



**Silicon  
CREATIONS®**

**2022  
Corporate  
Social  
Responsibility  
Report**



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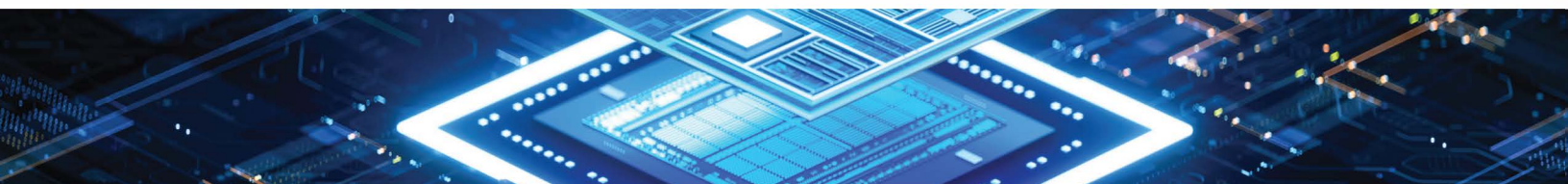
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# From the Founders

Silicon Creations is a company established with sustainability in mind. We were founded with a modest working capital investment and a desire to build a business we enjoy and feel positive about. The company has since grown solely with reinvested profits and with no outside capital. This ensures growth remains at sustainable levels and limits the stakeholders, allowing us to keep a long-term perspective.

Our three main business objectives have been:

- 1) To keep our employees happy
- 2) To keep our customers happy
- 3) To maintain profitability.

When 1) and 2) are met, 3) will follow.

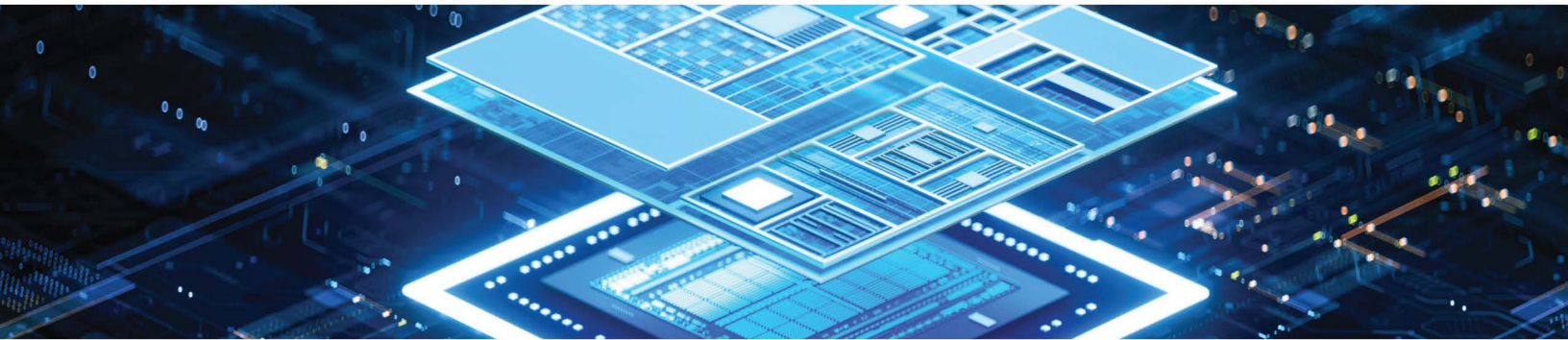
Our growth over the last 16 years from 2 people to over 120 has been careful and conservative. We enjoy what we do and have designed our company to be an innovative and rewarding place to work. Our near 100% employee retention over 17 years is a sign we've been successful in doing that.

We've always had a solid and healthy set of customers at Silicon Creations and we've managed to add 400 while keeping existing relationships strong and finding mutually beneficial, repeat business. We have great appreciation for our customers – we've earned their trust and they know we will not make promises unless we believe we can meet them. The many partner awards we've won from wafer fabs are a sign that we have earned respect from those in our industry.

This year marks our third CSR report. While we maintain focus on our three main objectives (employees, customers, and profitability), our CSR efforts provide an opportunity to see beyond Silicon Creations to our impact on the community and the planet. As the world enters 2023, many aspects of pre-COVID life have returned – travel, conferences, face-to-face meetings, etc. We believe we are in a “new post-COVID normal”, and we need to keep sustainability and social responsibility in mind.



