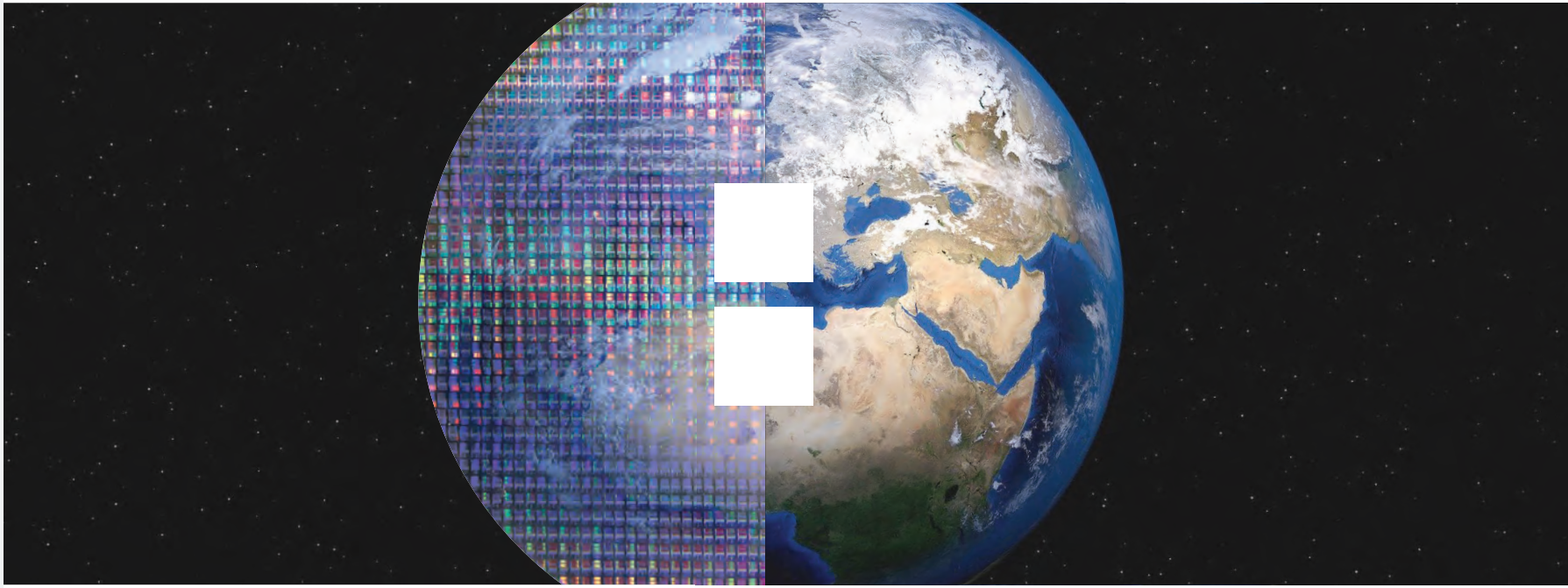
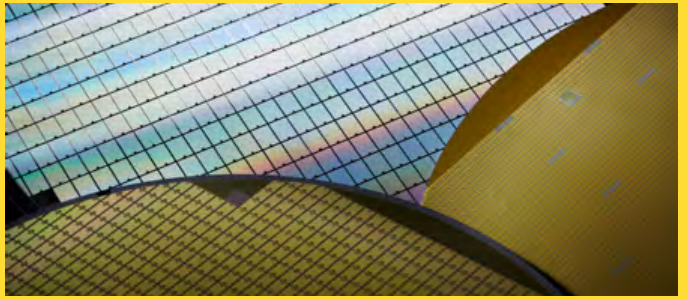
GlobalFoundries™



Corporate Responsibility Report 2022



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GlobalFoundries™

Corporate Responsibility Report 2022

01 Company profile

GlobalFoundries (GF) is one of the world's leading semiconductor foundries. We manufacture complex, feature-rich integrated circuits that enable billions of electronic devices that are pervasive throughout nearly every sector of the global economy. With our specialized manufacturing processes, vast library of intellectual property, and differentiated technologies, GF serves a broad range of customers that includes the global leaders in semiconductor design.

GF's differentiated services and technology and feature-rich solutions enable our customers to develop innovative products for an increasingly wide variety of applications across broad markets. We unlock value for our customers by helping drive technology in multiple dimensions, making their products more intelligent and intuitive, more connected and secure, and more powerful and energy efficient.

Semiconductor technology is central to our global economy and vital to the fabric of everyday life. GF's feature-rich chips are in the laptop computers, smartphones, smart devices and automobiles we use every day. They are in the high-speed wireless networks, data centers and multimedia tools that enable video conferencing in our homes, schools and businesses and help humanity stay connected. As technology continues to accelerate and yield incredible new innovations and advancements, semiconductors will remain at the heart of this progress.

Since GF's founding in 2009, we have invested more than $23 billion in our company to build a global manufacturing footprint with multiple state-of-the-art facilities across three continents, offering customers the flexibility and security their supply chains require. We currently operate five manufacturing sites, called fabs, in: Dresden, Germany; Singapore; Malta and East Fishkill, New York; and Burlington, Vermont. These world-class manufacturing sites across three continents provide the scale, technology differentiation and geographic diversification that we believe are critically important to our customers' success. Our scaled footprint also gives us the flexibility and agility to meet the dynamic needs of our customers around the globe, help them mitigate geopolitical risk, and provide greater supply chain certainty.

Semiconductor manufacturing is among the most complex and sophisticated manufacturing processes in the world. Requiring a strictly controlled environment called a cleanroom, the process includes a sequence of hundreds to thousands of processing steps in which electronic circuits are gradually built on a silicon surface. The resulting chips can be the size of a fingernail, or smaller, and feature billions of nanoscopic transistors.

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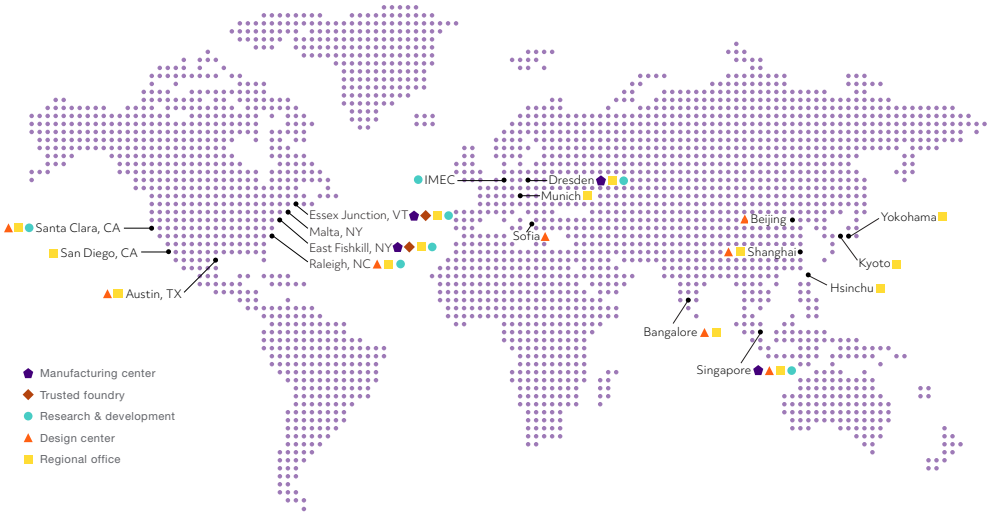
We focus on manufacturing feature-rich semiconductors that enable our customers to create devices that connect, secure and process data, and efficiently power the digital world around us. To solve our customers' most complex challenges, we offer a broad range of sophisticated technology platforms that leverage our extensive patent portfolio and deep technical expertise in digital, analog, mixed-signal, RF and embedded memory. Our manufacturing expertise is complemented by a global network of R&D, design enablement, and customer support operations.

GF's mission is to innovate and partner with our clients to deliver technology solutions for humanity. As we manufacture semiconductors around the globe, we are deeply committed to ethical and responsible business practices. At GF, corporate responsibility is fundamental to our company and the value we provide to our customers.

GF Worldwide locations



2021 Financial highlights

Revenue	Adjusted EBITDA margin	Adjusted gross margin
$6.6B	**28.1%**	**16.2%**

* For full financial information, including definitions of adjusted gross margin and adjusted EBITDA margin, please refer to the GF Q4 2021 Earnings Presentation: https://investors.gf.com/static-files/cb39ef6a-d485-484d-ac4b-1bf3e077f493 , page 5

Awards and Recognition

From 2020 through early 2022, GF has been recognized for outstanding employment practices, and for exceptional CSR (Corporate Social Responsibility) and EHS (Environmental, Health and Safety) performance with the following awards:

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ESG (Environment, Social and Governance)

- **Institutional Shareholder Services (ISS)**: "Prime" Corporate ESG Performance, April 2022
- **Responsible Business Alliance (RBA)**: 200/200 scores in Validated Assessment Program (VAP) Audits at Fab 1 and 9 (2021), Fab 8 and GF Singapore (2020)

EHS (Environmental, Health and Safety)

- **EHS Today**: America's Safest Companies Award (2020)
- **Albany Business Review**: New York Capital Region's Healthiest Employers Award – Fab 8 (2020 and 2021)
- **Vermont Governor's Excellence Award**: Worksite Wellness – Gold level – Fab 9 (2021), Silver (2020)
- **Casella Waste Systems**: Sustainability Leadership Award – Fab 9 (2021)
- **New York Power Authority (NYPA)**: Corporate Sustainability Leadership Award (2022)

Talent: Workplace; Diversity, Equity & Inclusion

- **Business Council of New York State**: Workforce Innovation Award (2022)
- **Global Equity Organization Awards**: Most Innovative Plan Award for Employee Stock Purchase Plan (2022)
- **Great Place to Work® Institute Singapore**: Great Place to Work – Certificate™ (2022)
- **Albany Business Review**: Leader in Diversity, Equity and Inclusion Award (2021)
- **HIRE Vets**: Medallion Award, Large Companies, Gold (2021)
- **HR Online**: Employee Experience Awards – GF Singapore (2021)
  - Gold (Best Organizational Upskilling & Reskilling Strategy), Gold (Best Learning and Development Program), Bronze (Best in-House Certification Program)
- **HR Online**: HR Excellence Awards – Talent Management (Gold), Leadership Development (Bronze) – GF Singapore (2021)
- **Capital**: Best Employers in Dresden (2020, 2021)
- **Capital/Ausbildung.de**: Germany's Best Companies for Vocational Training (2020)
- **Frankfurter Allgemeine Zeitung**: German Innovation Leaders (2020)
- **WELT**: Best Employers in Germany (2020)
- **Plan Sponsor Council of America/PNC Bank**: Signature Award Financial Wellness & Communication (2020)

Community: Philanthropy and Educational Partnerships

- **Hudson Valley Community College (HVCC)**: Foundation Philanthropy Award for STEM & Education Partnerships (2021)
- **Community Chest Singapore**: Community Spirit Gold (2020)
- **Singapore Children's Cancer Foundation**: Appreciation Award Silver (2020)
- **Lake Champlain Chamber**: Community Impact Award (2020)

02 CEO letter

The impact of the pandemic remained with us throughout much of 2021 and continued to serve as a reminder of the fragility of human life and our planet. Businesses across all industries and regions of the world faced significant supply chain challenges and most were impacted by semiconductor supplies. On all accounts, the unprecedented demand for semiconductors to support the acceleration of the digital transformation through the pervasive deployment of technologies has kept our industry at the forefront of the global economy.

For GF, this created both challenges and tremendous opportunities for our business and for our 15,000-strong global team. Throughout the year, we kept the health and safety of our employees and communities our top priority, working in partnership to protect each other, and I am proud to report that we did not experience any COVID-related outbreaks or shutdowns in any of our facilities.

2021 was an outstanding year for GF. Capitalizing on the vital role we play in the global semiconductor supply chain, we accelerated our business plan. We expanded our global manufacturing footprint with significant capacity expansions at our sites in Germany and the United States, and we broke ground for the first time in a decade on our new manufacturing facility at our Singapore campus. We created and implemented a new economic model for our industry in partnership with our customers and governments around the globe to enable the capacity expansions the global economy is relying on, and we took the lead in articulating the importance of chip manufacturing and redefining semiconductor innovation.

A major milestone for GF was taking our company public in October 2021, when shares of GFS started trading on the Nasdaq stock exchange. The culmination of more than a decade of work to build a profitable, at-scale global semiconductor manufacturer with strong technological differentiation, GF's IPO was one of Nasdaq's largest IPOs of the year and its largest semiconductor IPO ever.

For me and for GF, focusing on Environmental, Social and Governance (ESG) is not only the right thing to do it's also about making enduring profitable business. In this Corporate Responsibility Report, I am pleased to share the results of our focused efforts in this space that are yielding positive results. The report includes details of our many ESG wins and forward momentum in 2021 and into 2022. And as proud as we are of what we have achieved together, our goal is to become even better.

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We are in good company as we sharpen our focus on ESG and on making a positive impact. ESG is an area of increasing importance for our customers, partners, investors, employees and future employees. Just as GF requires suppliers to meet rigorous responsible sourcing and human rights criteria, more of our semiconductor customers hold us accountable for our environmental sustainability and other ESG measures. As a newly public company, GF will be appraised by agencies that review our ESG efforts and assign ratings that investors are factoring into investment decisions. We also know that sustainability, diversity and inclusion, and other ESG priorities are of critical importance to our global team of employees. Additionally, we are seeing that job seekers are considering a company's ESG efforts when deciding where to apply and accept positions.

Following are highlights of key successes and achievements you will find in this report.

Environmental

GF has a longstanding and proven record of environmentally responsible manufacturing and operations. As a science- and technology-based company, we recognize climate change is an unprecedented global challenge, and we are committed to growing responsibly and minimizing our impact on the environment. Here are some of the ways we are making a difference.

Journey to Zero Carbon

Last year we announced our Journey to Zero Carbon goal and made a commitment to reduce our total greenhouse gas emissions 25% by 2030 even as we grow our manufacturing output. We are making progress and are on track to meet our ambitious goal, achieving results through a variety of energy efficiency, energy sourcing, and emission control measures.

Resource Conservation

Over the past three years, GF has met or exceeded our resource conservation targets for – water, electricity, chemical use, greenhouse gas emissions, and waste generation. These efforts realized annualized savings of more than 86 gigawatt hours of electricity, almost 1.5 million cubic meters of water, 56,300 metric tons of carbon equivalents in greenhouse gas emissions, and more than 18,000 tons of chemical use and waste generation. In addition to the environmental benefits, these efforts resulted in millions of dollars in operational cost savings.

Social

Nothing is more important to GF than the safety and well-being of our worldwide team, their families, and our communities. Just as our feature-rich semiconductor chips enable technological innovation across a range of markets, as a company we aim to be a catalyst for driving positive social impact where our sites are located and around the world.

Health and Safety

We believe all workplace injuries are preventable. Our site leadership and operations teams around the world create and build a culture in which the expectation of zero injuries and incidents is the norm. Our safety incident rates continue to be at significantly lower levels than the semiconductor industry average. In 2020 and 2021, our total recordable injury rates were the lowest they have been since our company was founded in 2009.

Diversity, Equity, and Inclusion

GF has one of the most diverse and multicultural workforces of any semiconductor manufacturer, and we know this is a competitive advantage for our

company. Employee Resource Groups (ERGs) are a critical part of the structure we have in place to empower our team and celebrate the diversity of our workforce. Last year GF employees launched three new ERGs: Asian Society for Inclusion and Awareness; Pride at GF; and Unidos. As described in this report, these groups strengthen our team and position GF for continued success.

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GlobalGives

Participation in our employee giving program, GlobalGives, grew 77% last year. Together, the GF team supported more than 1,100 individual charities, donating nearly $400,000 USD through the GlobalGives platform to support nonprofit organizations. GF was proud to match these employee donations. Globally, GF and our team also supported critical causes including social justice, disaster relief and STEM education. In total, GF and our employees donated nearly $1.2 million USD through GlobalGives in 2021, giving back to our communities across the globe and making a difference.

Governance

At GF, we hold ourselves accountable and have structures and policies in place to ensure responsibility and accountability across our operations. We are committed to upholding the highest degree of ethical behavior and unyielding integrity in everything we do.

Board of Directors

Over the past year, GF has named three experienced leaders as independent directors of our company's board of directors: Elissa Murphy, a vice president of engineering at Google; Dr. Bobby Yerramilli-Rao, chief strategy officer and corporate vice president of corporate strategy at Microsoft; and Jack Lazar, who brings more than 30 years of experience in operational and finance roles at several public and private companies.

Perfect Responsible Business Alliance (RBA) Audit Scores

Our Fab 1 site in Dresden received a perfect score (200/200) in its first RBA audit, conducted in 2021. These comprehensive audits evaluate ethics, labor, health and safety, and environmental programs and the associated management systems. Fab 1 joins our Singapore site and Fabs 8 and 9, all of which received perfect scores in their RBA audits in 2020 and 2021.

ISS "Prime" ESG Rating

In April 2022, GF was recognized as a "Prime" performer and ranks within the top 10% of companies in the semiconductor industry for ESG efforts, according to the Corporate ESG Performance Rating from ISS (International Shareholder Services). The ISS score encompasses a wide range of ESG topics and metrics from operational eco-efficiency and climate change strategy to human rights standards, community involvement, and reporting transparency.

GF Technology Solutions for Humanity

Our industry is expected to grow more in the next decade than it did in the past 50 years, and GF is stepping up to do its part as we work to address the growing demand for technology innovation for the betterment of humanity. As we focus on the the sustainability of our own operations, the semiconductor solutions we manufacture also enable our customers to innovate new products to help achieve their own sustainability and efficiency goals.

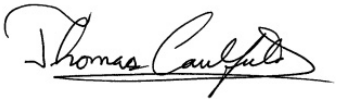
Be sure to read the "Technology Solutions for Humanity" section of this report to learn more about the many ways GF semiconductor chips are helping address some of the world's most pressing climate, resource sustainability, and societal challenges. The low power consumption, outstanding high-frequency performance, and design flexibility of GF's feature-rich technologies are driving key advancements across the markets we serve: From safer and more power efficient electric vehicles, to smartphones and smart devices that perform better and last longer on a single charge, to high performance energy efficient datacenters and AI.

02

Looking Ahead

You will find additional detail on these successes and initiatives, and much more, in this comprehensive report. I invite you to read further and learn more about GF's high level of commitment to ESG and the ways our company is driving positive impact and value through corporate responsibility. It would be impossible to overstate how proud I am of GF's global team, whose talent, drive and dedication help enable our successes and this forward progress in ESG. Just as our chip technologies differentiate us from other semiconductor foundries, GF's diverse global team sets us apart and is a distinct competitive advantage.

Working together, as ONEGF, we are positioned for further success and value creation through ESG. I have challenged myself, the GF senior leaders, and the global GF team to reach further and think even bigger about ESG and the positive impact we can create. In addition, we will further engage with our customers, partners, communities and other stakeholders to discover and innovate new ways of addressing future opportunities while advancing our ESG commitments. I look forward to sharing these and other successes with you over the coming year.



Dr. Thomas Caulfield
CEO
GF

03 GF stakeholders and CSR priorities

Our key stakeholders have a significant interest in our business and help shape our company and the products and services we provide. We regularly engage with our employees, customers, communities, suppliers, investors and industry peers, sharing perspectives and gaining valuable insight relevant to our business and operations.

GF stakeholders

Employees

At GF, people are at the heart of everything we do and we embrace the diversity of our teams as a competitive advantage. Our strength comes from a culture of inclusivity, empathy and respect. We take great pride in the dedication and commitment of our global workforce to collaborate together for breakthrough solutions. We nurture a performance-based culture in an environment that encourages individual development, collaboration and new ideas.

Employees engage and keep abreast of corporate and local site information through our GFCurrent platform, quarterly all-hands events, Employee Resource Groups and other global or site-specific team events, and ongoing corporate and employee communications, all of which include opportunities to ask questions and provide feedback. To enable employees to stay up to date during the global COVID-19 pandemic crisis, we added communication channels, including a weekly video message from our CEO and other GF leaders.

GF also seeks in-depth and confidential employee feedback via our third-party administered ONEGF Pulse Surveys that occur multiple times per year. Our surveys focus on engagement, manager effectiveness, diversity & inclusion, and other emerging themes that impact the employee experience. GF management thoroughly reviews employee feedback, translates input into action plans that address employee concerns, and shares both the feedback and the resulting action plans with employees both at the company and at the team level. This two-way engagement has yielded not only powerful insights but the ability to address concerns early and thoroughly.

Customers

It is GF's mission to innovate and partner with our customers to deliver technology and solutions for humanity. GF technologies, solutions, services and manufacturing scale give our customers the power to shape their markets. We work closely with both industry leaders and entrants to identify the right technology opportunities and deliver the right solutions across established and emerging applications in our customers' market segments.

03

Our Customer Experience program is geared to continually improve our customers' experience when partnering with GF by listening to and feeding our customers' voice back into our business processes. This includes our customers' voice on our shared commitment to social and environmental responsibility.

- We track internal, customer-facing key performance indices that closely align to our customers' Quality, Business, Technology, Fulfillment and Responsiveness targets to ensure we can quickly make course corrections when needed.
- We conduct third-party customer relationship surveys to enable a deeper assessment of our performance.
- We manage customer issues in our Action Management and Escalation system to ensure responsive follow-through to our commitments.
- We meet with our customers on a regular basis to review our performance. Improvement projects are prioritized based on customer feedback.

In every aspect of our Customer Experience Program, our GF SHIELD program is in place to ensure our customers' intellectual property and sensitive information remain secure.

Investors

Since our IPO, we have significantly broadened our shareholder base to include a variety of institutional and retail investors. We strive to maintain a transparent relationship with our shareholders, and actively engage with them via quarterly earnings conference calls, meetings with key executives and members of the Investor Relations team, and participation in conferences. We also respond to surveys from ESG research firms, as well as company-specific ESG questionnaires.

GF partner community

The GF Partner Community brings networks of high-growth companies together in the spirit of collaboration to charge up the future of automotive, industrial and consumer IoT, data center, networking, mobility, wired infrastructure and satellite communication. With more than 50 partners, it nurtures synergy and collaboration between partners and GF to reduce chip design and development barriers. GF also partners with worldwide universities to drive innovation through R&D partnerships, talent acquisition opportunities and degree partnership programs.

Communities

Along with our global footprint comes a responsibility to the communities in which we operate. GF stands committed to our responsibility as a great employer, good corporate citizen and major player in each of our communities where we contribute to existing or emerging high-tech clusters that bring additional economic benefits to those regions. GF also believes strongly in philanthropy, and our employees around the globe make a difference by volunteering their time and donating money and goods to support a wide range of causes. GlobalFoundries has a long history of community involvement, with well-established programs and global and local teams dedicated to enriching the lives of the people in our communities around the world. Through our worldwide GlobalGives program, we provide employees with the opportunity to make a positive impact in their local communities through personal donations, company matched donations as well as through volunteering their time.

03

Suppliers

Our relationships with our suppliers of goods and services are built on a foundation of trust and integrity. We strive to establish long-term working relationships through mutual performance expectations and measures, performance feedback, and continuous improvement plans. Beyond the day to day working level interaction, we engage with selected key suppliers through periodic business reviews and our Global Supplier Rating (GSR) process. The GSR determines supplier performance with regard to Quality, Cost, Operations, Service, Technology, Business Continuity and Compliance, including EHS and CSR. Responsible sourcing requirements include specific human rights, health and safety, environmental and business ethics standards which are established early in supplier relationships to improve efficiency and reduce risks throughout the supply chain. We require our suppliers to comply with the Responsible Business Alliance (RBA) Code of Conduct. We specifically engage with suppliers whose employees perform work on GF sites to assure conformance with site-specific EHS rules and procedures.

Industry collaboration

Through our participation and leadership in semiconductor industry trade associations, we gain valuable insight into the economic, social and environmental trends that affect our business. These groups include the RBA, Semiconductor Industry Association (SIA), European Semiconductor Industry Association (ESIA), Singapore Semiconductor Industry Association (SSIA), the World Semiconductor Council (WSC), the Global Semiconductor Alliance (GSA), Semiconductor Equipment and Materials International (SEMI), and ZVEI (a leading German electronics trade association).

