



CORPORATE  
RESPONSIBILITY  
REPORT 2018





# TABLE OF CONTENTS

COMPANY PROFILE . . . . .	01	COMMUNITY ENGAGEMENT . . . . .	07
CEO STATEMENT . . . . .	02	SUSTAINABLE MANUFACTURING . . . . .	08
GOVERNANCE . . . . .	03	PRODUCT STEWARDSHIP . . . . .	09
STAKEHOLDER ENGAGEMENT . . . . .	04	SITE PROFILES . . . . .	10
SUPPLIER RESPONSIBILITY . . . . .	05	ABOUT THIS REPORT . . . . .	11
OUR PEOPLE AND WORKPLACE . . . . .	06	GRI CONTENT INDEX . . . . .	12

# COMPANY PROFILE

We are GLOBALFOUNDRIES, a leading full-service semiconductor design, development, fabrication and innovation company with locations across the globe.

We partner with some of the world's most inspired companies to develop and produce the semiconductors that are changing the way people live today and defining what's possible for tomorrow.

As a manufacturing services company, operational excellence remains our first priority. We make possible the technologies and systems that transform industries. And we are dedicated to being the best possible partner for our customers, delivering the expertise and insights to help position them

as the leaders in their markets. We develop the products and technologies that are moving the world forward, making lives easier and creating new ways to meet the challenges of tomorrow. Our target markets include Mobility, Automotive, Communication and Datacenters, and IOT (the Internet of Things).

Since our foundation in 2009, we have continually expanded—breaking ground on our Fab 8 in New York in 2009, and performing expansion and technology upgrades to Fab 1 in Dresden. With the integration of Chartered Semiconductor in Singapore in January 2010 and IBM's Microelectronics Division in 2015, we have boldly pursued opportunities to strengthen our technology portfolio, manufacturing capacity, and diversity.

Today, GLOBALFOUNDRIES operates manufacturing centers in Dresden, Germany; Malta and East Fishkill, New York; Burlington, Vermont; and Singapore. GLOBALFOUNDRIES' corporate offices are in Santa Clara, California (Silicon Valley) with a global network of R&D, design enablement, and customer support operations in Singapore, China, Korea, Taiwan, Japan, the United States, Germany, Switzerland, France, India, and the Netherlands. GLOBALFOUNDRIES is owned by Mubadala Investment Company, which is owned by the Government of Abu Dhabi.

## COMPANY LOCATIONS





**Dr. Thomas Caulfield**  
CHIEF EXECUTIVE OFFICER

At GLOBALFOUNDRIES, corporate responsibility is more than a buzzword—it is at the core of everything we do. Our mission as a company is to innovate and partner with our clients to deliver technology solutions for humanity. The semiconductors that we manufacture enable life-changing technologies across a broad range of applications, from sensors to servers and everything in between. These technologies, in turn, make possible the innovations that will address many of society's greatest challenges.

We launched GF in 2009 with a commitment to corporate responsibility that has provided a strong foundation as we continue to adapt to an ever-changing industry. Today, we are guided by four key corporate values: Create, Embrace, Partner, and Deliver—always with unyielding

integrity. What we do is important, but how we do it is what truly defines our character. This applies across all of our operations and our interactions with clients, suppliers, and the communities where we operate.

I am pleased to share GF's 2018 Corporate Responsibility Report, which highlights key areas of focus and progress, including:

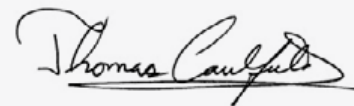
- **Strengthening our Corporate Responsibility Management System** spanning ethics, labor, environment, and health and safety to ensure we meet the stringent and continuously evolving expectations of all stakeholders. In 2017 and 2018 we performed closure audits under the RBA (Responsible Business Alliance) Validated Audit Process and achieved the highest scores possible, qualifying for RBA VAP Platinum Level Recognition.



- **Moving to an enterprise-wide certification of our global EHS management system** to the ISO 14001 environmental management systems standard and the OHSAS 18001 occupational health and safety management system standard.
- **Reducing our resource consumption and emissions of greenhouse gases** along our path to more sustainable manufacturing. We have made substantial progress towards achieving our 2016–2018 resource conservation goals. As shown in this report, by completing numerous improvement projects we have achieved reductions of more than 15 percent in our normalized water and electricity consumption rates, as well as our normalized greenhouse gas emission rate.

- **Growing our internal GLOBALWOMEN network**, whose mission is to create a sustainable framework for the professional development of women at GF. As GLOBALWOMEN’s senior executive sponsor, I am specifically proud to report that International Women’s Day 2018 marked the launch of our Singapore chapter, following our Bangalore chapter launch exactly one year earlier. Both complement and enrich our existing US GLOBALWOMEN network.
- **Expanding the impact of our community engagement and giving programs.** Since the 2016 launch of GlobalGives, our global giving platform, our employees have made over 13,000 donations. These totaled over \$300,000 USD in combination with corporate donations for global disaster relief.

While I am proud of our progress, made possible by the dedication of our nearly 17,000 employees around the globe, I recognize that the path to excellence is never-ending. As we celebrate our company’s 10<sup>th</sup> anniversary in 2019, I look forward to continuing to work with our clients, communities and suppliers to meet our shared goals of a prosperous industry that is also a leader in responsible business practices.



**Dr. Thomas Caulfield**  
CHIEF EXECUTIVE OFFICER

GLOBALFOUNDRIES is committed to upholding the highest ethical and compliance standards. Each of our employees, contractors, and consultants has the responsibility to carry out his or her duties in a manner consistent with this commitment.

#### **GLOBALFOUNDRIES' WORLDWIDE STANDARDS: CODE OF CONDUCT**

GLOBALFOUNDRIES' 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. 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 intellectual property, and anti-corruption. It also explains the major elements of our compliance program and identifies where employees can seek help and support. The Code has been communicated to all employees, and employee training and/or certification on the Code is repeated annually.

GLOBALFOUNDRIES' Code is aligned with the Responsible Business Alliance Code of Conduct (RBA Code). GLOBALFOUNDRIES joined the RBA in May 2016, following years of incorporating its Code into our business practices. We stand committed to the RBA Code and its continuous pursuit of excellence in corporate responsibility and the extension of responsible practices throughout the supply chain.

GLOBALFOUNDRIES established the Ethics & Compliance Office within the Legal Department to develop, coordinate, and support the compliance program and foster a culture of principled behavior and decision-making. This Office is responsible for promoting employee awareness, education, and training, as well as for creating and implementing a program to assess risks and proactively prevent and detect unlawful/unethical conduct. The Ethics & Compliance Office works closely with the Ethics Committee (including the Chief Human Resources Officer, Chief Financial Officer, and Chief Legal Officer), which is the body charged by the Board of Directors to oversee the compliance program.

## 03 GOVERNANCE

The GLOBALFOUNDRIES Ethics First Helpline is accessible 24 hours a day, 365 days a year, enabling employees and stakeholders to inquire directly about the compliance program and report potential violations and other concerns. The Helpline is available to employees and contractors as well as customers, suppliers, and vendors globally. We promptly review all reports, and the company has a strong non-retaliation policy to protect anyone who makes a good-faith report. Investigations of complaints are overseen by the GLOBALFOUNDRIES Ethics & Compliance Office, supported confidentially by other internal organizations such as Internal Audit and Global Security.

### 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.

#### 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 establishes the “tone at the top.”

The Board reviews and determines the company’s strategy, monitors and assesses the company’s corporate and financial performance, establishes and monitors effective compliance systems and policies, and oversees the performance of GLOBALFOUNDRIES’ executive management. The Board is composed of our

CEO, Dr. Thomas Caulfield; representatives of Mubadala Investment Company, our shareholder; and other senior industry leaders. The Board draws on a great depth of experience that spans the semiconductor and equipment industries, international finance, energy, aerospace, and business development. The Chairman of the Board is not an executive officer of the company.

#### Board Committees

Two committees support the Board in carrying out its governance responsibilities: Audit, Risk & Compliance; and People & Compensation (see below).

The Audit, Risk & Compliance Committee (ARC) is mandated by the Board to oversee the integrity of financial statements; compliance with legal and regulatory requirements; the effectiveness of internal systems and controls



## 03 GOVERNANCE

(including the company's internal audit function); the risk management function; and the independence, qualifications, and performance of the company's external auditors.

The People & Compensation Committee assists the Board in fulfilling its responsibilities concerning the hiring and compensation of our executives and in providing guidance to GLOBALFOUNDRIES' management on personnel and compensation issues.

**GLOBALFOUNDRIES' Chief Executive Officer** GLOBALFOUNDRIES' 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 ARC, the Legal Department and the Internal Controls Department are mandated by the CEO to oversee corporate governance at GLOBALFOUNDRIES. Together, the Legal Department and the Internal Controls Department 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 to the ARC Committee.

In addition, the Compliance Network promotes our culture of principled behavior and decision making. The Compliance Network consists of a group of influential employees who serve as Ethics & Compliance representatives to help identify key compliance risks, drive engagement, and ensure that training and communications are tailored to the needs of the individual sites.

Environmental Health & Safety scorecards are provided quarterly to the ARC.

## 03 GOVERNANCE

### **Delegation of Authority**

GLOBALFOUNDRIES is an integral part of the Mubadala Group. An important mechanism in maintaining a strong relationship with our sole shareholder is the shareholder-approved Delegation of Authority (DOA). The DOA allows the shareholder to exercise control and oversight over the authority levels within the company.

The DOA is a critical component of our corporate governance structure. In accordance with the GLOBALFOUNDRIES' DOA, the Board has delegated certain of its powers to the Board Committees, the CEO, and management. The Board, management, employees, contractors, agents, and anyone acting on behalf of GLOBALFOUNDRIES are responsible for ensuring that they operate in accordance with the DOA. On an ongoing basis, management in

coordination with the ARC ensures that the DOA is appropriate for the nature of the business and that it is reviewed on an annual basis.

### **Stewardship Committee**

In addition to the oversight provided by the Board and its committees, the GLOBALFOUNDRIES Stewardship Committee is responsible for setting strategic direction, conducting management review, and providing approval for risk management and business continuity, global Environmental, Health & Safety (EHS) and Corporate Social Responsibility (CSR) matters. Our Stewardship Committee is led by the CEO and includes key members of the Senior Leadership Team.

