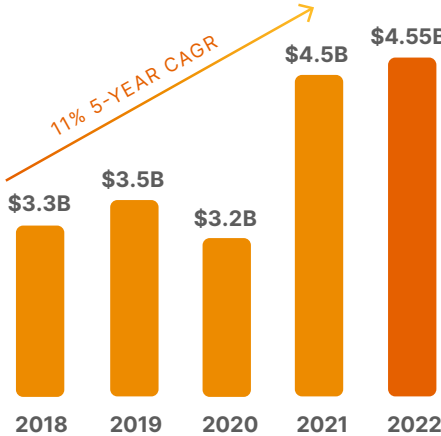
Baltimore, MD, US⁴
Foster City, CA, US^{3, 4, 6}
Hayward, CA, US^{2, 4}
Madison, WI, US^{2, 4, 6}
San Diego, CA, US^{1, 2, 3, 4, 5, 6}
São Paulo, Brazil⁴
- EMEA

Berlin, Germany⁴
Cambridge, UK^{2, 4, 5, 6}
Eindhoven, Netherlands^{4, 5}
Evry, France⁴
Istanbul, Turkey⁴
Mechelen, Belgium⁴
Moscow, Russia⁴
Rennes, France⁴
Steenoven, Netherlands^{4, 5}
Tel Aviv, Israel⁴
Dubai, UAE⁴
- Asia Pacific

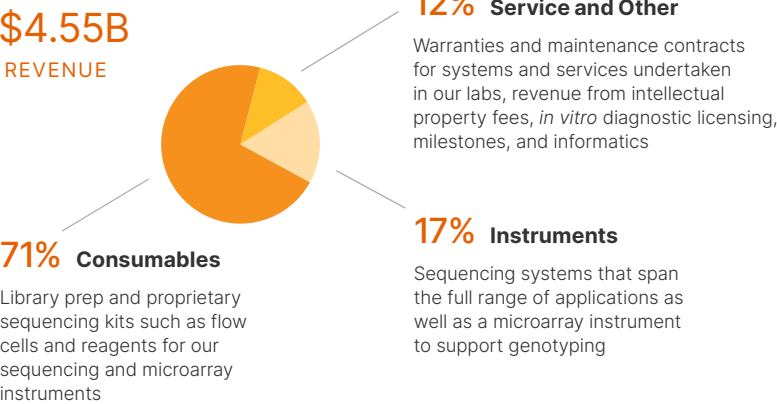
Melbourne, Australia⁴
Osaka, Japan⁴
Seoul, South Korea⁴
Singapore^{2, 4, 5, 6}
Tokyo, Japan⁴
- Greater China

Beijing, China⁴
Shanghai, China^{2, 4}
Taipei, China⁴
- ¹Headquarters, ²Manufacturing, ³Clinical, ⁴Commercial, ⁵Distribution Center, ⁶R&D

Financial Performance



Revenue Details



Sequencers

LOW-THROUGHPUT

MiSeq™

MiniSeq™

iSeq™ 100

MID-THROUGHPUT

NextSeq™ 500

NextSeq™ 550

NextSeq™ 1000/2000

HIGH-THROUGHPUT

NovaSeq™ X Series

NovaSeq™ 6000

DIAGNOSTIC

MiSeq™ Dx

NextSeq™ 550Dx

NovaSeq™ 6000Dx



CSR Strategy & Governance

Q&A With Our CFO and CPAO

Q: When the new public affairs function was established at Illumina, the ESG function shifted from the office of the Chief Financial Officer to the office of the Chief Public Affairs Officer. Can you both tell us about that move?

A: John When Illumina created a new Public Affairs department, it was a natural fit to bring together the internal teams of government affairs, corporate social responsibility, privacy, ethics, and patient advocacy so these groups could work together more closely and take advantage of natural synergies. Coming from Microsoft, where I most recently led the UN Affairs group, the intersection of government affairs, the UN Sustainable Development Goals, and our ESG efforts were interwoven, and we saw similar opportunities here at Illumina.

A: Joydeep I agree with John's points, and while the ESG team moved from Finance to Public Affairs, our shared focus on our investors and risk management is stronger than ever. Our functions work very closely together, and we expect that to deepen as various mandatory regulatory reporting requirements evolve. We see ESG as a key strategic driver to delivering value to our shareholders and stakeholders as we accelerate the adoption of sequencing in existing markets and enable the most impactful, new opportunities for genomics.

Joydeep, you were recently appointed Chief Financial Officer, expanding your role as Chief Business Strategy and Corporate Development Officer. How does Illumina's environmental, social, and governance (ESG) approach fit into the overall financial and business strategy of the company?

A: Joydeep Furthering our ESG strategy advances our business strategy and reinforces our mission to improve human health. Stewardship of our fiduciary responsibility includes a strong emphasis on managing risk, driving performance, and ensuring business integrity. We connect our ESG approach to existing finance governance, including accountability, risk analysis, internal monitoring, reporting transparency, and data assurance.

As CFO, I am looking for ways to ensure we are protecting the long-term value of the company, and that includes both financial and non-financial inputs related to risk and opportunities. ESG provides a lens to evaluate those risks and opportunities, incorporating the voices of all our stakeholders.

Investing in our ESG initiatives can drive growth, create innovation, and contribute to our long-term success.

What are some updates on the ESG/CSR governance approach at Illumina?

A: John There is a consensus that directors on boards of public companies should be taking a greater role in overseeing ESG programs and disclosures; however, there remains variation in how boards have chosen to approach their oversight. Previously, the Board's oversight of Illumina's ESG program and the various themes under the ESG umbrella were captured under existing committee work. Last year, we expanded the remit of the Nominating/Corporate Governance Committee to assist the Board in overseeing the company's ESG matters, except as specifically delegated to another Board committee. The Compensation Committee continues to oversee and provide input to management on diversity and inclusion matters, and the Audit Committee continues to oversee cybersecurity.



Joydeep Goswami
Chief Financial Officer,
Chief Strategy & Corporate
Development Officer

John Frank
Chief Public Affairs Officer

This new structure will increase the clarity and level of oversight of how we are managing the opportunities and risks of our material ESG issues and signifies the importance of ESG on the success of our business.

Given the importance of climate risk to the investment community and key stakeholders, how is Illumina signaling to these stakeholders your plans for climate action?

A: Joydeep As a science-based company, we wanted to ground our environmental targets in a science-based framework. We created a climate transition plan that is time-bound, with quantitative targets based on the best climate science recommendations available and aligned to the science-based target initiative (SBTi). We received external validation from SBTi of our climate transition plan, including our emission reduction targets and net zero commitments, demonstrating to stakeholders our commitment to mitigate our climate impact and provide a credible and accountable set of targets to help guide our company toward a 1.5°C climate scenario.

In addition, our commitment to climate action is demonstrated in our NovaSeq™ X launch last September. NovaSeq™ X significantly reduces waste and environmental impact, reflecting Illumina's commitment to using our technology to support the health of people and the planet. NovaSeq™ X features a 90% reduction in packaging waste and weight and 50% reduction in plastic usage compared to NovaSeq™ 6000. The enablement of ambient-temperature shipping of reagents will result in nearly 500 tons of dry ice savings per year, while significantly reducing waste streams for our customers.

What do you see as the future for ESG/CSR at Illumina?

A: John By engaging and empowering all our stakeholders, including customers, business partners, employees, and communities, we will continue to build resilience, create long-term value and support the science that advances public health and the health of our planet.

Connecting Our CSR Strategy to Our Business

With our mission to improve human health by unlocking the power of the genome, we are committed to making our products more affordable, accessible, and sustainable, realizing health equity for billions around the world.

As a purpose-driven company, we deliver sustainable, long-term value and impact by embedding our CSR strategy in the business.

Our CSR strategy has been influenced by materiality assessments and ongoing stakeholder engagement. It promotes the sustainable stewardship of our business by managing ESG risks, capitalizing on opportunities, driving performance, and ensuring business integrity.



Creating Unique Impact

We prioritize action on our most material environmental, social, and governance (ESG) issues, supported by robust governance, transparency, and accountability.

In this report we outline our management approach, targets, connection to the UN Sustainable Development Goals, and performance for each of our material ESG issues.

Through managing the risks and opportunities related to each material ESG issue, we execute on our purpose and deliver the greatest positive impact to our business, our stakeholders, and the planet.



Accelerate Access to Genomics

We are committed to accelerating access to genomics to realize health equity for billions of people around the world. We are driven by our conviction that genomics should be available to the many, not the few.

UN SDG



Material Topics

- Innovation →
- Pricing and Affordability →
- Democratize Genomics →



Empower Our Communities

We are committed to giving back, creating shared value through our business, and seeking opportunities to enable a more equitable and sustainable future for all.

UN SDG



Material Topics

- Community Investment →
- STEM Education →



Integrate Sustainability

We are committed to integrating environmental stewardship into the fabric of how we operate. Human health and the health of our environment are intertwined and connected to creating a healthy, sustainable future for all.

UN SDG



Material Topics

- Climate Action →
- Sustainable Facilities →
- Sustainable Products →
- Sustainable Supply Chain →



Nurture Our People

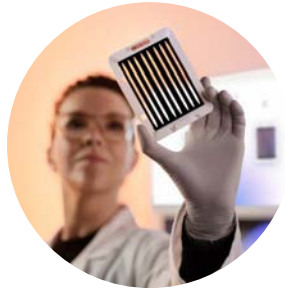
We are committed to engaging extraordinary talent and helping them thrive. By focusing on diversity, equity, and inclusion, investing in our people, and enabling a culture of care, we magnify the value of that collaboration and build community. Together our impact is amplified, and our potential is unlimited.

UN SDG



Material Topics

- Diversity, Equity, and Inclusion →
- Human Capital Management →
- Employee Health, Safety, and Wellness →



Operate Responsibly

We are committed to conducting ourselves with honesty, integrity, and respect for all. As genomic pioneers, we are enabling innovation for good, ensuring that the technology we create and the data we collect are used safely, ethically, and responsibly.

UN SDG



Material Topics

- Data Privacy and Security →
- Corporate Governance →
- Ethics and Transparency →
- Product Safety and Quality →

In this report, we use the terms “material” and “materiality” to refer to topics that reflect Illumina’s meaningful environmental, social, and governance impact. The use of such terms shall not be deemed to constitute an admission as to the materiality of any information in this report for purposes of applicable securities laws or any other laws of the United States, nor are we using them as they are used in the context of financial statements and financial reporting.

Our 2030 Targets

Our Focus Areas	Objectives	2030 Targets	UN SDG Target Alignment						
Accelerate Access to Genomics	1. Drive innovation and affordability 2. Catalyze genomic startups to broaden the genomic ecosystem 3. Increase genomic data diversity 4. Democratize genomics 5. Enable catalytic philanthropy 6. Expand reach with payer coverage, genomic literacy, and patient advocacy 🔄 Enable \$100 genome 🔄 Support 50,000 patients through philanthropic iHope programming 🔄 Achieve 2 billion covered lives by 2026 🔄 Invest in 200+ genomic startups ✔️ Activate Pathogen Genomics Initiative donations enabling our \$60 million commitments ✔️ Reach at least 25,000 medical education learners annually 3 GOOD HEALTH & WELL-BEING 4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 17 PARTNERSHIPS FOR THE GOALS Target 3.d: Improve early warning systems for global health risks Target 17.6: Knowledge sharing and cooperation for access to science, technology, and innovation Target 17.7: Promote sustainable technologies to developing countries Target 17.16: Enhance the global partnership for sustainable development	Empower Our Communities	1. Provide meaningful and strategic community investment 2. Engage our people to be agents of social change 3. Drive equitable access to STEM education 🔄 Reach 5 million STEM learners 🔄 Donate 100,000+ volunteer hours ✔️ Achieve 50% employee participation in giving and volunteering 4 QUALITY EDUCATION 5 GENDER EQUALITY 10 REDUCED INEQUALITIES Target 10.3: Ensure equal opportunities and end discrimination Target 5.b: Promote empowerment of women through technology	Integrate Sustainability	1. Drive climate action 2. Operate sustainable facilities 3. Foster a sustainable value chain 4. Develop sustainable products 5. Leverage genomics for a healthier planet 🔄 Deliver net zero emissions (Scope 1,2,3) by 2050 🔄 Reduce emissions by 46% (Scope 1,2) 🔄 Reduce emissions by 46% (Scope 3) ✔️ Achieve 100% renewable electricity 🔄 Reach 90% landfill diversion at core sites 🔄 Reach 10% reduction in water intensity at core sites 🔄 Reduce packaging by 75% 🔄 Invest \$20 million in philanthropic sustainability initiatives ✔️ Have 100% of strategic suppliers commit to minimizing their environmental footprint 9 INDUSTRIAL INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION Target 12.2: Sustainable management and use of natural resources Target 12.5: Substantially reduce waste generation Target 13.2: Integrate climate change measures into policy and planning	Nurture Our People	1. Practice diversity, equity, and inclusion 2. Invest in our people 3. Create a culture of care ✔️ Increase gender representation in global leadership ✔️ Maintain zero net pay gap ✔️ Increase minority representation in executive leadership (US) ✔️ Increase representation of Black, Native, Pacific Islander, Hispanic or Latino, 2 or more in US workforce and leadership ✔️ Reduce recordable injury and illness rate 3 GOOD HEALTH & WELL-BEING 5 GENDER EQUALITY 10 REDUCED INEQUALITIES Target 10.3: Ensure equal opportunities and end discrimination	Operate Responsibly	1. Practice strong corporate governance 2. Maintain a culture of compliance 3. Act with integrity in all that we do 4. Foster a responsible supply chain 5. Uphold high standards for data security and privacy 6. Participate in proactive public policy ✔️ Ensure 100% strategic suppliers committed to reducing their environmental footprint 🔄 Achieve 20% spend with diverse suppliers (US) ✔️ Achieve top industry ESG ratings 10 REDUCED INEQUALITIES 17 PARTNERSHIPS FOR THE GOALS Target 9.2: Promote inclusive and sustainable industrialization Target 10.3: Ensure equal opportunities and end discrimination Target 17.16: Enhance the global partnership for sustainable development ✔️ Achieved 🔄 In Progress

CSR Governance

CSR is integral to how we do business. Our governance structure facilitates accountability, transparency, and continuous improvement.

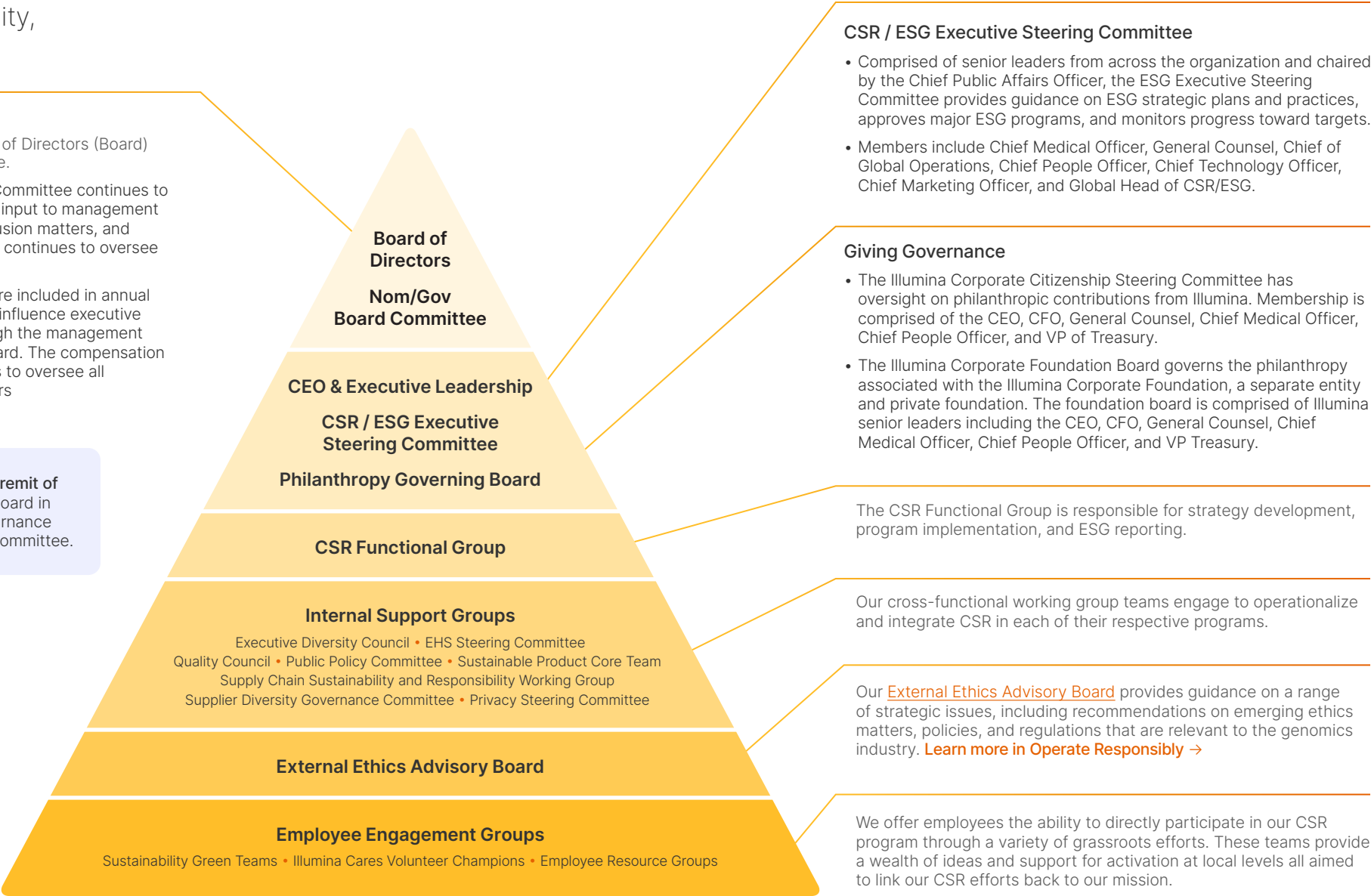
Board of Directors

We govern CSR at the highest level with oversight from the full Board of Directors (Board) with support from the Nominating / Corporate Governance Committee.

- This strong leadership supports the management of material environmental, social, and governance issues, including climate action, diversity, equity, and inclusion, human rights, cybersecurity, and ethical, responsible business practices
 - The full Board provides oversight and receives updates on current performance and future strategic plans at least annually or more frequently if material changes occur
- The Compensation Committee continues to oversee and provide input to management on diversity and inclusion matters, and the Audit Committee continues to oversee cybersecurity
 - Select ESG targets are included in annual corporate goals and influence executive compensation through the management performance scorecard. The compensation committee continues to oversee all compensation matters

In addition to the full Board oversight, we have now **expanded the remit of the Nominating/Corporate Governance Committee** to assist the Board in overseeing the company's material environmental, social, and governance matters (ESG), except as specifically delegated to another Board committee.

Learn more about our Board governance, member tenure, independence, and diversity in [Operate Responsibly](#) →



Stakeholder Engagement and Materiality

Our CSR strategy is continuously informed by engaging our stakeholders around our most material ESG issues.

Engaging Our Stakeholders

We are committed to operating with transparency and open communication to develop trusted relationships with all our stakeholders. We routinely gather feedback on environmental, social, and governance (ESG) topics from our stakeholders and work to create an open dialogue. As part of our ongoing engagement, we have used a variety of ways to gather feedback and evolve our program, including customer surveys, employee surveys, industry trade group participation, guidance from relevant frameworks, and external benchmarking.

Investors

- [ESG Investor Event](#) – We convened our second annual ESG investor event to share progress and field questions
- [Investor Day](#) – We hosted Investor Day for presentations by members of Illumina's executive team and a live Q&A session

Customers

- Our Customer Experience team regularly surveys customers to understand how we can improve. We conduct biannual relationship surveys, leverage machine learning tools, and provide an open channel for customer feedback from our field employees. These types of inputs even helped inform our design for environment approach. [Learn more in Sustainability →](#)

Patients

- We continue to advocate for the best clinical care for patients across the globe, actively engaging with medical organizations and governments to ensure that the genetic disease community has not only hope but also a voice

Reporting Frameworks and External Benchmarking



Employees

- Employee pulse surveys are sent out at least bi-annually [Learn more in People →](#)

Community Partners

- Community investment grant recipients complete an impact report following completion of projects to help guide future opportunities and provide feedback [Learn more in Community →](#)

Governments and Regulatory

- Illumina connects with governments and organizations around the world to engage and educate policymakers and key stakeholders on issues that impact our mission and business

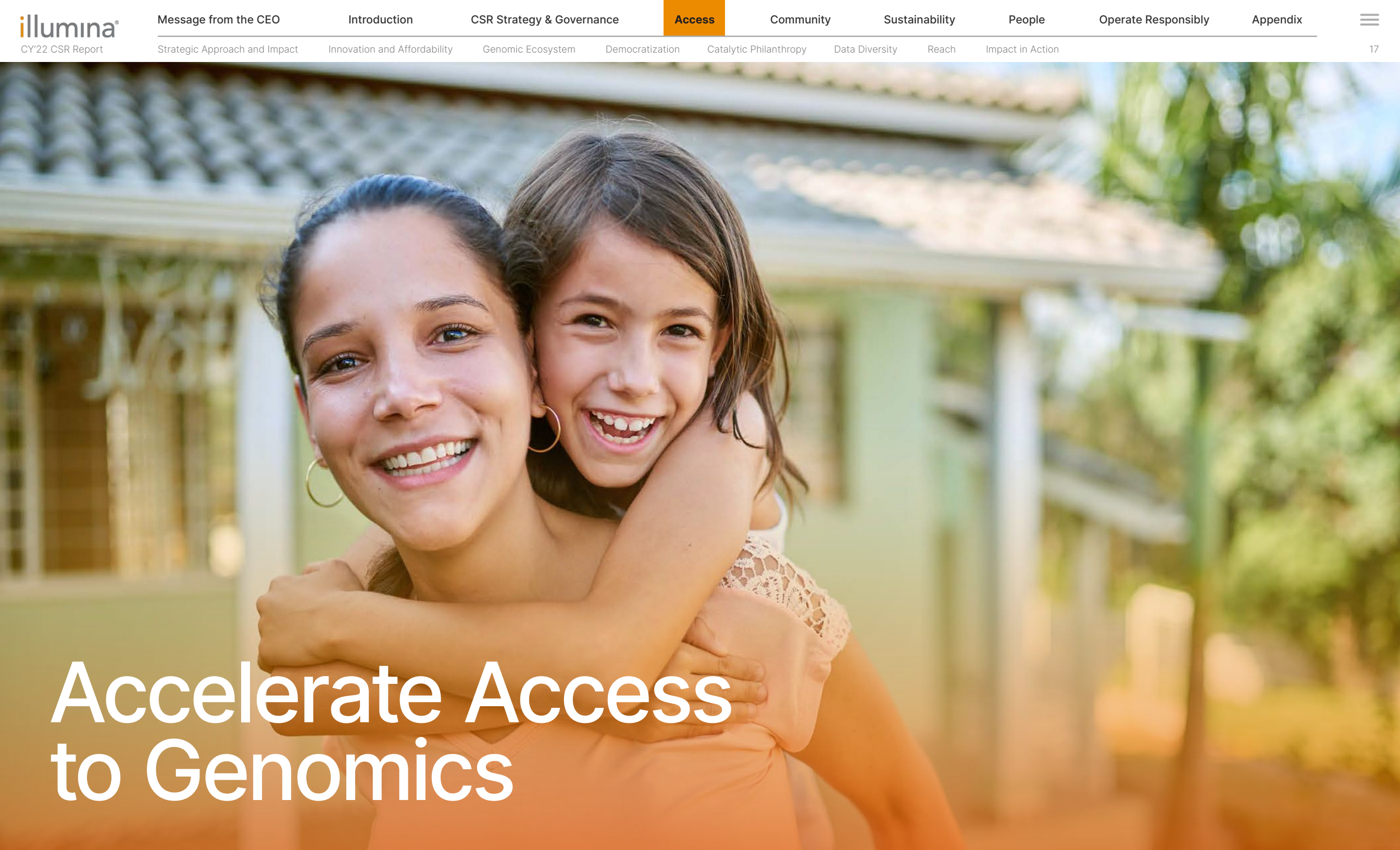
Materiality Assessment

- Our materiality assessment guides our CSR strategy by identifying the material¹ issues that matter most to our business and our stakeholders, and where we are uniquely positioned to create the greatest positive impact
- In 2021, we refreshed our 2018 baseline materiality assessment. The updated materiality assessment further refined and validated our priorities and focus areas

[Learn more about our CSR Strategy →](#)



Our Most Material ESG Issues		
Environment	Social	Governance
Climate Action	Democratize Genomics	Innovation
Sustainable Facilities	Community Investment and Philanthropy	Pricing and Affordability
Sustainable Products	STEM Education	Data Privacy and Security
Sustainable Supply Chain	Diversity, Equity, and Inclusion	Corporate Governance
	Human Capital Management	Ethics and Transparency
	Employee Health, Safety, and Wellness	Product Safety and Quality



Accelerate Access to Genomics

Strategic Approach and Impact

We are committed to accelerating access to genomics to realize health equity for billions of people around the world. We are driven by our conviction that genomics should be available to the many, not the few.

Realizing the potential of the genome to exponentially improve the human condition requires continued innovation and the democratization of genomics.

KEY OBJECTIVES

- 1 Drive innovation and affordability
- 2 Catalyze genomic startups to broaden the genomic ecosystem
- 3 Democratize genomics
- 4 Increase genomic data diversity
- 5 Enable catalytic philanthropy
- 6 Expand reach with payer coverage, genomic literacy, and patient advocacy

“To successfully fulfill our mission to improve human health, we must expand access to genomic technology in medical care to improve outcomes, regardless of social status, income, or geographic location. We must continue to bridge the gaps to ensure the individuals receiving genomic analysis represents our global diversity.”



Phil Febbo, MD
Chief Medical Officer

UN SDGs

3 GOOD HEALTH

4 QUALITY EDUCATION

10 REDUCED INEQUALITIES

17 PARTNERSHIPS FOR THE GOALS

2030 Target	2022 Progress
Achieve \$100 genome	\$200¹
Support 50,000 patients through philanthropic iHope programming	1,704
Invest in more than 200 genomic startups	74
Activate Pathogen Genomics Initiative donations enabling our \$60 million commitments by 2027	\$11M
Achieve 2 billion covered lives by 2026	1.2B
Reach at least 25,000 medical education learners annually	> 30,000

2022 Highlights

Breakthrough NovaSeq™ X series announced	22% revenue invested in R&D
193 new patent applications in 2022	9,178 total patents issued worldwide

¹~\$200, based on US list price, assuming 120 Gb/genome; compared to NovaSeq™ 6000.

Drive Innovation and Affordability

We have proven through focused and continuous innovation that unlocking the power of the genome can exponentially improve the human condition. As an engine of genomics innovation, we understand that the larger we grow our network of partners, the more lives that can be impacted.

There is an urgency to our mission because we understand that today's discoveries have the potential to help tomorrow's patients and address some of the world's most pressing challenges. Every technological breakthrough that reduces cost, improves throughput, decreases turnaround time, or improves ease of use helps us realize our potential, improving more lives and protecting our planet.

To drive innovation and affordability we endeavor to:

- Lower the cost of sequencing and enhance the value beyond cost per genome

Invest in strategic acquisitions and collaborations
- Deliver breakthrough technology and workflows

Catalyze genomic startups

2030 TARGET

\$100
genome

2022 PROGRESS

\$200
with announcement of launch of NovaSeq™ X

Lower the Cost of Sequencing and Enhance the Value Beyond Cost Per Genome

Since 2001, the cost of DNA sequencing has dropped more than 100,000x from \$100 million USD per human genome to ~ \$200¹ USD with the NovaSeq™ X sequencers, putting our dream of a \$100 genome within reach. Innovations are enhancing the value beyond cost per genome and delivering the most comprehensive genomic view.



¹~\$200 / genome based on US list price, assuming 120 Gb/genome; compared to NovaSeq™ 6000.



Breakthrough Technology and Workflows

Innovating at the intersection of technology, biology, and health, Illumina is reimagining what is possible for clinicians, transforming how they detect, diagnose, and treat cancer as well as other rare, infectious, and genetic diseases. We aim to inspire our customers to dream big.

Our 2022 Product Innovations



The NovaSeq™ X Series

At the end of 2022, we introduced the [NovaSeq™ X series](#), our most powerful and sustainable high-throughput next-generation sequencers. Breakthrough innovations with new XLEAP-SBS™ chemistry deliver revolutionary throughput, scale, sustainability, and accuracy with transformative economics. [Learn more about the sustainability attributes in Sustainability →](#)

NOVASEQ™ X SERIES HIGHLIGHTS			
Throughput, Accuracy, Efficiency	Economics	User Experience	Sustainability
2.5x higher output	60% reduction in cost/Gb*	Ergonomic innovations	90% reduction in packaging weight and waste
2x faster	~\$200 genome (based on US list price, assuming 120 Gb/genome)	Individually addressable flow cell lanes are done onboard the system automatically and automated lossless data compression	50% reduction of plastic mass
Up to 3x greater accuracy with the XLEAP-SBS chemistry	Lower disposal cost with more recyclable plastics, no dry ice, no ice packs	Reduced unpacking time and maximized storage space with compact cartridges and packaging	61% reduction in climate change impact

*~\$200 (based on US list price, assuming 120 Gb/genome; compared to NovaSeq™ 6000.

Illumina Complete Long Read Technology

To address the small portion of the genome that has historically been challenging to map due to highly repetitive or highly homologous regions of the genome, we developed a novel, [high-performance longread assay](#) that accelerates access to the remaining ~5% of genic regions, creating our most comprehensive genomic view yet.

- 99.87% accuracy score as measured by Precision FDA Challenge v2
- 90% less DNA input than current long read technology
- Simple workflow with automatable single-day library preparation

NovaSeq™ 6000 Dx

The first FDA-registered and CE-marked *in vitro* diagnostic (IVD) high-throughput sequencer, delivering the highest standards of compliance and driving actionable insights for patient care. This technology expands the breadth of applications and clinical testing in countries that require IVD products, increasing access to clinical genomics with scalable throughput while achieving significant reductions in cost/Gb and total cost of ownership. NovaSeq™ 6000 Dx is an open platform with Research Use Only (RUO) and IVD modes and a dedicated DRAGEN™ server, resulting in flexible, high-quality, automated data processing that will minimize the time and labor required to complete projects.

- First FDA-registered and CE-marked IVD high-throughput sequencer



Invest in Strategic Acquisitions and Collaborations

At Illumina, we are not just at the forefront of a global genomics movement, we are at the center of a transformation in global health. The last few years have shown the world the promise of genomics and the power of collaboration. Together we can achieve more. Enabling innovation and driving affordability goes beyond delivering sequencers and data. It includes delivering insights and accelerating the paradigm shift toward genomic sequencing as a standard of care to improve patient outcomes and drive down overall health care costs.

“In addition to our internal innovation engine, we leverage strategic acquisitions and collaborations to further support our mission, drive affordability, and accelerate access to genomics for all so that the potential of personalized medicine can be realized.”



Joydeep Goswami
Chief Financial Officer, Chief Strategy
& Corporate Development Officer

Illumina Launches a Research Test Co-developed with Merck to Unlock Deeper Insights into the Tumor Genome

The research test builds upon Illumina’s commitment to broadly enable comprehensive genomic profiling and enhance research critical to realizing precision medicine in oncology. [Learn more](#)

Illumina Launches Strategic Research Collaboration with AstraZeneca to Accelerate Drug Target Discovery

The research collaboration aims to utilize artificial intelligence (AI)-based genome interpretation and genomic analysis techniques along with industry expertise. [Learn more](#)

Illumina and GenoScreen Partner to Expand Access to Genomic Testing for Multidrug-Resistant TB

This alliance will help advance the World Health Organization’s strategy to end the global tuberculosis (TB) epidemic by 2035. It will also enable global access to a package combining Illumina sequencing products and the GenoScreen Deeplex® Myc-TB assay, a targeted next-generation sequencing (NGS) based test for rapid and extensive detection of anti-TB drug resistance, to promptly inform treatment decision. [Learn more](#)

Illumina Acquires GRAIL, a Previous Spin-Off of Illumina, to Improve Early Detection of Cancers (2021)

GRAIL is focused on lifesaving early detection of multiple cancers—all through a simple blood test in a doctor’s office. GRAIL’s Galleri® blood test can detect more than 50 types of cancer in asymptomatic patients. Our acquisition of GRAIL will accelerate access and adoption of this life-saving test worldwide.¹

Illumina Acquires IDByDNA

This company is developing metagenomic technology for infectious disease testing and pathogen surveillance. After an alliance for the past two years, the acquisition brings in-house a respiratory pathogen panel enrichment kit that identifies more than 280 pathogens, including SARS-CoV-2, and more than 1,200 antimicrobial resistance alleles. It runs on Illumina’s NextSeq 550 sequencing system and utilizes IDbyDNA’s Explify analysis software.

Additional 2022 Acquisitions, Partnerships, and Collaborations

- [Illumina Enters Co-Development Partnership with Somalogic](#)
- [Boehringer Ingelheim Companion Diagnostic Partnership](#)
- [Illumina Partners with Agendia to Expand Genomic Testing in Breast Cancer](#)
- [Illumina and Nashville Biosciences Announce Sequencing Agreement with Amgen](#)
- [Illumina Collaborates with National Cancer Center Japan](#)
- [Illumina Partners with Centers Across France to Advance Precision Medicine Approach for Patients with Late-Stage Cancer](#)
- [Illumina and Deerfield Management Partner to Accelerate Drug Development](#)
- [Illumina and GenoScreen Partner to Expand Access to Genomic Testing for Multidrug-Resistant Tuberculosis](#)

Illumina Ventures

We further support the genomics startup community through Illumina Ventures, an independently managed firm founded in 2016. It is focused on assisting startups that are pioneering genomic applications and enabling precision medicine. We provide funding and strategic counsel, as well as access to the wealth of experience and expertise of the world’s leading genomics solutions provider. [Learn more about Illumina Ventures.](#)

[Illumina Invested in Time Boost Capital I LP](#), a £30 million (US \$36.8 million) genomics venture fund from cornerstone investor LifeArc, other US and European investors, Illumina, and Illumina Ventures. The fund provides match funding to startups graduating from Illumina Accelerator Cambridge with the aim to advance breakthroughs in human health.

¹GRAIL must be held and operated separately and independently from Illumina pursuant to the interim measures ordered by the European Commission, which prohibited the Illumina/GRAIL transaction on 6 September 2022 under the EU Merger Regulation.

Catalyze Genomic Startups

Genomics startups are playing an increasingly important role internationally in the expansion of the genomic ecosystem. Illumina aims to catalyze this growth by supporting [Illumina for Startups](#) and [Illumina Ventures](#). The dramatic innovations emerging are helping to drive down costs and unlock new areas of biology and market use.

Illumina for Startups

Illumina for Startups is focused on creating an innovation ecosystem for the genomics industry by partnering with leading venture capital investors and entrepreneurs to create, launch, and grow genomics startups. Illumina for Startups initiatives include Illumina Accelerator, founded in 2014, and Sequoia Capital China Intelligent Healthcare Genomics Incubator, Powered by Illumina, founded in 2021.

\$1.1B

VC funding secured

47%

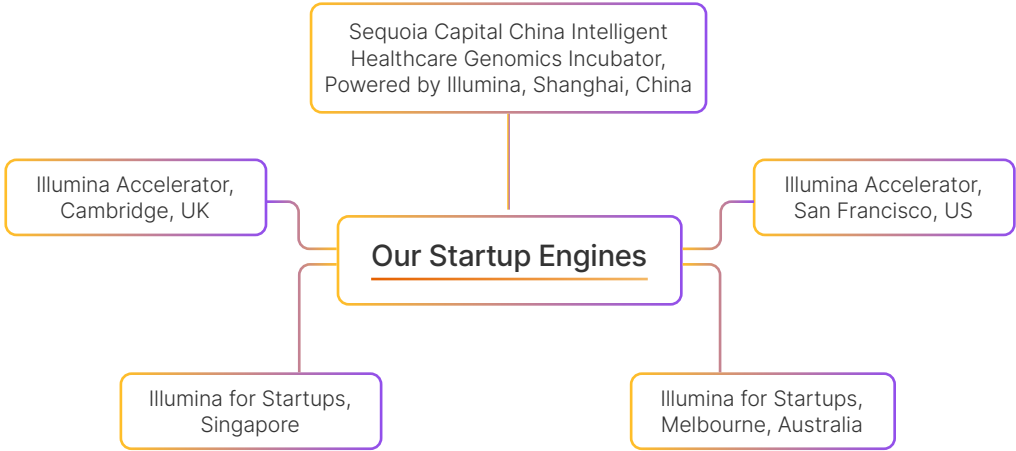
female founders

5

global locations

93%

startups raised additional capital



SCOPE OF PROGRAMS

Novel **drug discoveries** to treat patients

Important **agriculture and food innovations** to feed more with less

Software and tools to further enable new insights

Impactful **diagnostics** to detect and prevent disease

New **synthetic biology approaches** for a more sustainable future

Consumer-driven applications to help us better understand ourselves

Startup Spotlights

[Broken String Biosciences](#)

“The Illumina Accelerator experience completely transformed the way we thought about the future development of our genomics startup.”