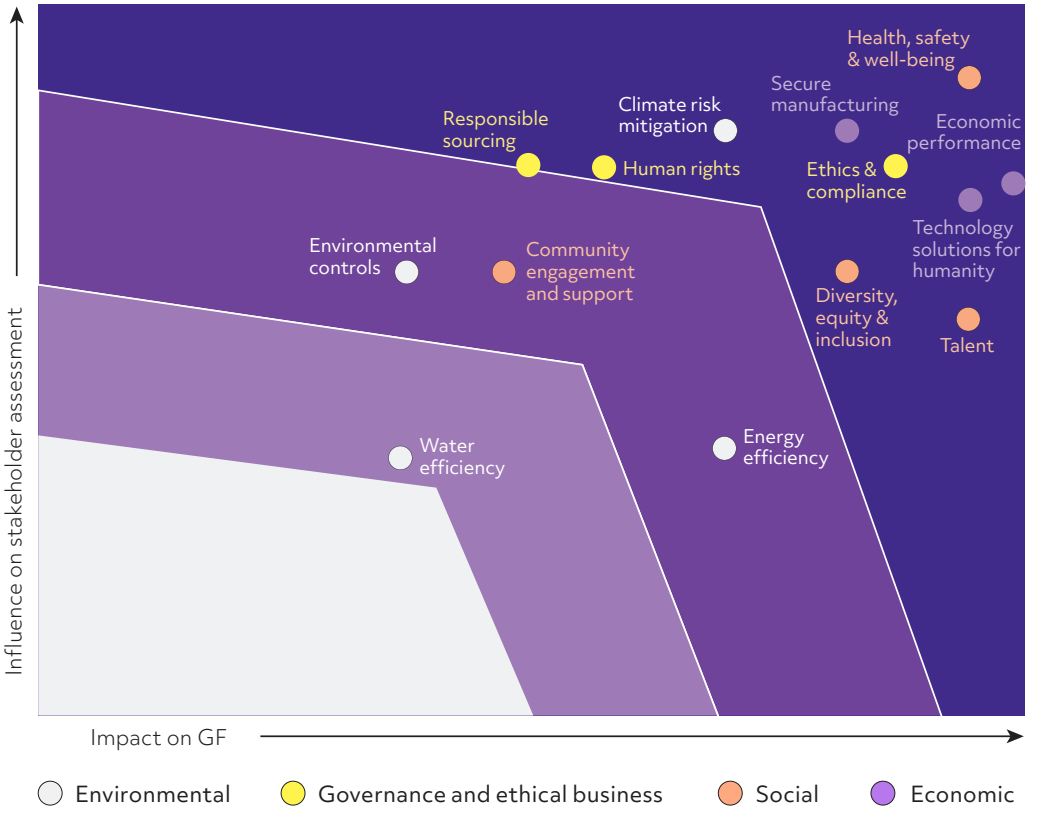
These associations are engaged in a wide variety of public policy matters ranging from technology, trade, tax, and environmental policy to promoting STEM education and the adoption of energy-efficient technologies. SIA, ESIA, the WSC, and SEMI all have active EHS committees.

03

Materiality analysis – GF CSR priorities

This report focuses on certain CSR priorities that we consider "material" to our business at GF. We periodically conduct a materiality analysis by reviewing and evaluating internal and external stakeholder input and expectations. GF's ESG Council oversees the process and GF's Stewardship Committee approves the resulting 'Materiality Map'. We consider customer inquiries, employee surveys, investor engagement, CSR topics and trends raised in our collaboration with peers in industry associations, as well as diverse internal perspectives on the relevance of CSR topics to GF. Identified topics are prioritized with regard to their economic, environmental and social impacts to GF and their perceived influence on GF's stakeholders' assessment. Following our 2021 IPO, we have conducted a refresh of our 2021 materiality analysis to accommodate the potential changes to our stakeholders and their perspectives. The resulting Materiality Map (Figure 1), which determines the scope and content of this report, was reviewed and approved by the Stewardship Committee in April 2022.

Figure 1. GlobalFoundries' materiality map



04 Governance

GF is committed to upholding the highest degree of ethical behavior in everything we do. Each of our employees, contractors and consultants has the responsibility to carry out their duties in a manner consistent with this commitment.

GlobalFoundries' Worldwide Standards: Code of Conduct

GF's Worldwide Standards: Code of Conduct (Code) is the foundation of our Ethics & Compliance program and an integral part of our Corporate Social Responsibility Management System. Our Code is approved at the highest level of our company, the GF Board of Directors. It sets forth the basic rules, standards and behaviors that we must follow to achieve our business objectives while upholding our values. The Code summarizes legal and ethical standards and provides practical advice covering a wide range of issues pertinent to ethical business practices, including human rights, discrimination, harassment, environmental responsibility, protection of confidential information and intellectual property, anti-bribery and anti-corruption. It also explains the major elements of our ethics and compliance program and identifies where employees can seek help and support.

Focus on preventing corruption

In addition to the Code, GF has implemented and communicated our Anti-Bribery and Anti-Corruption, Gifts and Entertainment, Conflicts of Interest, Insider Trading, Anti-Money Laundering, and Fraud Controls policies to further emphasize to our employees and business partners our commitment to doing the right thing. These policies include plain-language definitions of core concepts, scenarios that serve as examples drawn from our employees' own experiences, and procedures to ensure compliance. Along with the Code, these policies form the foundation of our ethics and compliance program.

Ethics & compliance office

GF's Ethics & Compliance Office (a part of the Legal Department) coordinates the ethics and compliance program and works to foster a culture of principled behavior and decision-making. This office is responsible for promoting

employee awareness, education, and training, and implementing a program to assess risks and proactively prevent and detect unlawful/unethical conduct. It is a resource for employees to ask questions or raise concerns and it is an integral part of our culture driven by executive leadership. Each year our CEO addresses all employees regarding the importance of maintaining the highest ethical and compliance standards as we perform our work. That message is continually cascaded throughout the organization to reinforce the importance of doing the right thing at all times.

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The Audit, Risk & Compliance Committee (ARCC) is the body charged by the GF Board of Directors to oversee the ethics and compliance program. The Ethics & Compliance Office is required to update the ARCC on key initiatives, metrics, and investigations on a quarterly basis. The leader of the Ethics & Compliance Office serves as Secretary to the ARCC and has a direct line of communication with the ARCC Chair. The Ethics & Compliance Office also works closely with the GF Ethics Committee (which includes the Chief Human Resources Officer, Chief Financial Officer, Chief Legal Officer, Chief Audit Executive, and other senior operations leaders). The GF Ethics Committee meets quarterly for formal review of key initiatives, metrics and investigations, and each investigation conducted by the Ethics & Compliance Office is reviewed by a member of the Committee.

The ethics and compliance program is implemented through a Compliance Network which consists of over 60 influential employees nominated from various GF sites and business functions around the globe. Network members serve as accessible, familiar contacts to employees and provide a direct conduit from each location to the Ethics & Compliance Office. Network members also help identify key compliance risks, drive engagement, and ensure that training and communications are tailored to the needs of the individual sites.

The Ethics & Compliance Office performs an annual assessment of company risk regarding potential violations of the GF Code (including corruption, fraud, and human rights concerns) and utilizes the input of subject matter experts and the Compliance Network to validate risk measures by category and region of operation. The results of this assessment are put into practice through policies and programs covering a range of risk areas including anti-bribery and anti-corruption, protecting confidential information, and insider trading, all of which are also encapsulated in the GF Code.

Asking questions, raising concerns, no retaliation

Employees, contractors and partners are encouraged to ask questions and raise concerns. Ethics & Compliance personnel are available in person, by phone or by email. In addition, GF maintains an Ethics First Helpline which is a confidential, anonymous whistleblower hotline administered by a third party. The Ethics First Helpline is available globally via links on both GF's intranet and external website. The Helpline is accessible 24 hours a day, 365 days a year and online access is available in English, German and Mandarin. Call center translation services are also available in over 200 languages enabling employees and other stakeholders around the world another avenue to raise questions and/or report concerns. We proactively make this contact information known through various internal and external

communications throughout the year and include it on all GF-issued purchase orders. We promptly review all reports and the company is committed to protecting anyone who makes a good-faith report from retaliation or discrimination. Investigations of complaints are overseen by the Ethics & Compliance Office and supported confidentially by other internal organizations such as Internal Audit and Global Security as appropriate.

04

The Ethics & Compliance Office also evaluates conflicts of interest and gifts and entertainment disclosures and responds directly to employee inquiries to ensure maximum engagement on Code-related topics. Ethics & Compliance is similarly a key member of the GF Charitable Donations Committee which reviews and approves prospective corporate charitable donations, utilizing a third-party platform to evaluate charitable causes and process employee donations and corporate matches.

Training and communications

The Code is communicated to all employees when they begin work with GF. Code training is conducted upon hire and is repeated annually. Code training includes modules with a specific anti-corruption focus, including avoiding conflicts of interest, appropriate handling and disclosure of gifts and entertainment, and anti-bribery. We update the training annually using a risk-based approach. The training, as well as the Code itself, is delivered in English, German and Mandarin to ensure that the content is easily understood by all GF employees across the globe. Training completion is monitored and enforced by the Ethics & Compliance Office and audited by Internal Controls. Employees maintain over a 98 percent on time completion rate. Contractors also acknowledge understanding of and compliance with the Code.

GF provides additional focused training for targeted audiences. For instance, leaders at GF across the globe complete a two-hour instructor led course entitled "Leading with Ethics" that focuses on ethical behavior and decision-making. In 2021, employees throughout the company completed a course regarding material non-public information and insider trading awareness. "Avoiding Ethical Pitfalls", an online targeted training to our global sales organization focuses on anti-bribery and anti-corruption, insider trading and protecting confidential information. New hires around the globe complete "Respectful Workplace" training and US employees complete annual "Preventing Workplace Harassment" training. These courses are part of a broader organizational engagement plan that includes articles, visual displays, and other means of communication to ensure education regarding ethical issues. We also conduct a global Ethics Week to heighten focus regarding specific provisions of our Code of Conduct. In 2021, despite the challenges presented by the pandemic, Ethics Week included video messages, online articles and games, and in-person roundtable discussions between employees and their local Compliance Network members. Our online activities received over 21,000 unique views. In addition, approximately 400 leaders of our global executive team viewed a panel discussion on the importance of ethics in our day-to-day working lives. Panelists included our Chief Financial Officer, Chief Legal Officer and Chief Communications Officer, and the discussion was moderated by the leader of the Ethics & Compliance Office.

Governance framework

Corporate governance addresses the way in which companies are directed, controlled and managed. Our governance framework is focused on four pillars: responsibility, fairness, transparency and accountability.

04

Board of directors

The Board of Directors (the Board) is the body charged with the ultimate responsibility for ensuring appropriate governance across the organization and establishing the "tone at the top."

The Board reviews and determines the company's strategy; monitors and assesses the company's financial performance and health (including financial and non-financial metrics); establishes and monitors effective compliance systems and policies to ensure effective management of risks and compliance with laws; determines the structure and compensation and oversees the performance of GF's executive management; and ensures that corporate governance standards are implemented and maintained and that obligations, including reporting, to shareholders, are met. All Board Committees review their charters annually.

The Board is composed of our CEO, Dr. Thomas Caulfield, representatives of Mubadala Investment Company, our principal shareholder, and other senior industry leaders. The Board draws on a great depth of experience that spans the technology, semiconductor and equipment industries, international finance, energy, aerospace, infrastructure, real estate, risk management and business development. The Chairman of the Board is not an executive officer of the company. The Board regularly meets in executive sessions without management present. More details about the Board of Directors, including Directors' biographies and experiences and the Board's practices are available in GF's Form 20-F Securities and Exchange Commission (SEC) Filing.

Board committees

Four Board Committees support the Board in carrying out its governance responsibilities: Audit, Risk & Compliance; People & Compensation; Nominating and Governance; and Strategy & Technology. Each Board Committee operates pursuant to a separate charter adopted by our Board, and conducts regular self-assessments.

The Audit, Risk & Compliance Committee (ARCC) is mandated by the Board to oversee the integrity of financial statements, financial filings and disclosures; compliance with legal and regulatory requirements (including oversight of the Ethics & Compliance program); the effectiveness of our accounting and internal systems and controls (including the company's internal audit function); the risk management function; approval of related party transactions; GF's ESG programs; cybersecurity, privacy, and information technology; and the independence, qualifications, appointment, remuneration and performance of the company's external auditors. The ARCC regularly meets with the company's external auditors without management present. Two of the three Committee members have been determined by our Board as "independent" for audit, risk and compliance committee purposes as defined by the rules of the SEC and the applicable rules of the Nasdaq. The company intends to have a fully independent ARCC within one year from the effectiveness of our initial public offering registration statement, as permitted by applicable requirements.

The People & Compensation Committee assists the Board in fulfilling its responsibilities by overseeing the company's overall compensation philosophy, strategy and programs, including executive compensation plans. The Committee reviews and approves the appointment and promotion of senior executives, and the compensation of our senior executives, including of the CEO; evaluates the performance of our executive officers; and oversees employee retention strategy and succession planning.

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The Nominating and Governance Committee advises the Board on the development and review of corporate governance guidelines (including the structure, composition and function of the Board and its committees); makes recommendations to the Board regarding appropriate candidates to serve as Directors and their compensation; evaluates Director independence; and oversees the evaluation of our Board and Board Committees.

The Strategy & Technology Committee assists the Board in its oversight responsibilities relating to strategy and technology matters, including long-term strategy and plans; strategic transactions; technology roadmap; and productivity and efficiency.

GF's chief executive officer

GF's Chief Executive Officer is responsible for managing the company's business and is accountable to the Board. The primary responsibilities of our CEO and senior management broadly cover the management of the day-to-day operations of the business, strategic planning, budgeting, financial reporting, risk management and compliance.

Support for the board and its committees

With the ARCC, the Legal Department and the Internal Controls Department are mandated by the CEO to oversee corporate governance at GF. Together, the Legal and Internal Controls Departments ensure that the organization adheres to the company's corporate governance framework and associated policies and procedures, provide guidance, and ensure training sessions are conducted on a regular basis.

Internal and external auditors play crucial roles in assisting the Board and management. External auditors are responsible for auditing the financial statements of the company. The Internal Audit organization plays an important role in providing the Board and senior management with objective assurance support for the business and consulting services. Internal Audit evaluates the effectiveness of risk management, internal controls, and governance processes, and makes recommendations for improvement. Internal Audit also acts as a bridge between the Board and management and reports directly to the ARCC.

Delegation of authority

The Delegation of Authority (DOA) is an important mechanism through which the Board directs and manages the company's governance framework. GF's DOA, which is made up of two policies — the Corporate Approvals Policy and the Sales Transaction Policy — enables the Board to exercise oversight and control over authority levels within the company.

In accordance with the GF's DOA, the Board has specified those matters reserved for Board approval and delegated certain of its powers to the Board Committees, the CEO, and management. The CEO, management, employees, contractors, agents, and anyone acting on behalf of GF are responsible for ensuring that they operate in accordance with the DOA. On an ongoing basis, management, in coordination with the ARCC and the Board, ensures that the DOA is appropriate for the nature of the business and reviewed on an annual basis.

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ESG governance

The Board oversees the Company's ESG matters and programs through the ARCC. In addition to the oversight provided by the Board and the ARCC, GF maintains a Stewardship Committee which is responsible for setting strategic direction, conducting management reviews, and providing guidance and approval regarding ESG related topics. These include GF's EHS and CSR management systems, climate risk mitigation, Human Capital Development, Diversity & Inclusion, and Supplier Responsibility. The Stewardship Committee membership includes executives representing the Legal, Finance, Manufacturing, Human Resources, Communications, Technology, Supply Management, and Customer Design Enablement organizations. GF has also established an ESG Workgroup spanning multiple organizations which is chaired by our leader of Ethics and Sustainability. The Workgroup contributes to developing and implementing GF's long-term ESG strategy and ensures organizational readiness to address stakeholder expectations.

Human rights

GF is committed to protecting fundamental human rights. GF's Global Human Rights Policy formalizes this commitment and highlights the human rights principles that we incorporate into our operations:

We provide a safe, fair and inclusive workplace based on a culture of respect, dignity and integrity. GF strictly forbids all forms of child labor and forced, compulsory or trafficked labor in the operation of our business and in our supply chain. We respect the rights of employees to associate freely and have a zero-tolerance policy against harassment, including sexual harassment, or discrimination based on age, ancestry, color, marital status, medical condition, mental or physical disability, national origin, race, religion, protected genetic information, political and/or third-party affiliation, sex, sexual orientation, gender identity, veteran status, or any other characteristic that is protected by applicable law. GF has set limits on working hours and consecutive days for hourly workers to not exceed 60 hours including overtime, and to not exceed more than six consecutive days—except in emergency or unusual situations. We also believe in providing internally equitable and externally competitive rewards and benefits that help foster employees' physical, financial and emotional well-being. We follow applicable laws and meet or exceed wage and mandated benefits.

GF's Human Rights Policy, together with GF's Code of Conduct, is aligned with the Responsible Business Alliance Code of Conduct ("RBA Code"), which is a set of globally recognized social, environmental and ethical industry standards. As a regular member of the RBA, we stand committed to the RBA Code, continuous pursuit of excellence in corporate responsibility and the RBA Code's escalation into our supply chain. GF's Human Rights Policy aligns with international norms and standards, including the

Universal Declaration of Human Rights, the United Nations Global Compact, the International Labor Organization (ILO) Declaration of Fundamental Principles and Rights at Work, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, ISO standards, and the applicable laws of jurisdictions in which we operate.

GF regularly conducts assessments of human rights in our own operations as well as in our supply chain using RBA's self-assessment and audit tools. Potential human rights risks are identified through stakeholder communication channels including questions received, Ethics First Helpline reports, employee communications, and information received through GF's participation in sector initiatives on responsible business. When GF identifies or is made aware of instances of non-conformance with this Policy, the GF Code, the law or any other policy or procedure, whether in GF's own operations or in our supply chain, GF will take appropriate action to assess, contain and correct the non-conformance, mitigate potential impacts, and prevent recurrence.

Responsible Business Alliance (RBA) self-assessments and audits

Annually, we assess our own conformance with the RBA Code and our Human Rights Policy principles using the RBA's self-assessment questionnaires (SAQs) for our corporate programs and for each of our manufacturing sites. To date, all of our SAQs are rated as "low risk" for non-conformance with the RBA Code. GF Internal Audit also reviews conformance with ethical standards as appropriate while executing its audit plan.

We also participate in the RBA's VAP (Validated Assessment Program), an independent third-party on-site audit program, that verifies conformance to each element of the RBA Code through interviewing workers and management, auditing policies and procedures, and detailed record reviews. We share SAQs and VAP audit results with our customers. GF's most recent VAP audits have each earned the maximum VAP audit score of 200 with zero findings across all five categories audited (Labor, Safety and Health, Environmental, Ethics, and Management Systems). We also use the RBA's self-assessment and auditing tools to monitor our suppliers' conformance to the RBA Code (see 10 Responsible Sourcing). GF's 2022 SAQ scores, risk ratings and VAP scores are listed in Table 1.

Table 1. GF's SAQ Scores, SAQ Risk Rating and VAP Scores

	2022 SAQ		2020-21 VAP Audits	
	Score (100 points possible)	Risk rating >85% = low risk	Score (200 points possible)	Date and type of audit
Corporate	94.3	Low	N/A	
Fab 1 Dresden, Germany	91.2	Low	200 RBA VAP platinum level recognition)	November 2021, initial audit
Fabs 2, 3, 5, & 7 Singapore	88.2	Low	200 (RBA VAP platinum level recognition)	November 2020, initial audit
Fab 8 Malta, New York	90.2	Low	200 (RBA VAP remote recognition)[1]	October 2020, initial audit
Fab 9 Burlington, Vermont	89.9	Low	200 (RBA VAP remote recognition)[1]	February 2021, initial audit
Fab 10 East Fishkill, New York	90.1	Low	—	None performed to date

[1] Due to COVID-19, Fab 8 VAP audit was a hybrid audit and Fab 9 VAP audit was fully virtual. RBA currently provides "remote recognition" for such audits. For reference, Fab 9's previous 200 point audit score in 2018 received "platinum recognition".

Risk management and business continuity

GF manages risk at the enterprise, business function and manufacturing site levels to meet our commitments to customers, shareholders, the community and employees. The ARCC of the Board of Directors is accountable for risk management. GF utilizes an Enterprise Risk Management (ERM) system to provide insight into existing and potential risks that could impact our ability to achieve our strategic goals. A cross-functional team consisting of senior representatives from Finance, Operations, Supply Chain, Procurement, Communications, Human Resources, Legal, EHS, and Ethics & Compliance organizations manage the ERM system. This team focuses on identifying and addressing the most impactful strategic, operational, financial, legal and compliance risks across the enterprise. Our structured approach of credible risk assessment, disciplined mitigation, comprehensive threat awareness and practiced crisis management enables us to identify critical risks and target mitigation programs at the appropriate level to avoid loss, disruption, or interruption of mission-critical activities and systems. Management and maintenance of risk mitigation and business continuity plans is an on-going task, and our manufacturing sites and critical business functions engage in a regular review and assessment of risks. Risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. During this process, risks are prioritized and mitigation strategies are identified, validated and measured.

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The following are key elements of GF approach to business continuity:

- Global scale and operational resiliency with manufacturing operations in low risk geographies;
- Executive stewardship and broad organizational engagement;
- Business continuity and recovery planning;
- Crisis communication and command protocols for prompt and appropriate attention to threats;
- World-class Environmental, Health and Safety programs support loss prevention and mitigation;
- Proactive management of supply chain risks.

Crisis management

GF is committed to company-wide readiness, response and recovery. Our Crisis Management Framework combines pre-threat assessment with an Incident Command System approach that supports the response process across all time zones and geographies. This enables GF to respond to and recover from a local, regional, national or global event of significance.

Early pre-threat assessment is accomplished through various internal and external monitoring systems. Assessment of potential impact is coordinated through an internal tool which serves as a global forum for communication of potential threats. This provides a means to prepare for a potential crisis situation, and to ensure appropriate escalation should it develop.

The framework uses clear criteria for activation and escalation of the Global and Site Crisis Teams which include broad organizational representation. This ensures an integrated and consistent response regardless of the type of event.

Secure manufacturing – cybersecurity

GF SHIELD is GF's comprehensive, company-wide program to engage every employee to safeguard and protect our and our customers' intellectual property and products. With GF SHIELD, we have embraced our role as a relied-upon partner and a world-class secure and trusted foundry.

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Protection of information, data and assets is the foundation of GF's partnerships with our customers and suppliers. GF SHIELD integrates information security, product security, operational security, and cyber security into a comprehensive program that covers all phases of the customer experience. From the initial meeting, through development, design, fabrication, delivery, and even disposal of product-related scrap—and every step between—GF SHIELD is in place to ensure a customer's products and sensitive information remain secure. Annually, we conduct comprehensive security training for all employees, covering Information Security, Cybersecurity, Operational Security, and Product Security. Each training module is updated at least annually, and employees are assigned one of the four modules each quarter. We average above a 97 percent on time completion rate on each of the modules. We augment this training with corporate wide and management communications regarding specific threats and reminders. Lastly, role-specific training is provided on an annual or as-needed basis for certain employees whose job roles require an enhanced level of security awareness and control as well as data privacy and government product security.

The GF SHIELD Core Team (made up of the GF SHIELD Regional Task Force leaders) coordinates strategy and tactical deployment of GF SHIELD protective elements across the four disciplines of Information, Cyber, Product and Operational Security. GF SHIELD Regional Task Forces then work within their geographic region to implement and measure compliance to GF security policies at an operational level.

The GF SHIELD program leverages and embraces GF's experience as a Trusted Foundry and supplier of advanced semiconductor to the U.S. government and the aerospace and defense industry, as well as GF's experience as a certified international Common Criteria standard (ISO 15408) manufacturer, and adopts many of those stringent security capabilities to all GF locations and customers. The ISO 15408 (Information Technology — Security Techniques) certification allows GF fabs to produce chips for financial transactions, smart cards, digital IDs as well as other products and applications for the public sector or industries that require an extra level of security and integrity in the production process. In addition, we maintain ISO 27001 (Information Security Management) certifications for Fab 1 in Dresden, Fab 7 in Singapore, and Fab 8 in Malta.

05 Health, safety and well-being

Our approach

GF has a foundational commitment to the safety and well-being of our employees, contractors, visitors and communities. This commitment is our North Star in GF's Journey to Zero. We strive to continuously reduce occupational injuries and illnesses in all of our operations, with an ultimate goal of zero incidents.

The GF **Journey to Zero** emphasizes that all injuries are preventable, and together we can create a culture where the expectation of zero injuries and incidents is the norm. This fundamental principle underlies our Global EHS Policy, which commits us to providing safe and healthy working conditions that prevent injuries and illnesses, and to the elimination of hazards and the reduction of safety risks, utilizing the principles of behavior-based safety and a hierarchy of risk-mitigation controls.

Our Global EHS Policy and Standards are the foundation of health and safety programs at each manufacturing location. The Global EHS Standards provide a consistent set of procedural and performance requirements that apply globally throughout the company. They cover a wide range of health and safety aspects, including injury and illness prevention, emergency preparedness, electrical safety, chemical safety, and industrial hygiene monitoring program requirements.

Our enterprise-wide health and safety management system is based on our EHS Policy and Standards and covers all activities performed at GF manufacturing sites. It is certified to the ISO 45001 Health and Safety Management Systems standard, after a successful transition from our OHSAS 18001 health and safety management system certification in April 2021 (certificate available here).

"Consultation and Participation" is a key tenet of ISO 45001, with the intent to ensure employees and on-site contractors are fully engaged in the health and safety management system. Communication, engagement and training are key components to facilitate safe behaviors at GF. This includes encouraging employees and contractors to raise safety concerns and report near misses and unsafe behaviors. GF actively addresses this through our Safety Committees, EHS

training programs and awareness initiatives. GF provides and facilitates a wide scope of general and job-specific health and safety training as defined by regulatory requirements and our own determinations in accordance with the Global EHS Standards: GF employees at manufacturing sites must complete annual basic health and safety training that addresses how to protect themselves from potential hazards present in the workplace, prevent injuries, what to do in emergency situations, including evacuations, as well as providing an overview of sites' general EHS procedures, practices and programs. Beyond this basic training, job-specific health and safety training is assigned according to job category to address specific risks and cover the related procedures, practices and programs. All contractors receive an EHS orientation before commencing work at GF premises. The contractor EHS orientation must also be completed annually.

