

# Tower

Semiconductor

Where **Analog** and **Value** Meet



## 2020 Corporate Sustainability (ESG) Report

NASDAQ & TASE: TSEM  
[www.towersemi.com](http://www.towersemi.com)

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August 2021

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## Feedback

Your comments and suggestions are important to us. If you have any questions or comments about this report, please contact:

### Noit Levy

Senior Vice President of Investor Relations, Communications, and Corporate Sustainability  
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# About this Report

This is our first Tower Semiconductor Corporate Sustainability (ESG) report containing an overview of Tower's ESG projects and activities during 2019-2020. We plan to issue this global report annually to describe ESG activities at all Tower sites in Israel and in the US and provide in-depth information to all stakeholders, including customers, employees, partners, industry analysts, socially responsible investors, nongovernmental organizations (NGOs), sustainability specialists, regulators, and others.

The report is compliant with Global Reporting Initiative (GRI) standards and Sustainability Accounting Standards Board (SASB).

To determine report contents, we considered:

- Input from executives and content experts across Tower.
- Input from external stakeholders.
- The broader sustainability context and trends.
- External standards and frameworks such as the Global Reporting Initiative Sustainability Reporting Standards, the UN Global Compact, the UN Sustainable Development Goals, Sustainability Accounting Standards Board for Semiconductors.
- Global reporting trends and best practices..

## Reporting scope and measures

This report describes Tower's sustainability policies, programs and goals. It includes Tower's performance data during FY 2019-2020, unless stated otherwise.

The information in this report is current as of the date of its initial publication. The report has not been updated to reflect any changes since that date, including any changes to Tower's business or strategy. Tower assumes no obligation and does not intend to update this report to reflect any such changes.

The ESG performance data presented in this report refers to Tower Semiconductor's fully owned subsidiaries and facilities only, as of Tower's most recently completed fiscal year, unless stated otherwise.

All references to years are to Tower's fiscal year, which ends on December 31, 2020, unless stated otherwise.

All references to dollars are to U.S. dollars.

## Metrics and goals

The metrics in this report are Tower's data, unless stated otherwise. We continue to standardize our measurement systems and metrics. Data is rounded to reflect the appropriate level of certainty.

The calculation of GHG emissions was conducted according to GHG Protocol (Scope 1 and 2).



The report was written with the assistance of Good Vision – CSR Consulting Firm, of the Fahn Kanne & Co. Grant Thornton Group. Good Vision is highly experienced in CSR services and is a member of the GRI GOLD community and the SASB consultant content program.

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# Letter from the Chairman of the Board of Directors

I am pleased to share Tower Semiconductor's comprehensive corporate sustainability report.

As the Board of Directors of the Company, we continuously focus on future leadership, value-add, and sustainability. These elements are the base and core of this first Environmental, Social, and Governance (ESG) report of Tower Semiconductor.

We are aware daily of the critical role that industry and world citizenry have on the health of our planet. As a Board, we review, give input on, and encourage all initiatives that the company pursues towards having a zero negative impact on our world. We well realize that this is not a one-day journey, but rather one that must incorporate real-time betterments with aggressive and measurable targets and investment.

I am proud to be Chairman of the Board of a company where the CEO and executive management have from day one taken to heart the full breadth and depth of social responsibility pursuing "gender equality and minority integration with a focus on education and vocational opportunities."

The Company's management is to be recognized for the leadership in combining Environmental and Social improvement programs under our ESG focus. Tower sponsors both through high-level academic mentorship and through direct funding a broad-based, multi-nation high school environmental science program, creating "citizen scientists" with tools and attitude to enter the workforce and life with a drive built upon successes, to make a positive change to the "air they breathe".


The Board of Directors is focused on best practice governance with a board comprised

of diverse backgrounds and expertise, well-staffed subcommittees, and frequent full board reviews with open comments and actions. Indeed, one benefit of a professional board membership, themselves active on other public boards, is the high-level of real-time, fact-based benchmarking of best practices and the evolution of these practices inside Tower.

Lastly, my thanks to the Company for the many sincere activities directed to safeguard the health of our employees throughout the COVID-19 pandemic, and to our worldwide employee base for pulling together to meet our customers and our suppliers needs, providing steady state, dependable business continuity for all.



**Mr. Amir Elstein**  
Chairman of the  
Board of Directors



*We are  
aware  
daily of  
the critical  
role that  
industry  
and world  
citizenry  
have on the  
health of  
our planet.*

# CEO Message

This is Tower's first formal corporate sustainability, or ESG (Environmental, Social, Governance) report.

2020 was, in so many aspects, a different year. It has brought all of us to an understanding that we are not separated, but tied to one another, regardless of where we are. The COVID-19 pandemic was a strong reminder of the power of nature and of our weakness against it. Even with the great achievement of the vaccines, we are still facing the implications of this pandemic. We had to modify the way we live, learn, behave, and communicate, among other things. Nonetheless, it gave us an opportunity to come back to our roots and to prioritize what is important. The social and personal responsibility came strongly into place in order to stay safe.

As a company, we have been 'proactive' to the extent within our control, to successfully manage this challenge - keeping in mind the health and safety of our employees alongside business and operational continuity and remaining committed to provide reliable technology and manufacturing solutions. We hope that the Coronavirus situation will be contained shortly and resolved as soon as possible for everyone's wellbeing, to minimize the local and global adverse impact it has already created, and that the one upside of this outbreak will be greater actions of world citizenry and cooperation benefiting society and our planet as a whole.

At the core of our Company's DNA we believe that it is the foremost goal of the company to create an environment where:

1. all employees can go home at the end of the day having gained confidence through successfully meeting challenges, with appropriate compensation, knowing that

the confident woman/ man is a better mother/ father, wife/ husband; and  
2. employees with capabilities and desire gain skills and acknowledgment to grow professionally, personally, and financially.

To support this, we have developed our set of value vectors. A vector signifying magnitude and direction - a construct depicting constant movement and progress. Those value vectors set the tone and path for who we are and how we do business, and best define the core of our Company: Partnership, Leadership, Innovation, Impact, and at the center of our construct - Excellence, firmly stating "excellence embedded in everything we do".

Various elements of our corporate responsibility, sustainability and ESG efforts are described in this report, and are all well aligned into our value vectors with the mindset of excellence in each of the described areas. We are continuously evaluating our activities in order to improve and ensure that our commitment and actions towards a better company, better society and better lives around us are met, and aim to further proliferate them and their impact with every action we take.

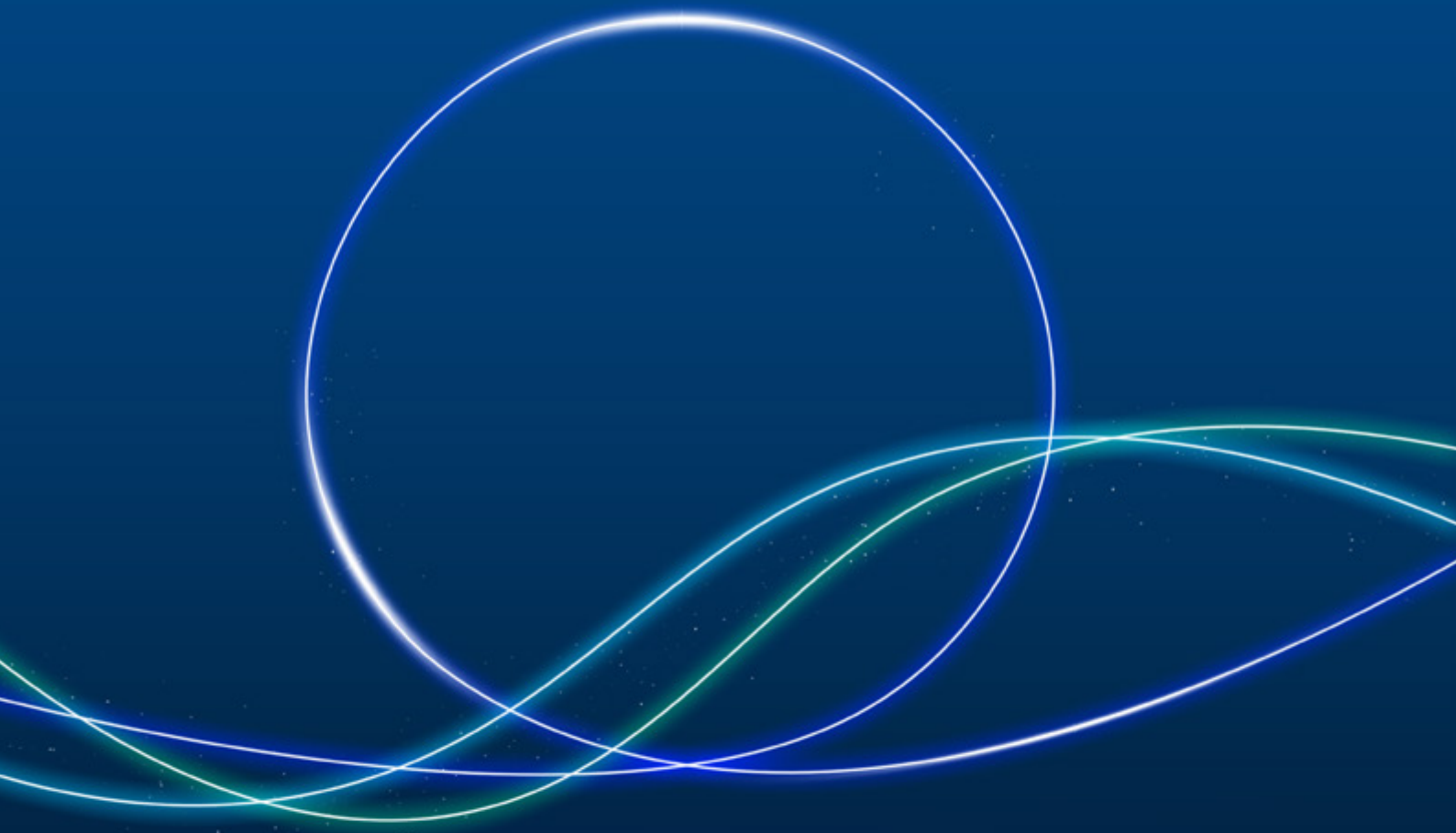


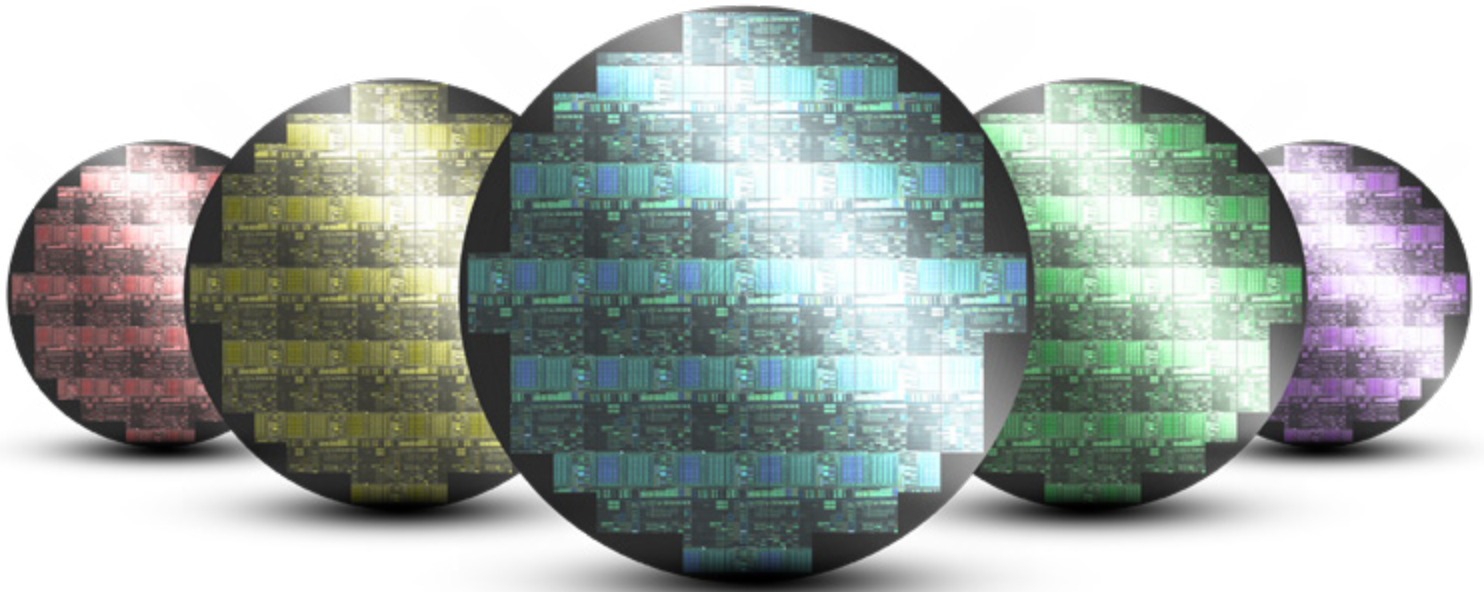
**Russell Ellwanger**  
Chief Executive  
Officer



*We are continuously evaluating our activities in order to improve and ensure that our commitment and actions towards a better company, better society and better lives around us are met.*

# The Semiconductor Industry & Technology Offering





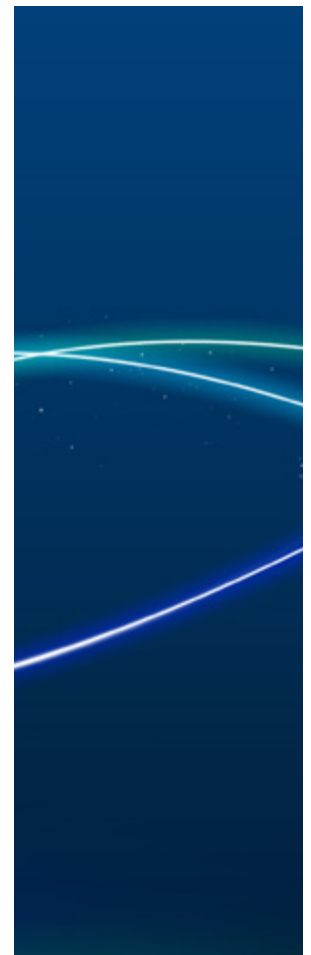
## Industry Overview

Semiconductor devices are responsible for the rapid growth of the electronics industry over the past fifty years. They are critical components of a variety of applications, from computers, consumer electronics and communications, to industrial, military, medical, and automotive applications. With the increase in their performance and decrease in their size, and resulting decrease in cost, the use of semiconductors and their number of applications has increased significantly. Semiconductor suppliers face increasing demands for new products that provide higher performance, greater functionality and smaller form factors at lower prices - all features that require an increased level of integrated circuits' (ICs) complexity, also driven by the dramatic rise in the number of applications that incorporate semiconductors, as well as the increase in semiconductor components used in the widest variety of end applications in today's leading markets.

Historically, the semiconductor industry was composed primarily of companies, known as integrated device manufacturers

("IDM"), that designed and manufactured ICs in their own fabrication facilities. In the mid-1980s, fabless IC companies began to emerge, focusing on IC design and using external manufacturing capacity. Fabless companies initially outsourced production to IDMs that filled this need through their excess capacity.

As the semiconductor industry continued to grow, increasing competition forced fabless companies and IDMs to seek reliable and dedicated sources of IC manufacturing services. Use of external manufacturing capacity allowed IDMs to reduce investment in their existing and next-generation manufacturing facilities and process technologies. This need for external manufacturing capacity led to the development of independent companies, known as foundries, that focus primarily on providing IC manufacturing services to semiconductor suppliers. Foundries, such as Tower, are used by nearly all major semiconductor companies in the world, including IDMs, as part of a strategy to promote risk-diversification and cost effectiveness.





# Basic Technologies

The two basic functional technologies for semiconductor products are digital and analog.

- **Digital semiconductors** provide critical processing power and have helped enable many of the computing and communication advances in recent years.
- **Analog semiconductors** monitor and manipulate real world signals such as sound, light, pressure, motion, temperature, electrical current, and radio waves. They are used in a wide variety of electronic products such as digital still cameras, X-ray medical applications, flat panel displays, personal computers, cellular handsets, telecommunications equipment, consumer electronics, automotive electronics, and industrial electronics.

Analog-digital, or mixed-signal, semiconductors combine analog and digital devices on a single chip which can process both analog and digital signals. Integrating analog and digital components in an individual, mixed-signal semiconductor enables the development of smaller, more highly integrated, power-efficient, feature-rich and cost-effective semiconductor devices. However, the design and manufacturing of mixed-signal semiconductors present significant challenges, which increase as the industry moves toward more advanced process platforms. As a result, analog and mixed-signal semiconductors can be complex to manufacture and typically require sophisticated design expertise, strong application, specific knowhow and capabilities, and a comprehensive intellectual property portfolio.

In addition, today's analog market is driven strongly to provide solutions to the growing sensitivity to environmental requirements (as will be further described in this report), such as the conservation of energy and promotion of human well-being. Systems enabled with Artificial Intelligence (AI) and AI-based edge computing allow analysis and filtering of data closer to the sensors so that only the relevant data is sent to the cloud, which results in lower power consumption.

Mixed-signal ICs are an essential part of any front-end electronic system. Our advanced analog CMOS process technologies have more features than their standard analog counterparts and are well suited for higher performance or more highly integrated analog and mixed-signal semiconductors, such as high-speed analog-to-digital or digital-to-analog converters and mixed-signal semiconductors with integrated data converters. These process technologies generally incorporate higher density passive components, such as capacitors and resistors, and improved active components, such as native or low voltage devices and improved isolation techniques, into standard analog CMOS process technologies.