Felix Dobbs, Ph.D.
Co-Founder & CEO, Broken String Biosciences



[Rethink Bio Private Limited](#), a synthetic biology company from India, is focused on **harnessing the potential of microalgae** to develop sustainable food solutions to benefit the planet and people.



2030 TARGET

200+ genomics startups supported

2022 PROGRESS

74 startups launched since program inception

Democratize Genomics

We are driven by our conviction that genomics should be available to the many, not the few.

Realizing the potential of the genome requires education, advocacy, access, and global data that is representative of the diversity of our populations.

Democratizing genomics and genomic sequencing can enable families, communities, and whole populations to harness the benefits of next-generation sequencing (NGS).

We are proud to support projects that:

Enable catalytic philanthropy

Increase genomic data diversity

Expand the reach of genomics with payer coverage, genomic literacy, and patient advocacy



Enable Catalytic Philanthropy

Bringing iHope™ to More Families

The Illumina iHope program will change the trajectory of genomic medicine worldwide, helping patients who may have otherwise been invisible to diagnostic and preventative service providers.

Families of children with undiagnosed genetic diseases often face an uncertain and unpredictable future. Their diagnostic journeys may take up to seven years in developed countries, while in low- and middle-income (LMI) geographies, many families never know the cause of their child's suffering. iHope is a philanthropic effort that provides clinical whole-genome sequencing (cWGS) to underserved families around the globe. It was created in 2017, bringing together a wide range of organizations aiming to shorten the diagnostic journey and inspire hope.

Demonstrating the impact of the program regardless of location, nearly 60% of the cases received in 2022 came from seven iHope program sites in LMI countries (Ghana, DR Congo, Peru, and Mexico). Patients from iHope sites in LMI countries who received a molecular diagnosis had comparable rates of change management to patients from high-income countries. We are excited about the growth and expansion that will bring iHope to more families in the future. Learn more about [iHope](#).

iHope Impact

1,704

patients impacted since inception

40%

patients receive diagnosis after cWGS

70%

change management after cWGS¹

28

iHope clinical sites worldwide

3

new clinical sites in Zimbabwe, N. Macedonia, and Singapore

2030 TARGET	2022 PROGRESS
50,000+ patients supported through iHope programming	1,704 patients supported

iHope Genetic Health

In 2021, we announced an expansion of the iHope program with the launch of the iHope Genetic Health program under the auspices of the nonprofit Genetic Alliance. The expanded program is designed to provide cWGS to tens of thousands of underserved families across the globe with at least half outside the US and at least one third dedicated to patients in Africa. In 2022, critical infrastructure and partnerships were put in place. Learn more about [iHope Genetic Health](#).



“No child with a genetic disease should suffer unnecessarily. iHope points to a future where every patient receives a diagnosis and true precision care.”



¹Derived from >1000 cohort 22.

iHope China with March of Dimes

Building upon the iHope model, in 2022 we announced the launch of our [iHope China](#), bringing whole-genome sequencing to those in need with our partner, the March of Dimes Birth Defects Foundation of China. iHope China aims to provide free genetic disease testing funding for 2,000+ families of rare disease patients across the country in the next three years. Additionally, the program will provide genetic disease identification and diagnosis training courses for 100+ front-line clinicians in 20 hospitals and continue to empower the construction of genetic disease specialty in China.



Boost Pathogen Genomics Surveillance in Low- and Middle-Income Countries

Building pathogen genomics capabilities globally protects the health of everyone since a public health threat in one location can quickly become a threat everywhere. The UN Sustainable Development Goal (SDG) 3 includes targets related to improving early warning systems for global health risks. In addition, SDG 17 promotes knowledge sharing and cooperation for access to science, technology, and innovation.

We are proud to be part of the Pathogen Genomics Initiative (PGI), a multi-sector collaboration with global funders, industry, NGOs, and public health agencies. In October of 2020, the [Africa Pathogen Genomics Initiative](#) was launched with the aim to enhance disease surveillance and public health through integrated, cross-continent laboratory networks equipped with the tools, human resource capacity and data infrastructure to fully leverage critical genomic-sequencing technologies. The vision was to integrate pathogen genomics and bioinformatics into routine public health surveillance systems, outbreak investigations, timely response to infectious disease threats, responsible data sharing, and improved disease control and prevention.

The partnership is designed to expand access to next-generation genomic sequencing (NGS) tools and expertise to strengthen public health surveillance and laboratory networks across low- and middle-income countries for COVID-19 and other epidemic threats and endemic diseases such as AIDS, tuberculosis, malaria, and cholera. Pathogen sequencing will also contribute to research and development efforts for new vaccines, diagnostics, and treatments for current and emerging infectious diseases.

In 2019, only seven countries in Africa had next-generation sequencing capacity within their public health laboratories. By 2022, that number has grown to 31, and Illumina donations have supported 20 of these countries. The new infrastructure was put to immediate use in 2022 to manage the Ebola virus and Mpox outbreaks, among others.

Illumina has committed \$60 million over five years with in-kind donations, including NGS platforms, reagents, and training support to the initiative. The initiative will bring us closer to the vision of an early warning system to detect new epidemics and apply genomics to benefit all.

COVID-19 pathogen surveillance is not the end of the story. The UN Environment Program has warned of the growing risk of zoonotic disease, infections that spread between people and animals due to increased urbanization and expansion of industrialized agriculture.

Building a global pathogen surveillance system that supports a One Health approach and is both versatile and adaptable is a vital part of managing these risks and a core part of the PGI vision.

The Pathogen Genomics Initiative (PGI) is a collaboration between the Africa CDC Institute of Pathogen Genomics, the U.S. Centers for Disease Control and Prevention, the Bill and Melinda Gates Foundation, Microsoft, Illumina, and other industry partners. The initial Africa PGI commitment included \$20 million and led to the expansion of a global model. Illumina committed an additional \$40 million of product donations over five years to support the global expansion and to other low-and middle-income countries, starting in South Asia.

The PGI commitment will help create a comprehensive pathogen genomic network around the world, building critical public health capabilities in areas of need.

The initiative will bring us closer to the vision of an early warning system to improve global health risks and apply genomics to benefit all.

*An African proverb uttered in the halls of the African Union captures the ethos of global partnerships and the spirit of collaboration: **If you want to go fast, go alone. If you want to go far, go together.***



TARGET	2022 PROGRESS
\$60 million committed over five years	\$11 million since program launch

Africa PGI Impact

\$9 million
delivered

20
countries

Asia PGI Impact

\$2 million
delivered

4
countries

Increase Genomic Data Diversity

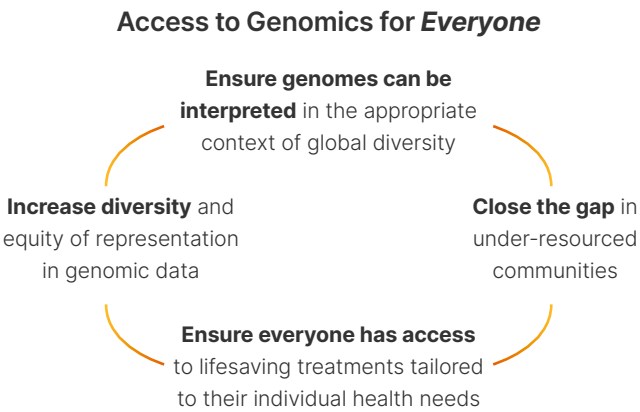
Genomic Data That Reflects Everyone, Everywhere

Genomic data is the blueprint for everything from identifying new diseases to precision drug development. That means the data sets must be representative to ensure the positive impact of genomics is applicable for all.

Genomics has been integrated into clinical practice at a faster rate than almost any innovation in the history of medicine, but inequities still exist. Implementation has been almost entirely restricted to more developed nations, and 87% of individuals included in genomic studies of disease risk are of European ancestry.

To ensure that genomes can be interpreted in the appropriate context of global diversity, we aim to increase the equitable representation of genomic data. This allows for therapies and solutions to be attuned to a broader set of genomes, decreasing this bias in our medicine for the future.

We are proud to support commercial and philanthropic efforts to increase diversity in human genetics and ensure that genomic representation is part of equitable health care in the future.



Qatar Genome Program

The [Qatar Genome Program](#) (QGP) is using Illumina technology to sequence individuals from the general population of Qatar, advancing genetic studies in Arab and Middle Eastern populations.

Egyptian Genome Project EGP

This year, the [Scientific Research and Technology Academy and Ministry of Defense](#) celebrated the two-year anniversary of the launch of the genome project in partnership with Illumina to implement a reference genome for Egyptians.

Singapore’s SG100K Project

In 2022, [Precision Health Research](#) (PRECISE), the lead entity implementing Singapore’s National Precision Medicine strategy, partnered with Illumina to launched the [SG100K Project](#). The three-year initiative aims to map the DNA of a diverse group of 100,000 Singaporeans who are of Chinese, Malay, and Indian ethnicity. In addition to enabling population-based research in groups that have been historically underrepresented, PRECISE will use the information collected to identify the social, environmental, lifestyle, and genetic factors that are associated with diabetes, hypertension, cancer, and other important diseases in the multi-ethnic population of Singapore.

Human Heredity and Health in Africa

Illumina supports the [Human Heredity and Health in Africa](#) (H3Africa). The H3Africa assays use novel, genome-wide content from individuals across African populations, built on the MEGA Array backbone. These studies use genetic, clinical, and epidemiologic methods to identify hereditary and environmental contributions to health and disease, empowering the ability to address African genomic diversity that can improve the health of both African peoples and the broader global population.

Genetic Research into Cancer Origins

The [New York Genome Center’s](#) (NYGC) [Polyethnic-1000 Project](#) (P-1000) focuses on cancer care inequities in underserved populations, with the objective of democratizing and broadening access to the power and potential of cancer therapies. Illumina provided \$2.4 million of in-kind product donations to support this initiative and help to identify differences between ethnicities that may account for disparities in occurrence, response to treatment, and survival for different cancer types. Using whole-genome sequencing (WGS), the resulting data set will be made public to the entire research community, creating the largest and most diverse collection of full-genome pairs available in oncology.

Native American Genomic Research

[Native BioData Consortium](#) (NBDC) is the first nonprofit research institute led and staffed by indigenous scientists and tribal community members in the US. Since its inception in 2018, the consortium’s goal has been to ensure that Native people can benefit from advances in genetics and health research.

In 2021, to empower the Native community’s ability to respond to COVID-19 and future risks, we supported the donation of a NextSeq 550, consumables, and training to the Cheyenne River Sioux Tribe. In addition to COVID-19 surveillance, NBDC will be able to study other diseases that disproportionately affect their population, such as diabetes, cardiovascular disease, and colon cancer.

Alliance for Genomic Discovery (AGD)

Illumina and Nashville Biosciences, announced a sequencing agreement with Amgen to whole-genome [sequence 35,000 DNA samples](#) primarily made up of DNA from African Americans, currently a community underrepresented in research for the clinical applications of genomics.

Australia’s OurDNA Initiative

Australia’s [Centre for Population Genomics](#) (CPG), a collaboration between the Garvan Institute of Medical Research and the Murdoch Children’s Research Institute, has launched a new initiative to engage diverse communities in genomic research. Supported by a AU\$10 million (US \$6.26 million) grant from the Australian government, as well as contributions from Illumina and other organizations, the Australian Genetic Diversity Database project, called OurDNA, will gather data to improve disease prediction, diagnosis, and treatment in underserved communities.



Expand Reach of Genomics with Payer Coverage, Genomic Literacy, and Patient Advocacy

Increase Patient Coverage and Reimbursement

Enabling innovation and driving affordability goes beyond delivering sequencers and data. It includes delivering insights and accelerating the paradigm shift toward genomic sequencing as a standard of care to improve patient outcomes and drive down overall health care costs. Through evidence generation, education, and community outreach, Illumina is committed to advocating for health care coverage and accelerating the adoption of genomics as a diagnostic tool.

- Evidence generation for clinical utility
- Expanded reimbursement and payer engagement
- Education of health care providers and government representatives
- Increased adoption

2030 TARGET

2 Billion

covered lives globally by 2026

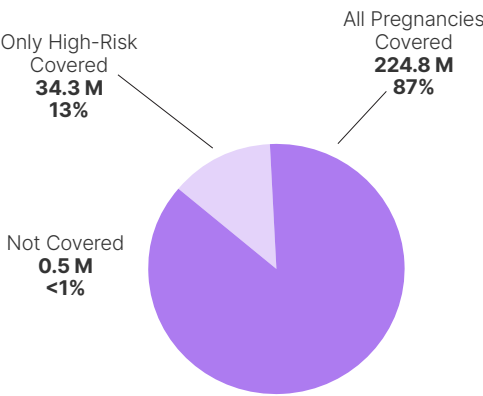
2022 PROGRESS

1.2 Billion

US Coverage Data (EOY 2022)

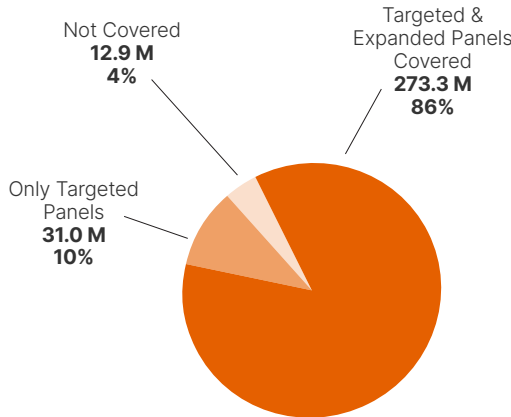
Non-Invasive Prenatal Testing (NIPT)

Total Insured Lives **259.7 M**



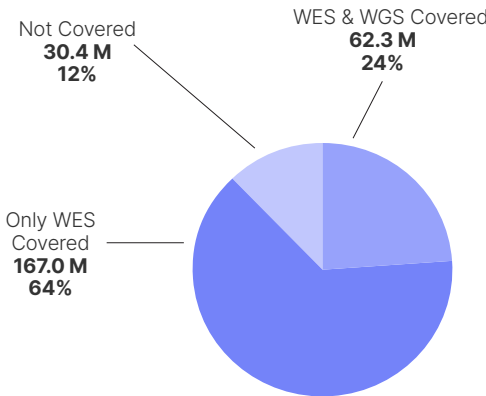
Somatic Mutation Panels (Oncology)

Total Insured Lives **317.3 M**



Whole-Exome and Genome Sequencing (Genetic Disease)

Total Insured Lives **259.7 M**



Global Coverage Snapshot¹

2022 PROGRESS

986M
↑149M YoY growth

2022 PROGRESS

536M
↑52M YoY growth

2022 PROGRESS

714M
↑62M YoY growth

Based on coverage and reimbursement of NIPT, CGP in advanced cancer, or WES/WGS in genetic disease

¹Global coverage numbers represent our tracking of 19 countries globally (US, Canada, Belgium, Czech Rep, Denmark, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden, UK, Israel, Japan, S Korea, Australia, China).

Strategic Evidence Projects to Engage Health Systems Globally and Demonstrate Clinical Utility

Optum/UnitedHealth Group (US)
The companies launched multiple evidence-generation projects across rare disease, oncology, and cardiovascular disease to accelerate the generation of evidence needed to unlock the promise of precise medicine.

Baby Lion (Germany) Hanover Medical School will evaluate the use of WGS to show the positive impact of earlier diagnosis and treatment of infants suspected of having a genetic disorder while in the neonatal intensive care unit (NICU).

Baby Bambi (Israel) Illumina supported a pilot program with Israel's Ministry of Health, led by the Genetics Institute of the Tel Aviv Sourasky Medical Center, to implement the use of whole-genome sequencing (WGS) for rapid diagnosis in newborns in critical conditions who are treated in NICUs. Clinical results have been reported back with a diagnostic yield coming close to 50%. Based on the positive results of Baby Bambi, the Ministry of Health is expected to commission a decision for reimbursement for rapid whole-genome sequencing (rWGS) in the NICU in 2023, providing the creation of a national reimbursement for WGS as diagnostic tool in hospitals across Israel.

Providence (US) The company is performing comprehensive genetic profiling (CGP) to demonstrate utility within an integrated care system. The collaboration has resulted in 10+ abstracts and there are multiple peer-reviewed publications due out in 2023.

Ballett (Belgium) The study will include 960 patients across Belgium from 12 cancer centers and nine NGS labs using CGP to demonstrate utility within a nationalized single-payer system.

Fudan Hospital (China) Children's Hospital of Fudan University in Shanghai is delivering a 24-hour rapid WGS diagnosis solution to NICU infant patients resulting in China's first expert consensus and first research article published for NICU rapid WGS application.

800+

peer-reviewed papers in strategic clinical segments

263

studies and research collaborations across the globe in pipeline

2

Illumina papers [were highlighted in AJHG's Genomic Medicine Year in Review](#) as part of the top 10 key advances in applying genomic information to clinical care reported in 2022



Champion Patients

Transforming patient outcomes epitomizes the heart of our mission. We partner with patients, families, and organizations that represent communities to help raise awareness, build hope, and create change. In 2022, we have worked to amplify the diversity of patient voices by supporting projects that unite single stories into collective evidence of the value of genomics in oncology and rare disease.

The Adolescent and Young Adults

Researchers at the Netherlands Cancer Institute (NKI) and the Dutch AYA foundation are working on a national large-scale genomics study. Within that study, the teams are exploring how AYA patients value and cope with the experience of having their whole genome sequenced (WGS). Output of the study aims to help inform the future of oncological practice as WGS becomes more routine in the clinic and to improve care for this population.

Know Your Biomarker

This campaign was launched by the Global Colon Cancer Association to increase awareness about biomarker testing and treatment decision making. The campaign also features patient stories highlighting the impact of biomarker testing on outcomes for colorectal cancer patients.



Annual Rare Disease Awareness Campaign #IlluminatingRareDisease

Our employees are passionate about the rare disease community. They understand the power of genomics to help end a patient’s diagnostic journey and support their care management. Since 2008, Rare Disease Day events have taken place around the world on the last day of February to raise awareness about rare diseases and highlight their impact on patients’ lives. Each year, our employees participate in a campaign and the Illumina Corporate Foundation donates to the chosen charities for the year.

The Rare Barometer: The Journey to Diagnosis for People Living with a Rare Disease

The Rare Barometer is EURORDIS’ signature survey program that guides EURORDIS’ patient-driven advocacy. The survey currently accesses the experiences of over 15,000 people representing over 1500 rare diseases in 80 countries across the world. Survey results transform the experiences and opinions of individuals into collective data that is used to influence policymaking, foster information exchanges, and raise awareness. In 2022, the survey was designed to explore the individual and external factors influencing the process of obtaining an accurate diagnosis for rare disease.

We LOVE Rare in Zimbabwe

Recognizing the disparity of access to diagnosis in various countries, Child and Youth Care (CYC), a Zimbabwean-based private voluntary organization, deployed a project to not only raise awareness but to physically go out and ‘find’ children and young people impacted by rare disease and to start to create the database of evidence needed to build the value case for prevalence and impact of rare disease in Zimbabwe.

Rare Youth Intern Program

This initiative seeks to empower young people affected by rare disease around the world with skills and confidence to seek meaningful employment and to empower the next generation of advocates. This is Illumina’s second year supporting this impactful program.

Illumina Patient Ambassadors

Illumina Patient Ambassadors are a coalition of patients and family members dedicated to increasing awareness of the importance of genetic testing. Connecting families to a wider community of people with similar experiences helps provide support and strength during the search for a diagnosis and can improve patient care and management. By sharing personal stories about their disease journey, the group can educate and motivate an entire ecosystem of support.



Expand Genomic Literacy

To accelerate access to genomics, we need to accelerate awareness. Illumina is committed to increasing the awareness of genomics in health care and the advancement of precision medicine. We aim to increase genomic literacy by supporting health care professionals, government representatives, connecting genomic professionals, and inspiring the next generation of scientists, innovators, and researchers.

We are committed to expanding understanding and access to genomic testing through our outreach to community health systems.

In 2022, we partnered with the [American Society for Preventive Cardiology](#) (ASPC) to create a podcast series which reached over 26,000 learners by year-end. We continued support of the [American Society of Human Genetics](#) (ASHG) online education for genetics professionals, and we participated in Becker's 10th annual leadership roundtable on how internalizing genomics can help providers achieve key health care goals. [Learn more](#)

2030 TARGET	2022 PROGRESS
Expand independent medical education (IME) partnerships with professional societies and the medical community, providing education across all clinical segments	>30,000 learners reached through IME
>95% supported medical education programs increase in participant knowledge and competence	98% increase in participant knowledge and competence
25,000+ health care professional learners reached annually	30,000+ health care professional learners reached

Illumina Genomics Forum (IGF)

In 2022, we hosted our inaugural [Illumina Genomics Forum](#) (IGF), which convened more than 800 visionaries, customers, and leaders from translational and clinical research organizations, government institutes, and academia, as well as hospital leadership, clinicians, payers, and patient advocates. An additional 7,800 people joined virtually. As an engine of genomics innovation, we are reimagining what's possible, inspiring our customers to dream big.

[Explore](#) additional Illumina events.

“Illumina is honored to host this unique gathering of the brightest minds discussing solutions to some of today's biggest challenges, redefining what's possible together.”

Francis deSouza
CEO



Francis deSouza
CEO

Impact in Action



Baby Fitz’s Lifesaving Diagnosis Through Whole-Genome Sequencing

In June 2019, Christina and Daniel Kettler were barely home from the hospital with their newborn son when they received an urgent phone call. They needed to rush back immediately: A routine screening, called the heel stick test, had revealed that Fitz, their firstborn baby, had severe combined immunodeficiency (SCID). SCID is a rare condition also known as “bubble boy disease.” Fitz had no functioning immune system. Further testing through rapid whole-genome sequencing (rWGS) at Rady Children’s Institute for Genomic Medicine in San Diego, California (US), identified the specific kind of SCID Fitz had, known as Artemis, or ART-SCID. Fitz was able to receive gene therapy in San Francisco—a process of extracting his stem cells, injecting them with a corrected copy of the



SCID-causing gene, and infusing them back into his body. The treatment succeeded in creating from scratch an immune system that would function properly and support Fitz. This year, Fitz celebrates his third birthday as a happy, healthy, and active toddler.

On April 25, to help raise awareness for National DNA Day, Fitz threw the first pitch with Illumina’s Chief Technology Officer, Alex Aravanis, during the April 24 San Diego Padres baseball game at San Diego’s Petco Park. Tens of thousands of baseball fans (and a contingent of proud Illumina employees) came together to celebrate Fitz and the victory of his health, and to raise awareness for genomics and its incredible potential to unlock information that improves human health.

[Learn More](#)



Beating Stage IV Lung Cancer: Biomarker Testing Changed Everything

Eight years ago, AJ Patel was diagnosed with advanced lung cancer. The Southern California resident and father of three had tumor masses in both lungs. AJ met a physician who recommended biomarker testing, an approach that uses next-generation sequencing to determine an individual’s cancer-causing genes and other markers. When the causal genetic alteration is identified through testing, a patient can be eligible for more personalized therapies or beneficial clinical trials. For AJ, biomarker testing led to a targeted therapy plan—and it is the reason he is still here today, telling his story. [Learn more](#)

Podcast series with
American Society
for Preventive
Cardiology reached

>26,000
learners



Continued Efforts and Innovation in the Surveillance of SARS-CoV-2 Variants

Illumina technology has been at the forefront of the pandemic since its inception and continues to be used across the outbreak continuum in over 200 countries around the globe.



Illumina Introduced New Pan-Cancer Companion Diagnostic to Match Patients with Rare Genetic Mutations to Targeted Therapy

In 2022, we added a companion diagnostic (CDx) indication to our CE-marked *in vitro* diagnostic TruSight™ Oncology (TSO) Comprehensive (EU) test. This single test kit assesses multiple tumor genes and biomarkers to reveal the specific molecular profile of a patient’s cancer. We continue to focus on unlocking the potential of new biomarkers to identify those most likely to benefit from precision medicines. This CDx claim, developed in partnership with Bayer, is the first of a series building upon our broad portfolio of oncology partnerships with industry leaders to advance cancer diagnostics and precision medicine. [Learn more](#)



Empower Our Communities

Strategic Approach and Impact

We are committed to giving back, creating shared value through our business, and seeking opportunities to enable a more equitable and sustainable future for all.

Fostering a culture that empowers our employees to give back is integral to our mission. Guided by our CSR focus areas, we deploy our skills, time, and resources to create a positive impact in our communities.

KEY OBJECTIVES

- 1 Provide meaningful and strategic community investment
- 2 Engage our people to be agents of change
- 3 Drive equitable access to STEM education

UN SDGs



“I continue to be inspired by the passion of our employees to give back and create a path for a more just and sustainable future.”

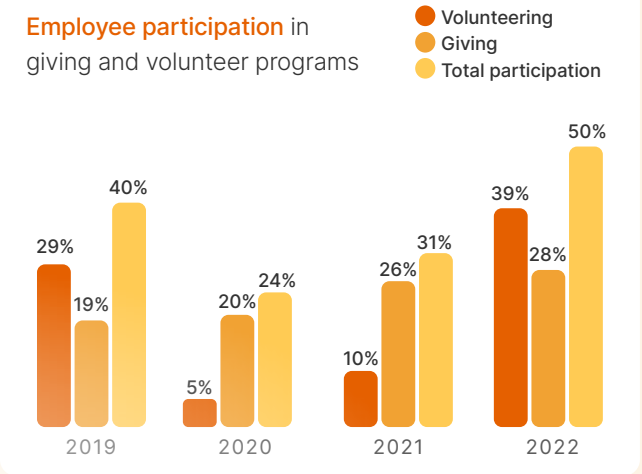


Sharon Vidal
Head of Corporate Social Responsibility

THE FUTURE OF GENOMICS
STARTS HERE

2030 Target	2022 Progress
Reach 5 millions STEM learners	1.2M STEM learners¹
Donate 100,000 volunteer hours	49,827 hours¹
Achieve 50% employee participation through Illumina Cares programs	50% employee participation

2022 Highlights	
46 countries community investment	~18 million total donations
10% increase in employee participation (giving and volunteering) since 2019	1,747 causes supported globally



¹Since 2019 baseline

Future Kings students visiting Illumina Baltimore facility.

Provide Meaningful and Strategic Community Investment

We focus our community impact strategy on investments that support our CSR efforts for patients, our communities, our people, and our planet.

We drive collective impact and leverage our resources to help address local and global needs with philanthropic activities and nonprofit partnerships.

How We Give Back

- Illumina Corporate
- Illumina Corporate Foundation
- Employee Giving and Volunteering

Community Investment Areas

Equitable Access to Genomics

APPROACH
Enable access to genomics for patients in need and increase the diversity of genomic data.

SAMPLE PROGRAMMING

- [iHope](#)
- [Pathogen Genomics Initiative](#)
- [Native BioData](#)
- [NYGC Polyethnic Study](#)
- [Red Cross Sickle Cell →](#)

Learn more in Access →

STEM Education for All

APPROACH
Increase genomic literacy and support equitable access to STEM opportunities.

SAMPLE PROGRAMMING

- [Illumina Genomic Discoveries](#)
- [DNA Decoded](#)
- [Genomics 101](#)
- [SD STEM Diversity \(SD2\)](#)
- [ENLACE SD and Mexico](#)
- [Form the Future, UK](#)
- [CHRF STEM, Bangladesh](#)
- [Cold Spring Harbor, China](#)
- [Junior Achievement](#)

Learn more in Community →

Sustainability and Environmental Justice

APPROACH
Invest in sustainability projects and efforts to create a just transition to a low carbon future.

SAMPLE PROGRAMMING

- [iConserve](#)
- [Illumina Agricultural Greater Good Initiative](#)
- [STREAM](#)
- [CSUEB Green Biome Institute](#)
- [GRID Alternatives](#)
- [The Solutions Project](#)
- [World Wildlife Fund](#)
- [SEE Foundation, China](#)

Learn more in Sustainability →

Local Impact

APPROACH
Engage in local efforts to address the issues and challenges where we live and work and support the causes employees care most about.

SAMPLE PROGRAMMING

- [Disaster response →](#)
- [Regional Community Grants →](#)
- [Ukraine support →](#)
- [Illumina Cares Ambassadors →](#)

Learn more in Community →

Diversity, Equity, and Inclusion

Diversity, Equity, and Inclusion is the foundational lens across all our investments, ensuring we consistently prioritize and promote equitable representation and support for vulnerable populations.

[Learn more in People →](#)



Engage Our People to be Agents of Change

We strive to create a purpose-driven culture with opportunities for employees to volunteer in their community with the organizations that matter most to them.

Employee Giving and Volunteer Benefits

\$500

donation match

16

hours paid volunteer time off (VTO)

\$25

new hire seed donation deposit

\$10

Volunteer rewards donation earned for each hour of volunteer work

We offer a variety of ways for employees to engage in giving back. Employees can volunteer as individuals, with their families, teams, local sites, regions, with employee resource groups and through corporate global engagements.

Individual



San Diego Classroom – Keith Rego, Senior Director of Global EHS, went to his child’s classroom to share about his work and the possibilities of DNA.



China Wetlands – 48 Illumina Greater China volunteers and their family members visited the Shanghai Chongming Dongtan Nature Reserve for the second habitat cleanup event. A total of 250 kg of used plastic bottles and Styrofoam were collected and turned into recyclable goods.



International Coastal Cleanup – 100+ Illumina employees, current and future, cleaned up local beaches. Across the region, over 4,000 volunteers cleaned 35,000 pounds of litter and debris.

Team



Pedal the Cause – The St. Louis customer success team made superhero capes for the Pedal Kids Challenge ride, supporting Pedal the Cause, an organization that provides critical funding for cancer research.



Singapore Illumina Hair for Hope – 27 Illumina Singapore employees shaved their heads to raise funds and awareness for childhood cancer. More than 200 employees supported the event, which raised nearly 38,000 SGD for Children’s Cancer Foundation Singapore.



Cambridge County Day – In celebration of the Queen’s Platinum Jubilee, Illumina served as the lead sponsor of the Cambridge County Day. We had our own Illumina marquee dedicated to the story of DNA, which began in the city in the 1950s.

ERG



Diversity in Life Science – Each ERG completes a social impact project. iLatinX ERG members regularly engage in community outreach where they mentor students and expose them to STEM concepts and careers and are active partners with programs such as the [Biocom California Institute’s Generation STEAM](#). [Learn more in People](#) →

Region



Volunteering Day – In conjunction with Singapore’s month-long National Day Giving Campaign, 253 employees from Singapore, Australia, Japan, Korea, India, and other APJ regions came together to give back in a single day over five activities in the island city. Our employees provided STEM learning opportunities to underprivileged children, contributed resource support to at-risk seniors, and enhanced environmental sustainability.

Company-wide



Rare Disease Day Campaign – For 2022 Rare Disease Day, Illumina focused on [SLC6A1 Connect](#) in the US, ASrid in Japan, NoRo in Romania, and [Rare Disease South Africa](#). Five families from each organization captured photos representing the everyday world of people living with a rare disease. [Learn more in People](#) →

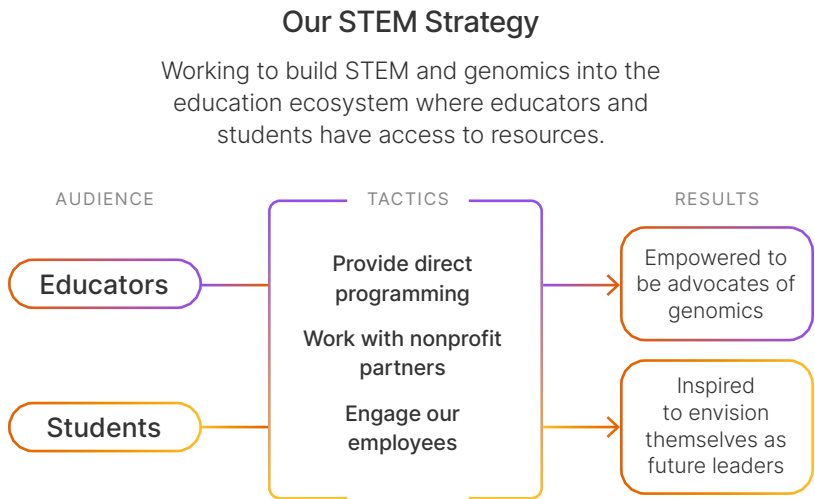
Giving “Twosday” – Illumina launched a worldwide double match campaign to commemorate Giving Tuesday. Our recent #GivingTWosday22 campaign raised over \$230,000 with almost 800 employees participating and impacted 580 charities in 29 countries.

Walk the World to End Cancer – Over 900 employees joined a virtual step challenge, walking the world for oncology. We featured international oncology charities for this special “Walk to End Cancer,” including the ASARGA Fighting Sarcoma, KickCancer Curing Kids, Zero – The End of Prostate Cancer, Rare Cancers Australia, and BEABA Cancer Education. Each charity received a \$5,000 donation for a campaign total of \$25,000.

Drive Equitable Access to STEM Education

We are committed to equitable access to STEM education with the goal of empowering students and enabling educators to inspire the next generation of scientists, innovators, and trailblazers.

The future of our mission is reliant on nurturing and equipping the next generation. Through direct programming, nonprofit partners, and engaging our employees, we aim to enable educators to be advocates of genomics and inspire learners to envision themselves as our future STEM leaders.



¹Since 2019 baseline.

Educators

Enable Educators

Inspiring the next generation of scientists, engineers, and innovators, starts with our educators. With the expertise of our employees and nonprofit partners, we develop tools and curricula for educators to bring genomics into the classroom.

- Illumina Genomic Discoveries** – In partnership with Biocom Institute California, Illumina Genomic Discoveries was developed to create an educational community of practice where teachers can learn the world of genomics. The program provides genomics-focused professional development, real-world curriculum, in-classroom activations, access to the [Illumina Virtual Lab](#) training, and industry connections.
- DNA Decoded** – In partnership with Discovery Education, [DNA Decoded](#) is designed to help educators explore curated resources with their students. The resources and guides provide educators with an overview of genomics, highlighting real-world connections to genomics and instructional resources sorted by applications.
- Virtual Field Trip** – In 2022, DNA Decoded released the [Genomics: Decoding the Language of Life](#) virtual field trip. This free virtual learning experience transports educators and students around the world to our labs in San Diego, CA, to meet our real-world experts harnessing the power of the genome to improve lives and support the conservation of the Earth's natural resources.

[Learn more and access our STEM resources.](#)

2030 TARGET	2022 PROGRESS
5 million STEM learners reached globally	1.2 million+ STEM learners reached globally ¹



DNA Day Campaign: The Future is Bright

In honor of DNA Day, which is celebrated on April 25, we host “The Future Is Bright,” a month-long genomic literacy initiative. Illumina employees connect with students by hosting career panels, implementing genomics curriculum, and leading hands-on experiments. [Learn More](#)

2022 IMPACT:

90,000+ learners	130+ events	1,500+ employee volunteer hours
1,600+ community partners and schools	53% of US classrooms were Title 1 schools where low-income families make up at least 40% of enrollment	2,230 strawberry DNA extraction kits donated
6 countries		



Students

Inspire the Next Generation

We’re committed to inspiring the next generation of genomic leaders and aim to nurture a diverse and inclusive STEM workforce for the future. To do this, we collaborate with a range of community partners and engage our employees to reach and empower students of all backgrounds.

Empowering Learners from Curiosity to Career

Through each stage of their educational journey, we empower students to envision themselves as future scientists, innovators, and trailblazers.

Curiosity

PRIMARY EDUCATION



Junior Achievement BizTown – In 2022, we opened a storefront in [Junior Achievement \(JA\) BizTown](#) in San Diego. Biztown, a mini-city, is JA’s experiential-based elementary school capstone program. The Illumina storefront mimics our labs with stations for students to become “scientists” and explore careers in the life science and biotech industry. [Learn More](#)

Cambridge Science Center – Over the summer, we sponsored a PopUpScience Roadshow with the [Cambridge Science Center](#). Students and their families explored space through hands-on science exhibits and interactive science shows.