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At each fab site, GF's health and safety professionals, management and employees share responsibility for implementing the Global EHS Standards through local programs and operating procedures. Applying the behavior-based safety approach, our programs recognize and facilitate individual safety awareness and behaviors. As part of our risk assessment process, health and safety professionals engage with operational personnel to analyze potential process hazards and mitigate them according to the following hierarchy of controls:

- Elimination (such as eliminating the use of a material, or task step);
- Substitution (such as replacing a hazardous process or material with a less hazardous one);
- Engineering controls (including ventilation, equipment interlocks, enclosure, segregation, etc.);
- Administrative procedures (developing procedures, implementing training, etc.);
- Personal protective equipment (to manage any residual risks, after all other controls have been implemented).

Safety performance in the workplace

We measure progress on the Journey to Zero with a range of metrics—both leading and lagging indicators. We evaluate all occupational injuries and illness cases to identify their root causes and determine appropriate preventive measures and corrective actions. Case reports for occupational injuries and illnesses, along with evaluations that identify root causes and determine appropriate preventive and corrective actions, are shared across our global sites. We set aspirational internal goals to further drive our safety performance and reduce work-related injury frequency and severity.

At the highest level, we measure our safety performance with the following lagging indicators:

- Total Recordable Injury Rate (TRIR: measuring the number of recordable injuries or illnesses); and
- Lost Time Injury Rate (LTIR: measuring the number of injuries that result in employees missing one or more workdays after the day of injury or illness).

Figure 2 shows GF's corporate rates from 2018 through 2021 in comparison to the 2020 U.S. Bureau of Labor injury rates for the semiconductor industry (2020 is the most recent year for which these governmental statistics are available).

Continuing on our Journey to Zero path, our global safety incident rates remained at significantly lower levels than (were better than) the 2020 U.S. Bureau of Labor Statistics (BLS) rates for the Semiconductor Industry, which is the most recent BLS dataset. Our 2021 TRIR was 0.13, same as in 2020, which was the lowest rate since GF was founded in 2009 and significantly lower than the comparable 2020 U.S. BLS rate of 0.7. Similarly, our 2021 LTIR remained at the same low level of 0.1 as 2020 and was well below the 2020 U.S. BLS LTIR for the semiconductor industry, which was 0.2. During 2021 there were zero work-related fatalities or high-consequence work-related injuries[2] affecting GF employees or contractor employees performing work at GF fab sites. For both GF employees and contractors, the main types of work-related injuries were struck by or against cases, followed by caught in or between cases, as well as slip /trip/ fall cases.

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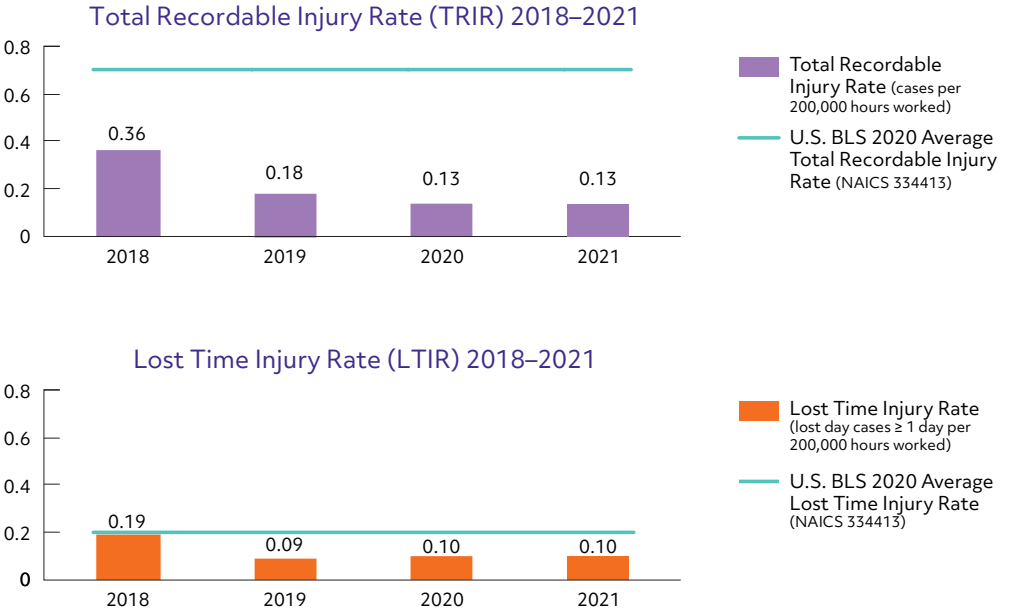
Figure 2. GlobalFoundries corporate Total Recordable Injury Rate, and Lost Time Injury Rate (2018-2021) as compared to 2020 U.S. Bureau of Labor Statistics rates for the semiconductor Industry. The graph includes GF employee injuries only.



[2] High-consequence work-related injury: As defined per GRI 403: Occupational Health and Safety 2018, this is a work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months.

Managing chemicals safely

Semiconductor manufacturing takes place in a highly controlled cleanroom environment. Equipment and chemical/gas distribution systems are completely enclosed, providing an ultra-clean manufacturing space and safe working conditions. Stringent material handling procedures include automated chemical delivery systems and sophisticated manufacturing equipment that incorporates multiple engineering controls to minimize the risk of chemical exposure for employees working in the cleanroom and chemical distribution areas. GF thoroughly reviews all new chemicals before their introduction to our sites and ensures that proper safeguards and material handling procedures are in place. Our chemical management systems at each site provide employees with ready access to Safety Data Sheets (SDS) and identification of appropriate personal protective equipment when necessary.

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Promoting health and well-being

We place great value on our employees' overall health and wellness. GlobalFoundries was proud to receive the 2021 Healthiest Employers Award (Fab 8) and the 2021 Governor's Excellence in Worksite Wellness Award (Fab 9). Each of our manufacturing facilities has an on-site clinic and medical professionals who administer health and wellness programs in collaboration with Human Resources and following applicable data privacy rules. Our health professionals engage globally within the Center of Excellence for Occupational Health and Employee Well-Being to share knowledge and drive continuous improvement. We encourage employees to live healthy, active lives, and provide support through services such as vaccinations, health screenings and surveillance, dietary consulting, on-site fitness facilities, first aid training, and safety tips for travelers. GF also has a robust Employee Assistance Program (EAP) available to all employees and their families providing confidential access to counseling on a variety of topics including personal, family, workplace, legal and finance related to mental health and well-being.

Annually in September, our facilities across the globe hold a themed "Health Day" for all employees with information campaigns and activities to further promote a healthy lifestyle. GF Health Day is a dedicated time to promote available health and well-being resources for employees and family members with a focus on physical, emotional, social, community, financial and career well-being. In 2021, our mostly virtual health days included informative sessions on how to deal with stress, change, mindfulness and how to positively impact physical and mental health as we navigate through challenging times. GF sites also offered on-site seasonal flu vaccinations, all following GF's strict site access and social distancing guidelines.

COVID-19 employee protection measures

Over the course of the COVID-19 pandemic through the last two years, GF's strict on-site protocols, along with our extended work-from-home mandates, has allowed us to protect our employees, contractors and visitors to GF facilities while we maintained our essential manufacturing operations.

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GF has implemented a measured Return-to-Workplace process, including a comprehensive "Playbook" for GF employees. GF follows at minimum all applicable COVID-19 regulatory requirements, including hygiene and social distancing measures, employee testing schemes and vaccination status tracking. We continuously monitor key indicators such as case rates normalized to regional populations, virus variant occurrence, testing volumes and test positivity rates, and vaccination rates, along with regional healthcare capacity. These indicators form the basis of decision-making regarding whether to increase employee populations at our manufacturing sites or reopen smaller regional offices. With the growing availability of vaccines, we have been able to increase employee on-site presence where this can be safely accomplished.

Throughout our response we consulted our employees, seeking their active participation in protecting themselves and others. This was accomplished through a robust set of Frequently Asked Questions, regular communications from our CEO and his leadership team, and targeted questions in our global ONEGF Surveys regarding our COVID-19 response.

Since the beginning of the global COVID-19 pandemic in 2020, our health teams, in close cooperation with our Epidemic Management Teams, continue to provide employees with assistance and information on how to stay healthy and well, both physically and mentally. This includes offering COVID-19 vaccinations and booster shots to our employees, up to date tips to avoid exposure and stop the spread of COVID-19, ergonomic guidance and a reimbursement program for employees working from home to purchase more ergonomic office equipment . Our health teams also offered ideas and best practices for managing stress and enabling social connectivity while working remotely, along with fun ideas on how to keep active and work out at home.

06 Technology solutions for humanity

Technologies from GlobalFoundries (GF) are helping to address some of the world's most pressing climate, resource sustainability and societal challenges. The low power consumption, outstanding high-frequency performance, and power-handling capabilities of GF technologies, among other attributes, make it possible for our customers to create innovative solutions that address these important challenges in areas such as transportation, wireless connectivity, computing and many others.

Driving Progress in Electric Vehicles (EVs)

The world is rapidly moving toward the electrification of vehicles, with the goals of reducing the impact cars, trucks and buses have on the world's climate; reducing localized air pollution; and using energy resources more sustainably. According to EV-Volumes.com, the electric vehicle world sales database, global EV sales totaled some 6.75 million units in 2021, representing 108 percent more electric and plug-in hybrid passenger vehicles, light trucks and light commercial vehicles than the year before. Many automakers have announced plans to electrify significant portions of their lineups over the next 10 years.

Many automakers and industry suppliers rely on multiple automotive-qualified GF differentiated technologies, which are solving some of the most difficult power challenges presented by vehicle electrification and EVS. For example, one key goal is to enable an EV to travel farther on a single battery charge. To do this, battery efficiency must be increased for greater output, and the substantial weight of EV batteries and related components must be reduced. Chips designed and manufactured with GF differentiated technologies make possible new battery-management systems (BMS) that address these needs in the harsh, real-world environments in which vehicles operate.

Edinburgh, Scotland-based Dukosi Ltd has developed an advanced BMS based on GF technologies. Dukosi's BMS chipset transmits data on the health of an EV battery's individual cells wirelessly, eliminating more than 95 percent of the cables currently required to monitor the temperature, health and state-of-charge in EV battery packs. This allows designers to re-architect EV battery systems for higher and more reliable output through greater cell density while also reducing weight.

Moreover, when an EV battery reaches the end of its useful life in a vehicle, its individual cells still may be used in less-demanding applications in the home or in industry. It isn't always easy to accomplish this effectively, but Dukosi's GF-enabled BMS system will make it easy to redeploy EV battery cells to other uses.

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Fast battery charging is another key requirement for vehicle electrification. EV charging stations convert AC power from the grid into the specific DC voltage and current needed by EVs, using components called AC-to-DC converters. These require chips with specialized power-management features, and GF's wide offering of such solutions enables our customers to design EV charging stations with high levels of conversion efficiency and cost-effectiveness. Higher efficiency shortens the time needed to charge a battery and, therefore, enhances the market appeal of EVs over traditional internal combustion engine vehicles. GF technologies are also being used for entirely new applications designed to further increase the efficiency of EVs. One is drive-by-wire technology, which uses an electrical signal rather than a physical connection to connect the steering wheel to the wheels, reducing an EV's bill of materials and its weight.

Many customers also rely on GF's differentiated solutions to design automotive chips for adaptive cruise control, automatic emergency braking, blind-spot monitoring, lane-change assist and other advanced driver-assistance system (ADAS) functions. One noteworthy example is GF's partnership with Bosch, a major supplier to the automotive industry, to develop a next-generation millimeter-wave (mmWave) automotive radar system-on-chip (SoC) for ADAS applications.

Enabling better, more energy-efficient wireless devices and networks

A veritable revolution is taking place in the use of wireless technologies to address climate, sustainability and social needs, and GF solutions are playing a big part of it. Our differentiated technologies are used to create high-performance, energy-efficient RF front-ends, transceivers, display drivers, low-noise amplifiers, power amplifiers, power management and other circuits essential for device connectivity. They are also used to modernize and enhance the capabilities and energy-efficiency of wireless network infrastructure, including reducing the physical size of infrastructure equipment; and to make possible new ways for society to benefit from the rapidly growing numbers of connected devices comprising the Internet of Things (IoT).

In smartphones, the RF front-end is the circuitry that connects the phone to the network. We believe that approximately 85 percent of today's smartphone front-ends are based on GF's RF technologies, which enable state-of-the-art data transmission rates, range and battery performance. Next-generation smartphones require mmWave front-ends to connect over >24GHz frequencies for even higher data rates, and GF technology enables highly efficient mmWave solutions for lower average power consumption.

Smartphone innovations that maximize the user experience and thereby increase user engagement are a big driver of the wireless revolution, and our technologies are helping to drive them. For example, GF's customer Cirrus Logic uses our solutions to design low-power, high-performance audio amplifiers for smartphones, giving users the benefits of outstanding audio quality and longer battery life.

GF solutions are also widely deployed in the backbone infrastructure of wireless networks, where 5G technology can dramatically reduce network energy consumption compared to previous-generation cellular technologies. These technologies have helped to make possible the widespread adoption of working and learning from home necessitated by the COVID-19 pandemic. Wireless connectivity enables people to work, learn, shop and conduct other activities remotely, saving the energy that otherwise would be required for transportation and to power office buildings and campuses.

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GF's solutions are also unlocking the vast potential of 5G and future 6G wireless communication networks to meet climate, energy and social goals. One example is the growing use of 5G technology to route, track and monitor goods in real-time. This real-time capability provides greater visibility into supply chains and leads to major improvements in logistics efficiency. According to industry studies, these improvements have the potential to reduce annual emissions by 55 million tons of carbon dioxide equivalent ($MTCO_2e$) emissions, through substantial reductions in the use of gasoline and diesel fuels.

An example of the social value of increased wireless connectivity is the growing ability to provide internet access to remote, under-served areas of the world via satcom, or satellite-based, communications protocols. This gives people the opportunity to take advantage of the benefits of connectivity in areas where terrestrial infrastructure is expensive or difficult to deploy.

Maximizing the benefits of the internet of things

GF's solutions specializing in low power, RF and system-on-chip integration also enable our customers to develop new wireless Internet of Things (IoT) devices and applications that lead to greater operational efficiency, reduced energy use and conservation of resources. Smart utility meters for water, gas and electricity are one such application.

Smart meters measure and monitor consumption, and then communicate the data wirelessly to utilities and municipalities, who benefit in many ways. Utilities can reduce their distribution costs, minimize waste, increase production efficiency and accelerate cash flow. Municipalities can use the data to operate more efficiently and minimize the loss of resources. Users receive accurate, timely consumption data that can help them reduce their consumption and spending.

Also, wireless IoT devices are typically battery-powered, and GF's highly efficient solutions support increased battery life to reduce the number of potentially hazardous lithium-ion batteries discarded on an annual basis. For example, our customer GreenWaves Technologies uses GF technology as the foundation of a low-power IoT processor for the fast-growing hearables market. Hearables is the term for electronic in-ear devices, such as earbuds. GreenWaves' GF-based processor makes possible the long battery life, state-of-the-art sound quality and user experience, by significantly reducing the energy required for typical activities such as music playback, active noise cancellation and voice commands, and by using artificial intelligence to free up power to improve audio quality.

Energy-efficient solutions for computing and control

"The electrification of everything" refers to the fact that electricity—increasingly

obtained from renewable energy resources (29 percent in 2020, per the International Energy Agency)—directly powers more and more of the devices, machines and processes we use in virtually every area of life today. Greater electrification requires the ability to control these systems effectively, efficiently and safely, and GF offers many solutions to do that. For example, devices called microcontrollers are essential components of the digital control systems used with modern electrified products and systems, from industrial machinery, wired IoT networks and HVAC equipment, to home automation, medical, automotive and other systems too numerous to mention.

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GF's portfolio of differentiated technologies, and its sophisticated design tools, enable customers to develop highly integrated microcontrollers with sensing, logic, memory, power management and communications functionalities, along with high levels of energy efficiency, for the control of electrified systems.

High-performance computing and artificial intelligence (AI)

Much of the world's high-performance, data-intensive computing takes place in data centers, which are heavy users of electricity. Electricity use continues to rise as data centers proliferate and get both larger and denser, as data volumes increase, and as AI and other sophisticated, energy-intensive computing techniques are used.

GF offers several differentiated solutions that meet the needs of data centers while reducing energy use versus alternatives. One is the GF Fotonix™ platform, which integrates sophisticated photonic (light-based) components monolithically on the same chip with high-performance CMOS logic and RF functions. GF customers are using GF Fotonix to develop next-generation optical interconnects for data centers, taking advantage of the fact that photonic interconnects for data transmission is much more energy-efficient than copper-based interconnects for high bandwidth data center applications. The technology ultimately will enable the reconfiguration of data centers to increase the total overall energy efficiency of data transport for machine learning/AI.

GF is also developing the GF Fotonix platform to enable new ultra-low-power photonic computing paradigms, including wafer-scale photonic neural network processors and photonic quantum computation. Both will offer substantial energy reduction per computing task.

Other GF solutions address the performance and energy use of AI computations running within data centers. A key issue is the need to reduce the power required to move data back and forth within data centers, and between data centers and the outside world. While there are many different aspects to this issue, in general it is referred to as the power bottleneck. GF is working with leading AI researchers to develop new, much more efficient computing architectures and algorithms to get around the power bottleneck, and to open up new AI horizons using GF technologies.

One way this could be accomplished is with optimized processing accelerators built to resemble memory architectures. Often referred to as "compute-in-memory" devices, they can perform computing operations in parallel, making them ideal for AI computations but at substantially lower total power. This will enable a greater use of AI at the network edge, such as in IoT devices, where GF technology offers a strong combination of computing performance and energy efficiency.

GF's power efficient platforms deliver novel solutions for datacenter platforms including but not limited to inductors, PMICs (power management integrated circuits), voltage regulation and beyond. These platforms can deliver measurable power reduction for data centers. GF is working with leaders in the datacenter space as well as leading suppliers of power management silicon to enable these savings.

06 Smart sensors, the human-machine interface, and new horizons in power management

GF's differentiated technology solutions are being used to address climate, sustainability and societal needs in many other applications as well. Smart sensors are one example. A smart sensor is a device that takes information from its physical environment and uses its embedded logic and wireless capabilities to monitor various scenarios and systems. GF technologies are used to build many types of smart sensors for automotive applications, such as remote sensing (radar or lidar, Light Detection and Ranging), image sensing and motion detection around a vehicle. By helping drivers avoid collisions, these systems can save human lives, reduce traffic congestion and extend a vehicle's useful life.

Another is the human-machine interface (HMI), which is key to how effectively people will engage with an electronic device or system. GF's differentiated technologies are used to build many types of HMI systems for a range of different applications. For example, GF technology is used to integrate image sensing with logic to enable image classification, an AI-based image-analysis technique that can give an electronic system greater context awareness. In a factory setting, this can increase employee efficiency and safety while reducing energy use and waste.

GF also offers augmented/mixed/virtual reality (AR/MR/VR) solutions for novel HMI applications that can lead to new human-machine engagement paradigms. One possibility is to use these capabilities to reduce the need for business travel and its associated emissions by enabling increasingly realistic virtual meetings, with the goal of achieving true "holographic telepresence." To help make this and other applications possible, GF has formed a strategic partnership with Compound Photonics, a leader in microdisplay solutions for AR/MR systems. The goal is to develop a real-time holographic consumer AR experience, based on smaller, lighter AR glasses that last longer on a single charge. These products are expected to unlock exciting new capabilities in warehouse management, factory automation, healthcare and other areas.

GF is committed to maintaining its lead in power management solutions and is investing in gallium nitride (GaN) technology research and development as one way to do that. GaN devices can operate at higher voltages more efficiently and reliably than silicon, and one major area of growth for GaN technology is in systems called inverters. Inverters are used to convert DC power from solar farms to AC power for use in homes and businesses, to control electric motors in EVs, and to make many other applications more efficient.

Meeting the needs of humanity

GF's differentiated technology solutions offer compelling value to customers and to society at large. While the functional attributes of our differentiated solutions differ, what they all have in common is their ability to help customers address their most pressing challenges in ways that minimize climate impacts, use as few resources as possible, and help to create products and systems that meet human needs.

07 Human capital – diversity, equity & inclusion and talent development

Diversity, equity & inclusion

At GF, our people embody and exemplify our company's vision and mission.

GF knows the best ideas come from a diverse team being inclusive, and that our success rests on empowering employees to bring their whole person—approximately 15,000 employees with unique talents and distinctive qualities—to our company. Building a culture of inclusion drives better business outcomes and retains talent. As a global company, GF recognizes and values the wide variety of cultural values, traditions, experiences, education and perspectives of our team and communities. GF's culture of inclusion leads to higher levels of belonging, engagement, retention, and ultimately higher-performing teams. Our values of *Create* and *Deliver* speak to "what we do" as a company while *Partner* and *Embrace* speak to "how we work together" to enable a culture that encourages each individual to do their best work and be the best version of themselves.

We are committed to leveraging, embracing and expanding upon the diversity of our team as a competitive advantage in our global markets. We achieve greater things by effectively leveraging the power of our diversity. GF is proud to employ a highly diverse, multicultural workforce representing more than 92 nationalities across 13 countries. We harness the unique backgrounds and experiences of our employees and unite together to develop, design and manufacture technology solutions.

GF provides a safe and respectful work environment that nurtures personal fulfillment at work. We have a zero-tolerance policy against harassment, including sexual harassment, and discrimination based on age, ancestry, color, marital status, medical condition, mental or physical disability, national origin, race, religion, political and/or third-party affiliation, sex, sexual orientation, gender identity or veteran status. We also respect the rights of employees to associate freely.

By embracing diversity, equity and inclusion as a company and as individuals, we collectively share ownership in how DE&I are embedded in all we do. The core foundational elements of GF's strategy include:

- Increasing representation of women and under-represented minorities across the company.
- Advancing equity in systems and processes for professional development, rewards, hiring and advancement.
- Building inclusive leadership and creating a culture of inclusion to enable better business outcomes.

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Our DE&I commitment starts at the top. Our executives appoint committees and business leaders who act as DE&I Champions, working to set organizational goals to advance DE&I as a business-led initiative. GF focuses on increasing representation through measuring all aspects of the employee lifecycle including attraction, recognition, development, and advancement of diverse talent, including women globally, and underrepresented minorities in the U.S. GF has made and continues to make progress in our executive representation for women and under-represented minorities through expanded executive accountability, creation of long- and short-term goals, implementation of diverse slates, and early identification and advancement of top talent. As part of the approach, we have robust analytics and clear talent acquisition strategies including outreach to universities in each region and partners like Fairygodboss, Jobsforher, the National Society of Black Engineers, the Society of Hispanic Engineers, and the Society of Women Engineers, among others. GF has introduced Global Journey, a new re-entry program for people who have taken a career break and are ready to return to work. This marks the next milestone of inclusivity at GF as a commitment to equitable career development and advancement opportunities. In addition, retention is monitored closely to understand the talent losses and reasons why individuals depart from the company. Retention strategies are developed to understand and address specific areas of concern.

After hire, our focus turns to developing diverse talent to prepare individuals for future roles within the company. GF provides differentiated leadership development programs regionally which includes on-the-job training, sponsorship and other professional development to further increase skill development, visibility and mentorship. A group of outstanding GF leaders participated in the McKinsey Black Leadership Academy which specifically acknowledges the unique skills of Black leaders and the challenges they face. Additionally, GF will participate in future McKinsey Asian and Hispanic programs. GF women enjoy growing their careers here with focused developmental opportunities. GF women participate in executive education with Smith College. Similarly, GF has entered into a partnership with the Jackie Robinson Foundation (JRF). This partnership focuses on advancing higher education opportunities for underrepresented minorities by providing multi-year scholarship awards to highly motivated college students with an interest in STEM—science, technology, engineering and math.

GF is speaking out on societal issues that affect racial justice and equity. We continue to sponsor a Social Justice & Equity campaign, donating money to nonprofits which fight systemic racism and help advance the cause of racial justice, equality, and an inclusive society. In addition, our CEO, senior leaders and Employee Resource Group (ERG) sponsors meet with employees across the globe to address and discuss the impact of racism in the world and to promote dialogue within our team regarding

the external and internal impacts of these issues. We also facilitate listening circles and roundtables to inform our strategy going forward. We are passionate about our future and the company we are becoming, including taking action to embrace a more socially conscious culture.

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Increasing inclusive leadership and building a culture of inclusion is a key objective of our DE&I strategy. GF's cornerstone executive education program, LEADING@GF, includes custom Inclusive Leader training on unconscious bias, cultural competencies, inclusion, allyship, social tolerance and equity. All managers are required to take unconscious bias training and a series of learning modules have been developed for managers to understand where biases show up in promotions, performance management, hiring and everyday interactions. This training ensures all leaders know how to foster an equitable and inclusive culture and lead with humility. It reinforces that our managers are the face of DE&I within their organizations and that inclusion at GF means everyone's contributions are welcome, all perspectives are heard and valued and every person has a sense of belonging.

Employee Resource Groups (ERGs) are another important element for creating a culture of inclusion and to help support the needs of under-represented populations. ERGs are voluntary, employee-led groups that foster a diverse, inclusive workplace aligned with GF's organizational mission, values, goals, business practices and objectives. At GF, the benefits of ERGs include the development of future leaders, increased employee engagement and expanded marketplace reach:

GLOBALWOMEN (GW), GF's largest employee resource group is an alliance of 1500+ women and men working in partnership to drive initiatives that support the professional development of women at GF. Each of the company's locations has a local chapter, offering events such as networking and mentoring, executive and guest panel discussions, professional development opportunities, external conference participation, and STEM community education programs for women.