The massive costs associated with modern fabs, combined with the increasing demand for complex

ICs, has created an expanding market for outsourced foundry manufacturing services. Foundries can cost-effectively supply advanced ICs to even the smallest fabless companies by creating economies of scale through pooling together the demand of numerous customers. In addition, customers whose IC designs require process technologies other than standard digital CMOS, have created a market for independent foundries that focus on providing specialized process technologies. Specialty process technologies enable greater analog content and can reduce the die size of an analog or mixed-signal semiconductor, thereby increasing the number of dies that can be manufactured on a single wafer and reducing final die cost. In addition, specialty process technologies can enable increased performance, superior noise reduction and improved power efficiency of analog and mixed-signal semiconductors compared to traditional standard CMOS processes. These specialty process technologies include advanced analog CMOS, specialized RF devices on SOI, radio frequency CMOS (RF CMOS), CMOS image sensors (CIS) and other types of original sensors, high-voltage CMOS, Bipolar CMOS (BiCMOS), Silicon Germanium BiCMOS (SiGe BiCMOS), Bipolar CMOS double-diffused metal oxide semiconductor (BCD), NVM technologies and special devices for enabling ICs with embedded AI.

Here at Tower, we have mastered the skills required to work in this technology-intensive environment which is continuously and rapidly changing. We work closely with our customers to provide them with unique and specialized solutions required for their business success.



*We have mastered the skills required to work in this technology-intensive environment which is continuously and rapidly changing.*



# Semiconductor Production Process

We manufacture ICs on silicon wafers, generally using the customer's proprietary circuit designs. In some cases, we provide our customers with **our own proprietary (IP) or third-party design elements**. The end-product of our manufacturing process is a silicon wafer containing multiple identical ICs. In most cases, our customers assume responsibility for dicing, assembling, packaging, and testing.

We provide **wafer fabrication services to fabless IC companies and IDMs**, as a sole source or second source, and enable smooth integration of the semiconductor design and manufacturing processes. By doing so, we enable our customers to bring high-performance, highly integrated ICs to market rapidly and cost effectively. We believe that our technological strengths and emphasis on customer service have allowed us to develop a unique position in large, high-growth specialized markets for CMOS image sensors, RF, power management and high-performance mixed signal ICs.

Our manufacturing process uses specialty process technologies that are mostly based on **CMOS process platforms** with added features to enable special and unique functionality, decreased footprint of products, competitive performance and cost advantages for analog and mixed-signal semiconductors. Products made with our specialty process technologies are typically more complex to manufacture than those using standard process technologies employing similar technology nodes. Generally, customers that use our specialty process technologies cannot easily transfer designs to another foundry because the analog characteristics of the design are dependent upon the specific process technology used for manufacturing. The specialty process design infrastructure is complex and includes design kits and device models that are specific

to the foundry in which the process is implemented and the process technology itself. In addition, the number of foundries capable of offering specialty process technologies are limited as there are few engineers who have the specialty process expertise needed, and specialty manufacturing necessitates significant investment required for development, transfer and maintenance of specialty process technologies. Our specialized process technologies, combined with dedicated design enablement capabilities, distinguish our IC manufacturing services and attract industry-leading customers.

We also offer **process transfer services to IDMs** that wish to manufacture products using their own process and do not have sufficient capacity in their own fabs. Our process transfer services are also used by fabless companies that have proprietary process flows and wish to manufacture at a secure foundry for IP protection and/or wish to diversify their manufacturing at more than one site. Our process transfer services include development, transfer, and extensive optimization as defined by customer needs.

We are a trusted, customer-oriented service provider that has built a solid reputation in the foundry industry for over twenty-five years. We have established strong relationships and partnerships with our customers. Our consistent focus on providing high-quality, value-add services, including engineering and design support, has allowed us to attract customers that seek to work with a proven leading provider of foundry solutions. Our emphasis on working closely with customers and accelerating the time-to-market and performance of their next-generation products has enabled us to maintain a high customer retention rate, while increasing the number of new customers and new products for production.

# Process Technology Offerings and Main Trends

We offer a broad range of advanced analog process technologies tailored to meet our customers' precise specifications enabling the most cost-effective and versatile IC manufacturing solutions.

The specific process technologies that we currently focus on include: Radio Frequency CMOS (RF CMOS) including SiGe, CMOS Image Sensors (CIS), and integration of other types of sensors, advanced analog CMOS, Radio Frequency Identification (RFID), Bipolar CMOS (BiCMOS), Silicon Germanium (SiGe BiCMOS), high-voltage CMOS, Silicon-on-Insulator (SOI) platforms for Power Management, RF and sensor applications, LDMOS transistors, MEMS and wafer bonding technologies, as well as technologies for enabling AI, in particular original Y-Flash memristors.

Our modular and customizable processes are available on either 150mm, 200mm or 300mm wafers

in our seven world-class fabrication facilities we operate in located in Israel, the US and Japan, which have achieved quality certifications for environmental management, health & safety, information security and automotive standards. We have also expanded our geographic offering to Europe at the Agrate, Italy facility which will be qualified and ramped for production by the second half of 2022.

We focus on three powerful megatrends that are transforming the world around us at an unprecedented pace: (1) Green Everything, (2) Wireless Everywhere and (3) Smart Everything. Those megatrends, anchored by leading edge digital and analog technologies, are fueling the next industrial revolution.

**Our strategy and tactics in dispatching these mega-trends is itself an enabler for all aspects of ESG.**



# 01

## Radio Frequency and High-Performance Analog: **Enabling a New Era of Communication**

We provide industry-leading, low-loss, high-dynamic range technologies from wireless RF to mmWave communications. Our SiGe BiCMOS, RF-SOI and RF-CMOS technology solutions enable high-speed, low-noise and low-power products for consumer, infrastructure, and automotive applications.

# 02

## Power Management: **The Power to Lead**

Our power management platform provides highly modular, industry-leading BCD technologies, with best-in-class power efficiency across a wide range of voltages, delivering comprehensive solutions for the consumer, industrial, infrastructure, automotive, and medical markets.







## 03

### CMOS Image Sensors: **Cutting Edge Imaging Solutions Customized for Your Needs**

We offer high-end, state-of-the-art technology solutions, unique customization processes, and unmatched design flexibility, enabling performance-optimized pixel technology with advanced features, and reduced die size, addressing consumer, industrial, medical, high-end photography, automotive, and environmental applications.

## 04

### Non-Imaging Sensors: **Expand the Sensing Capabilities - Lead the World of Sensors**

Our proven and flexible capabilities and technological platforms enable fabrication of diverse sensing devices, consisting of unique ionizing radiation sensors, remote temperature sensors, magnetic (TMR), UV radiation and gas sensors. In addition, we supply technology for LCOS and uOLED display backplanes, including stitching technology support for large silicon-based displays.



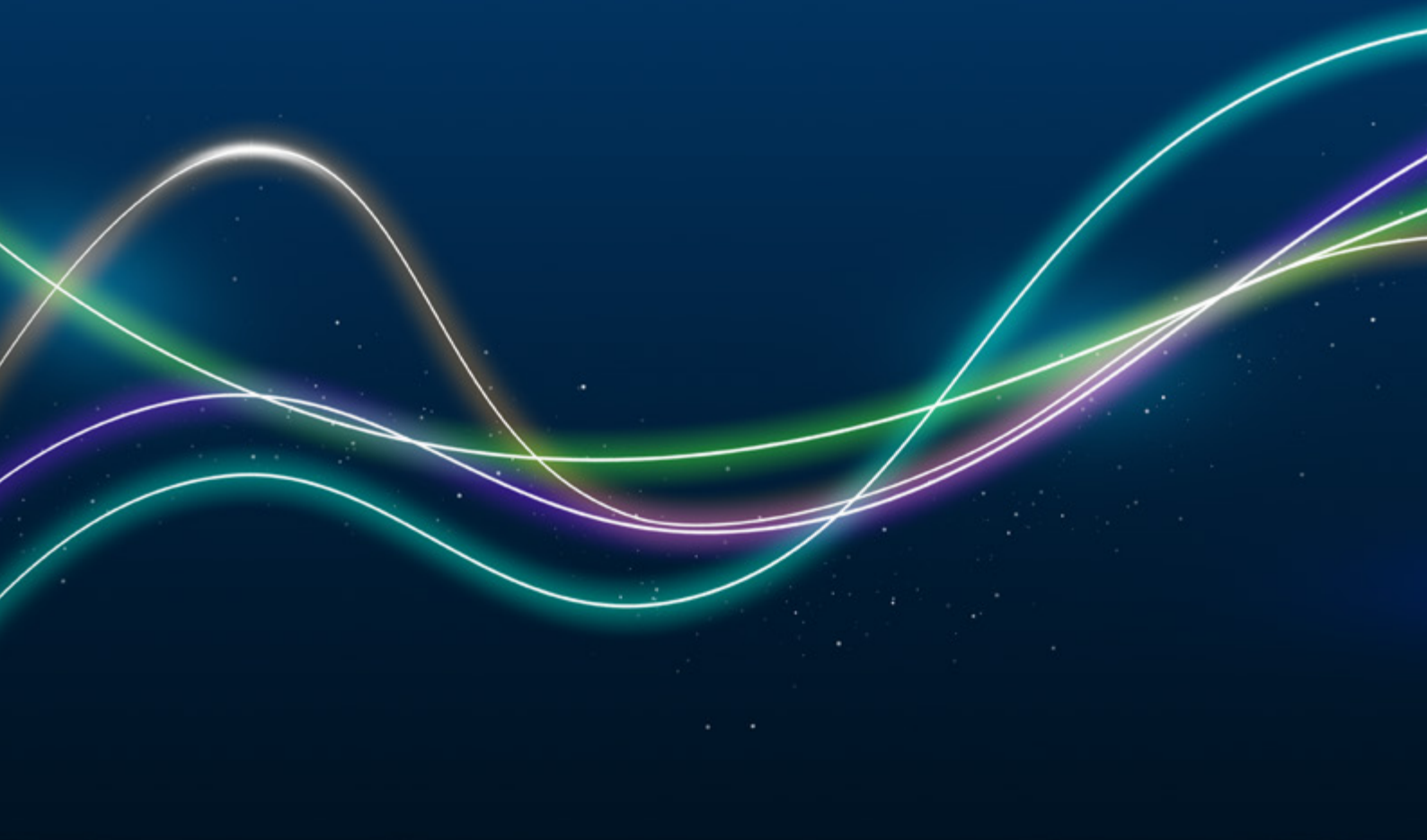
## 05

### Automotive: **Innovative Analog Solutions for Smarter Automobiles**

Our broad range of mature and modular analog technology platforms for imaging and sensing, wireless and wireline communications, mixed signal, and power management, provide the most comprehensive and advanced solutions designed to best support the entire automotive ecosystem.

According to the 2021 Global Semiconductor Industry Outlook from KPMG and the Global Semiconductor Alliance, the semiconductor industry will continue to grow due to the mainstream adoption of IoT, 5G and the increasing semiconductor needs of the automotive sector.

# Where **Analog** and **Value** Meet





# About the Company

Tower Semiconductor, the leading foundry of high-value analog semiconductor solutions, manufactures advanced analog integrated circuits. We lead the analog ecosystem with high-quality, innovative technological and manufacturing solutions, and provide strong competitive advantages in various growing markets.

The Company's strategic customer roadmap alignment and long-term partnerships with its profound customer base promote continuous growth and a distinguished market position. For almost three decades, Tower Semiconductor has consistently developed and provided the highest value analog semiconductor solutions.

Through its vast knowledge of current and emerging market needs, Tower offers advanced analog technologies and manufacturing solutions for the world's most exciting and growing arenas, such as communication, consumer, industrial, automotive, medical, security, among others.

**With ever-evolving capabilities and an innovative mindset, Tower Semiconductor thrives and drives full-circle value creation, all the while devoting ourselves to making a positive and sustainable impact on the world.**



## Our Vision

Provide the highest value analog semiconductor solutions as validated by our customers, employees, shareholders and partners.

## Our Mission

Being a trusted long-term partner with a positive and sustainable impact on the world through innovative analog technologies and manufacturing solutions.





# Our Value Vectors™



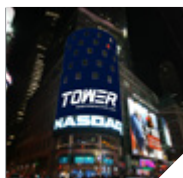
# Company's History

1993



Tower Semiconductor was founded with the acquisition of National Semiconductor's 150-mm wafer fabrication facility.

1994



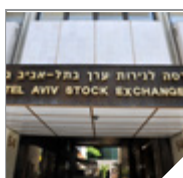
Tower Semiconductor became a public company. Shares began to be traded on NASDAQ (TSEM).

2000



Design it once, design it right:  
The worldwide Design Center was established in Netanya, Israel.

2001



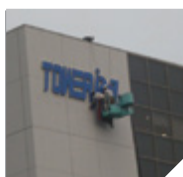
Tower Semiconductor shares began to be traded on Tel Aviv Stock Exchange (TSEM).

2004



Established an adjacent, state-of-the-art facility (Fab 2) in Migdal Haemek, Israel, designed to operate in geometries of 0.18μm and below, using advanced CMOS technology.

2008



Tower Semiconductor and Jazz Semiconductor merged in a stock for stock transaction and the combined company officially launched as TowerJazz.

2014



Completed a joint venture with Panasonic Corporation. The joint venture added available capacity of approximately 800,000 wafers per year (8" equivalent) in three manufacturing facilities in Japan; one 300mm and two 200mm.

2016



Acquired Maxim Integrated's 8-inch wafer fabrication facility in San Antonio, Texas, United States.

2020



On March 1<sup>st</sup>, 2020, launched a new brand identity to reflect Company's global presence and strength, and highlight its focus to provide the highest value analog semiconductor solutions.

2021



Announced partnership with ST Microelectronics to accelerate Agrade, Italy 300mm analog and power fab capacity and utilization ramp-up.





# Headquarters and Facilities' Location

We provide global capacity assurance with high quality and flexible worldwide manufacturing capabilities, enabling multi-fab wafer production diversification in three geographic regions, in Israel, the US and Japan, serving fabless companies as well as IDMs. We are continuously looking to increase wafer capacity at our existing factories and at additional geographic locations.

As a global company, we have the ability to benchmark between our worldwide manufacturing facilities as well as to take advantage of the enhanced skillsets within our workforce, sharing the best qualities and capabilities from each group across the entire organization. In this manner, we continuously improve our operational performance, manufacturing quality and corporate cost structure. These activities allow us to better serve our customers and achieve improved financial corporate performance.

Committed to excellence in everything we do, we continuously focus on our

operational performance and maintaining excellent operational indices. We define excellence as efficiency, effectiveness, and quality. Only when all three are met, excellence is achieved in activity and end-results.

With our firm reputation as a leading foundry providing unique, high-end, analog technology manufacturing capabilities, along with our solid market alignment, we wisely invest in our worldwide manufacturing facilities to best support the ever-evolving needs and growing demand of our customer base.

We are highly involved in driving green initiatives and are continuously expanding environmentally safe operational methodologies, including solar renewable energy, water consumption efficiency and recycling, among others.

The data presented in this report refers to Tower Semiconductor's facilities only, excluding TPSCo and Agrate facilities.



*We define excellence as efficiency, effectiveness, and quality. Only when all three are met, excellence is achieved in activity and end-results.*



# Our Global Operations

In addition to our fabrication facilities, we operate several sales offices around the world, located in USA, Japan, Europe, China, Taiwan, and Korea.

We have over 3,000\* highly devoted, talented, creative and skilled employees worldwide with broad knowledge, specialized expertise and profound experience.



**Newport Beach, CA, USA**

**San Jose, CA, USA**  
Sales and support office

**UK and France**  
Sales rep. office



**San Antonio, TX, USA**

**Virginia, USA**  
Sales and support office



## All of Tower's facilities are:

- ISO14001 Certified
- OHSAS18001 Certified
- Compliant to ISO45001
- ISO9001 Certified
- IATF16949 Certified
- Our US facilities and Uozu, Japan are ITAR compliant.



**Agrate, Italy**

Migdal Haemek, ISRAEL	Migdal Haemek, ISRAEL	Newport Beach, CA, USA	San Antonio, TX, USA
<ul style="list-style-type: none"><li>• 6" (150mm)</li><li>• CMOS, CIS, Power, Power Discrete</li><li>• 1µm to 0.35µm</li><li>• Planarized BEOL, W and Oxide CMP</li></ul>	<ul style="list-style-type: none"><li>• 8" (200mm)</li><li>• CMOS, CIS, Power, Power Discrete, RF Analog, MEMS</li><li>• 0.18µm to 0.13µm</li><li>• Cu and Al BEOL, EPI, 193nm Scanner</li></ul>	<ul style="list-style-type: none"><li>• 8" (200mm)</li><li>• CMOS, CIS, RF Analog, MEMS</li><li>• 0.18µm to 0.13µm</li><li>• Al BEOL, SiGe, EPI</li></ul>	<ul style="list-style-type: none"><li>• 8" (200mm)</li><li>• Power, RF Analog</li><li>• 0.18µm</li><li>• Al BEOL</li></ul>



**Migdal Haemek, Israel**

**Shanghai, China**  
Sales and support office



**Arai, Japan**

**Hsinchu, Taiwan**  
Sales and support office

**Nagaokakyo, Japan**  
Sales and support office

**Netanya, Israel**  
Worldwide Design Center



**Uozu, Japan**

**Seongnam, South Korea**  
Sales and support office



**Migdal Haemek, Israel**



**Tonami, Japan**

<b>Agrate, ITALY</b>	<b>Arai, JAPAN</b>	<b>Tonami, JAPAN</b>	<b>Uozu, JAPAN</b>
<ul style="list-style-type: none"> <li>• 12" (300mm)</li> <li>• Analog RF, Power, Displays</li> <li>• 65nm</li> </ul>	<ul style="list-style-type: none"> <li>• 8" (200mm)</li> <li>• Analog, CIS</li> <li>• 0.13μm to 0.11μm</li> </ul>	<ul style="list-style-type: none"> <li>• 8" (200mm)</li> <li>• Analog, Power Discrete, NVM, CCD</li> <li>• 0.35μm to 0.15μm</li> </ul>	<ul style="list-style-type: none"> <li>• 12" (300mm)</li> <li>• Analog, CMOS, CIS, RFCMOS/ SOI</li> <li>• 65nm and 45nm</li> </ul>

\* The ESG data performance presented in this report refers to Tower Semiconductor's facilities only, excluding TPSCo and Agrate facilities.