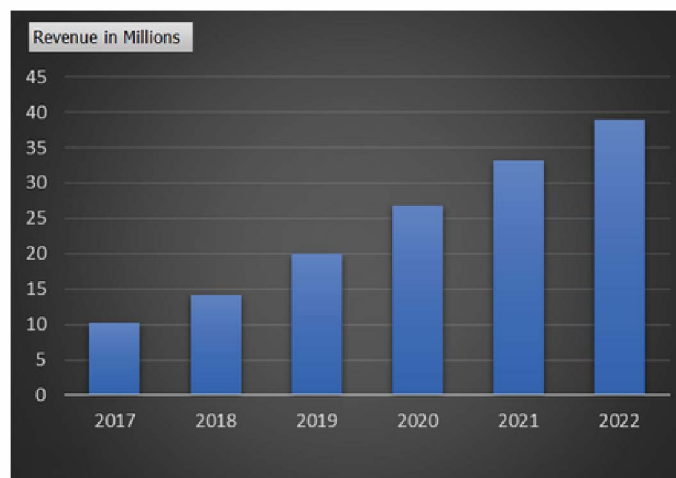
# Company Profile



**Silicon Creations is a self-funded, leading silicon IP developer with offices in the US and a subsidiary in Poland, with sales representation worldwide. The company provides world-class silicon intellectual property (IP) for precision and general-purpose timing (PLLs), oscillators, low-power, high-performance SerDes and high-speed differential I/Os for diverse applications including smart phones, wearables, consumer devices, processors, network devices, automotive, IoT, and medical devices. Silicon Creations' IP is proven and/or in high-volume mass production in process technologies up to the most advanced available in the industry.**

**With a complete commitment to customer satisfaction, Silicon Creations' IP has an excellent record of taking first silicon to mass production.**

**Our customers include more than 400 companies producing integrated circuits and products containing integrated circuits. These customers range from small to the very largest companies (by market capitalization).**







Founded  
in  
2006

Design Offices in  
Lawrenceville, GA, USA  
and Kraków, Poland

10 Sales  
offices  
world-wide

*Since the start of the Russian aggression in Ukraine at the end of February, 2022, Silicon Creations has put a halt to business development in the country of Russia. This will remain Silicon Creations' position until there is no threat to peace by the Russian military within Ukraine.*

# Quality & Continuous Improvement are our Key Values

From Silicon Creations Quality Policy: Silicon Creations IP has an excellent record of taking first silicon to mass production supported by our commitment to customer success and satisfaction.

Silicon Creations' team is committed to meeting customer and regulatory requirements and achieves this by setting and monitoring business and product related objectives and through the continual improvement of our quality management system.

Our quality policy and commitment to customer success is captured in our motto:

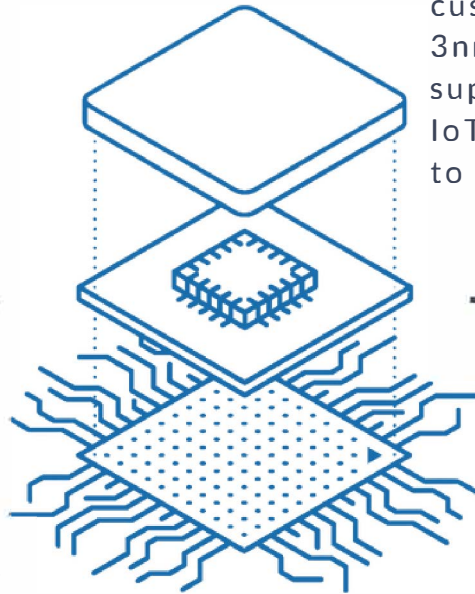
We're successful when you are!



# Innovation

Silicon Creations' designs are used in low power, high performance integrated circuits which are fabricated on millions of wafers each year (billions of chips) for hundreds of different end products.

Integrated circuit design is aimed at achieving performance at low power and low cost. These end goals enable many innovative products for our customers. We continue to support mobile and high-performance compute customers with design down to 3nm processes while supporting customers in the IoT market and other spaces up to 180nm.



Our SERDES products are the physical layer base for optical networks, PCIe systems, video display systems, and many other types of links in consumer homes, automobiles, industrial equipment, and aerospace applications. Our SERDES products are designed to be robust, wide ranging, and low power.

Our PLL and timing applications are supporting customers moving to more and more advanced nodes, allowing power to be saved and performance to be increased.