### **Self Assessments and Audits**

GLOBALFOUNDRIES is strongly committed to protecting the fundamental rights of all people. We strive to maintain a fair and open workplace based on a culture of respect, dignity, and integrity for all. As outlined in our Worldwide Standards: GLOBALFOUNDRIES Code of Conduct, the company 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, political and/or third party affiliation, sex, sexual orientation, gender identity, or veteran status.

## 03 GOVERNANCE

We assess our own conformance with the RBA Code using the RBA's annual self-assessment questionnaires (SAQs) for each of our manufacturing sites. To date, our SAQ results are rated as “low risk” for non-conformance with the RBA Code. At selected sites, we are participating in the RBA's VAP (Validated Assessment Process), an independent third-party on-site conformance audit. SAQ and VAP audit results are shared with our customers within the RBA-Online tool. GLOBALFOUNDRIES' SAQ scores, risk ratings and VAP scores are listed in [TABLE 1](#).

TABLE 1. GLOBALFOUNDRIES' SAQ Scores, SAQ Risk Rating and VAP Scores

	2018 SAQ		VAP Audit	
	Score (100 points possible)	Risk Rating >85% = Low Risk	Score (200 points possible)	Date and Type of Audit
GLOBALFOUNDRIES (corporate)	92.4	Low	N/A	
GLOBALFOUNDRIES Fab 1, Dresden, Germany	91.3	Low		
GLOBALFOUNDRIES Singapore (Fabs 2, 3, 5, 7 & 3E)	89.1	Low	200 (Qualified for RBA VAP Platinum Level Recognition)	Oct 2017, Closure Audit (New Audit September 2018)
GLOBALFOUNDRIES Fab 8, Malta, New York, U.S.A.	89	Low		
GLOBALFOUNDRIES Fab 9, Burlington, Vermont, U.S.A.	89.5	Low	200 (Qualified for RBA VAP Platinum Level Recognition)	June 2018, Closure Audit
GLOBALFOUNDRIES Fab 10, East Fishkill, New York, U.S.A.	91.2	Low		

## 03 GOVERNANCE

### **Operational Risk Management**

GLOBALFOUNDRIES manages risk at the enterprise, business, and functional levels. Our structured approach 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. We routinely review and update our business resilience and preparation, including risk mitigation and business continuity plans. Each year, our manufacturing sites and business units identify the potential operational and natural disaster risks that present business continuity challenges. Executive management conducts an annual review of prioritized risks and our related mitigation strategies, projects, and goals.

### **Operational Security Management**

Protecting the assets and intellectual property of GLOBALFOUNDRIES and our customers and suppliers is a critical focus area. GLOBALFOUNDRIES' broad portfolio of intellectual property advances our leadership in manufacturing technology and strengthens our competitive position. We adhere to strict policies and procedures at all times to ensure the security of company confidential information and the confidential information of our customers and suppliers. We pursue certification of our Security Management Systems according to international standard ISO 15408 (Information Technology – Security Techniques) where it adds additional value to our existing management systems and clients. Our Enterprise Security

Council brings together expertise in information security, physical security, trade compliance, logistics, and government security programs for a comprehensive approach to security. That approach extends to each employee and their individual responsibilities. Annually, we conduct integrated Confidentiality and Security training for all employees.

## STAKEHOLDER ENGAGEMENT

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, suppliers, communities, and industry peers, sharing perspectives and gaining valuable insight relevant to our business and operations.

### CUSTOMERS

Committed to manufacturing and execution excellence, we focus on the technologies and differentiated solutions that transform markets. And we are dedicated to being the best possible partner for our customers—helping to identify new opportunities to bring the future to life. We created our Customer Experience program to continually improve the value of our customers' partnership with GLOBALFOUNDRIES. The program is geared to drive improvements by listening to our customers and feeding their voice back into our business processes. We track internal, customer-facing key performance indices that closely align to our customers'

Quality, Business, Technology, Fulfillment and Responsiveness targets to quickly adjust 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. The relationships we maintain through ongoing dialogue and collaboration ensure that we understand our customers' expectations, including our shared commitment to social and environmental responsibility.



**EMPLOYEES**

We take great pride in the dedication and commitment of our global workforce to GLOBALFOUNDRIES' success and work to further engage employees at both the global and local level. We nurture a performance-based culture in an environment that encourages individual development, collaboration and new ideas. We also feature employees' professional and personal success stories in our Employee Spotlight section on GlobalConnect as an inspiration to all fellow employees.

Employees stay current on corporate and local site information through communication channels including quarterly all hands events, the internal bi-weekly global News Digest, our company intranet (GlobalConnect), the Global Community internal social platform, and ongoing corporate and employee communications, all

of which include opportunities to ask questions and provide feedback. GLOBALFOUNDRIES also provides the opportunity for more in-depth and confidential feedback via dedicated and third-party administered employee surveys. In 2017, our ONEGF employee survey was conducted to gather employee perspectives on what is working well in working at GLOBALFOUNDRIES and what can be improved upon to continue to drive organizational success.

**COMMUNITIES**

Along with our global footprint comes a responsibility to the communities in which we operate. Through our worldwide GlobalGives program, we provide employees at all of our sites with the opportunity to make a positive impact in their local communities in the areas of education, philanthropy, and the environment. Each of our fab locations has well-established programs and

teams dedicated to enriching the lives of local citizens, and we take great pride in their long history of community involvement.

**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. We engage with our suppliers through periodic business reviews and our Total Supplier Rating (TSR) process. The TSR determines supplier performance with regard to technology, quality, cost, flexibility, and service including Environmental, Health & Safety (EHS) and Corporate Social Responsibility (CSR). EHS and CSR expectations are established early in supplier relationships to improve efficiency and

reduce risks throughout the supply chain. We extend our commitment to responsible business practices to our suppliers, requiring them to comply with the RBA Code as well.

### 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 Semiconductor Industry Association (SIA), the European Semiconductor Industry Association (ESIA), 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, ITI, the WSC, and SEMI all have active EHS committees.

### THE MATERIALITY ANALYSIS

This CSR Report and metrics focus on certain Corporate Responsibility topics that we consider “material” to our business. We periodically conduct a Materiality Analysis by engaging a team representing diverse perspectives on GLOBALFOUNDRIES’ business, to provide insights into the expectations and perceptions of internal and external stakeholders. The Materiality Analysis Team is composed of

senior representatives from Communications; Customer Engineering; Ethics & Compliance; Global EHS & CSR; Global Supply Management; Human Resources; Global Sales and Business Development; and Risk Management, Sustainability, and Real Estate. The team identified a broad range of issues of concern which were prioritized with regard to their economic, environmental, and social impacts to GLOBALFOUNDRIES, as well as their perceived importance to internal and external stakeholders. The resulting materiality map ([FIGURE 1](#)) which determines the scope and content of this report, was reviewed and approved by GLOBALFOUNDRIES’ Executive CSR Council in 2017.

# STAKEHOLDER ENGAGEMENT

FIGURE 1. GLOBALFOUNDRIES' Materiality Map





GLOBALFOUNDRIES requires that our suppliers follow ethical and responsible business practices. 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 consulting. The majority of our manufacturing suppliers operate in the United States, Japan, Singapore, Germany and other EU countries, and Taiwan. There is also a small, but growing number of suppliers from the People's Republic of China.

GLOBALFOUNDRIES is a member of the Responsible Business Alliance (RBA) and is committed to the RBA Code of Conduct and its continuous pursuit of excellence in corporate responsibility and extension of responsible practices throughout the supply chain. 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.

Furthermore, we have implemented a supplier RBA Code conformity assessment and verification process directed at GLOBALFOUNDRIES “major” suppliers. We take a risk-based approach to determining these suppliers, following RBA Code requirements and factoring in supplier spend, facility location, and the nature of their business. In 2017, this list included 52 major suppliers providing capital goods, materials, and services (such as outsourced subcontractor services, but also covering on-site services such as janitorial, canteen and security services).

Annually, we ask major suppliers to provide a signed certification acknowledging their understanding of the RBA Code and our requirement to be in conformity, along with self-assessment information using RBA questionnaires and tools. GLOBALFOUNDRIES applies a risk-based approach for selected major suppliers to provide evidence of RBA Code conformity, through VAP (Validated Assessment Program) reports or targeted document reviews. To ensure that our supplier requirements are well understood, supplier leads within GLOBALFOUNDRIES Global Supply Management Department receive training regarding the RBA Code, focused specifically on its escalation into the supply chain and the results of our Code verification process. Where applicable, the annual results of RBA Code conformity assessment and verification process are included in our Global Supplier Ratings.

**RESPONSIBLE MINERALS SOURCING  
CONFLICT MINERALS—ACHIEVING A  
DRC CONFLICT-FREE SUPPLY CHAIN**

GLOBALFOUNDRIES requires all materials to be sourced responsibly—this applies specifically to materials potentially sourced from conflict-affected and high risk areas. GLOBALFOUNDRIES established a conflict minerals policy which prohibits sourcing of tantalum, tin, tungsten and gold (“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.

In the complex, multi-step silicon wafer manufacturing process, tantalum and tungsten are added to achieve the desired functionalities of integrated circuits. The commodities we purchase that contain tantalum or tungsten 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.

GLOBALFOUNDRIES’ goal is to maintain our 3TG “DRC Conflict-Free” supply chain—a status that we initially achieved in January 2016. 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). To support our customers’ needs for reporting under the United States Securities and Exchange Commission’s (SEC) Conflict Minerals Rule, we routinely provide due diligence information using the RMAP’s industry-standard reporting tools and processes.

To maintain our DRC Conflict-Free supply chain status, we manage our supply base to control all commodities containing 3TG metals. We partner with our suppliers 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. We also monitor emerging concerns regarding responsible sourcing of other materials used in semiconductor manufacturing, such as cobalt, and have initiated due diligence processes aligned with the RMI’s Cobalt Initiative. Our conflict minerals program and progress are reviewed periodically by the Stewardship Committee.