# United Nations Sustainable Development Goals

Grounded in our mission to have a positive and sustainable impact on the world, we are committed to implementing the United Nations' Sustainable Development Goals (SDG's) to help and face global sustainability challenges. Our current activity is aligned with the following SDG's:

## SDG

## Tower Semiconductor's action



Around the world, environmental factors threaten the health and well-being of many. At Tower, we are committed to minimizing the use of hazardous substances, reducing emissions and keeping a safe and healthy work environment.



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. At Tower, on top of the various programs we have for our diversified employee base in order to support their professional and personal development, we also drive multiple activities to strengthen youth capabilities in key areas to enable their future success.



Achieve gender equality and empower all women and girls. Tower is committed to gender equality, both in terms of the representation of both genders in the workplace in all functions and levels, and promoting a fair and inclusive environment. We are continuously taking actions as an equal opportunity employer, while focusing only on the ability and capabilities of our employees. No pay gap should relate to gender.



Humanity is threatened by global water shortages and mistreatment of our marine resources. In our operations, we aim to manage and conserve water use and increase the amount of water reused.



## SDG

## Tower Semiconductor's action



The global reliance on fossil fuels poses a grave threat to our ecosystem. At Tower, we are devoted to managing and conserving the consumption of energy in our operations and offices, and promoting the use of clean energy.



Though poverty has dramatically declined in recent years, we are still witnessing increasing inequality and human rights' abuses. We work to protect the human rights of our workforce while providing safe and secure work environments for our own employees, in our supply chains and communities.



Technological progress is key to finding lasting solutions to both economic and environmental challenges, and yet the digital divide around the world remains a major obstacle. At Tower, we provide technology solutions and operations that address societal demands, foster innovation and build sustainable infrastructures.



Achieving economic growth and sustainable development requires that we urgently reduce our ecological footprint by changing the way we produce and consume goods and resources. We are active in this effort by efficiently managing the use of chemicals and natural resources, and reducing waste.



All countries are experiencing the drastic effects of climate change. Greenhouse gas emissions are more than 50 percent higher than they were in 1990. Global warming is causing long-lasting changes to our climate system, which threatens irreversible consequences if we do not act. At Tower, we are developing energy efficient technologies and mitigating climate change risks within our operations.



# Managing ESG Risks and Improvement Opportunities

To integrate and manage potential sustainability risks and opportunities, we have implemented different procedures for risk assessments:

01

Business Impact Analysis  
(BIA)

02

Risk assessment per  
department (including  
Environmental Health & Safety  
(H&S), compliance, HR, etc.)

03

Failure Mode and Effects  
Analysis (FMEA)  
for design / technology / tools

The procedure for global risk assessment on an annual basis is using a structured framework to identify relevant potential risks to Tower's business, considering both financial, operational and ESG related impacts.

Our global QA department is in charge of reviewing, identifying, and analyzing any potential risk while also managing the appropriate improvement plan to minimize impact on our business.



## Business Impact Analysis

As part of our business impact analysis, we considered a wide range of potential threats covering several different sources, departments and risks to the business. Representatives from each department at each respective location, evaluate the severity and likelihood of occurrence for each potential risk assigned, and those risks with the highest scores are evaluated by the department heads of the company. They then establish risk mitigation plans for each of the high-risk areas identified.

## Global Risk Assessment



01

Map the relevant processes under the responsible unit.



02

Identify the potential risks (inherent risk).



03

Score the inherent risks identified.



04

Map the controls that exist to mitigate the risks.  
These may be systems, procedures, applications, etc.



05

Measure the risk with the combination of the  
exposure and existing controls (residual risk).



06

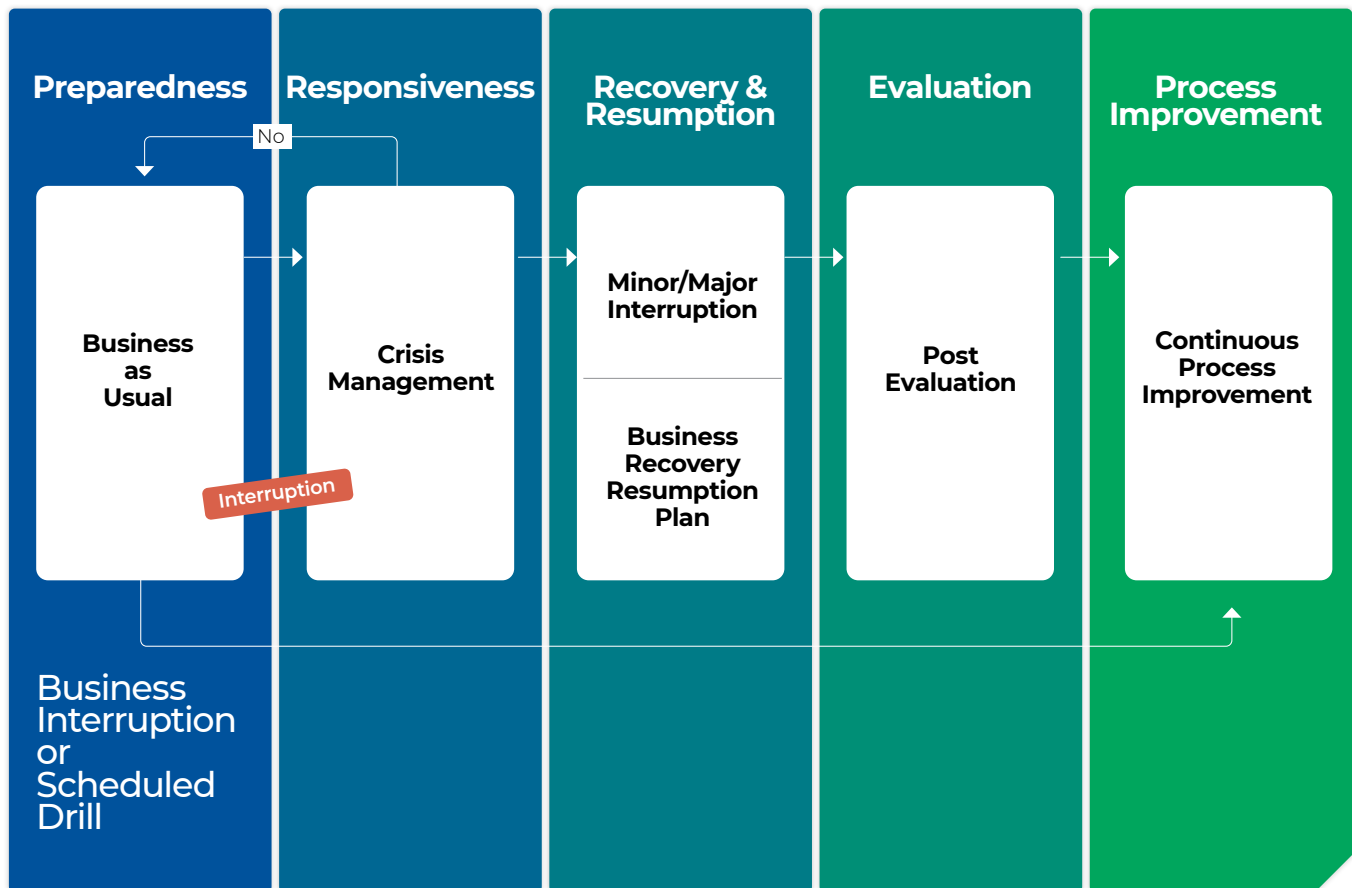
Determine whether the residual risk is acceptable.



07

For those risks with a high score, an improvement plan is set.

## Business Continuity Life Cycle



## The Integrated Business Continuity Plan (BCP)

Tower Semiconductor is committed to rapidly responding to and managing disasters and emergencies. The business continuity plan ensures that programs are in place to keep critical processes running during and after unexpected events or disasters in all of Tower's facilities. The risks associated with these programs are assessed to ensure preparedness: minimizing the duration and severity of such events, preventing injury, protecting assets, and enabling our ability to provide customers with a dependable and uninterrupted supply of products and services.

The plan is designed to mitigate financial exposure, disruption of operations, and the interruption of customer service while promoting rapid implementation of the appropriate disaster recovery strategy.

The BCP consists of proactive and reactive plans to meet varying levels of business

interruptions and disasters; the proactive plans include employee safety plans and day-to-day data protection activities, while the reactive plans include crisis management activities and business recovery and resumption strategies.

Tower conducts annual tests of the business continuity plan and once the results are evaluated, the BCP is updated if deemed necessary. We also track the Company's performance during actual crises to measure effectiveness of the BCP. Additionally, the plan is annually reviewed to ensure that system changes are relevant and documented.

### Crisis Management Team

The CMT's primary goals are employee safety, crisis resolution, resumption of normal business processes as soon after a business interruption as outside influences permit.



## Ensuring Business Continuity During COVID-19 Pandemic

During 2020, while the world dealt with the global COVID-19 pandemic, Tower continued to focus on ensuring business continuity by providing reliable technology and manufacturing solutions, and diligently taking action to reduce health and business risks to our employees, customers, suppliers, and partners. In doing so, our leadership team assessed risks and opportunities in real-time to appropriately respond to the evolving situation, aligned with the governmental instructions and requirements, often exceeding the minimum guidelines set forth.

### Continuity of the production cycle

Being an essential enterprise, our global manufacturing facilities continued to operate uninterrupted. All of our seven fabs continued to operate with good performance. All major supply chain materials were delivered without interruption.

### Continuity of the workflow

We strictly adhered to all government regulations and applied many health and safety guidelines within the workplace to ensure business continuity and safety for our employees. We implemented a Work from Home policy for all jobs that can be done remotely. Our employees were provided with communication kits and additional cyber security tools. We expanded our communication technologies using Microsoft TEAMS to convert visits to and from customers, suppliers, and partners, as well as internal employee meetings, to video conference calls to minimize face-to-face interaction. Our Fabs continued working without any significant interruptions, while multiple safety protocols were carried out onsite:

- ▶ Social distancing and working in capsules for production line workers.
- ▶ Office lunch breaks in groups of up to five.

- ▶ Minimized frequency and attendance of in-person/face-to-face meetings.
- ▶ Frequent cleaning of all public areas, including intense comprehensive cleaning of all heavy traffic areas before and after shift changes.
- ▶ Hygiene education.
- ▶ Temperature measurement upon entry to the facility as well as Coronavirus speed tests.
- ▶ All employees business travel has been extremely limited, in most cases cancelled.
- ▶ Expansion of shuttle services to ensure sufficient social distancing and extended options of travel by employees in their private car.
- ▶ Expanded lines of communication for employee questions while keeping them updated.

To ensure as little impact as possible on our supply chain, we've implemented the following measures:

- ▶ Increased inventory of indirect materials and silicon.
- ▶ Air and sea freight lines remained open. Some delays have required close follow-up. We increased the amount of air cargo freight in place of the lost passenger freight capacity.
- ▶ We conducted assessments with our raw material inventory and used, if necessary, alternative export channels for production continuity.
- ▶ Some delays regarding vendor on-site services, due to travel restriction, were mitigated with local vendor employees and Tower teams.

The spread of COVID-19 has had a tremendous impact on our lives, communities, and businesses worldwide. We would like to express our sincere sympathy and condolences to all families who lost loved ones due to the virus and thank all healthcare workers, doctors, and nurses for their incredible work.

We would like to thank each of the Company's employees in all our sites worldwide for their hard work, utmost commitment, and the humanity we show as a company.

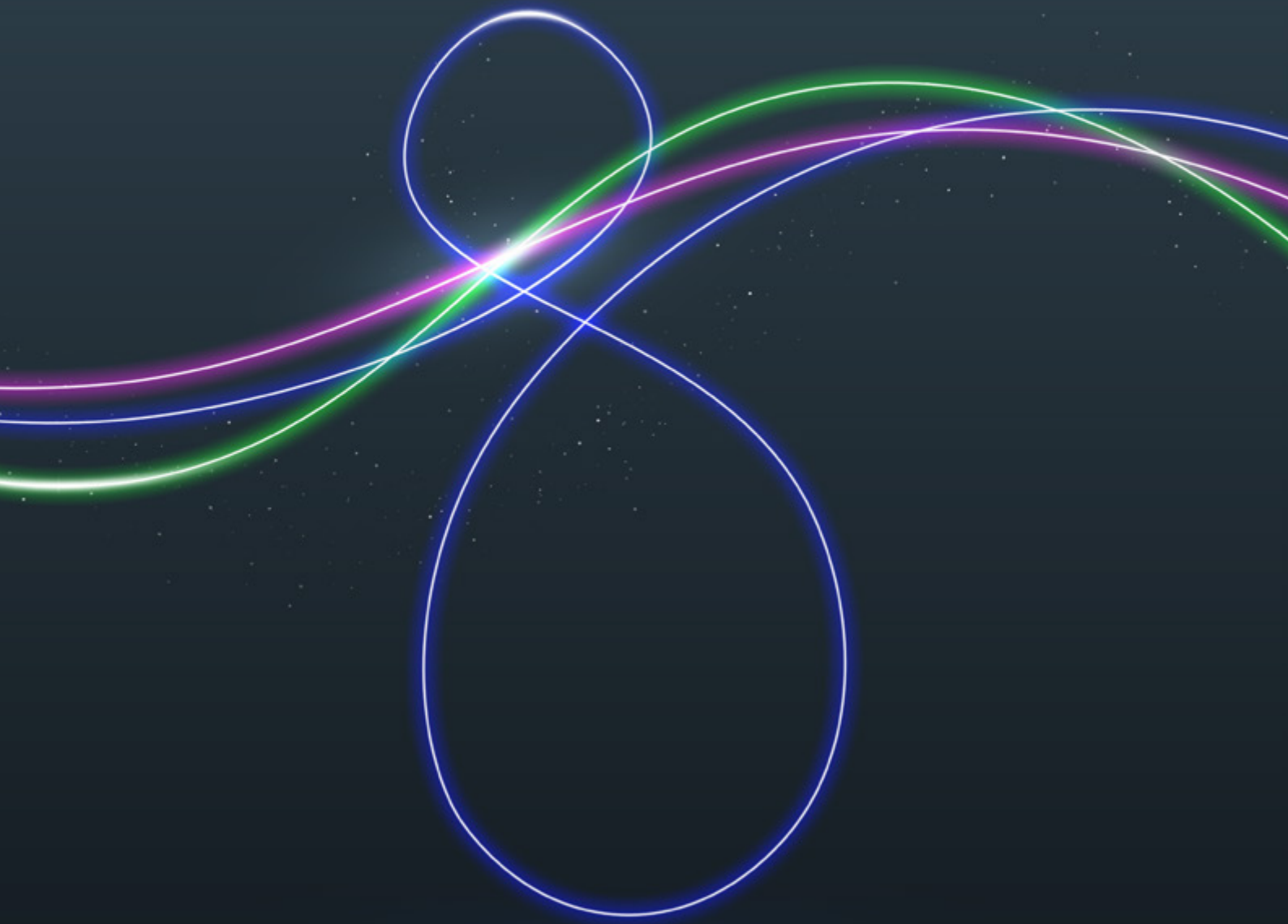
The Tower family has proven once again to be highly resilient, a vibrant company that knows how to overcome adversities placed in its way.

# Responsible and Ethical Business





At Tower Semiconductor, we believe that corporate responsibility and ethics are essential for a healthy and balanced corporate culture. We integrate ethical and moral focus into our decision making. We strive to provide our employees with opportunities to grow and thrive, our suppliers to develop, our customers to succeed, and our society to prosper.



\* The ESG data performance presented in this report refers to Tower Semiconductor's facilities only, excluding TPSCo and Agrate facilities.

## Corporate Governance

In addition to Tower's implementation of an Environmental, Social and Governance (ESG) program, the company has placed substantial focus on governance matters involving the Board of Directors and its committees in ESG related aspects. The ESG initiatives are presented to the Board of Directors and internally communicated to ensure understanding, commitment, and enthusiasm throughout the corporation.

## Board Of Directors

Our Board of Directors is currently composed of nine directors. Our directors are elected during a general meeting of our shareholders by a majority vote of the ordinary shares present, in person or by proxy. Generally, our directors hold office until their successors are elected at the next annual general meeting of shareholders (or until any of their earlier resignation or removal in accordance with the Companies Law). In addition, our Articles of Association allow our Board of Directors to appoint others (other than the external directors) to fill vacancies on our board or as an additional director or

additional directors, provided that the overall number of directors does not exceed the maximum number specified in the Articles of Association. A director appointed as aforesaid shall cease to hold office at the end of the annual general meeting following his/her appointment. We are proud to share that **one-third of our directors are women and 90% of our directors are independent.**

**The board targets recruitment of 1-2 new board members with diversity focus by 2025.**

Name	Title	Independence	DOB	Board Appointment Date
<b>Amir Elstein</b>	Chairman of the Board	Independent Director	November 20, 1955	January 2009
<b>Yoav Z. Chelouche</b>	Director, Chairman of the Audit Committee	Independent Director	July 18, 1953	April 2016
<b>Ilan Flato</b>	Director	Independent Director	September 11, 1956	February 2009
<b>Kalman Kaufman</b>	Director, Chairman of the Corporate Governance & Nominating Committee	Independent Director	June 7, 1945	August 2005
<b>Iris Avner</b>	Director	Independent Director	March 5, 1965	June 2016
<b>Russell Ellwanger</b>	Director, CEO		January 18, 1955	September 2016
<b>Dana Gross</b>	Director, Chairman of the Compensation Committee	Independent Director	May 9, 1967	November 2008
<b>Michal Vakrat Wolkin</b>	Director	Independent Director	December 30, 1971	September 2020
<b>Avi Hasson</b>	Director	Independent Director	June 18, 1970	September 2020

In 2020, the Board held a total of **11** meetings, and average director attendance at Board meetings was **99.8%**.

