SSIA
Singapore Semiconductor Industry Association

SINGAPORE SEMICONDUCTOR VOICE

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SEMICONDUCTOR WOMEN'S FORUM 2025

ACCELERATING ACTION, ENABLING WOMEN

Women's Forum Spotlight
Highlighting inspiring leaders driving change in semiconductors, fostering equity, valuable mentorship, and innovation for a more inclusive industry.

Sector Snapshot: Economy & Trade
Exploring global economic trends, trade policies, and market shifts driving industry landscape. Tradewinds and SSIA's review on the 2025 Budget Talks.

Our United Industry
Collaboration Fuels Innovation - Let's unite companies, global embassies, and local talent to strengthen the semiconductor ecosystem.

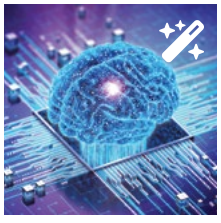
Joining the Singapore Semiconductor Industry Association (SSIA) opens a world of business opportunities

SSIA IS YOUR GATEWAY

Blending unparalleled network access and strategic growth opportunities into a single membership

Network Expansion:

Dive into a vast industry network through exclusive business networking and supplier development sessions, designed to forge valuable connections and partnerships.

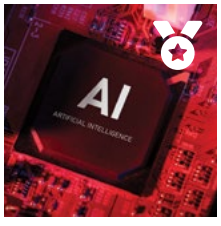


Branding and Marketing Leverage:

Broaden your outreach and enhance your visibility through diverse marketing opportunities - such as in our top industry VOICE publication - and a complimentary listing on the SSIA website.

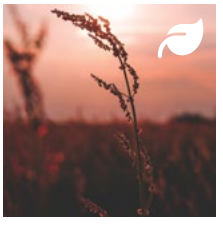
Insight and Influence:

Gain access to the latest developments and government policies affecting the sector, while also having a platform to voice your feedback directly to key industry and government leaders.



Exclusive Training Opportunities:

Enjoy priority enrolment in specialized semiconductor-focused training and courses, keeping your team at the forefront of industry advancements.



Advocacy and Growth:

Benefit from SSIA's proactive advocacy efforts, ensuring your business's interests are represented, while also contributing to the vibrancy and growth of Singapore's semiconductor ecosystem.

Why be an SSIA member?

For both SMEs and MNCs in the semiconductor sector, SSIA membership offers a dynamic platform for growth, influence, and strategic connections, accelerating your business's success in Singapore and beyond by fostering key industry partnerships, providing insights into policy and development, and enhancing visibility within the global semiconductor ecosystem.

SSIA WELCOMES NEW MEMBERS

Unravel Carbon

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ONESYSTEMS TECHNOLOGIES PTE LTD

SEMITEST

FOREWORD BY THE EXECUTIVE DIRECTOR

As we reach the end of the first quarter of 2025, we do so with a renewed commitment to fostering inclusivity, driving innovation, and strengthening collaboration within the semiconductor industry. This March, we are proud to organize the Semiconductor Women's Forum 2025, a significant initiative that underscores the importance of diversity and the pivotal role women play in shaping the future of our industry.

This year's forum highlights two essential pillars: support structures for women's vulnerabilities and mentorship culture. While the semiconductor industry has made significant strides toward gender inclusivity, we recognize the challenges that still exist. Creating a robust support network ensures that women in our sector feel empowered to navigate these challenges, while fostering a strong mentorship culture allows for knowledge-sharing and career growth. We urge all industry leaders to actively participate in building an environment where women can thrive, contribute, and lead.

Beyond the forum, 2025 is shaping up to be a dynamic year for the semiconductor industry, not just in business but in global engagement. Singapore's semiconductor sector will be well represented at major international events, including the ASIA Photonics Exhibition (end February), SEMICON SEA (May), International Semiconductor Executive Summit (ISES), and World MEMS Summit (end of the year). These platforms provide us with unparalleled opportunities to showcase Singapore's strengths and innovations on the world stage. I encourage companies to seize these moments to highlight their capabilities, forge new collaborations, and reinforce Singapore's position as a leading semiconductor hub.

SSIA will continue to drive industry engagement through our own flagship events. We started the year with a resounding success—the largest Electronics Industry Day in January, which saw an overwhelming response from students eager to explore career opportunities in semiconductors. Building on this momentum, we anticipate an even greater turnout at our Semiconductor Awareness Day events at all Institutes of Higher Learning (IHLs) in the second half of the year. To companies eager to inspire and attract the next generation of semiconductor talent, we invite you to join us in shaping the future workforce.

Additionally, Business Connect 2025 is set to play a pivotal role in strengthening our local semiconductor ecosystem. This platform will deepen collaboration between multinational corporations and local SMEs, fostering innovation and growth. We welcome companies that are keen to expand their networks and create impactful partnerships to be part of this journey.

This year also marks a major milestone for SSIA—our 20th anniversary. As we reflect on two decades of industry growth and collaboration, we are gearing up for an unforgettable Semiconductor Dinner in September, where we will celebrate this achievement with our partners, members, and industry leaders. We anticipate our largest industry dinner yet, and we invite all companies to be part of this momentous occasion. More details will be shared soon.

As we navigate the opportunities and challenges ahead, let us remain united in our vision to strengthen the local ecosystem and attract the brightest minds into our industry. The semiconductor industry's future is built on collaboration, and together with our regional and global partners, we will continue to propel Singapore's semiconductor sector to new heights. Stay tuned for more updates as we embark on another exciting year of growth and innovation.

Let's keep pushing forward—together.

ANG WEE SENG
Executive Director
Singapore Semiconductor Industry Association (SSIA)

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UPCOMING EVENTS

Mark Your Calendars

SSIA
Singapore Semiconductor Industry Association

6-8 MAY 2025

Leadership in Engineering 2025

Back by popular demand! This three-day, in-person immersive workshop, led by Lead Coach Dominic Siow, offers a dynamic and highly interactive experience. It blends contemporary best practices from leadership, neuroscience, and high performance. Designed to empower industry professionals, the workshop sharpens leadership mindsets, emotional intelligence, and provides practical tools to drive impactful change. Beyond the learning, it also presents a unique opportunity to network and collaborate with professionals across the entire value chain, fostering valuable connections.

10 JUL 2025

Semiconductor Business Connect 2025

Semiconductor Business Connect is a conference for MNCs and SMEs to unite as a collaborative powerhouse. Our goal: elevate SMEs through shared knowledge and networks, showcasing their innovations and emphasizing their essential role in driving the sector's global competitiveness and resilience. Together, we forge a path toward a unified and thriving semiconductor future.

24 SEPT 2025

SSIA Summit & Semiconductor Dinner 2025
(SSIA 20th Anniversary)

The Summit serves as a platform for sharing insights, discussing current trends, and charting the course for the technological integrations that will shape our future. It's not just another conference; it's the convergence of the brightest minds and most influential industry leaders in the semiconductor sector.

The Semiconductor Dinner offers a relaxed and celebratory atmosphere featuring the who's who of the industry – where participants can network, forge deeper connections, and celebrate the industry's achievements. With growing attendance, sponsorship, and support each year, the SSIA Dinner has solidified its status as a cornerstone of the semiconductor industry in Singapore and the region.

These event dates are subject to change. Please stay updated by visiting our website or following us on LinkedIn @SSIA for the latest news on these exciting events!

A collaboration between SSIA & EQ Strategist to support the development and evolution of Singapore's semiconductor industry

Leadership in Engineering 2025

6-8 MAY

"**High energetic, well prepared contents, excellent coaching** from EQ Strategist and SSIA"
- HP Inc Singapore

"If there was a leadership course that you want to attend, **this would be the one.**"
- Vanguard International Semiconductor

"Despite how busy your work schedule is, this leadership programme is **truly mindset-changing, game-changing, life-changing** to future leaders"
- Applied Materials

SOLD OUT LAST 2 RUNS, NEW SLOTS OPEN NOW!

"**The sheer energy of the program is amazing!** It takes a lot to conduct a program with so much energy to drive home the fundamentals of making a good leader, AMAZING!"
- KLA Corporation

A transformative 3-day course empowering high-potential professionals with the mindset, emotional intelligence, and tools to lead with impact.

Suitable Candidates

Up and rising, high-potential professionals with at least 3 years working experience

Course Details

Dates: 6 - 8 May 2025

Participants will receive a Certification upon completion.

Contact SSIA to book now!

✉ secretariat@ssia.org.sg

Program Overview

Pre-Course Work

• Participants will be guided through completing a DISC assessment. Each participant will receive a personalized DISC profile report, serving as a foundation for their leadership development plan and offering insights into their behavioral tendencies and communication preferences.

The 3-Day Workshop

• Delivered over three impactful days, the workshop integrates contemporary best practices from the fields of leadership, neuroscience, and high performance. Sessions will be facilitated by **Lead Coach Dominic Siow, Master Facilitator Andrew Davey**, and **two Semiconductor Industry Experts**, ensuring a balance of leadership principles and industry-specific applications.

Networking Opportunities

• The program includes dedicated networking sessions, enabling participants to connect with peers, industry leaders, and facilitators to foster long-term professional relationships and collaboration.

Virtual Post-Programme Recalibration Workshop

• Leadership is a journey, not a destination. This session is your chance to reflect, recharge, and refocus on your goals in a supportive and inspiring environment. It's also a valuable opportunity to strengthen the habits and strategies you've developed, ensuring they continue to drive meaningful results for you and your teams.

Organized by: SSIA Singapore Semiconductor Industry Association

Programme Partner: eqstrategist

SSIA
Singapore Semiconductor Industry Association

SEMICONDUCTOR BUSINESS CONNECT 2025

Semiconductor Business Connect is a key initiative designed to strengthen and grow Singapore's local SMEs within the semiconductor industry.

Targeted at **SMEs**, **MNCs**, and **industry leaders**, the event provides a platform for fostering partnerships, sharing industry knowledge, and showcasing SME innovations.
It also engages **foreign partners**, **encouraging cross-border collaboration** to drive growth and innovation.

Through keynote speeches, breakout sessions, and networking opportunities, Semiconductor Business Connect helps SMEs navigate challenges, leverage new technologies, and enhance their capabilities. By promoting collaboration and innovation, the event plays a crucial role in building a robust semiconductor ecosystem, supporting the growth of local SMEs, and driving Singapore's semiconductor industry forward.

Open for sponsorships, contact us at
secretariat@ssia.org.sg

10 July 2025
9 am - 5 pm
Singapore EXPO, 1 Expo Drive Singapore 486150

SEMICONDUCTOR WOMEN'S FORU

Accelerating Action, Enabling Women
















JM 2025

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Accelerating Action, Enabling Women

JM 2025

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ACCELERATING ACTION:

HOW MENTORING IS SHAPING THE FUTURE OF WOMEN IN SINGAPORE'S SEMICONDUCTOR INDUSTRY

Singapore's semiconductor industry is at the heart of global innovation, driving advancements in AI, 5G technology, and next-generation manufacturing. Yet, while the industry thrives, one challenge remains - women continue to be underrepresented in STEM careers, particularly in leadership and technical roles.

As we celebrate International Women's Day 2025 with the theme 'Accelerate Action', it is time to ask: How can we open more doors for women in this industry?

One of the most powerful solutions lies in mentoring.

The Power of Mentoring in Building a More Inclusive Industry

Mentoring plays a crucial role in breaking barriers and fostering growth. When women are guided by experienced mentors, they gain valuable insights, confidence, and networks that help them navigate their careers. A strong mentoring culture ensures that talent - not gender - drives progress.

A mentoring ecosystem benefits women in STEM by providing the following:

- **Access to Role Models:** Seeing women in leadership shows young professionals what's possible.
- **Career Guidance & Skills Development:** Mentors help mentees navigate career challenges and seize opportunities.
- **Stronger Industry Networks:** A wider network leads to better opportunities for collaboration and growth.
- **Support for Work-Life Balance:** Practical guidance can help women balance careers with personal commitments.

In Singapore, organisations like the Singapore Semiconductor Industry Association (SSIA) have recognised this need and taken action. In 2019, SSIA launched the first Semiconductor Women's Forum to promote female leadership. These efforts are a step in the right direction, and mentoring can further accelerate the progress - empowering more women to thrive in the industry and shaping an inclusive future.

Time to Accelerate Action – Let's Mentor!

The semiconductor industry is evolving, and the next generation of talent **needs your support**.

If you are an organisation, start a mentoring program or build a mentoring culture within your company. It is one of the most effective ways to **support talent development and organisation growth**.

If you are an industry leader, step forward and be a mentor. Your experience can shape the careers of young professionals and help build a more **inclusive and thriving** semiconductor sector.

Join the movement. Accelerate action through mentorship today.

https://forms.office.com/r/haPW8fCTVz

Mentoring SG: Building a Mentoring Culture in Singapore

Mentoring SG is a national movement under Forward SG, dedicated to making mentoring accessible and impactful for youth. By connecting young talents with mentors, it supports career growth, education transitions, and personal development.

Mentoring SG partners with SSIA and other semiconductor organisations to scale mentoring efforts within the industry, nurture future talent, and equip young professionals with industry-relevant skills. Harnessing the power of mentoring can help bridge the knowledge gap, cultivate future leaders, and enhance talent retention - ensuring a sustainable and thriving semiconductor workforce.

mentoring SG

KEY LEADERS FROM THE SEMICONDUCTOR MENTORING WORKING GROUP

Ray Chua,
Senior Director,
Human Resources, KLA

Both mentor and mentee often find the mentorship relationship rewarding. With a long and robust talent history in the semiconductor industry, we have the perfect conditions to create this virtuous self-sustaining talent lifecycle. For the more experienced to pass on their knowledge and strengthen whoever is taking over the baton in the industry. A strong talent base will in turn naturally attract more young talents to join our industry. I do strongly encourage more of us to embark on this mentorship journey, either as a mentor or be a mentee. You will gain by being part of this process.