TSMC's advanced technologies lead to lower energy consumption for compute, AI, 5G, and mobile platforms. TSMC's customers use Silicon Creations' clocking solutions in their complex designs targeting TSMC's most advanced nodes such as 5nm and 3nm. Due to their success in supporting TSMC's customers, Silicon Creations has been recognized as TSMC's Analog/Mixed-Signal Partner of the Year 6 years in a row.

Microchip produces the industry's lowest power FPGAs with up to 50% lower power than the competition. A key piece of the power advantage is the SERDES PMA design from Silicon Creations.

- Shakeel Peera, Associate Vice President





# Our Employees

At Silicon Creations, we strive to keep our employees happy and continue our excellent retention record.



**126 Employees**

**81% full-time**

**13% students**

**91% hold technical positions**

**56% have a Master's Degree or higher  
(11 hold PhDs)**

## Employee Benefits

To encourage a sense of ownership among employees, we have an extensive profit-sharing program in addition to our competitive salaries, benefits (in the US and Poland), and a flexible time off policy. We provide insurance, transportation, and childcare, which exceed the normal benefits for our industry. These benefits extend beyond employees to the families of our employees.

## Career Development

As mentioned in further sections, our employees are encouraged to continually expand their knowledge and technical expertise.

## Workplace Flexibility

Even before COVID-19, our employees have had the flexibility to work from home or the office. With customers spread around the globe, flexible hours allow us to better communicate across multiple time zones.

## Employee Feedback

We are proud of actively encouraging feedback and suggestions from our employees. We have a flat organization and employees are regularly encouraged to speak with any person in leadership and to take leadership roles. Transparency within the organization is a cornerstone of our construction.

## Diversity

Silicon Creations is committed to fostering a supportive and inclusive work environment and prohibits discrimination on any basis. We recognize internationally accepted regulations with regard to human rights including prevention of forced labor, human trafficking, and child labor.

We support diversity in the workplace and have employees originating from 6 continents. 13% of our technical employees are female, compared with 4% of IEEE members who are female. 16% of employees overall are female.

## Internships

Students from Georgia Tech, Auburn University (US headquarters) and AGH UST (in Kraków) gain practical skills and invaluable industry-grade experience during internships. This results in qualified students potentially becoming full-time engineers for Silicon Creations. Local technical high schools also benefit from a symbiotic relationship with our company. Our employees give technical lectures, guided company tours and sponsor educational events like contests, with a chance to win internships, thus encouraging adolescents to pursue microelectronics-oriented career.

# Training and Development

*Silicon Creations believes in continuously investing in advancing technical expertise and expanding the skill-set of employees.*

## Technical Conferences:

All employees are highly encouraged to attend technical conferences around the world.

The most frequently attended are:

- ISSCC Conference
- Design Automation Conference

## Training:

- Short courses provided by MEAD involving the world's leading experts on IC design.
- Regular classes and discussions organized during lunch time.

## Trade Shows and Symposiums:

- TSMC Technology Symposium and Open Innovation Platform.
- Guest speakers during hybrid IEEE SSSC Events in Poland and the US, like Bogdan Staszewski, Alvin Loke, Danielle Griffiths, Amir Bozorg and Sudip Shekhar.

## Participation in Customer Support Groups:

Approximately 34 unique support groups that focus on providing best-in-class customer support are available to every employee. This provides an avenue for exponential learning through direct customer interaction.

### New Employees

New employees are provided extensive training material for self-directed learning with guidance from an assigned mentor or project lead. A significant part of the training involves hands-on experience gained from contributions to active projects.

Many resources are available to the new employees which include (and are not limited to) technical reading material, video classes in the area of interest/skill and mentors with years of industry knowledge and experience.

# Educational Outreach

At Silicon Creations, we view Engineering as an honorable profession. At its core, Engineering is about using math and science to find creative and practical solutions to today's problems. We strive to support Engineering Education, especially in the area closest to our hearts – Solid State Circuits Education.

By sponsoring IEEE (Institute of Electrical and Electronics Engineers) conferences and programs, attending conferences, and hosting interns, we're helping to educate and train the next generation of engineers.

We're involved in the IEEE Solid State Circuits chapters local to our offices in Atlanta (hosted at Georgia Tech) and Kraków. Krzysztof Kasiński, Lead Hardware Design Engineer at Silicon Creations and Professor at AGH UST, is the chair of the IEEE SSCS Poland chapter. Involvement and sponsorship of the local IEEE Solid-State Circuits chapters brings distinguished global lecturers to our local communities.

In 2022, we helped to bring seven IEEE Solid-State Circuits Society events to our local community in Kraków.