Black Resource Affinity Group (BRAG), whose mission is to foster an environment that embraces diverse experiences of Black employees, provides a safe place to express individualism while continuing to build an inclusive culture within GF that promotes recruitment, retention and professional advancement of Black employees.

GlobalFamilies provides a community for employees and their families and shares helpful resources to promote work-life balance. It focuses on growing the GF community, connecting families through outreach, providing helpful resources such as expecting parents bootcamp, and hosting special events for GF families to come together.

United States Veteran's Resource Group (VRG) builds our veteran talent pool, fosters a professional network and supports veterans throughout the community. Their motto is SERVE: Support, Empower and Recognize Veteran Expertise.

Early Career and Tenure Resource Group cultivates a community that welcomes employees within the first years of their career by focusing on camaraderie, career growth and community.

Hispanic/Latinx Resource Group, Unidos, empowers and encourages Hispanic/Latinx employees through collaboration

and sharing across GF, serves as a resource for professional development and networking, fosters a community of support, respect and advancement and builds Hispanic/Latinx representation at GF.

LGBTQ+ Resource Group, Pride@GF, is dedicated to providing an inclusive environment for members of the LGBTQ+ community and their allies, empowering employees to bring their full selves to work, and informing and guiding GF to create a culture of inclusion. It offers a safe space where members can voice concerns and take actions to foster a more supportive environment for LGBTQ+ employees. Pride@GF aims to educate, raise awareness and share information about issues that affect members of the LGBTQ+ community at GF, while providing opportunity for mentoring, networking and cultural appreciation.

AAPI Resource Group, ASIA (Asian Society for Inclusion and Awareness) together with their allies, is dedicated to creating an inclusive and socially just environment for Asian American and Pacific Islanders by supporting and promoting interests of the community through networking, mentoring, awareness and action to affect meaningful change in our community.

Employee engagement and feedback

Our biannual engagement survey process takes the pulse of employee sentiment with an 80 percent participation on average. Each survey design focuses on engagement, employee satisfaction, belonging and manager effectiveness. Other emerging themes are covered to ensure employee feedback is understood as we continuously develop actions to create and sustain the work environment our people seek. The pulse survey provides quantitative and qualitative data on how we are building a culture of inclusion and engaging with our employees. Company results and actions are shared with all employees at CEO quarterly Globalcast and townhall meetings. All managers are required to build action plans to address specific areas of improvements.

Workforce composition

GF is committed to expanding the diversity of our team, which leads to greater success in our global markets. The composition of our global workforce by region, gender, employment type (regular / temporary) and nature of contract (full time / part time contracts) is presented in Table 2, while Table 3 provides an overview of the composition of our global workforce by employee category and gender. Table 4 and Table 5 provide additional information about our U.S. workforce and leadership composition.

Table 2. GF's workforce composition by region, gender, employment type and contract (as of December 31, 2021)

Region	All employees		All employees	Regular	Temporary**	Full time	Part time
U.S.*	43.1%	Male	77.7%	98.9%	1.1%	98.9%	1.1%
		Female	21.5%	98.5%	1.5%	97.8%	2.2%
		All	99.2%	98.1%	1.2%	97.9%	2.1%
Asia Pac	33.8%	Male	65.5%	98.4%	1.6%	100.0%	0.0%
		Female	34.5%	98.5%	1.5%	99.9%	0.1%
		All	100.0%	98.4%	1.6%	100.0%	0.0%
EMEA	23.1%	Male	82.5%	95.1%	4.9%	74.6%	25.4%
		Female	17.5%	92.8%	7.2%	67.8%	32.2%
		All	100.0%	94.6%	5.3%	73.4%	26.6%
All GF	100%	Male	74.7%	97.8%	2.2%	93.0%	7.0%
		Female	25.0%	94.6%	2.4%	94.0%	6.0%
		All	99.6%	97.4%	2.3%	92.9%	7.1%

* 0.8 percent of U.S. employees (equals 0.35 percent of total) have not self-identified or not disclosed their gender

** Temporary employee category includes contingent workers (equals 0.2 percent of total) as well as other employees, such as apprentices, students, and interns (equals 1.9 percent of total).

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Table 3. GF's workforce composition by gender (as of December 31, 2021)[+]

	2021 Global workforce		Change from 2020
Employee category	Male	Female	Female
All GF employees[++]	75.2%	24.4%	+0.4%
Entry level[+++]	71.6%	28.4%	–2.1%
Engineering roles	77.5%	22.5%	+0.6%
Non-technical roles	74.4%	25.6%	+0.5%
All managers[++++]	79.3%	20.7%	+0.7%
Directors and above	81.8%	18.2%	+0.4%
Vice Presidents and above	85.7%	14.3%	0.0%
Senior Vice Presidents and above	92.3%	7.7%	+1.0%
Board of Directors[+++++]	81.8%	18.2%	+9.1%

+ Numbers in Table 3 include contingent workers; does not include other employees, such as apprentices, students, and interns.
++ 0.35 percent of employees have not self-identified or not disclosed their gender.
+++ Entry level employees are exempt (non-hourly) professionals.
++++ All Manager category includes Manager career ladder job level 9 and below.
+++++ Board of Directors composition as of June 30, 2022.

Table 4. GF U.S. workforce composition by ethnicity (as of December 31, 2021)°

US workforce by race category	Overall totals	Change from 2020
White	72.5%	+0.7%
Asian	17.4%	–1.0%
Black / African American	3.3%	0.0%
Hispanic/ Latinx	3.5%	+0.3%
Not self-Identified	1.5%	–0.2%
Two or more races	1.4%	+0.2%
Native American / Alaska Native	0.3%	0.0%
Native Hawaiian or Pacific Islander	0.1%	0.0%

Table 5. GlobalFoundries U.S. minority representation in leadership (as of December 31, 2021)°

US workforce by race category	Minority	Change from 2020
Directors and above	27.7%	+3.5%
Vice Presidents and above	19.4%	+6.0%
Senior Vice Presidents and above	16.7%	+9.5%
Board of Directors[+++++]	9.1%	+9.1%

° Numbers in Table 4 and 5 include contingent workers; do not include other employees, such as apprentices, students, and interns.

Talent development strategy

People are at the heart of everything we do. We strive to build internal talent pipelines by providing our people with the right tools and support to proactively grow their careers within GF. We focus our efforts on talent enrichment platforms designed to create the next generation of innovators, promote a culture of curiosity and cultivate skills for powerful tomorrows. Our progressive, people-related development opportunities elevate, accelerate and transform our employees, their skills and their futures. Our talent philosophy provides enterprise-wide offerings designed not just to enhance skills at work but to focus on the whole person inside and outside of the workplace.

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Our talent strategy is powered by numerous professional developmental opportunities featuring progressive topics on leadership development, team engagement and collaboration, communication and cross-cultural intelligence and technical skill building and refinement. Our talent management portfolio consists of talent reviews, high-potential development and progressive succession planning. Our offerings are focused on unlocking employee potential, creating future leaders and innovating solutions that are changing the world. Between our enterprise-wide development and talent management programs, our extensive new hire orientation programs, required annual compliance training, and on-the-job training, one hundred percent of our world-wide employees receive training every year. The typical path of training includes new hire orientation to start GF careers off right. This training is followed by assigned compliance content to teach employees the fundamentals of what is expected at GF.

On-the-Job training happens next where employees are introduced to their roles and taught how to perform their work by a team of peers who show them the expected activities and tasks. Employees then complete goal forms with required development goals to plan out their preferred development each year. Whether completing required training or pursuing additional optional development, learning and skill/knowledge enhancement is an essential part of being a GF employee.

Leadership, employee, and technical development programs

GF's talent development programs are offered in every location around the world and create an optimal infrastructure to enable internal skill building and career mobility to sustain our internal talent pipeline. We focus on leadership development, professional skill refinement and technical innovation. We have a multi-tiered strategy for leadership development, starting with new manager training programs and progressing through executive leadership development programs. We also execute programs designed for top talent identification and development through enhanced end-to-end talent processes and tools. Our professional skills development offerings provide employees a way to build professional skills and grow technical expertise. All these courses are powered by our global learning management system that allows us to track global training data including professional development courses and technical on-the-job training courses.

Our deep technical expertise and technical skill building / refinement offerings include extensive on-the-job training and custom learning plans by career ladder and job

level. These programs provide deep subject matter expertise for excellence in role and attainment of deep levels of technical mastery. The top technical training programs offered to technicians globally include Maintenance Safety and Control of Hazardous Energy, Factory Systems Training, which provide specific software system training, and Module and Semiconductor Manufacturing Process Overviews. Key curriculum for engineers includes Statistical Process Control (SPC), Semiconductor Process and Specialized Technology Node Training, and the Process Control Review Board and Material Review Board overviews.

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In 2021, global instructor-led and web-based training totaled 367,499 hours, with an average of more than 21 training hours per employee. In addition, employees, particularly fab-based technicians, operators and engineers, receive significant amounts of on-the-job-training (OJT). It is conservatively estimated that 2021 OJT total training hours exceeded a total of 1 million hours, increasing average training hours to over 90 hours per employee. Beyond virtual and classroom training, we also support our employees' development through mentoring, coaching, professional certifications and partnerships with outside organizations. Whether instructor led, web-based, on-the-job or professional development, training hours are equitably shared across genders and career ladders yielding a consistent investment across all employee types.

Table 6. Average training hours for active GF employees: Instructor led & web-based training

GF 2021 Global training hours statistics					
	Training hours by gender			Training hours by career ladder	
	Female	Male	Non-binary & not disclosed	Manager	Non-manager
Web	12.8	12.6	16.2	12.7	12.7
Class	8.3	8.7	6.5	10.7	8.4
Totals	21.1	21.4	22.7	23.4	21.1

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Some of our featured programs and learning resources include:

- GF offers custom curated DE&I content to enhance belonging, inclusion, connectivity and cross-cultural awareness while providing mandatory global manager education on unconscious bias. Completion rates for assigned manager training were above 90 percent within six months of assignment with the intent to provide continuing education for all GF leaders worldwide on these emerging and critically important topics.
- Global compliance modules are assigned to all worldwide employees and require annual recertification to ensure all GF employees are aware of universal expectations that govern our work and behaviors. For additional information on GF Code training, please see chapter 04 Governance.
- Leadership Foundations was a new program launched in 2021 as a leadership competency development series designed to help front-line and mid-line managers grow and refine their skills, network with other leaders and deliver stronger results. Each quarter features a new topic to explore to improve manager effectiveness and enhance manager/employee relationships. With the pilot complete and upgrades in place, this program is positioned for great impact in 2022.
- GF partners with several universities and external affiliates on talent management strategies which includes continuing education for employees, leadership training, executive assessments and coaching, and specific programming that focuses on women globally and underrepresented minorities in the US.
- Engagement and Collaboration offerings provide development options designed to improve emotional intelligence, communicating with clarity and impact, and proliferation of respect in the workplace.
- The GF Global Mentoring Program utilizes an online matching software to connect employees with ideal counterparts and supports the cultivation of meaningful mentoring relationships. We have built a mentorship campaign in our succession and talent planning which ensures mentees are connected to mentors and sponsors. Worldwide, several hundred employees participate in our Global mentoring program with development conversations focused on technical innovation, leadership development, global teamwork and numerous other topics.
- GF employees have access to thousands of online, self-paced courses in skill development topics ranging from communication to computer programming. New courses are added weekly, and employees are regularly challenged to expand their knowledge through a variety of recommended content and custom curated playlists. Over half of our workforce actively engages in online learning with nearly 14,000 hours of viewed content and more than 275,000 videos viewed annually.

  Most popular online course topics:

  · Business Software and Tools (2,385 hours);

  · Professional Development (2,091 hours);

  · Data Science (1,836 hours);

  · Software Development (1,836 hours);

  · Leadership and Management (1,077 hours).

Workforce development: Growing future GF talent

GF has a targeted approach to working with educational institutions and local and regional government organizations to grow and strengthen the STEM workforce in our regions. We engage with all stages of the education pipeline, from primary/elementary school through secondary/high school, technical education schools, colleges and universities.

07 We have created numerous pathways into a career at GF, with many opportunities for further growth and advancement once here.

- Apprenticeship programs are a key pathway at our Malta, NY, Burlington, VT and Dresden sites. With a high school diploma or equivalent, students can enter GF enter as a full-time paid Apprentice, receive on-the job-training, and attend college courses at no cost to them, towards a further degree.
- Technician Internships programs at our fab sites in the US, Germany and Singapore give hands-on paid experience to students enrolled in a college program.
- College/University Internship programs (US, Germany, Singapore) enable university students to gain valuable paid experience in the semiconductor industry, while giving GF early access to hiring this talent.
- Through participation in industry advisory boards and curriculum advisement, GF engages with local technical education schools, community colleges, and universities to develop and align curriculum that meets the needs of the semiconductor industry.
- In 2021, GF Fab 8 donated $500,000 to Hudson Valley Community College in NY to expand their north campus building to further expand STEM degrees. The expansion will also support GF's Apprenticeship program, where employees will be trained in related instruction.
- To build excitement and inspiration for STEM careers, we engage in education outreach in our local regions through science and engineering fairs, STEM expos, career exploration events and more, and by leveraging our external virtual resource STEM@GF.

Performance management at GF

Our performance management process is designed to help GF employees and managers align and engage in goal setting and professional development planning to ultimately deliver results for our company, and for our employees' future. All GF employees participate in an annual performance management process to ensure clear goals and expectations for business results. Our performance management process enables managers and employees to partner to establish goals and development plans in January of every calendar year or within 90 days of hire. Managers also use their one-on-one engagements with employees to monitor and review contributions and engage in feedback throughout the year.

Feedback is required to be exchanged in the middle of the year and at the end of the year. Formal written documentation is maintained through goals forms housed in our human capital management system. The key components of this process include goal setting, development planning, feedback discussions, mid-year feedback exchange and an annual assessment. Performance management also includes clarifying role

expectations and deliverables; providing constructive feedback on performance; highlighting employee strengths, identifying areas for improvement, and creating development plans to enable personal and professional growth. It is through these important discussions that the manager/employee relationship grows, skills are developed and refined, and high performance and results delivery is unlocked.

07 Compensation & benefits

Our compensation philosophy is fundamental to the goals of our talent strategy in attracting, retaining and motivating a talented and diverse workforce that results in differentiated business performance. We provide robust compensation and benefit programs, which consist of base salary and variable pay programs, such as annual bonus (based on corporate performance), quarterly performance-based manufacturing bonuses and sales incentives. For eligible employees, we also offer stock-based compensation consisting of Restricted Stock Units and Performance Share Units. We conduct regular and extensive market analysis to ensure that our compensation levels and programs are market competitive.

In addition to market competitive pay, we continuously evaluate our various HR programs to ensure internal equity and fairness—because treating our employees fairly is the right thing to do. This includes regular review of our compensation practices throughout the employee life cycle, considering factors such as an employee's role and experience, the location of the job and their performance and we make adjustments, if appropriate.

For our global benefits programs, our goal is to achieve a balance between global standardization and local customization, while offering our employees protection and flexibility with their benefit offerings. We recognize that benefit environments vary by country, and therefore the type of benefit plans we offer reflect the prevailing local market practices and employee needs. GF is committed to offering high-quality benefit options that are affordable, competitive and sustainable for employees and their families across the globe. Benefits under this strategy include risk protection benefits, such as healthcare and life insurance; financial benefits, such as retirement savings plans and in some countries pension plans; flexible work programs , such as part time work, alternative work hours, alternative work arrangements, vacation and time off programs, world-class parental and other leave programs; career development programs, such as educational assistance, global mobility opportunities, and professional and career skills development, and other location-specific benefits.

GF has designed solutions to address the needs of the whole person to better support our diverse workforce and offer a more inclusive culture that allows employees to better integrate their life into work at GF and improve well-being. Our best-in-class paid maternity leave program provides our colleagues with a minimum of 20 weeks across all locations. GF Flex solutions address the needs of today's workforce by offering more flexible work solutions to support employees' work-life integration and well-being. GF Flex offers remote work options, part-time, flexible hours and options for holiday use. We are creating a culture that gives employees the flexibility to integrate their career and home lives. GF Flex is an important offering to retain critical talent and enhance work life balance. GF is committed to developing and enhancing programs that focus on the whole

person, helping them better manage their work and family. At GF we are most successful when our employees can contribute their value in a way that works for the business, themselves and their teams.

In 2022, we implemented a new Employee Stock Purchase Program (ESPP) for all employees in all countries, and over 80 percent of our eligible employees currently participate in this ownership program. Also in 2022, our ESPP- was recognized by the Global Equity Organization with the "Most Innovative Plan Design" award. This program matches 20 percent of employee contributions and also provides 50 Restricted Shares for each new participant as "seed" shares. In addition, in 2022 we extended participation in our new annual Long Term Incentive (LTI) program to approximately 25 percent of our employee population. Broad-based employee ownership allows our employees to participate in the value they help create, and it is a strong incentive to increase productivity, innovation, retention, and engagement.

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To support our employees during the global COVID-19 pandemic crisis, GF introduced new and enhanced benefits for all employees, to help team members remain healthy, care for family members and face other challenges arising from the pandemic. These include emergency paid leave for employees who are unable to work on-site or remotely, and quarantine paid leave for employees who are directed to quarantine by their physician or health authority. We also added additional mental health and family assistance resources to our portfolio to help employees adjust to ever changing demands on work and on life.

08 Community support and engagement

GF is as committed as ever to our mission, vision and values. This includes our commitment to community involvement and support for the well-established programs and teams dedicated to enriching the lives of people around the globe. As ONEGF, we not only deliver technology for humanity, but also pride ourselves in giving to and supporting the communities we call home.

It is easy to live our mission, vision and values when it is convenient to do so, but it is during the most difficult times that GF pushes itself to rise to the challenge. Our response to the needs of those in our communities validates who we are as a company. Embracing our community is integral to our company identity, connecting our teams to global initiatives that are bigger than GF.

The following is a look back on our companywide efforts to support our communities across the globe in 2021, a tribute to the original employee-led efforts that have evolved into what we know today as GlobalGives. Since 2016, our GlobalGives program has been a multifaceted worldwide effort, encompassing both employee and company-driven initiatives in the areas of STEM (Science, Technology, Engineering and Mathematics), philanthropy and crisis relief.

STEM (Science, Technology, Engineering and Mathematics) and digital skills

From its inception, GlobalGives has held a special place for STEM education, funding localized programs in every GF location to help foster a love of Science, Technology, Engineering and Mathematics in underserved communities across the globe. Through our GlobalGives STEM initiative, we:

- Provide experiential learning opportunities for students and teachers;
- Facilitate curriculum development and mentoring for early college high school programs;
- Drive digital inclusion, enhancing digital and programming skills to encourage students, especially girls, to pursue education and career paths in STEM;
- Offer internships, job shadowing, and employment opportunities in advanced manufacturing and other STEM fields.

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Some of the specific programs we have created or supported to foster STEM include:

- **STEM@GF** – a multimedia resource that inspires students to explore technical fields through videos, hands-on activity lessons, and information on career pathways. GF widely shares STEM@GF with educational organizations to inspire today's students to learn more about the field of semiconductors. Schools, teachers, parents and students can explore hands-on activities and videos to learn about different career pathways into GF. STEM@GF is often augmented by additional site-specific programs. For example in 2021, GF Fab 8 in Malta, NY donated Google Chromebooks to schools in the New York Capital Region to enable students to participate in online and hybrid classroom learning as the pandemic continued to plague school districts.
- **GLOBALGirls** – this annual summer STEM camp for middle school girls was launched in 2017 to help address the gender gap in manufacturing and inspire the next generation of female science and technology leaders (Malta, NY; East Fishkill, NY; Burlington, VT).
- **FIRST® Robotics** – GF's annual sponsorship of the FIRST® (For Inspiration and Recognition of Science and Technology) Robotics competition began in 2015. Supported in multiple GF locations, the program is designed to help students develop programming, mechanical and electrical skills, while learning the value of teamwork and cooperation (Malta, NY; East Fishkill, NY; Burlington, VT).
- "**Jugend Forscht**" (Youth in Science) in Saxony – in combination with the junior program "Schüler Experimentieren Saxony" (Students Experiment Saxony), Jugend Forscht is a regional competition, sponsored by GF Dresden since 2009. It rolls up to the federal "Jugend forscht" ("Young Scientists") competition. The renowned Germany-wide competition encourages young people with scientific and creative talents to put their ideas into practice (Dresden, Germany).
- **New York State Pathways in Technology** (P-TECH) - GF is a strong business partner in this Early College High School program and provides mentorship and engagement with students in the areas of advanced manufacturing, cybersecurity, entrepreneurship and clean energy, as well as leading digital citizenship and digital footprint workshops with students (Malta, NY; East Fishkill NY).
- **Donations** – GF's support of STEM often takes the form of monetary sponsorships or donations in-kind, providing computers, monitors and other equipment to local schools and institutions to better address the needs of underprivileged students. Examples of 2021 programs include:
  - Equipment donations to establish a science lab (Bangalore, India);
  - Donations to Teach for Bulgaria Foundation, which aims to provide access to quality education to every child (Sofia, Bulgaria);
  - Equipment donations that enabled the launch of a new Robotics Club for English as a Second Language (ESL) students (Santa Clara, CA).

GlobalGives philanthropy

When it comes to philanthropy, employees in every major GF site make a difference by generously volunteering their time and donating goods and money to support a wide range of causes, helping to improve the quality of life in the communities we call home. Since 2016, our charitable giving program, GlobalGives, has facilitated numerous localized campaigns, including food drives, school supplies and holiday gifts for children, annual Earth Day volunteerism and disaster relief, among others.

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Carrying forward the company matching program launched the preceding year, in 2021, GF offered every employee 100 percent matching for up to $1,000 USD (or local currency equivalent). Through company matching, GF essentially doubles employee donations to causes they care about most. Since 2020, GF has also leveraged GlobalGives Rewards to welcome new hires, gifting every new employee the equivalent of $20 USD to donate to any charity(ies) of their choice. In Q4 2021, GF leveraged GlobalGives Rewards to enhance our second annual Giving Week program, extending a gift of $20 USD (or equivalent) to every employee to donate to their preferred nonprofit(s). Through this creative and generous program, in just one week GF and its employees gifted approximately $117,000 USD to our communities around the world.

GlobalGives crisis relief

Thanks to GlobalGives, GF can quickly initiate giving campaigns to respond to disasters anywhere in the world. In 2021, GF launched numerous disaster relief campaigns, bringing aid to victims of flooding in western Europe, earthquakes in Haiti, and tornadoes in the U.S. GF also helped families in India through the horrific second wave of COVID-19, launching a special 200 percent matching campaign that resulted in almost $200,000 USD in employee donations and company donations/matching, far exceeding the $100,000 USD goal.

GlobalGives diversity, equity and inclusion

During 2021, GF also drove greater alignment between GlobalGives and our Diversity, Equity & Inclusion initiatives, further supporting our core company value *Embrace* by helping families in crisis in Myanmar and creating awareness campaigns in support of our Employee Resource Groups (ERGs), including GlobalWomen, BRAG, ASIA, Pride@GF and VRG. Building upon the social justice campaigns initiated in 2020 in support of Black and Brown Americans, in 2021, GF directed its annual $100,000 USD social justice funding to take a stand against Asian-American & Pacific Islander (AAPI) hate crimes in the U.S.

GlobalGives participation

As employees rose to the challenges of 2021, GlobalGives membership saw a tremendous increase of 77 percent year-over-year to over 4,300 employees globally. Collectively, GF employees supported 1,142 different charities in 2021, generously donating almost $400,000 USD through the GlobalGives platform to help others in their communities. In addition to these personal donations, employees gifted more than $50,000 USD in GivingWeek and New Hire Rewards to organizations of their choosing. Supporting the causes employees care about most, GF donated ~$430,000 USD in company matching, doubling every eligible employee donation. GF also donated $165,000 USD in support of the disaster relief and social justice campaigns mentioned earlier, and gifted ~$50,000 USD in support of site STEM programs. Individual GF sites leveraged the GlobalGives platform to make more than $100,000 USD in donations to support their local giving and holiday programs. All told, GF corporate, GF sites and our employees leveraged GlobalGives to give nearly $1.2M USD back to our communities across the globe in 2021.

08

As we enter 2022, GF has already activated GlobalGives to address new challenges, most notably the humanitarian crisis resulting from the invasion of Ukraine. Supporting the people of Ukraine and Ukrainian refugees in neighboring countries with a special 200 percent matching campaign, GF and its employees have already far exceeded the $25,000 USD campaign target, delivering well over $350,000 USD in donations to humanitarian organizations as of April 2022.

Visit the GlobalGives community portal to learn more about ongoing GF giving opportunities and campaigns.

09 Sustainable manufacturing

Our approach

Our **Journey to Zero** is the leading theme of GF's approach to environmental sustainability. It represents GF's commitment to grow responsibly while continuously minimizing our impacts on the environment. On our Journey to Zero, GF follows a Beyond Compliance strategy to ensure that we meet or exceed environmental regulatory compliance obligations, customer requirements and voluntary initiatives to which we subscribe. We collaborate with our customers, suppliers, partners, academic and governmental bodies, and industry consortia to drive continuous environmental improvement in semiconductor manufacturing beyond the limits of our own company. We engage internally and seek employee participation because we know that some of the greatest ideas for environmental sustainability are generated by our global workforce.