# Board Committees

	Audit Committee	Compensation Committee	Corporate Governance & Nominating Committee
<b>Iris Avner</b>	Member		
<b>Yoav Z. Chelouche</b>	Chairperson		Member
<b>Ilan Flato</b>	Member	Member	
<b>Dana Gross</b>		Chairperson	Member
<b>Kalman Kaufman</b>			Chairperson
<b>Avi Hasson</b>	Member	Member	
<b>Michal Vakrat Wolkin</b>			Member

**The Corporate Governance & Nominating Committee** is responsible for ensuring that director appointment processes are formal, rigorous and transparent. This Committee assists the board in establishing and reviewing the Company's statement of corporate governance principles and promoting good corporate governance in the Company. In addition, this Committee ensures a clear and actionable succession plan for key positions within the company and oversees the Company's commitment to social and environmental responsibility matters.

In 2020, the Committee held a total of **5** meetings, and average director attendance at committee meetings was **100%**.

**The Audit Committee** oversees the transparency and integrity of the external financial statements and system of internal controls over external financial reporting. This Committee assists the board in its responsibility to oversee the company's process for monitoring compliance with laws and regulations and the code of conduct. In addition, the Audit Committee oversees the Company's risk assessment and risk management, including procedures and activities in information and cyber security.

Summary of the audit committee charter is available on our website.

In 2020, the Committee held a total of **4** meetings, and average director attendance at committee meetings was **100%**.

**The Compensation Committee's** responsibilities are consistent with the Nasdaq Listing Rules and the requirements for compensation committees under the Companies Law, including determining or recommending to the Board of Directors for determination, the compensation of the CEO, and all other executive officers of the company, as well as members of the Board of Directors.

In 2020, the Committee held a total of **24** meetings, and average director attendance at committee meetings was **100%**.

In addition, the Board of Directors convenes subcommittee meetings for assessment of the Company's financial and investment strategies and policies, including financial aspects of corporate structure and potential strategic transactions.



## Ethical Business Practices

Tower is dedicated to conducting its business with the highest standards of business conduct and ethics. We have an obligation to all of our stakeholders including employees, shareholders, customers, suppliers, partners, community representatives, and other business contacts, to be honest and fair in all business activities. Hence, we have a code of ethics of which all our vendors are made aware of and whose standards they are expected to meet. Additionally, we have designated a compliance officer to administer this policy, responsible for ensuring that all employees are made aware of this policy and the Complaints Management Procedure by conducting a yearly training.

In 2020, 98% of our employees completed the ethics annual training.

The Company code of ethics is available on our website.

## Competitive Behavior

At Tower, we seek to compete primarily on the basis of advanced specialty analog/mixed-signal technology, research and development, breadth of process offering, production quality, technical support, and our design, engineering and manufacturing services. We have a highly differentiated specialty offering and proven track record in analog/mixed-signal markets, which enables us to effectively compete with larger foundry service providers. With that, our ability to compete depends on our ability to operate without infringing upon the proprietary rights of others.

During the reported period, there were no legal proceedings initiated against Tower associated with anti-competitive behavior regulations.

## Customer Service

Tower's global manufacturing facilities are 'operational excellence' driven, aiming to not only meet, but to exceed customer expectations. Through our continuous dedication to leverage our superb quality standards, maximized transparency, best-in-class performance, shortened lead times and optimized cost of operations, we guarantee our customers distinct world-class services.

We conduct satisfaction surveys among our customers so that they can assess our performance, which allows us to improve and develop our service.

In addition, we have a design service and support team who are highly experienced in digital, analog and power management designs.

## Privacy Policy

Tower is committed to the privacy and protection of its customers' personal data, meaning any information about an individual from which that person can be identified. We may collect, use and store a variety of personal data, including identity data; contact information; technical data from devices used to access our website and services; usage data regarding how our customers use the website and services; and aggregated data, such as statistical or demographic data. In



cases of legitimate interest, meaning a legal or contractual obligation in the interest of conducting and managing our business to enable us to provide the best service/product and the best and most secure experience, Tower may collect personal data.

We collect this data through various methods, such as direct interaction, including forms filled out on our website; requests for technical or business information; and registrations for our newsletters, updates, and/or conferences, our customer portal 'eBizz'. We also collect personal data through automated technologies or interactions using cookies, server logs and other similar technologies. Collected information is used to help diagnose problems with our server, administer our website, and deliver content tailored to our customers' interests. Some of this is voluntary and can be disabled in browser settings.

We make sure we consider and balance any potential impact on our customers (both positive and negative) and their rights before we use or process personal data for our legitimate interests. We may share such data, subject to confidentiality obligations, with vendors, sub-processors or subcontractors working on our behalf for purposes described above.

That being said, we maintain appropriate security measures in place to prevent personal data from accidental loss, misuse, alteration or unauthorized disclosure. Additionally, access to personal data is limited to those employees, contractors and third parties who are authorized to process the data on our behalf, under specific instruction, and subject to a duty of confidentiality.

The Company's privacy policy is available on our website.

## Cyber Security

Tower's Information Security Policy addresses the major risks, both technological and human/organizational, that may affect the confidentiality, integrity and availability of the information in the case of unauthorized access or a security breach. In order to address these risks, the policy outlines key elements in establishing an ISMS (Information Security Management System). These include information security components designed

to prevent malicious or accidental damage to company information, detection of breaches not identified by the prevention layer, real-time and post-event reaction to the breach, and documentation to allow the analysis of the events.

This policy works toward the important goals of maintaining the confidentiality, integrity and availability of information and is the basis for information security procedures and controls. It requires the implementation of an appropriate level of information security, the identification and management of risks and exposures of information stored in the Company's system, the defining of tools to actively enhance security awareness, and the preparation of an annual work plan.

To maintain a high level of information security, we established processes, allocated responsibilities and commitments, and set up a number of guidelines. The Company's management and Board of Directors play an important role in maintaining a high level of information security and must provide adequate resources to do so. Tower established an Information Security Steering Committee, that has the final word on changes to and implementation of the Information Security Policy. The Committee consists of the Senior VP of HR & IT, the COO, the CIO (Information Security Appointee), the Legal Counsel, the Global IT Infrastructure Director, the CISO, and the COE of Security & Cloud. The CISO is responsible for providing annual information for security review, leading the Information Security Steering Committee, implementing the Information Security policy and procedures, initiating an annual work plan, investigating and handling information security events and breaches, and presenting information security topics to management. The CIO works to support the CISO in daily matters and when needed also presents these topics to management.

Regardless of the division of roles, the responsibility for data protection lies with all employees. Company data is divided into four classes: general information, internal use, secret and top secret which is shared only on a "need to know" basis. Each of these classes is handled in specific ways to best manage the risk involved. Additionally, this policy outlines the process of controls and auditing to properly monitor the flow of information.



## Conflict Minerals

As a semiconductor manufacturer, we are aware of the materials needed for our production processes and products manufactured. To comply with the law, we review the products we manufacture to determine whether conflict minerals are necessary for their functionality or production.

At Tower, we use tantalum and tungsten. Every year, our mineral suppliers are required to complete the Conflict Minerals Reporting Template (CMRT) and submit it to the Company for review. We then file an annual report with the SEC (Securities and Exchange Commission) and issue our own CMRT for our customers to comply with this regulation.

## Conflict Minerals Policy

Tower is committed to the responsible sourcing of minerals and we support the position of the Global e-Sustainability Initiative (GeSI) and Responsible Business Alliance (RBA), that require companies to avoid the use of conflict minerals that directly or indirectly finance or benefit armed groups in the Covered Countries.

The Company has established programs aligned with the internationally recognized OECD due diligence framework to regularly evaluate our supply chain and require our suppliers to do the same. Suppliers are prohibited from supplying us with materials known to be derived from the Democratic Republic of the Congo (DRC) or adjoining countries that have not been confirmed as "DRC Conflict-Free" via a recognized and credible third-party process, such as the Conflict Free Sourcing Initiative's Conflict Free Smelter Program (CFSP).

We expect our suppliers to implement policies and due diligence measures that will assure that products and components supplied to it containing minerals are conflict free. In addition, we require our direct suppliers to provide us with completed conflict minerals declarations using the RBA/GeSI Conflict Minerals Reporting Template. We are committed to taking appropriate actions to enforce this policy, including discontinuing purchases from suppliers that fail to comply with this

policy. Based on information provided by our suppliers, we do not knowingly use any non-conflict free minerals in our manufacturing.

Tower is dedicated to the responsible sourcing of conflict minerals throughout our supply chain and to continued compliance with the applicable SEC rules and regulations related to conflict minerals.

The Company policy is available on our website.

## Labor and Human Rights

Tower is committed to ensuring the human rights of our worldwide employee base and treating them with dignity and respect as defined by the international community. Accordingly, we have a labor and human rights policy, available on our website, and have designated our Senior VP HR & IT as the Compliance Officer to implement this policy.

We are committed to supporting and respecting the protection of international human rights within the sphere of our influence, and ensuring that we are not party to human rights abuses. With that, we expect our managers to lead the company in accordance with this policy, in both words and actions.

The policy addresses the following subjects:

- ▶ Freely Chosen Employment
- ▶ Child Labor Avoidance
- ▶ Working Hours
- ▶ Wages and Benefits
- ▶ Humane Treatment
- ▶ Non-Discrimination
- ▶ Freedom of Association

In addition, Tower prohibits forced labor and trafficking in persons.

## Responsible Supply Chain

Tower is dedicated to corporate social responsibility and reporting our internal social responsibility standards to our customers, allowing them to evaluate and assess their global supply chains, including responsible sourcing of minerals in our supply chains.



## Cooperation with the RBA

Tower has been working alongside the Responsible Business Alliance (“RBA”) since 2014 to promote transparency and customer accessibility to CSR data and performance. The RBA provides assessment tools designed to help members identify social, environmental, and ethical risks in their supply chains, and implement systems to further improve their social contribution. Tower participates in the RBA self-assessment questionnaire (“SAQ”) for all of our facilities every year and works to improve based on input collected through the SAQ. We have been recognized by certain Tower customers for our noteworthy rating and improvement since completing the first SAQ. The risk level assigned to Tower as a result of each assessment is low.

To meet social responsibilities, suppliers are expected to conduct their business in an ethical manner and to act with integrity, all in accordance with Tower’s code of ethics and policies.

For our global ethical requirements for suppliers, we use the RBA supplier code of conduct.

## Supplier Audits

To evaluate the supplier’s quality system and to verify that appropriate controls are in place, we established an audit procedure for both new and existing suppliers. Each new supplier undergoes an audit during the approval period; and all existing suppliers every 3 years.

The audit assesses the following 14 categories of the suppliers’ processes: Quality Systems, Customer Service and Satisfaction, Training, Design and Change Control, Supplier and Materials Management, Housekeeping, Product Control and Traceability, Preventive Maintenance and Calibration, Inspection and Test, Process Control, Corrective Action, Continuous Improvement, BCP (Business Continuity Plan) and EICC Compliance. Each section places important emphasis on the ESG aspects of the process: transparency towards employees, labor systems, H&S practices, ethics, and many more.

The assessment is performed by both the supplier itself and Tower. The audit’s scores range from Probation (<70%) to Silver (70-79%), Gold (80-89%) and Platinum (>90%).

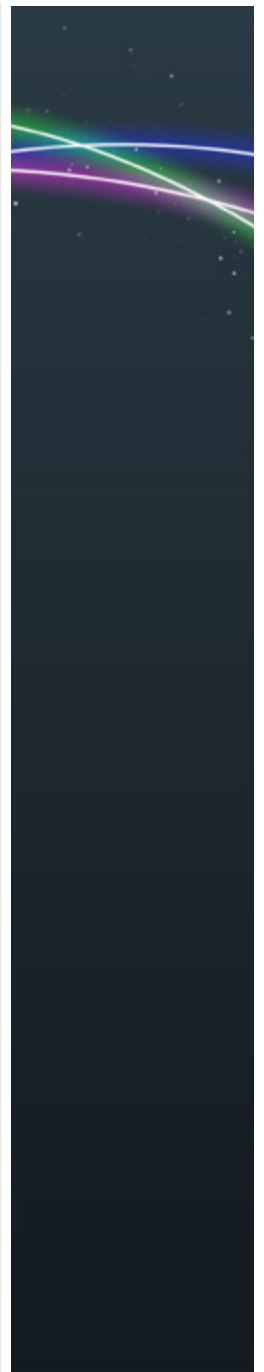
Tower strives to integrate sustainable practices into its supply chain and uses the audits as a framework to establish a dialogue with suppliers to improve their sustainability practices.

## Supplier Scorecards

Tower has a Global Supplier Performance Scorecard, with which our key suppliers rank our performance once a year. This process is led by our purchasing department and helps us improve our activities and our supplier relations.

The scorecard is divided into four main sections:

- ▶ Quality - Product & Safety
- ▶ Service & Support
- ▶ Cost
- ▶ Supply Chain



# Approaching Sustainable Future

Tower offers a broad range of advanced analog process technologies tailored to meet its customers' precise specifications, enabling the most cost-effective and versatile IC manufacturing solutions.

We are proud to have an environment of innovation which allows us to lead the analog ecosystem with technology and manufacturing solutions in exciting and growing markets.

The variety of end-products that are manufactured thanks to our specialty technology offerings include 5G wireless communication, Wi-Fi, Bluetooth, global positioning system (GPS), electric vehicles, medical technologies, and more.



**Wireless  
Everything**  
Seamless  
Connectivity

31%

of Corporate  
Revenues

**Green  
Everything**  
Energy  
Efficiency

38%

of Corporate  
Revenues

**Smart  
Everything**  
Interactive  
Smart Systems

15%

of Corporate  
Revenues





# Wireless Everything

## Radio Frequency (RF) & High-Performance Analog (HPA) Technologies – New Era of Communication

These technologies enable the communication revolution by bringing the world together, letting families, friends, and colleagues to “meet” virtually anywhere anytime, parents to work from anywhere (telecommuting) while giving care to dear ones or for doctors to deliver telehealth services at any corner of the world.

Technology Offering	Environmental / Social Impact
RF SOI Platform	<p>Tower's RF and HPA technologies are helping many facets of the society and environment by accelerating the communication revolution that is connecting everything in the world regardless of geographic or physical distance and doing it at lower cost and lower power. Our platforms are used in the most advanced communication technologies that have many environmental and social benefits:</p> <ul style="list-style-type: none"><li>· WiFi/ Bluetooth technologies reduce superfluous wires that find their way into trash and hurt wild and marine life.</li><li>· GPS technology increases productivity and reduces carbon footprint in multiple sectors.</li><li>· The sensors used in Radar Vehicle-to-Everything (V2X) communications are critical in reducing millions of global fatalities caused by drunk driving and distracted drivers.</li><li>· The platforms used for Datacenters (clouds), High speed optical telecommunication and 5G communication enable stable connection while working from home, which was crucial during the COVID-19 pandemic and has huge potential for reducing traffic.</li></ul>
RF SiGe Platform	
High-Performance SiGe Platform	
Silicon Photonics Platform	



# Green Everything

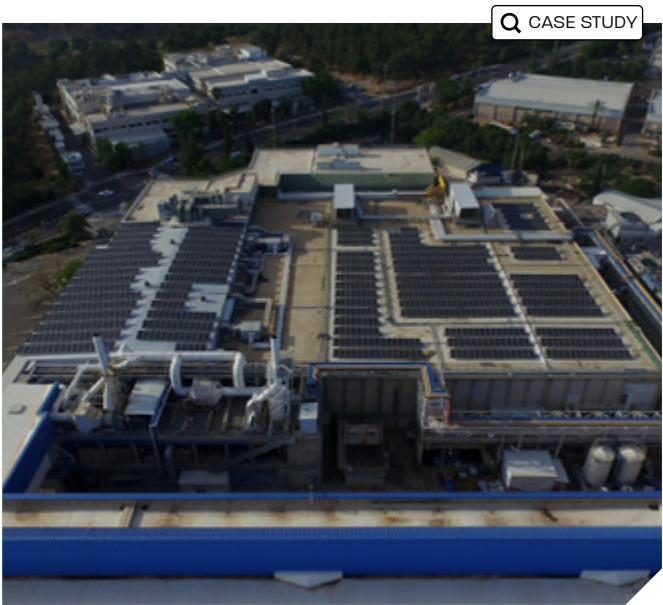
Tower's power management platforms are designed for maximum flexibility, enabling customers to design and manufacture optimized products at any desired level of integration and achieve first-pass success for fast time-to-market.