Child Health Research Foundation – Illumina and the Illumina Corporate Foundation provided a cash grant and in-kind donations valued at over \$300,000 to the [Child Health Research Foundation](#) (CHRF), a Bangladeshi nonprofit that promotes public health and STEM education. The grant will support [CHRF’s Building Scientists for Bangladesh program](#), which will introduce young women in under-resourced communities around the country to science and provide hands-on genomic training for university students and early career professionals. [Learn More](#)

Mobile Genomics Lab – Illumina and the Illumina Corporate Foundation provided funding to the [Carl R. Woese Institute for Genomic Biology \(IGB\)](#) at Illinois University to construct, staff, and operate a mobile STEM lab. With the mobile lab, the team can travel to economically and educationally disadvantaged locations. [Learn More](#)

SECONDARY EDUCATION



San Diego Squared (SD2) – We are proud to be a founding funder of [San Diego Squared \(SD2\)](#). The organization, based in our HQ hometown, focuses on creating diversity in STEM careers. In 2021, Illumina committed \$500,000 over three years to support the program. See the recipients of the [Illumina 2022 Scholarship Award](#) and read more about the [launch of the organization](#).

Future Kings – Future Kings delivers immersive STEM programs to middle and high school boys from underserved communities through a multi-year, hands-on curriculum and dedicated mentorship. Students also receive training in science communication, entrepreneurship, and project research. [See their impact](#)



Gloucester Marine Genomics Institute (GMGI) – Illumina provided in-kind donations to support [GMGI](#), which addresses critical challenges facing oceans, human health, and the environment through innovative scientific research and education. To advance education in the local community, GMGI created the Gloucester Biotechnology Academy, which offers seven months of hands-on training and a three-month paid biotech internship. [Learn More](#)

Genspace – [Genspace](#), a community biology lab in New York City, provides STEAM education programs. In 2022, Illumina and the Illumina Corporate Foundation provided in-kind product donations and a cash grant totaling over \$100,000 to build capacity for genomics research supporting students from historically marginalized backgrounds. [Learn More](#)

Career

UNIVERSITY & BEYOND



Center for Marine Biotechnology and Biomedicine at Scripps – Illumina provided a transfer of equipment and a philanthropic grant to Scripps Institution of Oceanography at the University of California San Diego (UCSD) for researchers at the [Center for Marine Biotechnology and Biomedicine \(CMBB\)](#). CMBB focuses on research at the intersection of ocean sciences and human health. This support from Illumina will be used in the development of an automation hub and become a training tool for students as they prepare to enter the biotechnology and genomics workforce. Illumina is dedicated to creating opportunities to invite innovation and work collaboratively. We are thrilled to get this automated technology into the hands of future scientists who will drive the next era of discovery. With this equipment transfer, and supporting \$1 million grant, we hope to enable students and support the acceleration of discoveries in marine biology that could improve both human and planetary health. [Learn More](#)

ENLACE – [ENLACE](#) (Spanish for “link”) is a program at the UCSD that uses science and engineering as a bridge for Mexican high school and college students to build professional connections and personal friendships. Illumina provided funding to sponsor 14 students to attend in 2022 to participate in the mentorship program, enabling them to work in fields ranging from marine biology to the physical sciences and even get a chance to contribute to published manuscripts. [Learn More](#)

Mira Costa Community College Biotech – Illumina provided in-kind support to enable genomics lab at the community college level. The community college offers a biotechnology program with associate, and bachelor’s degrees, and certificates grounded in hands-on, contextualized coursework. By providing access to next-generation sequencer technology, the program offers advanced specialized coursework leading to success from the diverse community it serves.

Impact in Action



Supporting Ukraine

UKRAINE RESPONSE

\$80k
Princess Maxima Centre for Pediatric Oncology
Supported pediatric cancer patients displaced from Ukraine to the Netherlands and every US state



\$100k
University of Cambridge
Ukrainian medical students displaced to continue studies at the University of Cambridge

\$100k
Eurordis
Rare disease patients displaced from Ukraine to other parts of EMEA

\$128k
Red Cross, Intl Medical Corp, UN Refugee Agency, Doctors Without Borders
Employee donation and match program

\$250k
International Committee of the Red Cross
Humanitarian aid for Ukraine

Signaling Our Commitment to STEM for All

In 2022, we engaged **two** new signatories

Our CEO signed the [CEOs for Computer Science](#) open letter to the Governors and Education Leaders of United States with Code.org and over 800 leaders. The letter called on state governments to update the K-12 curriculum in each state, for every student, in every school to have the opportunity to learn computer science.

Illumina also joined the [STEMM Opportunity Alliance \(SOA\)](#). In collaboration with the White House Office of Science and Technology Policy, the alliance will be led by American Association for the Advancement of Science and the Doris Duke Charitable Foundation to activate a national vision to drive transformative change across the American science, technology, engineering, math, and medicine (STEMM) ecosystem by expanding access and opportunities. The alliance aims to eliminate systemic barriers and elevate equity in STEMM to a sustained, national priority.



Illumina Is Proud to Support Sickle Cell Initiative with American Red Cross Southern California Region

Sickle cell disease is the most common genetic blood disease in the US. Most patients with sickle cell disease are of African descent and rely on blood given by people of the same race/ethnicity. Illumina provided a philanthropic grant to support work dedicated to understanding how genetics affect health outcomes.



Collaborating with Cambridge, UK LaunchPad

The birthplace of DNA sequencing, Cambridge is one of the UK's most science- and technology-intensive clusters with a vibrant, growing economy that draws an extensive range of STEM skills. Illumina is proud to be one of the local STEM businesses playing a pivotal role in helping teachers, schoolchildren, and young people to experience the vast array of available career opportunities and support the future growth of skills and jobs in Greater Cambridge.

Intern Skills-Based Volunteering

Each summer, Illumina interns put our culture of giving back into action by completing a social impact project with a nonprofit charity partner. This year, our **interns donated over 500 hours** and collectively completed 15 projects. For the first time, we expanded the program internationally, including our UK-based interns as well.



Ascending One of the Most Challenging Mountain Passes in Europe to Support Cancer Charity

To raise awareness and funding for cancer research, the Stelvio for Life Foundation organizes an annual event up the Passo dello Stelvio in North Italy.



The Stelvio for Life event supports cancer research. The research implementation is carried out by the Center of Personalized Cancer Treatment Foundation (CPCT Foundation). In 2022, we had several brave Illumina colleagues participate in this impactful event. The sponsorship provided by Illumina, and the individual fundraising by individual riders, will be used to support research for DNA-based personalized treatment of cancers through the Stelvio for Life Charity.



Integrate Sustainability

Strategic Approach and Impact

We are committed to integrating environmental stewardship into the fabric of how we operate.

Human health and the health of our environment are intertwined, connecting our mission with our commitment to operate responsibly and sustainably.

We recognize the importance of the environment in creating a healthy, sustainable future for all. Our approach to environmental sustainability prioritizes taking action on climate change and the implementation of sustainable solutions in our facilities, products, and across our value chain.

As the world seeks innovative solutions to tackle climate challenges and protect our natural capital, we recognize the incredible opportunity the field of genomics and our technology provides.

We view sustainability through the lens of continuous improvement, knowing there will always be more opportunities for us to protect our planet and do our part.

KEY OBJECTIVES

- 1 Drive climate action
- 2 Operate sustainable facilities
- 3 Foster a sustainable value chain
- 4 Develop sustainable products
- 5 Leverage genomics for a healthier planet

UN SDGs



“ Our science-based, verified climate action targets are an important part of our overall business strategy to minimize risk associated with climate change, build resilience, and identify opportunities for long-term sustainable growth. ”



Kevin Pegels
Chief of Global Operations

2030 Target	2022 Progress
Achieve net-zero emissions (Scope 1,2, and 3) by 2050	In progress
Reduce emissions by 46% in our direct operations (Scope 1, 2)	100%
Reduce emissions by 46% in our value chain (Scope 3)	↑ 51% ³
Decrease water intensity at core sites by 10%	↑ 4% ³ ↓ 9% YoY
Achieve 100% renewable electricity	100%
Divert 90% of waste from landfill at core sites	64%
Invest \$20 million in sustainability and environmental justice initiatives	\$759K \$1.5M Total
Reach 100% of strategic suppliers to commit to minimizing their environmental footprint	100%
Minimize packaging by 75%	30%

2022 Highlights	
NovaSeq™ X launch resulting in 61% reduction ² in climate impact compared to NovaSeq™ 6000	Carbon neutral in direct operations (Scope 1, 2) supporting the SBTi beyond value chain mitigation ¹ approach
100% renewable electricity	Verified SBTi Net-Zero and emission reduction targets

¹SBTi Beyond Value Chain Mitigation.
²Learn more on the sustainable product page.
³Since 2019.

Drive Climate Action

Climate change represents a threat to human health, the environment, and the global economy.

Among First in the World to Receive Approval of Net-Zero Target verification from the Science Based Targets Initiative (SBTi)

As a science-based organization, we aim to ground our climate action targets in a science-based framework.

In 2022, we were among the first companies in the world and our industry, and the first genomics company to receive [verification](#) of our 2050 net-zero emissions targets by the Science Based Targets initiative [Corporate Net-Zero Standard](#).

In 2021, our Scope 1, 2, and 3 emission targets were also externally [verified by SBTi](#) and aligned to the Paris Agreement’s climate ambition goal of keeping planetary warming to 1.5°C. We aimed to create an approach that helps us demonstrate that our long-term net-zero climate targets are credible, ambitious, and accountable.

We ensure that our efforts are aligned with the leading practices and organizations addressing climate action:

- Business Ambition for 1.5 °C
- Science Based Targets initiative (SBTi)
- We Mean Business Coalition
- United Nations Race to Zero
- The Implementation of UN SDG 13: Climate Change
- Task Force on Climate Disclosure (TCFD)

Our Path to a Science-Based Net-Zero

To ensure we hit critical milestones on our path to net-zero, we created short-, medium-, and long-term SBTi-verified targets aligned to the 1.5 °C climate action pathway.



Our Climate Action Progress

- SCOPE 1**
100%
reduction
- SCOPE 2**
100%
reduction
- SCOPE 3**
51%
increase
- SCOPE 1, 2**
Carbon neutral*
- INVEST** in sustainability and environmental justice initiatives
\$1.5M

*Scope 1 reductions include our beyond SBTi mitigation, applying Green E certified Carbon Offsets for our natural gas Scope 1.
*Scope 2 reductions include the combination of on-site solar, purchased renewable electricity, and renewable electricity credits.

[Climate Change Position Statement](#)
[CSR Policy](#)

Learn more in Sustainability
Impact in Action→

Climate Risks and Opportunities

Climate Risk Management

Addressing climate change is critical to achieving a sustainable, just, and resilient future for all.

As external conditions evolve, we continue to evaluate our approach, recognizing that both physical risks, such as extreme weather, and transition risks, such as regulatory and technological developments, may affect our operations. We have integrated climate risk into our enterprise risk management program.

Identifying Climate Risks and Opportunities

To deepen our understanding of the potential risks and opportunities of climate change, we conducted an assessment using the recommendations of the [Task Force on Climate-related Financial Disclosures \(TCFD\)](#). We engaged with BSR (Business for Social Responsibility) to develop three 2030 climate scenarios linked to global warming by 2100, understand the potential implications of climate change for our business, and identify opportunities to build resilience.

The climate scenario analysis was completed using three plausible narrative future representations of our operating environment respectively aligned to a well below 2°C, a 3°C, and a 4°C level of warming. To map assumptions for each trajectory, we utilized standardized third-party climate modeling data, such as the Shared Socioeconomic Pathways (SSPs) and the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP).

Managing Climate Risks and Opportunities

To manage climate-related issues, we are incorporating climate resilience across our operations and value chain with a risk management structure, our EHS team management system, business continuity program management, supply chain risk reviews, and periodic audits of related processes. Addressing risk at the site level is performed by our site emergency management cross-functional group, which plans for and reacts to immediate and near-term physical risks caused by climate change.

We review the environmental management system framework annually as part of the global aspect and impacts clause. Output from this data influences environmental performance and GHG reduction objectives. Illumina also uses our ISO14001 environmental management system as one of the mechanisms to monitor and reduce our environmental impacts from GHG emissions.

Climate Risks

The climate change elements that have most influenced our strategy are physical risks to operations, supply chain impact, and reputation. These risks have been incorporated into business continuity planning, future product development, redundancy in supply chain where possible, and site selection for future growth. We are actively reviewing opportunities to further integrate climate into our processes and paths to further expand resilience.

We have implemented redundant planning and maintained safety stock to provide resilience during severe weather events. For financial planning, we include risk and opportunities evaluated through our standard budget planning. Investment in energy-reduction projects that require capital expenditures are evaluated through the Capital Committee planning process. Potential indirect costs associated with supply chain, future tax, or increased operating costs from extreme weather connect with these internal workstreams.

Challenges

We have committed to ambitious science-based climate action targets including net-zero commitments that include our value chain and absolute based reduction targets. Illumina continues to experience strong growth and, with absolute based reduction targets, we recognize the challenges that lay ahead. In addition, varying levels of climate maturity within our supply chain and renewable sources in some markets may also provide challenges. We will continue to work through each challenge as we do our part on the path to net zero.

Natural Capital and Biodiversity

Nature underpins all economic activities and human well-being. It is the world's most important asset. As part of our approach to sustainable and responsible business operations, we have reviewed potential risk and opportunities beyond our climate footprint as part of a holistic look at natural capital and biodiversity. Natural capital assets are elements in nature that provide the goods and services that the economy depends on. We reviewed the links between our potential direct impacts and dependencies on natural capital.

We will continue to monitor progress from the Task Force on Nature-Related Financial Disclosures and the new Global Biodiversity Framework. At Illumina, our existing environmental-related targets currently include efforts that prioritize reducing the impact of our facilities, supply chain, and product. We will continue to monitor and assess the natural capital elements of our environmental footprint.

As evidence of the intersection between biodiversity, natural capital, and the economy becomes more defined, we recognize there are opportunities for the application of genomics and Illumina sequencing to protect and innovate in future nature-positive economies. Our technology is currently used in research to understand and guide conservation of species, to implement more sustainable agriculture and food security pathways, and as a tool for innovation to create new synthetic materials that minimize the use of natural resources or create alternatives to natural capital withdrawals.

EXPLORE OUR CLIMATE OPPORTUNITIES

Our approach to managing the physical and transition risks and opportunities presented by climate change aligns with the TCFD framework. Additional details on our climate scenario insights are in the [TCFD Index →](#) and our [2022 Climate CDP Response](#).

Operate Sustainable Facilities

We approach reducing the environmental footprint of our facilities by focusing on green building design, optimizing energy, reducing water and waste, and expanding the use of renewable electricity.

Emission Reduction

We regularly evaluate energy-efficiency measures and renewable energy projects to reduce our operational carbon emissions. Each of our sites maintains a pipeline of energy projects to contribute to emission reductions.

2030 TARGET	2022 PROGRESS
100% renewable electricity achieved	100% Through onsite generation, purchased renewable electricity, and renewable energy credits
46% reduction in Scope 1 and 2 emissions	100% reduction in Scope 1 and 2 emissions ¹

Green Building Design LEED Certified Sites

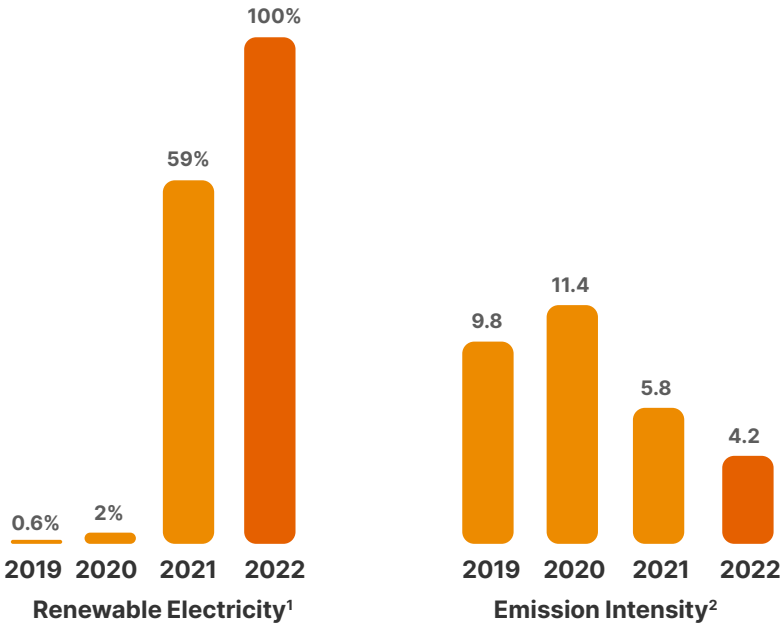


- San Diego, CA
 - Foster City, CA
- Singapore, SG
 - Shanghai, China



New Singapore Manufacturing Site Achieves Green Building LEED Gold Certification

The new facility opened in 2022 and has been awarded LEED Gold status, reflecting energy conservation, water usage reduction efforts, and the use of sustainable materials.



SBTi Net-Zero Mitigation Hierarchy³

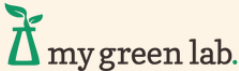
Illumina follows the recommended mitigation hierarchy with our net-zero commitments. SBTi recommends science-based targets for the near- and long-term to address our value chain emissions and implement strategies to achieve these targets as a first order of priority and then to invest in mitigation outside the value chains. Under the recommendations of SBTi Net-Zero Standard, companies should go beyond their near- and long-term science-based targets to further mitigate climate change by undertaking actions or making investments that generate additional co-benefits for people and nature. To further facilitate beyond value chain mitigation, Illumina has invested in Nature Based Green-e Certified Carbon Credits while on our journey to net zero. We have applied carbon offsets for our natural gas scope 1 as a temporary mitigation.

¹Onsite generation, purchased renewable electricity, renewable energy credits, and Green-e certified nature-based carbon credits.
²Scope 1 and 2 emission intensity per million dollars revenue.
³[SBTi Beyond Value Chain Mitigation](#)

2022 Initiatives

Greening Our Labs

We have partnered with [My Green Lab®](#) to improve the sustainability of our laboratories around the world. In 2022, we initiated the process of participating in the My Green Lab® Certification Program as part of our commitment to a net-zero future, with efforts continuing into 2023.



Regenerative Thermal Oxidizer (RTO) Decommission

At the end of 2022, we began decommissioning the RTO at our San Diego headquarters. As our manufacturing process evolved and hazardous pollutants decreased, the local Air Pollution Control District deemed the unit was no longer required. Every year, the RTO burns an average of 109,000 therms of natural gas at a cost of \$103,000 and at an environmental impact of 580 metric tons of CO₂ emissions. Full decommission is expected to be complete in 2023.

Water Stewardship

We continuously seek opportunities to reduce our water footprint by improving operational efficiencies and assessing potential risks to protect this vital natural resource. At our largest locations and highest water risk location, we employ a variety of water conservation applications. We assess our water usage by comparing the locations of our sites with the baseline water stress risk ranking according to the World Resource Institute and its [Aqueduct Atlas](#). For facilities that have been identified as operating in water-stressed regions, we are committed to focusing additional efforts on water management planning.

2022 Water Projects

Singapore Water Efficiency Building (WEB) Certification

Our Singapore site received a Water Efficiency Building Certification (WEB), that recognizes businesses, industries, and buildings that adopt water-efficient measures in their premises and processes. By installing a total of 85 control flow restrictors, water sensors, and water delay fittings, we’ve reduced the monthly water consumption of the building by 5%, resulting in .29 million gallons of water saved annually.

5%

reduction of monthly water consumption

Re-Use Water Cooling Tower

Our San Diego headquarters completed a project which added piping to divert drain water to a storage tank that feeds into HVAC cooling towers. This project will conserve 2.2 million gallons of water annually.

2.2M

gallons estimated to be conserved

Reclaimed Water Use

Our San Diego locations continue to utilize reclaimed water for landscaping, water features, and our cooling towers.



¹ San Diego (i3, HQ, Distribution Center), Foster City, Hayward, Madison, UK Illumina Centre, Netherlands, Singapore Woodlands.

WATER RISK AT CORE SITE LOCATIONS

San Diego, CA	
Madison, WI	Steenoven, NL
Foster City, CA	Singapore, SG
Cambridge, UK	Hayward, CA

WATER RISK ASSESSMENT BY SITE

- Extremely High

High

Medium-High
- Low-Medium

Low



2030 TARGET

10%
reduction in water intensity at core sites

2022 PROGRESS

4%
increase in water intensity at core sites from baseline

9%
reduction YoY

Waste Management

We take a hierarchical approach to waste management, where source reduction is the most preferable option, and landfill is the least preferable. We continue to prioritize innovative waste management efforts as part of our 2030 landfill diversion target.

Hazardous Waste

Our hazardous waste management program is designed to minimize impact and manage materials in the most environmentally responsible manner. The process follows a hierarchy that specifies reclamation/ reuse, recycling, waste-to-energy recovery, fuel blending, wastewater treatment, incineration, autoclave, and landfill when alternatives are not available.

Producer Responsibility

We participate in required compliance schemes for producer responsibility to ensure proper collection, management, and disposal. This includes the recycling of packaging, batteries, and [waste electrical and electronic equipment \(WEEE\)](#). Under the EU’s Batteries and Accumulators Directive and Packaging Waste Directive and regulations in several EU member states, we comply with requirements to finance the collection and recycling of batteries and packaging supplied with our products at end of life.

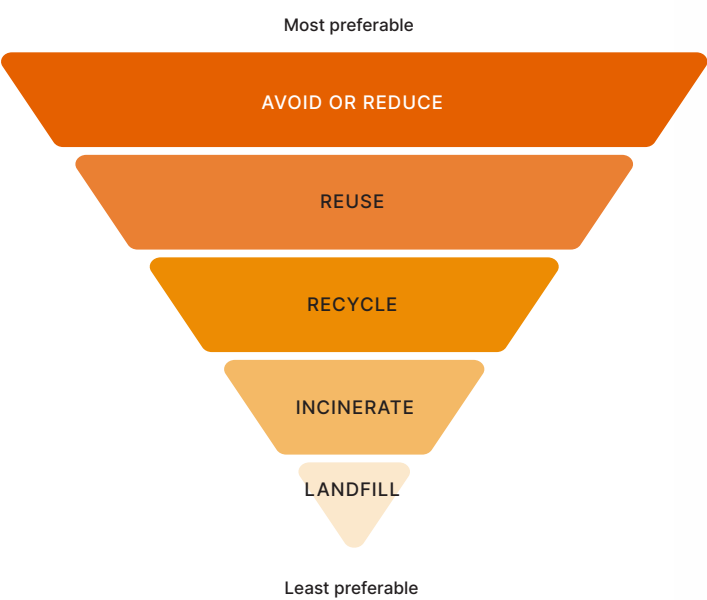
Responsible eWaste Disposal

Through our waste management programs, we aim to reduce the environmental impact from electronic waste and ensure responsible management at end of life. We partner with E-Steward, R2, and other certified recyclers to refurbish, rebuild, and reuse devices to help organizations around the world.

Plastics Shedding Pilot

In an effort to increase the circularity of our products, we conducted a pilot in 2022 to test the diversion of consumables waste to be repurposed for other plastic applications through a third-party partnership. Of the 6,540 pounds of plastic (PP and HDPE) that we diverted in the pilot, 5,232 pounds were recovered, resulting in a 20% loss of material during the repalletization process. We plan to further explore internal processes for the collection of plastics.

How We Tackle Waste



iRecycle

An employee-led program in our Asia, Pacific, Japan (APJ) region, iRecycle aims to minimize the environmental footprint associated with waste from the field service engineer teams. During the pilot phase in Australia, Illumina service teams sent product parts used in testing back to the office from field visits where they are then disinfected and recycled. Since launching in 2022, an estimated **5,000 kg of electrical waste** has been repurposed, recycled, or disposed of in an environmentally friendly way annually through iRecycle. With the successful pilot, the team plans to expand through the region for deeper impact.

Repair



Collect



Ship



Recycle



2030 TARGET

90%
landfill diversion at all core sites¹

2022 PROGRESS

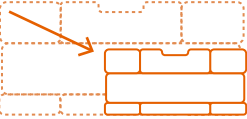
64%
landfill diversion
13%
improvement since 2019

¹San Diego, Foster City, Hayward, Madison, UK Illumina Centre, Netherlands, Singapore.

Meet the NovaSeq™ X Series

Impact the World, Not the Environment

The NovaSeq™ X Series Systems announced at the end of 2022 were purposefully designed to reduce environmental impact. The improved robustness and stability of XLEAP-SBS reagents allows for shipping at ambient temperatures, and reagent consumable plastics are made from sugar-cane based biopolymers. Sustainability was at the forefront of NovaSeq™ X design, with an aim to move beyond incremental improvements and challenge the status quo to benefit our customers and the planet.



50%
less cartridge volume



50%
less plastic mass
and volume



90%
less packaging
weight and waste



Ambient
temperature
reagent
shipping



Designed
for cartridge
disassembly and
recycling with no
tool required



Plant-based
bio-polymer
plastics



Data storage
optimized for
reduced storage and
energy requirements



61%
reduction in
climate impact*



“ We radically redesigned and transformed the technology and chemistry with sustainability principles at the core. ”



Alex Aravanis MD, PhD
Chief Technology Officer,
Head of Research and Product Development

Life Cycle Assessment

A life cycle assessment (LCA) evaluates the environmental impacts associated with a product over its life cycle, from raw material extraction to production, use, and end of life (from cradle to grave).

In 2022, we engaged a third party to complete a streamlined life cycle assessment to further quantify the improved environmental impact of the NovaSeq™ X kits. We evaluated the NovaSeq™ X 10B 300 cycle kit compared to the NovaSeq™ 6000 S4 300 cycle kit and used the functional unit of a per gigabase (Gb) of genetic code.

Our findings demonstrated a **61% reduction in climate change impact*** with the NovaSeq™ X kit. Armed with data on the holistic impact, we will use the information to address new opportunities in future design for environment applications and sustainability product enhancements.

Emissions per gigabase (Gb)

NovaSeq™ 6000	NovaSeq™ X
0.09 kg CO2 e	0.04 kg CO2 e

FUNCTIONAL UNITS ASSESSED

- NovaSeq™ X 10B 300 cycle kit vs. NovaSeq™ 6000 S4 300 cycle kit
- Sequencing + Primary analysis + Secondary analysis
- 1 gigabase (Gb) of genetic code
- The project aligned with the methodological requirements and guidelines of the ISO standards ISO 14040 (2006a) and ISO 14044 (2006b) on LCA and the GHG Protocol Product Life Cycle Accounting and Report Standard (WRI/WBCSD, 2011). However, as it is a streamlined LCA study, it does not fulfill all of the reporting requirements of these standards.

* Based on end market assessment NY, US

Based on comparison of NovaSeq™ 6000 reagent kits to NovaSeq™ X reagent kits.

Foster a Sustainable Value Chain

As a global organization, we recognize our environmental footprint extends beyond our facility walls.

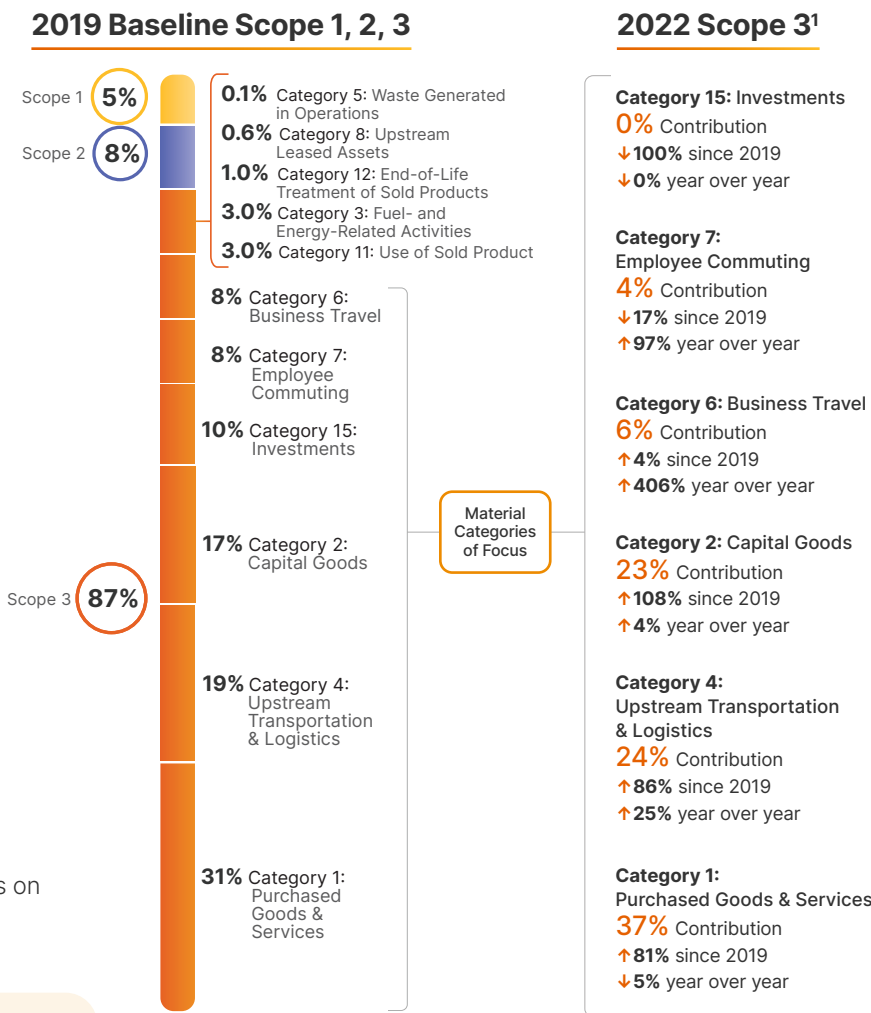
Scope 3 Emissions

Based on our first Scope 3 emission inventory assessment completed in 2021, 87% of our global emissions are attributable to elements in our value chain associated with our baseline year of 2019. We assessed all 15 Scope 3 categories and identified the most material contributors to our emission inventory. Categories that represented 7% or more were defined as material and accounted for 92% of our total Scope 3 footprint.

Our most material Scope 3 categories of focus include:

- Upstream transportation and distribution
- Purchased goods and services
- Capital goods
- Investments
- Business travel
- Employee commuting

For each category, we work with relevant functional groups on projects to further drive down the value chain impact.



Sample Reduction Efforts

Shifting from Air to Ocean Transportation

Following a successful air-to-ocean transition of key inbound raw materials from APAC to the US in 2019, we further strengthened our commitment in 2022 to leverage significant Scope 3 emissions reductions via the usage of ocean freight as a mode for our major global freight lanes.

2022 Ocean Freight Pilot

In 2022, we successfully qualified the intercompany movement of manufactured goods from Singapore to the US via a pilot program of three ocean shipments. With the success of the pilot, we now have the platform for regular monthly intercompany ocean shipments throughout 2023. Our network strategy from 2024 onward will see the usage of ocean over air further develop on a continuous growth plan.

Sustainable Investments Policy

We modified our investments policy to eliminate investing in energy and utilities sector bonds unless the associated issuance is identified as a Green, Social or Sustainability (GSS) Bond. We were able to adjust our approach without any expected impact on our returns.

Sustainable Business Travel

At Illumina, we enable employees to effectively avert travel for business meetings with a host of virtual tools, reducing carbon emissions. For our most traveled routes, we are curating preferred partnerships with airlines where sustainable aviation fuel and increased aircraft efficiency are options. We partner with an electric car consortium called SWOOP that allows for electric car transfers in our high transfer routes of Chicago/Madison and San Diego/Los Angeles.

Sustainable Suppliers

Through our strategic suppliers scorecard program, we assess environmental sustainability commitments made by our suppliers. Our goal is to empower our suppliers to reduce their collective carbon footprint and encourage transparent reporting on their progress.

Sustainable Shipping

The 2022 breakthrough innovation of NovaSeq™ X allows for ambient shipping and elimination of cold chain transportation. First shipments of NovaSeq™ X began in 2023. [Learn more→](#)

Sustainable Employee Commute

We support employees with a variety of regional commute options. [Learn more→](#)

We recognize the challenges associated with an absolute reduction target in an environment where Illumina continues to grow year over year. We remain committed to our net-zero path and have a number of initiatives that will impact our trajectory as they implement and mature.

¹For full data on all Scope 3 categories, see [Appendix](#).

Sustainable Supply Chain

We consider it business-critical to work with suppliers and partners across our value chain who share our commitment to the environment.

We engage with strategic suppliers and business partners on climate-related issues, hold them to the same high standards of business conduct that we set for ourselves, and require them to commit to reducing their own environmental footprint. Social impact and environmental screening are included in our Request for Information (RFI) tools when evaluating potential suppliers.

All new suppliers are required to acknowledge the Supplier Code of Conduct to complete the onboarding process. Our [Supplier Code of Conduct](#) is consistent with commitments we made both as a signatory of the [United Nations Global Compact](#) and as a member of the Dow Jones Sustainability World Index.

We expect our suppliers to:

- Comply with local regulations and applicable US and international regulations
- Uphold employee human rights and the [Illumina Human Rights Policy](#)
- Ensure a safe and healthy workplace
- Demonstrate social and environmental responsibility
- Conduct business in an ethical manner
- All new suppliers are required to acknowledge the Supplier Code of Conduct to complete the onboarding process

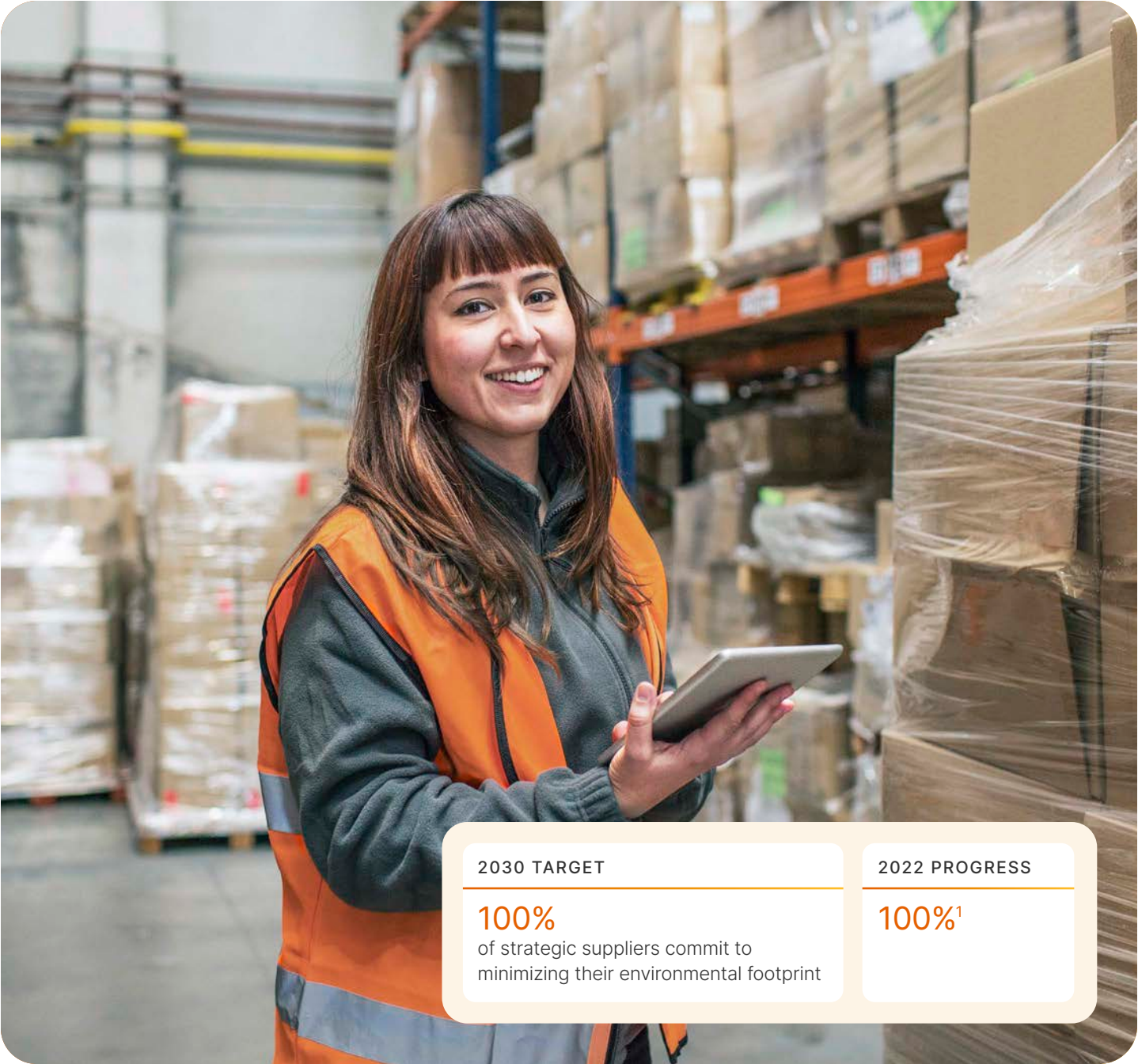
Learn more about our supplier engagement efforts in the Responsible Supply Chain section of the [Operate Responsibly chapter](#) →

Partnering with Amazon Web Services on Shared Sustainability Commitments

The amount of genetic data generated from next-generation sequencing that we securely store in the cloud has grown tremendously—from 1 petabyte to 100 petabytes in just eight years. We partnered with AWS and leveraged their Amazon Simple Storage Service (Amazon S3) Intelligent-Tiering that allows for automated storage cost savings by moving data when access patterns change, while still maintaining data security. It also improves sustainability by storing less volatile data on technologies designed for efficient long-term storage. Since implementing this project in 2021, there has been a 90% reduction in our carbon emissions associated with genomic data storage on the cloud. [Learn more](#)

90%

reduction in our carbon emissions associated with genomic data storage



2030 TARGET

100%
of strategic suppliers commit to minimizing their environmental footprint

2022 PROGRESS

100%¹

¹In 2022, we embedded the requirement in our Supplier Code of Conduct and require our strategic suppliers to accept this with issuance of any purchase order.