GF's Global EHS Policy and Standards are the foundation of our multisite ISO 14001 certified Environmental Management System. They are performance standards that incorporate what GF believes are best practices for global adoption across GF operations. We strive to continuously improve best practice by aligning with policy and regulatory developments, and the evolving voluntary initiatives and industry codes that GF subscribes to. Additionally, we apply knowledge drawn from collaboration with our customers, industry associations and academic partners. Our Global EHS Standards define how we operate our existing fabrication plants and other sites, as well as how we plan and build new sites. They cover a wide range of environmental topics, including Air Quality, Climate Protection, Chemical Management, Industrial Wastewater, Product Compliance, Resource Conservation and Pollution Prevention, Stormwater and Groundwater Protection, and Waste Management. They are reviewed and updated periodically as best practices evolve. The GF Global EHS Standards are complimented by assurance programs that govern regulatory compliance auditing and compliance assessments focused on the "beyond compliance" elements of the Standards.

Outside of our own operations, we extend environmental provisions through our standard supplier instruments (see 10 Responsible sourcing). GF requires that suppliers conform with the environmental provisions of the RBA Code and engages with its major suppliers in our annual RBA supplier review to promote environmental sustainability throughout our supply chain, including resource (water and energy) use and generation of waste and greenhouse gas emissions.

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Even further upstream of our direct operations, GF funds research in collaboration with university and industry partners to identify innovations to further reduce the semiconductor industry's environmental footprint. These partnerships address some of our most material environmental topics, such as to explore novel process chemistry solutions, explore innovative solutions for GHG emissions reduction and abatement, as well as to identify new technologies for specific wastewater treatment processes.

Our achievements

Since our foundation more than a decade ago, GF has focused on implementing pollution prevention and resource conservation programs that save water, energy, chemicals and corresponding emissions. We apply the pollution prevention hierarchy of source reduction, reuse, recycle, treat and dispose to enable cost savings while benefiting the environment at the same time.

Over the past three years (2019–2021), GF realized the following annualized savings:

86.2 GWh electricity

1.486 million m³ water

56,300 metric tons carbon equivalents of GHG emissions

18,100 tons of chemical use and corresponding waste generation

Our savings enabled GF to meet or exceed our 2019–2021 Resource Conservation Goals, which included both absolute and normalized targets with 2018 as the baseline year. We have measured our performance against our absolute targets as the sum of annualized savings achieved through projects completed during the years 2019–2021. We utilize our normalized performance rate (normalized to our Manufacturing Index[3]) as our key metric to measure progress in environmental efficiency against our normalized targets. Table 7 shows our achievements at year-end 2021 relative to the 2019–2021 resource conservation goals.

[3] We normalize data from operations using an industry standard Manufacturing Index (MI). The MI is derived from the number of wafers manufactured, the number of masking steps in our fabrication processes (reflecting process complexity), and the total area of wafers produced. The normalized target rates are reductions as compared to the 2018 baseline normalized rates. Following the divestiture of our former Fab 3E at the end of 2019, the 2018 baseline normalized rate has been recalculated by removing the Fab 3E contribution to correctly reflect the change in operational boundary.

Table 7. Performance status of GF's 2019-2021 resource conservation goals at year-end 2021

Goal Topic	Specific Goal	Outcome
Electricity	Achieve savings in annual electricity use of 86 gigawatt hours (GWh);	Achieved annual savings of 86.2 GWh meeting goal value
	Achieve 15 percent reduction of normalized electricity consumption	Achieved normalized reduction of 23 percent exceeding goal value
Water	Achieve savings in annual water use of 340,000 cubic meters (m^3);	Achieved annual savings of 1,486,000 m^3 exceeding goal value
	Achieve 10 percent reduction of normalized water consumption;	Achieved normalized reduction of 22 percent exceeding goal value
Greenhouse gas emissions	Achieve savings in annual GHG emissions of 11,900 metric tons carbon equivalent (MTCE);	Achieved annual savings of 56,300 MTCE exceeding goal value
	Achieve 18 percent reduction of normalized greenhouse gas emissions;	Achieved normalized reduction of 19 percent meeting goal value
Chemical use and waste recycling	Achieve savings in annual chemical use and waste generation of a combined 7,100 tons;	Achieved annual savings of 18,100 tons, exceeding goal value
	Recycle and reuse at least 60 percent of hazardous waste generated across the company for our 2021 operations;	Achieved a recycle and reuse rate of 51 percent of hazardous waste generated across the company in 2021 (85 percent of goal value)
	Recycle and reuse at least 65percent of non-hazardous waste generated across the company for our 2021 operations.	Achieved a recycle and reuse rate of 64 percent of non-hazardous waste in 2021 (98 percent of goal value)

Our goals for 2022 and beyond – GF Journey to Zero

Our resource conservation achievements to date have enabled GF to significantly increase environmental efficiency in manufacturing over the past five years. We recognize the critical global environmental challenges, specifically climate change, impacting the environment, human society, and the worldwide economy.

09 GF extended our Journey to Zero theme and developed a new generation of resource conservation goals to aggressively drive our environmental efficiency through the coming years:

- Greenhouse gas emissions:
  - GF Journey to Zero Carbon Goal: Reduce absolute GHG emissions (combined Scope 1 and Scope 2) by 25 percent from 2020 to 2030;
- Electricity:
  - Improve electricity use efficiency by achieving a normalized electricity use of 0.033 kWh /MI or less by 2025;
- Water:
  - Improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025;
- Waste
  - Achieve less than 0.9 grams /MI of normalized total waste generation in 2022;
  - Achieve 90 percent diversion of total waste from landfill in 2022.

We track our progress to our goals on a quarterly basis. Our quarterly data collection process is governed by an internal specification within GF's EHS Management System. Quarterly performance data are reported to our Stewardship Committee.

GHG emissions – climate risk mitigation

As an important step to align with climate science and minimize longer term exposure to climate change, in August 2021 we announced our **Journey to Zero Carbon** Initiative, building on GHG emission reduction strategies to conserve energy, implement additional emission controls and develop renewable and lower-carbon energy sources. We set a goal to reduce absolute Scope 1 and Scope 2 GHG emissions by 25 percent from 2020 to 2030—even as we significantly expand our global manufacturing capacity.

Our Journey to Zero Carbon Initiative supports the aims of the Paris Agreement, which calls for significant absolute reductions by 2030 on a path to global "Net Zero" GHG emissions by 2050. At the same time, and all within the scope of this goal, GF is investing in significant capacity expansions at our existing facilities in the U.S. and Germany as well as our newly announced 300mm fab in Singapore.

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Semiconductor manufacturing emits both direct (Scope 1) and indirect (Scope 2) GHG emissions. Scope 1 GHG emissions are those released from our facilities, comprising fluorinated GHGs (F-GHGs), N_2O and fluorinated heat transfer fluids (FHTF), as well as emissions from on-site combustion of fossil fuels such as natural gas, diesel, and fuel oils. F-GHGs include HFCs (hydrofluorocarbons) such as CH_2F_2 and CHF_3 and PFCs (perfluorinated compounds) such as CF_4, C_2F_6, C_3F_8, C_4F_8, as well as NF_3 and SF_6. Scope 2 GHG emissions are those that result from externally generated electricity used at GF sites.

GF monitors our energy consumption and greenhouse gas (GHG) emissions to understand our climate impacts. We manage our climate-related business risks by conserving energy and water by implementing emission controls and engaging with stakeholders, such as participating in initiatives to drive industry-wide reductions in GHG emissions. GF Fabs 1, 9 and 10 contributed to the success of the World Semiconductor Council's (WSC) industry-wide climate goal which achieved a 32 percent reduction in F-GHG emissions from 1995 to 2010. GF also adopted the WSC commitment to implement best practices for F-GHG reduction in all new semiconductor fabs. Fab 8 in Malta, NY, which started operations in 2012, and our new fab in construction in Singapore, were both designed in accordance with the WSC best practices.

GF has taken measures to better understand the long-term business risks and opportunities associated with climate change, in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In early 2022 we conducted a TCFD-based climate risk and opportunity assessment and evaluated key areas of potential risk using qualitative scenario analysis (please refer to the TCFD table in this report.) The potential impacts of climate change are complex, ranging from regulatory initiatives affecting energy sourcing and semiconductor process materials (including carbon taxes and related fees), severe weather events (such as storms, flooding and heat waves), chronic climate-related physical changes (such as prolonged droughts and chronic high temperatures) as well as supply chain impacts. For additional information on climate-related opportunities, please see chapter 06 Technology solutions for humanity. GF also plans to disclose our approach to climate governance, climate-related risks and opportunities, and their impact on business strategies, metrics and targets through CDP (Carbon Disclosure Project).

Figure 3 shows absolute and normalized direct (Scope 1) and indirect (Scope 2) GHG emissions from 2018 through 2021[4]. In 2021 Scope 1 was 68 percent of our combined Scope 1 and 2 GHG emissions and Scope 2 represented the remaining 32 percent.

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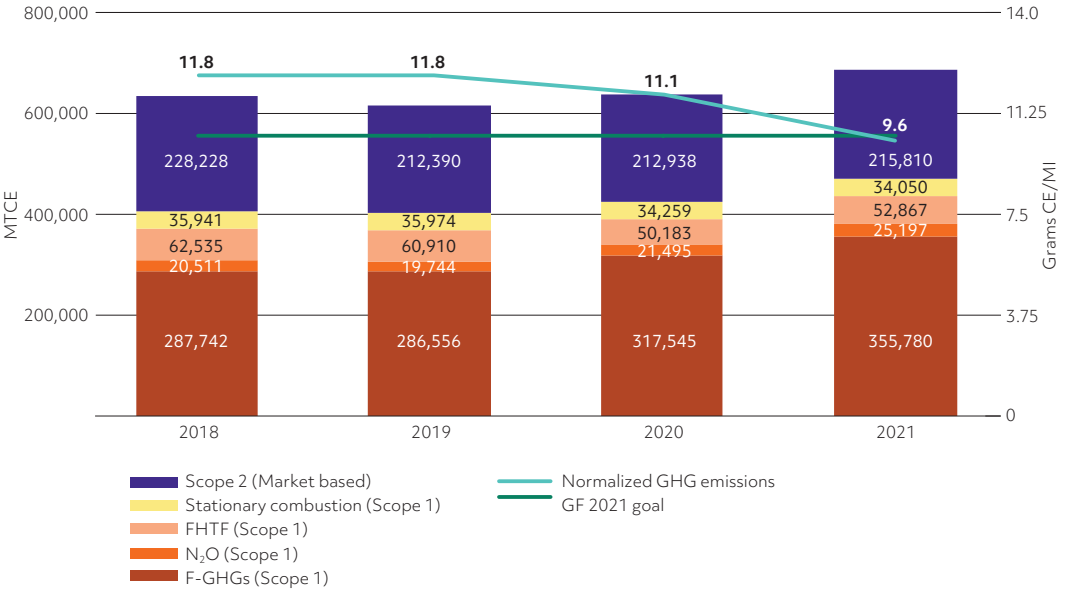
Combined absolute Scope 1 and Scope 2 emissions increased by seven percent as compared to the 2018 baseline, with a fourteen percent increase in Scope 1 emissions and a reduction of Scope 2 emissions of nearly six percent. Increasing manufacturing output drove the increase in absolute Scope 1 GHG emissions from 2019 to 2021. Normalized Scope 1 and Scope 2 combined emissions decreased 19 percent in 2021 compared to 2018 and more than 36 percent when compared to our initial company baseline. Our initial company baseline represents the first 12 months of production from GF's current manufacturing footprint (July 2015 – June 2016).

Figure 3. Absolute and normalized direct (Scope 1) and indirect (Scope 2) GHG emissions – through 2021



[4] GF quantifies GHG emissions using the following methods:

- "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)";
- For semiconductor process related F-GHGs emissions specifically GF uses Tier 2 methods of IPCC Guideline for GHG Inventories V3_Chapt6 Electronics Industries and U.S. EPA reporting methods under Subpart I of the GHG Mandatory Reporting Rule (MRR);
- GWPs used are from IPCC Fourth Assessment Report (AR4 - 100 year)
- GF is using the market-based method to quantify Scope 2 GHG emissions from the "GHG Protocol Scope 2 Guidance". The market-based method reflects emissions from the electricity that a company purchases, which in some cases may be different from the electricity that is generated locally and distributed via the local grid.

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The most relevant contribution to our Scope 1 emissions comes from F-GHG emissions. Absolute F-GHG emissions increased by nearly 24 percent in 2021 compared to 2018, while normalized 2021 F-GHG emissions decreased nearly seven percent over the same period. F-GHG emissions continue to be a key focus in our GHG reduction strategy, specifically in our legacy 200mm fabs in Singapore and Burlington, VT that have inherently lower F-GHG destruction efficiencies than our newer 300mm fabs. Our 300mm fabs in Dresden (Fab 1) and New York (Fabs 8 and 10) were designed to produce extremely low emissions of F-GHGs by using low-emission gases (specifically NF_3) in CVD chamber cleaning, coupled with near-universal use of point-of-use abatement equipment for F-GHG-using processes.

To enable the nearly 20 percent increase in GHG efficiency from 2018–2021, GF had executed projects that annually save more than 56,300 MTCE—exceeding our goal by almost five times the original amount of our targeted savings. In 2021, GF accelerated GHG reduction projects as we began to implement our Journey to Zero Carbon Initiative. Key 2021 projects to reduce Scope 1 emissions are noted below.

Additional projects that were implemented to save energy, saving corresponding amounts of Scope 2 emissions, are highlighted in the Energy subsection.

- The GF Singapore site completed two projects in 2021 to reduce GHG emissions:
  - A specific manufacturing process was transferred from a CVD tool set that uses C_2F_6, a PFC gas, for chamber cleaning to another CVD tool set that uses an NF_3 remote clean based with significantly lower emissions. This project achieved annual GHG emissions savings of more than 2,800 MTCE;
  - GF Singapore engineers successfully eliminated one of two CVD chamber cleaning steps for a specific deposition process that uses C_2F_6. Along with optimizing the remaining use of C_2F_6, these improvements reduced annual GHG emissions by 4,635 MTCE.
- In 2022, GF Singapore commenced a multi-year project to reduce GHG emissions by retrofitting a set of CVD tools. The retrofits enable use of an NF_3 remote clean for the CVD chamber clean process. This cleaning technology significantly reduces GHG emissions. On completion, projected annual savings are nearly 24,000 MTCE.
- Fab 9 completed projects optimizing the use of C_2F_6 and NF_3 gas in multiple manufacturing tools and installed three additional point-of-use (POU) abatement units. These POU installations are part of a multi-year project at Fab 9 to reduce GHG emissions. Over the entire project, a total of 38 abatement units are planned for installation. The annualized GHG emissions saved by the 2021 projects implemented at Fab 9 is equivalent to 809 MTCE.
- Fab 10 performed a project that avoided emissions of fluorinated heat transfer fluids through a robust, proactive point-of-use chiller leak detection and repair program. In 2021, the execution of the leak detection and repair program avoided over 7,800 MTCE of GHG emissions.
- In 2022, Fab 9 began a pilot project with Vermont Gas Systems, Inc. (VGS) and the University of Vermont to produce so-called "green hydrogen" on-site to reduce consumption of natural gas and

associated carbon emissions. The goal will be to extract hydrogen from water using renewable electricity from sources like wind and solar energy. GF Fab 9 plans to blend the extracted hydrogen into the fab's natural gas lines and thereby reduce the consumption of natural gas and associated combustion-related Scope 1 GHG emissions.

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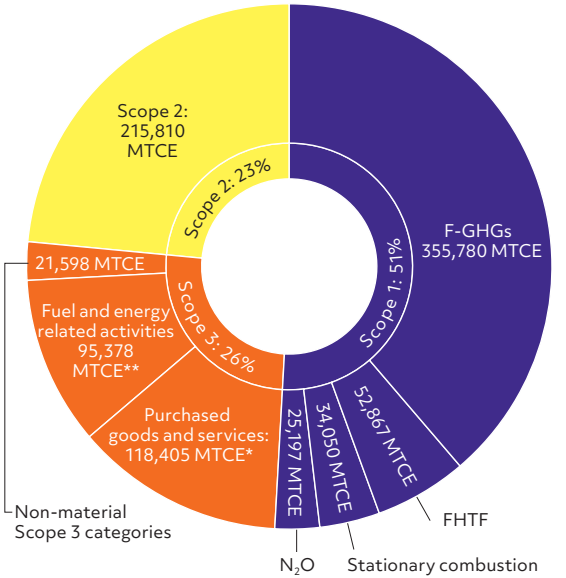
For the year 2021, GF has begun to quantify an extended GHG inventory that includes Scope 3 GHG emissions in addition to Scope 1 and Scope 2 emissions. Scope 3 comprises indirect emissions (not included in Scope 2) that occur in our value chain, upstream or downstream of GF's operational boundaries and control. Figure 4 shows GF's 2021 extended GHG inventory by subcategory. Our quantification identified two upstream emissions categories as the most significant contributors to our Scope 3 inventory. Scope 3 emissions in other categories represent comparably minor contributions to the Scope 3 total emissions, and therefore are not considered material to the total inventory:

- Upstream emissions of GF purchased goods and services (chemicals and gases, wafers, lithography masks, as well as outsourced assembly and test services) made up 50 percent of GF's estimated Scope 3 emissions in 2021.
- Upstream emissions of fuel and energy related activities contributed 41 percent of GF's estimated Scope 3 emissions in 2021. These emissions relate to extraction, production and transportation of fuels and energy purchased which are not already included in Scope 1 or 2 emissions.
- The third largest, but not material, contribution to GF Scope 3 emissions was from upstream emissions of capital goods (our manufacturing tools). This amounted to three percent of GF's estimated Scope 3 emissions in 2021.
- Other Scope 3 categories that were quantified and considered not material included emissions from upstream logistics, waste logistics and treatment, business travel, employee commuting and emissions associated with leased offices.

Figure 4. GF 2021 extended GHG inventory: Scope 1, Scope 2 and Scope 3 GHG emissions by subcategory



* Estimated using major suppliers' information obtained in annual supplier RBA request.

** Quantified using GF's own data on energy use and third party average factors (Defra 2021, and EPA 2021).

Energy

Semiconductor manufacturing requires electricity to create and maintain the critical cleanroom conditions in our fabs, as well as for powering process tools, pumps and other equipment needed for our complex manufacturing processes. We continually improve and optimize these processes, identifying and implementing further efficiencies and energy-saving measures into our operations.

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In the last three years, GF has executed projects that annually save more than 86 GWh. Key projects in 2021 included:

- At our GF Singapore site, a major chilled water plant optimization project that began in 2020 was completed in mid-2021. These measures introduced variable speed drives that optimize pump flow rates for more efficiency. The completed project is estimated to save more than 13,900 MWh annually, which also saves a corresponding annual amount of 1,557 MTCE in Scope 2 GHG emissions;
- GF Singapore conducted projects to convert existing MUA (Make Up Air) fans to more efficient direct drive fans that reduce mechanical friction loss. The new fans are also designed for smoother flow profiles to eliminate turbulence, producing even higher efficiency. Savings amounted to more than 425 MWh annually (with a corresponding savings of 48 MTCE in Scope 2 GHG emissions);
- GF Singapore upgraded the efficiency of the chiller that provides Process Cooling Water (PCW) to Fab 2. Efficiency improvements were implemented using a system-wide approach affecting chillers, the chilled water pumping system, the condenser water pumping system and the cooling tower system. Annual savings are estimated to amount to 1,793 MWh with a corresponding savings of 200 MTCE in Scope 2 GHG emissions;
- Fab 8 saved 6,600 MWh of electricity by reducing the pressure in the cleanroom by lowering duct static pressure. This also achieves annual savings of 192 MTCE in Scope 2 GHG emissions;
- The Fab 9 CVD team replaced three manufacturing tools with fewer, more energy efficient tools. The full savings associated with the tool replacements is equivalent to 589 MWh annually;
- Fab 10 completed multiple electricity conservation projects that combined saved 7,563 MWh and a corresponding amount of 220 MTCE in Scope 2 GHG emissions;
- Fab 1 completed several projects to replace office and plenum lightning with energy efficient light-remitting diodes (LEDs), resulting in combined annual savings of 1,156 MWh (equivalent to nearly 100 MTCE of Scope 2 GHG emissions).

Figure 5 shows absolute and normalized electricity use at our manufacturing facilities from the baseline of our previous three-year goal period to 2021. Absolute use of electricity remained relatively flat from 2018 to 2021 with a slight increase of approximately one percent from 2020 to 2021 while production increased by more than 20 percent at the same time from 2020 to 2021. As a result, normalized electricity use decreased more than 23 percent in 2021 compared to our baseline year of 2018 and by more than 38 percent compared to our initial company baseline, the first 12 months of GF's current manufacturing footprint (July 2015 – June 2016). This decrease in normalized electricity use reflects GF's work over many years to achieve significantly higher productivity by keeping the absolute electricity demand nearly flat while increasing manufacturing output by 67 percent (as expressed in MI).

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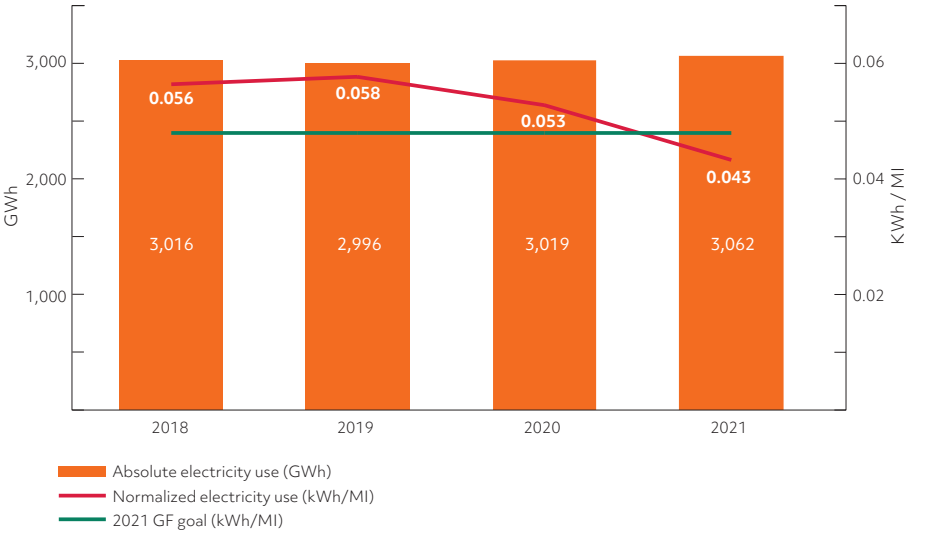
Figure 5. Absolute and normalized electricity use – through 2021



Water

Water is vital to our planet. It is also necessary for semiconductor manufacturing. Water, specifically, ultrapure water (UPW) is utilized in the complex semiconductor manufacturing process and must be treated to very high purity levels, removing particles, ions, and dissolved gases before it can be used. UPW is specifically used in wafer cleaning processes which become ever more water intensive as the features on the manufactured wafer become ever smaller. GF's water conservation strategy is to reduce water use in manufacturing processes while increasing water recycling and reuse.

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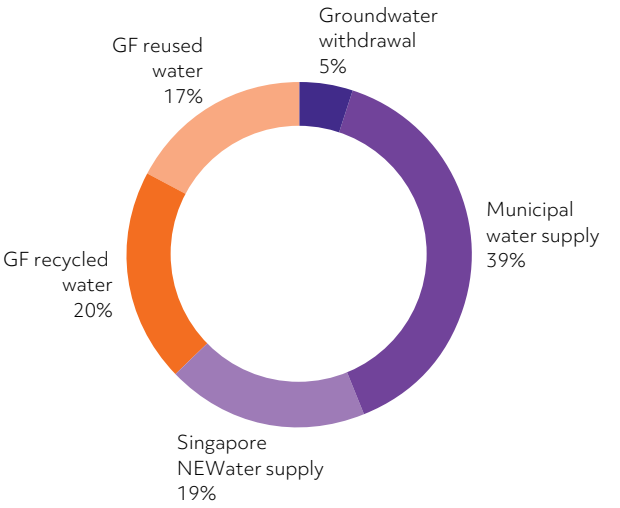
Water sources

GF sources (withdraws) water from third parties, but also has extensive water reclaim programs in place at our manufacturing facilities. "Reclaimed water" includes both recycled and reused water. Water recycling is the process that feeds previously used UPW back into the UPW purification plant. "Reused water" is utilized in operations that do not require the same purity requirements as UPW, such as cooling towers and scrubbers, which can accommodate lower-quality water sources.

Figure 6 shows 2021 total water use by source, comprising water that was supplied (withdrawn) from third parties or from groundwater sources, as well as water that was used and subsequently recycled or reused internally at GF.

Figure 6.* GF 2021 total water use by water source



In 2021, 37 percent of GF's total water use was covered by recycled and reused water from water reclaim programs. Implementing projects and developing more options to further increase our recycle and reuse rates is a key part of GF's water conservation strategy. GF sources the majority of its water from third party water utility providers (58 percent), with 19 percent sourced from Singapore's NEWater program.