GLOBALFOUNDRIES relies upon our people to deliver on our vision and mission. Our strength lies in the talent and diversity of our employees, who bring a range of capabilities, experiences, and qualifications that give us a competitive advantage in our global markets. GLOBALFOUNDRIES strives to create a respectful workplace for our approximately 17,000 employees, valuing diversity and enabling employees to learn, grow, and develop their talents.

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 respect the rights of employees to associate freely.

While we naturally have an international workforce due to the span of our global locations, GLOBALFOUNDRIES is also proud to be an employer of a highly diverse workforce within our sites. For example, our workforce at Fab 8 in New York is drawn from local talent as well as experienced professionals from across the United States and the globe and represents more than 45 nationalities. Similarly, while the majority of our workforce at Fab 1 in Dresden, Germany, is hired locally, the fab is home to employees from 40 nations. Our Singapore employees represent 20 nations.

In 2013, we established the GLOBALWOMEN network whose mission is to create a sustainable framework for the professional development of women at GLOBALFOUNDRIES. GLOBALWOMEN focuses on initiatives that have a positive impact on women and our business.

This is already happening in multiple ways:

- Establishing a chapter at each major U.S. site – (Austin, TX; Santa Clara, CA; Burlington, VT; and Malta, Albany, and East Fishkill, NY) as well as in Bangalore, India; and Singapore.
- Memberships, awards, publications, and leadership opportunities;
- A variety of site events and activities to network and engage employees;
- Attracting and recruiting top female talent into our business;
- “Lunch and learn opportunities” on topics that are relevant to women in business.

GLOBALWOMEN is supported by an Executive Steering Committee led by CEO Tom Caulfield, Emily Reilly (Senior VP Human Resources), and Mike Cadigan (Senior VP, Global Sales and Business Development) along with site executives. The company has also partnered with the Society of Women Engineers (SWE) as a corporate member. This partnership allows GLOBALWOMEN to leverage training, conference participation, and an extensive network of resources within SWE as we build out this program.

### WORKFORCE COMPOSITION

The composition of our global workforce by region, gender, employment type (permanent / temporary) and nature of contract (percentage of full time contracts) is presented in [TABLE 2](#), while [TABLE 3](#) provides an overview of the composition of our global workforce by employee category, gender, and age.

### COMPENSATION & BENEFITS

GLOBALFOUNDRIES' Global Benefits Strategy is to provide compliant and cost-effective benefit programs that are considered competitive against current local market norms. Our goal is to gain 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 types of benefit plans we offer reflect the prevailing local market practices. Benefits under this strategy include healthcare, parental leave, risk benefits such as personal insurance, retirement savings, time off, educational assistance, and other location-specific benefits. For example, GLOBALFOUNDRIES' approach to parental leave for employees for the birth or adoption of a child is based on a combination of national and local leave entitlements implemented through our regional leave policies.

### EMPLOYEE EDUCATION & TRAINING

GLOBALFOUNDRIES company culture leverages the power of our people by recognizing the importance of teamwork, increased employee engagement and empowerment.

We provide our employees resources and courses that develop job and career skills and help people manage change: Through our global and regional development resources our employees own their professional development, ranging from communication and leadership skills to project management and technical topics. We offer instructor-led courses, on-the-job-training, and e-learning, including through access to an extensive third party online training platform. We also support our employees' development through mentoring, professional certifications, and partnerships with outside organizations.

## OUR PEOPLE AND WORKPLACE

TABLE 2. GLOBALFOUNDRIES Workforce Composition by Region, Gender, Employment Type and Contract (as of December 31, 2017)\*

Region	Employee Category	Male	Female	Total
		Percentage / Percentage of Subtotals		
U.S**	<b>Total</b>	<b>78%</b>	<b>20%</b>	<b>45%**</b>
	Permanent	99%	98%	97%
	Temporary	1%	2%	3%
	Full time	100%	99%	98%
	Contingent	0%	1%	1%
	Other	0%	0%	0%
Asia Pac	<b>Total</b>	<b>66%</b>	<b>34%</b>	<b>35%</b>
	Permanent	100%	100%	100%
	Temporary	0%	0%	0%
	Full time	100%	100%	100%
	Contingent	0%	0%	0%
	Other	0%	0%	0%
EMEA	<b>Total</b>	<b>82%</b>	<b>18%</b>	<b>19%</b>
	Permanent	97%	95%	96%
	Temporary	3%	5%	4%
	Full time	97%	73%	93%
	Contingent	1%	2%	1%
	Other	3%	3%	3%
<b>Total</b>	<b>Total</b>	<b>75%</b>	<b>24%</b>	<b>100%</b>
	Permanent	99%	98%	98%
	Temporary	1%	2%	2%
	Full time	99%	96%	98%
	Contingent	0%	1%	0%
	Other	1%	1%	1%

TABLE 3. GLOBALFOUNDRIES Workforce Composition by Gender, Employee Category and Age (as of December 31, 2017)\*\*

	Employee Category	All Employees	All Managers	Directors and above	Vice Presidents and above	Senior Leadership Team	Board of Directors
<b>Male (Age)</b>	<b>Male (Totals)</b>	<b>75%</b>	<b>81%</b>	<b>85%</b>	<b>87%</b>	<b>87%</b>	<b>100%</b>
	under 30	14%	2%	0%	0%		
	30-50	57%	63%	35%	19%		
	over 50	29%	36%	65%	81%		
	Not disclosed	1%					
<b>Female (Age)</b>	<b>Female (Totals)</b>	<b>24%</b>	<b>19%</b>	<b>15%</b>	<b>13%</b>	<b>13%</b>	<b>0%</b>
	under 30	19%	3%	0%	0%		
	30-50	58%	70%	49%	50%		
	over 50	21%	27%	51%	50%		
	Not disclosed	1%					

\*Numbers include contingent workers and other employees (such as interns, students and apprentices), which both represent a share of less than one percent. \*\*1.5 percent of U.S. employees (equals 0.7 percent of total) have not self-identified their gender

Our performance management process reflects our employees' professional development—it is designed to help employees and managers find directions through joint goal and development planning, to ultimately deliver results not only for our company, but as well as for our employees themselves.

### HEALTH & SAFETY

Protecting the health, safety, and well-being of our employees, visitors, and communities is our greatest responsibility, one that we embrace proactively and systematically. We strive to continuously reduce occupational injuries and illnesses in all of our operations, with an ultimate goal of zero incidents.

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

Our OHSAS 18001-certified occupational health and safety management system is based on these Standards, and in 2017 we transitioned to an enterprise-wide certification which covers all of our manufacturing locations. Our global OHSAS 18001 certificate is available [here](#).

At each fab site, GLOBALFOUNDRIES' health and safety professionals, management, and employees share responsibility for implementing the Standards through local programs and operating procedures. 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)
- Substitution (such as replacing a hazardous process or material to 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).

We are committed to Behavior-Based Safety (BBS), a collaborative approach that recognizes and facilitates individual safety awareness and behaviors, with collective results. Behavior-Based Safety emphasizes communications, engagement, and training to encourage safe behaviors. We provide a wide range of general and job-specific health and safety training to our employees and contractors.

Our Risk Management, Sustainability & Real Estate organization (RMSRE) provides a unique platform for collaboration and integration across the disciplines of Safety, Environmental, Industrial Hygiene, Health, Security, Real Estate,

and Risk Management—united in the pursuit of operational excellence and the mitigation of risks to our people, communities, and assets. The RMSRE Centers of Excellence (COEs) program provides opportunities for staff from different sites to drive global integration and to identify and implement best practices. In the areas related to occupational health and safety, the COEs have focused on workplace monitoring and confirming the effectiveness of engineering and administrative controls that limit potential exposures, and sharing best practices related to emergency response and pre-purchase evaluation of semiconductor manufacturing equipment.

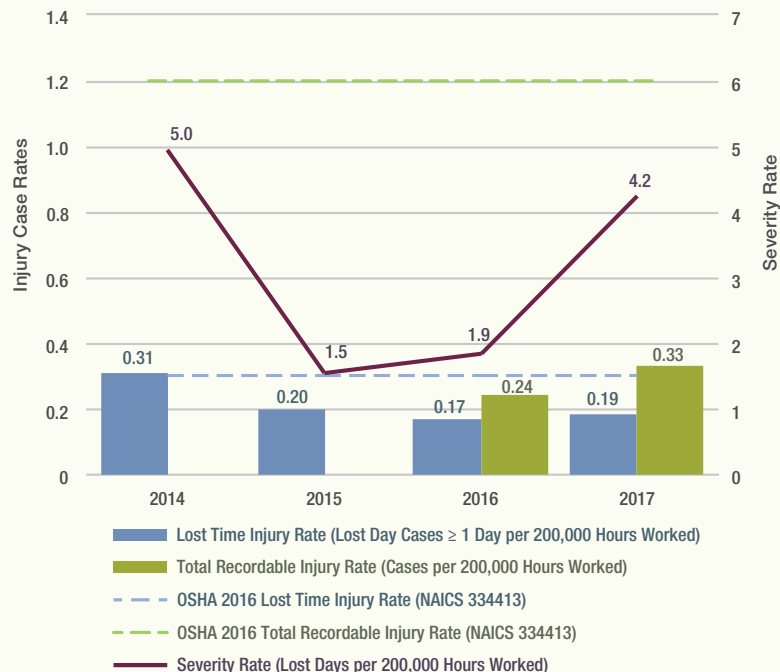
### **Safety Performance in the Workplace**

GLOBALFOUNDRIES measures the performance of our health and safety programs 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. At the highest level, Total Recordable Injury Rate, Lost Time Injury Rate and Severity Rate provide an aligned performance view across the company. [FIGURE 2](#) shows GLOBALFOUNDRIES corporate rates from 2014 through 2017 in comparison to 2016 U.S. Bureau of Labor rates for the semiconductor industry (with data for 2016 being the most recent year for which these governmental statistics are available).