Valerie Lee,
Senior Director,
Human Resources,
ams OSRAM Asia Pacific

Mentorship is the backbone of a skilled semiconductor workforce. It bridges experience gaps, accelerates learning, and builds resilience. I believe in nurturing talent through mentorship because it's how we grow as an industry and as individuals. Contributing to Semiconductor Mentoring SG is my way of giving back to the community that shaped my career. Mentorship isn't just about guidance—it's about building connections and fostering innovation. By investing in the next generation, we create a future-ready workforce, ensuring sustainability and growth in this dynamic sector. I'm committed to mentoring because it's how we leave a lasting impact.

Sylvia Chan
Operations Training and Development Director, GlobalFoundries

Mentorship has been a defining force in my journey, shaping my growth as a leader and collaborator. In the fast-evolving semiconductor industry, it's not just about passing down knowledge, it's about empowering others to navigate challenges, seize opportunities, and build fulfilling careers. As Steven Spielberg said, "The delicate balance of mentoring someone is not creating them in your image but giving them the opportunity to create themselves." A strong mentoring culture attracts and retains talent, creating a ripple effect of innovation and resilience. The guidance I've received has sharpened my strategic thinking and inspired me to pay it forward. By investing in mentorship, we don't just develop individuals, we strengthen teams, fuel industry progress, and build a future where everyone has the support to thrive.

AMD:

FOSTERING A WORKPLACE WHERE VOICES ARE HEARD, WELCOMED, AND VALUED

At AMD, we push the boundaries of innovation to help solve the world's most pressing challenges, and our people make this possible. As we strive for excellence in execution, we recognise the value of diversity among those who design, deliver, and use our technologies.

To continue empowering AMDers as we work together to transform lives through high-performance and adaptive computing, we aim to foster a culture of inclusivity—creating safe and respectful work environments where everyone feels encouraged to voice their ideas and perspectives. This means embracing all voices and differences, instilling a sense of belonging among employees, and challenging conventional ways of thinking. It also requires us to adopt a global mindset, question established practices and embrace change.

Belonging is a key pillar of our culture, and our AMD Women's Forum (AWF) employee resource group actively champions this cause within the company. Their mission is to create a supportive community for women by fostering meaningful connections, unlocking leadership opportunities, and encouraging engagement both within AMD and across the broader industry.

Global movement, Local Movement

The AMD Women's Forum is our largest Employee Resource Group, with 23 chapters worldwide, and we are proud to provide development programmes such as the Female Fellow Pipeline Mentoring and Advancing Women in Tech initiatives to support employee growth and learning. We are also rolling out global mentoring programmes with a specific focus on Women in Engineering.

We recognise the importance of external partnerships in driving progress within the semiconductor industry through thought leadership, collaboration, and initiatives

that elevate women in the field. Over the years, the AWF Singapore team has partnered with key organisations such as the Singapore Semiconductor Industry Association (SSIA), the Society of Women Engineers (SWE), IEEE Women in Engineering (WIE) Singapore, and The Institution of Engineers Singapore.

At AMD, we believe that in the hands of the brightest minds, our technology can help tackle shared challenges and create a better future for all. In line with this vision, we work closely with our partners to curate networking sessions for aspiring female engineering students, giving them the opportunity to interact directly with AMDers and learn more about internships, engineering careers, mentorship, and job shadowing opportunities. Mentorship and representation are central themes across all our initiatives.

We have also hosted office and lab tours for local tertiary and secondary school students, allowing them to experience first-hand the real working environment of our AMD engineers. These tours include Q&A sessions with our female engineers at AMD Singapore, providing students with an authentic glimpse into the inspiring career journeys of those who came before them.

Leading by example

At the heart of AMD Singapore's strong advocacy for women engineers is a team of dedicated AMDers, led by Ng Pei Fern, Senior Manager, Silicon Design Engineering.

With more than 16 years at AMD, Pei Fern is a well-rounded engineering professional. Beyond her core responsibilities as an engineer, she is a committed people manager, often acting as the bridge between her team and IT to ensure seamless workflows.

She is also deeply passionate about diversity, inclusivity, female representation in STEM, and women's empowerment. As the regional lead for AWF (AMD Women's Forum) and President of SWE@SG (Society of Women Engineers Singapore), she plays a pivotal role in enabling Singaporean women to realise their full potential as engineers and leaders in the field.

Pei Fern spearheaded Singapore's first all-female hardware hackathon with Nanyang Technological University (NTU) in 2019 and expanded the initiative in 2021 to include participants from NTU, the National University of Singapore (NUS), the Singapore University of Technology and Design (SUTD), and the Singapore Institute of Technology (SIT). Since 2023, she has also volunteered as a mentor with United Women Singapore (UWS).

"Connections play a crucial role in the global advancement of women in engineering by creating networks that facilitate knowledge exchange, mentorship, and collaboration," says Pei Fern. Through her leadership, she is driving positive change within AMD, SWE, and the wider engineering community in Singapore.

AMD

Attributed to, **Ng Pei Fern**
Senior Manager, Silicon Design Engineering, AMD

EMPOWERING WOMEN IN STEM:

AN INTERVIEW WITH NG PEI FERN

Ng Pei Fern is a steadfast champion for women in STEM, driving initiatives that empower and elevate female talent in the semiconductor industry. As the elected President of the Society of Women Engineers (SWE) Singapore, she leads efforts to foster a more inclusive and supportive ecosystem for women in engineering. She also serves as a regional lead for the AMD Women Forum (AWF) and sits on the board of the Women@NTU POWERS program, further solidifying her commitment to mentorship, advocacy, and industry-wide change. In her role as Senior Manager of Silicon Engineering at AMD Singapore, Pei Fern not only breaks barriers but also paves the way for future generations of women in semiconductors. Her leadership and dedication make her a driving force in shaping a more diverse and equitable industry.

What inspired you to take on a leadership role at SWE Singapore, and what key goals drive your mission?

I was inspired to take on a leadership role at SWE Singapore after hosting a 2019 hackathon where I witnessed the resilience and determination of female undergraduates tackling engineering challenges. This experience highlighted the potential loss to the industry if such talents did not pursue STEM careers. Connecting with SWE, I eagerly became the founding Outreach Director. My goals are to foster a strong presence of women in engineering in Singapore, expand industry partnerships, and encourage female students to pursue STEM careers, driven by a passion for gender diversity and inclusion.

From your perspective, what are the biggest challenges women in engineering face today?

We have made significant progress in addressing the challenges women in engineering face, but much work remains. Persistent unconscious gender bias and stereotypes still influence hiring, promotions, and the work environment. Achieving work-life balance is challenging due to demanding engineering roles, often leading to career interruptions. The lack of representation and role models in senior leadership positions makes it difficult for women to find mentors and guidance. Additionally, limited networking opportunities restrict women's access to career advancement and professional development resources.

How does SWE Singapore help address these challenges, particularly in mentoring and supporting young female engineers?

SWE Singapore collaborates with local universities and industry partners to create outreach programs like Internship Day, company open doors, and professional development series, aimed at inspiring young women to pursue and stay with STEM careers. Nearly all SWE events include networking opportunities, allowing women to connect with peers, industry leaders, and potential mentors, fostering a supportive community. SWE Singapore also engages in various mentorship forms and is working to formalize these efforts to better reach and support more young female engineers in their careers.

Reflecting on your journey, what has been the most rewarding moment in leading initiatives that empower women in engineering?

Reflecting on my journey, one of the most rewarding aspects has been witnessing the tangible impact of our efforts on young female students and engineers lives and careers. The positive feedback from participants at the first all-ladies hackathon I organized has been immensely fulfilling. Hearing how these events inspired them and provided valuable connections reinforces our work's importance. Additionally, mentoring a student who secured her dream intern role in a tech company was incredibly fulfilling. These experiences drive my passion and commitment to empowering women in engineering.

Looking ahead, what are your hopes for the future of women in engineering, and how can industry leaders play a role in driving this progress?

Looking ahead, I hope for greater gender diversity, equity, and inclusion in engineering, with women equally represented at all levels and their contributions valued. Industry leaders play a crucial role in driving this progress by fostering inclusive workplace cultures, implementing equitable hiring and promotion practices, and providing unconscious bias training. Supporting work-life balance initiatives and championing mentorship and sponsorship programs are vital. Additionally, investing in outreach and education programs can encourage young women to pursue STEM careers, building a strong pipeline of future female engineers.

swe
Society of Women Engineers
Singapore

DIVERSITY & INCLUSION:

THE BEST INFINEON FOR EVERYONE

While here in Infineon Singapore, we may have reached the goal of having 20% women with high positions, our endeavors for gender diversity are far from over. There is one thing we all have in common: we are all here at Infineon. We have a continuous role in fostering a diverse and inclusive working culture that promotes equal opportunities for all.

Here are some key measures implemented in Infineon Singapore:

Global Diversity Days

The objective of Infineon's Diversity Days is to spark conversations about diversity and inclusion. Held annually for the past decade, last year's theme was "Revealing the power of difference," with events highlighting different life realities based on age, ethnic origin , gender, and more.

The Asia Pacific opening event was led by top management to set the tone. "To all leaders in the call, it is very important you set the right tone by embracing diversity and actively fostering inclusion," said C.S. Chua, President of Infineon Asia Pacific. "Stand up for your peers if you see biases or inconsistent behaviours, just as you would for siblings or friends. It takes courage, but let's do the right thing."

Another highlight of the Diversity Days was the live interview with Chief Digital and Sustainability Officer Elke Reichart, who discussed "Navigating work and life as a female leader." Elke shared her leadership journey as a woman and spoke out against discrimination.

H.E.R Leadership Talk Series

Started in 2021, this series provides a networking platform for female employees to connect and exchange ideas with global women leaders. The goal is to expand gender diversity networks in Asia Pacific and develop leadership skills to help women achieve professional goals.

During the 2024 Diversity Days, the HR DI team organized a panel discussion on "Innovating Inclusivity – Women at the Forefront in Infineon's Tech Journey".

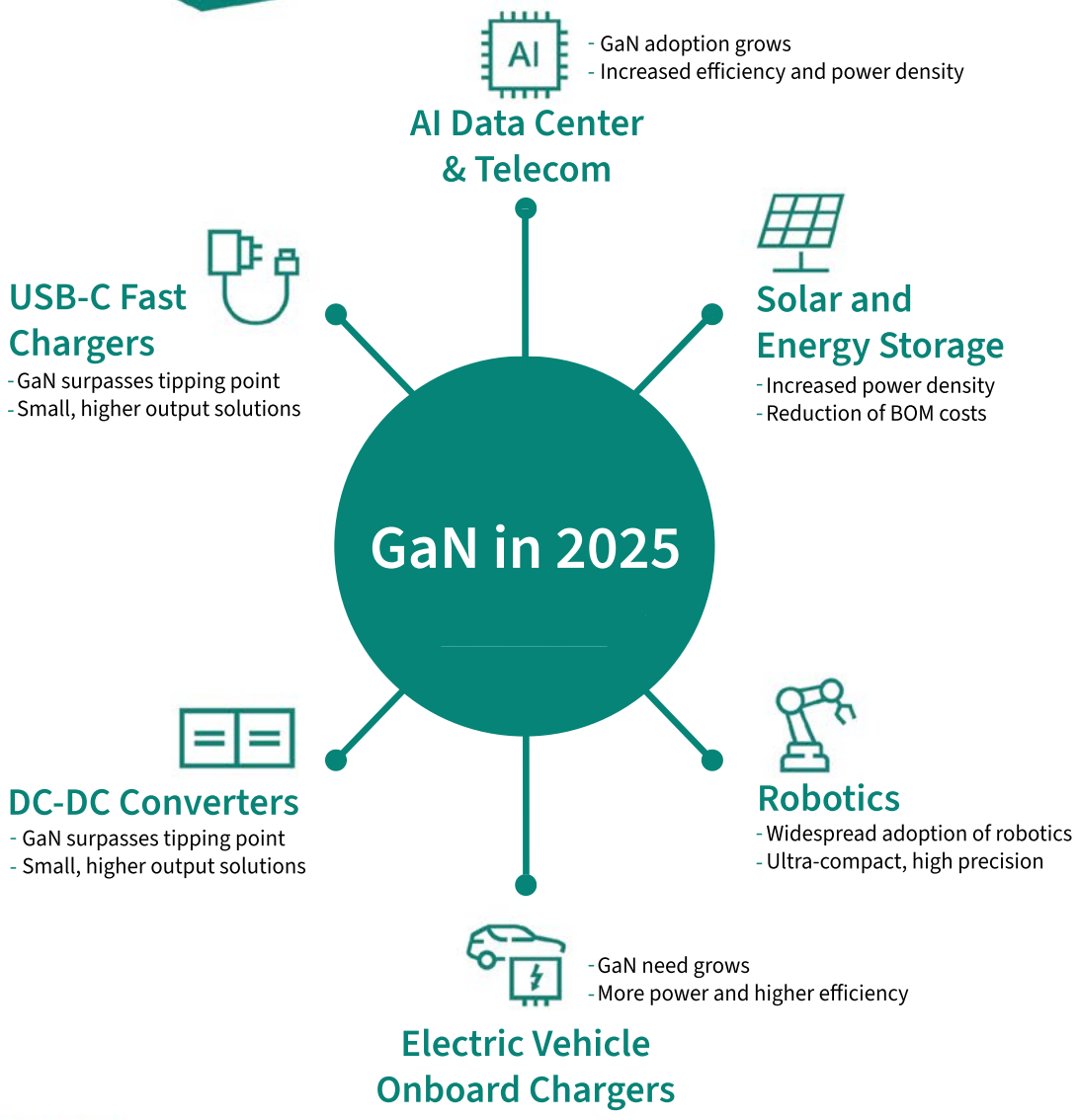
International Women's Day

Infineon has also celebrated International Women's Day on March 8th, committing to greater gender parity with various activities like workshops, roadshows, social media campaigns and more.