Leveraging Genomics for a Healthier Planet

The positive power of genomics is helping to identify, measure, and solve some of the planet’s most challenging and pressing issues.

Today, our technology and the use of genomics are being leveraged by scientists for studies around the world on biodiversity, endangered species protection, ecosystem conservation, sustainable agricultural practices, climate change research, and innovation.



Conservation Genomics

Conservation genomics focuses on characterizing the genetic diversity of endangered species and applying molecular tools like Illumina sequencing to support sustainable management of threatened species and populations.

Agrigenomics

Agricultural genomics, or [agrigenomics](#), has and will continue to drive sustainable productivity and offer solutions to the mounting challenges of feeding a growing global population. Using modern technology, farmers, breeders, and researchers can easily identify the genetic markers linked to desirable traits, informing cultivation and breeding decisions.

Biodiversity and eDNA Sequencing

[eDNA sequencing](#) is a rapidly emerging method for studying biodiversity and monitoring ecosystem changes. As organisms shed DNA into their environments, eDNA analysis can provide clues about the species present without disrupting the ecosystem. Potential applications of eDNA include port monitoring, biodiversity surveys, ballast water testing, soil testing, and more. Scientists are utilizing our technology and environmental eDNA to gain insights to develop innovative environmental solutions. [Learn more](#)

Agrigenomics and the Agricultural Greater Good Initiative

Greater Good Initiative

Launched in 2011 and awarded annually, [The Illumina Agricultural Greater Good Initiative](#) grant spurs critically needed research that will increase the sustainability, productivity, and nutritional density of agriculturally important crop and livestock species. Grant recipients receive donations of Illumina products to support their projects.



2022 Recipient: SENAI Innovation Institute for Biosynthetics

The 2022 Agricultural Greater Good Initiative recipient was SENAI Innovation Institute for Biosynthetics, based in Rio de Janeiro, Brazil. The institute focuses on seaweed cultivation to explore the genetic potential for carbon sequestration and environmental services, and food security.

By leveraging the power of molecular genetics, the institute studies the impact of environmental change on macroalgae distribution and biodiversity and defines metabolic pathways relevant to carbon fixation, bio stimulants, food industry, methane reduction, environmental services, and more.

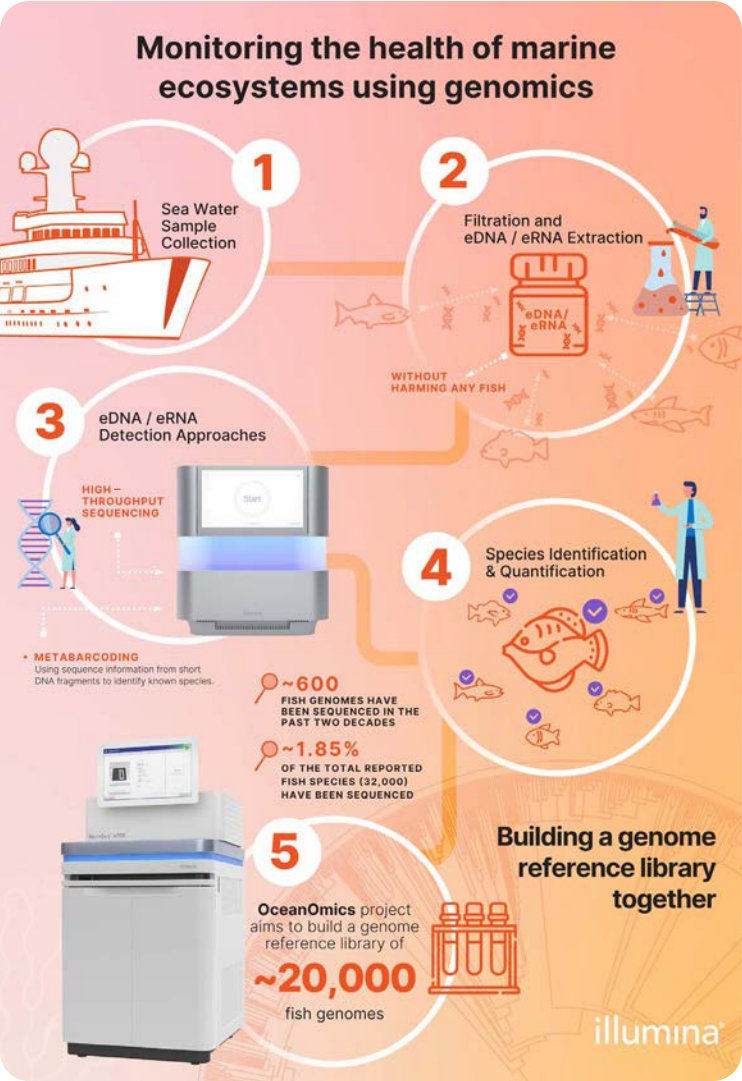
Seaweed aquaculture supports several of the United Nation Sustainable Development Goals as it enriches marine biodiversity, fights climate change, promotes local economies, and helps to clean seawater. [Learn more](#)



Protecting Biodiversity

Marine Conservation

In 2022, Illumina and the [Minderoo Foundation](#) announced a three-year, \$28 million partnership to improve surveillance of marine ecosystems using the power of high-throughput sequencing with Illumina technology. [Learn more](#)



iConserve Initiatives

iConserve seeks to bring the community together to accelerate wildlife conservation.

A new genomic atlas could help save endangered elephants

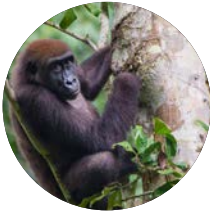
Data from this international partnership will assist biologists in protecting the herds they study

The population of wild African elephants is in dangerous decline, but a partnership between Illumina’s iConserve program, the San Diego Zoo Wildlife Alliance, and the universities of Copenhagen and Illinois are here to help. Using a library of 400 DNA samples from elephants across Africa, the team will use whole-genome sequencing to create a “genomic atlas” that can show which groups are most in danger from ivory poaching, reproductive scarcity, and conflict with humans. The partnership also aims to make sequencing tools available to biologists working in the field, empowering local communities to make a real difference.

[Learn more about this iConserve project here](#)



Learn more about our other iConserve efforts:



[How Genomics Will Support Gorilla Conservation](#)



[Sequencing to Save the Lemurs](#)



[Bottlenose Dolphin Genome Made Available to Researchers](#)

Studying the Health of STREAMs



Pollution, drought, and climate change are taking their toll, making watershed monitoring more important every year. Using eDNA and Illumina technology, Sequencing the Rivers for Environmental Assessment and Monitoring ([STREAM](#)) samples freshwater rivers throughout Canada. STREAM partners with citizen scientists, local groups, and Indigenous communities that have strong interests in preserving their waterways to help collect samples throughout the watersheds being studied. In turn, by democratizing the data, the Indigenous communities are empowered with vital information. Many of them rely on fishing, and the organisms STREAM monitors are literally fish food. [Learn more](#)

Profiling Endangered Plants



California State University, East Bay, located in the same community as our Hayward manufacturing location, has launched the [Green Biome Institute](#) using genomics to profile California’s endangered plants. The Institute aims to create molecular profiles of nearly 380 threatened or endangered plant species to promote conservation and document their biology, ecological interactions, and potential human benefits.

The Illumina Corporate Foundation provided the Institute with a \$50,000 grant for the advancement of genomic literacy and STEM education through hands-on genomics research for high school, undergraduate, and graduate students, while contributing to the knowledge and preservation of California’s endangered flora.

Protecting Koalas



The University of Sydney’s Australasian Wildlife Genomics Group is using genomics to battle decreased genetic diversity threatening koalas. Illumina whole-genome sequencing technology provides insights to researchers to help protect the species from climate change, disease, and other risks. [Learn more](#)

Impact in Action



Honoring a Just Transition to a Carbon-Free Future

We’ve partnered with [GRID Alternatives](#), a nonprofit organization providing access to clean, affordable renewable energy, transportation, and jobs to the communities most often harmed by systemic oppression across the nation, to help further advance climate and environmental justice. The Illumina Corporate Foundation provided a \$500,000 grant to support projects near each of our main campus locations to provide clean energy, solar industry job training, and job placement to low-income and tribal communities in San Diego, the San Francisco Bay Area, Washington, DC, and Wisconsin.

Our grant has enabled GRID to:

- Reduce carbon emissions by 6,568 tons—the equivalent of **24 million pounds of coal**
- Save families in San Diego and the Bay Area around **\$2.7 million** through the lifetime of their solar projects
- Expand job training in San Diego and Washington, training **93 people so far** [Learn more](#)

WATCH
How the [NovaSeq 6000](#) Is Empowering Agrigenomics Across the Globe



We are a contributing member of the [Earth Biogenome Project](#), a massive undertaking that aims to sequence the genomes of all species on Earth to help uncover the solutions for preserving and restoring biodiversity.



The Solutions Project

To support Black Climate Week, an annual event hosted by [The Solutions Project](#) designed to raise the profile of Black voices in climate action, Illumina provided a \$40,000 grant to honor the groundbreaking climate solutions and environmental justice work being led by Black and Indigenous communities and people of color.

Let It Grow: A DNA Database for Plants

[Plant GARDEN](#), led by Japan’s [Kazusa DNA Research Institute](#), is an online database that collects plant genomes. Unlike other similar databases, the intent is to make the data available to everyone. The Illumina [DRAGEN™ Bio-IT Platform](#) provided a new solution to overcome many of the challenges the research team were experiencing in compiling plant genomes. With Plant GARDEN, researchers have been able to identify new variants and study their expression and function in a variety of plant species. [Learn more](#)



Sustainable Commute Options

We offer a variety of regional commuter benefits including vanpool programs, free electric shuttles to local transit, and over 250 free electric vehicle charging stations globally.

Carbon Capture Through Hungry Bacterium

Illumina customer, LanzaTech can transform greenhouse gas into ethanol and other useful chemicals. Their goal is to turn carbon emissions into valuable material commodities. LanzaTech, a biotech company based in Illinois, has the goal of turning carbon emissions into valuable material commodities. LanzaTech found that an anaerobic bacterium called *Clostridium autoethanogenum* possesses an ancient pathway that could ferment both CO and CO₂, effectively converting it into ethanol under the right conditions. Illumina’s sequencing technology helped LanzaTech identify and modify the microbial genes responsible for making acetone. LanzaTech’s have produced over 50 million gallons of ethanol from industrial emissions, which is the equivalent of keeping over 200,000 tons of carbon from entering the atmosphere. [Learn more](#)



Nurture Our People

Strategic Approach and Impact

We are committed to creating a workplace centered on innovation and care, a workplace that values the unique talents of the individual, brings forward the best of the collective, and delivers on Illumina’s mission at a global scale.

An extraordinary mission requires extraordinary people at every level. By nurturing an inclusive and caring culture we magnify the value of collaboration and building a community.

Together our impact is amplified and our potential is unlimited.

KEY OBJECTIVES

- 1 Practice diversity, equity, and inclusion
- 2 Invest in our people
- 3 Create a culture of care

“Inclusion is core to our purpose. It is essential to the work we do, the communities we serve, the partners we choose, and the teams we build.”



Aimee Hoyt
Chief People Officer

UN SDGs

3 GOOD HEALTH

5 GENDER EQUALITY

10 REDUCED INEQUALITIES

2030 Target	2022 Progress
Increase gender representation in global leadership ¹	41% ↑ 2% ⁴
Increase representation of Black, Native, Pacific Islander, Hispanic or Latino communities, 2 or more in our US leadership ¹	13% ↑ 3% ⁴
Increase representation of Black, Native, Pacific Islander, Hispanic or Latino communities, 2 or more in our US workforce	18% ↑ 1% ⁴
Increase minority representation in executive leadership (US) ^{2,3}	30% ↑ 9% ⁴
Maintain zero net pay gap	Maintained 4 th consecutive year
Reduce recordable injury and illness rate	.23 ↓ from .56 ⁴

2022 Highlights

45% female workforce representation

Launched new disability ERGs

52% minority representation in US workforce

80 Net Promoter Score on Executive DEI Training Program

5% increase in female executive leadership in last three years

85% average satisfaction rate from leaders on professional development programming

Launched new mental health benefit program (US)

¹Leadership: Manager, equivalent, and above.

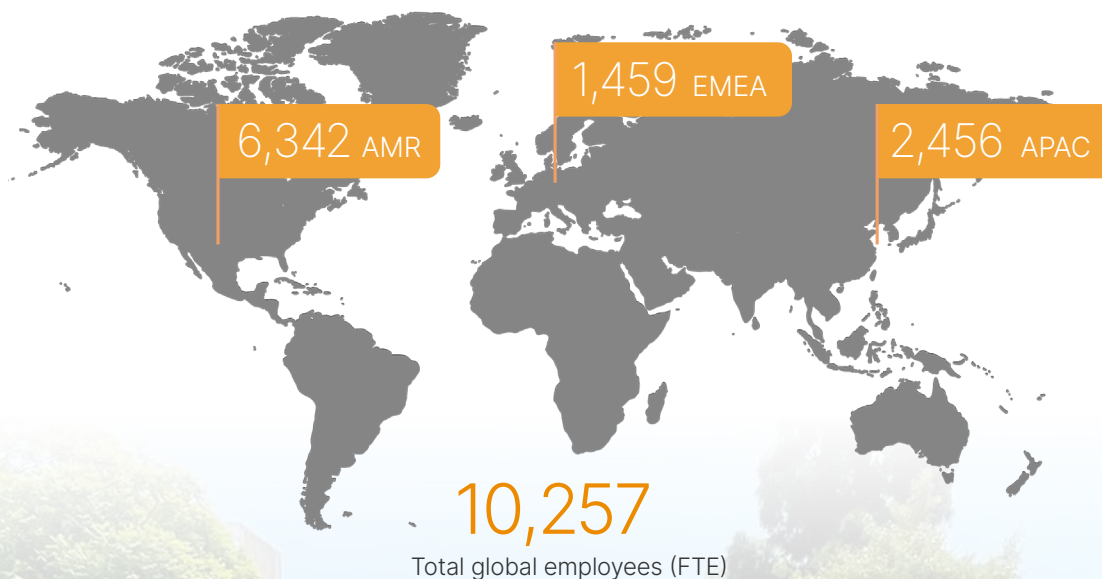
²Minorities (US): Asian, Black, Native, Pacific Islander, Hispanic or Latino, 2 or more.

³Executive Leadership: Director, equivalent, and above.

⁴Since 2019 baseline.

Our People

Everyone at Illumina is driven by the power of genomics to positively impact the world. We seek opportunities. We embrace challenges. We work tirelessly to move genomics and humanity forward.



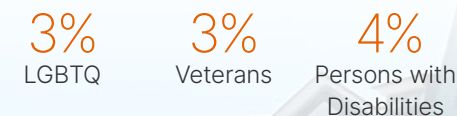
Gender Representation (Global)



Employee Age Distribution (Global)



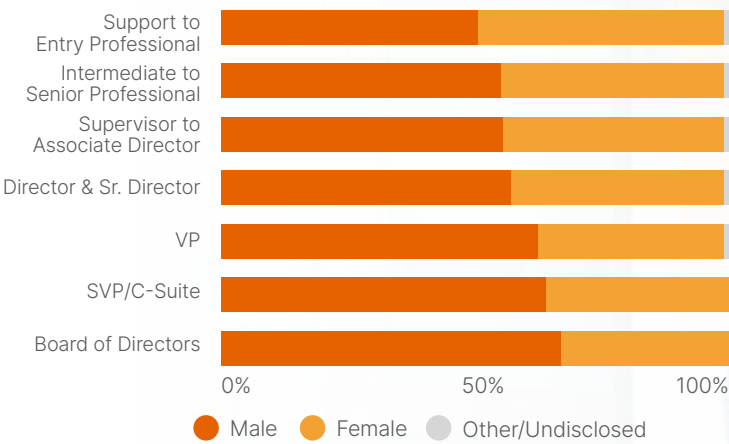
Additional Identities (US)



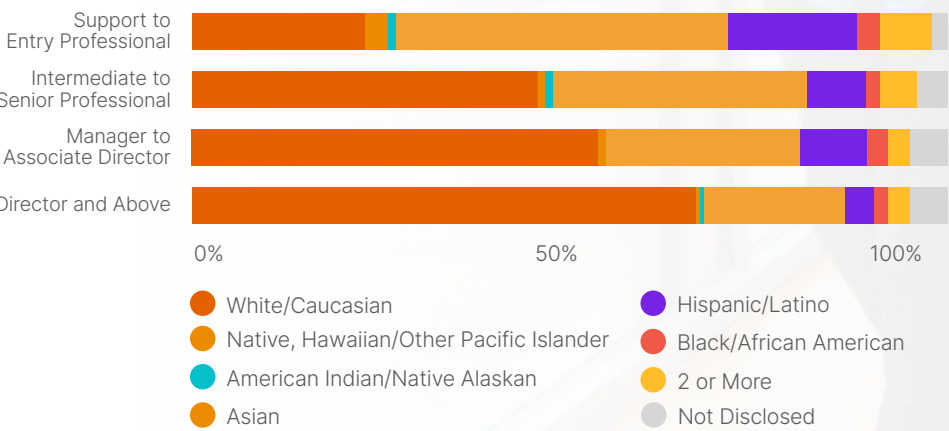
Workforce Diversity and Representation Data

Gender Representation Trends (Global)	2019	2020	2021	2022
Women in management roles in revenue-generating function	35%	36%	42%	42%
Revenue-generating roles held by women	41%	36%	48%	48%
Women in STEM-related roles (as % of total STEM positions)	37%	37%	39%	39%
IT workforce that are women	24%	23%	24%	24%
Engineering workforce that are women	37%	36%	29%	29%

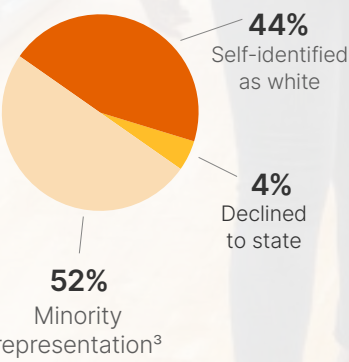
Gender Representation by Level (Global)



Minority Representation By Level (US)



Minority Representation in Workforce (US)



¹Since 2019 baseline.

²Leadership: Manager, equivalent, and above.

³Minorities (US): Asian, Black, Native, Pacific Islander, Hispanic or Latino, 2 or more.

⁴Executive Leadership: Director, equivalent, and above.

Practice Diversity, Equity, and Inclusion

We relentlessly practice diversity and inclusion in all we do to advance equity and belonging.

“Our DEI program is anchored in the philosophy of practice. We invite everyone to start where they are and continue to work, appreciating that there is always more to learn.”



Dr. Lisa Toppin
Global Head of Diversity, Equity, and Inclusion

Our DEI Governance

The following groups are in place to support DEI governance.

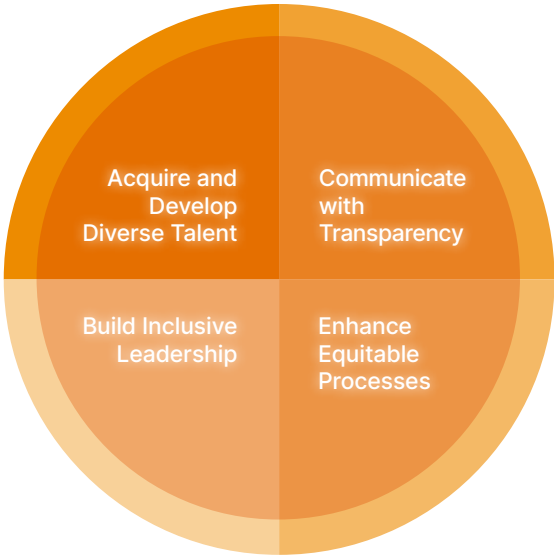


As part of our commitment to DEI, we are the proud signatories of:

- UN Women Empowerment Principles
- UN Global Compact
- CEO Action for Diversity and Inclusion
- Disability:IN CEO Signatory

Our DEI Strategy

We strive to foster a diverse and inclusive culture in which all employees feel valued and appreciated. This kind of environment helps people engage at their best, knowing they have an equal opportunity to grow and succeed based on their performance, fueled by their individual differences.



Key Programs

- DEI Ambassador Program
- Strengths Training
- ERG Program
- Self-serve DEI Learning
- 'Bright Minds' Executive DEI Training
- Global Smart Program
- HR Team DEI Training

DEI Beyond Our Workforce

Our DEI strategy goes beyond just our internal workforce, people, and culture. It is integrated across our business and is foundational to each of our CSR focus areas.

CSR Focus Area	DEI Intersection	
Accelerate Access to Genomics	Increase the diversity of genomic data	Read more in Access →
Empower our Communities	Empower diverse learners to be future STEM leaders	Read more in Communities →
Integrate Sustainability	Invest in environmental justice initiatives	Read more in Sustainability →
Nurture our People	Practice DEI in all we do	Read more in People →
Operate Responsibly	Target spend with diverse suppliers	Read more in Operate Responsibly →

“I knew when I joined Illumina the company held an intentional belief that diverse perspectives are needed to drive innovation. What I didn't know at the time was how much that company belief would impact my own journey to better understanding diversity dynamics and becoming a stronger DEI champion. After participating in the DEI Ambassadors Program, I find myself motivated to find new ways to lead change and consider the areas I can have the most impact. I've been asked to look inward to see the outside world more accurately.”



Jennifer Pellegrini
Sr. Staff Brand Manager

Employee Resource Groups (ERGs)

ERGs as Career Development and the Cornerstone of Our DEI Engagement

They deepen our respectful, inclusive culture by engaging employees and providing an opportunity to connect, celebrate, and learn with peers and allies. The ERGs are also a key lever to identify, develop, and retain talent.

Our ERG Program Philosophy

Each ERG at Illumina is structured around four contribution pillars: **community service**, **career development**, **education**, and **business impact** to ensure programming supports ERG member needs and aligns with Illumina values. This focused work educates our teams about the value of difference and uses the power of diversity to drive innovative problem-solving for our business. To read more about the ERG contributions to our philanthropic efforts, see the [People Impact in Action](#) section, the [Access](#) chapter, and the [Community](#) chapter.

Employee Resource Groups (ERGs) Program Pillars

COMMUNITY SERVICE

Support our communities by engaging with nonprofits where we live and work

CAREER DEVELOPMENT

Focus on building the careers and skills of diverse employees into future leaders

EDUCATION

Create more understanding and deeper collaboration

BUSINESS IMPACT

Enhance innovation with diverse teams identifying and solving business challenges

“Leading the social impact project for my ERG connected me with an organization that I became passionate about and ultimately led to an invitation to join their Board of Directors. The ERG created an opportunity for community service and professional development.”



Alexa Tralla
Sr. PCP Program Manager

“I appreciate Illumina for raising awareness through ERG iPRIDE events that our company values our employees based on their abilities.”



Seki Norihiro
Sr. EHS Specialist

2022 ERG HIGHLIGHTS

5,400+

participants engaged

17

ERG chapters globally

2 New Disability ERGs

Introduced

Our Employee Resource Groups



Pay Equity

We monitor our pay equity status and market competitiveness on an annual basis.¹ For a fourth consecutive year, we are proud to confirm a zero net gap in pay.²

Our pay practices are designed to compensate employees based on factors such as job performance, expertise, and experience relevant to individual geography. Everyone should be paid equitably, regardless of gender, race, age, ethnicity, sexual orientation, national origin, or any attribute that does not relate to their job and contribution.

Expanding Pay Transparency

As part of our commitment to pay equity and equitable processes, open communication, and leadership accountability, we are providing salary range transparency on all US job postings effective Jan. 1, 2023. To ensure fairness and consistency, we will also be providing all employees with access to the salary range for their current position in 2023 via our HR people system.

2030 TARGET	2022 PROGRESS
Maintain a zero net pay gap	Maintained for 4th consecutive year

Equal Opportunity and Nondiscrimination Policies

We support the elimination of discriminatory practices with respect to employment. We are committed to fair and respectful treatment of all employees, promoting equal opportunity and diversity in the workplace and in all aspects of our business. Our policies prohibit discrimination based on race, color, age, gender, sexual orientation, marital status, gender identity and expression, ethnicity, religion, physical or mental disability, medical condition, genetic information, veteran status, national origin, or any protected class.

¹Equal pay refers to paying a woman and man equally for the same or similar work.
²Zero net gap in pay means no statistically significant difference in pay for the same or similar work, regardless of gender, ethnicity, or race.



Invest in Our People

Development is the catalyst for how we achieve success and become more than we ever thought possible—as individuals, as teams, and as an organization. We aim to create the opportunities and environment to unlock the full potential of our people.

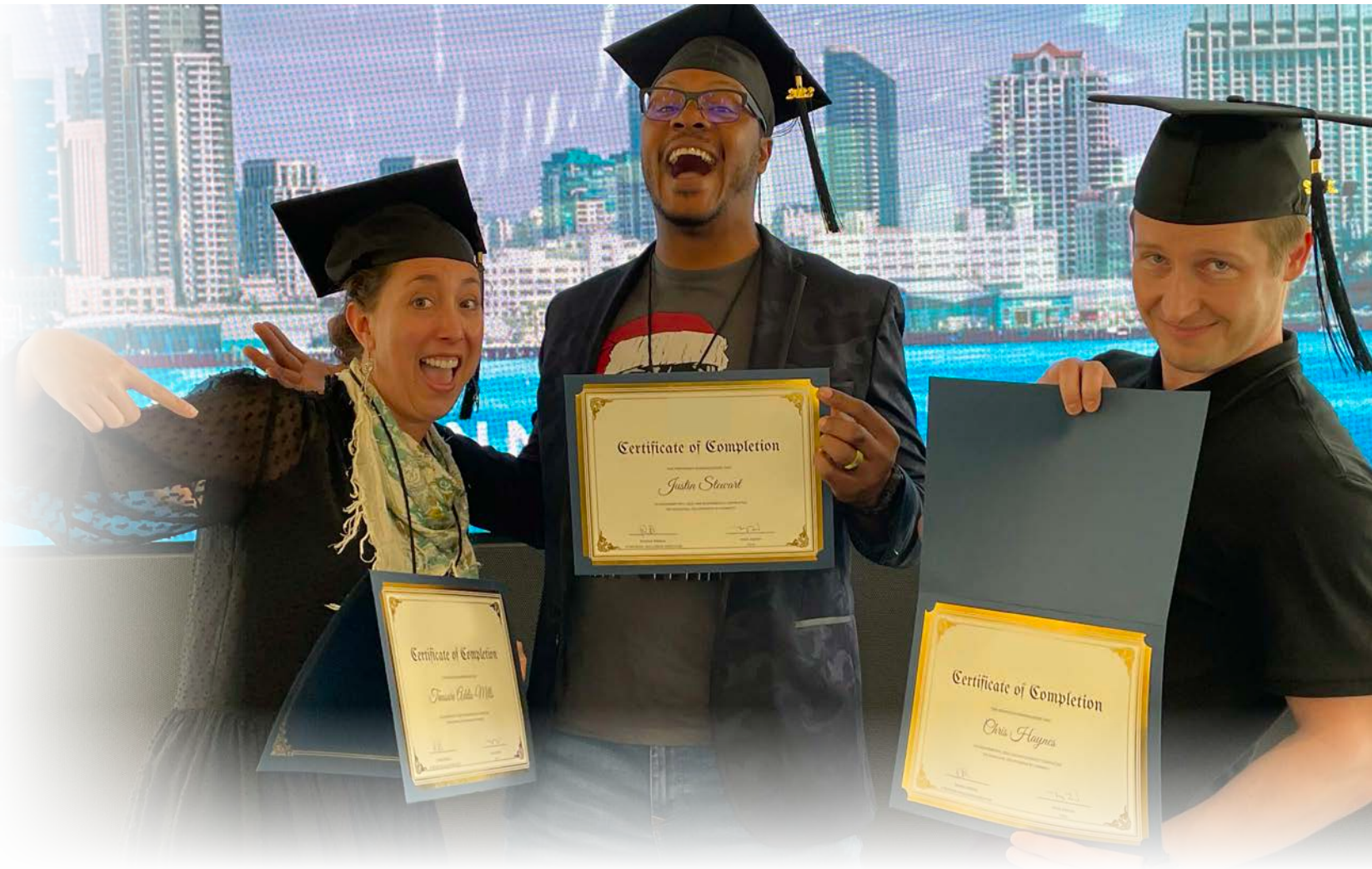
We are committed to engaging extraordinary talent and helping them thrive. To ensure that our employees enjoy long and fulfilling careers at Illumina, we:

- Invest in our talent
- Provide high-impact development opportunities
- Reward employees meaningfully

Development Happens Every Day

At Illumina, everyone can achieve and become more than they thought possible. Regardless of work arrangements or location, opportunities exist for continuous learning and growth. Development at Illumina is an intentional, everyday activity that prepares employees for success in their work now and for opportunities in the future. It is available to all, accessible in many formats, and contributes to a meaningful career experience at Illumina.

Guided and Supported at Every Step



“Every day, we engage in conversations that shape our expectations, relationships, and outcomes. We approach work with curiosity and passion, and, supporting a mission that truly matters, you will grow in ways you never imagined.”



Karen Wetherholt
Global Head of Talent

41%	executive roles* filled with internal candidates
49%	roles filled with internal candidates
28%	new hires referred by Illumina employees
62	average hours of annual training per employee

*Directors and above

Development Programs, Resources, and Solutions

We support Illumina employees from early career through senior leadership with a variety of programs, tools, and solutions.

Employee Development

Talent Discussions and Succession – Achieving our mission requires constantly developing the right talent. Talent assessments and succession planning allow us to get the right people and programs in the right places to ensure we are supporting the vision of Illumina for today and tomorrow.

Team Enablement – Highly effective teams invest in harnessing the strengths of the individual and bringing forward the best of the group. Team enablement provides teams with self-guided resources that create team cohesion and a strong foundation for future success.

Performance Enablement – Great performance requires an ongoing dialogue of how individuals are doing and where we’re headed. Shifting from annual reviews, our performance enablement creates a quarterly proactive connection opportunity for individuals and their leaders to align on priorities, discuss development, and use coaching and feedback—all in support of individuals’ achievement and growth.

Learning and Leadership Development – From early career to senior leadership, Illumina employees have unlimited opportunities to grow in the ways they never imagined. Learning and leadership development supports individuals at all stages in their careers with the tools, resources, and programs to be successful at every step.

Quarterly **career development and performance** conversations

Quarterly **promotion cycles**

100%

employees are provided opportunities for regular performance and career development reviews

Resources

Learning and development resources are curated so that employees can explore, share, plan, and act to get on the path that is the best fit for them.

- External speaker series
- Open career panel discussions
- TEK Talks (technical education knowledge)
- Anytime, informal feedback tools as well as formal assessments
- Tuition assistance/financial assistance for job-related education
- Workday learning, LinkedIn Learning, and other on-demand learning resources
- 360-degree and 180-degree assessments, Valence, and Strengths for Teams are available for individual and team feedback.

Listening to Our People

Illumina improves by deeply understanding our people. Employee listening, including iPulse, allows us to capture our people’s successes, needs, and overall experiences in a timely way to take action and improve the employee experience.

We ask our employees to complete regular iPulse surveys. In 2022, we conducted one assessment.

95%

are proud to work for Illumina

86%

engagement index

81%

trust & confidence index

90%

feel their manager supports efforts to balance work and personal life

81%

have confidence in the continued growth and success of Illumina

86%

would recommend Illumina as a great place to work

83%

believe Illumina really cares about their well-being

83%

feel they belong at Illumina

87%

feel it is safe to be vulnerable



Leadership Development at Illumina

Leaders actively prepare for the future through a variety of formal development offerings.

Power Hours – A leadership development program for frontline leaders, run by subject matter experts, to develop the skills and knowledge required to lead teams effectively

Discussion and Lean In Circles – Our business leaders host discussions on important topics such as “Moving into Management” and “Managing Your Career.” We also support Lean in Circles through our Women at Illumina (WIN) ERG

Mentoring Programs – The Horizons ERG hosts Jedi-Padawan buddy programs, connecting early career professionals with seasoned employees, and the Women in Illumina (WIN) ERG offers a mentor program called iMentor

Culture of Coaching – Our Coaching Learning Path highlights a variety of options to help leaders learn, practice, and build their coaching skills

Leaders in Action – Leaders helping leaders grow their skills and expand their impact

Thrive New Leader Orientation – Targeted to newly hired and promoted leaders at Illumina, this centers on our global new leaders and provides insight into leading at Illumina and our leadership philosophy

Ignite – This leadership series brings external thought leaders on leadership topics to provide ongoing and regular development

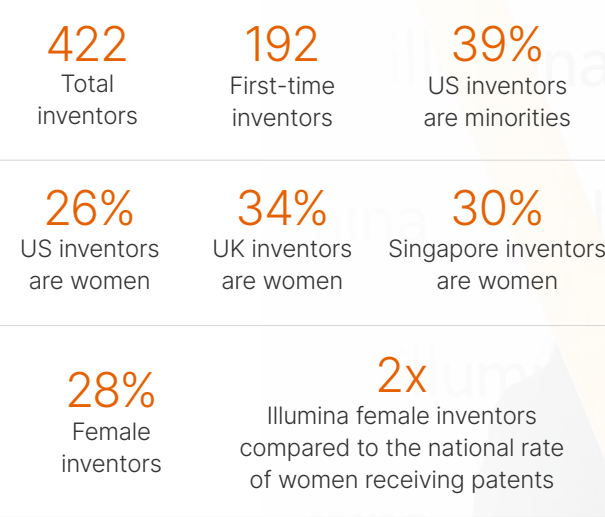
Elevate for Executive Leaders – Over a several week journey, Directors and Sr. Directors engage with peers around the globe in a cutting-edge social and interactive learning experience. Leaders learn from other executives through activities and guided discussions, share expertise, and deepen insights with a dedicated executive coach

Strengths-Based Training Program – Using the Clifton Strengths Finder Assessment tool, the program is designed to build self awareness of strengths and an appreciation for what colleagues contribute, helping drive DEI through our work.

Bright Minds Executive DEI Training - A program designed for Executives to learn how they can lead change in every aspect of our talent life cycle engine.

- Over **1,000 participants** in Strengths-Based Training Program
- **70%** of leaders attend at least one development program each year with an average satisfaction rate of **over 85%**
- Leaders have access to over **18,000** on-demand learning courses

Illumina Inventors by the Numbers



In 2022, Illumina employees filed a record **193 new patent applications**. Illumina has a total of **9,178 patents** worldwide.



Recognizing Success

We have designed several programs to recognize employees’ outstanding achievements, including:

- **Innovation Award** – Recognizes this core element of our culture and success by annually celebrating our pioneering scientists for their extraordinary contributions
- **Inventor Award** – Recognizes employee inventors who annually contribute to our patent applications
- **Values Award** – Presented to individuals and teams nominated by their peers for exemplifying our values



Attracting Extraordinary Talent

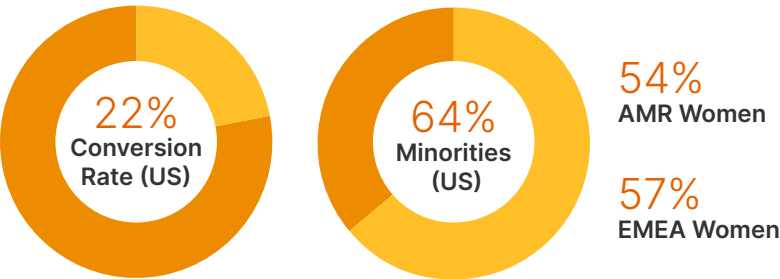
Illumina's talent acquisition strategy plays a critical role in supporting our mission. We integrate our DEI principles in our recruiting efforts to find top talent who share our values, and have diverse backgrounds and unique skill sets to join us and help deliver on the transformative power of genomics.