Technology Offering	Environmental / Social Impact
Low voltage 0.18um Power Management	<p>Tower's power platforms are available in three manufacturing facilities worldwide, ensuring maximum operational flexibility, continuous product supply, and geographic diversity.</p> <p>Our power platforms support the growing market of electric vehicles and green energy, and provides solutions for efficient power conversion and power management by ultra-low on-resistance power transistors and advanced isolation, leading to significant costs savings.</p> <p><b>Our current sixth generation (6Gen) process led to up to 35% improvement in energy efficiency from our previous process.</b></p> <p>Our sensors platforms features different types of radiation detectors that are reusable, have ultra-high sensitivity, and operate in a wide range of temperatures. These platforms help in various areas such as solar radiation protection and sterilization against viruses, such as COVID-19.</p> <p>Our gas sensors control, among other things, CO<sub>2</sub> levels in buildings. This is important for social distancing, especially during COVID-19 pandemic, and for monitoring the CO<sub>2</sub> levels that recovering COVID-19 patients' exhale.</p>
Mid voltage 0.18um Power Management	
High voltage 0.18um Power Management	
Low voltage 65nm Power Management	
Radon Sensors	
ToF Sensors	
uLED Displays (with customer)	
Gas Sensors	

### Galvanic Isolation Technology

The newly developed galvanic capacitor technology integrated with Tower's 0.18um power management and mixed-signal platforms, enable up to 12kV isolated gate driver and digital isolator ICs, which enhances safety and power efficiency for applications in the automotive, green power and industrial markets.

The new technology offers a cost and size advantage thanks to the integration of the galvanic isolator, saving the need for an additional device. Lead customers are prototyping initial products addressing applications such as battery chargers, power supplies and motor drivers for electric and hybrid vehicles, green power (solar inverters and wind turbines power converters), and industrial markets.



Q CASE STUDY





# Smart Everything

Our expanding connected IoT world is built around sensing our surroundings, analyzing data and reacting. We offer a broad range of sensor fabrication technologies and IPs to help customers meet this growing demand for various applications.

We offer technological platforms for fabricating diverse sensing devices, including unique ionizing radiation, UV and magnetic field sensors.

## Technology Offering

X-ray Sensors

Machine vision Sensors

High-end Sensors

ToF Sensors

UV Sensors

DNA Sequencing Chip (with customer)

Sensors of Liquids-based on BioFETS

Neuromorphic Devices

## Environmental / Social Impact

These technologies can be used for monitoring physical activity (running, jogging, etc.) and testing of food quality. They can benefit human healthcare by leading to more effective treatment for sepsis, shorter hospital stays, reduced mortality, and express blood testing.

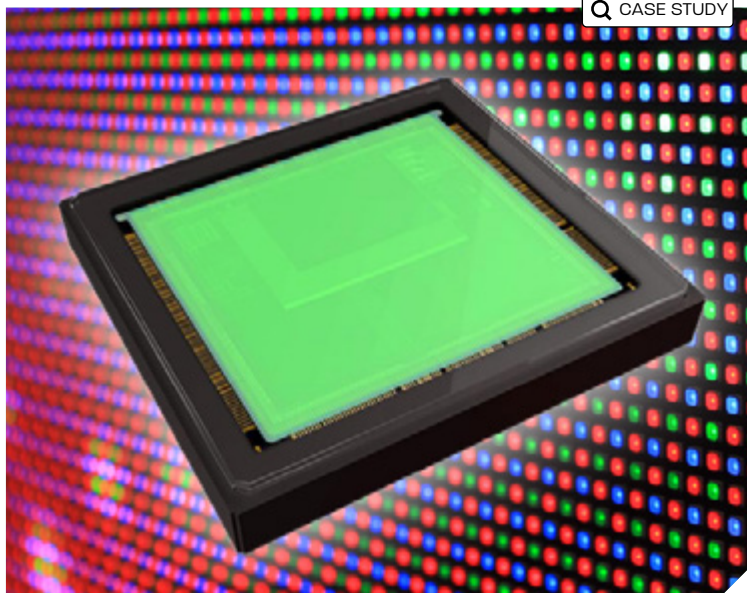
Moving to digital medical imaging has huge environmental impact, such as avoiding the use of acids and chemicals that harm the environment used to develop X-ray films.

## 10µm Three-tap Cutting-edge Pixel: a Partnership of Tower & Teledyne e2v

Produced by Tower and designed with proprietary CMOS technology, this pixel is featured in Teledyne e2v's new Time-of-Flight (ToF) CMOS image sensor - Hydra3D™. The sensor supports the latest industrial applications, including vision-guided robotics, logistics and automated guided vehicles.

Rafael Romy, Vice President of Professional Imaging at Teledyne e2v: "The great technology innovation and partnership with Tower has been key in the development of this innovative new ToF image sensor, helping us to bring to market this best-in-class solution."

Q CASE STUDY



# Collaborative Projects with a Specific Focus on ESG



## 01

### MADEIN4 PROJECT

Tower is participating in the Metrology Advances for Digitized ECS industry 4.0 (MADEin4), together with 46 partners from 10 different countries. The MADEin4 is an EU-funded project that develops next-generation metrology tools, machine learning methods and applications in support of industrial 4.0 high volume manufacturing in the semiconductor manufacturing industry.

## 02

### GAS SENSORS PROGRAM

A bi-national Israel-Germany (Fraunhofer Institute) program, funded by the IIA, is chartered with the development of gas sensors for environmental control. The sensors applications include testing of CO<sub>2</sub> in buildings for social distancing control and analyses of exhaled air from lungs for post-COVID-19 conditions' assessment.





## 03

**CC-SENS PROJECT**

This special program funded by the Israel Innovation Authority (IIA) is aimed at developing advanced products that are based on Israel's budding infrastructures while cooperating with research institutes and academic institutions abroad. The program supports an extraordinary collaboration between Tower, the engineering faculty at Tel Aviv University, the Technion, and global and German research teams, with the goal of developing a miniature sensor that can identify diseases and can be mass-produced.

**The Sensor That Will Smell Disease**

In 2017, the CC-Sens research project was supported by the Israel Innovation Authority as part of a joint German-Israeli call for proposals. At the center of the project is a sensor that will change the world of medicine, and Tower is responsible for its manufacturing.

**Prof. Yossi Rosenwaks, Dean of the Engineering Faculty at Tel Aviv University:**

"The goal of the current project is to develop a sensor for gases or molecules. This sensor is based on an electronic component that can only be created in large factories and not at a university. Furthermore, we also have a commercial purview so that is why we chose to collaborate with leading engineering companies such as Tower and the German Singulus Corporation. Singulus possesses the exclusive capability of applying/submerging the extremely thin layers required for the sensor's operation and to do so in mass-production – something that is impossible to do in other companies and certainly not at a university. It is compatible for components used in IoT systems (Internet of Things) requiring many sensors. For example, it could be a sensor that reports on the quality of air at the home or the freshness of food. In the future, it will be able to tell us whether our breath is gassy, thereby providing a different indication of diseases. The project's main goal is to engage in the field of early disease diagnosis."

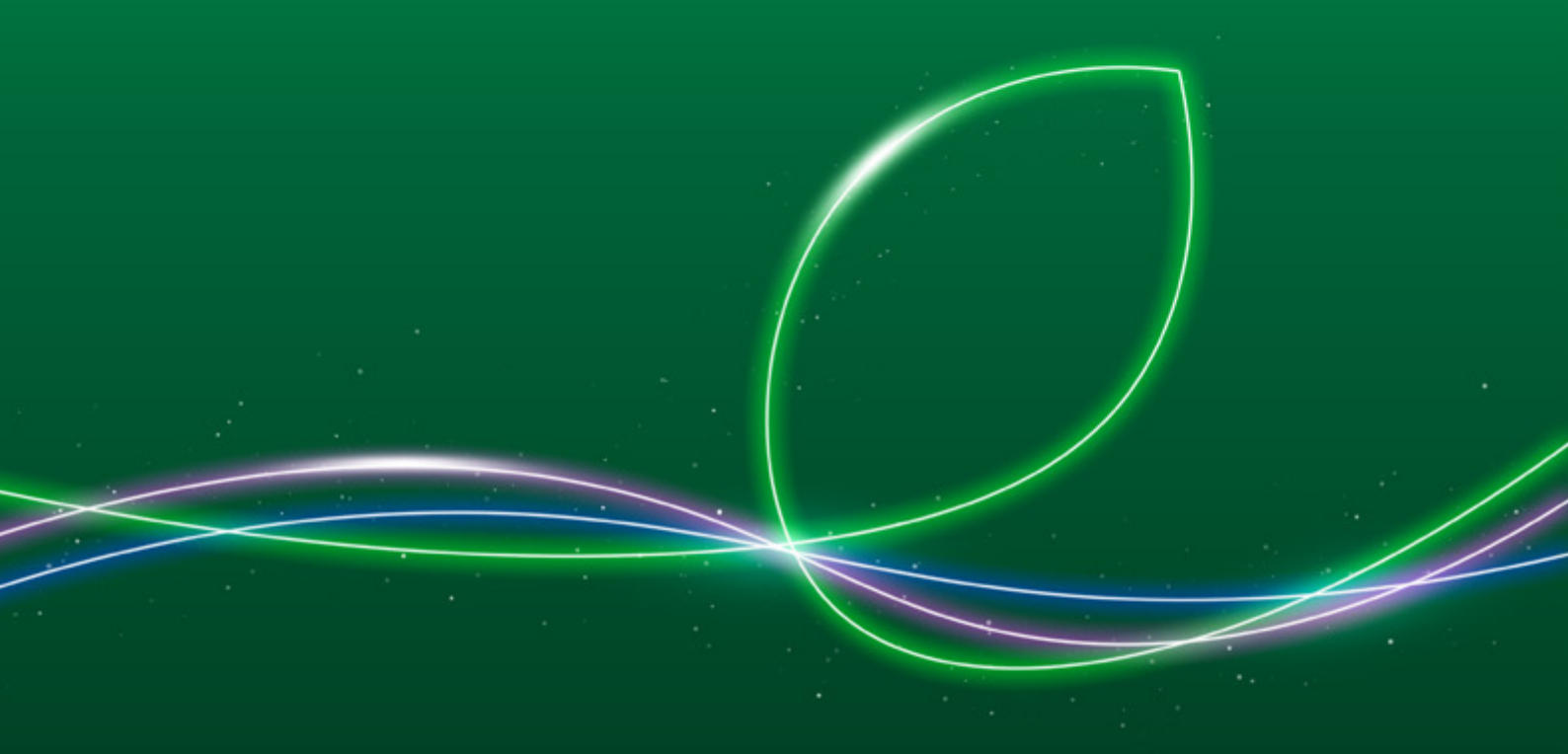
## 04

**MSC STARS PROGRAM**

In this Industrial Engineering (IE) students' program, in collaboration with Tel-Aviv University, six selected B.Sc. engineers complete M.Sc. studies in IE and later can apply their ideas in Tower. Two of the program students have already graduated, and some of the students in the Tower group were promoted to managerial positions. Ideas generated during this program are evaluated for implementation in Tower, such as one of the students' projects, "Optimizing Test Sampling Strategies in Semiconductor Manufacturing", may provide test flow optimization, decrease required resources and increase profits in Tower fabs.



# Environmental Responsibility



Semiconductors are a vital component of the value chain in the computing and electronics industries. With the trend towards increasing automation and going to digital, semiconductors are being used in more and more products, including automobiles and appliances. While the growing use of semiconductors promises to advance several crucial industries, their production can create environmental externalities that adversely affect the environment including resource depletion, eutrophication, water stress, toxicity, summer smog and local electrical consumption. This necessitates special focus on the environment, an essential consideration for Tower, as we seek to operate our business in a way which is profitable and advances the industry, all while being wary of environmental impacts and actively seeking to minimize them.

Combining ever-evolving capabilities in the field of semiconductor production with an innovative mindset and a sincere commitment to developing sustainably, Tower proceeds to drive full circle value creation, while being devoted to making positive and sustainable impacts on the world.

\* The ESG data performance presented in this report refers to Tower Semiconductor's facilities only, excluding TPSCo and Agrate facilities.

## Environmental Risks

Climate change brings with it a variety of environmental risks that may negatively affect Tower's business operations, including resource scarcity.

Increased attention to environmental concerns from the scientific community and policy makers has resulted in an increase in environmental legislation that has significant consequences for businesses. Legislative developments mandating a reduction in greenhouse gas emissions may result in increased energy prices and higher costs for transportation, equipment, and raw materials.

Tower is also subject to a variety of laws and regulations relating to the use, discharge, and disposal of toxic or other hazardous materials. Complying with current legislation as well as anticipating future laws which may be implemented

is critical to the risk-management of the company.

In addition to these concerns, scientists have predicted that more frequent droughts, floods, extreme weather conditions, and rising sea levels will likely occur due to climate change. These may impact transportation and production across many industries. While the scale of these challenges is difficult to predict, Tower recognizes the risk presented by these developments and the need to monitor and adapt to ongoing environmental changes.

**Tower strives to manage these risks and reduce potential adverse environmental impact on our operations, in order to protect long-term value and run our business as sustainably as possible. Environmental risks are monitored and mitigated through our environmental management system.**

## Our Environmental Strategy

Tower is committed to create sustainable environmental impact on the world through minimizing the effects of its own operations.

Our activities focus in multiple areas, including: environmental permits and reporting, pollution prevention and resource reduction, hazardous substances, wastewater and solid waste, air emissions, and product content restrictions.

*We are very pleased with the results we are seeing from our initiatives to strengthen our "green" focus and continue activities supporting environmental sustainability. Across all of our operations, we will intensify efforts to reduce environmental impact and implement forward-thinking policies for future environmental concerns*

**Rafi Mor,**  
**Chief Operating Officer**

## Management Approach

The environmental management system implemented throughout Tower's facilities in Israel and the US are certified by the International Organization for Standardization (ISO) 14001, designed to promote and guide an environmental management approach which is both effective and comprehensive.

Essential components of our corporate environmental approach include reducing greenhouse gas (GHG) emissions, managing energy consumption and improving energy efficiency during manufacturing; managing

water use and minimizing risks associated with water quality and availability; reducing and managing waste generated during manufacturing; minimizing product lifecycle impacts through innovation in product design and business practices, including managing the supply chain to minimize risks associated with the sourcing of sensitive or rare minerals.



## Responsibility Structure

Each site has a person responsible for environmental management, reporting to the site VP and with a dotted line reporting to the Corporate SVP of Excellence.

## Compliance with Environmental Regulation

Tower operates in accordance with the required environmental laws and regulations. All required environmental permits and registrations are obtained, maintained, and kept current. In addition, all applicable operational and reporting requirements are followed. This includes waste treatment, use of hazardous materials, protection of hazardous materials and emergency preparedness.

During the reported period, we had no complaints, legal proceedings, or fines regarding environmental issues in Israel and US.

## Environmental Audits

A variety of environmental internal and external audits, such as ISO 14001-2015 annual audit, environmental/hazardous materials annual audit, and annual emission tests, are conducted on a weekly, monthly, or yearly basis, in accordance with the requirements set forth by various regulatory bodies (for more information, see appendix).

## Employees' Training on Environmental Issues

All employees who are involved in production are sufficiently trained on environmental matters by the H&S department, including environmental responsibilities, documentation and compliance, ISO 14001, hazardous materials

release, air quality and facility emissions, resource consumption, storm water quality, and waste and recycling.

## Circular Economy and Life Cycle Analysis

Expanding use of semiconductors in the economy has considerable potential impact on the environment during the different phases of production lifecycle, and exacerbates the impact of the industry's increase in raw material use and disposal, including minerals, metals, and petroleum-based resources.

The life cycle of a product can be divided into 5 phases:

- ▶ Sourcing, processing and/or supplying raw materials;
- ▶ Manufacturing/production;
- ▶ Putting into circulation – transporting, distributing and marketing efforts;
- ▶ Use, reuse and product maintenance;
- ▶ End of life management (recycling and disposal).

Tower is responsible for the first two phases of the life cycle as described above. The last three phases are the responsibility of our customers.

As a company that provides semiconductor solutions, we put continuous effort into assisting our customers to reduce the environmental impact of their products through better energy efficiency, responsible manufacturing, responsible product sourcing, water management and waste management. Tower is committed to reduce the carbon, waste and water footprints throughout the life cycle of its semiconductor technologies' manufacturing processes.

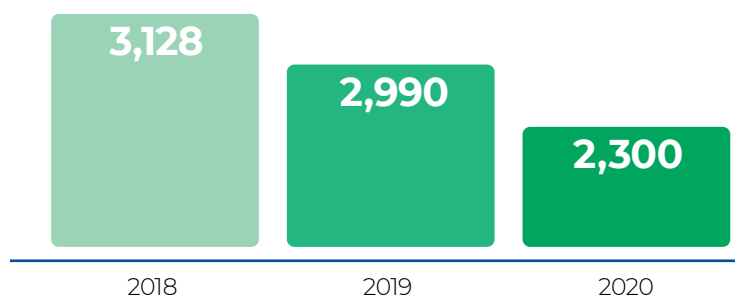
### Q CASE STUDY

## Integrating Circular Economy Into Our Value Chain

In 2020, our facilities in Israel began development and construction of a system to remove hydrogen peroxide from used sulfuric acid. Tower is working with partners to recycle the used sulfuric acid to be used as raw material.

**Long-term target: the Company's target is to reduce sulfuric acid disposal by 20% annually, starting 2021.**

Disposal of sulfuric acid (metric ton)





# Greenhouse Gases (GHG) Emissions

Increased recognition of the fact that greenhouse gases (GHGs) directly affect the Earth's climate have led to growing legislation regulating emissions across the entire globe. Among the dangers posed by climate change is the frequency and intensity of extreme events, such as heat/cold waves, storms, droughts and floods caused by rising sea levels. The scientific community widely accepts that ecological catastrophes may increasingly threaten national economies in years to come.

According to the Intergovernmental Panel on Climate Change's (IPCC) Special Report on Climate Change and Land, published in 2018, limiting warming to an average of 1.5°C, compared to the pre-Industrial Revolution period, would significantly reduce desertification, land degradation and other negative consequences of climate change, as compared to a scenario in which temperatures rise by 2°C or more. The report also recommends reducing greenhouse gas emissions by 50% by 2030, and reaching climate neutrality by 2050, meaning that all human-caused GHG emissions should be balanced out by carbon removal from the atmosphere.