NEWater is an alternative water source, comprised of reclaimed and treated wastewater supplied by the Singapore Public Utilities Board (PUB). Using NEWater supports Singapore's water conservation strategy to reserve high-quality potable water for domestic consumption. A smaller share (five percent of company-wide use in 2021) of freshwater is sourced from groundwater at GF Fab 10.

* Figure 6 has been revised as of July 26, 2022

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Water stress and water risk

GF manufacturing sites are not located in, and do not withdraw water from, areas that are assessed as high water stress areas. GFs uses the World Resources Institute's (WRI) "Aqueduct Water Risk Atlas" in our annual assessment to determine whether our manufacturing sites are located in, or withdraw water from, high water stress areas. Reflecting the WRI assessment, three GF manufacturing sites (Singapore, Malta, NY and East Fishkill, NY) in are located in areas currently assessed with a baseline water stress[5] of "Low". Two GF manufacturing sites are located in areas with a baseline water stress of "Low to Medium" (Burlington, VT), or "Medium to High" (Dresden, Germany). No GF manufacturing site is located in areas assessed with a baseline water stress of "High" or "Extremely High", defined respectively as a range from 40 percent to 80 percent and a ratio above 80 percent of total water withdrawals to available renewable surface and groundwater supplies. Evaluating future water stress scenarios for our GF manufacturing sites locations using the Water Risk Atlas shows a greater than "High" water stress for Singapore. GF is well aware of this scenario, addressing it by sourcing the Singapore PUB-supplied NEWater at our Singapore site and by continuing to drive water conservation and recycling projects.

[5] Baseline water stress is expressed as the ratio of total water withdrawals to available renewable surface and groundwater supplies. Higher values indicate more competition among users.

Water conservation

During the last three years, GF has executed projects that annually save more than 1.48 million m^3 of water, exceeding our original savings goal fourfold. Key projects in 2021 included:

- Fab 8 performed a further optimization of a project initially implemented in 2020 that installed a Reverse Osmosis treatment system (HFRO) for a site wastewater stream containing hydrofluoric acid. This allowed for more efficient management of the waste stream, but also allowed the treated water to be reused in facilities systems. The project conserved more than 175,000 m^3 of water annually. In 2021, the HFRO process was optimized, realizing even further water savings. These efforts conserve approximately 308,000 m^3 of water annually;
- The GF Dresden site implemented a project in 2021 to significantly increase the recycling rate of its ultrapure water recycling plants from 50 percent to 75 percent. This led to significant municipal water savings of more than 300,000 m^3, while also reducing wastewater generation by approximately 140,000 m^3, and reducing the need for ultrapure water treatment chemicals;
- GF Singapore completed the Fab 7/7G 300mm "Century Water Reclamation" project resulting in significant water savings as well as demonstrating the feasibility of further water reclamation in GF Singapore's 200mm fabs. This project conserves 613,000 m^3 of water annually by reclaiming wastewater from the Fab 7 and 7G condensate, slurry and DI (deionized water) reject streams. The wastewater now passes through activated carbon, ceramic filtration and catalytic treatment before being used in cooling towers and point-of-use scrubbers. This project was funded by a grant from the Singapore Public Utilities Board (PUB).

Figure 7 shows absolute and normalized water withdrawal[6] for our manufacturing facilities from the baseline of our previous three-year goal period through 2021. Absolute water withdrawal in 2021 remained relatively flat compared to 2018 even though production increased significantly over this time. Our water intensity (as represented by our normalized rate of water withdrawal) decreased by nearly 23 percent compared to 2018. When compared to our initial company baseline, the first 12 months of GF's current manufacturing footprint (July 2015 – June 2016), our normalized water withdrawal decreased by more than 40 percent. With a production growth of 67 percent (as expressed in MI) since our previous baseline, this represents a significant improvement in water efficiency.

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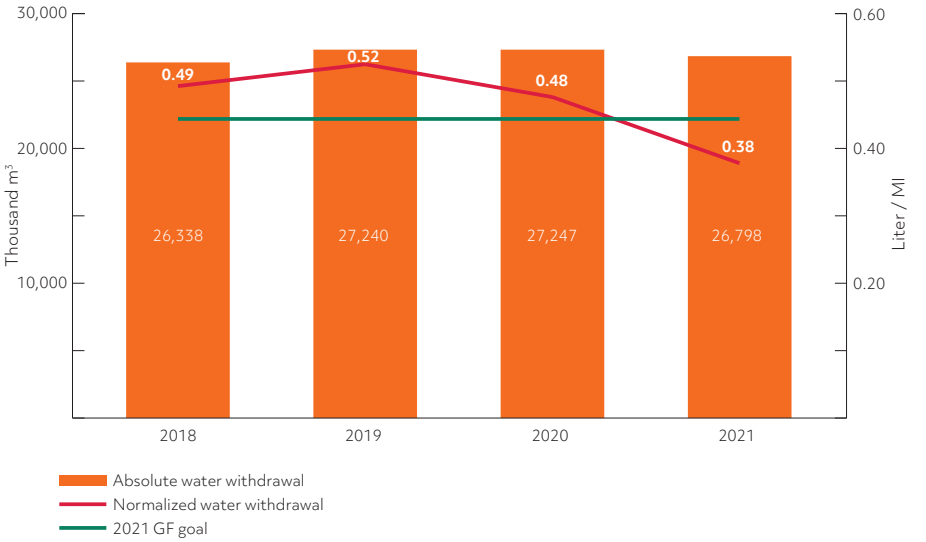
Figure 7. GF water withdrawal[6] absolute and normalized – through 2021



Water discharge and water consumption

GF's Global EHS Standards have strict requirements for groundwater and stormwater protection to prevent impacts to groundwater or stormwater runoff. The Global EHS Standard for industrial wastewater further specifies the techniques and management practices for proper wastewater treatment and discharge. The Standard includes requirements to apply best available technologies for the operation and construction of wastewater treatment facilities, to assess the potential impact proposed discharges could have to the receiving surface water body and/or the local sewer treatment facility, including toxicity in the receiving water body and performance impacts to the sewer treatment facility. Sites must maintain inventories of wastewater discharge, as well as plans, specifications, sampling protocols, operating and maintenance procedures, and provide secondary containment of industrial wastewater, vessels and piping.

[6] Water withdrawal as defined by GRI 303-3 (GRI 303: Water and effluents 2018)

At each of our manufacturing sites, we operate corresponding wastewater treatment systems to manage effluent from production areas in accordance with our wastewater discharge permits. These facilities treat the wastewater by neutralization, removing trace metals and dissolved solids, and other treatment steps as needed to meet regulatory requirements prior to discharge. GF Singapore, Fab 1 and Fab 8 discharge wastewater to municipal treatment facilities following on-site pretreatment. Fabs 9 and 10 discharge directly to surface waters following a rigorous combination of industrial and biological treatment processes. In total, in 2021, we discharged 23.5 million cubic meters of treated wastewater from all manufacturing operations combined, of which 32.7 percent (7.7 million cubic meters) were discharged directly to surface water.

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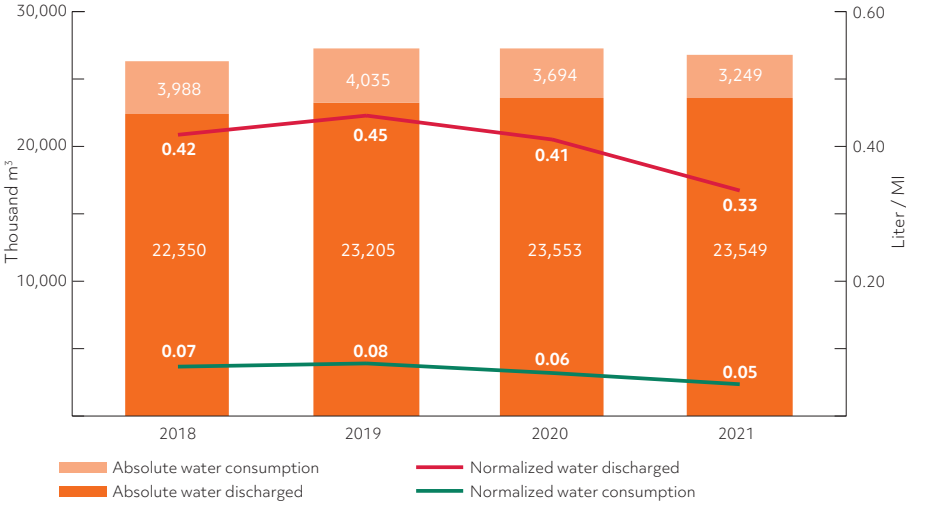
Figure 8 shows the volume of GF wastewater discharge as well as the volume of GF "water consumption"[7] through 2021. Water consumption is calculated as the delta between water withdrawal and wastewater discharge. Approximately 88 percent of water withdrawn is discharged back to public treatment facilities or surface water, resulting in total water consumption of less than 12 percent of total water withdrawal in 2021. The main contributor to GF water consumption is evaporation through cooling towers and exhaust.

Figure 8. Absolute and normalized GF water discharge and water consumption[7] - through 2021



[7] per GRI 303: Water and Effluents 2018, water consumption is defined as "Sum of all water that has been withdrawn and incorporated into products, used in the production of crops or generated as waste, has evaporated, transpired, or been consumed by humans or livestock, or is polluted to the point of being unusable by other users, and is therefore not released back to surface water, groundwater, seawater or a third party".

Waste

GF focuses on pollution prevention and resource conservation to reduce chemical use and avoid waste generation. As determined by our Global EHS Standard on Pollution Prevention and Resource Conservation, we apply the pollution prevention hierarchy of source reduction, reuse, recycle, treat or dispose, to achieve cost savings while benefiting the environment at the same time.

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GF carefully manages the waste generated from our manufacturing processes that cannot be avoided. Semiconductor manufacturing generates varied waste streams, ranging from spent process fluids, spent solvents, solids resulting from wastewater treatment to waste from construction projects and general office waste. Waste streams fall into both hazardous and non-hazardous waste categories. GF's Global EHS Standards have precise requirements for waste management, including proper tracking, employee training and handling, as well as requirements for waste disposal and auditing of waste disposal facilities.

Over the past three years, GF has executed multiple projects that save chemicals and reduce waste generation. Key projects in 2021 include:

- Fab 8 completed several process optimizations that reduced waste from chemical dispensing in photolithography, eliminated or reduction of wafer cleaning steps, and reduced chemical use in chemical mechanical polishing processes. Combined chemical usage savings amounted to almost 2,800 tons;
- Fab 8's industrial sulfuric acid distribution system was reconfigured for direct acceptance and reuse of sulfuric acid waste for pH neutralization in wastewater treatment. This project installed a new pumping system which allows the sulfuric acid waste stream to be used in place of new sulfuric acid, reusing 390 m^3 (approximately 590 tons) of sulfuric acid waste annually;
- In 2021, process engineers at our Singapore site optimized chemical use in a "pre-anneal" cleaning step. Prior to optimization, the pre-anneal cleaning relied on a mixture of hydrochloric acid and hydrogen peroxide. During the optimization test runs, it was found that the pre-anneal clean could be done without hydrogen peroxide and nearly 290 tons of hydrogen peroxide can be saved each year;
- At GF Dresden, a project was successfully concluded in 2021 which introduced a new wastewater pretreatment process to remove copper from a copper rinseate waste stream. The cleaned portion can now be safely discharged as wastewater to the municipal wastewater treatment plant. The copper permeate continues to be disposed off-site as waste. As a result of the rinseate treatment, the total amount of annual waste was reduced by 900 tons;
- GF Dresden piloted a project to recycle Deuterium. Deuterium (D2) is a hydrogen isotope that has an additional neutron in the atomic nucleus. In nature, deuterium is rare and is therefore the gas is very expensive. It is used in some annealing processes to improve device performance and reliability. To address its conservation, Dresden engineers developed a basic principle of a recycling plant that enables D2 separation from the waste gas of the annealing process, followed by subsequent purification, compression and reuse. The pilot project is now implemented at production scale. We anticipate effective reductions from 2022 on.

Figure 9 shows absolute and normalized total waste generation, as well as absolute generation of hazardous waste[8], non-hazardous waste and byproducts beneficially recycled and reused[9], from 2018 through 2021.

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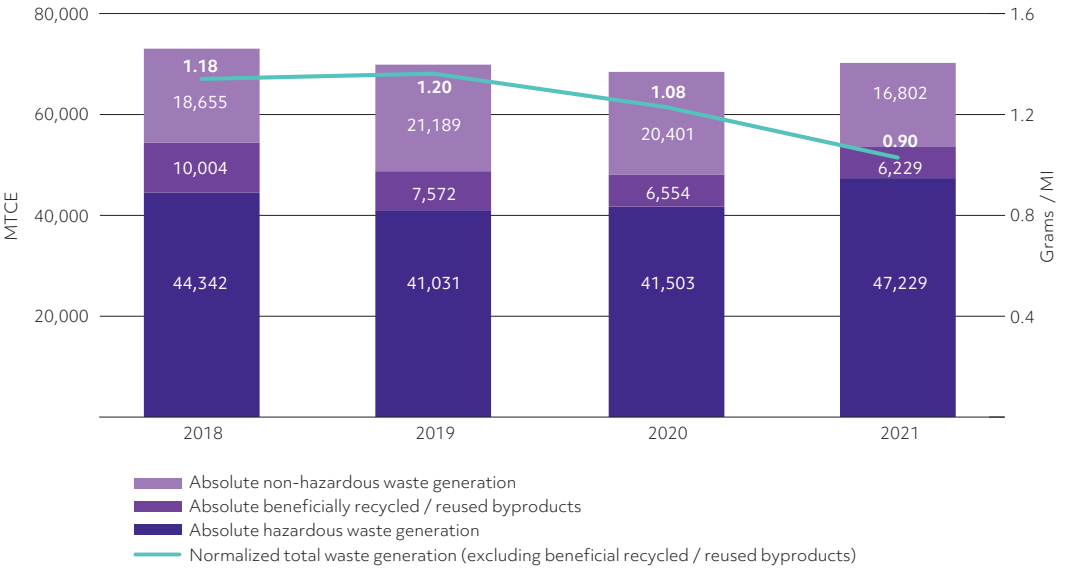
Absolute waste generation decreased by four percent from 2018 to 2021. At the same time, the normalized waste generation rate decreased 23 percent. The reduction reflects significant progress in resource conservation, achieved while GF significantly increased manufacturing output (as expressed in MI). We continue to actively investigate ways to reduce water and chemical use to ultimately reduce generation of waste.

Figure 9. Absolute waste generation (including byproducts beneficially recycled and reused) and normalized waste generation through 2021



[8] The classification of waste as "hazardous" is determined by the respective regulations that apply to our manufacturing sites.

[9] We also include the category "byproducts beneficially recycled and reused", which is applicable only to our U.S. sites because reclaimed material is excluded from the U.S. EPA definition of hazardous waste. Examples of beneficially recycled and reused byproducts include the reuse of spent sulfuric acid as a raw material in the manufacture of fertilizers or production of aluminum sulphate, or the reuse of spent solvents in other industries after external purification through distillation.

Figure 10 and Table 8 show the 2021 volumes and disposal paths for waste diverted from disposal and waste directed to disposal. For hazardous waste, we achieved an overall recycling and reuse rate (that combines the categories "recycled /reused" with "byproducts beneficially recycled and reused") of 51 percent, short of our 2021 stretch goal to recycle and reuse 60 percent of hazardous waste.

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For non-hazardous waste, GF achieved a 64 percent recycle and reuse rate, which was at 98 percent of our 2021 goal.

In 2021, 54 percent of GF's total waste generated (including category of byproducts beneficially recycled and reused) was diverted to material recycling and reuse, and 90 percent was diverted from landfill. GF has placed a specific focus to limit landfill disposal, so we have set a 2022 goal and reduction initiatives within our Journey to Zero to maintain at least 90 percent diversion of total waste from landfill in 2022.

Figure 10. 2021 total waste generated: Volumes by waste type and by disposal path

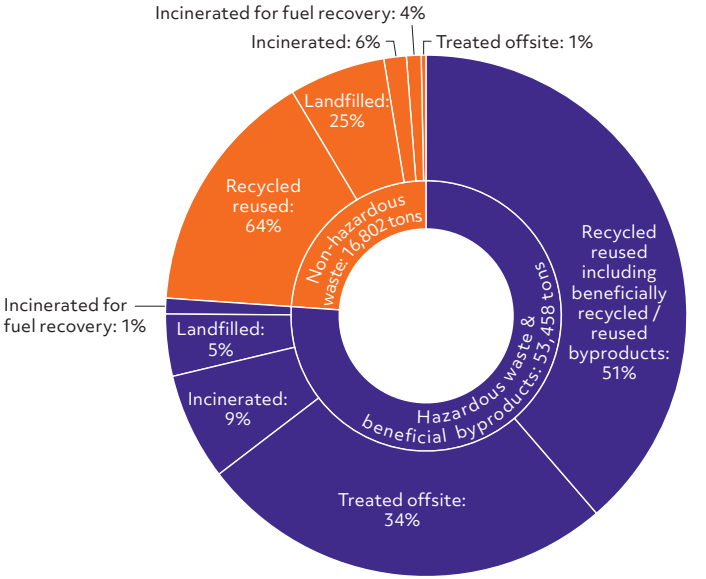

Table 8. Total waste generated at GF in 2021: Volumes by waste type and by specific diversion and disposal paths

Waste type	Diversion / Disposal	Weight (Tons)	Percentage	Diversion path / Disposal path	Weight (Tons)	Percentage
Hazardous waste (including beneficial recycled / reused byproducts)	Diverted from disposal	27,851	52%	Beneficially recycled / reused byproducts	6,229	12%
				Recycled / reused	20,939	39%
				Incinerated for fuel recovery	684	1%
	Directed to disposal: diverted from landfill	22,906	43%	Incinerated	4,678	9%
				Treated offsite	18,229	34%
	Directed to disposal: landfilled	2,701	5%	Hazardous waste landfilled	2,701	5%
Non- hazardous waste	Diverted from disposal	11,414	68%	Recycled / reused	10,776	64%
				Incinerated for fuel recovery	639	4%
	Directed to disposal: diverted from landfill	1,192	7%	Incinerated	978	6%
				Treated offsite	215	1%
	Directed to disposal: landfilled	4,195	25%	Landfilled	4,195	25%
Total waste	Diverted from disposal	39,265	56%	Recycled / reused	31,715	45%
				Beneficially recycled / reused byproducts	6,229	9%
				Incinerated for fuel recovery	1,322	2%
	Directed to disposal: diverted from landfill	24,098	34%	Incinerated	5,655	8%
				Treated offsite	18,443	26%
	Directed to disposal: landfilled	6,896	10%	Landfilled	6,896	10%

Air emissions

GF's Global EHS Air Quality Standard has strict requirements for the management of emissions to the air. The Air Quality Standard specifies the management practices for maintaining an air emissions inventory and which practices to follow for installing and operating air emissions control devices. All our manufacturing facilities operate within air quality conditions permitted by local regulatory agencies. The primary air emissions from our facilities include corrosives (acids and bases) and volatile organic compounds (VOCs).

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We employ wet scrubbers to neutralize corrosive emissions and treat the scrubber water in on-site wastewater treatment systems prior to discharge. For VOC emissions reduction, most sites use thermal oxidation or carbon bed adsorbers. Fab 1 in Dresden, Fab 7 in Singapore, Fab 8 in Malta, NY, and Fab 10 in East Fishkill, NY have control technology in place that utilizes rotary concentrators followed by thermal oxidation. This technology uses highly adsorbent zeolite materials to capture VOCs, which are subsequently desorbed, producing a low-volume exhaust stream with a higher concentration of VOCs. This more concentrated exhaust stream is then treated with greater efficiency through a combustion process that destroys as much as 98 percent of the VOCs.

Materials management and product compliance

GF has chemical review and approval systems in place to ensure that only approved materials are used in wafer fabrication and development of foundry modules. Our material qualification process assesses materials relative to our Specification for Banned, Restricted and Declarable Materials Management, which includes both regulatory and customer-driven requirements.

We extend these requirements to our manufacturing partners that provide semiconductor foundry, assembly and test services. Applicable regulatory requirements include the EU Directive on Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive), its sister directives in other jurisdictions, such as China RoHS, and other legislation that regulates substances contained in products (also called "articles"), and the EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) provisions on the presence of designated Substances of Very High Concern (SVHCs).

Our specifications also require packing material suppliers to meet applicable substance restrictions. GF has programs in place to obtain analytical evidence of product compliance (such as RoHS and halogen-free requirements). We make these reports and other product compliance documentation available to our customers on our GlobalFoundryView data portal.

All our fabs have either been certified under the Sony Green Partner program or maintain equivalent controls to ensure product compliance. Our certificates are available here.

EHS compliance

We are committed to a "Beyond Compliance" approach, seeking to exceed the requirements of applicable regulations. We implement consistent and rigorous EHS standards, management systems, metrics, external reporting and compliance assurance programs. Our manufacturing sites perform internal reviews as part of their EHS Management Systems and are routinely inspected by regulatory authorities. In 2021, we received one notice of violation for a self-reported issue. No financial penalty resulted from the NOV, and no other financial penalties resulted from government agency inspections and regular compliance reporting across our global locations.

10 Responsible sourcing

Responsible supply chain

GlobalFoundries is committed to human rights and responsible sourcing practices. We require suppliers to conform to the RBA Code of Conduct requirements, including respecting human rights, prohibiting forced and child labor and meeting or exceeding all labor, safety, health, environmental and ethical standards, including our Human Rights Policy's key principles. We utilize RBA processes and tools to assess supplier conformance to our principles and the RBA Code.

Our manufacturing supply chain consists primarily of suppliers of highly specialized semiconductor manufacturing equipment and materials. We also work with suppliers of specialized business services ranging from fab design and construction to IT (Information Technology) consulting. The majority of our manufacturing suppliers operate in the United States, Japan, Singapore, Germany, other EU countries, and Taiwan. There are also a small number of suppliers from the People's Republic of China. Due to the nature of the semiconductor foundry business (highly specialized materials, tools and services with relatively long qualification times), GF has developed long-term working relationships with most of its suppliers, and specifically with its most relevant suppliers.

Our requirement that suppliers conform with the RBA Code is included in our standard contract templates, Purchase Order Terms and Conditions, Global Supplier and Subcontractor Management Policy and Material Qualification Procedure. We have implemented a risk-based supplier monitoring process that assesses our major suppliers' conformity to the principles of our Human Rights Policy and the RBA Code. Our supplier monitoring is complemented by a verification element that draws from and builds on the RBA VAP audit process. Verification is applied with due consideration of the perceived supplier risk of potential non-conformance to our Human Rights Policy principles and the RBA Code.

The composition of the major supplier list is reviewed annually and is based on documented criteria that are related to supplier spend by supplier commodity, supplier strategic importance and potential supplier risk. The 2021 GF major supplier list covered suppliers with a cumulative spend of more than 80 percent in the primary commodities, which include silicon wafer, electronic grade and specialty chemical suppliers, manufacturing tool suppliers[10], mask suppliers, and outsourced manufacturing — mostly outsourced test and assembly (OSAT) suppliers. Our 2021 major supplier list also included labor recruitment agencies and on-site service suppliers, such as janitorial, security and canteen services. In 2021 this comprised approximately 85 suppliers, most of which provide products and services to GF from multiple supplier sites (218 major supplier sites in total).

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As we commence our annual major supplier monitoring process, we ask our designated major suppliers to provide a signed certification acknowledging their understanding of the RBA Code and the GF requirement to be in conformity to the RBA Code. The certification also highlights specific GF provisions on anti-corruption. The annual major supplier monitoring also include deliverables to complete supplier self-assessments, to provide visibility about RBA VAP audits performed or planned and to provide environmental information (such as climate and water-related metrics and targets). GF utilizes RBA questionnaires and tools (such as RBA-Online, RBA's supply chain risk assessment platform) or equivalent methods.

GF applies a risk-based approach for major suppliers to provide additional evidence of RBA Code conformity when needed. These additional verification steps range from targeted document reviews performed by GF staff to comprehensive RBA VAP (Validated Assessment Program) audits. Where corrective actions are identified, either in VAP audits or in a GF review, we monitor supplier closure to implement the necessary measures and provide assistance as needed.

Annual results of the RBA Code conformity assessment and verification process are included in our Global Supplier Ratings process, which scores supplier performance with regard to Quality, Cost, Operations, Service, Technology and Business Continuity / Compliance. Given their important role in supplier oversight, commodity managers in GF's Global Supply Management organization receive annual training regarding the RBA Code and its requirements, with a specific focus on the results of the preceding year's major supplier RBA Code monitoring and verification program.

[10] Suppliers in this category covered more than 70 percent of spend

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Figure 11 and Figure 12 respectively show, for 2020 and 2021, the number of supplier sites self-assessments obtained, and the number of suppliers who performed RBA VAP audits and the number of targeted document reviews conducted.

As shown in Figure 12, within the 2021 supplier monitoring program cycle, 218 self-assessment responses were obtained from major supplier sites. The majority (96 percent) of the 2021 self-assessment responses indicated a low risk for non-conformance to the RBA code, while four percent indicated a medium risk, and zero self-assessments were scored at a high risk. GF staff specifically reviewed all self-assessment information where self-assessments were scored at medium risk of non-conformity to the RBA Code. GF staff conducted targeted document review for fifteen on-site service suppliers and for all (four) foreign worker recruitment agencies used during 2021.