Intern, Graduate, and Early-in-Career Talent

Intern → Graduate → Early in Career → Employee → Alumni

Nurturing and investing in future talent is critical to Illumina's growth strategy. Robust engagement with key universities provides an opportunity for us to create long-term relationships with students, graduates, professors, and university faculty. We create meaningful student experiences through special events, professional development workshops, technical talks, and campus ambassador programs. Our hybrid approach meets students where they are by offering both virtual and in-person sessions across all time zones.

Intern Cohort



Attracting Diverse Future Talent

As a global organization, the perspectives from diverse backgrounds and experiences are core to our talent strategy. Supporting and engaging with underrepresented student groups continues to be a key priority as we invest in the future. Examples of student organizations include school chapters of Society of Women Engineers, National Society of Black Engineers, and Society of Professional Hispanic Engineers, among others. In 2022, we met over 500 students in the US through key diverse student organizations through in-person events, campus visits, and virtual sessions.

Internship Program

We know that students and graduates are innovators, creators, and the future of Illumina. Annually we welcome an extraordinary group of interns, work experience students, and apprentices around the globe. These dedicated students learn, grow, and become more than they ever thought possible as fully integrated members of the team. Our programs provide endless opportunities for impactful work, professional development, and volunteer projects. Interns are empowered to practice leadership, observe the direct impact of their work, overcome challenges, and navigate new situations.



Learn more about our employee engagement and intern skills based volunteer program [here](#).

Illumina Alumni Network

We aim to broaden the genomic ecosystem and create a community to forge the future of genomics together. When joining Illumina, you become part of the Illumina family. If your journey takes you away from the company, we stay connected through the [Alumni Network](#). With over 7,000 alumni representing 600+ companies across the globe, we recognize the potential of our alumni to advance thought leadership and fill talent pipelines within the biotechnology community. Launched in 2021, the alumni network provides former employees an opportunity to make connections with fellow alumni, sharing industry trends, thought leadership and extending the network of genomics influencers.



Create a Culture of Care

Building extraordinary teams and breakthrough innovations starts with caring for our employees and putting their welfare at the heart of all we do.

We offer a wide range of benefits as innovative as our work, including healthcare, access to genomics sequencing, and family planning. Our goal is to enable all employees to take advantage of the benefits that are most meaningful to them and their loved ones.

Employee Benefits

We offer a world-class portfolio of benefits and well-being programs, and we extend these benefits to employees, spouses, domestic partners, and dependent children.

Every day, our technology is being used to improve human health—enabling advancements that were not possible just a few years ago. Our employees receive access to these new technologies, such as workplace genomics, reproductive health programs, and cancer testing to help better inform their health care decisions.

Our employee benefits, which vary by country and region, recognize the tremendous value our people bring to the business with an array of meaningful programs.

Workplace Genomics Program*

Through our partner, Genome Medical, we provide access to genetic experts who can provide consultations, guidance, and facilitate testing for employees and their families. In addition, we offer financial support for cancer tests, reproductive health tests, and clinical whole-genome sequencing (cWGS) for rare and undiagnosed diseases.

Cancer Early Detection Testing (US)

The Galleri™ multi-cancer early detection test is available at no cost to eligible US employees and their dependents as part of our Workplace Genomics Program.

Supporting Growing Families*

Employees, their spouses, and domestic partners may be eligible for the company-sponsored reproductive health program either through insurance or financial support:

- *In vitro* fertilization
- Pre-implantation genetic testing
- Non-invasive prenatal testing

Through our partner, Progyny, we offer a comprehensive fertility benefit program to eligible US-based employees that provides coverage for fertility preservation, providing equitable access to care for our diverse employees, including those pursuing nontraditional paths to parenthood.

Providing Time to Recharge

- Flexible time off
- Two days of paid volunteer time off
- Minimum 10 days of holiday paid time off
- Company-wide shutdowns in July and December
- Compassion and Care Time Off

Fostering Wellness Inside and Out

- Medical, dental, and vision coverage
- Pre-tax spending accounts
- Employee assistance program (EAP)
- Wellness rooms for nursing, meditation, and prayer
- Business travel medical insurance
- Gym access or membership
- Ergonomic workstations, abundant natural light, and opportunities to work outdoors
- Cafeterias offering sustainable, healthy food options, including vegetarian choices
- Genetic counseling
- Global well-being activities

Health Solutions (US)

- Cancer support and expert advisory review through Access Hope
- Expert guidance for diagnosis, treatment, or finding the best physician through Included Health (US)
- Digital musculoskeletal (MSK) physical therapy care solution through Hinge Health
- Comprehensive mental health program for employees, dependents and all household members through Lyra

Investing for the Future

- Employee stock purchase program
- Retirement savings plans
- Pensions (EMEA)
- Life and accident insurance
- Disability insurance
- Independent financial advice
- Tuition assistance

Additional Perks and Benefits

- Site amenities, including car washing, dry cleaning, mobile salons, food service, mindfulness, and self-improvement courses
- Employee referral program
- Donation matching program
- Special interest clubs
- Commuter support
- Broadband allowance (hybrid + remote employees)



*Some services only available in the US.

Workplace Health and Safety

We are committed to a safe and healthy work environment for all our employees, contractors, and the communities in which we operate. Through a risk-based approach, our policies outline a process for the assessment, evaluation, elimination, and mitigation of EHS risks while adding value and efficiency across our operations globally.

Global EHS Management System

We continue to develop global processes under international voluntary standards for environmental and occupational health and safety management systems. Our Singapore site attained recertification to [ISO 14001](#) and [ISO 45001](#) and obtained a [Workplace Safety Health Innovation Award](#).

We embrace our mission through the establishment, implementation, and maintenance of an integrated EHS management system. [Read more in our EHS policy.](#)

EHS Programs

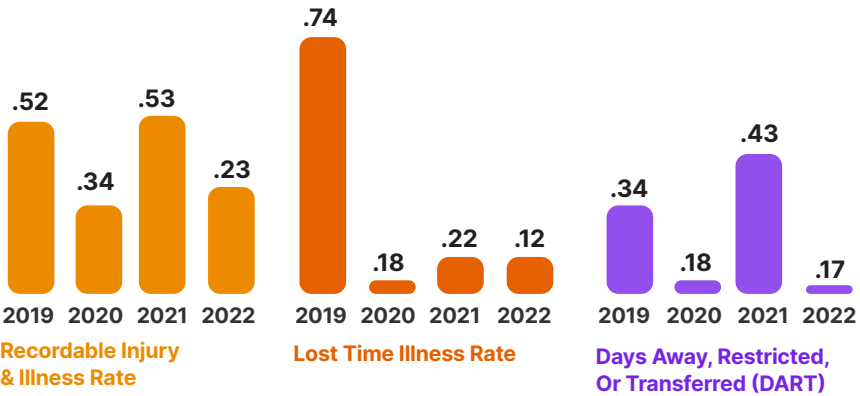
Our vision is for every Illumina employee to be an environmental, health, and safety leader. This year we championed a series of safety projects and initiatives that drive continuous improvement and program maturity.

- Completion of EHS Regulatory Assessments at all core sites¹
- Implementation of an updated Ergonomic Risk Reduction program to further enable our employees to identify and address ergonomic risk factors to drive mitigation actions
- Standardization of a global process for Hazardous Material Management including EHS review for hazardous material procurement and a chemical inventory conducted at all core sites¹

Prevention and Preparedness

EHS's Global IIPP describes basic processes our employees can take to maintain a safe and compliant workplace. Our Emergency Action teams work together to create awareness and lead regular preparedness drills and activities. This precautionary approach² is embedded in our risk assessments, our environmental aspects/impacts, our EHS Policy, product stewardship, and the engagement of our people.

Environmental, Health, and Safety Trends



2022 Safety Performance

2,010

Prevention reports

215

EHS risk assessments completed globally

324

Ergonomic evaluations completed

>45,000

Hours of EHS-related training

.23

Recordable injury and illness rate

40%

Reduction in days away, restricted, or transferred rate*

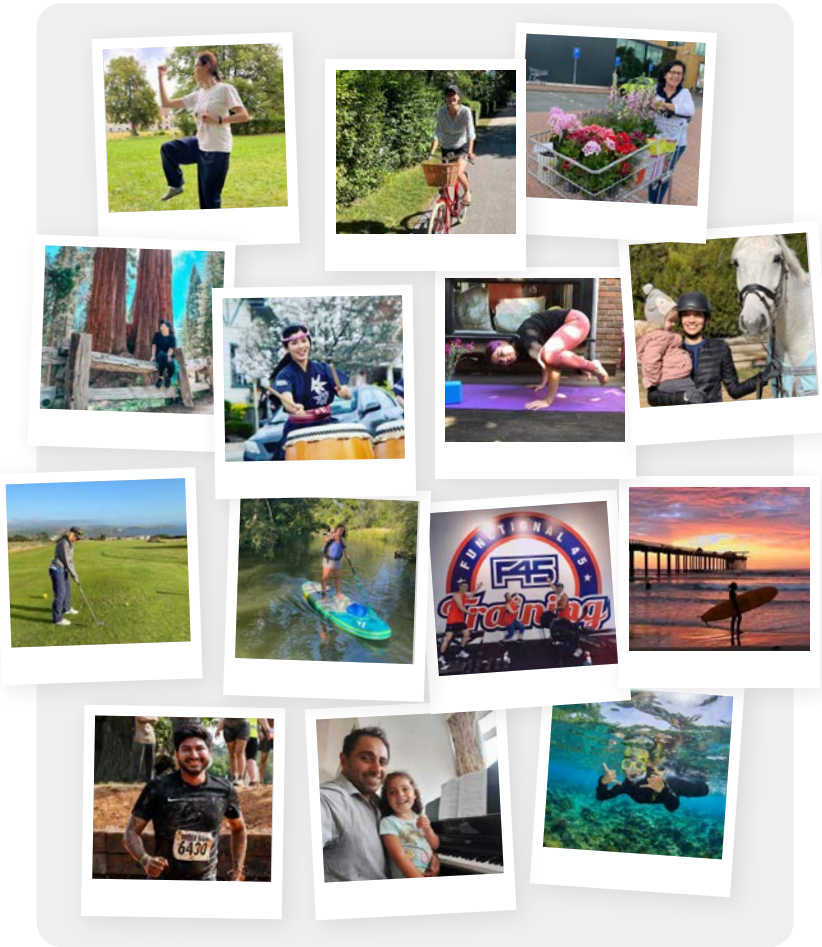
*Reduction reflects year over year comparison between 2021 and 2022

Learn More

- [EHS Policy](#)
- [14001 Certificate](#)
- [45001 Certificate](#)
- [Injury and Illness Prevention Program \(IIPP\)](#)

¹Core Sites – San Diego (i3, HQ, Distribution Center), Foster City, Hayward, Madison, UK Illumina Centre, Netherlands, and Singapore Woodlands.
²The UN Global Compact Principle 7 and The UN Global Compact Principle 15 state in order to protect the environment, the precautionary approach shall be applied.

Impact in Action



Healthy Selfie Campaign

To promote self care for our employees and their loved ones, we offered a **\$500 Health and Lifestyle Allowance** to all employees globally. To foster connection, we held a **#HealthySelfie** campaign to have employees share how this is positively impacting their healthy lifestyle.

ERG Community Impact Project

As part of the ERG program pillars, each group completes a community service social impact project. In 2022, the initiatives included STEM outreach to underrepresented communities, creating care packages and notes for teens with gender dysphoria, career mentoring for transitionaig veterans, and many more. The ERGs put our culture of giving back into action connecting our mission, their ERG focus, and community service.



Care and Connection Sessions

To support an inclusive place for all, we host sessions linked to current events in order to foster conversations that promote healing, learning, and the deepening of connections amongst our community. This year, one of the most impactful sessions was "Woman, Life, Freedom" and the impact of recent events on our Iranian community. Employees shared their experiences, showed support for the community, and were provided resources to learn more about the rich and brave history of the Iranian Women.

Singapore Workplace Safety Health Innovation Award

Illumina Singapore was recognized with an award on innovation in workplace health and safety. The project included developing automation to support assembly and manufacturing of heavy equipment. Reducing risk, eliminating lifting hazards, and improving efficiencies and safety earned external acknowledgment from the Workplace Safety and Health Council and the Ministry of Manpower (MOM).



Illumina Ranked One of 50 Smartest Companies in China by MIT Technology Review



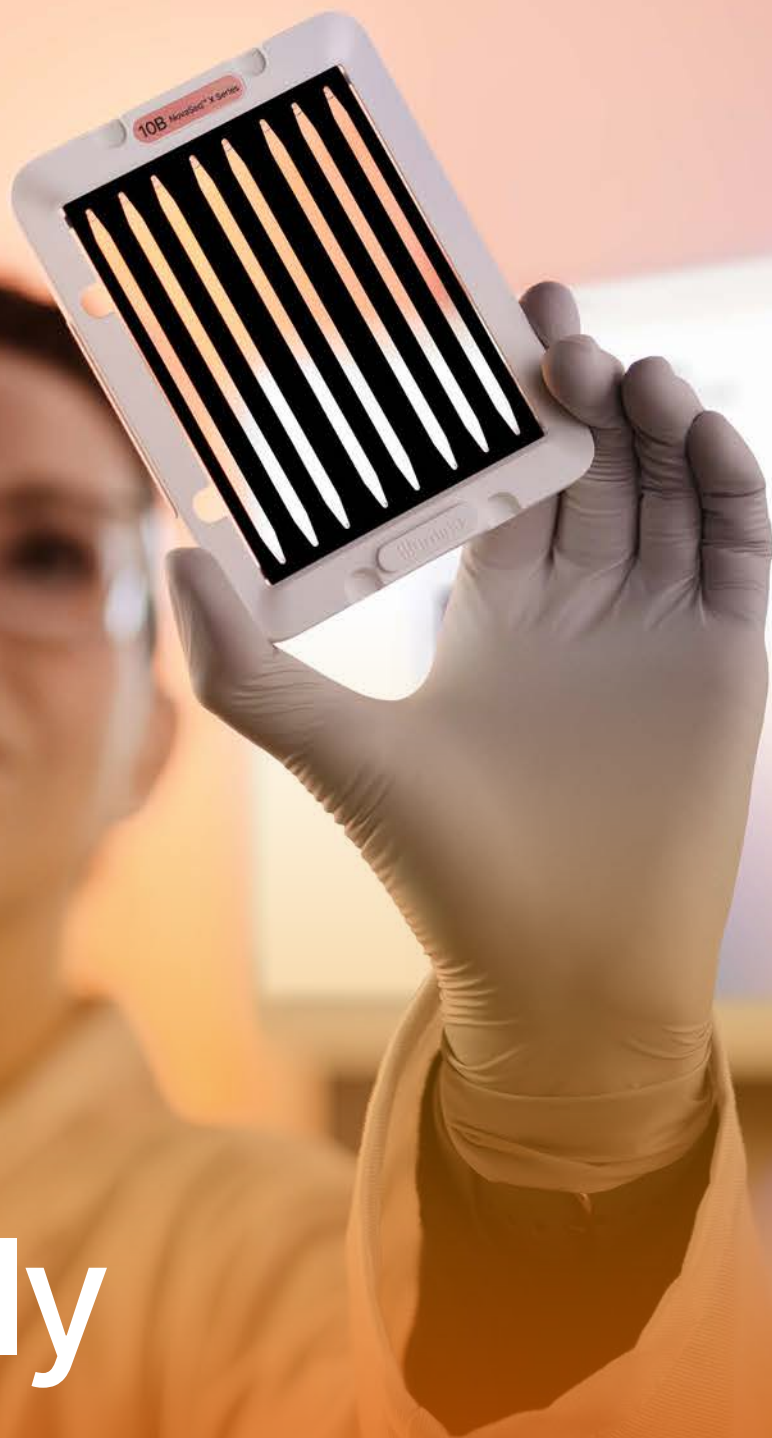
Through consistent innovation in next-generation sequencing (NGS) technologies, and relentless efforts to combat COVID-19 worldwide, Illumina distinguished itself from other multi-national companies in the Technology Review Top 50 Award in China.

Nurturing a Culture of Care with Employee Wellness

Throughout the year, opportunities for wellness activities are offered to employees, including global 5K walks and runs, Wellness Wednesdays, Wellness Fairs, and virtual walk the world for charity events through our wellness fitness platform.

Our EMEA HR Team expanded these efforts with a focus on mental health and well-being efforts, such as the mental health advocates program, mental health awareness session for leaders, sponsoring the annual well-being day, and partnering with a UK charity offering employee wellness session.

Operate Responsibly



Strategic Approach and Impact

We are committed to conducting ourselves with honesty, integrity, and respect for all.

Doing the right thing is core to who we are. Our role as a genomics pioneer brings with it the responsibility to enable innovation for good, ensuring that the technology we create and the data we collect are used safely, ethically, and responsibly.

KEY OBJECTIVES

- 1 Practice strong corporate governance
- 2 Maintain a culture of compliance
- 3 Act with integrity in all that we do
- 4 Uphold high standards for data security and privacy
- 5 Foster a responsible supply chain
- 6 Participate in proactive public policy

“For us, doing the right thing is more than just compliance. It is having a deep sense of integrity and honoring the trust placed in us by employees, patients, customers, shareholders, and communities.”



Gwen Chapman
Chief Compliance Officer



2030 Target	2022 Progress
Achieve 20% spend with diverse suppliers (US)	18%
100% strategic suppliers committed to reducing their environmental footprint	100%
Achieve top industry ESG ratings	Ongoing
Position Illumina as the most trusted company in genomic privacy and ethics	Ongoing

2022 Highlights	
33% Board members are women	33% Board members represent racial/ethnic diversity
\$269 million (US) diverse supplier spend	100% Illumina core facilities participated in third-party audit programs ¹
Achieved ISO 27701 for Privacy Information Management on Illumina's six cloud-based products	Industry Leader in multiple ESG rating and ranking indices including DJSI, Sustainalytics, and CDP
Completed first Human Rights Impact Assessment	72 approvals from 58 regulatory agencies

¹Core facilities defined as San Diego, Bay Area, Madison, Cambridge, UK, and Singapore.

Practice Strong Corporate Governance

By exercising strong corporate governance, we aim to inspire confidence in the work we do and in our company’s future.

Board of Directors

Our [Board of Directors](#) is a diverse group of leaders who champion scientific innovation. The Board’s aim is to ensure the company is equipped with the tools it needs to accelerate the power of genomics. The Board has adopted [Corporate Governance Guidelines](#) which are founded on a commitment to building shareholder value, with an emphasis on responsible governance. These guidelines, together with the [Code of Conduct](#) and [Board Committee Charters](#), provide the framework for corporate governance at Illumina.

Our Board has established four standing committees. Learn more in each committee charter:

- [Audit Committee](#)
- [Compensation Committee](#)
- [Nominating/Corporate Governance Committee](#)
- [Science and Technology Committee](#)

Board ESG Governance

The full Board provides ESG oversight, and this past year we expanded the remit of the Nominating/Corporate Governance Committee to assist the Board in overseeing the Company’s material environmental, social, and governance matters (ESG), except as specifically delegated to another Board committee. The Compensation Committee continues to oversee and provide input to management on diversity and inclusion matters, and the Audit Committee continues to oversee cybersecurity. [Learn more in Governance](#) →

Diverse and Independent Board

As stipulated in our Corporate Governance Guidelines, our company seeks to achieve a mix of Board members that represents a diversity of background and experience, including with respect to age, gender, international background, race, and specialized experience.

Our Corporate Governance Guidelines also require that independent directors constitute at least a majority of the Board. In order to be independent directors of the Company, directors must meet the criteria for director independence established by the Nasdaq Stock Market.

Board of Directors



John W. Thompson (Chair)



Francis deSouza



Frances Arnold, PhD



Caroline Dorsa



Robert S. Epstein, MD



Scott Gottlieb, MD



Gary S. Guthart, PhD



Philip Schiller



Sue Siegel

Board Profile

89%

Independent directors

33%

Female representation

33%

Minority representation

6.6 Years

Average Board tenure

More details about the Board can be found in our [Proxy](#) and on our [corporate website](#).

Maintain a Culture of Compliance

We take pride in conducting our business with honesty, transparency, and in accordance with legal standards and ethical principles.

Our culture of compliance and ethics starts at the Board level and is incorporated into every level of our business. Our policies guide employees on how to apply a culture of compliance to their daily work.

Illumina Code of Conduct

The [Illumina Code of Conduct](#) promotes honest and ethical conduct, compliance with applicable laws and regulations, and protection of our business interests. The code applies to all Illumina employees, consultants, temporary workers, officers, and members of the Board of Directors, regardless of location, seniority level, business unit, function, or region. Key topics of our Code of Conduct include fraud prevention, bribery and corruption, anti-discrimination, anti-harassment, human rights, diversity and inclusion, employee safety, corporate social responsibility, marketing and sales claims, and government interactions and political activity.

CODE OF CONDUCT
12 languages

Training

We provide annual training on our Code of Conduct and Anti-Bribery and Anti-Corruption Policies for all employees globally and more focused training on other Illumina compliance-related policies.

All employees receive training when onboarded and are annually certified through our enterprise learning management system. On an annual basis, all employees are assigned Code of Conduct training through our enterprise learning management system and are required to electronically acknowledge that they have read, understood, and will abide by our Code of Conduct.

TRAINING

100% of employees* are assigned training annually

98% completed the web-based training and certified they have read and understand the code in 2022

*Including FTEs, contractors, consultants, and interns

Expanded Oversight for Clinical Environments

At Illumina, we are at the forefront of the evolution of genomics from pure research to *in vitro* diagnostic (IVD) medical devices. With this evolution, we operate in the ever-changing, highly regulated IVD market and often interact with health care professionals and government officials, representatives, and agencies that regulate the markets in which we do business. Illumina is committed to high standards of ethical business conduct, including compliance with all applicable anti-bribery/corruption and anti-kickback laws, as well as relevant medical device industry codes.

Compliance Committee

Illumina's Compliance Committee is a standing committee responsible for ensuring that the company continues to conduct its operations and activities ethically, with the highest level of integrity, and in compliance with all legal and regulatory requirements. The Compliance Committee oversees the development, maintenance, and monitoring of global, legally-sound, practical, and sustainable programs (collectively the Compliance Program) intended to satisfy the company's legal compliance obligations and to foster a culture of compliance with laws, regulations, industry standards, and company policies.

Ethics and Compliance Reporting

We are committed to fostering a culture in which employees feel comfortable raising compliance and ethics concerns without fear of retaliation. We promote an open-door policy that encourages our employees to raise concerns to their managers, HR, and the Compliance Department directly. We have established a third-party Compliance and Fraud Prevention Hotline and website that Illumina employees and others may use to report concerns anonymously.

Illumina takes the obligation to investigate reports of potential violations of law, non-compliance with Illumina's Code of Conduct and corporate policies, and unethical conduct very seriously. The company is committed to impartially investigating all such reports where warranted and in remediating any such violations in a fair and consistent manner. Illumina takes all reasonable steps permissible to protect reporting or cooperating parties from retaliation.

Illumina's Compliance and Fraud Prevention Hotline is available to both employees and third-party partners, 24/7 by phone or [online](#).

KEY POLICIES

- [Code of Conduct](#)
- [Compliance Program Framework](#)
- [Anti-Corruption/Anti-Bribery](#)
- [Anti-Competitive Behavior](#)
- [Interactions With Healthcare Professionals](#)
- [Compliance Information](#)
- [Ethics Information](#)
- [Ethics Advisory Board Charter](#)
- [Ethics Advisory Board Members](#)



Anti-Bribery/Corruption

We prohibit bribery and corruption in any form. We comply with applicable anti-corruption laws in the countries in which we conduct business, including laws that prohibit bribery of government officials and employees of commercial organizations. Illumina personnel and our sales channel partners worldwide are prohibited from directly or indirectly offering, promising, paying, giving, or authorizing the giving of any financial or other advantage, or anything of value, to any other person or organization in order to exert improper influence over the recipient, induce the recipient to violate his or her duties, secure an improper advantage for the company, or improperly reward the recipient for past conduct. We require our business partners (e.g., channel partners, and consultants) to maintain the same standards when acting on our behalf.

Anti-Competitive Behavior

We work to compete and succeed in a fair and honest marketplace. We do not engage in unethical, unfair, or illegal communications with competitors. We always deal fairly with customers, suppliers, competitors, and employees. We do not take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation, or any other unfair-dealing practice. We do not enter into formal or informal agreements with competitors to engage in any anti-competitive behavior, including setting prices or dividing up customers, suppliers, or markets. We comply with all laws related to competition, antitrust, and the gathering of competitive information. In order to promote fair and honest competition, we minimize contacts with competitors and always avoid sensitive subjects, including those relating to competition between the company and others.

Risk Management

Illumina has adopted a company-wide approach, through various mechanisms, to assess and manage risks. We endeavor to ensure that all employees adhere to our ethics and compliance protocols. Our Enterprise Risk Management (ERM) framework has been established to anticipate, assess, monitor, manage, and report on risks that could impede our business and identify emerging issues and opportunities. We have implemented a corporate, global, Business Continuity Planning (BCP) program to reduce risk exposure and mitigate negative events to business operations. The ISO 22301:2019 standard is used as a business continuity framework for this program. Additionally, the Internal Audit Department independently and objectively assesses risk and reports insights to the Audit Committee of the Board of Directors on a quarterly cadence.

Our risk assessments consider various quantitative and qualitative inputs, including:

-  Business and Finance
-  Product Quality
-  Operational
-  Employee
-  Legal and Regulatory
-  Environmental, Health, and Safety
-  Brand and Reputation
-  Climate (physical and transition)

Learn more about [our risk factors in our 10K](#).

Climate Resilience

At Illumina, we believe addressing climate change is one of the key topics to achieving a sustainable, just, and resilient future for all. We are committed to climate action and the integration of climate resilience planning into our risk management program. See [Sustainability →](#) for additional information and the [Appendix →](#) for additional details on our Task Force on Climate-related Financial Disclosures (TCFD) index.



Act with Integrity

We are committed to reflecting the very best of our people, practices, and purpose. Integrity and fairness are central to how we operate in the workplace and the marketplace.

Ethical Business and Use of Genomics

Ethics Advisory Board

We seek guidance from our [Ethics Advisory Board](#) on a range of strategic issues, including recommendations on emerging ethics matters, policies, and regulations that are relevant to the genomics industry. We meet with the Ethics Advisory Board on a quarterly basis. Work includes providing strategic advice to Illumina about:

- Emerging policies and regulations relevant to the genomics industry and the company's interests
- Ethical issues arising from specific technology or products



Clement Adebamowo, BM, ChB, ScD, FWACS, FACS



Leslie Biesecker, MD



Glenn Cohen, JD



Freda Lewis-Hall, MD, DFAPA, MFPM



Nita Farahany, JD, PhD



Charmaine Royal, MS, PhD

Ethical Use of Genomic Technologies

Illumina is steadfast in our commitment that genomic technologies should be used to benefit humanity, and we will only work with partners who further this mission. Our Human Rights Policy and customer agreements outline our expectations regarding ethical business conduct, the use of our technology, and the steps we can take in the event of a possible violation. We have expanded and enhanced our oversight and accountability processes to monitor and enforce these commitments and prevent sales that could result in misuse or human rights concerns before they happen. Illumina is committed to investigating potential reports of product misuse and will not hesitate to cease sales to business partners in the event of a confirmed ethics or human rights concern.

KEY INITIATIVES

- Ethics Advisory Board
 - Human Rights Oversight and Accountability Framework
 - Human Rights Response Playbook for Product Misuse
 - Human Rights Impact Assessment
- Illumina Connected Analytics Impact Assessments (includes ethical AI, privacy, and human rights analysis)
 - International Best Practices for Genomic Data Sharing
 - Genomic Ethics Documentary Series

Ethical Artificial Intelligence Principles

Illumina is dedicated to improving human health by unlocking the power of the genome. Our mission drives everything we do, including the technology we develop. Illumina creates and uses artificial intelligence (AI) systems to power industry-leading sequencing quality, fuel data insights, improve understanding of genomic variation in relation to health and disease, and advance genomic science. We define AI systems to include machine learning, deep learning, and predictive modeling. Illumina is committed to developing and using AI according to applicable laws and the following guiding principles:

- Transparency
 - Diversity, nondiscrimination, and fairness
- Values-driven design
 - Accountability

Learn More

- [Privacy Policy](#)
- [Privacy Principles](#)
- [Privacy Transparency Report](#)
- [Responsible Stem Cell Use Position Statement](#)
- [Animal Testing Position Statement](#)
- [Ethical Artificial Intelligence Principles](#)



Ethical Marketing

The claims we make about our products must be truthful and accurate. All information we provide to our customers about our products, including those that are involved in providing health care services, must be consistent with the applicable label and consistent with local legal and regulatory requirements.

Our Responsibilities

- Represent our products and services fairly, truthfully, and accurately. Promote them only for their approved uses
- Do not create by statement or omission any misleading impressions in any advertising, marketing or sales materials, or in any presentations
- Do not overstate the efficacy of our products, downplay or minimize the risks associated with our products, or make false or illegal claims about or comparisons to the products or services of a competitor
- All advertising and promotional materials must adhere to our advertising and promotional materials guidelines and policies
- Do not use messages or marketing materials that have not been properly reviewed and approved following company policy and procedure

Affordability and Pricing Transparency

illumina is committed to offering prices that enable broad access to genomic technology. We maintain a responsible approach to pricing our products. We negotiate and partner with health care systems, payers, and research institutions to provide availability of our products at a fair net price.

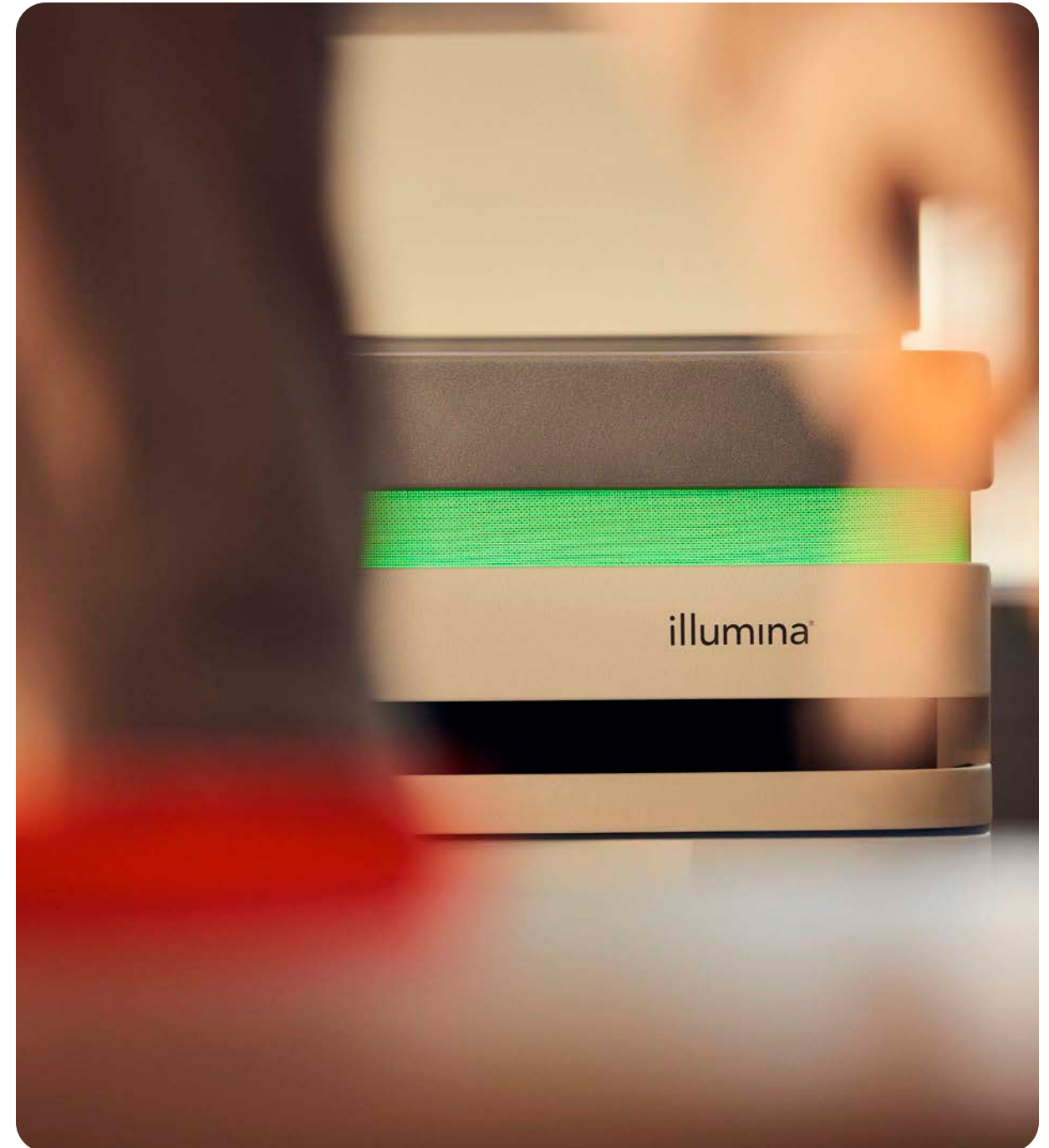
To support our customers and increase access, illumina has:

- Launched the NovaSeq™ X, a new production-scale sequencer that will push the limits of what is possible with genomic medicine, enabling faster, more powerful, and more sustainable sequencing
- Partnered with GenoScreen to expand capabilities for countries impacted by tuberculosis to more effectively detect and combat multidrug-resistant TB (MDR-TB). This will help advance the World Health Organization's (WHO) strategy to end the global TB epidemic by 2035
- Continued to expand the open offer program, which ensures a level playing field in the clinical oncology NGS market

illumina sets and adjusts list prices based on several factors, including but not limited to costs, inflation, and market dynamics. Prices are available to customers through their account managers or online on myillumina.com. Prices are also visible to customers on their invoices and billing statements.

As in past years, illumina's price increases were at or below inflationary indices, while absorbing many of the temporary cost increases driven by global supply chain issues. For example, in the US in 2022, the illumina annual price change was below the US Consumer Price Index (CPI).

illumina pricing reflects its value proposition and enables the company to continue to innovate for our customers and accelerate access to genomics for all.



Upholding Human Rights for All Stakeholders

We are committed to respecting human rights and treating every stakeholder with dignity and respect.

We acknowledge and respect the fundamental principles contained in the International Bill of Rights (i.e., United Nations Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, and International Covenant on Economic, Social, and Cultural Rights), the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, and the United Nations Guiding Principles on Business and Human Rights. As a member of the United Nations Global Compact, Illumina is committed to integrating these principles into our strategy, our culture, our operations, and our relationships with business partners

Key Pledges of Our Human Rights Policy

- Ethical business conduct
- Supplier Code of Conduct
- Right to exercise freedom of association
- Fair wages and working hours
- Protection of privacy
- Safe workplace
- Elimination of child and forced labor
- Equal opportunity

Read the full [Human Rights Policy here](#)

KEY POLICIES

[Human Rights Policy](#)

[Human Rights Policy—Japanese](#)

[Conflict-Free Minerals Policy](#)

[California Transparency in Supply Chains Act, UK Modern Slavery Act, & Australian Modern Slavery Act Disclosure Statement 2022](#)

Human Rights Impact Assessment

In 2021, we initiated a human rights impact assessment in alignment with the UN Guiding Principles. The assessment continued into 2022 as we evaluated internal policies, external disclosures, and worked to map actual and potential salient human rights impacts.

In 2022, we continued the evaluation with the goal of identifying Illumina's salient human rights impacts, Illumina's current practices for protecting and promoting these rights, and ways in which Illumina can continue to build on its human rights practices.