Tower sees great importance in reducing its carbon footprint in alignment with recommendations from the international scientific community. Consequentially, we have undertaken a process of calculating and measuring the emissions of CO<sub>2</sub> and other greenhouse gases resulting from our activities and develop strategies for reducing emissions over time.

**Long-term target:** the Company shall define and integrate procedures to formalize and systematize the potential adverse impact on key environmental factors (such as GHG emissions, water, waste, electricity, etc.) for any new process introduction, in order to define mitigation of any such impact in alignment with the current worldwide industry best practices and in compliance with IPCC recommendations.

## Calculation of GHG Emissions

As part of our efforts to reduce Tower's GHG emissions, emissions are measured according to the GHG Protocol methodology.

The calculation includes reference to scope 1 (direct emissions) and scope 2 (indirect emissions):

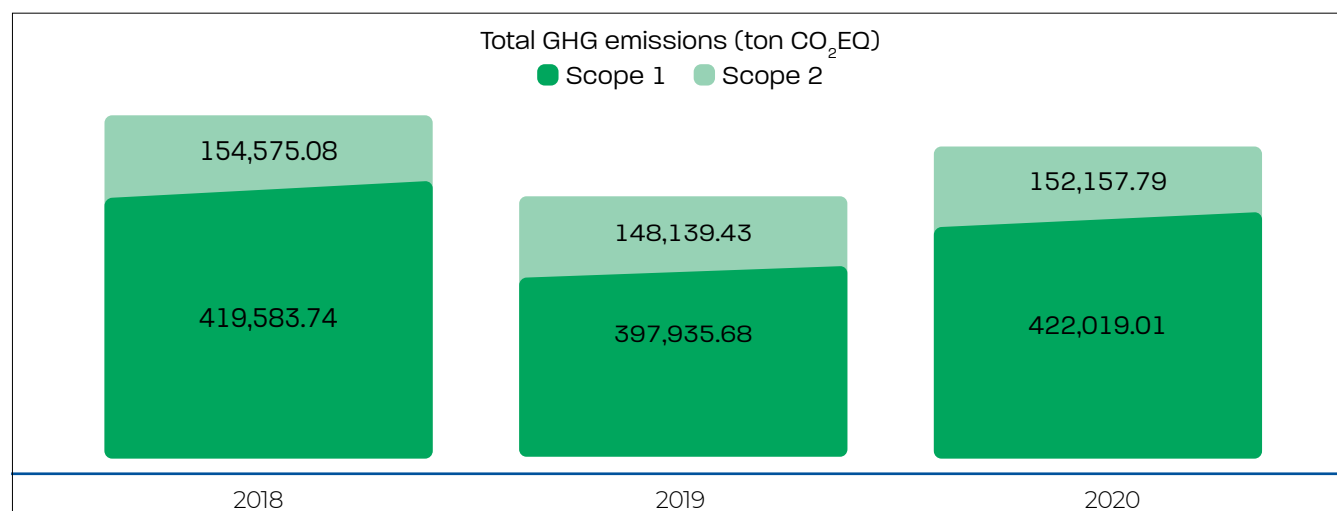
**Scope 1** - Carbon emissions from direct emission of fuels and gas leaks into the atmosphere.

**Scope 2** - Carbon emissions as a result of purchasing energy from an external source (electricity consumption from an electricity company or a private manufacturer).

The variations in the scope 1 emissions are due to cooler and warmer weather conditions between the years effecting the emissions during production.

## HIGHLIGHT: REDUCING GHG EMISSIONS IN NEWPORT BEACH

In our NPB facilities, our three hot water boilers have a documented reduction of 53.1% lower Nitrogen Oxide (NOx) emissions rate and our steam boilers emit 77.5% less NOx. We have an ongoing burners' replacement project which also aims to reduce NOx emissions. The overall facility NOx emissions are expected to be reduced by approximately 30% once the project is completed.





## Energy Management

US Energy Information Administration estimates that due to a rise in global living standards and population growth by year 2050, global energy consumption will grow by 50% compared to 2018 levels, while electricity use will increase by approximately 80%. In order to fight the growth of GHG emissions associated with energy consumption, the world needs to focus on greater reliance on renewable energy and increased energy efficiency. Taking these concerns into consideration, Tower actively seeks to address these issues in its ongoing business activity.

### Renewable Energy

Tower installed a photovoltaic (PV) system in a nearly 100,000 square foot area in our Israeli facilities with 1700MWh yearly production of solar energy.

In addition, approximately 30% of our purchased energy in Texas comes from renewable sources.

### Energy Efficiency

Tower's semiconductors are utilized in a wide range of markets from mobile technology, to automotive, industrial, and power restricted wearables. Our power management platforms are designed to ensure maximum flexibility, enabling customers to manufacture a design-optimized product at any desired level of integration and achieve first-pass success for fast time-to-market. The technologies cover up to 700V voltage range from low-power to high-power applications, and are available on both 8" and 12" production wafers. This allows for integration of the sophisticated power controls being manufactured by Tower, with best-in-class efficiency, allowing products to achieve higher power efficiency ratings.

For more information on our products, go to products chapter.

#### Q CASE STUDY

### Increasing Energy Efficiency at Our Newport Beach Fab

Our manufacturing facility in Newport Beach, California has implemented projects that improve the performance and energy efficiency of equipment systems and decrease water consumption, compressed air and electricity throughout the plant. As a result of these projects, the site reduced electricity consumption in the last 5 years by over **23 million Kilowatt hours (kWh), which is enough energy to power 2,000 households for a year** or avoid the GHG emissions of **3500 vehicles on the road** (Greenhouse gas equivalencies calculator, United States environmental protection agency). We have succeeded in attaining these improvements without reducing productivity.

## Energy Performance

	2018	2019	2020
<b>Energy consumption (total), GJ</b>	1,748,039.2	1,733,935.2	1,701,857.1
<b>Purchased grid electricity consumption, GJ</b>	1,415,825.8	1,353,772.3	1,386,717.7
<b>Renewable energy consumption, GJ</b>	0.0	1,318.9	1,709.4
<b>Fuel consumption, GJ</b>	332,213.4	378,844.0	313,429.9

In 2019, the amount of electricity consumption was approximately 10% lower than it was in 2018 and in 2020. This is due to a cooler climate condition, which required less electricity and water to cool and dehumidify the fab air.

Our fuel consumption consists of diesel, unleaded gasoline, LPG and natural gas (VOC, boiler, steam, chilled water). LPG consumption saw an approximately 13% decline from 2018 to 2020, due to improvements in our gas abatement systems.

### HIGHLIGHT: CHOOSING OUR ELECTRICITY PROVIDERS CAREFULLY

Most of the Company's electricity in Israel is provided by OPC Energy, the first private electricity company in the country. OPC's electricity is environmentally friendly and produced with maximal energy efficiency. The power plant's equipment is based on the world's most advanced technologies, with professional and experienced personnel.

Tower's US facility in San Antonio is provided power by CPS Energy, which provides affordable and reliable power while being sensitive to the environment in San Antonio and the surrounding areas. Our facility in NPB receives its energy from SCE (Southern California Edison), which delivers safe, affordable and clean power for Southern California.



# Water Management

Water is becoming a scarce resource throughout the world, as its consumption has increased due to population growth, urbanization and climate change. The semiconductor production process in particular presents specific challenges in this regard as it requires a significant quantity of "ultra-pure" water when cleaning hardware of chemicals used in the production processes.

Tower is continuously striving to improve its water treatment and management, in order to conserve as much water as possible in the manufacturing process.

## Water Stress

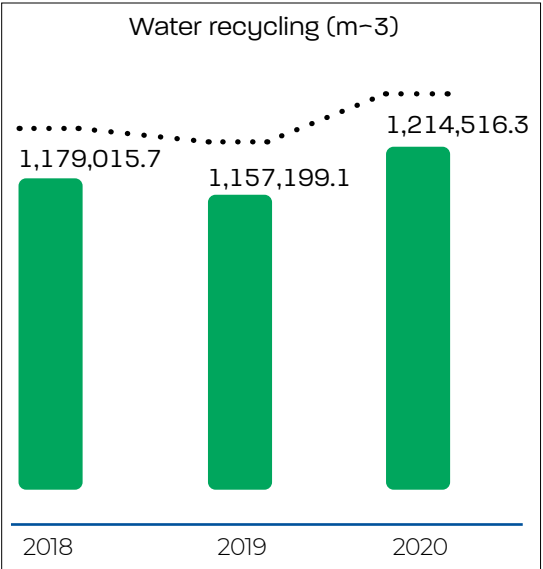
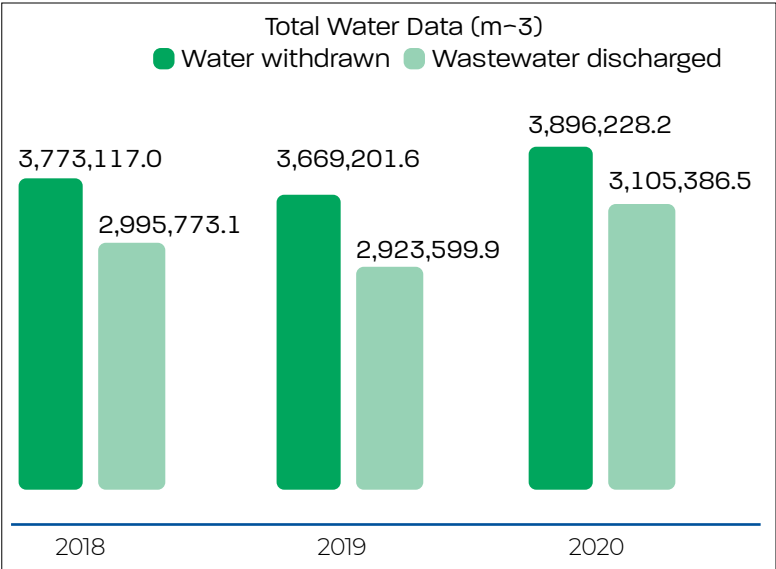
Water stress, a condition which occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use, has become an increasing source of concern for Tower. Without careful planning, water scarcity can result in higher supply costs, social tensions with local communities and governments, and/or loss of access to water in water-scarce regions thereby presenting a critical risk to production.

According to the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct, the water stress is extremely high in our facilities in Israel and in Newport Beach and medium-high in Texas.

As the impact on water use greatly varies by location, Tower has developed ways to reduce water consumption and increase recycling of water at our different sites worldwide.



## Our Performance





## HIGHLIGHT: WATER RECLAMATION IN ISRAEL

Upgrade of the water reclamation system in Fab 1 and Fab 2 in Israel resulted in saving **90,000 m<sup>3</sup>/year** of tap water annually.



### Q CASE STUDY

#### Water Recycling

At our Israeli Fabs in Migdal Haemek, we recycle 60% of the ultra-pure water which would equate to water consumption for 3200 people per year. We have also reduced brine disposal by 50%.

Recycling reverse osmosis (RO) reject water (the concentrated non-pure stream of water remaining from the reverse osmosis water purifying process) in the NPB Fab, saves **128,207m<sup>3</sup>** of water annually.

### Q CASE STUDY

#### Water Reuse

The air in San Antonio is very dense and humid. As part of the process of drying the air in the fab, we implemented, approximately ten years ago, a system to collect the humidity from the air and reuse it. For the last 3 years, this process saved approximately **28,390m<sup>3</sup>** of water per year. Since the implementation of this system, **251,351m<sup>3</sup>** of water has been reused.

In Newport Beach, we reuse rinse water that is taken from wet sinks, in abatement tools and scrubbers. This process yields around **162,875m<sup>3</sup>** of reused water annually.



## Waste Management

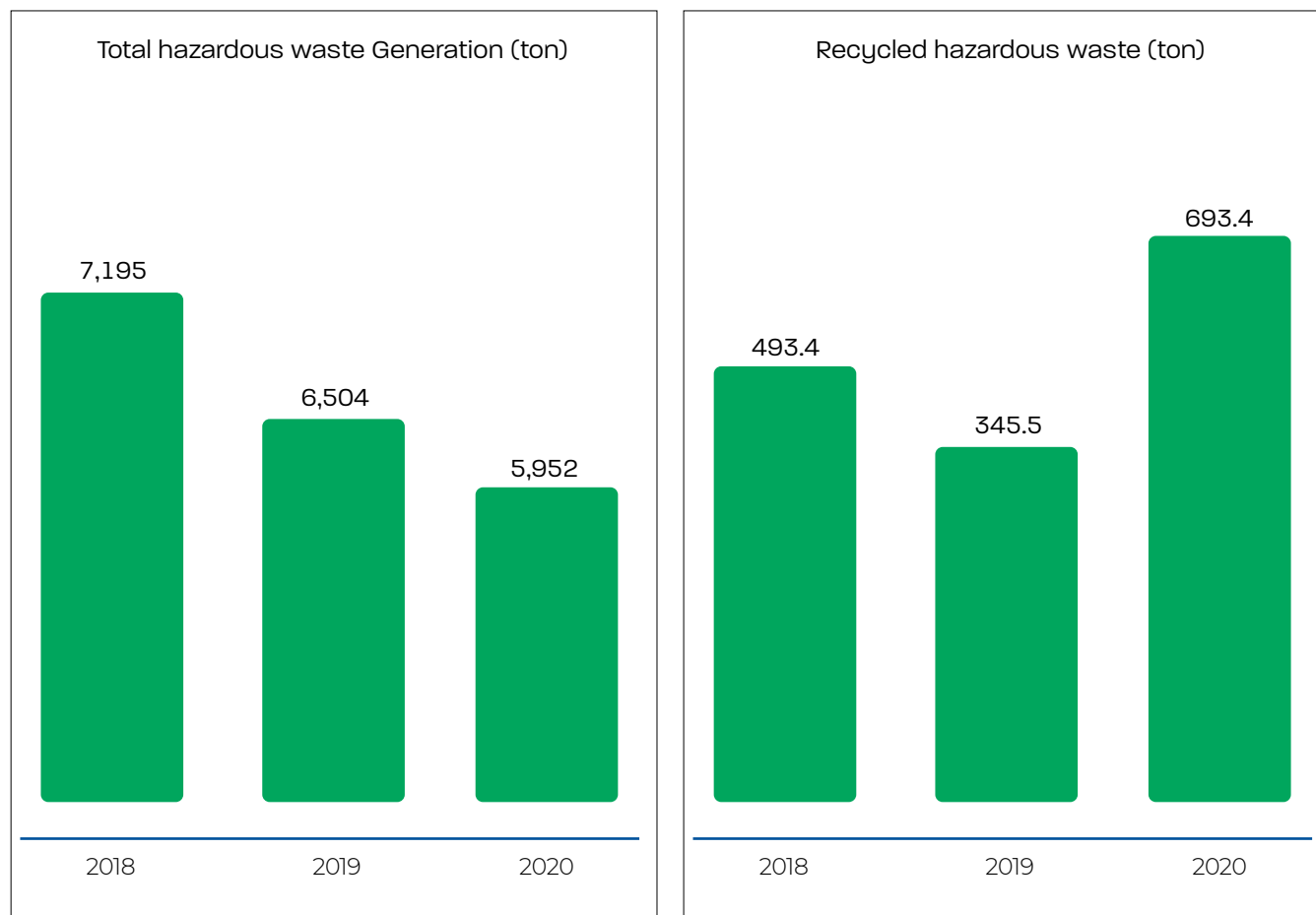
The semiconductor production process produces hazardous and non-hazardous waste which is carefully treated. Tower is committed to reducing waste of all types by modifying production processes, materials' substitution, conservation, or recycling and re-using materials.

Non-hazardous waste	2018	2019	2020
Generation (ton)	3,995.0	3,499.0	3,656.8
Recycling (ton)	209.2	197.4	153.7

In Israel, our electronic waste is collected by **Ecommunity**, a social enterprise that hires employees with special needs to recycle outdated hardware. In this way, Ecommunity supports its employee of with individuals with disabilities, while addressing the challenges of electronic waste. Our cardboard and plastic packaging are recycled by Tamir Recycling Corp., a public benefit company that operates on a non-profit basis.

## Hazardous Waste

Our business is subject to a variety of laws and governmental regulations relating to the use, discharge and disposal of toxic and otherwise hazardous materials used in Tower's production processes.



### HIGHLIGHT:

#### RECYCLING OF HAZARDOUS MATERIALS IN US FABs

The total percentage of recycled hazardous waste in all of our US facilities was almost 68% in 2020, compared to almost 50% in 2018.

The increase in our recycled hazardous waste is mostly due to the sulfuric acid project mentioned above.

## Reducing Hazardous Waste

In 2018, we minimized water content in solvent waste in Migdal Haemek. As a result, the amount of Migdal Haemek solvent waste decreased by 46%.

In 2019-2020, we developed and constructed a system for the removal of hydrogen peroxide from used sulfuric acid. Sulfuric acid, which was previously disposed of as hazardous waste, is now considered a dilute technical acid and is sold to enable reuse as a raw material.

Another project implemented in 2020 is treatment by reverse osmosis of brine after regeneration of ion exchange resin. This treatment helped us avoid disposal of approximately 2,000 m<sup>3</sup>/year of brine to the sea and instead, this water could be re-used instead of tap water.

## Leaks

During the reported period, there were no leaks or serious environmental incidents at any of our sites.

# Health and Safety

\* The ESG data performance presented in this report refers to Tower Semiconductor's facilities only, excluding TPSCo and Agrate facilities.



Tower places the highest priority on the safety and prevention of injury and ill health of its employees, the surrounding community, and the environment. Every Tower employee is expected to conduct business in a safe and responsible manner and to adhere to all safety policies and procedures to ensure occupational safety, emergency preparedness and prevention of occupational injury and illness. Good health and safety management is an important part of our overall business strategy, implemented through ongoing interaction with our employees to ensure that H&S risks are being identified and mitigated in the work environment.