We've also sponsored the FiWIN program, a National Science Foundation sponsored program which helps support graduate students and research at Auburn University and Georgia Tech.

Silicon Creations has made many positive contributions to solid state circuits education in Poland including sponsoring distinguished lecture series at AGH University of Science and Technology, and sponsoring the European Solid State Circuits Conference (ESSCIRC) in Kraków, and supporting dozens of graduate level interns.

*– Dr. Paweł Gryboś AGH  
UST*



Silicon Creations has helped support solid state circuits education by sponsoring the FiWIN program, an NSF sponsored research center for industrial and academic collaborations, including universities such as Auburn and Georgia Tech. Silicon Creations sponsorship helped support PhD students and their research into novel circuit architectures at Auburn.

*- Dr. Foster Dai,  
Auburn University*

Working with High Schools (Technikum Łączności, Zespół Szkół Energetycznych) and even kindergartens in Kraków, students are provided opportunities to visit the Polish office and Design Center, attend lectures given to EE trainees and HS teachers, serve as interns to work on IP Verification and Validation as part of their professional development program, and take part in electronics related contests where Silicon Creations is a sponsor.

We also support the Microelectronics faculty of AGH University of Science and Technology in Kraków through the lending of professional equipment for SPICE simulation and IC characterization, supporting professional training to lecturers through collaboration on teaching content, and promoting microelectronics as a solid career path among future students in the EE field.

Silicon Creations U.S. sponsors Auburn University's (in Auburn, Alabama) ongoing research on Frequency Synthesizer Design. This has resulted in a publication in the highly prestigious circuit periodical, the IEEE Journal of Solid-State Circuits.

In 2022, ten members of our engineering staff were certified as Semiconductor Automotive Functional Safety Professionals under the personal qualification program for ISO26262 semiconductor development from SGS-TÜV Saar. This engineering certification will enhance the company's support of automotive customers and augment previously certified engineering staff.

# What our customers are saying



Cadence’s DDR PHYs support customers in the industry’s most advanced nodes, helping to bring down the power of computation. Silicon Creations has been an innovative and reliable collaborator in this effort, providing PLLs and clocking solutions for these DDR systems.

*Marc Greenberg, Product Marketing Group Director, Cadence Design Systems*



SiFive via their DesignShare initiative is on a mission to make complex computing and silicon chip development accessible to small companies and to research teams. Our specific RISC-V processor designs configurable with web-based tools enable designers to access and customize RISC-V processors for their application. Our domain-specific chip design Templates provide an inexpensive path for these small entities to prototype their system concepts in an advanced IC and use their prototypes to convince others to help fund their dreams. Silicon Creations has made it's widely programmable PLLs and SerDes PMAs available to our target customers via our DesignShare program, so making a significant contribution to democratization of complex silicon designs.

*Mohit Gupta, Senior Vice President & GM, IP BU*



Analog Devices believes in the transformative power of business to create impactful solutions to address social and environmental challenges. We are pleased and deeply committed to working with our network of employees, suppliers and customers to meet our objective for "Engineering Good" .

ADI appreciates, supports and looks forward to collaborating in the efforts undertaken by Silicon Creations LLC in creating their goals framework and addressing critical challenges with the launch of their initiatives focusing on issues such as climate change, social justice and community impact.

*Badhri Uppiliappan, IP Leverage, CTO Office*

# Suppliers

While Silicon Creations is primarily a design firm with no supply chain for physical goods, we place importance on using software and equipment suppliers that operate their businesses sustainably and ethically.

Our key suppliers include:

**Cadence Design Systems**

[https://www.cadence.com/en\\_US/home/company/csr.html](https://www.cadence.com/en_US/home/company/csr.html)