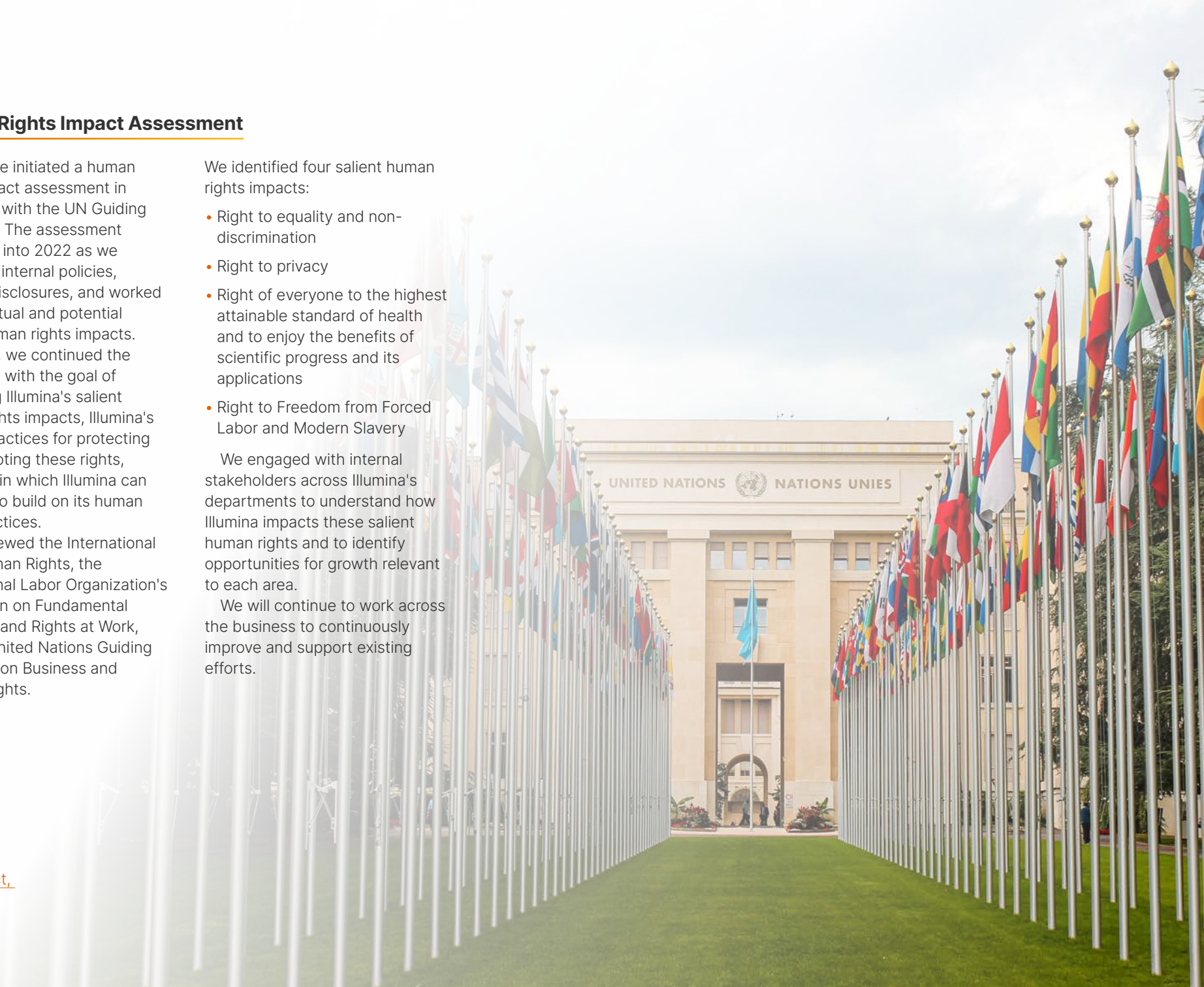
We reviewed the International Bill of Human Rights, the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, and the United Nations Guiding Principles on Business and Human Rights.

We identified four salient human rights impacts:

- Right to equality and non-discrimination
- Right to privacy
- Right of everyone to the highest attainable standard of health and to enjoy the benefits of scientific progress and its applications
- Right to Freedom from Forced Labor and Modern Slavery

We engaged with internal stakeholders across Illumina's departments to understand how Illumina impacts these salient human rights and to identify opportunities for growth relevant to each area.

We will continue to work across the business to continuously improve and support existing efforts.



Uphold High Standards for Data Security and Privacy

As we expand access to genomics around the world, we must also respect and properly secure the resulting data.

Genomics data is powering positive progress around the world. We are committed to developing, upholding, and promoting high standards for genomic data privacy. We develop, implement, and review privacy-related policies, practices, and contractual language and ensure the integration of privacy as a priority throughout the company. Our Privacy Policy defines the way we use, maintain, protect, disclose, and transfer personal information.



Our Privacy Principles

Our Privacy Policy defines how we may use, maintain, protect, disclose, or transfer certain types of personal information in the provision of our products and services. How we handle personal information is aligned to our four fundamental privacy guiding principles:

- Transparency
- Ethical Use
- Responsible Stewardship
- Accountability

Key Initiatives in 2022

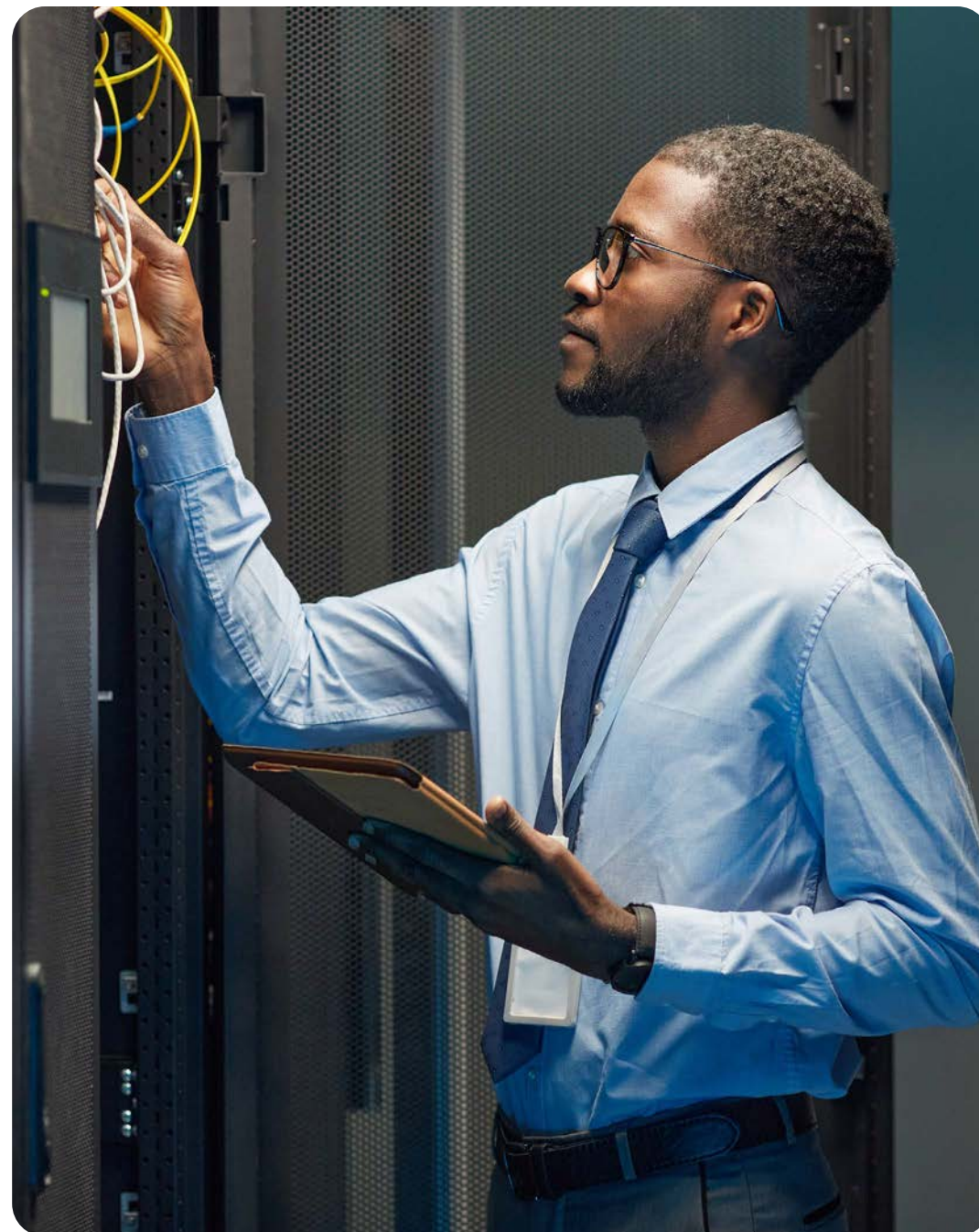
- The cross-functional Privacy Core Team and Privacy Steering Committee brought together leaders from across the business to advance Illumina's privacy program
- Submitted EU Binding Corporate Rules application (controller and processor) as a privacy program maturity effort regarding cross-border data transfers within the group
- Achieved ISO 27701 certification for Illumina's six cloud-based products for Privacy Information Management
- Revised Illumina's privacy and employee privacy policies to align with California's Privacy Rights Act and evolving global privacy regulations

Learn More

[Privacy Policy](#)

[Privacy Principles](#)

[Privacy Transparency Report](#)



Cybersecurity Framework

Our technologies and services inherently involve handling large amounts of genomic and health data that must be protected, making cybersecurity integral to achieving our company’s mission.

“Strong cybersecurity measures are a necessary component of modern IT systems. Maintaining a safe and trustworthy platform for our customers and the communities we serve is fundamental to our business.”



Carissa Rolins
Chief Information Officer

KEY REFERENCES

- NIST Cybersecurity Framework
 - ISO 27001
 - ISO 13485
 - General Data Protection Regulation (GDPR)
- California Consumer Privacy Act (CCPA)
 - Health Insurance Portability and Accountability Act (HIPAA)
 - Clinical Laboratory Improvement Amendments (CLIA)

Learn More
[Cybersecurity Illumina Security Resources and Best Practices](#)

CYBERSECURITY AWARENESS MONTH

Each October, we recognize **Cybersecurity Awareness Month** (CSAM), which provides heightened awareness regarding cybersecurity events, threats, attacks, and best practices that all employees can follow to help keep Illumina and its data safe from cyber threats.

2,486 employees participated in our Cybersecurity Awareness Month activities

10% increase in total participation. Unique participants increased **35% YOY**

The Five Pillars of Our Cybersecurity Commitment

1

Program Governance

- Led by Chief Information Security Officer (CISO)
- CISO reports at least quarterly to the Board of Directors’ Audit Committee
- Annual assessment against National Institute of Standards and Technology (NIST) Cybersecurity Framework
- Employees and contractors trained annually
- Third-party work requires cybersecurity risk assessment prior to engagement

2

Partnerships

- Healthcare Information Sharing and Analysis Center (H-ISAC)
- Domestic Security Alliance Council (DSAC)
- Information 2 Systems Security Association International (ISSA)
- Society for Information Management San Diego (SIM)
- Chief Information Security Officer Roundtable
- InfraGard

3

Secure Product Design and Placement

- Products and systems secured and maintained throughout life cycle
- Risk mitigation at earliest stages of product design and placement
- Security design requirements
- Cloud-based products aligned with ISO 27001
- Privacy by design
- Strong encryption standards
- Strict data access controls

4

Risk Analysis and Security Testing

- Continuously assess cybersecurity risk
- Perform internal and external security testing for all cloud software products
- Regularly put cloud software products through static analysis
- Incident response plan and team in place to handle cyber-related disruption with business continuity and contingency plans
- Internal vulnerability analysis conducted
- Internal tests deployed to represent simulated hacker attacks

5

Data Protection

- Data protected in compliance with applicable laws and cybersecurity best practices
- Data privacy and data protection align with standards set by GDPR, CCPA, HIPAA, other regulations, and our Privacy Policy
- CLIA laboratories ensure data quality and security with CLIA and regular HIPAA framework assessments
- Backup capabilities encrypt and store data in immutable formats for data confidentiality and integrity
- Amazon Web Services (AWS) hosts the Illumina BaseSpace Suite with additional security features

Foster a Responsible Supply Chain

Our suppliers are critical to our mission. Together, we magnify the positive impact to the customers we serve and the communities where we operate.

Supply Chain Overview

Illumina’s global supply chain consists of suppliers, sub-contractors, channel partners, manufacturing sites, distribution centers, and customers. We consider it business-critical to work with suppliers who share our commitment to integrity and who support an ethical and compliant culture. We view our suppliers as partners in our effort to work toward a more equitable and sustainable future for all.

We hold our suppliers to the same standards of business conduct that we set for ourselves. We require them to comply with the standards of behavior outlined in our [Supplier Code of Conduct](#) and exhibit social responsibility and environmental stewardship.

The Supplier Code of Conduct is consistent with commitments we made both as a signatory of the [United Nations Global Compact](#) and as a member of the Dow Jones Sustainability World Index.

We expect our suppliers to:

- Comply with local regulations and applicable US and international regulations
- Uphold their employees’ human rights and the Illumina [Human Rights Policy](#)
- Ensure a safe and healthy workplace
- Demonstrate social and environmental responsibility
- Conduct business in an ethical manner

Social impact and environmental screening are included in our Request for Information (RFI) tools when evaluating potential suppliers.

All new suppliers are required to acknowledge the Supplier Code of Conduct to complete the onboarding process.

In 2022, we embedded the requirement for suppliers to commit to reducing their environmental footprint in our Supplier Code of Conduct and require our strategic suppliers to accept this with issuance of any purchase order.

Our suppliers range from off-the-shelf packaging material to highly sophisticated reagents. We define our supplier base by categories, segments, and classification. The categories include direct and indirect, with subcategories such as a segment classified as Strategic Suppliers. Classifications of suppliers depend on the product or service they provide, such as finished medical devices, spec, off the shelf, and services. We source components, software, equipment, and services from over 75 countries across the world.

OUR SUPPLY CHAIN

3,323
suppliers across
the supply chain

>\$1B
estimated payments
to suppliers

\$694M
direct supplier
spend

919
active diverse
suppliers

\$269M
diverse supplier
spend

Transparency in Supply Chains and UK Modern Slavery Act

illumina is committed to conducting its business lawfully and with integrity. We work to continually strengthen our practices to ensure no human trafficking, slavery, or forced or compulsory labor occurs in any part of our supply chains and global operations. We also seek to ensure that our global business partners do not use modern slavery in any of its forms in providing goods or services. In 2022, we updated our California Transparency in Supply Chains Act and UK Modern Slavery Act disclosure statements to include disclosures for the Australian Modern Slavery Act 2018. Additional information is available in our [California Transparency in Supply Chains Act, UK Modern Slavery Act, and the Australian Modern Slavery Act disclosure statements](#).

Conflict-Free Minerals

illumina supports international efforts to ensure no conflict minerals directly or indirectly benefit armed groups in the Democratic Republic of Congo or adjoining countries. To this end, illumina expects all suppliers to commit to the [Responsible Business Alliance \(RBA\) Code of Conduct](#). Through our [Conflict-Free Minerals Policy](#) we expect all our suppliers to establish their own due diligence program to ensure supply chains are free of conflict minerals and make those due diligence measures available to us upon request. illumina routinely evaluates its suppliers to ensure they are adhering to our expectations and values.

Verification and Due Process

We only build relationships with business partners that share our commitment to fulfilling all legal and ethical obligations. We never knowingly conduct business with business partners that employ underage individuals, employ forced labor, or use corporal punishment to discipline employees, regardless of whether such practices are permitted by law.

We perform due diligence on new business partners to verify that they meet our standards. This process involves conducting initial risk assessments when onboarding new suppliers and conducting periodic assessments of performance. In addition, for supply chain areas of higher risk, we take steps to enhance our risk mitigation strategies. Prior to engaging in business with any supplier, we utilize tools that provide up-to-date sanction lists from governments around the world that identify companies and individuals involved in criminal activities such as money laundering, financing paramilitary groups, etc. In addition, we utilize tools to continuously monitor our supplier base for potential risk elements such as financial stability, leadership changes, global news, and others.

We encourage all employees and business partners to report potential violations or concerns through a variety of formal channels, including our legal team and/or our Compliance and Fraud Prevention Reporting website or hotline.

Channel Partners

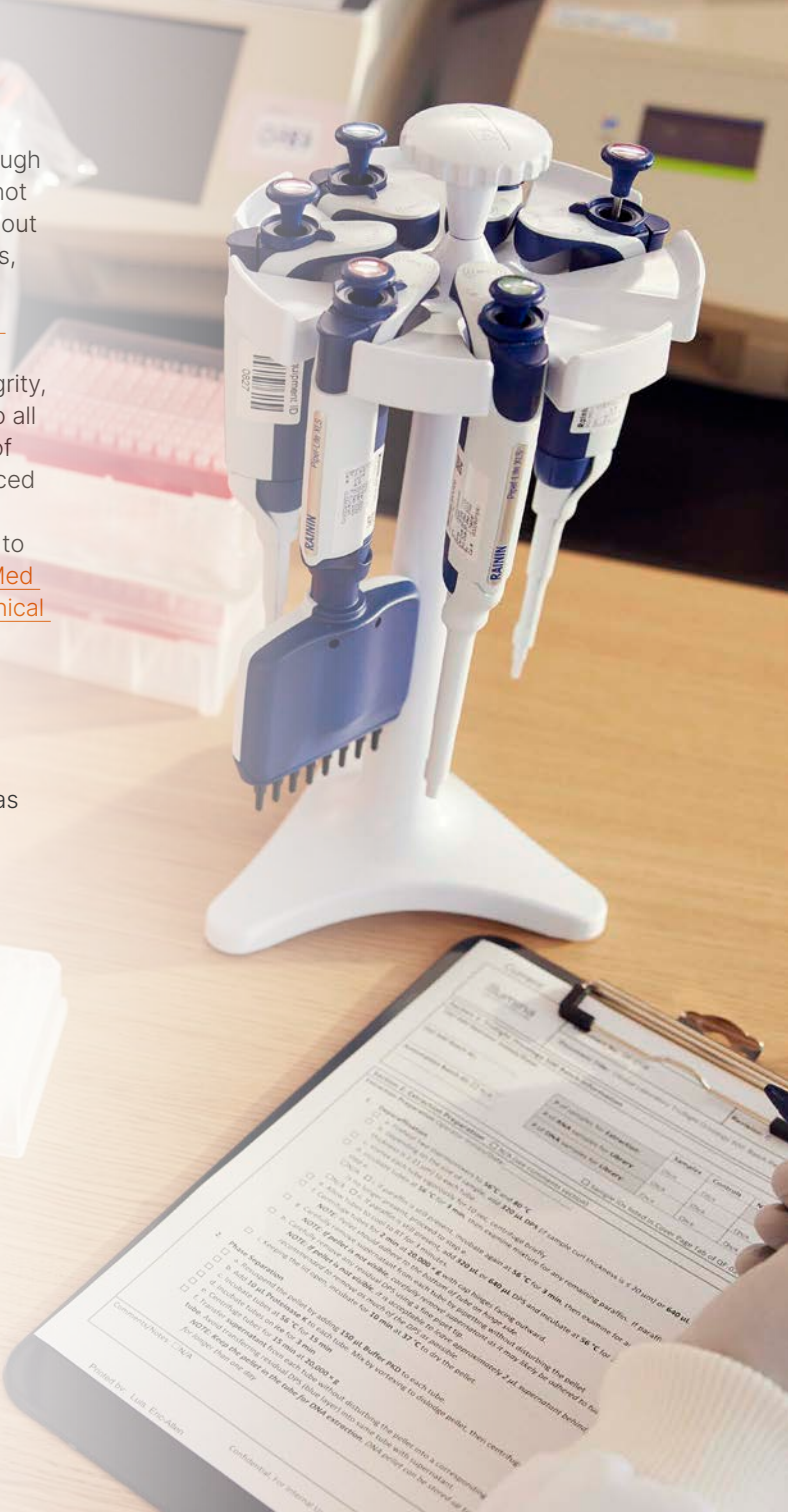
Our products are available around the globe through a robust channel partner network. Our partners not only offer critical access to our products throughout the world but also provide the same level of sales, marketing, service, and support that we offer to customers directly. The [illumina Channel Partner Code of Conduct](#) requires that channel partners match the illumina commitment to business integrity, ethical conduct in the marketplace, adherence to all applicable laws, and the fundamental elements of human rights. illumina is a member of the Advanced Medical Technology Association (AdvaMed) and MedTech Europe. Channel Partners are required to adhere to the applicable provisions of the [AdvaMed Code of Ethics](#) and [MedTech Europe Code of Ethical Business Practice](#).

Supplier Sustainability

In 2022, we assessed 100% of our supply chain as part of our Scope 3 emission data collection.

Learn more about [Supplier Sustainability](#) →

Learn More
[Channel Partner Code of Conduct](#)
[California Transparency in Supply Chains Act & UK Modern Slavery Act Disclosure Statement](#)
[Conflict-Free Minerals Policy](#)



Supplier Diversity

Our supplier diversity efforts aim to cultivate a supplier base that reflects the diversity of our communities, customers, employees, and the local economies where we operate.

We recognize that a diverse supplier base provides a competitive business advantage by harnessing suppliers’ unique experiences and creative solutions. Our program, overseen by a Supplier Diversity Governance Committee, promotes partnership opportunities for suppliers in the US that are at least 51% owned, managed, and controlled by a qualifying diverse group.

These include, but are not limited to:

- Woman-owned
 - Minority-owned
 - Veteran-owned
 - Disabled person-owned
 - LGBTQ-owned
- Socially and economically disadvantaged-owned businesses
 - Certified small businesses

Globally, we encourage the use of local businesses wherever possible to support the economies where our employees work and live. Our program is expanding to include woman-owned businesses in APAC and small businesses in Great Britain.

As part of our operational controls to embed supplier diversity in our supplier management, we require a mandatory internal training certification on supplier diversity for our procurement sourcing managers through our learning management system (LMS). In 2023, we plan to include diversity screening in our Request for Information and Request for Proposal process further strengthening the operational controls to support diverse suppliers.

Learn More
[Supplier Code of Conduct](#)
[Supplier Diversity Program](#)



Product Quality

Illumina is dedicated to being the leading provider of integrated solutions that advance the understanding of genetics and health. We achieve this through our focus on the customer experience, our commitment to continual improvement, maintaining the effectiveness of our quality management system, and complying with regulatory requirements.

During 2022, we issued zero medical device product recalls that were reported to the FDA. There was one medical device voluntary recall that was not required to be reported to the FDA. There were five voluntary medical device recalls/field actions that were reported to non-US national regulatory authorities and removed from the market or corrected.

Quality Management Systems

The following locations are certified to the ISO 13485 Standard, which specifically covers the quality of medical devices:

- Foster City, CA
- San Diego, CA
- Hayward, CA
- Madison, WI
- The Netherlands
- Singapore
- Cambridge, UK

100%

Illumina core facilities¹ participated in third-party audit programs

¹Core facilities defined as San Diego, Bay Area, Madison, Cambridge, UK, and Singapore.

Supplier Quality Vision and Values

To ensure the quality of our products, we have to ensure the quality of the components that we source. That is the rationale behind the Illumina Supplier Quality Vision, which is to construct and foster a leading supplier base that ensures safe and quality products every time.

The supplier quality management life cycle incorporates the following phases:

- Initial risk assessments
- Audits
- Qualification
- Monitoring

Working with our suppliers, we focus on the customer experience, continual improvement, effectiveness of our quality management system, and compliance. All Illumina Direct Tier 1 suppliers are subject to onboarding and qualification per Illumina Purchasing Controls. All products have traceability, and inventory is tracked via our inventory management system, SAP. Products may contain bar code, lot numbers, and/or unique identifiers.

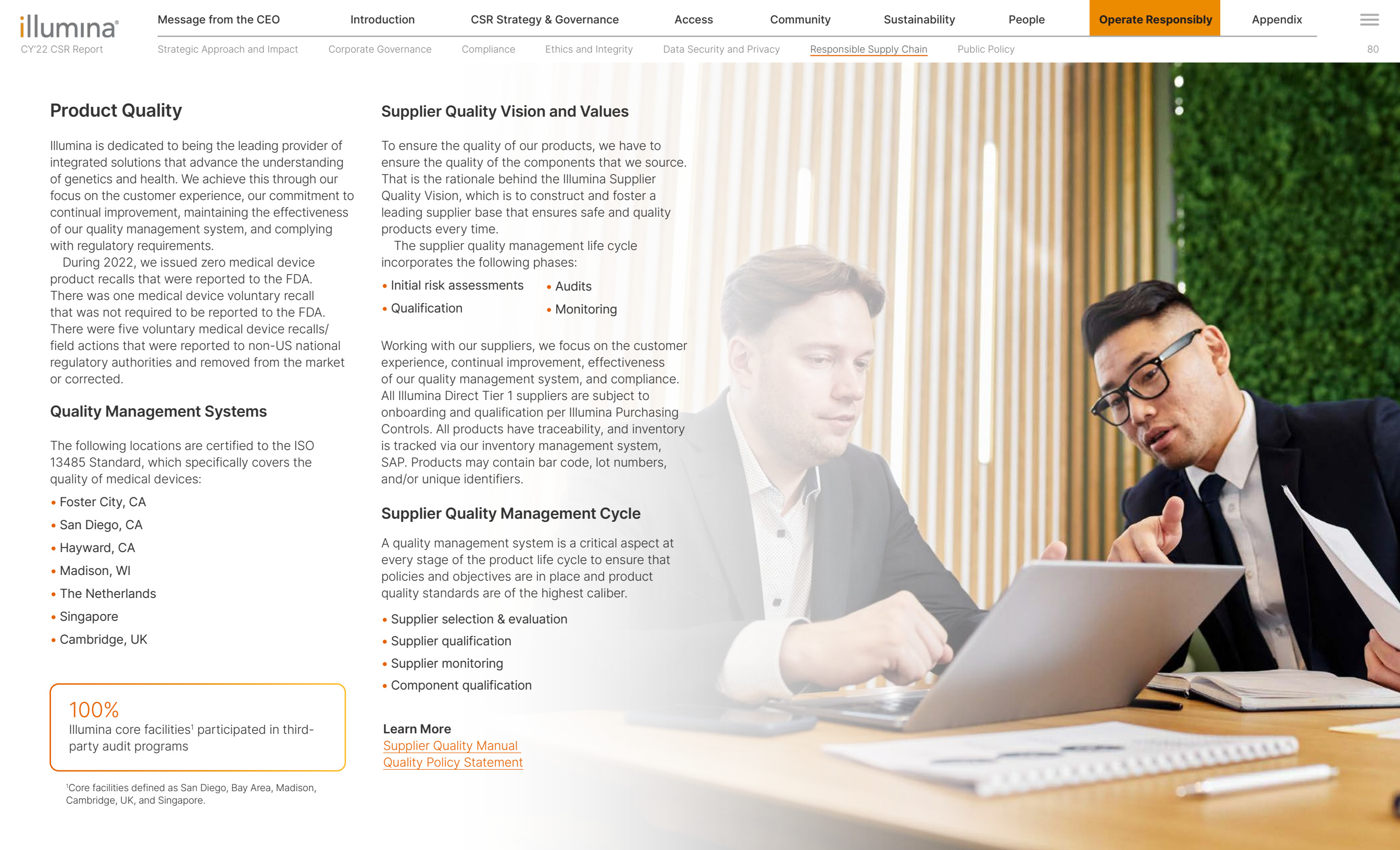
Supplier Quality Management Cycle

A quality management system is a critical aspect at every stage of the product life cycle to ensure that policies and objectives are in place and product quality standards are of the highest caliber.

- Supplier selection & evaluation
- Supplier qualification
- Supplier monitoring
- Component qualification

Learn More

[Supplier Quality Manual](#)
[Quality Policy Statement](#)



Make Responsible Public Policy Decisions

Proactive engagement with public policy stakeholders enables sharing accurate and reliable information about genomics and advocating for policies that promote broad access.

Illumina participates in the political and public policy process with governments and organizations around the world to engage and educate policymakers and key stakeholders on issues that impact our mission and business.

Our interactions with policymakers must align with our core values, ethical responsibilities, and legal obligations. The Illumina Nominating/Corporate Governance Committee of our Board of Directors oversees our political policies and contribution practices. The Committee maintains responsibility for ensuring all Illumina political activities promote ethical and transparent engagement, advance the company’s mission, and comply with applicable laws and reporting requirements. On an annual basis, we provide an update on our [public policy priorities](#), political contributions, lobbying expenditures, and information about significant memberships. Our Global Government Affairs team is responsible for advocacy activities. Illumina does not have a Political Action Committee but does retain outside strategic advisors who support our global engagement with policymakers and key stakeholders. These advisors may also provide expertise on policy and specific regional issues.

Illumina complies with all applicable laws and requirements in connection with our global political and public policy activities. These laws generally require reporting on lobbying activities and compliance with applicable gift laws.

Reports filed on behalf of Illumina are publicly available in the following government-hosted databases:

- [Office of the Clerk, US House of Representatives](#)
- [Secretary of the Senate, US Senate](#)
- [Lobbying Disclosure, California Secretary of State](#)
- [Transparency Register, European Commission](#)
- [Texas Ethics Commission](#)

Advocating for public policies that ensure and enable broad access to genomic technologies is a priority. In 2022, we focused engagement with public policy stakeholders around:

- Advancement of precision medicine
- Adoption and reimbursement for genetic testing
- Adoption and reimbursement for NIPT
- Adoption and funding for genomic infectious disease surveillance
- Promoting STEM opportunities

Trade Associations and Memberships

Illumina participates in various trade associations for collaboration and the exchange of ideas. We pay annual dues to a number of trade and industry associations, some of which use a portion of membership dues for nondeductible state and federal lobbying and political expenditures. We disclose memberships in trade associations for which we contributed over \$5,000 in the immediately preceding year, as well as the total amount of such dues.

For trade association payments in excess of \$50,000, we also disclose the portion of payments that are nondeductible under Section 162(e)(1)(B) of the Internal Revenue Code, such as payments to organizations designated as 501(c)(4) and 501(c)(6).

Learn More
[Political Contribution Policy](#)
[Political Contributions Spend Report, Trade Association and Significant Membership Report](#) →

“As Illumina’s impact on clinical healthcare grows, government and industry stakeholders expect that we will engage with them on how genomics can better serve patients, individually and at global scale.”



John Frank
Chief Public Affairs Officer



illumina

Appendix

About this Report

Our report has been designed to provide a comprehensive and integrated view of our commitments, progress, and activities related to our corporate social responsibility program and most material environmental, social, and governance (ESG) themes.

Boundaries and Exclusions

The boundary of this report includes only core Illumina activities.

In 2021, Illumina acquired GRAIL. GRAIL must be held and operated separately and independently from Illumina pursuant to the interim measures ordered by the European Commission, which prohibited the Illumina/GRAIL transaction on 6 September 2022 under the EU Merger Regulation. Data contained in this report does not reflect any GRAIL operations, financial results, or ESG data.

Reporting Period

January 1, 2022, to December 31, 2022, unless otherwise indicated.

Baseline Year

2019, unless otherwise indicated.

Materiality

Based on the [materiality assessment refreshed](#) in 2021.

Currency References

US Dollars

Re-statements

We conduct ongoing data review to ensure accuracy and consistency. Any material data changes would be identified.

Assurance

[Limited assurance](#) has been provided in accordance with ISAE 3000 and ISAE 3410 on the following topics:

- Scope 1, 2, and 3 GHG emissions data
 - Energy data
- Water data
 - Human capital data

Signatory Participation

- United Nations Global Compact (UNGC)²
- We Mean Business Coalition 1.5^o
- UN Race to Zero
- CEO Action for Diversity & Inclusion
- UN Women Empowerment Principles
- STEMM Opportunity Alliance
- CEOs for Computer Science

Reporting Frameworks

- In accordance with the GRI standards
- Sustainability Accounting Standards Board (SASB)
- Task Force on Climate-related Financial Disclosures (TCFD)
- UN Sustainable Development Goals
- UN Global Compact
- UN Universal Declaration of Human Rights
- Dow Jones Sustainability Index
- CDP¹
- Bloomberg Gender Equality Index
- HRC Corporate Equality Index
- ISO 26000 as reference to provide guidance for integration of social responsibility

Relevant Memberships

- Business for Social Responsibility (BSR)
- World Economic Forum
- Association of Corporate Citizenship Professionals (ACCP)
- Chief Executives for Corporate Purpose (CECP)
- CSR Board.Org
- World 50
- Sustainable Packaging Coalition
- My Green Labs

ESG Appendix Contents

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Contact

We welcome your feedback at csr@illumina.com

Learn More

- [Illumina CSR and ESG microsite](#)
- [Illumina ESG Reporting Hub](#)

¹To access Illumina's public facing CDP submission [Learn More](#).
²In 2023, the UNGC has updated the Communication on Progress reporting to an online portal. To access Illumina's participant page [Learn More](#).

Our 2030 Targets

Our Focus Areas	Objectives	2030 Targets	UN SDG Target Alignment
Accelerate Access to Genomics	1. Drive innovation and affordability 2. Catalyze genomic startups to broaden the genomic ecosystem 3. Increase genomic data diversity 4. Democratize genomics 5. Enable catalytic philanthropy 6. Expand reach with payer coverage, genomic literacy, and patient advocacy	Enable \$100 genome Support 50,000 patients through philanthropic iHope programming Achieve 2 billion covered lives by 2026 Invest in 200+ genomic startups Activate Pathogen Genomics Initiative donations enabling our \$60 million commitments Reach at least 25,000 medical education learners annually	3 GOOD HEALTH & WELL-BEING 4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 17 PARTNERSHIPS FOR THE GOALS Target 3.d: Improve early warning systems for global health risks Target 17.6: Knowledge sharing and cooperation for access to science, technology, and innovation Target 17.7: Promote sustainable technologies to developing countries Target 17.16: Enhance the global partnership for sustainable development
Empower Our Communities	1. Provide meaningful and strategic community investment 2. Engage our people to be agents of social change 3. Drive equitable access to STEM education	Reach 5 million STEM learners Donate 100,000+ volunteer hours Achieve 50% employee participation in giving and volunteering	4 QUALITY EDUCATION 5 GENGENDER EQUALITY 10 REDUCED INEQUALITIES Target 10.3: Ensure equal opportunities and end discrimination Target 5.b: Promote empowerment of women through technology
Integrate Sustainability	1. Drive climate action 2. Operate sustainable facilities 3. Foster a sustainable value chain 4. Develop sustainable products 5. Leverage genomics for a healthier planet	Deliver net zero emissions (Scope 1,2,3) by 2050 Reduce emissions by 46% (Scope 1,2) Reduce emissions by 46% (Scope 3) Achieve 100% renewable electricity Reach 90% landfill diversion at core sites Reach 10% reduction in water intensity at core sites Reduce packaging by 75% Invest \$20 million in philanthropic sustainability initiatives Have 100% of strategic suppliers commit to minimizing their environmental footprint	9 INDUSTRIAL INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION Target 12.2: Sustainable management and use of natural resources Target 12.5: Substantially reduce waste generation Target 13.2: Integrate climate change measures into policy and planning
Nurture Our People	1. Practice diversity, equity, and inclusion 2. Invest in our people 3. Create a culture of care	Increase gender representation in global leadership Maintain zero net pay gap Increase minority representation in executive leadership (US) Increase representation of Black, Native, Pacific Islander, Hispanic or Latino, 2 or more in US workforce and leadership Reduce recordable injury and illness rate	3 GOOD HEALTH & WELL-BEING 5 GENGENDER EQUALITY 10 REDUCED INEQUALITIES Target 10.3: Ensure equal opportunities and end discrimination
Operate Responsibly	1. Practice strong corporate governance 2. Maintain a culture of compliance 3. Act with integrity in all that we do 4. Foster a responsible supply chain 5. Uphold high standards for data security and privacy 6. Participate in proactive public policy	Ensure 100% strategic suppliers committed to reducing their environmental footprint Achieve 20% spend with diverse suppliers (US) Achieve top industry ESG ratings	10 REDUCED INEQUALITIES 17 PARTNERSHIPS FOR THE GOALS Target 9.2: Promote inclusive and sustainable industrialization Target 10.3: Ensure equal opportunities and end discrimination Target 17.16: Enhance the global partnership for sustainable development

Recognition 2022

Member of

Dow Jones Sustainability Indices

Powered by the S&P Global CSA

Workplace

- Glassdoor Best Place to Work
- BioSpace Best Place to Work
- Refinitiv Top 100 Global D&I Index
- Just Capital Top 100 US Companies Supporting Healthy Communities & Families
- Just Capital Workforce Equity & Mobility
- Wall Street Journal Top 250

Regional

- SANDAG Green Commute Award San Diego
- AmCham Cares CSR Singapore
- MIT Tech Review 50 Smartest Companies in China
- Water Efficiency Building (WEB) Singapore
- Best Employer Straits Times Singapore
- Workplace Safety Award Singapore

Leadership

- Most Responsible CEO | Francis deSouza
- Top Chief Human Resources Officer | Aimee Hoyt
- Savoy Most Influential Black Exec | Kathrynree Reeves
- Forbes 50 over 50 | Susan Tousi

Key Performance Indicator Summary

Introduction

General	2022
Name of organization	Illumina, Inc.
Location of headquarters	San Diego, California, US
Number of global locations	33
Nature of ownership and legal form	Public Corporation
Revenue	\$4.55 billion
Total capitalization (stockholder’s equity) market value as of 12/31/2021	\$6.6 billion
5Y CAGR	11%
10Y CAGR	15%
R&D % revenue investment	22%
R&D spend	\$1.1 billion
Building footprint ¹	2,649,068 square feet
Facility additions ²	7
Facility closures ³	2

Expand Access to Genomics

Access to Genomics	2022
Cost per genome ⁴	~\$200
iHope™ patients supported in 2021	439
Total iHope™ patients supported since program inception	1,704
Clinical iHope™ network sites	28
Professional healthcare learners	>30,000
Illumina Accelerator companies funded through December 2021	74
NGS coverage outlook: total insured lives	1.2 billion

Footnotes:

¹Average square feet during reporting year.