Our Lost Time Injury Rate declined from 0.31 in 2014 to 0.19 in 2017, although the rate was even lower in 2016. For comparison, the 2016 U.S. Lost Time Injury Rate was 0.3 for the semiconductor industry. Our employee Total Recordable Injury Rate increased from 0.24 in 2016 to 0.33 in 2017, similar to the increase described for the Lost Time Injury Rate. The comparable 2016 U.S. Total Recordable Injury Rate for the semiconductor industry was 1.2. The Severity Rate measures the number of days employees were unable to work following an occupational injury or illness. Our 2017 Severity Rate decreased from 2014 (5.0) to 2016 (1.9), but increased in 2017 to 4.2 due to a relatively small number of incidences with more lost days. Our 2018 goal is to reduce our rates of total recordable injuries, lost work-day injuries and severity by 10% below our 2017 performance.

FIGURE 2. GLOBALFOUNDRIES Corporate Recordable Injury Case Rate, Lost Day Injury Case Rate, and Severity Rate (2014–2017\*)



\*Total Recordable Injury Rates were not tracked for non-US sites prior to 2016.

**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. GLOBALFOUNDRIES 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.

**Promoting Health and Well-Being**

We place great value on our employees' overall health and wellness. Each of our manufacturing facilities has an on-site clinic and medical professionals who administer health and wellness programs in collaboration with Human Resources. 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. Annually, our facilities across the globe hold a themed "Health Day" for all employees with information campaigns and activities to further promote a healthy lifestyle.

In addition, GLOBALFOUNDRIES' Employee Assistance Program (EAP) provides all U.S. employees and their families with confidential access to resources to help with life management issues. The Employee Assistance Program resources include short-term counseling sessions, legal and financial services, childcare, eldercare, and adoption references.

## COMMUNITY ENGAGEMENT

Our company has a global footprint and, with it, a responsibility to the communities in which we have a presence. Globally, our community programs focus on education outreach, philanthropy, and the environment.

Each of our fab locations has well-established programs and teams dedicated to enriching the lives of local citizens, and we take great pride in their long history of community involvement. Through the GlobalGives program, we are building upon these grassroots efforts, embracing them as integral to our company identity, and connecting employees and teams to a larger international effort.

In 2017, GLOBALFOUNDRIES launched several worldwide campaigns through its giving platform in response to natural disasters that had resulted in extensive damage and devastation. Together with employees, GF provided aid to

victims of Hurricanes Matthew, Irma, and Maria in the mainland USA and Puerto Rico; flooding in South Asia; a major earthquake in Mexico; and wildfires in California. In the 8 quarters since the launch of GlobalGives, our employees and company have made more than 13,000 donations totaling more than \$300,000.

### EDUCATION OUTREACH

GLOBALFOUNDRIES strives to promote, develop, and support educational programs inside and outside the classroom, as well as in our homes and local communities. Our many activities include developing, supporting, and expanding upon educational programs in the STEM (Science, Technology, Engineering, and Mathematics) fields at all of our sites. Through our global STEM initiative, we provide experiential learning opportunities for students and teachers, facilitate curriculum development and mentoring support for early college high school

programs, drive programming to encourage girls to pursue education and career paths in STEM, and offer internship, job shadowing, and employment opportunities in advanced manufacturing, among others.

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

- GLOBALGirls, a summer STEM camp for middle school girls launched in 2017 to inspire our next generation of female science and technology leaders and address the gender gap in manufacturing (Malta, NY, and Burlington, VT);
- FIRST® (For Inspiration and Recognition of Science and Technology) robotics programs, designed to motivate young people to pursue education and career opportunities in STEM, while building self-confidence, knowledge, and life skills (Malta, NY, East Fishkill, NY and Burlington, VT). Together with its consortium of business partners, GLOBALFOUNDRIES has

collectively pledged more than \$1 million to support STEM programming along the U.S. Northeast Tech Corridor over six years (2015–2020);

- “Jugend Forscht” (Youth in Science) Saxony, a regional competition that supports creative talents and encourages young people to put their ideas into practice (Dresden, Germany);
- Volunteers from GF Bangalore held two “show and tell” events for local 8<sup>th</sup>–10<sup>th</sup> graders at local schools. The events included an introduction to GF, a detailed presentation and videos on semiconductors and the fabrication process, a number of demonstrations and electronics experiments, and a quiz contest where students answered general science questions.

### PHILANTHROPY

We believe the success of our company is directly related to the health of the communities we call home. GLOBALFOUNDRIES and its employees make a difference by generously

volunteering their time and donating money and goods to support a wide variety of philanthropic causes, helping to improve the quality of life in our communities. Our Calendars for Charity program leverages the winning images from our annual employee photo contest to create calendars that are given to employees who make charitable donations in support of their local communities.

Some of the many local programs we have supported across the company include:

- Hair for Hope, which promotes awareness of childhood cancer. A total of 68 Singapore GLOBALFOUNDRIES employees had their heads shaved in 2017, raising more than \$115,000. (Singapore);
- Food Drives to help fight hunger in local communities (Burlington, VT, Malta, NY, Santa Clara, CA, Austin, TX);
- Operation Holiday Happiness, which provides gifts for needy families in the East Fishkill, NY community, Toys for Tots in Malta, NY; and Louisenstift gGmbH in Dresden, a charity for children from disadvantaged families, many of whom are not able to celebrate Christmas with their families;
- GF Bangalore donated computers to the Sri Channabasaveshwara Government School in Bellary, Karnataka, to help students attend “smart” classes, and a projector to the Kidwai Memorial Institute of Oncology, a regional center for cancer research and treatment to help support cancer awareness camps in rural areas;
- Together with the towns of Malta and Stillwater, GLOBALFOUNDRIES established and funded two charitable foundations, specifically designed to benefit the communities located near our Malta, NY site. These foundations fund and support a wide variety of local community programs, not-for-profit organizations, and other charitable causes that have been benefiting the towns of Malta and Stillwater since the first grants in 2012. With the 2017 awards, the foundations have exceeded \$1.2 million in total grants invested in the communities and continue to retain healthy endowments for sustained future giving.

### ENVIRONMENT

GLOBALFOUNDRIES strives to provide our employees with opportunities to make a positive impact on the environment, both through volunteer programs and various on-site activities.

Some of the activities we support include:


- Dresden's "Ride your bike to work" campaign, running every year from April to September. In 2017 a total of 430 participants travelled almost 384,000 km to work by bicycle between April and September. As a result of the bike to work campaign, more than 53 tons of CO2 emissions that would have been emitted due to car use were avoided.
- Biannual Adopt-a-Road Cleanup Days in Malta, NY, bring employees together to clean a section of local road.

The annual celebration of Earth Day at GLOBALFOUNDRIES worldwide sites marks a highlight that serves to raise awareness for environmental protection. Some of the specific events that took place on Earth Day include:

- Local clean up events at the Elbe river shore (Dresden employees) and the Don Edwards San Francisco Bay Refuge (Santa Clara employees);
- E-waste drives for electronic products nearing the end of their useful life to be reused, refurbished, or recycled (Santa Clara, CA, and Bangalore, India).
- In Burlington, Earth Day coincided with Take Our Children to Work Day, delivering environmental conservation messages in unique and fun ways to employees and their children. The Environmental Health and Safety teams also invited local environmental organizations on-site to celebrate Earth Day.

- In East Fishkill, the site held an Earth Day event offering event tables with information on less wasteful eating portions, help on how to "recycle, reduce, and reuse" at work and at home, and proper medication disposal.
- In Singapore, employees of each fab challenged themselves with a fab-wide goal pledge, for example our SGP 300mm fab (Fab 7 and 7G) pledged to collect 500kg of recyclable waste and educate at least 100 employees on sustainable living. The pledge was achieved with 1.1 tons of recyclables collected and 232 employees trained.





GLOBALFOUNDRIES is committed to eco-efficiency in our manufacturing operations. We define eco-efficiency as optimizing the utilization of resources to yield products meeting stringent performance and quality criteria.

#### **ENVIRONMENTAL, HEALTH & SAFETY MANAGEMENT SYSTEMS**

Our Global EHS Policy and Standards are the foundation of an integrated EHS Management System. GLOBALFOUNDRIES has achieved an enterprise-wide certification to both the ISO 14001 environmental management systems standard and the OHSAS 18001 occupational health and safety management systems standard that covers all of our manufacturing locations. In addition, our fabs have either been

certified under the Sony Green Partner program or maintain equivalent controls to ensure product compliance. Fab 1 (Dresden, Germany) has established an ISO 50001-certified energy management system. Our certificates are available [here](#).

Fab 8, in Malta, New York, was designed as a “green fab.” The fab and associated administrative and support buildings include many energy and water efficiency features. We applied the “LEED® green building program” design criteria. Admin 1 and Admin 2 office buildings are LEED Gold® and the Fab 8.1 fabrication facility is LEED Silver®.

#### **ECO-EFFICIENCY: OUR GOALS**

We measure our operational EHS performance using key environmental performance indicators (KEPIs), reflecting resource consumption, environmental emissions, waste generation, and regulatory compliance. 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 rate of a KEPI thus reflects our eco-efficiency.



## 08 SUSTAINABLE MANUFACTURING

In 2016, we reset our resource conservation goals to address our acquisition of IBM's Microelectronic Division in 2015; including two manufacturing facilities now known as Fab 9 in Burlington, VT, and Fab 10 in East Fishkill, NY. We established a new baseline defined as the first 12 months of our combined operations following the acquisition (from July 2015 through June 2016).

We identified resource conservation projects across our manufacturing sites to reduce absolute consumption of electricity and water, greenhouse gas emissions, chemical consumption, and the generation of waste from 2016 through 2018. Our goals represent the projected aggregated annual savings of these projects by year-end 2018:

- Reduce electricity use by 48 gigawatt hours (GWh);
- Reduce water use by 3.7 Million cubic meters (m3);
- Reduce GHG emissions by 14,600 metric tons carbon equivalents (MTCE); and
- Reduce chemical use and waste generation by a combined 11,000 tons.

Noting that normalized rates are affected by changes in technology mix and the level of fab activity (loading), achieving our resource conservation goals would lead to the following forecasted reductions in normalized consumption or emission rates by the end of 2018:

- 18 percent reduction of normalized electricity consumption;
- 32 percent reduction of normalized water consumption;
- 20 percent reduction of normalized greenhouse gas emissions.