Infineon wishes everyone a Happy International Women's Day. **#WeAreIn** to create the best Infineon for everyone. Are you in?

What's next for GaN in 2025?

Discover the advancements GaN brings to power electronics



Scan the QR code
and download the eBook.

infineon

ACCELERATING ACTION:

EMPOWERING DIVERSITY AND INCLUSION AT SOITEC

As we mark International Women's Day 2025, it's essential to celebrate the strides women have made in industries that have traditionally been male-dominated. The semiconductor sector, while still facing gender imbalances, is witnessing an empowering shift. At Soitec, a key player in this transformation, the launch of WomEn@Soitec in January 2024 has been a game-changer. This global community, open to both women and men, focuses on gender equality, diversity, and inclusion within the company, and is a driving force for positive change.

WomEn@Soitec was conceived as a platform for exchange, empowerment, and inspiration.

The network aims to tackle gender stereotypes and foster a culture of collaboration. It is dedicated to creating a more inclusive and supportive workplace, where gender equality is championed at all levels. This initiative also works to amplify the voices and contributions of women at Soitec, providing visibility to their achievements and promoting greater representation across the company.

The statistics speak for themselves. Women now make up 35.3% of Soitec's workforce, and the company is committed to reaching 40% by 2029-2030. The percentage of women in senior management positions stands at 23%, with women occupying 36.4% of executive committee roles. Soitec's recruitment efforts are also leading the way, with 42% of new hires being women.

In terms of internal development, Soitec has made significant progress. The company has worked hard to create an environment that encourages women to aim for leadership positions through empowerment training and the promotion of gender balance. Notably, 19% of women and 17% of men were promoted in fiscal year 2022-2023. Soitec is also dedicated to providing international mobility opportunities to women, recognizing the importance of global visibility in their career advancement.

Flora Martinie, IT Director and Head of Women's Network at Soitec, reflects on the importance of the initiative: *"The creation of a women's network is part of our initiative to take into account the diversity of feelings about gender equality, and give them greater visibility."*

Through its focus on recruitment, internal promotion, and a robust network for women, Soitec is accelerating action and empowering women to thrive in the semiconductor industry. This is just the beginning – Soitec's commitment to gender equality is setting a strong example for other companies and industries to follow.

WomEn@Soitec's members with their two sponsors, CHRO - Jeannette Schuh, VP of Global Procurement & Supply Chain - Goh Jong Aik, EVP of Automotive & Industrial Division - Emmanuel Sabonnadière, Senior EVP Innovation & CTO - Christophe Maleville, GM Business Unit Automotive SOI - Rainelr Lutz and Senior Director of Operations - Mohamed Anis

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https://www.soitec.com/en/

FOSTERING WOMEN LEADERSHIP THROUGH PURPOSEFUL EMPOWERMENT

At Lam Research Singapore, our diverse workforce and cross-cultural operations is a unique advantage that enables greater collaboration and engagement. This has led to increased employee retention and stronger sense of belonging. As an industry, we have much to do to grow and drive opportunities for women leadership.

Multiple studies have shown the benefits of having a diverse and inclusive workforce – better productivity and innovation. By focusing on empowerment, we can work with stakeholders and collaborate to create actionable programs that encourage the development of women in leadership roles.

1. Inclusive Leadership Development: Sponsorship over Mentorship

Mentorship through the pairing of high-potential women with senior leaders who can provide guidance, and visibility.

On the other hand, I believe sponsorship initiative is even more critical. It allows capable women to be actively sponsored and exposed to complex, or high-visibility projects, international assignments, and even leadership roles.

2. Transparent Career Pathways and Tailored Development Focus

I believe leadership development programs could aim to address the unique challenges women face in the workplace to further honing women's skill:

- Skill-enhancement that focus on negotiation, executive visibility, strategic risk-taking and decision-making.

- Confidence-building through programs that help women overcome imposter syndrome and build self-assurance.

- International opportunities from rotational assignments or cross-border projects to enhance experience dealing with diverse cultural contexts.

3. Promote Flexible Work Arrangements

At Lam Singapore, we have various initiatives to address such needs:

- **Flexible policies:** Offering remote work and flexible hours at workplace.

- **Enhanced parental bonding leave:** Providing equitable parental leave policies for both men and women to normalize caregiving responsibilities.

- **Performance-based reward:** Focus on individual performance and result achieved, enabling women to excel without sacrificing personal commitments.

4. Cultivate Workplace Culture

A supportive workplace culture is essential for women to thrive. We are conscious and continue to invest in these areas to ensure that our employees are self-sufficient and sustainable. This could mean creating spaces for shared experiences in our workplace:

- **Encouraging support:** Educating all leaders and employees on the importance of gender diversity and their role in advocating for women.

- **Employee Resource Groups (ERGs):** A conducive haven for women to connect, share experiences and learn from each other and to drive change.

More than a Moral Obligation

Organizations that unlock these opportunities can thrive from the immeasurable potential of female talents. These efforts not only empower women, but also drive innovation, resilience, and long-term success in an increasingly competitive global market.

Lam RESEARCH

Nicole Kong
Director, HR Business Partner

MANTALENA'S JOURNEY AT A*STAR

I am Mantalena Sarafianou, a Scientist at the A*STAR Institute of Microelectronics (IME). My research focuses on signal processing applications for ultrasonic miniaturized sensors, Synthetic Aperture Radar (SAR) systems, and Ultra-wideband (UWB) medical imaging modalities.

Before relocating to Singapore and joining IME in 2021, I was based in the UK, where I earned an MSc in Communications Systems and Signal Processing (2008) and a PhD in Electrical and Electronic Engineering (2012) from the University of Bristol. My career journey took me through various industries, including medical devices, consumer electronics, and automotive, where I worked as an R&D engineer developing signal-processing solutions.

Joining IME and the Acoustic MEMS department was my first introduction to the semiconductor industry, it was both an exciting and challenging experience. I had to determine how best my expertise could contribute to the team's work. To bridge this knowledge gap, I invested a significant amount of time, both during and outside work hours, familiarizing myself with MEMS technology and its applications. Naturally, the initial months were filled with challenges as I navigated this new domain. However, with the unwavering support of my team and my perseverance and hard work, I gradually built confidence and gained deeper insights into MEMS technology. Looking back, stepping out of my comfort zone was a transformative experience that helped me grow into a more well-rounded scientist.

Throughout my time at IME, I have been fortunate to work alongside colleagues who have been incredibly supportive of my efforts to explore innovative applications for MEMS technology. A defining moment in my career was receiving the prestigious 2024 IEEE Sensors Best Paper Award for my research titled *"Preliminary evaluation of multi-angle spatial compound imaging with pMUTs."* This paper explores, for the first time, the use of standard miniatured ultrasonic sensors for advanced methodologies in medical imaging. Receiving this recognition was truly an honor and has motivated me to continue making scholarly contributions in this area.

The journey so far has not always been easy, but I have learned that agility, adaptability, positivity, perseverance, and enthusiasm are key qualities that help navigate challenges. My time at IME has reinforced my belief that hard work and persistence do pay off.

For young women aspiring to enter the semiconductor industry, my advice is to define your short and long-term objectives early in your career. This clarity will help you identify the right path, mentors, and sources of inspiration to achieve your goals. Do not let stereotypes deter you from pursuing your ambitions. Career barriers can be overcome with hard work, determination, and a willingness to learn and adapt.

As Winston Churchill once said, *"Success is not final, failure is not fatal: It is the courage to continue that counts."*

Institute of Microelectronics
IME

Written by, **Dr. Mantalena Sarafianou,**
Scientist (A*STAR Institute of Microelectronics)

EDWARDS:

CREATING AN INCLUSIVE ENVIRONMENT FOR WOMEN TO EXCEL

At Edwards SE Asia, we are committed to helping women thrive in the workforce. With women making up nearly half of Singapore's workforce, it's crucial that they have an environment that supports both their professional and personal lives.

Women juggle multiple roles—daughter, sister, friend, spouse, or mother—while excelling at work. Balancing these responsibilities requires motivation, self-discipline, and a supportive environment. Without the right support, organisations risk losing valuable contributors.

Edwards is proud to be an inclusive employer, with many women in technical and corporate roles, such as Technicians, Field Service Engineers, and Technical Support Engineers. We ensure tasks are manageable, team leaders understand the challenges female engineers face, and foster a culture of cooperation. As we expand, we are mindful of the growing number of female technicians and are planning facilities to accommodate their needs.

We address concerns related to life changes, such as marriage and pregnancy, by working with HR and management to offer flexible solutions and create a reassuring work plan. This ensures our women feel confident in their roles and have peace of mind.

Additionally, we celebrate Women's Day with fun activities like day trips and workshops, promoting a balanced work culture.

Though we've made significant progress, we recognise there's always room to do more. At Edwards SE Asia, we embrace diversity and inclusivity, fostering a harmonious team dedicated to serving the industry and supporting our customers' uptime.

Chair Yoga

Dried Flowers Arrangement

Women's Day Gift

REALTEK SINGAPORE:

A COMMITMENT TO WOMEN EMPOWERMENT AND DIVERSITY

At Realtek Singapore, women empowerment is not just a concept, but a core value that is deeply embedded in the organization's culture. The company has made significant strides in fostering an inclusive environment where gender equality thrives. With close to 40% of its workforce comprising female employees, Realtek Singapore surpasses the average representation of women in both the tech and semiconductor industries, where such numbers are often far lower. This remarkable statistic speaks volumes about the company's commitment to diversity and inclusion.

Breaking the Gender Ceiling in Leadership

What sets Realtek Singapore apart even further is its leadership structure. Over half of its managers and team leaders are women, a fact that is particularly notable in the traditionally male-dominated semiconductor sector. By breaking the gender ceiling, we are not only promoting diversity but also sending a powerful message that leadership potential is not confined by gender.

Celebrating Diversity Within the Female Workforce

Our focus on empowering women extends beyond simply recruiting capable women; we also celebrate diversity within the female gender. We are set to feature a short video showcasing our female employees from different walks of life: from working moms, young female engineers who moved to Singapore to start their careers, to female tech leaders. These examples serve to demonstrate the many possibilities within Realtek Singapore, showing that women's experiences and contributions are diverse and invaluable.

Investing in the Future: Internship Program for Young Engineers

In March, we will launch our internship program to actively cultivate young engineers, providing them with the tools, mentorship, and opportunities needed to thrive in a highly competitive field. This initiative ensures that the next generation of engineers, male or female, is well-equipped to contribute meaningfully to technological innovation.

Meritocracy as the Foundation of Excellence

The bottom line is that we continue to foster an environment where excellence is the true standard, regardless of gender or ethnicity. It is not just about achieving gender equality, but about creating a workplace where all employees, regardless of their gender and backgrounds, are encouraged to excel, demonstrate dedication, and perform at the highest level. By establishing this culture of meritocracy, we hope to set the benchmark for other organizations and show that inclusivity and excellence can go hand in hand.

REALTEK

Angela Yeh, Senior Director, Realtek Singapore

REVOLUTIONIZING LEGACY TOOLS & EMPOWERING WOMEN'S LEADERSHIP IN TECHNOLOGY

Change is inevitable, but it is acceleration that defines true progress. As industries evolve, leaving behind outdated norms and rigid roles, transformation is essential. At Insphere Technology, we are driving this change by revolutionising legacy tools with SECS/GEM automation, creating smarter, more efficient operations. However, this transformation isn't limited to machines—it's also about empowering people. Just as we modernize industrial tools, women across industries are stepping into leadership roles, breaking barriers, and reshaping what it means to lead. We have experienced this transformation firsthand, proving that it is just as much about mindset as it is about technology.

Insphere Technology is dedicated to fostering a culture of inclusivity and empowerment, where women in leadership can thrive and contribute to our company's continued success. Diana Ho (LinkedIn) was appointed Director of Operations on January 1, 2024. With over a decade of experience in the audit and commercial sectors, Diana brings a unique perspective to our team. Transitioning from a finance-focused role to one that involves strategy, networking, and innovation has been a pivotal shift. This opportunity was made possible by the unwavering support of our Founder, Jeffrey Kwok (LinkedIn). His commitment to diversity and growth has not only amplified the contributions of women in our company but also helped shape a forward-thinking, dynamic working environment. By embracing diverse perspectives and encouraging women to take on leadership roles, Insphere Technology fosters a culture where transformation is encouraged. Together, Jeffrey's technical expertise and Diana's business acumen have created a powerful synergy, propelling the company to the forefront of the semiconductor industry and expanding our reach with cutting-edge solutions.

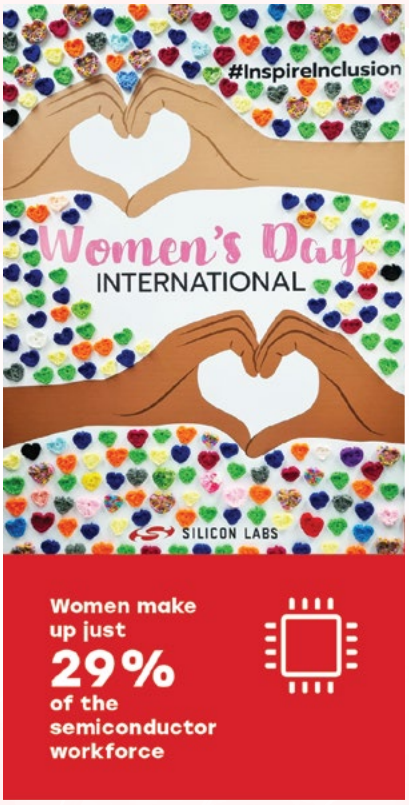
As we continue to accelerate change, we acknowledge that the journey is far from over. From modernizing legacy tools to empowering women in leadership, we aren't just adapting to the future—we're shaping it. Our collective journey proves what can be achieved when we embrace new roles and push beyond our comfort zones. With a passionate team and an unwavering commitment to progress, we will continue to break down barriers, ignite innovation, and inspire a new generation of leaders to shape the future.