²Added lab support facilities in UK, commercial locations in Milan, Dubai, and Israel, and new manufacturing locations in Shanghai and Singapore.

³Moved warehouse from Eindhoven to Steenoven and moved Brazil office.

⁴Announced launch in 2022 based on US list price, assuming 120 Gb/genome, compared to NovaSeq™ 6000.

⁵In order to be included in the Causes Database, an organization must meet their country's NGO guidelines. Organizations are then evaluated against 1,200 watch lists and a number of National Taxonomy of Exempt Entities Codes (NTEE) that are also excluded from matching eligibility. Illumina currently blocks charitable organizations that have been found to discriminate against a specific race, religion, ethnicity, sexual orientation, or gender identity.

Empower Our Communities

Total Giving	2019	2020	2021	2022
Illumina, Inc. + Illumina Corporate Foundation + employee giving	\$1,185,088	\$13,829,496	\$14,966,331	\$18,239,858
Illumina, Inc. + Illumina Corporate Foundation	\$873,088	\$13,255,768	\$14,446,500	\$17,676,194
Number of causes supported ⁵	1,021	1,034	1,345	1,747

Illumina, Inc. Giving	2019	2020	2021	2022
In-kind product donations + cash grants	\$560,088	\$7,146,450	\$9,409,966	\$12,379,381

Illumina Corporate Foundation Giving	2019	2020	2021	2022
Employee giving	\$312,000	\$573,728	\$519,831	\$563,664
Employee participation (giving)	19%	20%	26%	28%
Foundation match & volunteer rewards (Dollars for Doers)	\$208,000	\$721,111	\$546,884	\$606,597
Charitable grants	\$105,000	\$5,388,207	\$4,489,650	\$4,887,885
Total Foundation giving (not including employees)	\$313,000	\$6,109,318	\$5,036,534	\$5,860,477

Volunteer Hours	2019	2020	2021	2022
Employee hours	13,980	4,236	8,772	20,142
Employee volunteering	29%	5%	10%	39%
Intern hours	140	1,237	800	520

Employee Participation	2019	2020	2021	2022
Total employee participation (giving + volunteering)	40%	24%	31%	50%

Summary of International Giving (Outside US)	2019	2020	2021	2022
Illumina, Inc.	NA	\$2,894,129	\$7,044,842	\$5,994,599
Illumina Corporate Foundation	NA	\$635,126	\$1,089,892	\$1,980,646
Number of countries	24	29	44	46

STEM	2019	2020	2021	2022
Number of teachers and students engaged in Illumina STEM programs	306,170	195,000	315,000	396,865

Key Performance Indicators

Integrate Sustainability

Energy Consumption (Units: Gigajoules)	2019	2020*	2021*	2022*
Total fuel consumption from non-renewable sources	247,576	390,564	403,211	375,516
Total fuel consumption from renewable sources	0	0	0	0
Generation from renewable sources consumed by the organization	1,566	3,333	2,417	2,966
Total energy consumption from non-renewable sources	503,658	561,258	581,067	228,712¹
Total energy consumption from renewable sources	1,566	3,333	9,077	375,516
Total energy consumption	505,224	564,591	590,144	604,228

Energy Consumption by Activity and Region (Units: Gigajoules)	2019	2020*	2021*	2022*
Total electricity (purchased + generated)	257,648	174,028	187,297	231,678
Purchased electricity	256,082	170,694	184,882	228,711.6
Generated electricity (on-site solar)	1,566	3,333	2,417	2,966.4
Total fuel	247,576	390,564	403,211	375,516
Natural gas	247,576	390,564	403,211	375,516
Total steam	0	0	0	0
Electricity, heating, cooling, steam sold	0	0	0	0
Total energy consumption AMR region	380,106	445,190	469,104	473,893
Total energy consumption EMEA region	47,779	35,072	36,358	36,308
Total energy consumption APAC region	75,752	80,996	84,681	94,026

Renewable Electricity Consumption	2019	2020	2021*	2022*
Percentage of global electricity consumption that is renewable	0.6%	2%	59%	100%
On-site solar generation	0.6%	2%	1%	1%
Renewable electricity purchased	0%	0%	3%	37%
Covered by Renewable Energy Credits	0%	0%	55%	62%

Footnotes:

¹Renewable energy credits purchased for all non-renewable electric consumption.

General Notes:

* Denotes data has been assured.

- Boundary definition for energy and Scope 1 & 2 emission inventory: sites >30,000 square feet or contain manufacturing, distribution, or significant R&D activities.
- Boundary definition sites represent our jurisdictional control plus material locations accounting for 96% of our total 2019 baseline footprint.
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard is utilized as the methodology to calculate Scope 1 and Scope 2 emissions.
- Some segments may not add up to total due to rounding.

Emissions (Units: Metric Tons CO ₂ e)	2019	2020*	2021*	2022*
Total Scope 1 & 2 (market-based) GHG emissions	34,404	36,573	26,265	18,902
Total Scope 1 & 2 (location-based) GHG emissions	34,404	36,573	36,914	39,924
Gross direct GHG emissions (Scope 1)	12,489	19,701	20,296	18,902
Gross market-based energy indirect GHG emissions (Scope 2)	21,915	16,872	5,968	0
Gross location-based energy indirect GHG emissions (Scope 2)	21,915	16,872	16,618	21,022

Regional Emissions Market-Based (Units: Metric Tons CO ₂ e)	2019	2020*	2021*	2022*
Scope 1 & 2 AMR region	22,903	25,207	25,060	18,159
Scope 1 & 2 EMEA region	3,014	2,253	864	743
Scope 1 & 2 APAC region	8,488	9,113	341	743

Country-Specific Scope 1 Emissions (Units: Metric Tons CO ₂ e)	2019	2020*	2021*	2022*
China	0	0	0	0
Netherlands	73	73	74	55
Singapore	0	0	0	0
United Kingdom of Great Britain and Northern Ireland	1,132	801	768	688
United States of America	11,284	18,827	19,454	18,159

Country-Specific Scope 2 Market-Based Emissions (Units: Metric Tons CO ₂ e)	2019	2020*	2021*	2022*
China	388	518	0	0
Netherlands	384	368	8	0
Singapore	8,099	8,595	341	0
United Kingdom of Great Britain and Northern Ireland	1,425	1,011	14	0
United States of America	11,619	6,380	5,605	0

Key Performance Indicators

Integrate Sustainability continued

Facility-Specific Emissions ^{1,2} (Units: Metric Tons CO ₂ e)	Scope 1		Scope 2 Market-Based		Scope 2 Location-Based	
	2021*	2022*	2021*	2022*	2021*	2022*
Cambridge, United Kingdom	749	681	0	0	903	971
Eindhoven, Netherlands	72	0 ⁴	0	0 ⁴	203	0 ⁴
Foster City, California	1,359	1,506	1,403		1,403	1,906
Hayward, California	634	624	592	0	592	673
Madison, Wisconsin	1,458	1,554	2,138	0	2,138	2,695
Northcoast, Singapore	N/A	0 ⁵	N/A	0 ⁵	0 ⁵	247
San Diego Headquarters, California	15,248	13,910	1,291	0	1,580	3,443
San Diego i3, California	756	564	134	0	200	325
San Diego Warehouse, California	0	0	47	0	74	96
Shanghai, China	0	0	0	0	358	220
Steenoven, Netherlands	2	55	8	0	218	541
Watson, United Kingdom	19	7	14	0	23	26
Woodlands, Singapore	0	0	341	0	8,927	9,556

Greenhouse Gas Breakdown (Units: Metric Tons CO ₂ e)	2019	2020*	2021*	2022*
CO ₂ Scope 1	12,475	19,681	19,884	18,518
CH ₄ Scope1	7	10	375	349
N ₂ O Scope 1	6	10	37	35

Emission Intensity Ratios (Scope 1 & 2)	2019	2020*	2021*	2022*
GHG emission intensity per million dollars revenue	9.8	11.4	5.8	4.2
GHG emission intensity kgCO ₂ e/square feet	13.8	15.1	10.4	7.5
GHG emission intensity per employee	4.4	4.7	2.9	1.8

Emission Intensity Ratio (Scope 3)	2019	2020*	2021*	2022*
GHG emission intensity per million dollars revenue	72.6	71.3	66.1	78.8

Footnotes:

¹Facilities included in Scope 1 & 2 GHG Scope Boundary.

²Energy emission factor for fuel based on 2018 Climate Registry Default Emission Factors. Metric tons CO₂e; GWP Reference: IPCC Fifth Assessment Report (AR5 – 100 year).

³Scope 3 material categories included in SBTi emission reduction and net zero targets.

⁴Eindhoven, Netherlands DC closed and moved to Steenoven, Netherlands.

⁵Northcoast, Singapore new facility opened in 2022.

General Notes:

* Denotes data has been assured.

- Boundary definition for energy and greenhouse gas emission inventory: sites >30,000 square feet or contain manufacturing, distribution, or significant R&D activities. These sites represent our jurisdictional control plus material locations. This scope accounts for 96% of our total 2019 estimated baseline footprint.
- Refrigerant-specific data is not included.
- Some segments may not add up to total due to rounding.
- The Greenhouse Gas Protocol: A Corporate Value Chain (Scope 3) Accounting and Reporting Standard is utilized as the methodology to collect activity data and calculate Scope 3 emissions.

Scope 3 Emissions (Units: Metric Tons CO ₂ e)	2019	2020	2021*	2022*
Purchased Goods and Services (Category 1) ³	72,915	100,351	138,563	131,929
Capital Goods (Category 2) ³	39,940	44,057	79,530	83,071
Fuel- and Energy-Related Activities (Category 3)	6,956	5,785	9,048	8,590
Upstream Transportation & Distribution (Category 4) ³	46,327	48,256	68,934	85,993
Waste Generated in Operations (Category 5)	236	617	1,055	1,275
Business Travel (Category 6) ³	19,350	8,913	3,959	20,040
Employee Commuting (Category 7) ³	18,012	7,567	7,616	15,027
Upstream Leased Assets (Category 8)	1,480	733	547	830
Downstream Transportation & Distribution (Category 9)		Assessed, not relevant		
Processing of Sold Products (Category 10)		Assessed, not relevant		
Use of Sold Products (Category 11)	6,968	4,850	9,221	11,865
End-of-Life Treatment of Sold Products (Category 12)	2,368	2,245	5,230	31
Downstream Leased Assets (Category 13)		Assessed, not relevant		
Franchises (Category 14)		Assessed, not relevant		
Investments (Category 15) ³	23,559	19,038	0	0
Total Scope 3 Emissions	238,110	242,411	323,702	358,651

Scope 3 Emissions: % of Total Scope 3 Emissions	2019	2020	2021*	2022*
Purchased Goods and Services (Category 1) ³	31%	41%	43%	37%
Capital Goods (Category 2) ³	17%	18%	25%	23%
Fuel- and Energy-Related Activities (Category 3)	3%	2%	3%	2%
Upstream Transportation & Distribution (Category 4) ³	19%	20%	21%	24%
Waste Generated in Operations (Category 5)	0.1%	0.3%	0.3%	0%
Business Travel (Category 6) ³	8%	4%	1%	6%
Employee Commuting (Category 7) ³	8%	3%	2%	4%
Upstream Leased Assets (Category 8)	0.6%	0.3%	0.2%	0%
Use of Sold Products (Category 11)	3%	2%	3%	3%
End-of-Life Treatment of Sold Products (Category 12)	1%	0.9%	2%	0%
Investments (Category 15) ³	10%	8%	0%	0%

Key Performance Indicators

Integrate Sustainability continued

Water (Units: Megaliters)	2019	2020	2021*	2022*
Interactions with water: total water withdrawal (potable + recycled)	225	294	268	256
Water withdrawal (potable)	147	208	195	213
Water withdrawal (recycled)	78	86	74	43
Percentage of total water withdrawal in water stressed regions ¹	63%	62%	70%	66%
Water intensity (kiloliters by rentable square feet for core locations) ²	0.10	0.12	0.11	0.10
% water consumption in AMR	97%	97%	97%	92%
% water consumption in EMEA	2%	1%	1%	2%
% water consumption in APAC	1%	2%	2%	6%

Total Waste (Units: Metric Tons)	2019	2020	2021	2022*
Total (hazardous + non-hazardous)	4,934	4,979	5,975	7,503
Global average non-hazardous diversion from landfill	51%	49%	49%	64%

Regional Waste Data AMR (Units: Metric Tons)	2019	2020	2021	2022*
Non-hazardous waste total	2,619	2,869	3,326	4,802
Hazardous waste total	902	699	605	594
Madison Site % diversion ³	39%	43%	43%	43%
Foster City % diversion ³	54%	48%	49%	66%
Hayward % diversion ³	32%	22%	22%	70%
San Diego % diversion ³	33%	36%	31%	42%

Regional Waste Data EMEA (Units: Metric Tons)	2019	2020	2021	2022*
Non-hazardous waste total	451	397	590	569
Hazardous waste total	67	35	55	79
Cambridge, UK % diversion ³	100%	100%	100%	100%
Netherlands % diversion ³	100%	100%	100%	100%

Regional Waste Data APAC (Units: Metric Tons)	2019	2020	2021	2022*
Non-hazardous waste total	424	437	504	750
Hazardous waste total	471	542	894	710
Singapore % diversion ³	100%	100%	100%	100%

Footnotes:

¹Water stressed regions listed on [page 44](#).
²Core locations: San Diego HQ, i3 and Warehouse, Hayward, Foster City, Madison, Netherlands, Cambridge, and Singapore.
³% Diversion calculated using non-hazardous waste and % diverted from landfill.

Effluent & Waste by Type and Disposal Method (Units: Metric Tons)	2019	2020	2021	2022*
Non-Hazardous Waste				
Non-hazardous waste total	3,494	3,703	4,421	6,119
Reuse	0	0	0	0
Recycling	887	872	937	3,338
Composting	149	203	259	267
Recovery (including energy recovery)	760	729	977	366
Incineration	0	0	0	0
Deep well injection	0	0	0	0
Landfill	1,698	1,899	2,247	2,224
On-site storage	0	0	0	0
Other	0	0	0	0

Hazardous Waste				
Hazardous waste total	1,440	1,276	1,552	1,075
Reuse	0	0	0	0
Recycling	413	489	332	65
Composting	0	0	0	0
Recovery (including energy recovery)	850	707	1,169	943
Incineration	62	34	41	47
Deep well injection	0	0	0	0
Landfill	37	20	6	8
On-site storage	0	0	0	0
Other	77	26	4	12

General Notes:

* Denotes data has been assured. (Units: Metric Tons CO2e).

Key Performance Indicators

Nurture Our People

Workforce Data	2019	2020	2021*	2022*
Total employees	7,802	7,828	9,191	10,257
Full-time employees	7,749	7,782	9,137	10,195
Part-time employees	53	46	54	62
Contingent workers	1,247	1,459	1,647	1,578

Age Group				
Employees under 30	1,527	1,363	1,820	1,963
	20%	17%	20%	19%
Employees 30–50	5,090	5,235	5,992	6,748
	65%	67%	65%	66%
Employees over 50	1,185	1,230	1,379	1,546
	15%	16%	15%	15%

AMR				
Total employees	4,973	4,937	5,668	6,342
Full-time employees	4,954	4,918	5,650	6,324
Part-time employees	19	19	18	18
Contingent workers	971	1,182	884	726

APAC				
Total employees	1,883	1,871	2,238	2,456
Full-time employees	1,882	1,871	2,238	2,456
Part-time employees	1	0	0	0
Contingent workers	164	146	588	726

EMEA				
Total employees	946	1,020	1,285	1,459
Full-time employees	913	993	1,249	1,415
Part-time employees	33	27	36	44
Contingent workers	112	131	175	186

Footnotes:
¹Percentage of all part-time employees.
²Leadership: Manager, equivalent, and above.
³Executive leadership: Director and above.

General Notes:
* Denotes data has been assured.
• For all people metrics unless specified, the values include only regular Illumina employees, not contingent workers.
• Some segments may not add up to total due to rounding.

Gender Data	2019	2020	2021*	2022*
Workforce				
Total women	3,334	3,342	4,076	4,596
	43%	43%	45%	45%
Full-time women	3,293	3,305	4,036	4,543
	43%	43%	45%	45%
Part-time women ¹	41	37	40	53
	79%	80%	76%	86%
Temporary women	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A

Leadership				
Women in leadership ²	571	610	746	898
	39%	40%	42%	41%
Women in executive leadership ³	112	136	174	217
	33%	36%	38%	38%
Women on Board of Directors	3	3	3	3
	33%	30%	33%	33%

Total Women by Region				
AMR	2,071	2,067	2,474	2,813
APAC	847	826	1,037	1,124
EMEA	416	449	565	659

Women in Leadership by Region				
AMR	404	421	506	613
APAC	95	104	135	153
EMEA	72	85	105	132

Functional Group				
Women in revenue-generating roles	41%	36%	48%	48%
Women in revenue-generating roles—management	35%	36%	42%	42%
Women in STEM-related roles (% of total STEM roles)	37%	37%	39%	39%
Women in IT roles	24%	23%	24%	24%
Women in engineering roles	37%	36%	29%	29%

Key Performance Indicators

Nurture Our People continued

Learn More: [Federal Employer Information EEO-1 Report](#)

Percentage Female of Each EEOC Category (US)	2019	2020	2021*	2022*
White/Caucasian	41%	41%	43%	44%
Native Hawaiian or Other Pacific Islander	31%	27%	33%	31%
American Indian or Native Alaskan	50%	45%	50%	50%
Asian	44%	44%	45%	46%
Hispanic or Latino	39%	40%	44%	43%
Black or African American	37%	41%	45%	46%
2 or More	45%	46%	51%	51%
Choose not to self disclose	40%	40%	41%	37%

Percentage Male of Each EEOC Category (US)	2019	2020	2021*	2022*
White/Caucasian	59%	59%	57%	56%
Native Hawaiian or Other Pacific Islander	69%	73%	67%	69%
American Indian or Native Alaskan	50%	55%	50%	50%
Asian	56%	56%	55%	54%
Hispanic or Latino	61%	60%	56%	57%
Black or African American	63%	60%	55%	54%
2 or More	55%	54%	49%	49%
Choose not to self disclose	60%	60%	59%	63%

Percentage Gender by Level 2022*	Male 2022*	Female 2022*	Undisclosed 2022*
Support to Entry Professional	51%	49%	1%
Intermediate to Senior Professional	55%	44%	1%
Supervisor to Assoc Director	56%	44%	1%
Director and Senior Director	59%	41%	1%
VP	63%	37%	0%
SVP / C suite	64%	36%	0%
Board of Directors	67%	33%	0%

Footnotes:

¹Minority defined as any EEOC category that is non-white/non-Caucasian. Does not include those who choose not to specify a race/ethnicity.

²Leadership: Manager, equivalent, and above.

³Executive leadership: Director and above.

General Notes:

* Denotes data has been assured.

• Some segments may not add up to total due to rounding.

EEOC Minority Summary (US)	2019	2020	2021*	2022*
Total employees identifying in minority race and ethnicity statistics ¹	2,429	2,422	2,830	3,213
Minority of total employees ¹	49%	49%	50%	52%
Non-Minority of total employees ¹	46%	46%	45%	44%
Decline to state of total employees	5%	5%	5%	4%
Representation of Black, Native, Pacific Islander, Hispanic or Latino, 2 or more communities in workforce	17%	17%	17%	18%
Representation of Black, Native, Pacific Islander, Hispanic or Latino, 2 or more communities in leadership ²	10%	11%	12%	13%
Minority representation in executive leadership ³	21%	23%	27%	30%

EEOC Minority by Category (US)	2019	2020	2021*	2022*
White/Caucasian	2,284	2,253	2,514	2,756
	46%	46%	45%	44%
Native Hawaiian or Other Pacific Islander	62	56	67	64
	1%	1%	1%	1%
American Indian or Native Alaskan	10	11	13	15
	<1%	<1%	<1%	0%
Asian	1,601	1,601	1,863	2,097
	32%	33%	33%	34%
Hispanic or Latino	447	435	510	588
	9%	9%	9%	9%
Black or African American	121	121	130	146
	2%	2%	2%	2%
2 or More	188	198	248	303
	4%	4%	4%	5%
Choose not to self disclose	240	238	294	241
	5%	5%	5%	4%
Veteran	143	141	145	157
	3%	3%	3%	3%
Disabled	248	235	230	223
	5%	5%	4%	4%

Key Performance Indicators

Nurture Our People continued

Learn More: [Federal Employer Information EEO-1 Report](#)

EEOC Data by Level (US)	2019	2020	2021*	2022*
Support to Entry Professional				
White/Caucasian	261	226	264	255
	24%	23%	23%	23%
Native Hawaiian or Other Pacific Islander	29	31	34	29
	3%	3%	3%	3%
American Indian or Native Alaskan	3	2	3	4
	<1%	<1%	<1%	<1%
Asian	489	452	514	485
	45%	45%	45%	44%
Hispanic or Latino	173	160	185	191
	16%	16%	16%	17%
Black or African American	48	38	38	36
	4%	4%	3%	3%
2 or More	57	56	65	83
	5%	6%	6%	7%
Choose not to self disclose	38	34	35	26
	3%	3%	3%	2%
Intermediate to Senior Professional				
White/Caucasian	1,403	1,389	1,555	1,721
	50%	48%	48%	46%
Native Hawaiian or Other Pacific Islander	22	16	21	22
	1%	1%	1%	1%
American Indian or Native Alaskan	4	6	7	9
	<1%	<1%	<1%	<1%
Asian	895	938	1,078	1,292
	32%	33%	33%	34%
Hispanic or Latino	199	201	243	300
	7%	7%	7%	8%
Black or African American	51	56	63	75
	2%	2%	2%	2%
2 or More	105	115	150	181
	4%	4%	5%	5%
Choose not to self disclose	143	146	191	147
	5%	5%	6%	4%

EEOC Data by Level (US)	2019	2020	2021*	2022*
Manager to Associate Director				
White/Caucasian	413	421	452	508
	54%	56%	55%	54%
Native Hawaiian or Other Pacific Islander	11	9	11	12
	1%	1%	1%	1%
American Indian or Native Alaskan	2	2	1	0
	<1%	<1%	<1%	0%
Asian	182	174	214	243
	24%	23%	26%	26%
Hispanic or Latino	65	61	70	82
	9%	8%	8%	9%
Black or African American	17	21	22	26
	2%	3%	3%	3%
2 or More	22	21	23	28
	3%	3%	3%	3%
Choose not to self disclose	46	48	51	49
	6%	6%	6%	5%
Director and Above				
White/Caucasian	207	217	243	272
	75%	75%	70%	67%
Native Hawaiian or Other Pacific Islander	0	0	1	1
	0%	0%	<1%	<1%
American Indian or Native Alaskan	1	1	2	2
	<1%	<1%	1%	<1%
Asian	35	37	57	77
	13%	13%	16%	19%
Hispanic or Latino	10	13	12	15
	4%	4%	3%	4%
Black or African American	5	6	7	9
	2%	2%	2%	2%
2 or More	4	6	10	11
	1%	2%	3%	3%
Choose not to self disclose	13	10	17	19
	5%	3%	5%	5%

General Notes: * Denotes data has been assured. • Some segments may not add up to total due to rounding.

Key Performance Indicators

Nurture Our People continued

New Hire Data	2019	2020	2021*	2022*
New Hire by Age Group ¹				
Employees under 30	458	380	990	860
	30%	28%	54%	44%
Employees 30–50	716	586	1,358	1,320
	14%	11%	23%	20%
Employees over 50	89	88	156	140
	8%	7%	11%	9%
New Hire by Gender ²				
New female employee hires	566	490	1,185	1,049
	17%	15%	29%	23%
New male employee hires	684	560	1,262	1,240
	15%	12%	25%	22%
New Hire by Region				
AMR new employee hires	707	629	1,479	1,315
	14%	13%	26%	21%
APAC new employee hires	376	249	621	621
	20%	13%	28%	25%
EMEA new employee hires	180	176	404	384
	19%	17%	31%	26%
Percentage New Hire per EEOC (US)				
White/Caucasian	44%	47%	40%	39%
Native Hawaiian or Other Pacific Islander	1%	<1%	1%	1%
American Indian or Native Alaskan	<1%	<1%	<1%	<1%
Asian	32%	33%	34%	35%
Hispanic or Latino	10%	7%	10%	11%
Black or African American	2%	4%	2%	3%
2 or More	7%	6%	7%	6%
Choose not to self disclose	5%	3%	6%	4%

Footnotes:

¹Percentage data for new hire by age represents the percentage of the total age group headcount for the reporting year.

²Represents percentage of new hires out of all female employees.

Promotion Data	2019	2020	2021*	2022*
Total number of employees promoted	1,502	1,568	2,583	2,436
Promotion Rate by EEOC (US)				
White/Caucasian	22%	20%	34%	26%
Native Hawaiian or Other Pacific Islander	19%	10%	34%	24%
American Indian or Native Alaskan	0%	29%	33%	21%
Asian	23%	20%	37%	25%
Hispanic or Latino	19%	19%	34%	17%
Black or African American	14%	15%	33%	25%
2 or More	20%	18%	37%	38%
Choose not to self disclose	21%	22%	35%	21%

Veteran Data (US)	2019	2020	2021*	2022*
Number of US employees, regardless of whether they have any military connection	4,908	4,866	5,561	6,210
Number of employees as defined by the federal government as meeting the criteria for protected veteran status	87	87	90	92
Number of veteran and active duty employees, regardless of protected status	143	141	145	157
Number of disabled veteran employees	2	2	3	3
Number of women veteran employees	24	20	26	27
Number of minority veteran employees—minority veterans include, but are not limited to, people of color, women, LGBTQIA+, and (non) religious minorities	67	68	75	80
Percentage of Veterans (US)	3%	3%	3%	3%

Other Identities Self Reported (US)	2019	2020	2021*	2022*
LGBTQ (US)	1%	1%	2%	3%
Disabilities (US)	3%	5%	4%	4%

General Notes:

* Denotes data has been assured.

- For all gender statistics, percentage of women is based on number of employees who identify as male or female, not total number of Illumina employees.
- Some segments may not add up to total due to rounding.

Key Performance Indicators

Nurture Our People continued

Employee Turnover Data	2019	2020	2021*	2022*
Total Turnover				
Total number of employee turnover	856	1,028	1,154	1,246
Rate of employee turnover	11%	14%	14%	13%
Total number of voluntary turnover	644	714	1,048	1,050
Rate of voluntary turnover	9%	9%	12%	11%
Turnover by Age				
Employees under 30	229	224	246	308
	15%	16%	15%	16%
Employees 30–50	489	638	749	787
	10%	12%	13%	12%
Employees over 50	138	166	159	151
	12%	14%	12%	10%
Voluntary employee turnover under 30	195	182	233	279
	13%	13%	15%	15%
Voluntary employee turnover 30–50	366	456	686	654
	7%	9%	12%	10%
Voluntary employee turnover over 50	82	76	129	117
	7%	6%	10%	8%
Turnover by Level				
Voluntary turnover support to entry professional	11%	11%	14%	16%
Involuntary turnover support to entry professional	3%	5%	1%	2%
Voluntary turnover intermediate to senior professional	8%	8%	12%	9%
Involuntary turnover intermediate to senior professional	2%	4%	1%	2%
Voluntary turnover manager to associate director	6%	8%	11%	10%
Involuntary turnover manager to associate director	4%	4%	2%	1%
Voluntary turnover director and above	6%	13%	17%	9%
Involuntary turnover director and above	4%	4%	3%	2%

Employee Turnover Data	2019	2020	2021*	2022*
Total Turnover by Region				
AMR	530	666	763	646
	11%	13%	14%	11%
APAC	223	261	251	405
	12%	14%	12%	17%
EMEA	103	101	140	195
	11%	10%	12%	14%
Voluntary Turnover by Region				
AMR	384	442	701	586
	8%	9%	13%	10%
APAC	188	207	224	315
	10%	11%	11%	13%
EMEA	72	65	123	149
	8%	7%	11%	11%
Voluntary Turnover Percentage by EEOC (US)				
White/Caucasian	8%	10%	13%	9%
Native Hawaiian or Other Pacific Islander	11%	10%	5%	17%
American Indian or Native Alaskan	0%	0%	25%	7%
Asian	7%	8%	13%	11%
Hispanic or Latino	8%	7%	14%	10%
Black or African American	11%	12%	16%	12%
2 or More	6%	11%	21%	9%
Choose not to self disclose	6%	8%	13%	13%

General Notes:

* Denotes data has been assured.

• Some segments may not add up to total due to rounding.

Key Performance Indicators

Nurture Our People continued

Parental Leave	2019	2020	2021	2022
Total number of employees who were entitled to parental leave	4,714	4,900	5,302	5,916
Total number of employees who took parental leave, by gender	Female 116 Male 65	Female 181 Male 121 Blank 1	Female 173 Male 89	Female 236 Male 128 Blank 1
Total number of employees who returned to work in the reporting period after parental leave ended, by gender	Female 116 Male 65	Female 191 Male 138 Blank 1	Female 166 Male 123	Female 226 Male 121 Blank 1
Total number of employees who returned to work after parental leave ended that were still employed 12 months after their return to work, by gender	Female 100 Male 54	Female 177 Male 123 Blank 1	Female 150 Male 107	Female 192 Male 102 Blank 1
Return to work and retention rates of employees who took parental leave, by gender	Return to Work: Female 100% Male 98% Retention: Female 86% Male 83%	Return to Work: Female 100% Male 98% Retention: Female 86% Male 83%	Return to Work: Female 98% Male 99% Retention: Female 93% Male 89%	Return to Work: Female 97% Male 100% Retention: Female 85% Male 84%

Benefit Plan and Other Retirement	2019	2020	2021	2022
Percentage of salary contributed by employee or employer	US 401(k): Employee elected between 0–80%, Illumina matching contribution of 50% up to the first 6% employee election (3% of eligible salary)			
Level of participation in retirement plans, such as participation in mandatory or voluntary schemes, regional or country-based schemes, or those with financial impact	US 401(k): 97% employee voluntary participation		US 401(k): 98% employee voluntary participation	

Employee Bonus and Stock Program	2019	2020	2021	2022
Employees eligible for annual VCP bonus	All employees			
Employees eligible to participate in employee stock purchase plan	All employees			

Footnotes:

¹ Following the birth of a child or placement of a child for adoption or foster care, we provide 100% pay continuity to eligible US-based employees for up to six weeks to help ensure peace of mind during this essential time. In some cases, a mother could receive up to 28 weeks of pay continuity depending on the combination of leaves associated with childbirth. Our parental leave policies in the other locations where we operate either meet or exceed local legal entitlements.

² Employee survey participation rates in 2019 are calculated using an average of two surveys per year (Q2 and Q4 of each year). For 2020, the participation rate is based on an average of three quarterly surveys (Q2–Q4). For 2021, the participation rate is based on an average of four quarterly surveys (Q1-Q4). For 2022, one survey was completed.

General Notes:

- For all training hour metrics, the values include only regular Illumina employees, not contingent workers.

Performance & Career Development Review	2019	2020	2021	2022
Percentage of employees receiving regular performance and career development reviews (includes all administrative, production, technical, middle management, and senior management)	100%	100%	100%	100%

Employee Survey ²	2019	2020	2021	2022
Participation rate for employee iPulse survey	89%	79%	80%	86%

Average Compensation Ratio—Women to Men	2019	2020	2021	2022
Across all employee categories	100%	100%	100%	99%
Support to entry professional	102%	102%	101%	100%
Intermediate to senior professional	100%	100%	99%	99%
Supervisor to associate director	98%	99%	100%	99%
Director and above	101%	98%	99%	98%

Annual Compensation Ratio	2019	2020	2021	2022
Ratio of annual total compensation for the organization's highest-paid individual in each region to the median annual total compensation for all employees	Refer to Proxy Filing	Refer to Proxy Filing	Refer to Proxy Filing	Refer to Proxy Filing

Training	2019	2020	2021	2022
Average hours of training per employee per year	60	64	64	62
Hours of training by gender: Male	60	66	66	63
Hours of training by gender: Female	61	61	63	60
Hours of training by employee category: Individual Contributor	64	68	68	66
Hours of training by employee category: Middle Management	71	76	76	70
Hours of training by employee category: Senior Management	38	38	44	39
Hours of training by employee category: Executive Leadership	22	24	30	26
Hours of training by functional category: Commercial Operations	50	46	52	51
Hours of training by functional category: General Operations	23	25	27	25
Hours of training by functional category: Manufacturing	91	104	98	96
Hours of training by functional category: Research & Development	53	57	62	58
Total number of hours devoted to training on human rights	1,737	5,578	3,333	4,726
Applicable employees certified to Code of Conduct	99%	98%	97%	97%

Key Performance Indicators

Nurture Our People continued

Health & Safety	2019	2020	2021	2022
Global recordable injury or illness incident rate (incident per 100 employees)	0.52	0.34	0.54	0.23
Lost time incident rate	0.74	0.18	0.23	0.12
Days Away Restricted Time (DART)	0.34	0.18	0.43	0.17
Environment, Health & Safety notices of violations	0	0	0	0
Environmental fines	0	0	0	0
Prevention reporting statistics	3,611	3,018	1,452	2,054

Employee Safety	2019	2020	2021	2022
Number of work-related fatalities	0	0	0	0
Rate of work-related fatalities	0	0	0	0
The number of high-consequence work-related injuries and illnesses (excluding fatalities)	49	29	51	23
The rate of high-consequence work-related injuries and illnesses (excluding fatalities)	0.62	0.39	0.16	0.24
The number of recordable work-related injuries and illnesses	49	29	51	23
The rate of recordable work-related injuries and illnesses	0.62	0.39	0.16	0.24
The main types of work-related injury and illness	Ergonomics, strains, contusions, and sprains	Ergonomics, strains, contusions, and sprains	Ergonomics and strains	Ergonomics, strains, contusions, and sprains
The number of hours worked	15,647,395	15,344,520	15,946,780	19,462,592

Safety Workers Who Are Not Employees but Whose Work and/or Workplace is Controlled by the Organization	2019	2020	2021	2022
Number of work-related fatalities	0	0	0	0
Rate of work-related fatalities	0	0	0	0
The number of high-consequence work-related injuries and illnesses (excluding fatalities)	0	3	2	3
The rate of high-consequence work-related injuries and illnesses (excluding fatalities)	0	0.07	0.13	0.18
The number of recordable work-related injuries and illnesses	0	3	2	3
The rate of recordable work-related injuries and illnesses	0	0.07	0.13	0.18
The main types of work-related injury and illness	Ergonomics, Strains, Contusions, and Sprains	Ergonomics, Strains, Contusions, and Sprains	Fractures and strains	Ergonomics, strains, contusions, and sprains
The number of hours worked	2,741,396	2,798,888	2,986,473	3,296,423

Environmental, Health & Safety Training				
Total hours of EHS training	26,758	30,054	43,066	45,022
Average hours per employee	3.7	3.4	4.1	4

General Notes:

- Recordable injury & illness rate calculated using total hours worked from employees + contingent workers.
- Contingent workers: workers who are not employees but whose work and/or workplace is controlled by the organization.
- Lost time incident rate calculated using total hours worked from employees—contingent workers.
- High-consequence work-related injuries are defined as all recordable injuries.
- Rates have been calculated based on 200,000 hours worked.
- DART: Days Away, Restricted, Or Transferred.
- Ergonomic injuries include repetitive stress injuries.