**Keysight Technologies**

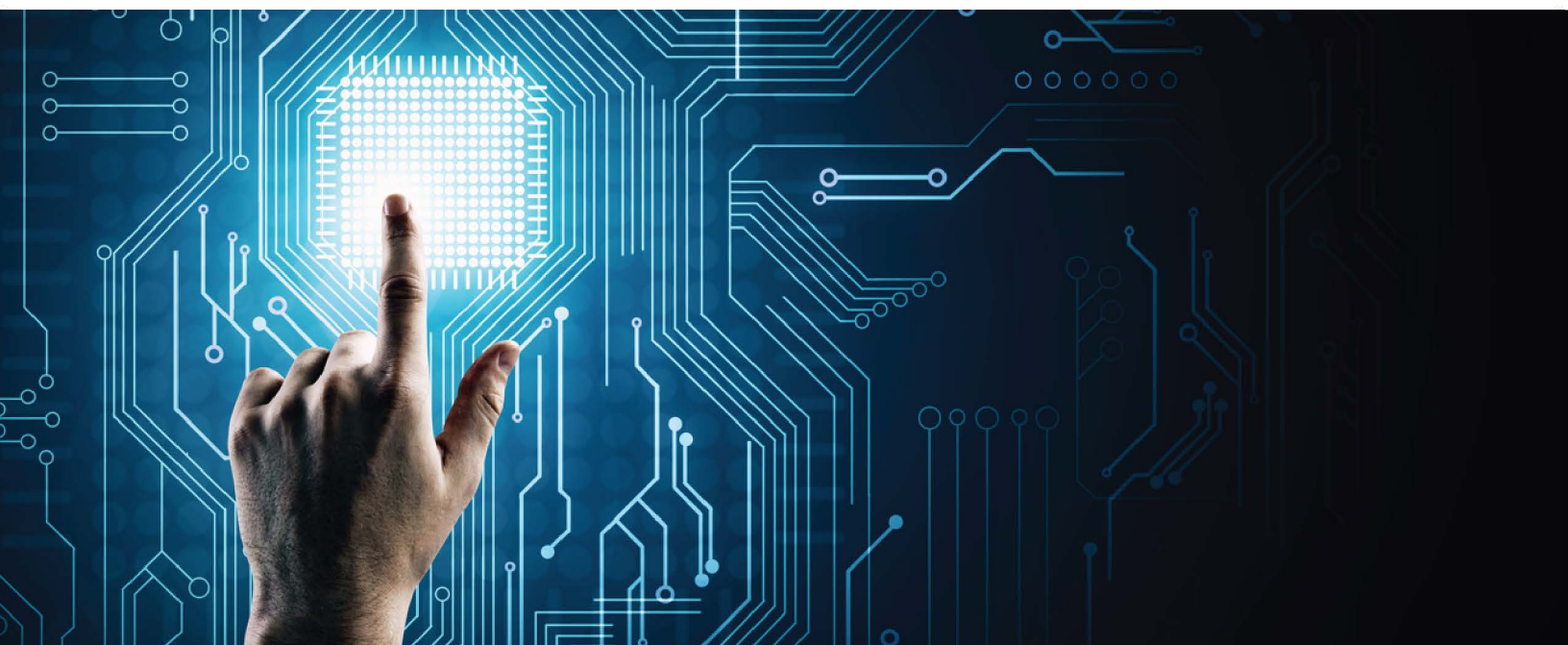
<https://www.keysight.com/us/en/about/corporate-social-responsibility.html>

**Mentor Graphics/Siemens**

<https://new.siemens.com/global/en/company/sustainability.html>

**Synopsys**

<https://www.synopsys.com/company/corporate-social-responsibility.html>



# Carbon Emissions and Carbon Neutrality

Definitions and descriptions of the major contributors to our carbon footprint are listed below, with estimated actual values of these contributors listed on the next page.

## Electricity

- Electricity is our major CO<sub>2</sub> emission source due to the extensive computer simulations required for our products.
- Sensor lighting is used in our Atlanta office to avoid lighting empty rooms.

## Employee Commute

- 30 employees bike or walk to work on a semi-regular basis, totaling over 10,000 miles in 2022.
- Almost half of our employees in Poland use public transportation on a regular basis.
- Employees commuted 9530 days by car, averaging 77 days per person.
- Flexible work arrangements allow employees to work from home, minimizing CO<sub>2</sub> output from waiting in traffic.
- Our Poland subsidiary includes expanded bike rack space to encourage commuting by bicycle.

## Trash and recycling

- On-site recycling for all paper products, aluminum and some plastics.
- Our office participates in e-waste recycling drives on a regular basis for work and personal electronics and regularly donates obsolete equipment to a local technical high school.





# Carbon Emissions



In our efforts to become Carbon Neutral, our company will purchase carbon offsets for all estimated carbon emissions produced by the company for 2022. As we did last year, we will continue to support the [Crow Lake Wind project](#) in South Dakota which is a zero emissions, grid-connected electricity generation source.