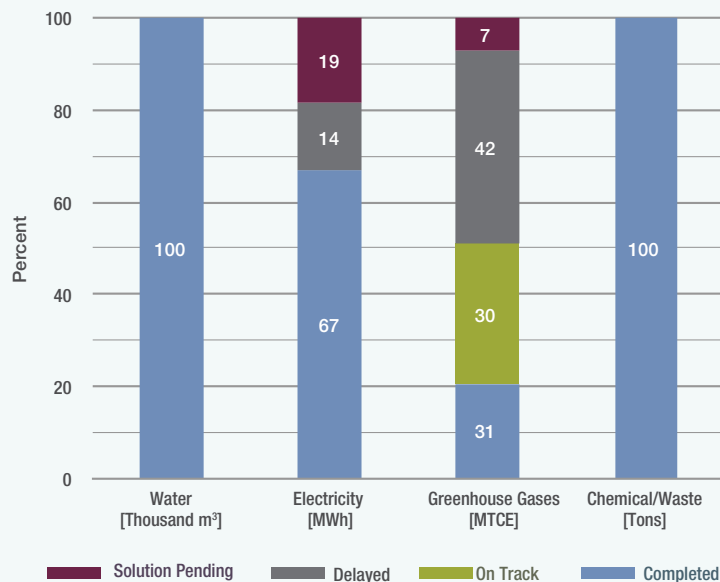
We have also maintained an annual goal to recycle and reuse at least 55 percent of hazardous waste generated across the company for our 2017 and 2018 operations.

### Progress towards our Goals

Until full-year 2018 data is available, we are measuring progress towards our new goals in percentage of completion of the underlying 2016–2018 resource conservation projects (FIGURE 3).

Most of our resource conservation projects are on track for completion or have already been completed. In addition, GLOBALFOUNDRIES' engineers are continually working to identify additional resource conservation projects. As a result we expect to achieve reductions (particularly in the areas of energy consumption and greenhouse gas emissions reduction) that outpace our original goal levels.

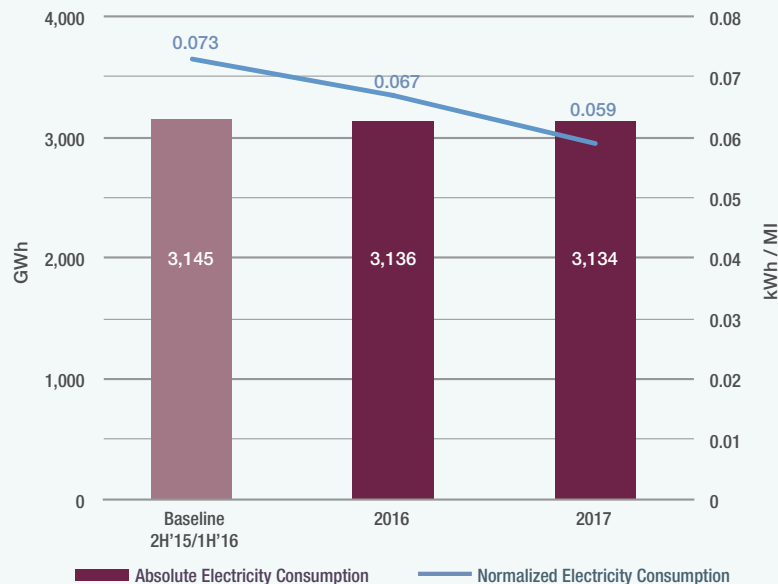
FIGURE 3. Resource Conservation Project Status



## ENERGY CONSUMPTION

FIGURE 4 shows absolute and normalized electricity consumption at our manufacturing facilities from the baseline to 2017. While absolute consumption of electricity in 2017 was flat from the baseline value, normalized electricity usage improved by nineteen percent in 2017 compared to the baseline level. We expect this trend to continue with additional efficiency improvements.

FIGURE 4. Absolute And Normalized Electricity Usage – Baseline to 2017

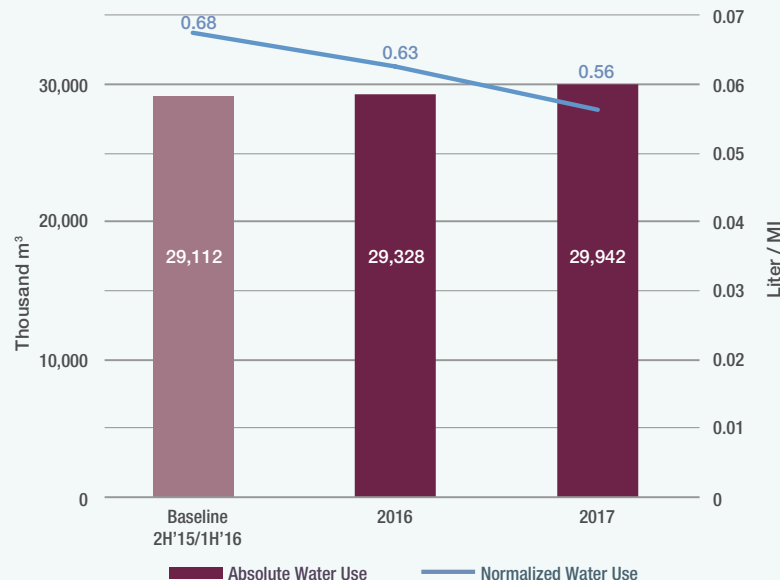


## WATER USE

**FIGURE 5** shows absolute and normalized water consumption at our manufacturing facilities at the baseline and through 2017. In 2017, absolute water consumption increased slightly over the previous year – by three percent compared to the baseline value. Comparing the 2017 normalized water consumption rate to our baseline shows a decrease (improvement) of seventeen percent. We expect continued reductions in normalized water use.

We have extensive water reuse and recycling programs at our manufacturing facilities in place. In 2017, we achieved a combined corporate water reclaim rate of 62 percent relative to incoming water supply, an 11 percent increase over our reclaim rate in 2016. In 2017, the average water recycling rate across our fab sites was 37 percent compared to incoming water, a two percent improvement over our 2016 recycling rate. “Reclaim” includes both water recycling and reuse. Some reclaimed water is used as a high-quality raw water supply to our ultra-pure water (UPW) plants (defined as “recycling”) as well as for facility operations such as cooling towers and scrubbers, which can accommodate lower-quality water sources (defined as “reuse”).

FIGURE 5. Absolute and Normalized Water Use – Baseline to 2017



### GREENHOUSE GAS EMISSIONS

Climate change is a critically important challenge impacting our global environment, human society and the global economy. GLOBALFOUNDRIES monitors our energy consumption and greenhouse gas (GHG) emissions to understand our climate impacts. We manage our climate-related business risks by conserving energy, implementing emission controls, and participating in initiatives to drive industry-wide improvements.

The potential business risks associated with climate change are complex, ranging from regulatory initiatives affecting energy and process materials to severe weather events such as droughts, flooding, and extreme temperatures. Climate-related risks, including supply or operational disruptions due to severe weather events, are evaluated as part of our risk management process. We track the development of proposed climate legislation around the world and have implemented proactive measures that go well

beyond regulatory requirements, including the World Semiconductor Council's (WSC) 2020 goal to implement best practices in all new semiconductor fabs. Our newest operating fab, Fab 8 in New York, was built to meet the WSC Best Practices commitment.



FIGURE 6 shows absolute and normalized direct (Scope 1) and indirect (Scope 2) GHG emissions at our baseline, and through 2017. Absolute total GHG emissions were slightly lower (2 percent) in 2017 relative to the baseline value, with approximately the same reduction percentages for both Scope 1 emissions and market-based indirect Scope 2 emissions. Compared to our baseline, normalized 2017 GHG emissions were 20 percent lower. We expect that continued growth in manufacturing volume along with projects to reduce direct and indirect GHG emissions will further support that trend.

Several GHG emission reduction projects commenced in 2016 and continued through 2017, including reduction in direct emissions from fuel use at the Singapore Woodlands site, and reductions in emissions of heat transfer fluid emissions at Fab 10 in East Fishkill, NY.

FIGURE 6. Absolute and Normalized Direct (Scope 1) and Indirect (Scope 2) GHG Emissions – Baseline to 2017

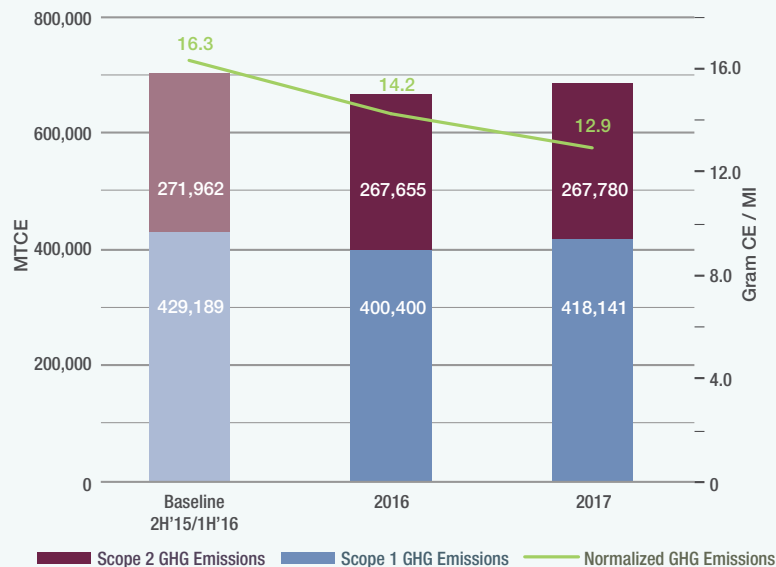
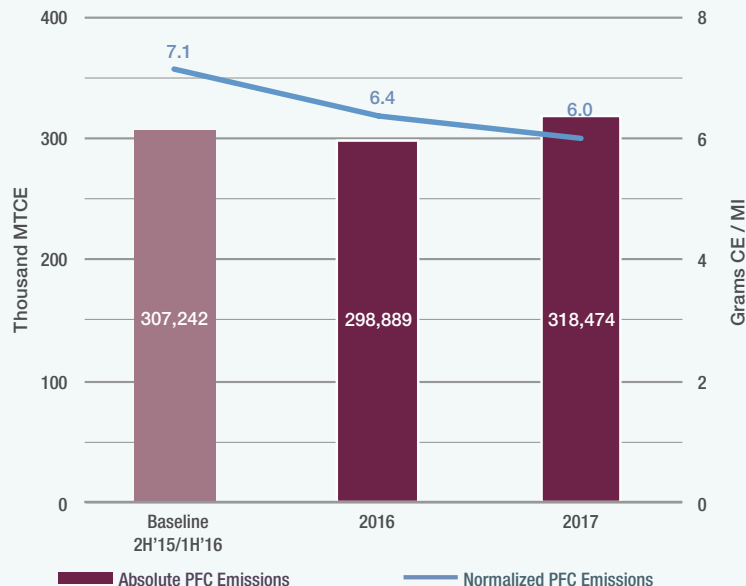