Key Performance Indicators

Operate Responsibly

Governance	2019	2020	2021	2022
Non-compliance with environmental laws and regulations; Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations	0	0	0	0
# of FDA recalls	0	0	0	0
Number of substantiated complaints concerning breaches of customer privacy and losses of customer data	0	0	0	0
Number of public legal cases regarding corruption brought against the organization or its employees during the reporting period	0	0	0	0
Antitrust Cases	2	0	See notes	See notes
Nature and total number of critical concerns communicated to highest governance body regarding CSR topics	0	0	0	0
Total employees covered by collective bargaining agreements	0	0	0	0
Incidents of discrimination and corrective actions taken	See note 3	See note 3	See note 3	See note 3
Transparency Reporting Law Enforcement & National Security Requests	N/A	2020 Privacy Transparency Report	2021 Privacy Transparency Report	2022 Privacy Transparency Report
Security personnel are trained in organization's policies or procedures concerning aspects of human rights that are relevant to operations.	N/A	N/A	N/A	Yes
The organization is unaware of any operations in which there is a significant risk for incidents of child labor.	N/A	N/A	N/A	Confirmed
The organization is unaware in which there is a significant risk for incidents of forced or compulsory labor.	N/A	N/A	N/A	Confirmed

1. On January 11, 2021, Complete Genomics, Inc., BGI Americas Corp., and MGI Americas, Inc. (collectively BGI) filed a complaint in the US District Court for the Northern District of California alleging that Illumina violated federal antitrust and state unfair competition laws, based on a patent infringement suit Illumina filed against BGI in the same court. Illumina denies the allegations, which are without merit. In July 2022, Illumina and BGI settled all US litigation, and the case was dismissed.
2. On March 30, 2021, the United States Federal Trade Commission (FTC) filed an administrative complaint alleging that Illumina's acquisition of GRAIL, Inc. violates federal antitrust law. Following a full trial on the merits, in September 2022 the FTC's Chief Administrative Law Judge's (ALJ) rejected the FTC's complaint and found in favor of Illumina. On April 3, 2023, the FTC overturned the ALJ's rejection of the FTC complaint, and the FTC issued an opinion and order requiring Illumina to divest GRAIL. Illumina has filed a petition for expedited review with a US Court of Appeals, and the FTC's order to unwind the acquisition will be automatically stayed pending appeal.
3. During the past thirteen years, neither the EEOC nor any court or administrative agency has issued a finding against Illumina in a claim involving discrimination. There was one claim of discrimination filed during the reporting period. Illumina denies the allegation. The matters that were pending during the last reporting period have been resolved. We do not tolerate acts of discrimination, and promote an open culture to report concerns (including anonymously). Illumina takes all reports of misconduct seriously and has a strict non-retaliation policy. If a report is substantiated, the company would respond as it deems appropriate or necessary, consistent with the law, and will act swiftly to correct the problem and deter future occurrences. Depending on the circumstances, this may include training and/or disciplinary action up to, and including, termination. Individuals may also be subject to civil or criminal prosecution for violating the law.

ESG Governance Topics	Position	Level from CEO	Level from Board
Corporate Social Responsibility / ESG	SVP, Chief Public Affairs Officer	1	2
Environment, Health & Safety, Supply Chain, Facilities, Operations	SVP, Chief of Global Operations	1	2
People, Employment, Diversity, Equity, and Inclusion	SVP, Chief People Officer	1	2
Compliance, Ethics, Legal	SVP, General Counsel	1	2
Product	SVP, Chief Technology Officer	1	2
Cybersecurity	SVP, Chief Information Officer	1	2
Finance, Investor Relations, Internal Audit	SVP, Chief Financial Officer	1	2

Board of Directors (BoD)	2022
BoD level oversight for CSR and ESG (including themes of sustainability and climate action; diversity, equity, and inclusion; human rights; cybersecurity; data privacy; and ethical and responsible business practices)	Yes
Clawback provision	Yes
Commitment to gender diversity on BoD	Yes
BoD composition by gender (% female)	33%
BoD composition by racial/ethnic minority representation	33%
Number of Directors	9
Number of Independent Directors	8
Average Board Tenure	6.6 years

Key Performance Indicators

Operate Responsibly continued

Supply Chain	2019	2020	2021	2022
Quantity of product shipped	3,118,142 units	3,297,561 units	3,862,839 units	3,752,857 units
Spend with direct suppliers	\$440 million	\$396 million	\$585 million	\$694 million
Supplier Code of Conduct in place			Yes	Yes
Geographic location of suppliers	Countries: AE, AM, AR, AT, AU, BE, BS, CA, CH, CL, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HK, ID, IE, IL, IN, IS, IT, JP, KR, LT, LU, MO, MX, MY, NL, NO, NZ, PA, PE, PH, PL, PT, RO, RU, SE, SG, SI, TH, TR, TW, UA, US, UY, VN, ZA	Countries: AE, AM, AR, AU, AU, BE, BR, BY, CA, CH, CL, CN, CR, CZ, DE, DK, EE, ES, FI, FR, GB, GH, HK, ID, IE, IL, IND, IS, IT, JP, KR, LT, LU, MY, MX, NL, NO, NZ, PE, PH, PL, PT, RU, SA, SE, SG, TH, TR, TW, UA, US, UY, ZA	Countries: AE, AM, AR, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, ES, FI, FR, GB, GH, HK, ID, IE, IL, IN, IT, JP, KR, LK, LT, LU, LV, MY, NL, NO, NZ, PL, RO, RU, SA, SE, SG, SI, TH, TR, TW, US, ZA	Countries: US, DE, CA, GB, SG, CH, JP, PL, FR, AU, ZA, BE, NZ, IT, CN, NL, DK, NO, MY, IN, ES, IS, SE, IL, PT, AR, HK, AM, KR, UA, IE, BN, ID, BD, EC, AT, FI, TW, MO, LU, VN, TR, LK, AE, MX, CZ, RU, RO, TH, BR, LV, CR, PH, BY, UY, SA, HU, SI, GR, PK, CY, BG, LT, RS, BO, PY, NG, KY, GT, PA, SV, KE, EE, PE, CL, CO
A description of the organization's supply chain	Illumina's global supply chain consists of suppliers, sub-contractors, channel partners, manufacturing sites, distribution centers, and customers			
Types of suppliers	Direct, indirect, strategic, finished medical device, custom spec, off the shelf, and services			
Number of suppliers engaged by organization	3,891	3,704	3,798	3,323
Estimated monetary value of payments made to suppliers	>\$1 billion	\$935 million	>\$1 billion	>\$1 billion
Number of active diverse suppliers (US)	>400	334	517	919
Diverse supplier spend	\$190 million	\$152 million	\$209 million	\$269 million
Percentage of total PO spend with diverse suppliers (US)	19%	16%	17%	18%
Percentage of strategic suppliers that have committed to minimizing their environmental footprint	N/A	75%	84%	89
% of total PO Spend with total diverse suppliers (Global)	N/A	N/A	N/A	13%

Key Performance Indicators

Operate Responsibly continued

Political Contributions	2019	2020	2021	2022
Total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary	\$50,000	\$0	\$0	\$0

Trade Association & Memberships	2021	2022
illumina participates in various trade associations and industry memberships for collaboration and exchange of ideas. Some of these organizations may utilize a portion of membership fees for non-deductible state and federal lobbying and political expenditures. As part of our transparency practices, we disclose trade memberships for which we contribute at least \$5,000 annually in fees.		

Trade and Industry Group Memberships Above \$5,000 Threshold Annually		
Global		
World Economic Forum	\$330,000	\$330,000

EMEA Trade Association Memberships		
All.Can (ASBL)	\$35,000	\$32,204
EUCOPE	\$27,892	\$19,322
US Qatar Business Council	\$10,000	\$10,000
US Saudi Arabian Business Council	\$10,000	\$10,000
US UAE Business Council	\$10,000	\$10,000
International Quality Network for Pathology (IQN Path)	\$5,000	\$0

APJ and Greater China Trade Association Memberships		
US India Business Council	\$27,500	\$20,000
Pathology Technology Australia	\$7,309	\$20,868
US Chamber — China	\$25,000	\$25,000
US-China Business Council (USCBC)	\$15,000	\$15,000
US-ASEAN	\$11,686	\$14,500
AmCham China	\$7,413	\$4,026

U.S. Trade Association Memberships		
World 50, Inc.	\$393,766	\$240,850
US Chamber of Commerce	\$150,000	\$160,000
Coalition for Access to Prenatal Screening (CAPS)	\$100,000	\$100,000
Access to Comprehensive Genomic Profiling Coalition	\$80,813	\$75,000
Procurement Leaders	\$57,000	\$58,710
Biocom	\$56,300	\$57,500
American Clinical Laboratory Association (ACLA)	\$50,000	\$50,000
Coalition for 21st Century Medicine	\$50,000	\$50,000
Personalized Medicine Coalition (PMC)	\$32,000	\$32,000
California Chamber of Commerce	\$25,000	\$0
San Diego Economic Development Corp. (SDEDC)	\$25,000	\$25,000
National Association of Manufacturers (NAM)	\$24,500	\$24,500
AdvaMed	\$19,950	\$19,950
American Cancer Society—Cancer Action Network (ACS-CAN)*	\$10,000	\$0
San Diego Regional Chamber of Commerce (SD Chamber)	\$7,650	\$7,650
Industrial Environmental Association (IEA)	\$6,000	\$6,000
Healthcare Business Women's Association (HBA)	\$5,000	\$5,000

For the trade associations with membership fees greater than \$50,000, the portion of such payments that is non-deductible under Section 162(e)(1) (B) of the Internal Revenue Code, such as payments to organizations designated as 501(c)(4) and 501(c)(6) associated with state and federal lobbying efforts annually.

Organization	Total Annual Membership Fee		% Membership Fees Used for State or Federal Lobbying		Dollars Applied to State or Federal Lobbying From Membership Fees	
	2021	2022	2021	2022	2021	2022
US Chamber of Commerce	\$161,625	\$160,000	25%	35%	\$40,406	\$56,000
Coalition for Access to Prenatal Screening (CAPS)	\$100,000	\$100,000	25%	\$0	\$25,000	\$0
American Clinical Laboratory Association (ACLA)	\$50,000	\$50,000	33%	30%	\$16,500	\$29,500
Biocom	\$56,300	\$57,500	10%	10%	\$5,630	\$5,750
Coalition for 21st Century Medicine	\$50,000	\$50,000	45%†	30%	\$22,500†	\$15,000

† Updated data to reflect most current information.

GRI Index

GRI Description	GRI Section	Illumina Report
GRI 1:Foundation		
Statement of use	Illumina has reported in accordance with the GRI Standards for the period 1st January 2022 to 31st December 2022	
GRI 1 reference	GRI 1	GRI 1: Foundation 2021
GRI 2: General Disclosures		
Organizational details	GRI 2-1	Pages: 8 , 9 , 86
Entities included in the organization, sustainability reporting	GRI 2-2	Page: 83
Reporting period, frequency and contact point	GRI 2-3	Page: 83
Restatements of information	GRI 2-4	Page: 83
External assurance	GRI 2-5	Page: 105
Activities, value chain and other business relationships	GRI 2-6	Pages: 8-9 , 12-14 , 21-21 , 26-30 , 48-49 , 77-80 , 86 , 98
Employees	GRI 2-7	Pages: 54-65 , 90-96
Workers who are not employees	GRI 2-8	Page: 90
Governance structure and composition	GRI 2-9	Pages: 11-16 , 69 , 97
Nomination and selection of the highest governance body	GRI 2-10	Pages: 15 , 69 , 97
Chair of the highest governance body	GRI 2-11	Pages: 15 , 69 , 97
Role of the highest governance body in overseeing the management of impacts	GRI 2-12	Pages: 15 , 69 , 97
Delegation of responsibility for managing impacts	GRI 2-13	Page: 15
Role of the highest governance body in sustainability reporting	GRI 2-14	Pages: 15 , 69 , 97
Conflicts of interest	GRI 2-15	Pages: 69-73
Communication of critical concerns	GRI 2-16	Page: 97
Collective knowledge of the highest governance body	GRI 2-17	Pages: 15 , 69-73 , 97
Evaluation of the performance of the highest governance body	GRI 2-18	Page: 69
Remuneration policies	GRI 2-19	Page: 69 , Proxy
Process to determine remuneration	GRI 2-20	Page: 69
Annual total compensation ratio	GRI 2-21	Page: 69
Statement on sustainable development strategy	GRI 2-22	Page: 2-3 , 11-15
Policy commitments	GRI 2-23	Pages: 12-16 , 41 , 49 , 59 , 65 , 69 , 70 , 71 , 74 , 75 , 76-81
Embedding policy commitments	GRI 2-24	Pages: 12-16 , 41 , 49 , 59 , 65 , 69 , 70 , 71 , 74 , 75 , 76-81
Processes to remediate negative impacts	GRI 2-25	Page: 68-81 , 97 , 103
Mechanisms for seeking advice and raising concerns	GRI 2-26	Page: 68-81 , 103
Compliance with laws and regulations	GRI 2-27	Page: 65 , 69-83 , 97
Membership associations	GRI 2-28	Page: 16 , 21 , 28 , 30 , 38 , 41 , 83
Approach to stakeholder engagement	GRI 2-29	Page: 16
Collective bargaining agreements	GRI 2-30	Page: 97

GRI Description	GRI Section	Illumina Report
GRI 3: Material Topics		
Process to determine material topics	GRI 3-1	Pages: 11-16
List of material topics	GRI 3-2	Pages: 13,16
Management of material topics	GRI 3-3	Pages: 11-16 , 69
GRI 201: Economic Performance		
Management of material topics	GRI 3-3	Pages: 11-16
Direct economic value generated and distributed	GRI 201-1	Proxy
Financial implications and other risks and opportunities due to climate change	GRI 201-2	Pages: 41-42 , 48 , 50-51 , 104
Defined benefit plan obligations and other retirement plans	GRI 201-3	Pages: 64 , 95
GRI 202: Market Presence 2016		
Management approach: Market Presence	GRI 3-3	Pages: 11-16
Ratios of standard entry level wage by gender compared to local minimum wage	GRI 202-1	Pages: 59 , 95
Proportion of senior management hired from the local community	GRI 202-2	Page: 60
GRI 203: Indirect Economic Impacts		
Management approach: Indirect Economic Impacts	GRI 3-3	Pages: 11-16 , 18 , 33 , 54 , 68
Infrastructure investments and services supported	GRI 203-1	Pages: 18 , 21-22 , 24 , 25 , 29 , 34 , 37-38 , 51-52
Significant indirect economic impacts	GRI 203-2	Pages: 18 , 21-22 , 24 , 25 , 29 , 34 , 37-38 , 51-52
GRI 204: Procurement Practices		
Management approach: Procurement Practice	GRI 3-3	Pages: 11-16 , 68 , 77-78
Proportion of spending on local suppliers	GRI 204-1	Pages: 79 , 98
GRI 205: Anti-corruption		
Management approach: Anti-corruption	GRI 3-3	Pages: 11-16 , 68
Operations assessed for risks related to corruption	GRI 205-1	Pages: 68-73 , 77-78 , 97
Communication and training about anti-corruption policies and procedures	GRI 205-2	Pages: 70-71 , 77 , 78 , 97
Confirmed incidents of corruption and actions taken	GRI 205-3	Pages: 97
GRI 206: Anti-competitive Behavior		
Management approach: Anti-competitive	GRI 3-3	Pages: 11-16
Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	GRI 206-1	Pages: 97

GRI Index continued

GRI Description	GRI Section	Illumina Report
GRI 301: Materials		
Management approach: Materials	GRI 3-3	Pages: 11-16 , 40 , 46
Reclaimed products and their packaging materials	GRI 301-3	Page: 46
GRI 302: Energy		
Management approach: Energy	GRI 3-3	Pages: 11-16 , 40-42 , 43
Energy consumption within the organization	GRI 302-1	Pages: 40-41 , 43 , 48 , 87 , 88 , 104
Energy consumption outside of the organization	GRI 302-2	Pages: 40-41 , 43 , 48 , 87 , 88 , 104
Energy intensity	GRI 302-3	Pages: 43 , 88
Reduction of energy consumption	GRI 302-4	Pages: 40-41 , 43 , 47-48 , 52 , 87-88
Reductions in energy requirements of products and services	GRI 302-5	Pages: 46-47 , 50-52
GRI 303: Water and Effluents		
Management approach: Water and Effluents	GRI 3-3	Pages: 11-16 , 40 , 44
Interactions with water as a shared resource	GRI 303-1	Pages: 44 , 89
Management of water discharge-related impacts	GRI 303-2	Pages: 44 , 89
Water withdrawal	GRI 303-3	Pages: 44 , 89
Water discharge	GRI 303-4	Pages: 44 , 89
Water consumption	GRI 303-5	Pages: 44 , 89
GRI 304: Biodiversity		
Management approach: Biodiversity	GRI 3-3	Page: 11-16 , 40-42
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	GRI 304-1	Page: 42-43
Significant impacts of activities, products and services on biodiversity	GRI 304-2	Page: 42
Habitats protected or restored	GRI 304-3	Page: 42-43 , 50-52
IUCN Red List species and national conservation list species with habitats in areas affected by operations	GRI 304-4	Page: 42-43
GRI 305: Emissions		
Management approach: Emissions	GRI 3-3	Page: 11-16 , 40-42
Direct (Scope 1) GHG emissions	GRI 305-1	Page: 40-41 , 43 , 87-88
Energy indirect (Scope 2) GHG emissions	GRI 305-2	Page: 40-41 , 43 , 87-88
Other indirect (Scope 3) GHG emissions	GRI 305-3	Page: 40-41 , 48 , 88
GHG emissions intensity	GRI 305-4	Page: 43 , 88
Reduction of GHG emissions	GRI 305-5	Page: 40-41 , 43 , 47-48 , 52 , 87-88
Emissions of ozone-depleting substances (ODS)	GRI 305-6	Page: 88
Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	GRI 305-7	Page: 88

GRI Description	GRI Section	Illumina Report
GRI 306: Waste		
Management approach: Waste	GRI 3-3	Pages: 11-16 , 40 , 45
Waste generation and significant waste-related impacts	GRI 306-1	Pages: 40 , 45-47 , 89
Management of significant waste-related impacts	GRI 306-2	Pages: 40 , 45-47
Waste generated	GRI 306-3	Pages: 45 , 89
Waste diverted from disposal	GRI 306-4	Pages: 45 , 89
Waste directed to disposal	GRI 306-5	Pages: 45 , 89
GRI 308: Supplier Environmental Assessment		
Management approach: Supplier Environmental Assessment	GRI 3-3	Pages: 11-16 , 40 , 49 , 68
New suppliers that were screened using environmental criteria	GRI 308-1	Pages: 78 , 86
Negative environmental impacts in the supply chain and actions taken	GRI 308-2	Pages: 47-48
GRI 401: Employment		
Management approach: Employment	GRI 3-3	Pages: 11-16 , 54
New employee hires and employee turnover	GRI 401-1	Page: 93
Benefits provided to full-time employees that are not provided to temporary or part-time employees	GRI 401-2	Pages: 64 , 95
Parental leave	GRI 401-3	Page: 95
GRI 403: Occupational Health and Safety		
Management approach: Health and Safety	GRI 3-3	Pages: 11-16 , 54
Occupational health and safety management system	GRI 403-1	Pages: 65 , 96
Hazard identification, risk assessment, and incident investigation	GRI 403-2	Pages: 65 , 96
Occupational health services	GRI 403-3	Pages: 64-65 , 96
Worker participation, consultation, and communication on occupational health and safety	GRI 403-4	Page: 65
Worker training on occupational health and safety	GRI 403-5	Pages: 65 , 96
Promotion of worker health	GRI 403-6	Pages: 64-65
Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	GRI 403-7	Pages: 65-66
Workers covered by an occupational health and safety management system	GRI 403-8	Pages: 65 , 96
Work-related injuries	GRI 403-9	Pages: 65 , 96
Work-related ill health	GRI 403-10	Pages: 65 , 96

GRI Index continued

GRI Description	GRI Section	Illumina Report
GRI 404: Training and Education		
Management approach: Training and Education	GRI 3-3	Pages: 11-16 , 54
Average hours of training per year per employee	GRI 404-1	Pages: 6 , 60 , 95
Programs for upgrading employee skills and transition assistance programs	GRI 404-2	Pages: 58 , 60-63
Percentage of employees receiving regular performance and career development reviews	GRI 404-3	Pages: 61 , 95
GRI 405: Diversity and Equal Opportunity		
Management approach: Diversity and Equal Opportunity	GRI 3-3	Pages: 11-16 , 54 , 57
Diversity of governance bodies and employees	GRI 405-1	Pages: 54-56 , 69 , 90-94 , 97
Ratio of basic salary and remuneration of women to men	GRI 405-2	Page: 95
GRI 406: Non-discrimination		
Management approach:	GRI 3-3	Pages: 11-16 , 54 , 59
Incidents of discrimination and corrective actions taken	GRI 406-2	Page: 97
GRI 407: Freedom of Association and Collective Bargaining		
Management approach: Freedom of Association and Collective Bargaining	GRI 3-3	Pages: 11-16 , 54
Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	GRI 407-1	Page: 103
GRI 408: Child Labor		
Management approach: Child Labor	GRI 3-3	Pages: 11-16 , 68 , 74
Operations and suppliers at significant risk for incidents of child labor	GRI 408-1	Page: 74
GRI 409: Forced or Compulsory Labor		
Management approach: Forced and Compulsory Labor	GRI 3-3	Pages: 11-16 , 68 , 74 , 77 , 78 , 97
Operations and suppliers at significant risk for incidents of forced or compulsory labor	GRI 409-1	Pages: 74 , 78 , 97
GRI 410: Security Practices		
Management approach: Security Practice	GRI 3-3	Pages: 11-16
Security personnel trained in human rights policies or procedures	GRI 410-1	Page: 97
GRI 413: Local Communities		
Management approach: Local Communities	GRI 3-3	Pages: 11-16 , 33
Operations with local community engagement, impact assessments, and development programs	GRI 412-1	Pages: 33-38

GRI Description	GRI Section	Illumina Report
GRI 414: Supplier Social Assessment		
Management approach: Supplier Social Assessment	GRI 3-3	Pages: 11-16 , 49 , 68 , 77
New suppliers that were screened using social criteria	GRI 414-1	Page: 98
GRI 415: Public Policy		
Management approach: Public Policy	GRI 3-3	Pages: 11-16 , 68 , 81
Political contributions	GRI 415-1	Pages: 81 , 99
GRI 417: Marketing and Labeling		
Management approach: Marketing and Labeling	GRI 3-3	Pages: 11-16 , 68 , 73
Requirements for product and service information and labeling	GRI 417-1	Pages: 73 , 103
Incidents of non-compliance concerning product and service information and labeling	GRI 417-2	Page: 103
Incidents of non-compliance concerning marketing communications	GRI 417-3	Page: 103
GRI 418: Customer Privacy		
Management approach: Customer Privacy	GRI 3-3	Pages: 11-16 , 68 , 72 , 75-76
Substantiated complaints concerning breaches of customer privacy and losses of customer data	GRI 418-1	Page: 97

SASB Index

The Sustainability Accounting Standards Board (SASB) is an independent standards-setting organization that promotes disclosure of material sustainability information to meet investor needs. Illumina is classified officially in the Health Care Sector and Medical Equipment & Supply Industry. We have also chosen to add relevant sections from the industry categories of Biotechnology & Pharmaceuticals as well as Software & IT Services.

Dimension	General Issue Category	Disclosure Topic	Code	Accounting Metric	Response
PRIMARY SICS SECTOR: HEALTHCARE Primary SICS Industry: Medical Equipment & Supplies					
Social Capital	Access & Affordability	Affordability and Pricing	HC-MS-240a.1	Ratio of weighted average rate of net price increases to the annual increase in the U.S. Consumer Price Index	76
		Affordability and Pricing	HC-MS-240a.2	Description of how price information for each product is disclosed to customers or to their agents	76
	Product Quality & Safety	Product Safety	HC-MS-250a.1	Number of FDA recalls issued, total units recalled	0
		Product Safety	HC-MS-250a.2	List of products listed in the FDA's MedWatch safety alerts for human medical products database	0
		Product Safety	HC-MS-250a.3	Number of fatalities related to products as reported in FDA Manufacturer and User Facility Device Experience	0
		Product Safety	HC-MS-250a.4	Number of FDA enforcement actions taken in response to violations of Current Good Manufacturing Practices (cGMP)	0
	Selling Practices & Product Labeling	Ethical Marketing	HC-MS-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	0
		Ethical Marketing	HC-MS-270a.2	Description of code of ethics governing promotion of off-label use of products	76 , Illumina Code of Conduct
Business Model & Innovation	Product Design & Lifecycle Management	Product Design & Lifecycle Management	HC-MS-410a.1	Discussion of process to assess and manage environmental and human health considerations associated with chemicals in products, and meet demand for sustainable products	43 , 49
		Product Design & Lifecycle Management	HC-MS-410a.2	Total amount of products accepted for takeback and reused, recycled, or donated, broken down by: (1) devices and equipment and (2) supplies	48 , 92
	Supply Chain Management	Supply Chain Management	HC-MS-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in third-party audit programs for manufacturing and product quality	71 , 83
		Supply Chain Management	HC-MS-430a.2	Description of efforts to maintain traceability within the distribution chain	83
		Supply Chain Management	HC-MS-430a.3	Description of the management of risks associated with the use of critical materials	80-81 , 83
	Leadership & Governance	Business Ethics	Business Ethics	HC-MS-510a.1	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption
Business Ethics			HC-MS-510a.2	Description of code of ethics governing interactions with health care professionals	73-74 , Interactions with HCP Policy
Other	Activity Metrics	Activity Metrics	HC-MS-000.A	Number of units sold by product category	101
Supplemental SICS Industry: Biotech & Pharma					
Human Capital	Employee Engagement, Diversity & Inclusion	Employee Recruitment, Development & Retention	HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and R&D personnel	63-66
		Employee Recruitment, Development & Retention	HC-BP-330a.2	1) Voluntary and 2) involuntary turnover rate for a) executive/senior managers b) mid-level managers c) professionals d) all others	97
Supplemental SICS Industry: Software & IT Services					
Human Capital	Employee Engagement, Diversity & Inclusion	Recruiting & Managing a Global, Diverse & Skilled Workforce	TC-SI-330a.3	Percentage of gender and racial/ethnic group representation for 1) management 2) technical staff 3) all other employees	58-59 , 94-95

Task Force on Climate-related Financial Disclosures (TCFD) Index

TCFD voluntary climate-related disclosure recommendations have been used to guide our reporting. We believe addressing climate change is key to achieving a sustainable, just, and resilient future for all. We are committed to transparency and will continue to share progress in our annual CSR Report and [CDP submissions](#).

TCFD Disclosure Element	Topic	Description	Illumina CSR Report Section/CDP Questionnaire Response
Governance Describe organization's governance around climate-related risks and opportunities.	Board oversight	Describe Board's oversight of climate-related risks and opportunities.	CSR Report 15-16 , 41 , 69 , 7 CDP C1.1 , C1.1a , C1.1b
	Management role	Describe management's role in assessing and managing risks and opportunities.	CSR Report 15-16 , 41 , 71 CDP C1.2 , C1.2a
Strategy Describe the actual and potential impacts of climate-change risks and opportunities on the organization's business, strategy, and financial planning where such information is material.	Climate risk and opportunities timeline	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	CSR Report 40-52 CDP C2.1a , C2.1b , C2.2 , C2.2a , C2.3 , C2.3b , C2.4 , C2.4b
	Climate risk and opportunities impact	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	CSR Report 11 , 16 , 40-52 , 71 CDP 2.2 , C2.2a , C2.3b , C2.4b , C3.1 , C3.2 , C3.2a , C3.2b , C3.3 , C3.4 , C3.5
	Targets to manage climate risk and opportunities	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	CSR Report 40-52 , 69 , 71 , 77-78 , 87-89 CDP 2.2 , C3.1 , C3.2 , C3.2a , C3.2b , C3.3
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.	Process to identify climate risk	Describe the organization's processes for identifying and assessing climate-related risks.	CSR Report 12-14 , 40-52 , 69 , 71 , 77-78 CDP 2.1 , C2.1a , C2.1b , C2.2 , C2.2a , C3.1 , C3.2a , C3.3
	Process to manage climate risk	Describe the organization's processes for managing climate-related risks.	CSR Report 12-14 , 33-34 , 40-52 , 69 , 71 , 77-78 CDP 2.1 , C2.1a , C2.1b , C2.2 , C2.2a , C3.1 , C3.2a , C3.3
	Process to integrate climate risk in overall risk management	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	CSR Report 12-16 , 33-34 , 40-52 , 69 , 71 , 77-78 CDP 2.1 , C2.1a , C2.1b , C2.2 , C2.2a , C3.1 , C3.2a , C3.3
Metrics & Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Climate-related metrics	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	CSR Report 40-41 , 43-46 , 48-49 , 68 , 78 , 79 , 87-89 CDP 4.1 , C4.1a , C4.2 , C4.2b , C4.2c , C6.1 , C6.2 , C6.3 , C6.5 , C6.5a , C6.10 , C7.1a , C7.2 , C7.3b , C7.3c , C7.5 , C7.6b , C7.6c
	GHG emission data	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	CSR Report 40-41 , 43-46 , 48-49 , 68 , 78 , 79 , 87-89 CDP 4.1 , C4.1a , C4.2 , C4.2b , C4.2c , C6.1 , C6.2 , C6.3 , C6.5 , C6.5a , C6.10 , C7.1a , C7.2 , C7.3b , C7.3c , C7.5 , C7.6b , C7.6c
	Targets to manage climate risk and performance to targets	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	CSR Report 40-41 , 43-46 , 48-49 , 68 , 78 , 79 , 87-89 CDP 4.1 , C4.1a , C4.2 , C4.2b , C4.2c , C6.1 , C6.2 , C6.3 , C6.5 , C6.5a , C6.10 , C7.1a , C7.2 , C7.3b , C7.3c , C7.5 , C7.6b , C7.6c

Independent Limited Assurance Report to Illumina, Inc.



Background and Introduction

ISOS Group, Inc. ("ISOS" or "we") were engaged by Illumina, Inc. ("Illumina" or "Company") to undertake a limited assurance engagement in accordance with ISAE 3000 and ISAE 3410 covering select information reported within Illumina's 2022 Corporate Social Responsibility Report ("2022 CSR Report") for the period beginning January 1, 2021, and ending December 31, 2021 ("FY21").

We have performed our limited assurance engagement in accordance with the International Standard on Assurance Engagements 3000 (ISAE 3000), Assurance other than Audits or Reviews of Historical Financial Information, as well as the International Standard on Assurance Engagements 3410 (ISAE 3410) Assurance Engagements on Greenhouse Gas Statements, issued by the International Auditing and Assurance Standards Board. The engagement covered all entities and all facilities under the operational control of Illumina.

Our review was limited to the data reported in the following Key Performance Indicator Summary sections (pages 88–95) and marked with the symbol * ("Reported Information"), comprising of:

Integrating Environmental Sustainability:	Nurturing Our People:
• Energy Consumption • Energy Consumption by Activity and Region • Renewable Electricity Consumption • Emissions • Regional Emissions • Greenhouse Gas Breakdown • Country-Specific Scope 1 • Country- Specific Scope 2 Market-Based • Facility-Specific Emissions • Emission Intensity Ratios • Scope 3 Emissions • Scope 3 Emissions: % of Total Scope 3 Emissions • Water	• Workforce Data • Gender Data • Percentage Female and Male of Each EEOC Category (US) • EEOC Minority Summary (US) • EEOC Minority by Category (US) • EEOC Data by Level (US) • New Hire Data • Percentage New Hire per EEOC (US) • Promotion Data • Promotion Rate by EEOC (US) • Veteran Data (US) • Employee Turnover Data

Reporting Criteria

The reporting criteria are the standards identified in the 2022 CSR Report – Reporting Overview ("Reporting Criteria").

Inherent Uncertainty

The nature of non-financial information and the methods used to determine non-financial information, allow for different, but acceptable measurement techniques, which can result in materially different measurements and can impact accuracy and comparability. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision thereof, may change over time.

The Reported Information has been measured applying the Reporting Criteria, which has been adopted solely for the purpose of providing this non-financial information. As such the Reported Information may not be suitable for another purpose. Where significant assumptions or deductions are utilized, they are disclosed. Where direct data was unavailable, the company used industry standards as estimates. The assurance provided therefore does not guarantee or provide certainty over the completeness of reported data.

Illumina's Responsibilities

The Company's management are responsible for:

- The accuracy and completeness of the information contained in the Reported Information.
- The design, implementation, and maintenance of internal controls relevant to the preparation of the report to provide reasonable assurance that the report is free from material misstatement, whether due to fraud or error.
- Ensuring the Reported Information is fairly stated in accordance with the applicable criteria ("Reporting Criteria") and for the content and statements contained therein.

Our Responsibilities

Our responsibility is to express a limited assurance conclusion in accordance with ISAE 3000 and ISAE 3410 whether the Reported Information has been properly prepared in accordance with the Reporting Criteria and to provide this in a report to Illumina.

Work Performed

- The procedures we performed were based on our professional judgment. Our work included, but was not limited to:
- Assessing the appropriateness of the Reporting Criteria for the Reported Information
- Carrying out interviews with key personnel to understand the systems and controls in place during the reporting period
- Assessing the systems, processes, and controls to collate, aggregate, validate, and report the data
- Reviewing a selection of factors and formulae used and calculations performed over the Reported Information
- Considering the appropriateness of the Reported Information provided by Illumina and any third-party data management system service providers
- Testing a sample of records against underlying records, which were either individually material or where there was potential for errors to accumulate to material amounts included:
 - Testing of energy consumption, scope 1 and 2 emissions, and water consumption at company facilities across 12 countries in scope of the reporting
 - Testing of scope 3 emissions across the 11 calculated scope 3 emissions categories
 - Testing of human capital data aggregated across three regions and 28 countries where company operates, including against EEO-1 reporting for US operations
- Reperforming a selection of calculations of the Reported Information

The relative effectiveness and significance of specific control procedures at Illumina and their effect on assessment of control risk at a facility level are dependent on their interaction with the controls and other factors present at individual facilities. We have not performed any procedures to evaluate the effectiveness of controls at individual facilities. We have not conducted any work outside the agreed scope and therefore restrict our conclusion to the above-mentioned subject matter.

Restriction of Use

This assurance report is made solely to Illumina in accordance with the terms of our engagement, which include agreed arrangements for disclosure. Our work has been undertaken so that we might state to Illumina those matters we have been engaged to state in this limited assurance report and for no other purpose. Our limited assurance report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than Illumina for any purpose or in any context. Any party other than Illumina who obtains access to our limited assurance report or a copy thereof and chooses to rely on our limited assurance report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than Illumina for our work, for this independent limited assurance report, or for the conclusions we have reached.

Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Reported Information, noted in the Key Performance Indicator Summary (pages 88–95) for FY21 ended on December 31, 2021, has not been prepared, in all material respects, in accordance with Illumina's Reporting Criteria.

Brian Noveck
CSAP Practitioner for, and on behalf of, ISOS Group, Inc.
31 March 2022

Learn More: [CY' 22 Assurance Letter](#)



Photo Credit: Juraj Krivda
Illumina Employee | Distribution Planner
Singapore | Woodlands Facility

Disclosures

This release may contain forward-looking statements that involve risks and uncertainties. Among the important factors to which our business is subject that could cause actual results to differ materially from those in any forward-looking statements are: (i) changes in the rate of growth in the markets we serve; (ii) the volume, timing and mix of customer orders among our products and services; (iii) our ability to adjust our operating expenses to align with our revenue expectations; (iv) our ability to manufacture robust instrumentation and consumables; (v) the success of products and services competitive with our own; (vi) challenges inherent in developing, manufacturing, and launching new products and services, including expanding or modifying manufacturing operations and reliance on third-party suppliers for critical components; (vii) the impact of recently launched or pre-announced products and services on existing products and services; (viii) our ability to further develop and commercialize our instruments, consumables, and products, including Galleri®, the cancer screening test developed by GRAIL, to deploy new products, services, and applications, and to expand the markets for our technology platforms; (ix) the risks and costs associated with the integration of GRAIL's business if we are ultimately able to integrate GRAIL, and our ability to successfully realize the related anticipated synergies; (x) the risk of incurring fines associated with the consummation of our acquisition of GRAIL and the possibility that we may be required to divest all or a portion of the assets or equity interests of GRAIL on terms that could be materially worse than the terms on which we acquired GRAIL; (xi) the risk that disruptions from the consummation of our recent acquisition of GRAIL or any associated legal or regulatory proceedings or obligations will harm our business, including current plans and operations; (xii) our ability to obtain approval by third-party payors to reimburse patients for our products; (xiii) our ability to obtain regulatory clearance for our products from government agencies; (xiv) our ability to successfully partner with other companies and organizations to develop new products, expand markets, and grow our business; (xv) the application of generally accepted accounting principles, which are highly complex and involve many subjective assumptions, estimates, and judgments and (xvi) legislative, regulatory and economic developments, together with other factors detailed in our filings with the Securities and Exchange Commission, including our most recent filings on Forms 10-K and 10-Q, or in information disclosed in public conference calls, the date and time of which are released beforehand. We undertake no obligation, and do not intend, to update these forward-looking statements, to review or confirm analysts' expectations, or to provide interim reports or updates on the progress of the current quarter.

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