	Metric Tons of CO <sub>2</sub>	Per employee
Purchased electricity	328.85	2.61
Business Travel by air	84.11	0.67
Business Travel by car	3.79	0.03
Employee commute by car	60.07	0.48
Employee commute by public transportation	4.07	0.03
Total	480.89	3.82

# Ethics

Silicon Creations' Code of Conduct provides a minimum set of guidelines for how to conduct ourselves in relation to others. It outlines how we should treat fellow employees, our customers, and our community.

Our core values are at the heart of our business. These values include:

- Honesty towards, and respect and empathy for, our coworkers, customers, and community
- Responsibility and accountability
- Obedience for the rule of law
- Teamwork



## CONFIDENTIALITY

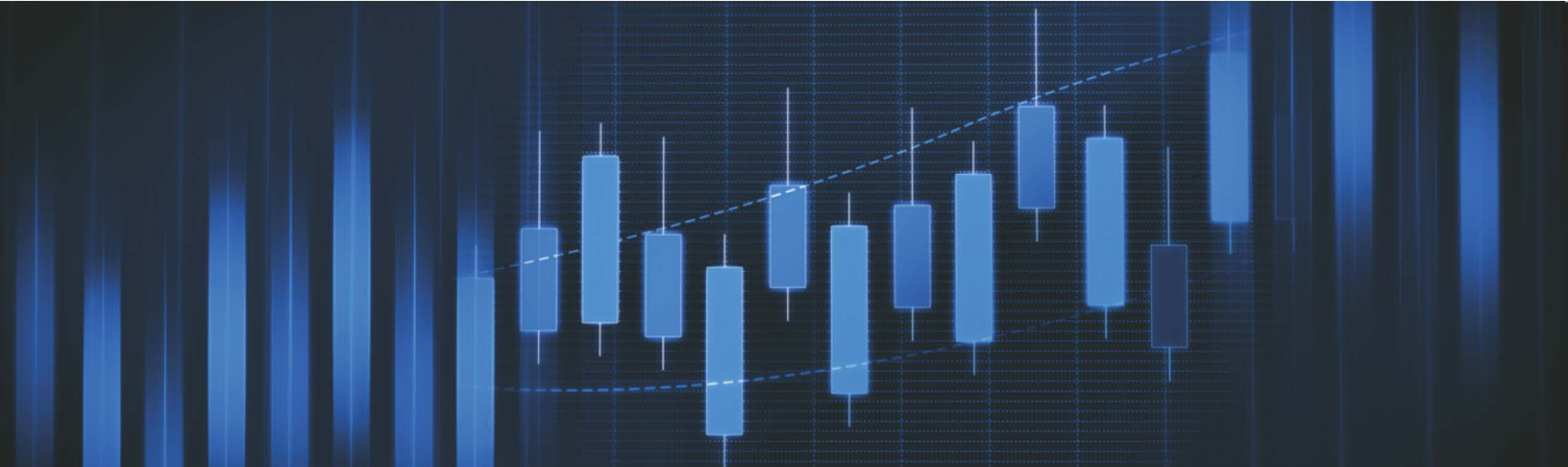
The company and its employees maintain the confidentiality of all proprietary information. Proprietary information includes all non-public information that might be harmful to the company, its customers and business partners or other individuals or organizations if disclosed.

All employees sign an agreement that contains provisions for information confidentiality and non-disclosure.

## REPORTING/SPEAKING UP

Silicon Creations encourages all employees to ask questions and raise issues if they suspect any action is unethical, illegal, or suspicious. This can be done anonymously or otherwise, and the company will not tolerate retaliation for any such report.

# Continuous Improvement



As a company focused on quality and process, we have set goals for continuous improvement in the areas described by this report.

- Keep our employees happy.
  - Keep our excellent employee retention record!
  - Increase opportunities for training and career development.
- Help improve our communities, local and global.
- Limit CO<sub>2</sub> emissions and achieve carbon neutrality.
  - Reduce carbon footprint from 2019 levels per employee.
  - Commit to buy carbon offsets for our calculated 480.89 metric tons of CO<sub>2</sub> emissions for 2022 to become carbon neutral.
- Increase our social/community outreach, including our educational programs.
- Continue working with suppliers who share our values.

# CSR Review Team

Silicon Creations 2022 CSR report  
was compiled and reviewed by the  
following team:

DORA AATHMANI  
RICK ADER  
ANIA BOMBAR  
MICHAŁ BOMBAR  
RANDY CAPLAN  
ANDREW COLE  
ŁUKASZ DENCA  
HELEN DOWNING  
ŻANETA DROZD  
JEFF GALLOWAY  
KRZYSZTOF KASIŃSKI  
CARYN MCAUSLAND