FIGURE 7 shows absolute and normalized total PFC (perfluorocompound) emissions at our baseline and through 2017. PFC gases are used in semiconductor wafer etching and Chemical Vapor Deposition (CVD) chamber cleaning. Absolute PFC emissions increased by almost four percent in 2017 compared to our baseline, whereas normalized PFC emissions decreased by 16 percent. Our Singapore Woodlands site is currently implementing a project to replace a PFC gas used in CVD chamber cleaning with one that has no global warming potential. This project is expected to result in a significant reduction in GHG emissions, adding to reductions achieved already by the built-in features of Fab 1 in Dresden and Fabs 8 and 10 in New York. These 300mm fabs were designed to produce extremely low emissions of PFCs by using low-emission gases in CVD chamber cleaning, coupled with near-universal use of point-of-use abatement equipment for PFC-using processes.

FIGURE 7. Absolute and Normalized PFC Emissions – Baseline to 2017



## HAZARDOUS WASTE

FIGURE 8 shows the absolute and normalized hazardous waste<sup>†</sup> generation at our baseline and through 2017. Absolute hazardous waste generation increased by 29 percent in 2017 compared to the baseline. During the same time, the normalized rate of hazardous waste generation increased by five percent. The rise in absolute and normalized hazardous waste generation correlates with the continued growth of the number of wafer cleaning steps in advanced processes. These cleaning steps require increased use of UPW and cleaning chemicals such as sulfuric acid. We are actively investigating ways to reduce water and chemical use to ultimately reduce hazardous waste.

FIGURE 9 shows a breakdown of the disposal methods for the hazardous waste generated in 2017. We met our 2017 goal to recycle and reuse at least 55 percent, as approximately 59 percent of total hazardous waste (including by-products beneficially recycled and reused) was recycled or reused.

<sup>†</sup>The classification of waste as “hazardous” is determined by the respective regulations that apply to our manufacturing sites.

FIGURE 8. Absolute and Normalized Hazardous Waste Generation – Baseline to 2017

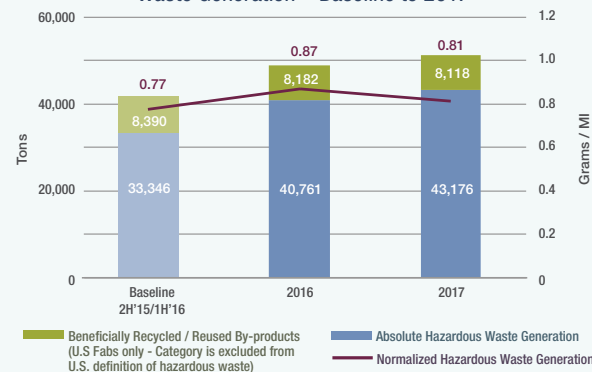
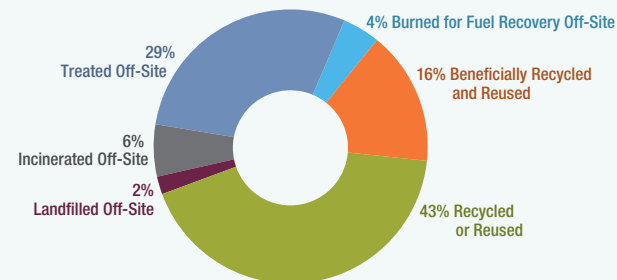


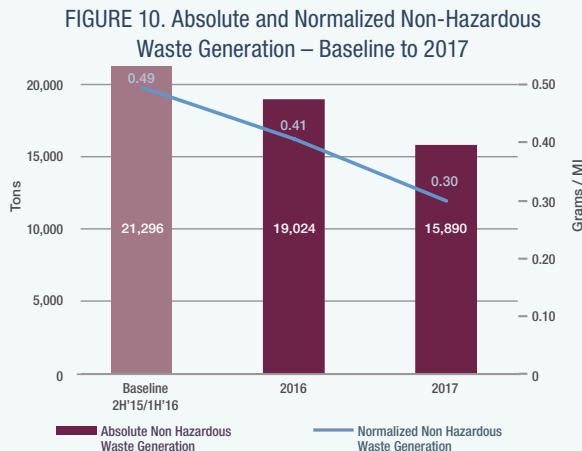
FIGURE 9. 2017 Disposal Methods for Hazardous Waste and Beneficially Recycled and Reused By-products



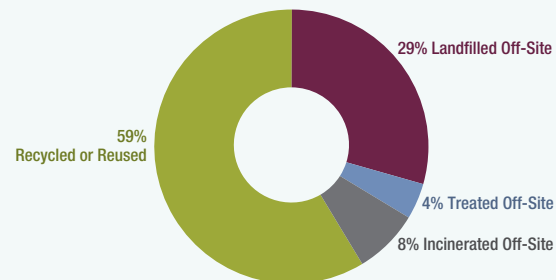
## NON-HAZARDOUS WASTE GENERATION

FIGURE 10 shows absolute and normalized non-hazardous waste generation at our baseline and through to 2017. Absolute nonhazardous waste generation decreased by 25 percent in 2017 compared to our baseline, whereas normalized non-hazardous waste generation decreased even more (by 40 percent).

FIGURE 11 shows the breakdown of the disposal methods for non-hazardous waste generated in 2017. 59 percent of non-hazardous waste generated by GLOBALFOUNDRIES in 2017 was recycled or reused.



**FIGURE 11. 2017 Disposal Methods for Non-Hazardous Waste**



### Air Emissions

All of 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).

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 8 in Malta, NY, and Fab 10 in East Fishkill, NY, have control technology 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.

### 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 2016, inspections and regular compliance reporting across our global locations resulted in four notices of violation (NOVs)<sup>‡</sup>. In 2017, inspections and regular compliance reporting across our global locations resulted in six notices of violation (NOVs). All issues are being corrected in communication with the respective regulatory authorities. No financial penalties were assessed in 2017. In 2018 GLOBALFOUNDRIES Singapore paid penalties of approximately \$4,800 USD related to wastewater discharge violations in January 2016.

<sup>‡</sup>This is a restatement to our 2017 CSR report that reported 2 NOVs for the same time period.



We enable our customers' success with our broad range of technologies and our manufacturing expertise, supported by our Quality Management Systems, while at the same time keeping a focus on opportunities to reduce their environmental footprint. We take action to reduce the potential health, safety, environmental, and social impacts of the product life-cycle stages under our control.

#### QUALITY MANAGEMENT SYSTEMS

GLOBALFOUNDRIES' Quality Management System is in place to ensure that our products meet or exceed customer specifications on quality and reliability for all industries and markets. We are dedicated to a "zero excursion, zero defect" mission in all aspects of our product realization and business processes.

GLOBALFOUNDRIES' manufacturing facilities obtain certification to international quality standards that validate the effectiveness of the quality management system in support of market segments. These include ISO 9000, and may extend to market-specific standards for automotive (IATF-16949) and aerospace (AS9100) products. Our advanced quality system builds upon these internationally recognized standards, codifying the requirements to ensure product quality, including robustness of the management system and infrastructure.

In the quest to continually improve our customers' experience when partnering with GLOBALFOUNDRIES, we listen to our customers and feed their voice back into our business processes and systems. We manage customer issues in our Action Escalation system to ensure responsive follow-through with our commitments. We track internal, customer-facing key performance indices that are closely aligned to our customers' Quality, Business, Technology, Fulfillment, and Responsiveness targets. Finally, we conduct third-party customer relationship surveys every year to ensure our customers notice the improvements we're making. Our quality management system is described further [here](#), including copies of third-party certification certificates.



## 09 PRODUCT STEWARDSHIP

### ENABLING ENERGY EFFICIENCY

GLOBALFOUNDRIES' technology portfolio provides energy-efficient solutions for high-performance applications as well as those that depend on long battery lifetimes. GLOBALFOUNDRIES' 14/12nm FinFET platform enables energy efficiency for performance-hungry applications (servers, CPUs, GPUs, and others), driving system performance within a given power envelope (i.e. increasing system performance within given power requirements).

Another approach focuses on minimizing power consumption for a given set of performance requirements. GLOBALFOUNDRIES' FDX technologies are designed to span a wide range of applications where power and energy efficiency matters most.

### FD-SOI Technology—

#### 22FDX® and 12FDX™ technologies

FD-SOI technologies (Fully Depleted Silicon on Insulator technologies) employ an ultra-thin oxide insulator placed on top of the base silicon. On top of this oxide insulator a very thin silicon layer creates the transistor channel. Due to the thinness of this layer, no channel doping is required, making the transistor “fully depleted”. The FD-SOI structure results in much better transistor characteristics compared to traditional bulk CMOS technology, reducing leakage current and parasitic capacitance, thus making the transistor more energy-efficient.

Making intelligent use of the generic FD-SOI features, GLOBALFOUNDRIES' 22FDX® and 12FDX™ technologies feature significant low power, low cost and power efficiency advantages for designing differentiated solutions for mobile application processors, wireless networking, Internet of Things (IoT) and automotive markets. 22FDX® has been designed as a low-capacitance technology that allows a designer to take advantage of ultra-low operating voltages as well as of dynamic power consumption control. A unique FDX feature enables the chip to dynamically switch back and forth between high-performance and low-power operation; i.e. to boost performance in the moment it is needed while reducing the static leakage to a minimum when the performance is not needed.