INSPHERE TECHNOLOGY

Insphere will be exhibiting at SEMICON SEA 2025, visit us at Booth 1733 (Singapore Pavilion) to learn more about our solutions and how we can support your business growth.

CHAMPIONING WOMEN IN SEMICONDUCTORS AT SILICON LABS

Silicon Labs proudly celebrates all the women who are driving innovation in the semiconductor industry. From IoT and AI to sustainability, we recognize that the future of technology depends on diverse minds. While women make up just 29% of the semiconductor workforce, their contributions have continually redefined industry advancements. We rejoice in celebrating global events like International Women's Day to honor our peers, but as we build a more connected world and culture of inclusion at Silicon Labs, we realize that our mission must continue day in and day out. Here's how we're empowering women to excel and lead throughout the year and beyond.



Starting Early: Creating Education and Skills-Building Opportunities

At Silicon Labs, we like to start where it counts, and sometimes that means in the classroom. We know that early experiences can spark a lifelong interest in STEM. That's why we're working with our communities to inspire all students, especially girls, to discover the exciting possibilities of science, technology, engineering, and math.

We provide opportunities for students to connect with experts, learn about different educational paths and career options, and develop hands-on skills that will benefit them throughout their lives.

Strong Teams: Fostering and Retaining Underrepresented Talent

At Silicon Labs, we believe diverse experiences and viewpoints drive better solutions and innovation. When it comes to accountability and making long-term changes, we're the first to analyze ourselves. As of 2023, 30% of our employees identified as female, and 20% identified as a racial minority, and we're continually working to calibrate these numbers. We use data and employee feedback to guide our efforts and ensure we're making meaningful progress toward a more diverse and inclusive workforce.

We're building teams that reflect our global communities, prioritizing inclusive hiring, and creating pathways for underrepresented talent through internships and university partnerships.

Our Singapore office, a vibrant hub of over 200 talented employees, is a testament to our commitment to diversity. We recently celebrated our 20th anniversary at Silicon Labs International, a milestone made possible by our incredible team. We've built a workplace where honesty, openness, and belonging shine through in every decision, fostering a culture where everyone is celebrated for their unique contributions.

Empowering Women:
The Women @ Silicon Labs Initiative

Silicon Lab's Diversity, Equity, and Inclusion Committee leads community-building efforts, hosting regular meetings and developing impactful programs like the Women @ Silicon Labs initiative. This internal program provides a platform for engagement, inspiration, and growth through mentoring circles, informal coffee chats, leadership panels, and volunteer events. By supporting women at all levels, we're strengthening our commitment to empowerment while driving business performance.

Investing in Women, Inspiring Change

By investing in women, we are investing in the future of technology. The women of Silicon Labs are driving innovation, shaping our culture, and inspiring the next generation of leaders. We are proud of the progress we have made, and we are excited to continue building a company where everyone feels a sense of belonging and purpose.

Leadership Spotlight:

Jennifer Teong,
Manufacturing Vice President, Silicon Labs International

Building a strong pipeline of women in STEM is essential for the future of technology. At Silicon Labs, we're committed to fostering a supportive and inclusive environment.

Zehra Gozde Fidan,
Senior Director of Engineering, Silicon Labs

A truly successful engineering team is one where everyone feels valued and supported. I've been fortunate to learn from incredible women throughout my career, and now I find it incredibly rewarding to share my experiences and knowledge with the next generation of aspiring female engineers. It's a privilege to be part of their journey and witness their growth.

Serena Townsend,
Chief People Officer, Silicon Labs

Building high-performing global teams starts with a foundation of trust, respect, and a shared commitment to our values. At Silicon Labs, we're passionate about creating an inclusive culture where everyone feels empowered to make a difference.

Radhika Chennakeshavula,
Chief Information Officer, Silicon Labs

Throughout my career, I've been inspired by the women who paved the way in technology. I believe that technology has the potential to transform businesses and create a more connected world, and I'm honored to play a role in shaping that future at Silicon Labs with all my talented colleagues.

SILICON LABS
CONNECTED INTELLIGENCE

CADENCE GIVING FOUNDATION DRIVES THE FUTURE WITH FEM.AI, TRANSFORMING SEMICONDUCTORS AND AI

In an era where artificial intelligence (AI) and semiconductors shape the future of innovation, the Cadence Giving Foundation not only leverages AI to drive the continuous advancement of cutting-edge semiconductor technologies but also takes a leading role towards a tech and AI workforce for all.

Through its Cadence Giving Foundation and the transformative Fem.AI initiative, the company emphasizes the critical role everyone can play in the tech industry, working alongside industry partners to create a vibrant and inclusive future while driving meaningful change in STEM.

A Global Commitment

Founded in 2022, the Cadence Giving Foundation focuses on addressing critical global needs, with an emphasis on access to STEM education, opportunity for all, and climate sustainability. One of its initiatives is Fem.AI, a program designed to support opportunities for all in the high technology and AI workforce.

The Fem.AI Alliance brings together leaders from tech, academia, and nonprofits. The Cadence Giving Foundation hosted the inaugural Fem.AI Summit on October 1, 2024 (also recognized as International Women in AI Day) and gathered all the partners to brainstorm actionable solutions for achieving opportunity for all in AI.

Driving Opportunity Through Education and Innovation

Fem.AI emphasizes building strategic partnerships, collaborating with academic institutions, and funding scholarships to empower future innovators.

And this is just the beginning. As the Cadence Giving Foundation continues to invest in the future of the next generation in the industry, organizations and individuals are welcome to join this movement. By fostering collaboration and innovation, we can create a future where everyone is fully engaged in shaping technology and driving societal impact.

cadence®

SSIA ELECTRONICS INDUSTRY DAY 2025 : CULTIVATING FUTURE LEADERS

The **SSIA Electronics Industry Day 2025** was a resounding success, bringing together students and aspiring engineers for a day of career exploration, networking, and skill-building. Held on **21 January 2025** at **ITE College Central**, this year's event focused on **"Cultivating Future Leaders: Transforming Curiosity into Career Success."**

Strengthening Industry-Academia Partnerships

A key milestone at this year's event was the signing of two new **Memoranda of Understanding (MOUs)** between the **Institute of Technical Education (ITE), Siltronic Singapore (Siltronic Singapore Pte Ltd and Siltronic Silicon Wafer Pte Ltd), and Vanguard International Semiconductor Singapore Pte Ltd**. These partnerships aim to enhance **microelectronics training and talent development** for the semiconductor industry.

The signing was witnessed by the Guest-of-Honour, **Mr. Alvin Tan, Minister of State, Ministry of Culture, Community and Youth & Ministry of Trade and Industry**, reinforcing the government's support for industry-academia collaboration.

Training the Next Generation of Microelectronics Professionals

Under these MOUs, **Siltronic Singapore and Vanguard International Semiconductor Singapore** will play a vital role in ITE's **Work-Study Diploma (WSDip) in Microelectronics** and other relevant courses by:

- Offering **internships and recruitment pathways** for ITE graduates
- Advising on **curriculum development** to align with industry needs
- Supporting the **development of training blueprints and certification courses** for their employees
- Collaborating with ITE on **joint industry projects, seminars, and workshops**

These initiatives will benefit over **500 ITE students**, equipping them with practical industry experience and preparing them for promising careers in the semiconductor sector.

Following the MOU, students from SSIA's Semiconductor Active Youth (SAY) Ambassador Programme celebrated their graduation in a ceremony led by **Guest-of-Honour Mr. Alvin Tan, Minister of State, Ministry of Culture, Community and Youth & Ministry of Trade and Industry.**

As SSIA's premier student initiative, the **SAY Ambassador Programme** is designed for ambitious undergraduates eager to make their mark in the industry. SSIA extends its heartfelt congratulations to the **Class of 2024** SAY Ambassadors and wishes them all the best as they step into the working world. Equipped with **new connections, valuable skills, and exclusive semiconductor experience**, these graduates are now poised to make a meaningful impact in one of the world's most vital industries.

Empowering the Next Generation

As **Singapore's largest student outreach event for the semiconductor industry**, the Electronics Industry Day featured: **30+ major industry players** offering job and internship opportunities, **career workshops** on resume writing and interview skills, **flash mentoring sessions** with industry veterans and **professional headshots**.

With **over 270 job opportunities** available, students and job-seekers had the chance to connect with top employers and explore career paths in semiconductor.

Exciting Opportunities & Lucky Draws

To make the experience even more engaging, students who visited company booths stood a chance to win a **MacBook Air, iPad Air, and Sony earbuds** from SSIA's Lucky Draw.

Participating Companies

This year's SAY Ambassador Programme was made possible with the support of leading industry players, providing invaluable exposure and hands-on experience to participants.

Institute of Microelectronics, AEM Singapore, Analog Devices, Applied Materials South East Asia, ASM, ELH Additive Manufacturing, GlobalFoundries, Henkel, HOYA Electronics, Innowave Tech Pte Ltd, KYEC, Lam Research, Marvell Technology, MediaTek, MEDs Technologies, Micron Technology, NXP Semiconductors, Qualcomm, Realtek Singapore, Silicon Labs, Siltronic Silicon Wafer, Skyworks Solutions, Soitec, Siemens, STATS ChipPAC, STMicroelectronics, Systems on Silicon Manufacturing Company Pte Ltd (SSMC), Tokyo Electron Singapore, Tekscend Photomask (formerly Toppan Photomask), United Microelectronics Corporation (UMC), UTAC, Vanguard International Semiconductor Corporation, VDL ETG Singapore, VisionPower Semiconductor Manufacturing Company Pte Ltd (VSMC).

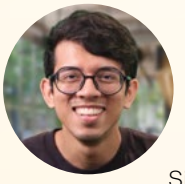
Supporting Partners

With strong support from **government agencies and industry partners**, including **NTUC's Employment and Employability Institute (e2i), Economic Development Board (EDB), JTC Corporation, Mentoring SG, National Youth Council (NYC), and Workforce Singapore (WSG)**, SSIA's Electronics Industry Day continues to be a **vital platform for talent development in Singapore's semiconductor sector**.

SSIA
Singapore Semiconductor Industry Association

THRIVING IN SEMICONDUCTOR INNOVATION:

SAJIDUL HAQUE SIRAJI'S JOURNEY



Sajidul Haque Siraji, a Senior Process Engineer at GLOBALFOUNDRIES Singapore, shares his insights into semiconductor manufacturing and his career growth.

Starting in Semiconductor Engineering

Since joining GLOBALFOUNDRIES in 2019, Sajidul has focused on etching processes for 200mm wafer fabrication. "My role involves developing new etching recipes and improving process efficiency," he explains. Additionally, he leverages data analysis and visualization to investigate tool and process drifts, ensuring production remains seamless.

Overcoming Challenges

Working in semiconductor fabrication means dealing with a fast-paced environment where production lines run continuously. This presents a unique challenge, as even minor process deviations must be addressed immediately. "If a process drifts, the process owner must find an immediate containment, formulate a hypothesis, and develop a long-term prevention plan," Sajidul shares.

To tackle these challenges, he has honed his problem-solving skills and learned various methodologies such as Lean Six Sigma and the DMAIC approach for continuous process improvements. "I've also picked up programming languages like Python and SQL, along with data visualization tools such as JMP and Power BI," he adds, emphasizing the importance of continuous learning.

A Supportive Work Culture

GLOBALFOUNDRIES fosters collaboration and innovation. "GF Singapore has been re-certified as a Great Place to Work for three years," Sajidul says. He values the opportunity to share ideas and work with a diverse team.

Career Growth and Advice

A crucial lesson: *'Always be on top of your responsibilities.'* For aspiring engineers, he emphasizes the importance of being proactive in learning. "Always have your learning cap on and absorb what your team and mentors share. Never shy away from voicing your opinions on improvements, optimizations, or root cause findings—just ensure you back them up with data and evidence."

Shaping the Future of Semiconductor Manufacturing

Sajidul's experience at GLOBALFOUNDRIES has given him a broader perspective on the semiconductor ecosystem. "I had the opportunity to represent GF Singapore at the SEMI Advanced Semiconductor Manufacturing Conference (ASMC) 2023, where I saw firsthand how vast and diverse this industry is," he says. From pure wafer fabs to backend packaging, silicon photonics to nanometer-scale transistors, the industry offers endless opportunities for learning and innovation.

"What excites me most is that I will never run out of things to learn and ways to grow," he adds enthusiastically.

Memorable Achievement

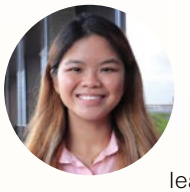
One of the most rewarding moments in Sajidul's career was leading a project to enable remote control for a legacy tool that was not originally designed for remote access. "I worked with a multidisciplinary team, including vendors, equipment owners, IT, facilities, and cybersecurity teams. After months of coordination, we successfully implemented remote control," he recalls. "The first time I accessed the tool from home, it felt like I had conquered a massive peak."

Looking Ahead

As he continues to grow in his role, Sajidul is confident that his experience has equipped him with critical problem-solving skills and the ability to perform under pressure. His advice to future engineers is simple yet impactful: "Stay curious, keep learning, and always be prepared. The semiconductor industry is complex, but with the right mindset and continuous learning, the opportunities are limitless."