Figure 11. Number of GF supplier RBA code self assessments by commodity (2020–2021)

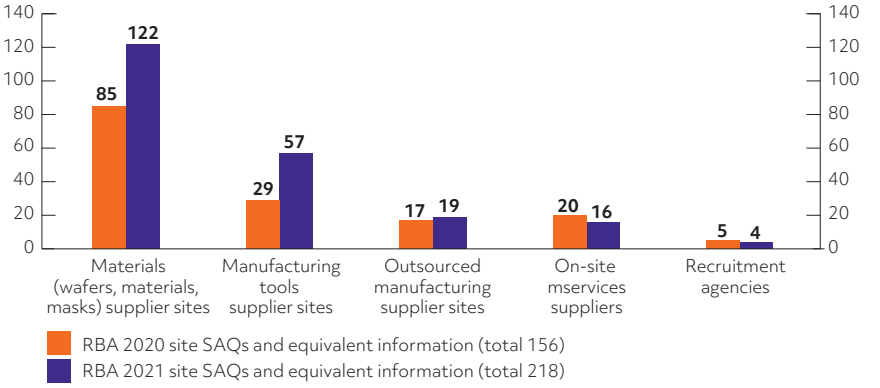
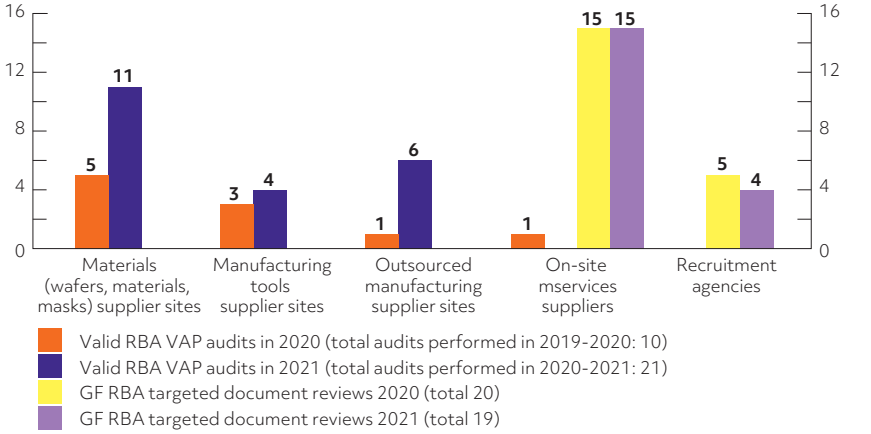


Figure 12. Number of GF supplier RBA VAP audits and targeted document reviews by commodity (2020–2021)



GF continues to encourage all suppliers to perform and to share RBA VAP audits. RBA VAP Audits have been done at GF supplier sites in Japan, Malaysia, Singapore, Taiwan, South Korea, the United States, Belgium and the People's Republic of China. As shown in Figure 13, 21 major supplier sites had conducted VAP Audits in 2020 and 2021. Of the 21 major supplier sites that conducted an Initial VAP Audit in 2020 and 2021[11], 16 sites had corrective actions identified for closure within the RBA VAP process[12]. As of April 2022, closure of corrective actions is complete for 11, and in progress for the other five of these supplier sites. Figure 13 shows the average scores achieved by VAP audit type in audits performed during the last two years at major supplier sites. The increasing audit scores from Initial Audits through Closure Audits demonstrate supplier learnings and progress in closing non-conformities. Initial Audits are the first audits in a VAP Audit cycle, Priority Closure Audits are used to verify closure of any "priority"-level audit findings (the most severe) and Closure Audits serve to verify closure of any other types of findings ("major" or "minor").

GF analyzes our major suppliers' RBA VAP Audit findings to identify the most relevant responsible sourcing risks in our supply chain. As shown in Table 9, of the RBA VAP Audit findings, two percent were classified as priority findings (all of which were closed by the end of 2021), 60 percent were classified as major findings, and 38 percent as minor findings[13]. These findings pertained to the RBA Code categories as shown in Table 9.

Figure 13. Average VAP audit score by VAP audit type for GF major supplier sites that completed an initial VAP audit in the time period 2020 through 2021

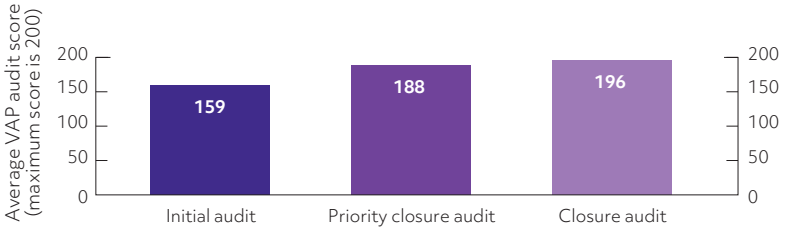


Table 9. Supply chain RBA non-conformities by RBA code section

RBA finding severity level	Number of findings	Percentage of findings	Percentage of findings by RBA code category
Priority non-conformity	4	2%	50% Labor (all audited through closure) 25% Health and safety (all audited through closure) 25% Management systems (all audited through closure)
Major non-conformity	100	60%	35% Labor 32% Management systems 21% Health and safety 12% Environment
Minor non-conformity	63	38%	39% Health and safety 28% Labor 14% Management systems 10% Environment 9% Ethics

[11] GF considers RBA VAP audits valid for a period of two years.

[12] GF considers VAP audits with scores of less than 180 points (below RBA "Gold" Level) as needing corrective actions, confirmed through a VAP Closure Audit.

[13] A priority non-conformity represents a grievous breach of RBA standards, a major non-conformity is a significant failure in the auditee's RBA conformance management system, a minor non-conformity is an isolated or random non-conformity.

As the most frequent findings, we assess the topics below to be the most relevant supply chain risks of non-conformity to GF's Human Rights Policy principles and the RBA Code:

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- **Labor—Working hours and consecutive days worked** (12 percent of findings): These included exceedances on weekly working hours and consecutive workdays and missing procedures to effectively manage working hours. One priority finding was identified in this category, which has been closed in a subsequent audit.
- **Health & safety—Emergency preparedness** (11 percent of findings): These findings included inadequate emergency response planning, lack of effective emergency evacuation drills or insufficient protective equipment and training for emergency response personnel. Two priority findings were identified in this category, both have been audited through to closure.
- **Health & safety—Occupational Health & safety** (10 percent of findings): These findings included missing health and safety permits or licenses, ineffective measures to control worker exposure to potential safety hazards, or lack of reasonable accommodation for nursing women. No priority findings were identified in this category.
- **Management systems—Supplier responsibility** (9 percent of findings): These findings are related to missing procedures to communicate the RBA Code requirements to next tier suppliers, as well as lack of a program to monitor and verify next tier supplier conformance to the RBA Code. One priority finding was identified in this category, which has been audited subsequently as closed.
- **Labor—Freely chosen employment** (7 percent of findings): These included findings of prohibited fees and penalties (recruitment fee, educational bond, penalty to leave on short notice), withholding of personal documents, mandatory overtime and lacking policies to prohibit of any form of involuntary labor. No priority findings were identified in this category.
- **Non-discrimination** (7 percent of findings): Findings included lack of reasonable accommodation for religious practices and missing anti-discrimination and anti-harassment policies. No priority findings were identified in this category.

Approximately 90 percent of the findings have been closed or are proceeding towards closure as of April 2022. GF tracks the progress of findings closure through the RBA-Online platform.

Responsible minerals sourcing

GF requires all materials to be sourced responsibly—this applies specifically to materials potentially sourced from conflict-affected and high-risk areas. GF's Conflict Minerals Policy establishes due diligence expectations for sourcing of minerals and metals, such as tantalum, tin, tungsten and gold ("3TG") as well as cobalt. The policy specifically prohibits sourcing of 3TG metals that contributes to financing armed conflict and human rights abuses in the conflict regions of the Democratic Republic of Congo (DRC) and adjoining countries. Our corresponding responsible minerals sourcing program and its progress are reviewed periodically by the Stewardship Committee.

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In the complex, multi-step silicon wafer manufacturing process, tantalum, tungsten—and in some cases, cobalt or gold—are added to achieve the desired functionalities of integrated circuits. The commodities we purchase that contain tantalum, tungsten, gold or cobalt include high-purity targets used in physical vapor deposition (PVD) and process gases and chemicals, all of which are used to deposit ultra-thin metal films onto the wafer surface. Tin and gold are used in post-wafer fab process steps, such as in interconnect materials in wafer bump or wafer packaging, and in components used for semiconductor module assembly.

GF is a member of the Responsible Minerals Initiative (RMI) and applies RMI's due diligence tools, such as the Responsible Minerals Assurance Process (RMAP) and Risk Readiness Assessment (RRA) for conflict-affected and high-risk areas. GF's goal is to maintain our 3TG DRC conflict-free supply chain—a status that we initially achieved in 2016.

As of Q4 2021, GF's supply chain includes 41 tungsten, 40 tantalum, 105 gold and 67 tin smelters, of which the tungsten, tantalum, gold smelters are all validated as DRC conflict-free smelters[14]. DRC conflict-free sourcing is defined by sourcing 3TG metals only from smelters listed as compliant by the Responsible Minerals Initiative's (RMI) Responsible Minerals Assurance Process (RMAP). We routinely provide due diligence information to support our customers' reporting needs.

To maintain our DRC conflict-free supply chain status, we manage our supply base with detailed requirements for responsible metals and minerals sourcing in a supplier specification that controls all direct materials (those that become part of GF products) containing 3TG metals. We partner with our suppliers in, at minimum, annual reviews of their due diligence practices and to identify all smelters in our extended supply chain and ensure they maintain RMAP conformance. Any new commodities including 3TG metals must be sourced only from RMAP compliant smelters.

In addition, as part of GF's risk management process for Responsible Minerals sourcing, if the supplier's conflict minerals declaration or Responsible Minerals sourcing practices do not meet our company expectations or if a smelter used in the supplier's supply chain becomes non-conformant with the RMAP protocols, the supplier shall either correct the gap immediately or if needed, develop and submit a corrective action plan. If a non-conformant smelter is unwilling to pursue corrective actions per the RMAP

[14] At YE 2021, 1 Tin smelter was in RMAP active status. Their RMAP assessment was completed in November 2021. The audit report published year-end 2021 identified corrective actions that as of March 2022, were completed, so that the smelter moved back to RMAP conformant status.

process, then GF will take steps to implement alternate sourcing of materials that is not dependent on that non-conformant smelter. Accordingly in 2021, GF took steps to remove one tin smelter and three gold smelters from our supply chain, as they lost their respective validated RMAP compliant status. Any new commodities including 3TG metals must be sourced only from RMAP compliant smelters.

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For cobalt, we have implemented due diligence processes aligned with the RMI's Cobalt Initiative. In the beginning of 2021, nine percent of our cobalt smelters were RMAP conformant. In line with RMI's cobalt program, we worked with our cobalt material suppliers who sourced from smelters that were not yet RMAP compliant to exert pressure on the smelters to achieve compliance as expeditiously as possible. This was a very successful effort and as of Q4, 2021, 66.7 percent of our cobalt smelters were RMAP conformant. GF's responsible sourcing goal for cobalt is to achieve 100 percent of cobalt-containing materials from RMAP active or conformant smelters by year-end 2022. We have updated our supplier Specification for Banned, Restricted, and Declarable Materials Management to escalate this requirement to our supply chain.

GF has expanded our supplier assurance processes to our extended minerals supply chain, using RMI's Risk Readiness Assessment (RRA) tool. The RRA is a voluntary self-assessment and reporting tool that extends further upstream than the RMAP program, which focuses on smelters. The RRA enables a broader understanding of the environmental, social and governance risks in the minerals supply chain beyond DRC conflict-free minerals sourcing. The RRA specifies good management practices ("industry norms") to successfully address potential risk. These management practices are derived from requirements of voluntary sustainability standards that are commonly applied to the minerals and metals supply chains.

11 About this report

About this report

The GF 2022 Corporate Responsibility Report is our eighth comprehensive corporate social responsibility and sustainability report. The last report was published in 2021 and covered 2020 data.

We use the Global Reporting Initiative (GRI) Sustainability Reporting Standards and self-declare that this report has been prepared in accordance with the GRI Standards: Core option.

Please find detailed information in the GRI Index of this report.

Data presented in this report reflect calendar year 2021 where not indicated otherwise. The data were compiled from facilities owned or operated by GF during the reporting period and validated using our internal processes. We perform internal due diligence to ensure the accuracy of the information and data presented. We currently do not seek independent assurance of non-financial data.

We value and encourage your feedback on this report. Please send comments or questions to CSR.GF@gf.com.

12 Site profiles


Fab 1 – Dresden, Germany


Fab 9 – Burlington, Vermont, USA


"GIGA+ Fab" and Fab 7/7G – Singapore


Fab 10 – East Fishkill, New York, USA


Fab 8 – Malta, New York, USA


GF Bangalore, Karnataka, India

Site Profile: Fab 1 – Dresden, Germany

Groundbreaking for the manufacturing site in Dresden took place in October 1996. The grand opening of the first production cleanroom followed in 1999, and the Dresden site has continued to expand ever since. In 2009, the Dresden site became the first GlobalFoundries (GF) fab when the company was divested from Advanced Micro Devices, Inc. (AMD). GF Dresden contributes significantly to the advancement of a leading-edge semiconductor industry in Europe, Germany, and specifically the high-tech cluster in Saxony. The region currently counts approximately 2,500 high-tech companies with more than 70,000 employees.

12

Community relations

Located literally fence-to-fence with its neighbors in the 800-year-old villages of Wilschdorf and Boxdorf, the Dresden site participated in its first local town hall meetings back in 1996 and continues to do so today. GF Dresden supports various neighborhood associations and activities such as local heritage societies, volunteer fire brigades and choirs. The Dresden site's Community Affairs Program has a strong focus on educational youth projects. As a leading tech company, the Dresden site is driving a considerable number of educational projects focused on STEM activities with K–12 students. Jointly with other long-term partners, since 2009, GF Dresden is a sponsor of the renowned German youth tech competition "Jugend forscht" ("Young Scientists") in Saxony that rolls up to the nationwide competition. The GF Dresden site's continued focus is on virtual events for K-12 students, such as "Girls' Day", "Summer University" (jointly with TU Dresden) and virtual "microelectronics lessons" for school classes.

Sustainability feature: Low greenhouse gas emissions

Fab 1 was designed for extremely low emissions of PFCs, which is accomplished by utilizing low-emission gases in CVD chamber cleaning, coupled with near-universal use of point-of-use abatement equipment for PFC-using processes. Highly efficient natural gas powered trigeneration plants power Fab 1, along with a fraction of electricity from the Dresden public grid.

Wafer size: 300mm
Technology: 22nm, 28nm, 40nm, 55nm
Management system certifications: ISO 9001, IATF 16949, ISO 14001, ISO 45001, ISO 27001, ISO 50001, Sony Green Partner

Awards:

- 2020 Dresden's Best Employers: awarded by the business magazine Capital. The evaluation took into account GF Dresden's specific commitment to the region, its dedication to social responsibility, and the respondents' rating of GF Dresden as an attractive employer.
- 2020 Germany's Best Companies for Vocational Training: awarded by the business magazine Capital and Ausbildung.de. GF Dresden scored well for our support and involvement of trainees, innovative teaching methods and excellent overall quality of learning in the company.
- 2020 German Innovation Leaders: GF Dresden was honored to be named a German Innovation leader by Frankfurter Allgemeine Zeitung for our own inventiveness and for the influence of our patents on other inventions.
- 2020 and 2021 Best Employers in Germany: Newspaper WELT has assessed GF Dresden's "very high attractiveness" as an employer in the industrial sector.
- 2021 Responsible Business Alliance (RBA) VAP Platinum Recognition for achieving the maximum score of 200 in Fab 1's first ever VAP Audit in November 2021.

Site Profile: "GIGA+ Fab" and Fab 7/7G – Singapore

The GF Singapore Woodlands campus is home to one 200mm "GIGA+" fab (Fabs 2, 3 and 5) and one 300mm fab (Fab 7/7G). The history of our GIGA+ fab goes back to 1995 when Fab 2 first started production. Our 300mm Fab 7 commenced operation in 2005 and has evolved ever since. The GF Singapore fabs were previously owned by Chartered Semiconductor Manufacturing and were acquired by GlobalFoundries in 2010. In 2016, our former 200mm Fab 6 was converted to 300mm (Fab 7G) and merged into Fab 7. In June 2021, GF broke ground for construction of a new 300mm fab on our Singapore campus.

12 Community relations

Since 2006, the GF Singapore site has held an annual Hair for Hope fundraising event benefiting the Singapore Children's Cancer Foundation (CCF). This signature event serves to raise funds and promote awareness of childhood cancer. GF donated a total of S$60,000 (~$45,000 USD) to the beneficiary in 2021 and altogether has raised more than S$1M over the last 17 years. GF Singapore also supported CCF's Hope Train campaign, which aims to raise awareness of the therapeutic benefits of art for childhood cancer patients. GF Singapore also supports regional STEM activities, providing insights into advanced technology for students from several tertiary institutions.

Sustainability feature: Resource efficiency

Resource efficiency is a priority for the Singapore team—energy and water conservation programs are continually pursued. Our Singapore fabs have extensive state-of-the-art water recycling capabilities in place. The site achieved a 62 percent recycling rate in 2021.[15] The recycling rate increased eight percent in one year following implementation of a major project in 2021 that significantly improved the already high water recycling rate. Our new fab, which is now under construction, was designed to capture rainwater to reuse it for general non-potable water uses. Moreover, 95 percent of the water supply to GF Singapore is NEWater, which is reclaimed and treated wastewater supplied by the Singapore Public Utilities Board. Using NEWater supports Singapore's water conservation strategy to reserve high-quality potable water for domestic consumption.

Wafer size: 300mm / 200mm
Technology: 180nm–40nm
Management system certifications: ISO 9001, IATF 16949, ISO 14001, ISO 45001, Sony Green Partner; UL Zero Waste to Landfill Certified, Fab 2/7/7G: ISO 15408, ISO 27001

Awards

- 2020 Responsible Business Alliance (RBA) VAP Audit Platinum Recognition for achieving the maximum score of 200 in the November 2020 VAP Audit.
- 2020 Singapore Community Spirit Gold in recognition of the collective contribution from the company and its employees to The Courage Fund. This giving effort has helped social service agencies and the service users they support tide through challenges arising from the COVID-19 pandemic.
- 2020 Singapore Childrens' Cancer Foundation Appreciation Award (Silver) for the collective effort and giving of the company and our employees.
- 2021 HR Online Employee Experience Awards: GF SGP won Gold in Best Organizational Upskilling & Reskilling Strategy, Gold in Best Learning and Development Program, and Bronze for Best in-House Certification Program.
- 2021 HR Online HR Excellence Awards: GF SGP won Gold in Excellence in Talent Management, and Bronze in Leadership Development and HR team Collaboration.
- 2022 Great Place to Work-Certified™ by Great Place to Work® Institute Singapore.

[15] as compared to water withdrawal

Site Profile: Fab 8 – Malta, New York, USA

In 2009, GF broke ground for construction of the Fab 8 300mm wafer manufacturing facility in Malta, New York. Total capital investment for the Fab 8 campus now exceeds $15 billion USD. The majority of this investment has been directed towards advanced 14/12nm process technologies. With approximately 42,000 square meters of cleanroom space and continued expansion, GF's Fab 8 is one of the leaders in advanced manufacturing in the U.S. Fab 8 is a cornerstone of Upstate New York's "Tech Valley" region and is the largest and most successful public-private sector investment in New York State's history.

12 Community relations and workforce development

Along with charitable donations in the local community, the site's community relations and workforce development programs support numerous educational initiatives. These include the FIRST® (For Inspiration and Recognition of Science and Technology) robotics program, a GlobalGirls STEM camp for middle school girls in partnership with the Girl Scouts of Northeastern New York and mentoring and workshops for P-TECH (Pathways in Technology Early College High School) students. Additionally, the Fab 8 team partners with local school districts on educational programming for students about the semiconductor industry, GF and STEM careers.

Together with its consortium of business partners, GF has invested over $5M USD in the Saratoga County communities of Malta & Stillwater including the development and construction of a $1.1M USD three-season community athletic complex in the Luther Forest Technology Campus. The GF Malta and GF Stillwater Foundations have collectively granted in excess of $2.2M USD to over 510 community, civic, athletic, non-profit and STEM programming organizations through 2021.

GlobalGives holiday gift campaign 2021

On behalf of our generous Fab 8 employees, GF donated a total of $30,000 USD to two local charities: the Regional Food Bank of Northeastern New York and Saratoga Bridges as part of our 2022 GF GlobalGives Holiday Gift Campaign. Additionally, in December 2021, our GF Malta employees contributed to our 2021 Fab 8 Toys for Tots Drive, which is coordinated each year with the U.S. Marine Corps. A total of 2,809 toys were donated (plus 48 bikes that were assembled by GF employee volunteers) to the program.

Sustainability features: Green building design

The Fab 8 campus has integrated green building principles and energy and water efficiency features from the beginning. This includes an innovative system that uses heat recovery chillers to meet the fab's year-round base cooling load and recovers the heat for site needs instead of removing it with cooling towers. The fab was also equipped from the start with high-efficiency motors, chillers, boilers, fan filters for the cleanroom and vacuum pumps. Using the "LEED (Leadership in Energy & Environmental Design)® green building program" design criteria from the US Green Building Council, the Fab 8 campus achieved LEED Gold® for the Admin1 and Admin2 office buildings and LEED Silver® for the fabrication facility.

Wafer size: 300mm
Technology: 14/ 12nm
Management system certifications: ISO 9001, ISO 14001, ISO 45001, ISO 27001

Awards:

- 2021 New York Capital Region's Healthiest Employers Award
  Fab 8 received the Albany Business Review's Healthiest Employers Award for two consecutive years (2020 & 2021). This award spotlights Capital Region businesses that promote health and wellness and support a culture of wellness and well-being in the workplace.
- Hudson Valley Community College (HVCC) Foundation Philanthropy 2021 Award for STEM & Education Partnerships
  Fab 8 earned the award for our long-standing philanthropy in the Capital Region surrounding STEM and education, including the recent donation by GF of $500,000 USD in economic support and equipment towards the HVCC North Expansion Capital Project at the TEC-SMART Campus in Malta.
- Green Building: Admin 1 and Admin 2 office buildings are LEED Gold®. Fab 8.1 fabrication facility is LEED Silver®.

Site Profile: Fab 9 – Burlington, Vermont, USA

GF Fab 9 is the largest 200mm pure-play foundry site in the United States. We employ approximately 2,200 people in the State of Vermont, which we believe makes us one of the largest private-sector employers in the state. IBM broke ground on this facility located on the banks of the Winooski River near Burlington in 1957. Since then, the campus has grown and evolved into a major semiconductor manufacturing site. GF acquired the site as part of the IBM Microelectronics business in 2015.

Community relations

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The Burlington site has an extensive history of community involvement. As part of the GF GlobalGives program, many Burlington employees volunteer with a variety of local non-profit agencies, which focus on food stability, health services and family-oriented causes. Additionally, GF employees support many K-12 STEM initiatives, such as the ECHO Leahy Center for Lake Champlain, Odyssey of the Mind, STARBASE, and FIRST®Lego and Robotics. Over the holiday season, Fab 9 hosted a site-wide food drive, donated over 2,400 pounds of food to eight local food shelves and donated $25,000 USD to the Vermont Foodbank.

Educational partnerships

GF has a strategic partnership with the University of Vermont (UVM) and Vermont Technical College (Vermont Tech). GF and UVM are working together to develop a semiconductor engineering curriculum within the UVM College of Engineering, and in early 2021, GF embarked in a pilot mentorship program with UVM. GF has a partnership with Vermont Tech, which also provides an equipment technician apprenticeship program.

Clean Energy Development: GF and UVM have engaged in the Vermont Clean Energy and Resilience Consortium, which seeks funding for research and related economic and commercial development related to clean energy in Vermont and collaborates on projects of mutual interest to support green energy, renewable energy, decarbonization and energy resiliency in Vermont.

Sustainability feature: Legacy of environmental excellence

Noted for its long-term environmental excellence, GF Fab 9 has received extensive recognition including numerous national, regional, and state awards for its pollution prevention programs. The Burlington site also has a history of supporting photovoltaic development research, and in 2016, transferred unused land to Green Mountain Power to develop a 4.7 MW solar power generation facility.

Wafer size: 200mm
Technology: 350nm–90nm
Management system certifications: ISO 9001, IATF 16949, ISO 14001, ISO 45001, Sony Green Partner

Awards:

- 2021 Responsible Business Alliance (RBA) VAP Audit Recognition—GF Fab 9 achieved the maximum score of 200 in its February 2021 VAP Audit.
- 2020 LCC (Lake Champlain Chamber) Community Impact Award: Fab 9 was recognized for enhancing the quality of life of the Lake Champlain region of Vermont.
- 2020 and 2021 Vermont Governor's Excellence Award in Worksite Wellness—Fab 9 received the 2021 Gold Award for The Governor's Excellence in Worksite Wellness. This is the second consecutive year GF has received this award and first achieving Gold level status.

Site Profile: Fab 10 – East Fishkill, New York, USA

Originally developed by IBM in 1962, the East Fishkill, New York, site grew and evolved into a major R&D and manufacturing center. The site joined GF as part of the acquisition of IBM Microelectronics in 2015 and is now known as GF Fab 10. In April 2019, GF announced the launch of its strategic partnership with onsemi, through which GF will transfer ownership of the Fab 10 facility to ON at the end of 2022.