## 09 PRODUCT STEWARDSHIP

Additionally, the FDX technology platform is designed to integrate a multitude of functionalities into a single System-on-Chip. Customers can thus easily integrate digital, analog, and RF (radio frequency) functions onto a single chip for intelligent, power efficient and fully integrated system solutions. With the 12FDX™ platform, beyond offering a full-node shrink versus 22FDX®, GLOBALFOUNDRIES extends the 22FDX® functionality, enabling access to a wider range of applications at low power density.

### **Additional Energy-efficient Technologies**

Our focus on technologies that enable energy efficiency extends beyond advanced technology nodes. We also offer semiconductor services for power-management integrated circuits (PMICs) and power converters. Our growing portfolio is continuously expanding for higher voltages.

GLOBALFOUNDRIES' Analog and Power processes include highly competitive DMOS Power FETs that enable maximum power conversion efficiency to aid in extending battery operating time. For example, GLOBALFOUNDRIES has developed a unique version of BiCMOS/DMOS named BCDLite®, which has become one of the key technology platforms for cost-effective power management and power converter solutions. This technology platform offers tremendous design flexibility for power management and high-voltage analog circuits.

### **System Integration**

Next to developing energy-efficient silicon technologies, system integration is another aspect that drives the final device's energy efficiency.

GLOBALFOUNDRIES advances System-on-Chip concepts to combine more and more different functionalities onto the same piece of Silicon—a concept that avoids the overhead of package integration of System-in-Packages, both in terms of energy use and manufacturing cost.

Where System-on-Chip integration cannot practically be accomplished, die stacking by direct wafer-to-wafer bonding is a cost- as well as energy-efficient alternative to integrate components. The state-of-the-art tooling and processes in GLOBALFOUNDRIES' Packaging Differentiation Line allow developing tailored solutions for customer requests and bringing them to volume production.

### **MATERIALS MANAGEMENT AND PRODUCT COMPLIANCE**

All GLOBALFOUNDRIES sites have chemical review and approval systems in place to ensure that only approved materials are used in wafer fabrication. 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 the use of certain 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”), most prominently the EU REACH Directive’s provisions on the presence of designated Substances of Very High Concern (SVHCs). Our specifications also require packing material suppliers to meet applicable substance restrictions.

GLOBALFOUNDRIES 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 customers on GlobalFoundryView, our customer portal.

## SITE PROFILES: FAB 1 – Dresden, Germany

Capacity: up to 80K  
300mm wafers/month

Technology: 28nm, 22nm, 12nm

Management System

Certifications: ISO 9001, IATF  
16949, ISO 14001, OHSAS 18001,  
ISO 50001, Sony Green Partner

Awards: Piepenbrock Gold  
Seal Award for implementa-  
tion of an ecological building  
cleaning system (2018)

Groundbreaking for Fab 1 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 fab when the company was divested from Advanced Micro Devices, Inc. (AMD). With more than 52,000 square meters of cleanroom, Fab 1 is the largest semiconductor manufacturing site in Europe.

GLOBALFOUNDRIES Dresden significantly contributes to the advancement of leading-edge semiconductor industry in Europe, Germany, and specifically the high-tech cluster in Saxony. The region currently counts approximately 2,300 high-tech companies with more than 60,000 employees.

### 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. Fab 1 supports various neighborhood associations and activities such as local heritage societies, volunteer fire brigades and choirs.

The Dresden site's Community Affairs Program also 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, GF Dresden is a sponsor of the renowned youth tech competition “Jugend forscht” (“Young Scientists”).

### 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 small fraction of electricity from the Dresden public grid.

In 2017, the team completed an extension of the ultrapure water recycling plant, with the goal to substantially increase the recycling capacity for ultrapure water, thereby saving a corresponding amount of feed water along with the chemicals and energy that would have been required to treat the additional incoming water supply.

## SITE PROFILES: Singapore

### Capacity:

93K 200mm wafers/month  
68K 300mm wafers/month

Technology: 180nm–40nm

### Management System

Certifications: ISO 9001,  
TS 16949, ISO 14001, OHSAS  
18001, Sony Green Partner;  
Fab 7 and Fab 3E: ISO 15408  
(Common Criteria)

GLOBALFOUNDRIES Singapore stretches across two campuses: the main Woodlands campus, which is home to one 200mm “GIGA fab” (Fabs 2, 3 and 5) and one 300mm fab (Fab 7), and a 200mm fab in Tampines, 30 minutes away from the main campus. These facilities comprise nearly 11 soccer fields of cleanroom space. 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, with the last significant extension during 2016, when our former 200mm Fab 6 was merged into Fab 7. The GLOBALFOUNDRIES Singapore fabs were previously owned by Chartered Semiconductor Manufacturing, and were acquired by GLOBALFOUNDRIES in 2010.

### COMMUNITY RELATIONS

Since 2006, the GLOBALFOUNDRIES Singapore site has held an annual Hair for Hope fundraising event benefiting the Children’s Cancer Foundation (CCF). GLOBALFOUNDRIES donated a total of S\$115,000 (\$83,000 USD) to the program in 2017. This signature event serves to raise funds and promote awareness of childhood cancer. GLOBALFOUNDRIES Singapore also supports regional STEM (Science, Technology, Engineering and Mathematics) activities such as hosting a series of plant visits for students from a number of different universities providing insights into high-end technology and sharing experiences as the students embark on their own engineering journey.

### SUSTAINABILITY FEATURE: Resource Efficiency

Resource efficiency is a priority for the Singapore site team—energy and water conservation programs are continually pursued. For example, our Singapore fabs have extensive water recycling capabilities and achieved a 53 percent recycling rate in 2017 as compared to incoming water. The site further enhanced its conservation efforts by completing construction of a new water treatment and reclamation facility at the Woodlands campus in January 2017. This state-of-the-art facility features advanced technology that is designed to reduce waste sludge and enable the reuse of treated wastewater that in turn reduces overall water consumption.

Furthermore, more than 95 percent of the water consumed at GLOBALFOUNDRIES 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.

## SITE PROFILES: FAB 8 – Malta, New York, USA

Capacity: up to 60K  
300mm wafers/month

Technology: 14/ 12 nm

Management System  
Certifications: ISO 9001,  
ISO 14001, OHSAS 18001

Awards: Kimberly Clark  
Greenovation Award for Nitrile glove  
recycling (2018); National Pollution  
Prevention Roundtable MVP2 (Most  
Valuable Pollution Prevention) Award  
– Partnering for Best Practices  
in Sustainable Semiconductor  
Manufacturing (Sulfuric Acid Use  
and Waste Reduction); (2018)

Admin 1 and Admin 2 office  
buildings are LEED Gold®.

Fab 8.1 fabrication facility  
is LEED Silver®.

In 2009, GLOBALFOUNDRIES broke ground for construction of our Fab 8 300mm wafer manufacturing facility in Malta, New York. The current capital investment for the Fab 8 campus is more than \$12 billion. The majority of this investment has been directed toward supporting the ramp of our leading-edge 14nm technologies. With 40,875 square meters of cleanroom space and continued expansion, GLOBALFOUNDRIES 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 public-private sector industrial investment in New York state’s history.

### COMMUNITY RELATIONS:

Next to charity donations to those in need within the local community, the site’s community relations program supports local education through numerous initiatives. Jointly with GLOBALFOUNDRIES in East Fishkill, NY and Burlington, VT, GLOBALFOUNDRIES Fab 8 supports FIRST® (For Inspiration and Recognition of Science and Technology) robotics programs, designed to motivate young people to pursue education and career opportunities in STEM, while building self-confidence, knowledge, and life skills. Together with its consortium of business partners, GLOBALFOUNDRIES has collectively pledged more than \$1 million to support STEM programming along the Northeast Tech Corridor over six years (2015–2020).

### SUSTAINABILITY FEATURE:

#### Green Building Design:

The Fab 8 campus integrated green building principles and practices as part of the site design, construction and operation. This includes:

- High-efficiency motors, chillers, boilers, fan filters for the cleanroom, and vacuum pumps.
- An innovative system that uses heat recovery chillers to meet the fab’s year-round base cooling load and recover the heat for site needs instead of removing it with cooling towers. The system meets 40 percent of the site’s heating load with recovered heat.
- A fab-wide “Green Mode” strategy for point of-use abatement systems and for a significant portion of the installed base of vacuum pumps.



## SITE PROFILES: FAB 9 – Burlington, Vermont, USA

Capacity: up to 40K  
200mm wafers/month

Technology: 350nm–90nm

Management System  
Certifications: ISO 9001,  
TS 16949, ISO 14001, OHSAS  
18001, Sony Green Partner

### Awards:

2018 National Pollution Prevention  
Roundtable's MVP2 (Most  
Valuable Pollution Prevention)  
Award (Chemical Use Reduction  
in Chemical Mechanical Polish)

2018 Vermont Governor's  
Environmental Excellence Award  
(Elimination of Legacy Wet  
Chromium Etch Processing In  
Photomask Manufacturing)

More than sixty years ago, IBM broke ground on its Vermont facility located on the banks of the Winooski River near Burlington. Since its inception in 1957, the campus has grown and evolved into a major semiconductor manufacturing site. GLOBALFOUNDRIES acquired the site as part of the IBM Microelectronics business in 2015. GLOBALFOUNDRIES Fab 9 is the largest private employer in the state of Vermont.

### COMMUNITY RELATIONS:


The site has an extensive history of community involvement and thus is well known for its dedication and passion to the community, whether it be through charitable contributions or through volunteering during days of caring. In addition, the “Bridge the Gap” and Calendars for Charity programs helped provide local charities with valuable contributions. Burlington employees are very passionate about K–12 outreach, taking part in FIRST® (For Inspiration and Recognition of Science and Technology) Robotics activities jointly with GLOBALFOUNDRIES in Malta, NY and GLOBALFOUNDRIES in East Fishkill, NY.

### SUSTAINABILITY FEATURE:

#### Legacy of environmental excellence

Noted for its long-term environmental excellence, the Burlington site has received extensive recognition, including numerous national, regional and state awards for its pollution prevention and energy management results and initiatives. In 2018 Fab 9 received the Governor's Award for Environmental Excellence for the 25<sup>th</sup> consecutive year. In 2016, Fab 9 transferred unused land to Green Mountain Power to develop a 4.7 MW solar power generation facility, the state's largest at that time, providing benefits to local communities, GLOBALFOUNDRIES and the environment.