BUILDING A CAREER IN SEMICONDUCTORS:

AN INTERVIEW WITH JANICE KOH



The semiconductor industry is a rapidly evolving field that requires continuous learning. Janice Koh, a Process Engineer at GlobalFoundries Singapore, shares her journey and insights.

Starting in Semiconductor Engineering

Janice joined GlobalFoundries through an internship in her third year at NTU. "I'm one of the youngest engineers in the department and proud to be an SgIS scholar with GF," she shares.

As a process engineer, Janice plays a key role in supporting production ramp schedules and collaborating with global colleagues to establish best-known methods (BKM) for process performance improvement. "My work involves not just ensuring smooth production, but also driving innovation in our process methodologies," she explains.

Learning and Overcoming Challenges

Familiarizing herself with semiconductor-specific software was challenging at first. "School provided the theory, but practical experience was necessary," she says. She actively participated in discussions and trainings to bridge the gap.

A Collaborative Work Culture

Janice values the diverse and inclusive environment at GlobalFoundries. "The Singapore site alone has 34 nationalities. I collaborate across teams and learn from experienced colleagues," she notes. She is also part of the GF Graduate Excellence Model Program, which fast-tracked her professional development.

Key Lessons and Career Advice

A key lesson: "Think of solutions that benefit all stakeholders. Projects involve multiple departments, so collaboration is essential." Her advice to newcomers: "Be like a sponge—absorb and learn as much as possible!"

A Broader Perspective on the Semiconductor Industry

Through her experience, Janice has gained a deeper understanding of the semiconductor ecosystem. "This industry is much bigger than I initially thought. Beyond my module, there are numerous functions, and everyone is working toward a common goal," she explains.

She is particularly excited about the impact of semiconductors on technological advancements. "We manufacture the essential chips that power the devices we rely on daily, from smartphones to automotive applications. It's amazing to be part of something so fundamental to modern technology."

Memorable Achievements

One of her proudest moments was receiving two global recognition awards for a cost-saving project. "I had to quickly familiarize myself with the process, work with PI engineers, and consolidate data for review," she recalls.

Recently, the team successfully qualified one of the high-runner processes. "This project taught me how to manage complex coordination efforts and gave me valuable insights into process optimization," she adds.

Looking Ahead

Janice is grateful for early exposure through GF's internship and industrial FYP programs. For students and aspiring engineers, she recommends seeking internship or scholarship opportunities to gain an edge in the workforce. "At GF, interns are given priority for full-time roles, and even if you're still exploring career options, this experience will be invaluable.", she says. Her final advice: "Seek out opportunities and gain experience—it will be invaluable."

GlobalFoundries®

EMPOWERING FUTURE TALENT:

THE VALUE OF INTERNSHIP PROGRAMS

At United Test and Assembly Center Ltd (UTAC), we recognize the importance of fostering relationships with educational institutions and providing valuable opportunities for students to transition from the classroom to the workplace. Internship programs play a pivotal role in bridging the gap between academic knowledge and real-world experience, helping young talent gain a deeper understanding of professional environments and their future careers.

The benefits of these internships are not one-sided. As we continue to nurture young talent, we also gain fresh perspectives and innovative ideas that help drive our success. Many of our interns go on to transition into full-time roles, and some even cite their internship experience as the key factor in their decision to pursue a long-term career with us.

We asked some of our former interns to share their experiences, and their feedback highlights the value of a dynamic, collaborative work environment. One intern shared, *"The dynamic work environment and the teamwork-oriented culture within the assigned department was the key reason I chose to stay. The hands-on exposure and collaboration with other departments helped me understand cross-functional workflows and build strong working relationships, which made the transition smoother. This collaborative experience reinforced my decision to join full-time."*

Another intern reflected, *"The team's emphasis on innovation, safety, and teamwork made me feel genuinely valued and supported. The exposure to meaningful projects, coupled with a culture that fostered my growth, solidified my decision that this was the ideal place to kickstart my career."*

These insights affirm our belief that internship programs are not just about providing students with work experience—they are an opportunity for us to create an environment where young professionals feel valued, supported, and empowered to succeed.

The Internship Graduation Ceremony is organized for all students at the conclusion of their learning journey with UTAC. During the ceremony, supervisors and mentors are invited to witness the presentations by their respective students. They also present the certificates and a small token of appreciation as a gesture of gratitude. We are proud to have played a significant role in their learning experience and wish them every success in their future endeavors.

Over the past two years, we have successfully hired more than forty interns from various Institutes of Higher Learnings (IHLs), reflecting the strength of our partnerships with educational organizations. In our most recent collaboration with the National University of Singapore (NUS), we have successfully placed six talented students from the Master of Science (Safety, Health & Environmental Technology) into our internship program. This partnership allows students to apply their skills and knowledge in meaningful ways, contributing to projects across various departments, and creating a mutually beneficial experience for both the interns and our organization.

In many cases, an internship serves as a natural steppingstone for building long-term relationships with high-potential candidates. It gives us the opportunity to invest in future talent while also creating a strong network of professionals who are already familiar with our culture and values. By offering these experiences today, we're not just mentoring interns—we're shaping a talented, diverse, and capable workforce for tomorrow.

Where Vision Meets Precision

Advanced WLCSP Solutions
Powered by
Smart Manufacturing Excellence

Warning:

Not all semiconductor packaging partners are created equal.

In fact, when it comes to mission-critical applications, choosing the wrong partner could cost you millions in delays, quality issues, and lost market share.

Here's why industry leaders choose UTAC Group:

SECURE. STABLE. SCALABLE.

- Singapore headquarters - politically stable, IP-protected environment
- Strategic location in Asia's technology hub
- Advanced manufacturing facilities across Asia
- Global logistics network

MANUFACTURING MASTERY

- State-of-the-art WLCSP capabilities
- Industry 4.0 smart manufacturing
- Real-time quality monitoring
- Advanced automation systems

4 COUNTRIES. 1 STANDARD OF EXCELLENCE.

- Production facilities located in Singapore, Thailand, China, Indonesia
- Singapore's UTAC factory delivers scalable, mission-critical solutions.

TURN POTENTIAL INTO PERFORMANCE

Contact our experts today to discuss your semiconductor assembly and test requirements.

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Your Strategic OSAT Partner

www.utacgroup.com

UTAC Singapore:
Combining world-class WLCSP innovation with Southeast Asia's strategic advantage.

SEMICONDUCTOR TRADEWINDS FEB 2025

As we enter 2025, the most significant event thus far has been the inauguration of the 47th President of the United States. The election of Donald Trump in 2024 has introduced considerable uncertainty regarding the potential impact of his policies on world trade that could impact the semiconductor supply chain. Undoubtedly, 2025 will be an intriguing year for the semiconductor industry.

Looking back on 2024

Overall, the semiconductor industry experienced robust growth in 2024, with revenue surging by approximately 18-19% year on year (YoY) and surpassing US$600 billion for the first time to reach approx US$628billion. However, the growth trajectory was not uniform across different sectors. Strong demand for leading edge technologies driven by Artificial Intelligence (AI) and Data Centre infrastructure disproportionately favoured companies like Nvidia, TSMC & SK Hynix. In contrast, the rest of the semiconductor market exhibited more modest growth with the smartphone sector showing slight growth and automotive, industrial & Internet of Things (IoT) sectors faced challenging markets.

Table 1

Foundry	2024 revenue	YoY %	Market Share
TSMC	US$87.9billion	34%	63%
SMIC	US$8.0billion (est)	27%	6%
UMC	US$7.1billion	4%	5%
GF	US$6.75 billion (est)	-8.8%	5%
VIS	US$1.33billion	15%	~1%
PSMC	US$1.37billion	3%	~1%
OSAT	2024 revenue	YoY %	Market Share
ASE	US$10.2billion	0.5%	37%
Amkor	US$6.3billion (est)	-3%	17%
JCET	US$4.75billion (est)	16%	12.5%
TFMC	US$3.3billion (est)	12.5%	9%
PTI	US$2.2billion	4.1%	6%

As a result, there are significant disparities in the 2024 revenue outcomes of the leading pure-play Foundry and OSAT companies as shown in table 1

Government Funding

In response to the global chip shortage exacerbated by the pandemic, numerous governments worldwide have implemented financial incentives for companies to establish domestic manufacturing capabilities, thereby reducing their reliance on Asian chip supplies.

USA

Notably, the United States enacted the CHIPS Act in 2022, which allocated US$39 billion in subsidies for semiconductor manufacturing and US$11 billion for research and development. Furthermore, the legislation provides a 25% investment tax credit for semiconductor projects initiated prior to 2027.

By the end of 2024, the Biden administration had finalized the awards of over US$31 billion in direct funding for over 40 projects to construct new wafer fabrication facilities, backend processing facilities, and semiconductor equipment and materials manufacturing factories. As per analysis conducted by the Semiconductor Industry Association (SIA), the CHIPS act incentives have generated approximately US$450 billion in private sector capital within the United States.

Table 2 presents the most significant finalized direct funding awards under the purview of the CHIPS Act.

Table 2

Company	Total Final Grant (US$)	Notes
Intel	7.9billion	Across 4 locations
TSMC	6.6billion	
Micron	6.1billion	Across 3 locations
Samsung	4.7billion	
TI	1.6billion	Across 2 locations
GF	1.6billion	Across 2 locations

Outside the US, other governments have also implemented policies to establish domestic manufacturing or defend market share.

European Union

Europe's CHIPS Act funding scheme, approved US$47 billion in funds, with funding primarily coming from member states. To date, Intel, TSMC, Infineon, Wolfspeed in Germany, and a joint venture between GlobalFoundries and STMicroelectronics in France have received high-profile awards for new wafer Fab projects. However, the Intel, GF/STM JV, and Wolfspeed projects have been delayed, with no clear construction start dates.

Japan

Japan has taken a different approach involving establishing a startup called Rapidus to manufacture 2nm chips. Rapidus has partnered with 12 Japanese companies, US-based IBM, and European IMEC. The Japanese government has provided substantial financial support, amounting to approximately US$6.1 billion in subsidies to date with further funding expected. Additionally, Japan has attracted TSMC to build a new factory, offering subsidies of up to 40% of construction costs. The first Fab, JSMC, in Kyushu, is a joint venture between TSMC, Sony, and Denso, and started production in 2024. The Japanese government plans to subsidize a further US$5 billion for the construction of a second Fab in Kyushu, starting construction in 2025.

Taiwan and South Korea

Taiwan and South Korea, collectively held about 66% of global foundry capacity and over 75% of advanced technology foundry capacity as of 2023, so semiconductors hold immense significance to their economies. To maintain their lead, they've implemented various measures. Taiwan's government allocated US$9 billion in funding for 2024 through tax credits and for advanced node equipment acquisition. They've also enhanced semiconductor training programs and provided subsidies to firms like Nvidia, Micron, and ASML to build facilities.

South Korea's subsidy strategy aims to establish a new megacluster of semiconductor fabrication facilities called the K Semiconductor Belt in Yongin. It offers substantial tax credits for new construction and R&D, as well as cash subsidies to foreign companies. At the Yongin site, SK Hynix and Samsung Electronics are projected to invest US$91 billion and US$220 billion, respectively, with total investments in South Korea estimated to reach US$450 billion between 2021 and 2030.

Looking ahead...

According to leading market research companies, the global semiconductor industry is predicted to grow 11~12% YoY in 2025 to reach around US$700billion in revenue, The foundry market is expected to witness a 20% YoY growth primarily driven by strong AI demand favoring TSMC, whilst the OSAT market is forecast to grow 7~9% YoY. While the outlook appears promising, the market faces several challenges in 2025 that could potentially hinder its growth trajectory. These challenges include geopolitical tensions and trade restrictions, particularly between the United States and China, supply chain disruptions, escalating raw material costs, and a persistent talent shortage.

ams OSRAM

Contributed by, **Mark Dyson**,
Foundry Account Director

BUDGET 2025:

POWERING THE NEXT LEAP IN SEMICONDUCTOR INNOVATION

By, **Ang Wee Seng**
Executive Director, Singapore Semiconductor Industry Association (SSIA)

The Budget 2025 announcement reaffirms Singapore's unwavering commitment to solidifying its position as a global powerhouse for semiconductor innovation, technology, and advanced manufacturing. As the world undergoes a technological revolution—driven by artificial intelligence, quantum computing, and next-generation semiconductor design—this budget signals that Singapore is not just keeping pace but striving to lead.

The establishment of a **National Semiconductor R&D Fabrication Facility** marks a bold and necessary step forward. The semiconductor industry is at the heart of every major technological breakthrough, powering industries from healthcare to automotive, from AI-driven applications to global communications. To remain ahead in this competitive landscape, Singapore must push the boundaries of chip design, fabrication, and advanced packaging. This new facility will serve as a launchpad for deep-tech innovation, attracting the brightest minds and fostering groundbreaking research that will shape the industry's future.

At the core of our success lies talent and capability building. The government's continued **$3 billion top-up to the National Productivity Fund** is a forward-thinking move that strengthens our ability to attract high-value investments and create high-quality, future-ready jobs. Our semiconductor ecosystem—spanning MNCs, SMEs, startups, and research institutions—will benefit immensely from the emphasis on industry collaboration, R&D partnerships, and infrastructure development.

The semiconductor industry is at an inflection point, where innovation, resilience, and collaboration will define our next era of growth. Singapore already plays a crucial role in the global supply chain, producing over 10% of the world's semiconductors and 20% of semiconductor equipment. This budget ensures we build upon that strong

foundation to advance our leadership in AI-driven chip technologies, next-gen computing, and sustainable semiconductor solutions.

One of the most significant enablers of growth is access to capital. The announcement of a **$1 billion Private Credit Growth Fund** will unlock new financing opportunities for high-growth enterprises, semiconductor startups, and SMEs. In a capital-intensive industry like ours, robust financial support fuels innovation, strengthens market positioning, and ensures that companies can scale globally.