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Community relations

East Fishkill employees have always prided themselves on being good neighbors, giving generously to the local community through charitable donations and volunteering in the local community. In the past, Fab 10 employees assembled bikes to donate to local children's not-for-profit organizations, collected hats, gloves, and non-perishable food for the community, provided gifts for Toys-for-Tots, and supported the "Treat the Troops" program to send homemade care packages to deployed U.S. military service members. Most recently, in 2021, employees volunteered and completed a roadside cleanup in East Fishkill to honor Earth Day.

The East Fishkill site has also participated in STEM activities, including "DiscoverE" school visits and National Manufacturing Day on-site where students experience STEM problem solving skills and careers. The Fab 10 team continued to partner with local school districts in a virtual environment on educating students about the semiconductor industry, GF and STEM careers.

GlobalGives holiday gift campaign – 2021
Demonstrating the generosity of employees, the Fab 10 team donated a total of $27,500 USD to The Food Bank of Hudson Valley, a local organization dedicated to alleviating hunger while preventing the waste of wholesome foods; and Astor Services for Children and Families, a community-based non-profit organization that provides children's mental health services, child welfare services and early childhood development services.

Additionally, Fab 10 employees contributed to our December 2021 Toys for Tots drive. A total of 583 toys were donated, directly supporting 170 local families and 426 children.

Sustainability features

Fab 10 produces two commercial chemical products for reutilization from the wastewaters generated by its 300mm manufacturing operations. A sulfuric acid wastewater is segregated to produce a spent sulfuric acid product and an ammonia wastewater is distilled to produce an ammonium hydroxide solution for reuse in off-site catalytic air emission abatement systems.

Groundwater treated through IBM groundwater remediation activities (approximately 25 percent of site water usage) is also reused in the production of ultra-pure water.

Wafer size: 300mm
Technology: 130nm–22nm
Management system certifications: ISO 9001, AS 9100D, ISO 14001, ISO 45001, IATF 16949, Sony Green Partner

GF Bangalore, Karnataka, India

The GF India office in Bangalore is our largest non-manufacturing site and serves as a center of excellence for design and technology enablement, information management and information technology. GF India is also home to fab engineering, product tape out, Human Resources, Finance, Global Sales and Business Development teams. GF India started operations in July 2015 as a strategic component of our acquisition of the IBM Microelectronics Division.

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The GF India Board of Directors established a CSR Policy in 2017 and has a dedicated CSR Committee that oversees actions taken in support of the policy. GF India executes a wide range of CSR projects every year with a dedicated budget and tremendous support from our employee volunteers. Our CSR projects serve not only communities in Bangalore, but also extend to the rural and tribal sectors in the State of Karnataka. GF India donates to non-governmental organizations and contributes teaching aids for skill development, smart class and computer lab setups, healthcare equipment and environmental solutions. As part of STEM outreach, GF India also organizes field trips, 'Show & Tell' workshops, celebrates National Science Day and engages children from various underprivileged schools to spread awareness about the importance of, and growth opportunities in, Science and Technology.

Our activities are focused primarily on four key focus areas: Education, Vocational Training and Skill Building, Healthcare and Environment. In 2021 and early 2022 our CSR projects included:

Education

- Donated (cash donation) to Concern India Foundation, Bangalore in support of the "Girl Child Education" project.
- Setting up a science lab for the PKS school in Bangalore.
- Donating to the Tribal Society of India to successfully run 40 one-teacher schools (Ekal Vidyalaya) in tribal areas for the year 2021.
- Provided school desks, school chairs, desktops and sewing machines as educational support for underprivileged and persons with special needs to Snehashreya Foundation, Ramamurthy Nagar, Bangalore.

Healthcare

- Donated gloves and masks to local hospitals and healthcare workers in Bangalore during the COVID crisis;
- Provided a water purifier to Karnataka Public School, Bangalore as part of health/hygiene improvement.

Environment

- Donated solar power enablement for a rural health care resource center (Samarthanam Trust for the Disabled), that facilitates basic health care, medical and rehabilitation for persons with severe and profound conditions. The solar projects also enabled street lighting for five villages.

Vocational training and skill building

- Donated sewing machines to five organizations for rural women under the women empowerment sustainable development program enabled by SWASTI (a global public health organization committed to vulnerable communities).

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 102: General Disclosures 2016	102-1	Name of the organization	Company profile (page 3)		
	102-2	Activities, brands, products, and services	Company profile (pages 3–4)		
	102-3	Location of headquarters	Company profile (page 4)		
	102-4	Location of operations	Company profile (page 4)	2021 GF Annual Report GF Form 20-F, "Information on the Company", pages 39–45	
	102-5	Ownership and legal form	—	2021 GF Annual Report GF Form 20-F, "Information on the Company", pages 30, 38	
	102-6	Markets served	Company profile (page 3)	2021 GF Annual Report GF Form 20-F, "Information on the Company", pages 30, 39	
	102-7	Scale of the organization	Company profile (page 4) Human capital - diversity, equity & inclusion and talent, development (page 33)	2021 GF Annual Report GF Form 20-F, "Information on the Company", pages 30, 39–45	
	102-8	Information on employees and other workers	Human capital - diversity, equity & inclusion and talent development (pages 36–37)		
	102-9	Supply chain	Responsible sourcing (page 67)		
	102-10	Significant changes to the organization and its supply chain	CEO Statement (pages 6–9)	2021 GF Annual Report GF Form 20-F, "Information on the Company", page 45	On November 1, 2021, GF announced closing of its initial public offering. GF shares are listed on the Nasdaq Stock Exchange and trade under the ticker symbol "GFS."
	102-11	Precautionary Principle or approach	Sustainable manufacturing (pages 48–49)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 102: General Disclosures 2016	102-12	External initiatives	Governance (pages 19–20)		
	102-13	Membership of associations	GF stakeholders and CSR priorities (page 12)		
	102-14	Statement from senior decision-maker	CEO statement (pages 6–9)		
	102-16	Values, principles, standards, and norms of behavior	Governance (page 14)		
	102-17	Mechanisms for advice and concerns about ethics	Governance (pages 15–16)		
	102-18	Governance structure	Governance (pages 17–18)	Corporate Governance Framework	
	102-19	Delegating authority	Governance (pages 18–19)	Corporate Governance Framework	
	102-20	Executive-level responsibility for economic, environmental, and social topics	Governance (page 19)	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 67–68	
	102-22	Composition of the highest governance body and its committees	—	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 60–63, 67–69; https://gf.com/about-us/board-directors/	
	102-23	Chair of the highest governance body	—	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 60–61; https://gf.com/about-us/board-directors/	
	102-26	Role of highest governance body in setting purpose, values, and strategy	Governance (page 14)	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 67-69, "Code of Ethics", page 85	

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 102: General Disclosures 2016	102-30	Effectiveness of risk management processes	Governance (pages 17, 21)	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 67–68; Corporate Governance Framework	
	102-31	Review of economic, environmental, and social topics	Governance (pages 17, 19)	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", pages 67–68	
	102-40	List of stakeholder groups	GF stakeholders and CSR priorities (pages 10–12)		
	102-41	Collective bargaining agreements	Governance (page 19)		No collective bargaining agreements were in place in 2021 at GF sites.
	102-42	Identifying and selecting stakeholders	GF stakeholders and CSR priorities (page 10)		
	102-43	Approach to stakeholder engagement	GF stakeholders and CSR priorities (pages 10–12)		
	102-44	Key topics and concerns raised	GF stakeholders and CSR priorities (pages 10–12)		
	102-45	Entities included in the consolidated financial statements	—	2021 GF Annual Report GF Form 20-F, "Information on the Company", page 38; "Financial Statements", pages F-45 - F46	
	102-46	Defining report content and topic Boundaries	GF stakeholders and CSR priorities (page 13)		
	102-47	List of material topics	GF stakeholders and CSR priorities (page 13)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 102: General Disclosures 2016	102-48	Restatements of information	—		Restatement of a data point of the GF 2021 CSR Report SASB Index: TC-SC-130a.1 Energy Management in Manufacturing Restatement for 2020 values: (the 2020 value included only the amount of electricity use and not the amount of total energy used) (1) Total energy consumed: 15,108,280 GJ (2) Percentage grid electricity: 62.6% (3) Percentage renewable 0.1% Restatement to Figure 6 in 2021 CSR report, page 56: Municipal Water: 39%, SGP NEWater: 19%, GF Recycled Water: 20%, GF Reused Water: 17%, Groundwater Withdrawal: 5%
	102-49	Changes in reporting	GF stakeholders and CSR priorities (page 13)		
	102-50	Reporting period	About this report (page 74)		
	102-51	Date of most recent report	About this report (page 74)		
	102-52	Reporting cycle	About this report (page 74)		
	102-53	Contact point for questions regarding the report	About this report (page 74)		
	102-54	Claims of reporting in accordance with the GRI Standards	About this report (page 74)		
	102-55	GRI content index	GRI content index (pages 82–93)		This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option.
	102-56	External assurance	—	—	GF currently does not seek independent assurance of non-financial data.

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
Management Approach					
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	GF stakeholders and CSR priorities (page 13)		
	103-2	The management approach and its components	—	—	Covered in topic related report sections.
	103-3	Evaluation of the management approach	—	—	Covered in topic related report sections.
Material Topics					
Economic					
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	Company profile (page 4)	GF Q4 2021 Earnings Presentation, page 5	
	201-2	Financial implications and other risks and opportunities due to climate change	Sustainable manufacturing (pages 51–52) TCFD Table (pages 98–100)	2021 GF Annual Report GF Form 20-F, "Key Information", D "Risk Factors Summary", pages 16, 22	
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	Community support and engagement (pages 44–47); Site profiles (pages 75–81)		
	203-2	Significant indirect economic impacts	Site profiles (pages 75–81)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
Governance and Ethical Business					
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	—		In 2021, the company's Ethics & Compliance team conducted an enterprise risk assessment. The company also monitors its reporting mechanisms available to internal and external parties for corruption related matters. No significant risks related to corruption were identified.
	205-2	Communication and training about anti-corruption policies and procedures	Governance (page 16)		
GRI 206: Anti-competitive Behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	—		None
Environmental					
Energy					
GRI 302: Energy 2016	302-1	Energy consumption within the organization	Sustainable manufacturing (page 57)		
	302-3	Energy intensity	Sustainable manufacturing (page 57)		
	302-4	Reduction of energy consumption	Sustainable manufacturing (pages 49–50, 56)		
	302-5	Reductions in energy requirements of products and services	Technology solutions for humanity (pages 28–32)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
Water					
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	Sustainable manufacturing (pages 58–59)		
	303-2	Management of water discharge-related impacts	Sustainable manufacturing (pages 60–61)		
	303-3	Water withdrawal	Sustainable manufacturing (page 60)		
	303-4	Water discharge	Sustainable manufacturing (page 61)		
	303-5	Water Consumption	Sustainable manufacturing (page 61)		
Climate Change, GHG Emissions					
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	Sustainable manufacturing (pages 53–55)		
	305-2	Energy indirect (Scope 2) GHG emissions	Sustainable manufacturing (pages 53–55)		
	305-3	Other indirect (Scope 3) GHG emissions	Sustainable manufacturing (page 55)		
	305-4	GHG emissions intensity	Sustainable manufacturing (page 53)		
	305-5	Reduction of GHG emissions	Sustainable manufacturing (pages 49–50, 54–55)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
	305-6	Emissions of ozone-depleting substances (ODS)	—		GF does not use ODS in and does not release ODS from its manufacturing processes. Some GF fabs use a Montreal Protocol Annex C substance as a refrigerant in closed chillers in conformance with applicable laws and regulations.
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Sustainable manufacturing (page 66)		Our 2021 fabs' combined corrosive emissions were approximately 75,000 kg (this value is based on air emission measurements conducted annually at each fab). Our 2021 fabs' combined VOC emissions were approximately 74,000 kg (this value is based on air emission measurements conducted annually at each fab).
Waste					
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	Sustainable manufacturing (page 62)		
	306-2	Management of significant waste-related impacts	Sustainable manufacturing (page 62)		
	306-3	Waste generated	Sustainable manufacturing (page 63)		
	306-4	Waste diverted from disposal	Sustainable manufacturing (pages 64–65)		
	306-5	Waste directed to disposal	Sustainable manufacturing (pages 64–65)		
GRI: 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	Sustainable manufacturing (page 66)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	Sustainable manufacturing (page 49); Responsible sourcing (page 67)		
	308-2	Negative environmental impacts in the supply chain and actions taken	Responsible sourcing (pages 69–71)		
Social / Employment					
GRI 401: Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Human capital - diversity, equity & inclusion and talent development (pages 42–43)		
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	Employee health & safety and well-being (page 23)		
	403-2	Hazard identification, risk assessment, and incident investigation	Employee health & safety and well-being (page 24)		
	403-3	Occupational health services	Employee health & safety and well-being (page 26)		
	403-4	Worker participation, consultation, and communication on occupational health and safety	Employee health & safety and well-being (pages 23–24)		
	403-5	Worker training on occupational health and safety	Employee health & safety and well-being (pages 23–24)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 403: Occupational Health and Safety 2018	403-6	Promotion of worker health	Employee health & safety and well-being (page 26)		
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	—	—	Omission reason: Not applicable – GF has full control over both the work and workplace at GF fabs.
	403-8	Workers covered by an occupational health and safety management system	Employee health & safety and well-being (pages 23–24)		
	403-9	Work-related injuries	Employee health & safety and well-being (pages 24–25)		GF does not report data for b.iii. and b.v. because we do not have full access to data on hours worked by employees of supplier companies who perform work at GF premises.
	403-10	Work-related ill health	—	—	During 2021 there were no cases and no fatalities of work-related ill health or fatalities affecting GF employees or contractor employees performing work at GF fab sites. Please also note: GF does not have full access to data on hours worked by employees of supplier companies who perform work at GF premises.
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	Human capital – diversity, equity & inclusion and talent development (page 39)		
	404-2	Programs for upgrading employee skills and transition assistance programs	Human capital – diversity, equity & inclusion and talent development (pages 41–42)		
	404-3	Percentage of employees receiving regular performance and career development reviews	Human capital – diversity, equity & inclusion and talent development (pages 41–42)		

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GRI standard	GRI standard disclosure number	GRI disclosure title	2022 CSR Report section and Report page number	Additional reference	GF 2021 CSR Report: Explanatory comment / Direct information
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	Human capital – diversity, equity & inclusion and talent development (pages 36–37)	2021 GF Annual Report GF Form 20-F, "Directors, Senior Management and Employees", page 60	Employee age group information is not disclosed. GF considers age data for employees attorney-client privileged information.
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Governance (page 19); Responsible sourcing (pages 70–71)		
GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	Governance (page 19); Responsible sourcing (pages 70–71)		
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Governance (page 19); Responsible sourcing (pages 70–71)		
GRI 412: Human Rights Assessment 2016	412-1	Operations that have been subject to human rights reviews or impact assessments	Governance (page 20)		
GRI 412: Human Rights Assessment 2016	412-2	Employee training on human rights policies or procedures	Governance (page 16)		
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	Community support and engagement (pages 44–47); Site profiles (pages 75–81)		
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	Responsible sourcing (pages 67–68)		
GRI 414: Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	Responsible sourcing (pages 69–71)		
GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	—	—	In 2021, GlobalFoundries was not assessed any significant fines or non-monetary sanctions.

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Topic	Accounting metric	Category	Unit of measure	Code	GF disclosure
Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	Quantitative	$MTCO_2e$	TC-SC-110a.1	(1) 2021 Scope 1 GHG emissions: 1,715,613 $MTCO_2e$ (equals: 467,894 MTCE, see Figure 3 in section 09 Sustainable manufacturing) (2) 2021 Scope 1 perfluorinated compounds emissions: 1,249,306 $MTCO_2e$ (equals: 340,720 MTCE). Perfluorinated compounds emissions provided here include PFCs (perfluorocarbons) such as CF_4, C_2F_6, C_3F_8, C_4F_8, as well as NF_3 and SF_6, but not HFCs (hydrofluorocarbons), such as CH_2F_2 and CHF_3.
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	n/a	TC-SC-110a.2	We disclose our GHG emissions over time as well as short and long term strategy in section 09 Sustainable manufacturing of the report and in the TCFD Table. Short term targets (2019–2021) for combined Scope 1 and Scope 2 GHG emissions were: • Achieve savings in annual GHG emissions of 11,900 metric tons carbon equivalent (MTCE); • 18 percent reduction of normalized greenhouse gas emissions At YE 2021, GF had substantially exceeded (by almost five times) the original amount of our target to save annual GHG emissions of 11,900 MTCE by implementing projects that save more than 56,300 MTCE annually, with the vast majority (more than 49,000 MTCE) being Scope 1 GHG emissions. Normalized Scope 1 & Scope 2 emissions decreased 19 percent from 2018 to 2021 — achieving our normalized GHG reduction goal. Long-term strategy: In August 2021 GF announced our "Journey to Zero Carbon" Initiative, which builds on our long history of proactive investment in Greenhouse Gas (GHG) emissions reduction. We are setting a goal to reduce absolute GHG emissions by 25% from 2020 to 2030 by enhancing manufacturing (emission) controls, further improving energy efficiency, and sourcing renewable and lower-carbon energy - even as we significantly expand our global manufacturing capacity.
Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	TC-SC-130a.1	(1) 15,301,627 GJ (2) 62.5% (3) 0.1% (self generated solar electricity)
Water Management	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m^3), Percentage (%)	TC-SC-140a.1	(1) 26,798 Thousand m^3 (2) 3249 Thousand m^3 Zero percent of GF water withdrawal or consumption is in regions with high or extremely high baseline water stress per the World Resources Institute's (WRI) "Aqueduct Water Risk Atlas"

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Topic	Accounting metric	Category	Unit of measure	Code	GF disclosure
Waste Management	(1) Amount of hazardous waste from manufacturing, (2) percentage recycled	Quantitative	Metric tons (t), Percentage (%)	TC-SC-150a.1	(1) 53,457.74 Tons (In combination with hazardous waste per applicable legal definitions, we also include the category "byproducts beneficially recycled and reused" in this total. This category is only applicable to our U.S. sites because reclaimed material is excluded from the U.S. EPA definition of hazardous waste.); (2) 51 % (the rate combines the categories "recycled /reused" with "byproducts beneficially recycled and reused")
Employee Health & Safety	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	Discussion and analysis	n/a	TC-SC-320a.1	We disclose our management approach to employee safety and health in this report's section "Health, safety and well-being", including our enterprise certification to ISO 45001.
	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	Quantitative	Reporting currency	TC-SC-320a.2	None (0 USD)
Recruiting & Managing a Global & Skilled Workforce	Percentage of employees that are (1) foreign nationals and (2) located offshore	Quantitative	Percentage (%)	TC-SC-330a.1	(1) GF is proud to employ a highly diverse, multicultural workforce across our global locations with more than 92 nationalities across 13 countries. GF does not disclose the number of employees that are foreign nationals. (2) GF discloses our workforce composition by region in Table 02 in report section 07 Human capital - diversity, equity & inclusion and talent development.
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%)	TC-SC-410a.1	We disclose our management approach to product stewardship, including product material content compliance, in section 09 Sustainable manufacturing. We do not disclose percentage of products by revenue that contain IEC 62474 declarable substances. ALL GF manufactured finished die pattened wafers comply with applicable regulatory requirements, including the EU Directive on the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive), its sister directives in other jurisdictions, such as China RoHS, and other legislation that regulates substances contained in products (also called "articles"), the EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as well as Toxic Substances Control Act (TSCA) provisions on the presence of designated substances in articles.
	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops6	Quantitative	Various, by product category	TC-SC-410a.2	We disclose our general management approach to product energy efficiency in report section 06 Technology solutions for humanity.

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Topic	Accounting metric	Category	Unit of measure	Code	GF disclosure
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Discussion and analysis	n/a	TC-SC-440a.1	GF's approach to responsible sourcing of certain conflict minerals is described in section 10 Responsible sourcing, subsection Responsible minerals sourcing. These include gold, tungsten, tantalum, tin and cobalt. Securing and protecting the ongoing supply of strategic and critical materials and minerals (including the subset of the "Rare Earth" elements that are important to our industry) ensures continuity in our manufacturing operations and most importantly, delivery to our clients. As such, GF's Global Supply Management organization has implemented a rigorous Business Continuity Planning (BCP) process that considers multiple factors of risk with corresponding proactive mitigation plans and actions. This BCP process is global in scope and is reviewed on a regular basis to maintain a constant state of readiness. Proactive measures are undertaken to ensure the protection of our supply both in the short and long term. Our global footprint, with fabs on three continents, helps us to diversify our supply chain and gives us the flexibility to cross-qualify our fabs as well as leverage alternative sources for key supplies. We are not totally immune to global shortages, but our footprint provides us with more insulation.
Intellectual Property Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Quantitative	Reporting currency	TC-SC-520a.1	None (0 USD)

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Disclosure area	TCFD recommended disclosure	GF metric or qualitative disclosure	Disclosure location
Governance	**Disclose the organization's governance around climate-related risks and disclosures.**	Oversight of Environment, Social and Governance (ESG) matters, including climate, is within the charter of the Audit, Risk and Compliance Committee (ARCC) of our Board of Directors. The full Board also receives regular updates on our climate change initiatives, including progress towards meeting goals established through our Journey to Zero Carbon initiative. ESG and climate matters are overseen by our Stewardship Committee, which includes Manufacturing Operations, Finance, Legal, Global Supply Management, and Technology, Engineering and Quality. Our CEO receives regular ESG updates and approves major initiatives.	Governance (pages 17,19) GF 2021 Annual Report on Form 20-F, page 71
Strategy	**Disclosure of the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.**	We recognize the critical global environmental challenges, specifically climate change, impacting the environment, human society, and the worldwide economy. As an important step to align with climate science and minimize longer term exposure to climate change, in August 2021 we announced our Journey to Zero Carbon Initiative, building on GHG emission reduction strategies to conserve energy, implement additional emission controls and develop renewable and lower-carbon energy sources. We set a goal to reduce absolute Scope 1 and Scope 2 GHG emissions by 25% from 2020 to 2030 - even as we significantly expand our global manufacturing capacity. In early 2022, we conducted a TFCD-aligned climate risk assessment and a qualitative scenario analysis that utilized selected low and high emissions scenarios. While climate modeling is complex and different outcomes are possible, based on this qualitative scenario analysis, we do not expect any of the evaluated risks to present material impacts in the short-term (1-2 years) to mid-term (3-5 years). Our manufacturing sites are located in generally low-risk geographies for natural hazards, and the scenario analysis did not indicate a significant risk to our operations from extreme weather events well into the middle of the century. We are evaluating additional steps to refine the qualitative analysis, including potential future application of quantitative scenario analysis.	GF 2021 Annual Report on Form 20-F, see the Risk Factors section, specifically pages 16, 22 We also describe our climate-related risks and opportunities in Sustainable manufacturing, pages 51–52; and Technology solutions for humanity, pages 28–32. Additional detail will be provided in the 2022 CDP Climate survey.

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Disclosure area	TCFD recommended disclosure	GF metric or qualitative disclosure	Disclosure location
Risk management	**Disclose how the organization identifies, assesses, and manages climate-related risks.**	GF's approach to risk management and our risk factors are described in our Annual Report on Form 20-F. Please see additional information on risk management and our efforts to reduce our climate change impacts, included in this Corporate Responsibility Report, primarily in Chapter 4 (Governance) and Chapter 9 (Sustainable manufacturing, see subsections: GHG emissions – climate risk mitigation, Energy and Water). Potential risks associated with climate change are evaluated as part of our overall risk management process. Our TFCD-aligned climate risk assessment and qualitative scenario analysis utilized selected low and high emissions scenarios. The transitional risks included pricing of GHG emissions through carbon taxes and fees, and costs for lower emissions technology in manufacturing operations. The physical risks included increased severity of extreme weather with the potential to impact GF manufacturing operations in Germany, Singapore and the Northeast region of the U.S., or our suppliers, and rising mean temperatures.	Governance see "Risk management and business continuity" page 21; and Sustainable manufacturing, pages 51–52 GF 2021 Annual Report on Form 20-F – See "Key Information", section D "Risk Factors Summary" beginning on page 3
Metrics and targets	**Disclosure of the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.**	Our Scope 1, 2, and 3 emissions data and our climate-related metrics, goals and targets, are included in this annual Corporate Responsibility Report. We also plan to participate in the 2022 CDP Climate Survey. Our GHG goal from 2018-2021 was to achieve savings in annual emissions of 11,900 metric tons carbon equivalent (MTCE), while also achieving an 18% reduction of normalized greenhouse gas emissions. Our results achieved savings of 56,300 MTCE and a 19% normalized reduction. Our electricity goal from 2018-2021 was to achieve savings in annual electricity use of 86 gigawatt hours (GWh) with a 15% reduction of normalized electricity consumption. We achieved 86.2 GWh savings with a 23% normalized reduction. GF provides manufacturing services for many "fab-less" or "fab-light" customers. Our Scope 1 and 2 emissions can be considered Scope 3 emissions for our customers. GF calculates customer-specific emissions based on the relevant manufacturing locations, technologies and production volumes.	Technology solutions for humanity, pages 28–32; and Sustainable manufacturing, pages 49–55

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