## SITE PROFILES: FAB 10 – East Fishkill, New York, USA



Capacity: up to 20K  
300mm wafers/month

Technology: 90nm–22nm

Management System  
Certifications: ISO 9001,  
AS 9100C, ISO 14001, OHSAS  
18001, Sony Green Partner

Originally developed by IBM in 1962, the site grew and evolved into an R&D and manufacturing center, first solely in support of IBM's own mainframe products, and later also serving the needs of other original equipment manufacturers (OEM). The site joined GLOBALFOUNDRIES as part of the acquisition of IBM's microelectronics business acquisition in 2015 and is now known as GLOBALFOUNDRIES Fab 10.

### COMMUNITY RELATIONS:

East Fishkill employees have always prided themselves on being good neighbors, giving generously to the local community through charitable donations and volunteering, such as collecting toys for less fortunate children and collecting and donating food to local food banks. East Fishkill employees also support a Treat the Troops program and the GLOBALFOUNDRIES Calendars for Charity campaign.

The site also participates in a number of STEM (Science, Technology, Engineering and Mathematics) activities, including FIRST Robotics, along with GLOBALFOUNDRIES in Malta, NY and GLOBALFOUNDRIES in Burlington, VT.

### SUSTAINABILITY FEATURE:

#### Recycle and Reuse

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 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.

## ABOUT THIS REPORT

The GLOBALFOUNDRIES 2018 Corporate Responsibility Report is our fourth comprehensive corporate social responsibility and sustainability report. The last report was published in 2017 and covered 2016 data.

We are using the Global Reporting Initiative (GRI) G4 Sustainability Reporting Standards and self-declare that this report has been prepared in accordance with the GRI Standards: Core option.

Data presented in this report reflect calendar year 2017. The data were compiled from facilities owned or operated by GLOBALFOUNDRIES during the reporting period and validated using our internal processes. No significant change in material topics as relevant to this report occurred during 2017.

We value and encourage your feedback on this report. Please send comments or questions to [CSR@globalfoundries.com](mailto:CSR@globalfoundries.com).

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
GENERAL DISCLOSURES					
General Disclosures	102-1	Name of the organization	Company Profile		Full
	102-10	Significant changes to the organization and its supply chain	–	No significant change occurred during the reporting period (2017).	Full
	102-11	Precautionary Principle or approach	Sustainable Manufacturing		Full
	102-12	External initiatives	Stakeholder Engagement		Full
	102-13	Membership of associations	Stakeholder Engagement		Full
	102-14	Statement from senior decision-maker	CEO Statement		Full
	102-16	Values, principles, standards, and norms of behavior	Governance		Full
	102-17	Mechanisms for advice and concerns about ethics	Governance		Full
	102-18	Governance structure	Governance		Full
	102-19	Delegating authority	Governance		Full
	102-2	Activities, brands, products, and services	Company Profile		Full
	102-3	Location of headquarters	Company Profile		Full
	102-4	Location of operations	Company Profile		Full
	102-40	List of stakeholder groups	Stakeholder Engagement		Full
	102-41	Collective bargaining agreements	–	None	Full
	102-42	Identifying and selecting stakeholders	Stakeholder Engagement		Full
	102-43	Approach to stakeholder engagement	Stakeholder Engagement		Full
	102-44	Key topics and concerns raised	Stakeholder Engagement		Full

## GRI CONTENT INDEX

(continued)

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
General Disclosures	102-45	Entities included in the consolidated financial statements	–	GLOBALFOUNDRIES is a privately held company and does not publish financial statements.	Not Disclosed
	102-46	Defining report content and topic boundaries	Stakeholder Engagement		Full
	102-47	List of material topics	Stakeholder Engagement		Full
	102-48	Restatements of information	Sustainable Manufacturing	Please see restatement for GRI 307-1 (Environmental Compliance) in Section Sustainable Manufacturing.	Full
	102-49	Changes in reporting	Stakeholder Engagement	No changes as compared to previous reporting period.	Full
	102-5	Ownership and legal form	Company Profile		Full
	102-50	Reporting period	About this Report		Full
	102-51	Date of most recent report	About this Report		Full
	102-52	Reporting cycle	About this Report		Full
	102-53	Contact point for questions regarding the report	About this Report		Full
	102-54	Claims of reporting in accordance with the GRI Standards	About this Report		Full
	102-55	GRI content index	GRI Content Index		Full
	102-56	External assurance	–	At this time, GLOBALFOUNDRIES is not seeking external assurance for this report.	Full
	102-6	Markets served	Company Profile		Full
	102-7	Scale of the organization	Company Profile		Full
	102-8	Information on employees and other workers	Our People and Workplace	We report the break down by category as percentage.	Full
	102-9	Supply chain	Supplier Responsibility		Full

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
MANAGEMENT APPROACH					
Management Approach	103-1	Explanation of the material topic and its boundary	Stakeholder Engagement	In subsection The Materiality Analysis	Full
	103-2	The management approach and its components	–	Covered in topic related report sections.	Full
	103-3	Evaluation of the management approach	–	Covered in topic related report sections.	Full
MATERIAL TOPICS					
Economic					
Economic Performance	201-1	Direct economic value generated and distributed	–	While this is a material topic, GLOBALFOUNDRIES as a privately held company, does not disclose any financial details.	Not disclosed
Governance and Ethical Business					
Anti-corruption	205-1	Operations assessed for risks related to corruption	–	In 2016 and 2017, the company's Ethics & Compliance team conducted an enterprise risk assessment. No significant risks related to corruption were identified.	Full
Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures	Governance		Full
Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	Governance		Full
	412-2	Employee training on human rights policies or procedures	Governance		Full
Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Governance; Supplier Responsibility		Full
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	Governance; Supplier Responsibility		Full
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Governance; Supplier Responsibility		Full



## GRI CONTENT INDEX

(continued)

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	Supplier Responsibility		Full
Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	Supplier Responsibility		Full
	414-2	Negative social impacts in the supply chain and actions taken	Supplier Responsibility		Partly
Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	–	In 2017, GLOBALFOUNDRIES was not assessed any significant fines or non-monetary sanctions.	Full
<b>Environmental</b>					
Energy	302-1	Energy consumption within the organization	Sustainable Manufacturing		Full
	302-3	Energy intensity	Sustainable Manufacturing		Full
	302-4	Reduction of energy consumption	Sustainable Manufacturing	Examples with significant reductions are reported as well as overall savings by energy conservation projects underlying to 2016–2018 corporate goals.	Partly
	302-5	Reductions in energy requirements of products and services	Product Stewardship	Examples are reported for new and existing energy-efficient technologies that enable our customers to design energy-efficient products.	Partly
	303-1	Water withdrawal by source	Sustainable Manufacturing	GLOBALFOUNDRIES uses water from municipal sources at all of our manufacturing facilities. In 2017, a portion equivalent to 6 percent of GLOBALFOUNDRIES total water use was withdrawn from groundwater sources.	Full
	303-3	Water recycled and reused	Sustainable Manufacturing		Full

## GRI CONTENT INDEX

(continued)

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
Climate Change, GHG Emissions					
Emissions	305-1	Direct (Scope 1) GHG emissions	Sustainable Manufacturing	<p>GLOBALFOUNDRIES quantifies Scope 1 GHG emissions using the following methods:</p> <ul style="list-style-type: none"> <li>- “The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)”;</li> <li>- For semiconductor process related PFC emissions specifically, GLOBALFOUNDRIES 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);</li> <li>- GWPs used are from IPCC Fourth Assessment Report (AR4 – 100 year).</li> </ul>	Full
	305-2	Energy indirect (Scope 2) GHG emissions	Sustainable Manufacturing	<p>GLOBALFOUNDRIES quantifies Scope 2 GHG emissions using the following methods:</p> <ul style="list-style-type: none"> <li>- “The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)”;</li> <li>- “The Greenhouse Gas Protocol: Scope 2 Guidance”;</li> <li>- GF is using the market-based method to quantify Scope 2 GHG emissions.</li> </ul>	Full
	305-4	GHG emissions intensity	Sustainable Manufacturing		Full
Emissions, Waste, and Effluents					
Emissions	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Sustainable Manufacturing	Our 2017 fabs’ combined corrosive emissions were approximately 103,500 kg (this value is based on air emission measurements, that are annually conducted at each fab).	Partly

## GRI CONTENT INDEX

(continued)

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
Effluents and Waste	306-1	Water discharge by quality and destination	Sustainable Manufacturing	We operate permitted wastewater treatment systems at each of our manufacturing sites to manage effluent from production areas. These facilities treat the wastewater to meet regulatory requirements prior to discharge. GF facilities discharge waste water to municipal treatment facilities, or directly to surface waters in the case of Fabs 9 and 10. The direct discharges follow a rigorous combination of industrial and biological treatment processes. In total, in 2017, we discharged 21.807 million cubic meters of treated wastewater from all manufacturing operations combined, of which 31% (6.850 million cubic meters) were discharged to surface water.	Full
	306-2	Waste by type and disposal method	Sustainable Manufacturing	To determine our hazardous waste recycling and reuse rate, we also include the category “by-products beneficially recycled and reused”, which is applicable only to our U.S. sites. Such reclaimed material is excluded from the U.S. EPA definition of hazardous waste.	Full
	306-3	Significant spills	—	No significant spills occurred in 2017.	Full
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	Sustainable Manufacturing		Full

## 12

GRI CONTENT INDEX  
(continued)

GRI Standard Title	GRI Disclosure Number	Disclosure Title	CSR Report 2018 Section	Explanatory Comments / Direct Information	Coverage
<b>Social / Employment</b>					
Employment	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Our People and Workplace		Full
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Our People and Workplace	We do not disclose by gender and region.	Partly
Training and Education	404-2	Programs for upgrading employee skills and transition assistance programs	Our People and Workplace		Full
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	Our People and Workplace		Full
<b>Community</b>					
Indirect Economic Impacts	203-2	Significant indirect economic impacts	Site Profiles		Full
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	Community Engagement; Site Profiles		Full



GLOBALFOUNDRIES®

## CORPORATE RESPONSIBILITY REPORT 2018

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