## Occupational Safety

Employee exposure to potential safety hazards (e.g., electrical and other energy sources, fire, vehicles and fall hazards) is controlled through well designed engineering and administrative controls, preventative maintenance, safe work procedures (including lockout/tagout), and periodic safety training. Employees are provided with well-maintained, personal protective clothing and equipment as required for the specific tasks being done. Additionally, production and other machinery are being evaluated regularly for safety hazards, physical guards, with interlocks and barriers that are being used to avoid potential risk to employees.



## Emergency Preparedness

We brainstorm to identify potential emergency situations and events and prepare ourselves for such events by assessing their possible impact and devising emergency plans and response procedures. These include emergency reporting, employee notification and evacuation procedures, employee training and drills, maintenance of appropriate fire detection and suppression equipment, and immediate and longer-term recovery plans.



## Occupational Injury and Illness

Procedures and systems are in place to prevent, report, manage and track occupational injury and illness, including encouraging employee reporting, classifying, and recording injury and illness cases, investigating cases and implementing corrective actions to prevent future potential cases.

Safety trainings specifically focus, among others, on exposure to chemicals or gases, the work procedures to ensure proper handling thereof and measures to be taken in the event of any such exposure.



## Management Approach

Tower is certified by ISO 45001 Occupational Health and Safety (H&S) international standard. To ensure compliance with the standard, Tower has in place an executive leadership structure that is accountable for the health and safety of all employees, helps define required work procedures, and is responsible for reporting and system oversight.

followed by the COO and SVP of Excellence & QA and each site has a local Safety Management team.

### Managing Risks

Each Tower Fab has a Safety Team who work in a cross-functional capacity to ensure that adequate safety protocols are in place and properly executed. Our safety teams on each site assist with distribution of information, performing audits/inspections, monitoring and reporting H&S concerns, and implementing job hazard analysis and risk assessments.

The overall success of risk management is ensured by constant communication within our entire operation. We maintain this dialogue through daily facilities team meetings and online “ticket” systems that allow employees to submit issues of concern as they occur.



*We maintain this dialogue through daily facilities team meetings and online “ticket” systems that allow employees to submit issues of concern as they occur.*

### H&S Functional Structure

We have established H&S committees in all of our sites.

Safety committees are informed of every accident and incident in order to investigate and prevent such future events. At Tower, we engage every level of the H&S operation to ensure compliance with international standards and protection of all employees and site visitors and contractors. The CEO is at the top of this hierarchy of responsibility,

So far, we have completed approximately 150 risk-surveys, which revealed that the main risks at Tower, as in the semiconductor industry as a whole, are hazardous gases, chemicals, radiation and electrical risks. In order to minimize these risks, Tower has a number of protective systems, including engineering defense, administrative protection, monitoring, personal protective equipment, ERT (emergency response team).

In 2020, we revamped the safety program to include more comprehensive risk assessments for improved early detection and prevention, as well as a formally certified Safety Officer.

### Monitoring and Audits

In addition to upholding the requirements according to ISO 45001 international standard, we perform a wide range of audits throughout our Fabs to ensure the health and safety of our team. These audits are both internal and external and are performed regularly to ensure continued compliance.

### Employee Awareness and Engagement

In order to strengthen awareness among, and engagement of employees, all the H&S information is accessible on the internal "H&S site" and on the corporate bulletin board. Additionally, H&S meeting and audit report summaries, accidents and events are published on that platform for employees' awareness. Employees are asked to submit comments and advice based on prior experience with respect to accidents, incidents or near-miss events to minimize and prevent future events.

### Annual H&S Training

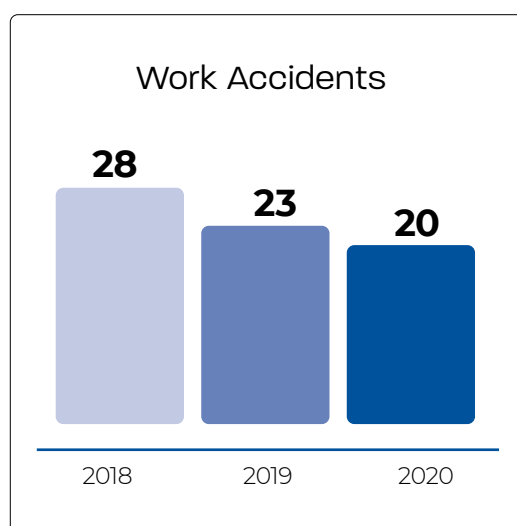
In addition to the annual safety training for all employees and orientation in H&S for new employees, we provide more than 80 trainings on safety subjects for targeted audiences, including contractors, technicians, ionized equipment workers and others. Employees working in the outdoor industrial areas of the facilities receive an advanced training in additional topics such as oil spill prevention control and countermeasure, hazardous materials risk management plan, and storm water pollution prevention plan.

### H&S Performance

Our H&S system empowers us to protect our employees as best as we can. We monitor our performance by measuring multiple factors including tracking of accidents (which is being counted for any event that employee lost more than one working day), incidents (safety event where employee didn't lose any working days), near-miss events and injuries by cause of the event, including gas exposure, slips and falls, chemical exposures and leaks, mechanical injuries and other factors.

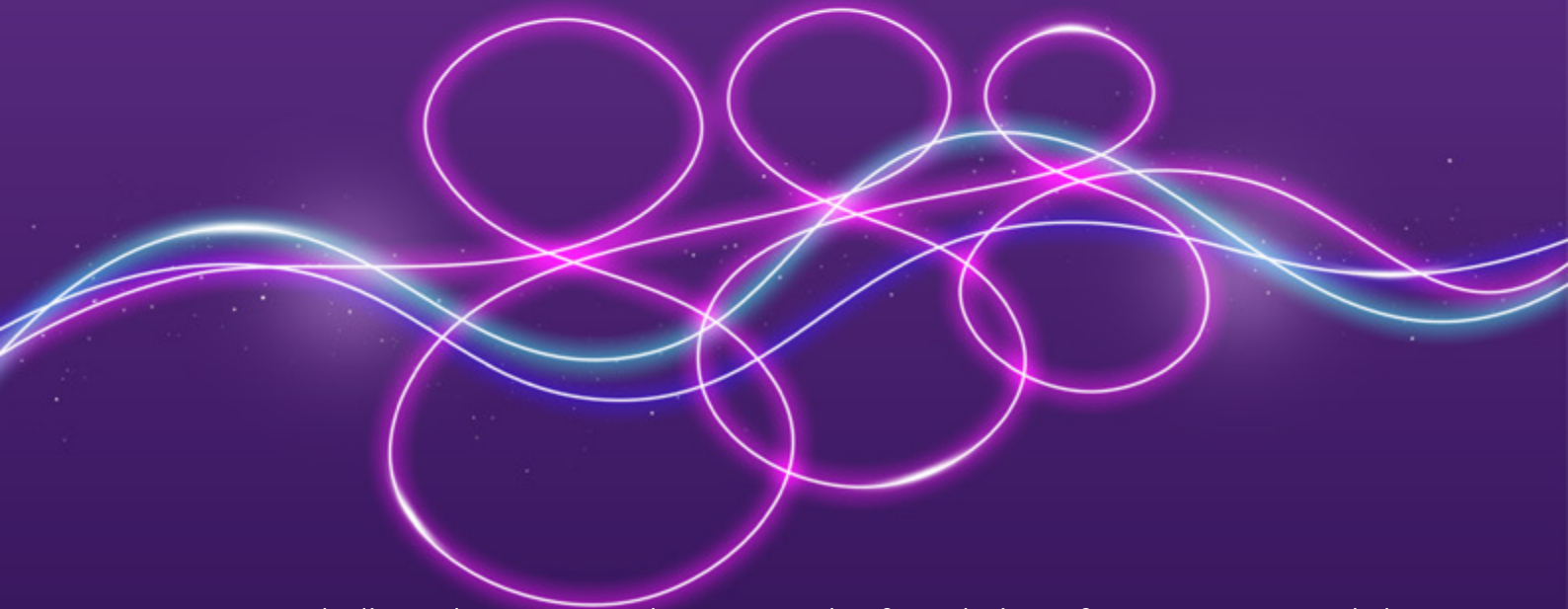
The total number of work accidents has steadily decreased between 2018 and 2020.

During that period of time, there were no on-site fatalities.



**Long-term target: to reduce the number of accidents to zero by continuous improvement of our safety process and procedures, and reduce accidents by at least 50% by 2030.**

# Employees & Work Environment



At Tower, we believe that our employees are the foundation of our success, and that empowering them to reach their professional and personal potential is a critical component in moving our enterprise forward. To advance this vision, we strive to sustain a culture of learning and development that encourages our employees to exert their best efforts while growing within the company.

As a company, our approach to workplace and employee development is grounded in several principles. These include fostering a culture of inclusivity and fairness, encouraging an innovative workplace in which anyone can make an impact, and investing in the personal development of our employees.

**We have a grand total of 3,087 employees**, as of the end of 2020, representing a global community. We are highly tuned to adapt the good characteristics of each of our diverse site cultures into our corporate culture, making us one extremely strong global company.

Our team is a family of highly professional diverse employees focused on growth and development. They are highly devoted, talented, and creative with broad knowledge, specialized expertise, and profound experience.

72% of our employees are working with us for at least 3 years (exc. students and part time employees). The average tenure at the company is 10 years.

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# Diversity and Inclusion

At Tower, we believe a diverse work environment that brings people together from different backgrounds and cultures encourages creativity and enables the company to use each individual and cultural strengths to improve and achieve common goals. Our corporate culture emphasizes respect, recognition, and opportunity for all employees to thrive and grow.

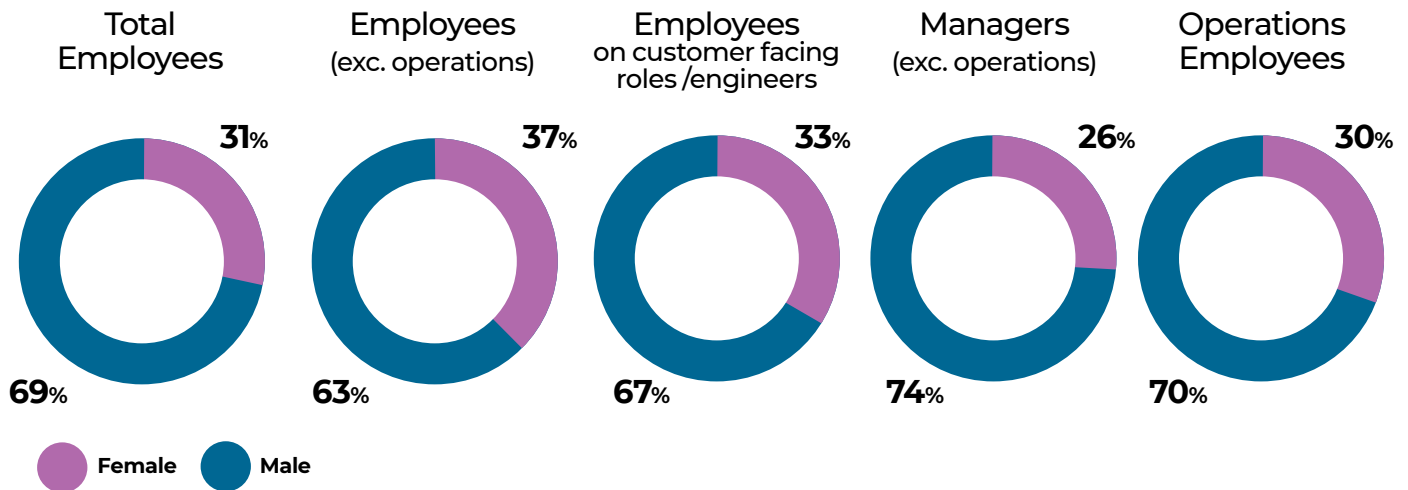
## Gender

Our workforce of 3,087 employees worldwide consists of **2,117 Men** and **970 women**.

Tower is committed to gender equality, both in terms of representation of both genders in the workplace and promoting a fair and inclusive environment. We believe

in equal opportunity, and focus on the ability, talent, and capabilities of our employees.

We conducted an equal pay assessment to ensure that there are no gaps that relates to gender. The results showed that female employees in most positions are paid equally to their male counterparts, and, in many cases, earn more than their male counterparts.



Our manufacturing operators work 12-hours shifts, the morning shift (8am-8pm) or the night shift (8pm-8am). They work either 3 or 4 shifts per week.

The Company supports internal promotions, enabling operators to start their career and grow to higher positions in the Company.

### Long-term target:

To further support gender equality, create an environment and specific activities and programs that provide female employees with additional opportunities for professional and managerial promotion.

## Minorities

At Tower, we are committed to create an inclusive work environment and strive to continually increase minority groups' representation in all of our sites.

### Mr. Russell Ellwanger, Tower Semiconductor CEO:

"The ideal of a civil society with equal opportunities and rights is not easy to achieve, but it is also not an illusion. It begins with corporate leaders who live and enforce an ethical, moral and inclusive value system with no exceptions."

## Persons with Disabilities

In our hiring processes, we give equal opportunity to populations with disabilities.

In addition, we participate in specialized job fairs sponsored by local non-profit organizations that focus on employment of people with disabilities, in order to outreach and provide meaningful job opportunities. We also encourage our existing employees to voluntarily report any existing personal disabilities so that we may offer adjustments as may be needed in the workspace.

The Employing Persons with Disabilities Policy is available on our website.



## Developing and Engaging Our Employees

Tower views investment in employee education as an essential way to advance our business while unlocking the potential of individual employees. With this interest in mind, we devote an annual budget of **412,000 USD** to various educational initiatives.

### Training and Development (T&D)

#### New Hire Orientation

Any new employee who joins the company participates in its "new hire orientation" during their first day.

This training provides a general overview of the company's structure and key functions. In addition, new hires receive safety training and learn about employee rights and benefits. Each employee receives a handbook with all company employment related information.

In addition to this orientation, our manufacturing operators participate in

a designated orientation training with all relevant information about working at the clean room.

#### Organizational Development

We put great focus on creating an environment of learning and development for our global employee base, through 5 main pillars of T&D:

**Employee Development** - We believe employees who work at Tower should grow within the company, therefore we invest in creating programs to drive employees' development. Development improves performance, productivity, and engagement, fosters key talents, and prepares them for future roles. Our programs include:

- ▶ Technical tailored courses for our technicians.
- ▶ Vendor training for technicians and engineers.
- ▶ LinkedIn learning platform with more than 16,000 online courses with different contents (business, leadership, innovation and professional), over 70% of relevant employees are already using it.

- ▶ Employee enrichment plans to allow employees to develop personal skills.
- ▶ Industrial Engineering 2nd degree program which is directed at talented employees who apply and obtain Tower committee approval as well as Tel Aviv University acceptance criteria. This program is integral towards a greater breadth of capability, and hence career opportunity and advancement.
- ▶ "Coaching as a way of life" course and many more programs that we create per business need.

**Leadership development** - Our leadership development programs support leaders in different transition points – from employee to manager, managing employees to managing managers and as they progress to higher managerial levels. Managers receive personal coaching and take management and leadership skills courses depending on their managerial level. Our programs also include a workshop and coaching for new managers, managerial clubs, lunch & learn sessions to broaden the leader's perspective and discuss relevant managerial issues within the leaders' community, and managerial newsletters to address different challenges.

**Organization development** - Our organization development is focused on helping the organization to achieve its business goals through the alignment of our corporate mission and values, strategy, structure, people, rewards, metrics, and management processes. We drive global programs, such as succession and talent development, performance management (GPS), professional ladder, as well as lead change in management processes to increase effectiveness, efficiency, and quality within the organization. One of the major programs we drove this year was the global excellence program that involved every employee in the company. The program contains 4 interactive online training courses:

1. Introduction to Excellence
2. Lean 6-Sigma
3. Financial Analysis
4. End-state and Success Criteria

All trainings include group discussions to understand how effectiveness, efficiency, and quality drive excellence, and how each employee can undertake activities towards excellence in their day-to-day life within the organization.

**Learning experience** - We are committed to creating the best learning experience for our learners. We use a variety of platforms and learning methods such as practical workshops, online courses, high quality content development service (Articulate), and instructor-led classroom. The choice of learning method also depends on the purpose of the training for the learner to ensure engagement, effectiveness, and meeting learning objectives. In addition, we believe in our employees' educational growth and support them in their academic degrees and achievements.

**Learning Management System (LMS)** - Learning management includes follow-up and registration for all courses, workshops, seminars, and tutorials. Our best-in-class LMS success factors system helps identify and monitor learning gaps in our employee groups. Based thereon, we run programs that target to reduce any such identified gaps. In addition, by creating an interface between our management system and the production system, we ensure that only operators and technicians who are authorized to handle machines in the production line operate and repair them.

The learning management system also provides us with easy access to reports and data asked for by our customers or auditors and helps us manage all training activities, scholarships, training effectiveness, logistics, etc.

### Top Talent Development and Retention

**Long-term target:** continue and develop group and/or individual programs for our top 20% ranked employees (based on our GPS program described below) in order to:

1. Increase skills and capabilities of these key employees to allow higher impact; and
2. Minimize turnover of this group to less than 2%/ annually.

### High Potential Program

The High Potential Program was initiated and is being mentored by our CEO, Mr. Russell Ellwanger, with the following goals:

- ▶ Increase exposure of high potential employees to executive management.
- ▶ Maximize employees' value and impact by

working on special projects/simulations to solve real business issues.

- Connect High Potential employees to one another.