A Call to Action: Seizing the Future Together

Singapore's semiconductor industry does not just power our economy—it powers the world. As we navigate a dynamic global landscape, we must embrace change, harness innovation, and strengthen collaboration across the ecosystem. The government has provided a strategic roadmap with this budget; now, it is up to us—industry leaders, policymakers, and researchers—to turn vision into reality.

The future of semiconductors is being shaped today. Let us seize this opportunity to drive Singapore's next leap in technological leadership and innovation.

SSIA
Singapore Semiconductor Industry Association

DRIVING THE FUTURE OF AI:

MICRON'S US $7 BILLION INVESTMENT IN SINGAPORE

Micron Technology, a global leader in memory and storage solutions, is making a bold statement in the AI era with its groundbreaking initiative in Singapore. On January 8, 2025, the company officially broke ground on a state-of-the-art High Bandwidth Memory (HBM) advanced packaging facility, a move that underscores its commitment to staying ahead in the semiconductor race.

This new facility, strategically located adjacent to Micron's existing operations, isn't just another addition to Singapore's skyline—it's a signal of the nation's pivotal role in the global semiconductor supply chain. With operations set to kick off in 2026 and meaningful expansion of Micron's total advanced packaging capacity beginning in 2027, the facility aims to meet the surging demand for advanced memory solutions driven by AI's exponential growth.

The groundbreaking ceremony, graced by prominent figures like Singapore's Deputy Prime Minister Gan Kim Yong and Economic Development Board (EDB) Chairman Png Cheong Boon, highlighted the strategic collaboration between Micron and Singapore. "As AI adoption proliferates across industries, the demand for advanced memory and storage solutions will continue to increase robustly," said Sanjay Mehrotra, Micron's president and CEO. "With the continued support of the Singapore government, our investment in this HBM advanced packaging facility strengthens our position to address the expanding AI opportunities ahead."

The numbers behind the project are staggering. With a planned investment of US $7 billion through the end of the decade and beyond , Micron aims to create approximately 1,400 jobs initially, with the potential to expand to reach an estimated 3,000 jobs. These new roles will span cutting-edge areas like packaging development, assembly and test operations.

But the implications go beyond job creation. As the first of its kind in Singapore, the HBM advanced packaging facility marks a significant milestone for the nation's semiconductor ambitions. Png Cheong Boon noted, "We welcome this significant investment by Micron, which reflects its confidence in Singapore's competitiveness as a critical node in the global semiconductor supply chain. This is Singapore's first HBM advanced packaging facility, allowing us to contribute to global AI growth. It expands Singapore's partnership with Micron and further strengthens the semiconductor ecosystem in Singapore."

Micron's future expansion plans in Singapore will also support long-term

manufacturing requirements for NAND. Micron will maintain flexibility in managing the pace of capacity ramps in both the HBM and NAND facilities to align with market demand. Micron's investment also aligns with its sustainability goals. Building on the success of its existing Singapore facility, which has been recognized as a global leader in sustainable semiconductor manufacturing, the new facility will incorporate advanced technologies to minimize environmental impact. The new facility will feature technologies such as a greenhouse gas abatement, water recycling and waste circularity (reduce, reuse, recycle, recover) and highly automated through AI-based intelligent solutions, while it is also designed to meet the LEED certification requirements.

As the semiconductor industry grapples with balancing supply and demand, Micron is maintaining a flexible approach to its expansion. The company's future plans also include bolstering its NAND manufacturing capabilities, ensuring it can adapt to evolving market dynamics.

Singapore, long recognized as a hub of technological innovation, stands to gain immensely from this partnership. By hosting Micron's first HBM advanced packaging facility, the nation solidifies its position as a global semiconductor powerhouse, contributing to the technological backbone of AI's growth.

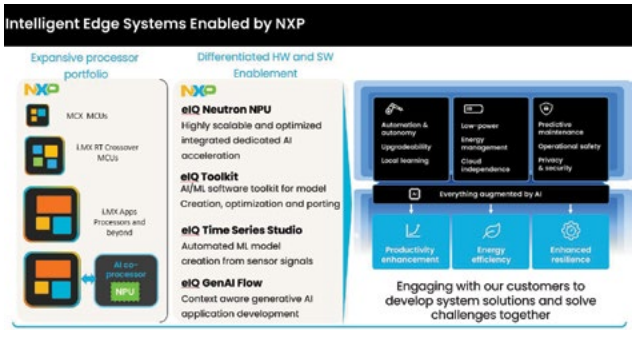
In an era defined by rapid advancements in AI and data-driven technologies, Micron's bold investment signals its determination to lead the charge. With Singapore as its trusted partner, this initiative promises to shape the future of the semiconductor industry while setting a high benchmark for innovation, sustainability, and collaboration.

micron

EMPOWERING THE INTELLIGENT EDGE:

NXP'S COMPREHENSIVE APPROACH TO SCALABLE AND EFFICIENT AI DEVELOPMENT

AI has surged into the spotlight over the past couple years driven by technological advancement, increasing data availability, and algorithm breakthroughs. The benefits of AI are immense, and when implemented properly, can significantly improve productivity, user experiences, and automation across many industries. To date, cloud computing has been instrumental in AI development. However, there is a growing and urgent need to bring AI to the edge, to devices and systems where real-time responses, power efficiency, privacy, and security are paramount.



At NXP Semiconductors, as a leader in the semiconductor industry, we are dedicated to making edge AI accessible, efficient, and future-proofed. Our portfolio is among the most comprehensive available, from low-power MCUs (MCX series) to high-performance applications processors (i.MX processors), all AI-ready. The breadth is complemented by scalable AI accelerator neural processing unit (NPU) cores, machine learning development tools, and solution workflows, enabling us to support a wide range of industrial, IoT, smart city, and automotive applications.

The **eIQ® Neutron NPU** is central to our edge AI strategy. As an early adopter of dedicated NPUs in application processors, we recognize the importance of a scalable and adaptable NPU architecture that's capable of supporting evolving operations and model topologies. Today, the eIQ Neutron NPU is integrated across multiple processor lines, delivering significant AI inference acceleration and energy efficiency compared to CPU, GPU or DSP based processing. With the rise of compute-intensive applications like large language models (LLM), generative AI, and multi-modal AI, we are steadfast in our commitment to providing scalability and expandability to meet future AI demands.

The **eIQ® Toolkit** is a suite of tools that is designed to provide ease of use, modularity, and performance optimization that works across NXP processors. Both command line and

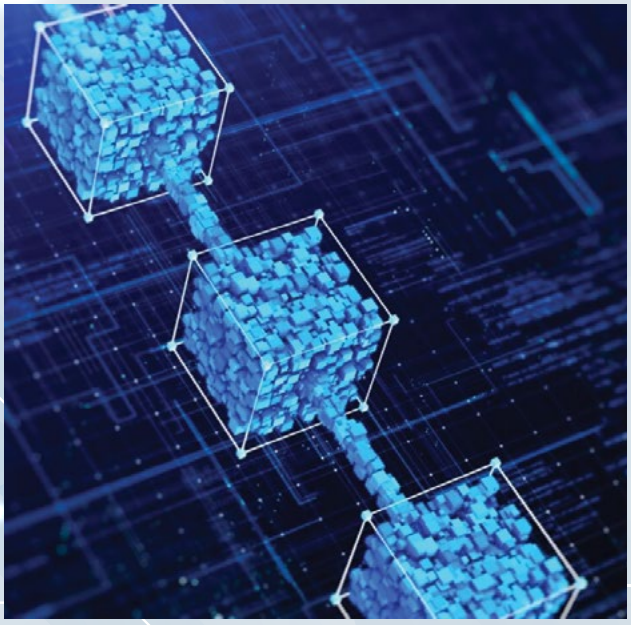
graphical interface options are available for developers with different preferences. Bring-your-own-model (BYOM) as well as bring-your-own-data (BYOD) workflows are also supported. To ensure compatibility with industry standards, we also support the most popular frameworks such as LiteRT (TensorFlow Lite), ONNX, and PyTorch.

The **eIQ® Time Series Studio**, part of the eIQ Toolkit, is an end-to-end development tool featuring integrated automated machine learning (autoML) to streamline the time series AI development and deployment process. This tool simplifies development complexity by providing examples data, step-by-step instructions, and a complete workflow including data curation, analysis, model generation, optimization, emulation, and deployment - all in one package. Leveraging autoML for model generation and optimization, time required to develop tasks like anomaly detection, predictive maintenance, classification and regression can be reduced from several weeks to hours. Training data can be sourced directly from the edge and stored locally, removing the need for cloud-based training and data sharing - ensuring data privacy and accelerating iteration.

The **eIQ® GenAI Flow** provides essential components for deploying large language, vision, and multi-modal models at the edge, while ensuring data privacy and minimizing latency. One key example is utilizing Retrieval Augmented Generation (RAG). RAG allows large language models (LLM) to access and process context-specific data without expensive retraining or exposing sensitive information to model providers. This is achieved through a compact embedding model and a vector database stored directly on the device, enabling conversational interfaces and other advanced AI functionalities. This is relevant to various market segments, including industrial automation, healthcare, automotive, smart homes, and many more.

AI's transformative impact is reshaping industries, unlocking unprecedented use cases and functionalities. Realizing the full potential of this revolution requires the right combination of hardware, software, and tools, driving advancements in efficiency, sustainability, privacy and security. NXP's comprehensive and scalable platform is designed to empower this very process, and we are thrilled to join our customers on this exciting innovation journey. Together, let's enable the intelligent edge.

HOW BLOCKCHAIN AND TAGGING TECH CAN HELP FIGHT LUXURY GOODS COUNTERFEITING



Counterfeiting and malicious gray-market activity has been a consistent challenge for luxury goods brands. The counterfeit market is now considered the biggest illicit trade in the world — the OECD estimated its worth at $464 billion a year, or 2.5% of world trade, in 2019. It's clearly a lucrative industry for criminals, and immensely damaging to any luxury brand's reputation as well as its bottom line.

Defending against counterfeiting ultimately requires the luxury goods sector to evolve its approach to product authentication. But as more fraudulent products continue to hit the market, how can luxury brands protect their intellectual and physical property?

The answer lies in innovative technology with embedded security features, which have the potential to revolutionize product verification and digital tracking. Near field communication (NFC) and blockchain technology underpin these solutions, becoming essential tools for strong brand protection and product authentication.

Blockchain is often linked with cryptocurrencies, but this immutable and decentralized database is also key to achieving clear product traceability and authentication. When paired with NFC chips, which enable communications between electronic devices over short distances, it can deliver extremely effective security for physical products.

How It Works

Luxury brands can embed an ultra-thin NFC chip within their product. This gives customers the ability to authenticate the product with a simple tap of their phone. When integrated into a bag, jacket, watch or piece of art,

the chip not only guarantees product authentication, but offers customers insight into the item's lifecycle and wider supply chain visibility as well.

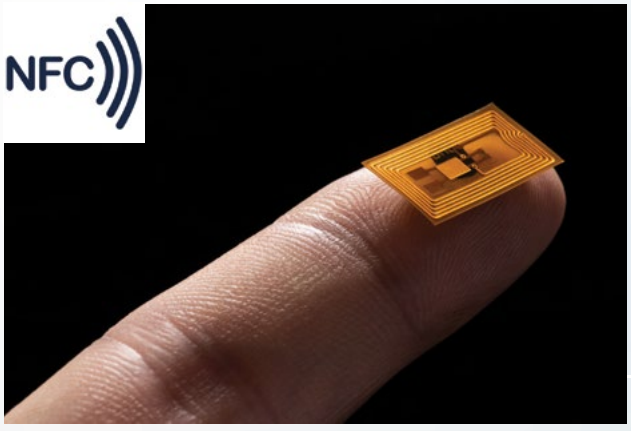
Accessibility and simplicity are essential if luxury retailers and their customers are to engage with this technology. Solutions need to be turnkey, ready to go straight out of the box. At the same time, they must be non-intrusive, to protect the customer's experience when using the product. Small and lightweight NFC chips make this possible. Just 0.5mm thick, these durable, waterproof, temperature-resistant chips are easy to hide. This allows for seamless and versatile implementation with products across luxury goods industries, especially for high-end fashion such as clothing, footwear and handbags.

The blockchain-based infrastructure behind these sophisticated NFC chips provides a transparent data audit trail. With an unalterable record of transactions available to view and secure data storage, customers have full visibility over each stage of a product's journey and a guarantee of authenticity.

State-of-the-Art Protection

Data is only as good as the security infrastructure that underpins it. As the tools used within the gray market to create counterfeit products become more sophisticated, luxury brands must keep in step, by utilizing the most secure techniques and tools available to secure their goods.

The latest NFC tags adopt the security and privacy features needed to make this possible. For example, tags with advanced elliptical curve cryptography allow brands to achieve a higher level of protection against physical attacks, and ensure product integrity.



Connecting With People

Embedding semiconductor technology into luxury items will set a new standard for verification and digital tracking. At the same time, it can help brands to deepen their connection with people. Once a customer has tapped the NFC tag with their smartphone and connected to the product's digital certificate, the brand has more opportunities to engage with them.

Whether it's offering personalized marketing content or using the interactive platform for broader engagement, brands can provide dynamic and diverse digital experiences. With a smartphone, customers can be closer than ever to their favorite luxury brands.

Given the growing interest in sustainability, brands can also use NFC chips to highlight exactly where materials were sourced, how products were made, and how they can be reappraised or recycled. This has quickly become a significant purchasing decision for consumers. Research from PWC indicates that people are willing to pay a premium and forgo cheaper alternatives when factoring in sustainable practices.

Luxury brands can take action against the persistent threat of counterfeiters. While the tools available to bypass authenticity and verification controls are becoming more sophisticated, the latest NFC chip technology bolsters security so that brands are in the strongest possible position to protect their intellectual property, and prevent their customers falling for counterfeit goods.

By deploying blockchain architecture combined with cutting-edge secure NFC technology, luxury brands have an opportunity to guarantee product authenticity, protect their reputation, and create new routes to deepen customer engagement.

Contributed by, **Romain Pardo**, head of NFC/RFID product marketing, STMicroelectronics

REVOLUTIONIZING SEMICONDUCTOR MANUFACTURING WITH AI-DRIVEN AUTONOMY

How Innowave Tech's iWave AI Platform Solves Industry-Critical Challenges

The semiconductor industry faces unprecedented pressure: shrinking node sizes, soaring quality demands, and labour-intensive processes that defy conventional automation. At Innowave Tech, we pioneer AI-driven solutions tailored to these challenges. Our iWave **AI Platform**—featuring **iWave ZeroDefects** and **iWave Autopilot**—empowers manufacturers to overcome inefficiencies, achieve zero-defect precision, and unlock fully autonomous production.

The Imperative for AI in Semiconductor Manufacturing

Modern fabs grapple with two existential hurdles:

1. **Dynamic Workflows:** Human-dependent processes—equipment tuning, anomaly resolution, and adaptive control—resist traditional automation, creating bottlenecks.

2. **Defect Scarcity:** Limited defect data and manual root-cause analysis delay time-to-market, while false positives inflate costs.

AI is no longer optional. It is the bridge to *predictive* quality control and *self-optimizing* production. Companies that lag in adoption risk inefficiency, yield erosion, and margin compression.

iWave ZeroDefects: Closing the Defect Data Gap with Proprietary AI

Traditional vision systems falter with rare or evolving defects, relying on manual reviews and rigid rules. **iWave ZeroDefects** redefines quality assurance by solving the industry's core dilemma: *How to train accurate models without sufficient defect images?*

Our Innovation:

- **Proprietary Anomaly Detection:** Combines attention mechanisms and self-supervised learning to identify subtle defects, even with minimal training data.

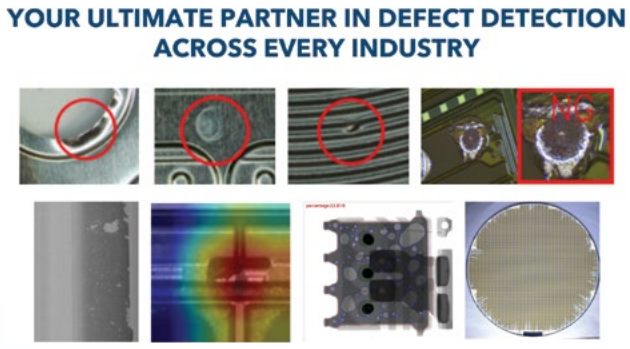
- **MLOps Empowerment:** Enables engineers to rapidly retrain models for new products or defect types, reducing deployment time by 60%.

- **Root-Cause Intelligence:** Correlates defects with process parameters (e.g., temperature, pressure) to pinpoint inefficiencies, slashing root-cause analysis from days to hours.

Impact:

- Reduce false positives by 45% and scrap rates by 30% through adaptive learning.

- Shift from reactive inspection to predictive quality, achieving near-zero DPPM (Defective Parts Per Million).



iWave Autopilot: Automating the Impossible

Human intervention remains pervasive in dynamic workflows—equipment adjustments, exception handling, and process tuning. **iWave Autopilot** eliminates this dependency by emulating human expertise at scale.

How It Works:

- **Cognitive Automation:** AI agents interpret unstructured data (logs, sensor feeds, images) to autonomously operate equipment, mimicking human judgment.

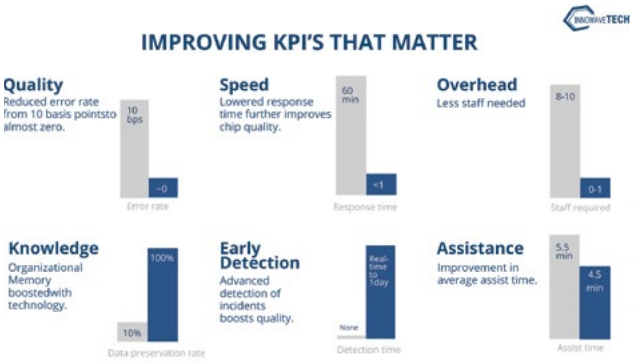
- **Self-Optimizing Workflows:** Dynamically adjusts parameters (e.g., etch rates, deposition times) in response to tool drift or environmental shifts.

- **Predictive Maintenance:** Anticipates equipment failures with 98% accuracy, reducing unplanned downtime by 50%.

Impact:

- Enable **lights-out manufacturing** for 24/7 production, reducing labour costs by 35%.

- Boost throughput by 20% through real-time synchronization of process steps.



The Path to Industry 4.0: Smarter, Leaner, and Future-Ready

Singapore's semiconductor sector, a global hub for advanced fabs, demands solutions that align with its precision-driven ethos. The iWave AI Platform delivers:

- **Scalability:** Centralized management of AI models, data libraries, and workflows across global sites.

- **Sustainability:** Minimize waste through predictive quality and resource optimization.

- **Resilience:** Agile responses to supply chain shifts or product redesigns.

Conclusion: Leading the AI-Driven Transformation

The semiconductor industry's future belongs to those who embrace autonomy. With **iWave ZeroDefects** and **iWave Autopilot**, Innowave Tech empowers manufacturers to:

- Eliminate human-dependent bottlenecks.

- Achieve zero-defect precision despite data scarcity.

- Transition from static automation to adaptive, cognitive systems.

As nodes shrink and complexity grows, AI is the catalyst for survival. The question is no longer *if* to adopt, but *how fast*.

About Innowave Tech

Innowave Tech is a manufacturing AI company that *simplifies manufacturing* through advanced, AI-driven automation for processes that traditional automation cannot handle. By building on a foundation of deep industry expertise and cutting-edge research, Innowave Tech is **transforming manufacturing**—one chip at a time.

INNOWAVETECH®

PARTNERING TO DRIVE AI AND SEMICONDUCTOR INNOVATION IN SINGAPORE

Singapore's semiconductor industry is at the forefront of a global transformation, fuelled by the rise of generative AI and advanced computing. As major semiconductor firms expand their presence in Singapore, the nation is rapidly emerging as a pivotal hub for cutting-edge chip design, AI-powered computing, and resilient supply chains. With a diverse ecosystem that spans the entire semiconductor value chain—from integrated circuit design and wafer fabrication to packaging and testing—Singapore already contributes 10% of the world's semiconductor output. Its strategic importance is set to increase even further as the demand for high-performance AI chips surges, driven by collaborative initiatives from organizations like the EDB and SSIA and IHLS (Institutes of Higher Learning) in Singapore.

Yet, amid these exciting developments lies a critical challenge: the need for highly specialized talent to support the evolution of semiconductor design technologies. This is where FluidTal steps in.

The Fluidity of Talent:

The name **FluidTal** was born from a clear vision: to supply the semiconductor industry with a continuous stream of highly skilled, adaptable professionals. The term **"fluid"** captures the dynamic nature of both talent and the industry—just as electricity flows through chips and circuits, adaptable expertise is essential for driving innovation forward.

As the semiconductor landscape pivots toward advanced technologies like AI, machine learning, and next-generation manufacturing techniques, our approach ensures a flexible and ever-evolving pool of professionals. Talent is not static; it must be continually nurtured and developed to meet shifting industry demands. By delivering Time & Materials (T&M) solutions and managing outsourced projects, we empower semiconductor companies to stay ahead of global technological advancements. In an industry characterized by constant change, we serve as the bridge between today's challenges and tomorrow's opportunities, driving innovation, growth, and success.

A Game-Changer in Semiconductor Talent and Service Integration

FluidTal, a Service Integration (SI) company committed to delivering tangible business and technology outcomes for semiconductor companies. With nearly three decades of talent expertise in Asia, we specialize in undertaking projects to source, train, integrate, and scale services to enable the projects of Artificial Intelligence (AI) engineers, Integrated Circuit (IC) design specialists essential for next-generation chip development.

Our Key Contributions to Singapore's Semiconductor Ecosystem :

1. BOLT Model: Cultivating Local Expertise

o Build:
In the **Build** phase we develop specialized teams of expert semiconductor designers by forging strong partnerships with educational institutions and technology providers. These teams execute outsourced design projects, offering clients dedicated resources tailored to their unique needs. Initiatives such as the Skills Future Work-Study programmes exemplify this collaborative approach, ensuring both high-quality outcomes and scalable solutions.

o Operate:
The **Operate** phase sees these teams applying their deep understanding of AI and chip design to real-world projects. They work on enhanced designs, utilizing AI-powered tools and techniques to optimize chip architectures, enhance performance, and accelerate time-to-market. Mentorship from experienced professionals ensures continuous growth and refinement of their expertise.

o Learn:
The **Learn** phase emphasizes continuous improvement and skill development, ensuring these teams remain at the forefront of innovation in AI and semiconductor technology. Access to cutting-edge research and exposure to new challenges fosters both technical and leadership growth.

o Transfer:
Finally, the **Transfer** phase ensures that the knowledge and expertise developed during the project are effectively transferred to the client organization. This includes delivery, documentation, training, and collaborative sessions, empowering the client's team to leverage the insights gained from the outsourced design project for their own long-term success.

2. Strengthening Singapore's Semiconductor Workforce

FluidTal addresses the critical need for local, highly skilled semiconductor talent through targeted upskilling and strategic hiring initiatives. By developing a sustainable talent pipeline, we align closely with Singapore's vision of becoming a leading hub for semiconductor innovation.

3. AI-Driven Semiconductor Talent Development
Our approach also includes providing highly specialized experts in AI, machine learning, and semiconductor software. This focus enhances next-generation chip design and drives manufacturing automation, ensuring that Singapore remains at the cutting edge of technological advancements.

Fostering Innovation through IP Creation

The ultimate goal of the BOLT Model is to cultivate a self-sustaining ecosystem where local talent actively creates proprietary technologies and innovations. By investing in continuous learning and skill development, FluidTal prepares teams to contribute significantly to intellectual property **(IP)** creation—a powerful driver of growth for individual companies and for Singapore's standing as a global semiconductor leader.

Singapore has the potential to lead the world in semiconductor innovation, and FluidTal is dedicated to helping realize that vision. By working together, we can strengthen Singapore's semiconductor ecosystem and solidify its position on the global stage.

Let's build the future of semiconductors together.

www.fluidtal.com

FluidTal

Written by **Jasmine Haria,** Cofounder, FluidTal Pte Ltd.

PHOTONDELTA:

A NEW ERA OF SEMICON IS ON THE HORIZON

The Netherlands has long been a hub for innovation in electronics and semiconductors, and photonic chip technology is emerging as a key area of focus. But that did not happen overnight, Technical University of Eindhoven already pioneered research on photonic chips in 1995 and with support of the Dutch National Growth Fund and strategic investments, PhotonDelta started accelerating the industrialisation of photonic chips and fostering the development of cutting-edge applications. During SSIA's Asia Semiconductor Conference at the Asia Photonics Expo, PhotonDelta CEO Eelko Brinkhoff shared the organisation's mission to build a robust end-to-end value chain for photonic chips in the Netherlands and across Europe. He emphasised efforts to scale startups, drive new applications, develop talent and the need for international collaboration between key stakeholders in the industry.

PhotonDelta: Driving Photonic Chip Innovation

PhotonDelta is a non-profit organisation supporting an ecosystem of more than 70 organisations. This photonic chip ecosystem designs, develops, and manufactures innovative solutions using InP, SOI, SiN and Al2O3 material systems. The PhotonDelta foundation creates global awareness for the Dutch and European photonic chip industry and its technologies, leveraging funding from the National Growth Fund alongside strategic investments that totals to €1,1 billion, where in its third year the effects of its investments take shape. "In the near future, photonic chips will unlock high-end solutions for mayor societal challenges such as digitalisation and energy transition, contributing to the Sustainable Development Goals." says Brinkhoff.

Removing Bottlenecks to Enable Growth

For the photonic chip industry to flourish, key challenges must be addressed. PhotonDelta helps to bring innovative photonic chip-based products to the market by providing the necessary resources and support to strengthen the ecosystem.