The task definition for the high potential program has two parts:

1. Training from executive management – to better expose the employees to the many aspects of managing the company as well as develop strategic management, organizational theory & leadership skills.
2. During 2020, the management has defined two main tasks for this team:

- **Market Competitiveness**

Analyze both the 200mm and 300mm semiconductor markets and determine from what we are presently pursuing: where we should increase focus and investment, stop the activity, or kick-off a new activity. The learning objective was achieved by preparing an internal white paper with an analysis and recommendations of concrete activities.

- **Quality**

Our view towards quality is: **“Quality is embedded in everything we do”**. A team was assigned with the task to identify and establish a quality mindset within the organization, where discipline is recognized as creating freedom rather than being restrictive.

The program includes 11 high potential employees and managers from varying disciplines within the organization.

The team had semi-regular meetings with the CEO and with some other members of the executive management to update them with findings/ideas and drive specific actions towards achieving the defined goals.

## Academic Studies

Tower offers programs in professional development and long-term academic studies to relevant employees. These include the MS in industrial engineering at Tel Aviv University, currently attended by four employees, and an MS in industrial engineering at Arizona State University, currently attended by one employee.

In addition, the company provides its employees with a scholarship program

to support their academic studies in areas that can drive their professional growth in Tower. Our scholarship program is designed according to Towers' core needs, allowing our employees each year to choose their desired learning path and introduce them to opportunities in the company.

## Performance Assessment

Tower's fair and transparent method of assessing employee performance is critical to the success of our company. It is company policy that all employees go through a yearly evaluation process, according to the **GPS – Growth, Performance and Salary adjustment**.

The GPS covers employees' business and performance goals (as defined at the beginning of the year), development goals and employee evaluation according to Company's values.

The employee assessment procedure begins in December of each given year with an employee's self-evaluation and evaluation by relevant managers, resulting in a leveling adjustment and, where applicable, merit-based salary adjustments.

## Succession Planning and Internal Mobility

At Tower, we make special efforts to recruit talent from within the company. Because we give our employees room for growth and the potential to advance within the company, we are able to achieve business success, especially when it comes to our leadership and the individuals who uniquely contribute to our operation.

Tower promotes internal mobility, reaching **48% of internal hires** (including promotions) in 2020.

Each year Tower implements a detailed procedure to identify successors to critical employees and managers. This ensures that plans are in place to promote the ideal candidates from within the company if a critical employee or manager leaves.

The process of talent identification includes the use of the 9box methodology that indicates





Demonstrated Performance

the person's demonstrated performance and long-term potential and agility.

We invest in the Company's future and promote opportunities for our employees. During the year of the COVID-19 pandemic, 25% of the students working for us were hired to become full-time Company employees.

Employee Recognition and Wellbeing

Tower cherishes the wellbeing of our employees and their families. Our employees receive a number of benefits based on performance and tenure. Our CEO offers prizes and an award ceremony for high performing employees, as well as seniority gifts (granted every ten years), birthday presents, and holiday-related gifts. Children of our employees also receive company gifts when entering their first year of grade school.

Employee Engagement

Tower's healthy and empowering environment encourages employees to be efficient, innovative, and motivated, which is possible due to our culture of open dialogue. Tower has an open-door policy, proactively encouraging forums to speak up regarding any issue (such as factory efficiency, COVID-19, labor contract, company policies, welfare, transportation, word of thanks, etc.). There are several communication channels (both physical and virtual) to submit any inquiry, which will be addressed by Company's management and/or relevant departments. Company is tracking these communication channels to ensure that all needs are documented and being addressed. Each month Tower publishes responses to each inquiry, and where necessary makes required changes and adjustments. These interactions are to provide our employees with the most accessible ways to approach management and is in addition to our whistleblower procedure.





## Bringing Value for Our Communities

Corporate social responsibility is an integral building block of our success, as it is essential for a healthy and balanced corporate culture, and global betterment. We support a wide range of health, educational, social, and community-building activities that involve our employees and improve the wellbeing of our community, with a special focus on gender equality and minority integration.

Tower headquarters and its Israeli fabs are located in a peripheral area. Being the largest employer for the local community in this area, Tower strives to create jobs and support socio-economic prosperity of the area.

Our community contribution is both by financial support of different activities as well as by volunteer efforts of our employees.

### Supporting Global Awareness Investigation and Action (GAIA) Program

For over eight years, Tower has sponsored the GAIA program and mentored with key technical staff, whose program aim is to instill its core philosophy of "Peaceful Cooperation in a Green World" through a set of middle- and high-school activities. The GAIA team is comprised of middle school and high school students who use science and politics to research environmental issues, while guiding other national and international schools through their own processes and findings.

Throughout the years, Tower has become a holistic partner, providing not only financial support, but also access to onsite equipment in Migdal Haemek, and engineering support and collaboration on various GAIA projects. Tower supports a number of GAIA projects including endangered species sanctuaries, recycling of materials to produce quality goods, biological pest control, and hydroponic indoor gardens.



## Raising Environmental and Scientific Awareness through Supporting Nature Conservancy Projects

Tower is the primary supporter of several community citizen scientist projects among which are:

- A. the establishment and preservation of heritage tree orchards under the guidance of students from local and international schools through the Global Awareness, Investigation and Action (GAIA) project. This project aims to identify effective management techniques through genetic bar coding and business models to increase genetic diversity among food crops.
- B. with guidance from the Wildlife Alliance in Cambodia, GAIA students have been on the forefront of raising awareness about the connection between zoonotic disease, poaching of exotic wildlife and rapid deforestation of tropical rainforests. GAIA is currently contributing to the creation of a Ranger Station in the Prambei Mom rain forest in Cambodia. It will provide support gear, communication equipment, first aid water and solar energy panels to monitor and protect critically endangered species. A GAIA student group from Israel, Czech Republic and Greece will participate in on the ground research at this field station in January 2022 as part of an ongoing research and forest protection activity.

As part of our overall goal to inspire youth to make a positive impact upon the world in which they live, and possibly to pursue careers in science and technology to do so, we help to create a synergy between educators and corporate resources. We support local educational institutions in multiple nations whose mission is to work towards increased public awareness and activities to preserve the environment through the tools of science and technology.

*We invest time, employee expertise and financial resources to create real science and technology solutions for important community issues. Currently, we are pleased that Tower is directly involved in groundbreaking research where young students are the lead stakeholders in solving critical questions through technology to increase diversity in the genetic variations of plant food species in Israel.*

**Russell Ellwanger,**  
Tower Chief Executive Officer

*With the global reduction of species diversity, it is very important to preserve ancient varieties of fruit trees which contain unique genetic data. This genetic information is of great importance to science. We are very pleased with the overwhelming support we have received from Tower for many years working with our students through the GAIA project. The Company's valuable contributions to this horticultural program in particular will have a significant positive impact on generations to come.*

**Dr. Stuart Fleischer,**  
WBAIS and Project GAIA Director

## Encouraging STEM Education

Tower encourages our engineers to share their background and passion for science with students and to expose both female and male students to opportunities for careers in science and technology. We regularly host students at our facility in Israel to increase awareness and knowledge of the semiconductor industry and to learn about our advanced technology and manufacturing facility. Visits introduce them to the hands-on, day-to-day work of our engineers, its challenges, and development opportunities.

Q CASE STUDY



Tower hosted students from the Science and Technology Forum of the “Face for Science and Technology Association.” The Forum’s goal is to change gender perception related to scientific and technological studies and careers.

The visit was held in our Migdal HaEmek site and included a tour of our advanced manufacturing facility. This tour was led by a group of female Tower engineers who shared their stories of personal development, provided a technology and company overview, and allowed for a unique opportunity to closely encounter the industry.





## Helping Kids and Youth with Studies

Our employees take part in an English learning project which gives youth in Israel an opportunity to learn English and improve their communication skills, in the hopes of helping them gain access to more opportunities in the future. In addition, we began teaching math at a high school in Migdal HaEmek, Israel as part of a new initiative.

## Big Brother Program

For more than a decade now, the employees at our HQ (MH) facilities are supporting youth clubs for kids who need help with homework or need some mental support. This program has been in effect for the last eight years with a team of about 25 volunteers that participate in this activity once a week.

## Food Bank Events

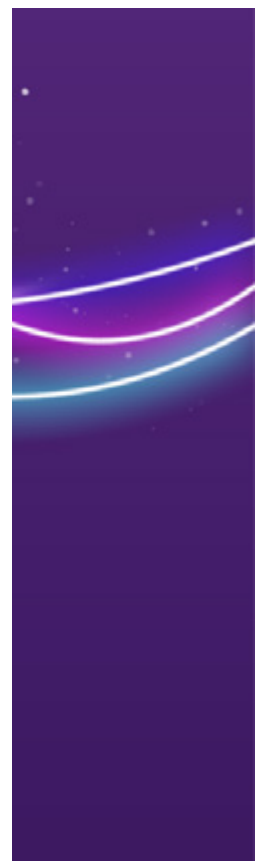
In Newport Beach, CA, Tower's employees participated in a Corporate Social

Responsibility Day at the Second Harvest Food Bank of Orange County. Employees volunteered to help with various activities such as sorting and boxing perishable food items.

At the company's San Antonio facility, our employees contributed to the community by supporting a local food bank event. They packed over 19,000 lbs. of food, translating to over 15,000 meals for families in need in the area.

## Educational Supplies & Holiday Presents

In Texas, Tower purchased a large amount of school supplies, and our employees filled 250 backpacks with school supplies to support children in need within the community. During the holiday season, Tower also purchased 400 educational toys as a holiday present for children in need, and our employees helped wrap the gifts in time for the holiday.



## Report Disclosure: GRI Standards



GRI Standard Title/Topic	Disclosure Number	Disclosure Title	Chapter/Sub-chapter	Disclosure
Organization profile	102-1	Name of the organization	About the Company	Disclosed
	102-2	Activities, brands, products, and services	Where Analog and Value Meet, Approaching Sustainable Future	Disclosed
	102-3	Location of headquarters	Headquarters and Facilities Locations	Disclosed
	102-4	Location of operations	Headquarters and Facilities Locations	Disclosed
	102-5	Ownership and legal form	Disclosed in the company's 20-K Form	Disclosed
	102-6	Markets served	The Semiconductor Industry & Technology Offering	Disclosed
	102-7	Scale of the organization	Where Analog and Value Meet, Employees & Work Environment	Partially disclosed
	102-8	Information on employees and other workers	Employees & Work Environment	Disclosed
	102-9	Supply chain	Responsible and Ethical Business	Disclosed
	102-10	Significant changes to the organization and its supply chain	(none 1st report)	Disclosed
	102-11	Precautionary Principle or approach	Responsible and Ethical Business	Disclosed
	102-12	External initiatives	Environmental Responsibility, Employees & Work Environment	Disclosed
	102-13	Membership of associations	Responsible and Ethical Business	Disclosed
Strategy	102-14	Statement from senior decision-maker	The CEO Message	Disclosed
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	Where Analog and Value Meet	Disclosed
Governance	102-18	Governance structure	Responsible and Ethical Business	Disclosed
	102-40	List of stakeholder groups	Responsible and Ethical Business, About this Report	Disclosed
	102-41	Collective bargaining agreements	Developing and Engaging Our Employees	Disclosed
Stakeholder engagement	102-42	Identifying and selecting stakeholders	Ethical Business Practices	Partially disclosed
	102-43	Approach to stakeholder engagement	Employees & Work Environment, Health and Safety	Partially disclosed
	102-44	Key topics and concerns raised	Sensitive information	Not disclosed
	102-45	Entities included in the consolidated financial statements	Disclosed in the company's 20-K Form	Disclosed
	102-46	Defining report content and topic boundaries	About this Report	Disclosed
	102-47	List of material topics	GRI and SASB tables	Disclosed
	102-48	Restatements of information	(None 1st report)	Disclosed

GRI Standard Title/Topic	Disclosure Number	Disclosure Title	Chapter/Sub-chapter	Disclosure
<b>Reporting practice</b>	102-49	Changes in reporting	(None (1st report	Disclosed
	102-50	Reporting period	About this Report	Disclosed
	102-51	Date of most recent report	(None (1st report	Disclosed
	102-52	Reporting cycle	About this Report	Disclosed
	102-53	Contact point for questions regarding the report	About this Report	Disclosed
	102-54	Claims of reporting in accordance with the GRI Standards	About this Report	Disclosed
	102-55	GRI content index	Annexes	Disclosed
	102-56	External assurance	None	Disclosed
<b>Management Approach (required for each material aspect)</b>	103-1	Explanation of the material topic and its Boundary	Where Analog and Value Meet, Responsible and Ethical Business Approaching Sustainable Future, Environmental Responsibility, Health and Safety, Employees & Communities	Disclosed
	103-2	The management approach and its components		
	103-3	Evaluation of the management approach		
<b>Economic performance</b>	201-2	Financial implications and other risks and opportunities due to climate change	Where Analog and Value Meet	Disclosed
	203-2	Significant indirect economic impacts	Industry Overview, Approaching Sustainable Future, Bringing Value for Our Communities	Disclosed
<b>Anti-competitive Behavior</b>	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Responsible and Ethical Business	Disclosed
<b>Energy</b>	302-1	Energy consumption within the organization	Environmental Responsibility	Disclosed
	302-2	Energy consumption outside of the organization	Environmental Responsibility	Disclosed
	302-4	Reduction of energy consumption	Environmental Responsibility	Disclosed
	302-5	Reductions in energy requirements of products and services	Approaching Sustainable Future	Disclosed
<b>Water</b>	303-1	Water withdrawal by source	Environmental Responsibility	Disclosed
	303-3	Water recycled and reused	Environmental Responsibility	Disclosed
<b>Emissions</b>	305-1	Direct (Scope 1) GHG emissions	Environmental Responsibility	Disclosed
	305-2	Energy indirect (Scope 2) GHG emissions	Environmental Responsibility	Disclosed
	305-5	Reduction of GHG emissions	Environmental Responsibility	Disclosed
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Environmental Responsibility	Partially disclosed

GRI Standard Title/Topic	Disclosure Number	Disclosure Title	Chapter/Sub-chapter	Disclosure
<b>Effluents and Waste</b>	306-1	Water discharge by quality and destination	Environmental Responsibility	Disclosed
	306-2	Waste by type and disposal method	Environmental Responsibility	Partially disclosed
	306-3	Significant spills	Environmental Responsibility	Disclosed
	306-4	Transport of hazardous waste	Environmental Responsibility	Partially disclosed
<b>Environmental Compliance</b>	307-1	Non-compliance with environmental laws and regulations	Environmental Responsibility	Disclosed
<b>Supplier Environmental Assessment</b>	308-1	New suppliers that were screened using environmental criteria	Responsible supply chain	Partially disclosed
<b>Employment</b>	401-1	New employee hires and employee turnover	Developing and Engaging Our Employees	Partially disclosed
<b>Occupational Health and Safety</b>	403-1	Workers representation in formal joint management-worker health and safety committees	Employees & Work Environment, Health and Safety	Disclosed
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Health and Safety	Partially disclosed
	403-4	Health and safety topics covered in formal agreements with trade unions	Employees & Work Environment	Disclosed
<b>Training and Education</b>	404-1	Average hours of training per year per employee	Developing and Engaging Our Employees	Partially disclosed
	404-2	Programs for upgrading employee skills and transition assistance programs	Employees & Work Environment	Disclosed
	404-3	Percentage of employees receiving regular performance and career development reviews	Developing and Engaging Our Employees	Disclosed
<b>Diversity and Equal Opportunity</b>	405-1	Diversity of governance bodies and employees	Employees & Work Environment	Disclosed
	405-2	Ratio of basic salary and remuneration of women to men	Employees & Work Environment	Partially disclosed
<b>Human Rights Assessment</b>	412-2	Employee training on human rights policies or procedures	Responsible and Ethical Business	Disclosed
<b>Local Communities</b>	413-1	Operations with local community engagement, impact assessments, and development programs	Bringing Value for Our Communities	Disclosed
<b>Customer Health and Safety</b>	416-1	Assessment of the health and safety impacts of product and service categories	Approaching Sustainable Future	Disclosed





**CONSULTANT  
CONTENT  
PROGRAM**

## Report Disclosure: SASB Semiconductors

SASB Topic	Accounting Metric	Category	Unit of Measure	Code	Disclosure
<b>Greenhouse Gas Emissions</b>	Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	Quantitative	Metric tons (t) CO <sub>2</sub> -e	TC-SC-110a.1	Environmental Responsibility
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	TC-SC-110a.2	Environmental Responsibility
<b>Energy Management in Manufacturing</b>	Total energy consumed, (2) (1) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), (%) Percentage	TC-SC-130a.1	Environmental Responsibility
<b>Water Management</b>	Total water withdrawn, (2) to- (1) tal water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m <sup>3</sup> ), Per- (%) centage	TC-SC-140a.1	Environmental Responsibility
<b>Waste Management</b>	Amount of hazardous waste from manufacturing, percentage recycled	Quantitative	Metric tons (t), Per- (%) centage	TC-SC-150a.1	Environmental Responsibility
<b>Employee Health &amp; Safety</b>	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	Discussion and Analysis	n/a	TC-SC-320a.1	Health and Safety
	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	Quantitative	Reporting currency	TC-SC-320a.2	Not available
<b>Recruiting &amp; Managing a Global &amp; Skilled Workforce</b>	Percentage of employees that are (1) foreign nationals and (2) located offshore	Quantitative	(%) Percentage	TC-SC-330a.1	Not available
<b>Product Life-cycle Management</b>	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	(%) Percentage	TC-SC-410a.1	Not available
	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	Quantitative	Various, by product category	TC-SC-410a.2	Not relevant
<b>Materials Sourcing</b>	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	n/a	TC-SC-440a.1	Environmental Responsibility; Responsible and Ethical business



## 2020 Corporate Sustainability (ESG) Report

[www.towersemi.com](http://www.towersemi.com)



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