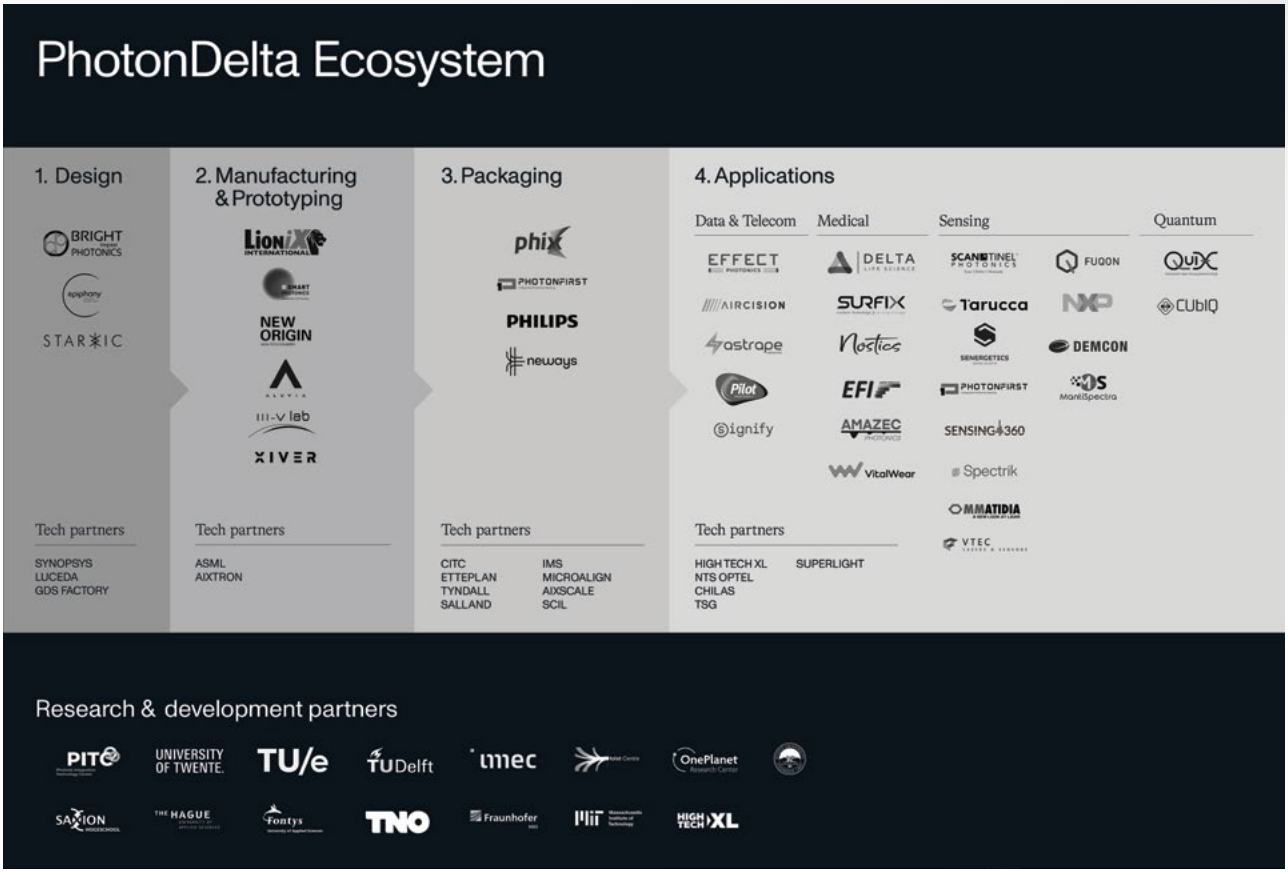
Securing early stage funding is critical for photonic chip startups. The PhotonDelta Startup Fund provides funding ranging from €250K to €2 million per startup, offering low-interest loans to mitigate risks during the crucial early years.

Talent is another crucial pillar of ecosystem growth. Together with the ecosystem- and educational partners, the PhotonDelta Talent Programme aims to increase the attractiveness of a career in integrated photonics and expand the quality and size of the photonic chip talent pool.

Scaling a high-tech industry also requires market engagement and promoting photonic chip technology globally. A great example is the Global Design Engineering Contest, where engineers are encouraged to come up with disruptive new photonic chip applications. Also, PhotonDelta organises Europe's leading photonic chip industry event, PIC Summit Europe (Nov 4-5, 2025), that attracts the leading lights from across the photonic chip industry.

With a strategic focus on key markets such as Asia, PhotonDelta is forging strategic relationships, conducting in-depth market research, and building strong industry networks with the aim of unlocking new commercial opportunities in the region. "Our goal is to connect with key players in the industry and to look for collaboration opportunities in Singapore and across Asia," says Florian Federer, Business Development Manager Asia at PhotonDelta.

With a deep focus on understanding the integrated photonics landscape, PhotonDelta is actively exploring collaboration opportunities across Asia for topics like heterogeneous Integration of multiple material systems (SiPh, InP, SiN, Al2O3 etc.) and Advanced Packaging solutions for applications like Datacom/Telecom, AI, Sensing and Medical. To drive this initiative forward, the team will be present at major industry events, including Asia Photonics Expo, Semicon Southeast Asia, Osaka



Expo Japan, Semicon Taiwan, and Semicon Japan. Together with the Netherlands Enterprise Agency, PhotonDelta also organises an innovation mission to Singapore and a trade mission to the World Expo Osaka.

Delivering Results

The proof that the PhotonDelta's ecosystem approach works, is shown in the successes of the startups part of their ecosystem. Recently, the Silicon Nitride foundry New Origin unveiled its plans for a manufacturing plant to be in operation by the end of 2026. Thanks to PhotonDelta contributing €53.8 million, the Netherlands plays a pivotal part in the European pilot line project for integrated photonics, PIXEurope, with the development of a 6 inch Indium Phosphide pilot line for R&D and commercial purposes. Furthermore, photonic chip startup MantiSpectra is causing a stir with its groundbreaking spectrometer-on-chip technology that can be used in applications ranging from consumer electronics to personal health.

Moving forward, PhotonDelta is excited about the developments in photonic chip technology and is looking forward to creating a strong network of companies, researchers and investors. They consider Singapore an important partner for our ecosystem and we will be back in May with a delegation to build partnerships and accelerate the adaptation of this emerging technology in the market.

PhotonDelta

GEORGIA:

A GLOBAL HUB FOR INNOVATION, TALENT, AND MANUFACTURING

Skyline views of Atlanta and Georgia Tech. Credit: Georgia Institute of Technology

Georgia is a global gateway for business. More than 8,100 new jobs and nearly $6 billion in investments were welcomed by the state from international companies expanding or locating in the U.S. market in the last year.

Consistently, technology and manufacturing companies are growing in the state as a result of its pro-business environment, robust talent pool, and commitment to innovation.

Thriving Manufacturing and Tech Ecosystem

Each year, over $70 billion is generated by Georgia's manufacturing sector alone*, driven by more than 430,000 workers. Within cleantech and e-mobility, Georgia is leading the race, attracting more than $28 billion in investments since 2018. Its emerging closed-loop, fully-integrated supply chain includes both battery recyclers and manufacturers, affording a symbiotic relationship. In the past year, over 50% of new locations or expansions in Georgia have been in the manufacturing industry, which benefits from a robust supply of carbon neutral energy thanks to the first two nuclear reactors in the United States in over a decade.

New, state-of-the-art facilities are coming to Georgia thanks to technology companies such as Micron Technology (Micron). Micron's Atlanta Design Center develops and delivers advancements in technology innovations including artificial intelligence, 5G, and autonomous vehicle experiences – supported by diverse, well-educated talent from metro Atlanta. Micron's entrusts its Atlanta team with advancing the company's memory design and engineering leadership.

Leading in Workforce

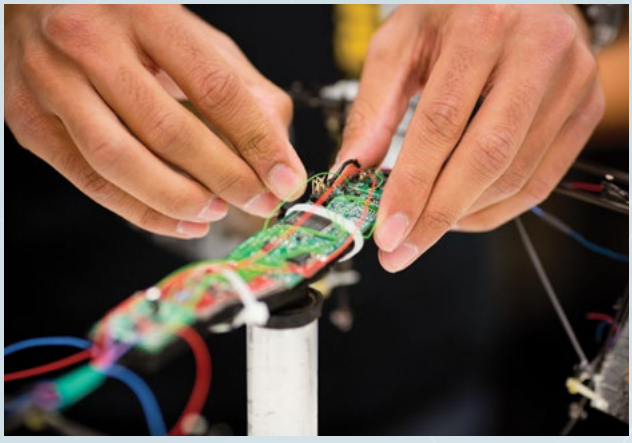
At the heart of Georgia's success is the commitment to listening to business needs and fostering collaboration, a strength well-leveraged in workforce development and training initiatives. For the 15th year running, Georgia Quick Start has earned the title of Top Workforce Training Program in the nation due to the program's continual adaptation of new and emerging technologies needed to meet the needs of successful business operations. Quick Start was created in 1967, and today it is a testament to Georgia's leadership in the space. With a 22-campus-strong Technical College System in addition to the University System of Georgia, companies can partner with the right educational institution to foster talent across a variety of roles.

Industry organizations such as the Technology Association of Georgia (TAG) also play a pivotal role in fostering the state's technology workforce and innovation. Through initiatives like the Technology Innovation Showcase, TAG highlights cutting-edge projects that transform government operations and services. Additionally, TAG's Education Collaborative (TAG-Ed)[1] is dedicated to preparing Georgia's future tech workforce by offering professional development programs that equip individuals with essential technology skills.

Innovation and R&D Supporting the Semiconductor Supply Chain

Georgia's commitment to semiconductor research and development is exemplified by collaborations between its universities and industry partners. The Georgia Institute of Technology (Georgia Tech) is establishing the Semiconductor Manufacturing and Advanced Research[2] with support a $285 million grant in partnership with the Semiconductor Research Corporation (SRC). This initiative focuses on utilizing digital twin technology to accelerate microelectronics development and deployment. Georgia Tech is collaborating[3] with historically Black colleges and universities and minority-serving institutions to build research partnerships and work on joint semiconductor projects, thereby expanding the talent pipeline and fostering diversity in the field.

Furthermore, Georgia Tech partners[4] with industry leaders like GlobalFoundries to advance semiconductor research, education, and workforce development.



A postdoctoral research fellow in the Navy Engineering Education Center (NEEC) lab. Credit: Georgia Institute of Technology

Georgia: A Gateway for International Business Expansion

For international businesses aiming to expand into the U.S. market, Georgia offers strategic advantages:

- **Proximity to Markets:** Georgia's strategic location provides access to 80% of U.S. markets within a two-day drive or two-hour flight, enhancing distribution efficiency. Georgia's global connectivity is supported by the world's busiest airport, Hartsfield-Jackson Atlanta International Airport, and two of the fastest growing deepwater ports in the United States.

- **Affordable Cost of Doing Business:** The state offers competitive operating costs as well as affordable, reliable energy, making it an attractive destination for businesses seeking cost-effective expansion.

- **Research Partnerships:** Nationally top-ranking research universities provide opportunities for collaboration in cutting-edge research and development, particularly in the semiconductor sector.

- **High Quality of Life:** Georgia boasts a favorable climate, diverse settings, and hosts world-renowned sporting events such as the Masters Tournament, contributing to an exceptional quality of life for residents and visitors alike.

Georgia's business-friendly environment, coupled with its innovative tech and manufacturing ecosystems, positions the state as an ideal destination for international investments in the semiconductor supply chain.

*According to JobsEQ.

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[1] https://tagedonline.org/
[2] https://news.gatech.edu/news/2024/11/22/semiconductor-research-corp-and-georgia-tech-secure-285m-smart-usa-institute
[3] https://research.gatech.edu/feature/chips-research
[4] https://gf.com/gf-press-release/georgia-tech-and-globalfoundries-to-collaborate-on-joint-semiconductor-research-and-workforce-development/

BARCELONA-CATALONIA:

THE EMERGING SEMICONDUCTOR HUB IN SOUTHERN EUROPE

Barcelona, the capital of Catalonia, is a global city renowned for its **cultural richness, Mediterranean lifestyle**, and **economic vitality**. As a thriving hub in Southern Europe, Barcelona seamlessly blends innovation with tradition, playing a pivotal role in Catalonia's diverse economy. The region's **strategic location, excellent connectivity** (including five direct flights per week to Singapore), **talented workforce, year-round events, industrial heritage**, and **state-of-the-art infrastructure** make it a prime destination for trade, highly skilled talent, technology, and global investments.

Barcelona-Catalonia semiconductor ecosystem (2024)

From Industrial Tradition to Cutting-Edge Innovation

Barcelona-Catalonia is positioning itself as a **European leader in semiconductors**, a critical industry driving **technological sovereignty** and **digital transformation**. Building on its strengths in **R&D, talent development**, and **industrial expertise**, the region is attracting global players and fostering local innovation.

Ca L'Alier houses the municipal BIT Habitat Foundation and the multinational technology company Cisco

A Solid Ecosystem Fueled by Research and Talent

The region is home to **world-class research facilities** such as the **Barcelona Supercomputing Center (BSC)**, the **Institute of Photonic Sciences (ICFO)**, and the **ALBA Synchrotron**. In late 2024, Spanish public institutions secured investments exceeding **€392 million** to support semiconductor-related projects.

These institutions are driving advancements in **quantum computing**, **AI chips**, and **sustainable semiconductor materials**, positioning the region at the forefront of technological innovation.

Leading global firms have recognized the region's potential—for instance, Cisco chose Barcelona for its first chip design center in Europe, while Intel partnered with the Barcelona Supercomputing Center (BSC) to advance cutting-edge innovation. More broadly, **Catalonia hosts over 9,600 international companies** and ranks as the EU's 3rd region for semiconductor FDI projects, according to FDI Magazine, solidifying its position as a key technology and investment hub.

Mapping of the semiconductor business ecosystem in Catalonia (2024, compared to 2022)

Talent and education, the essence of the Catalan semiconductor industry

Catalonia is nurturing a **specialized talent pipeline** to meet the growing demands of the semiconductor industry. With an **excellent public university system**, Barcelona enrolled **6,656 students** in official IT Master's programs in 2023-2024 alone. The region offers **four Bachelor's Degrees** and **five Master's Degrees** specializing in AI technologies. In 2024, it launched an **inter-university Master's degree in Semiconductor Engineering and Microelectronic Design.**

Collaborations between these academic programs and global companies ensure that Barcelona continues to attract and develop top-tier talent

the MareNostrum supercomputer, housed in the deconsecrated Chapel Torre Girona at the Barcelona Supercomputing Center in Spain.

A Committed Public Sector

Public initiatives are playing a crucial role in building a robust semiconductor ecosystem. The **Semiconductor Alliance in Catalonia**, powered by the **Government of Catalonia**, and the **Barcelona Innovation Coast**, led by the **Barcelona City Council**, bring together **industry, academia, and institutions**. These initiatives align with the **European Chips Act strategy**, ensuring access to funding and fostering collaboration.

Additionally, entities such as the **Barcelona City Council** and **Catalonia Trade & Investment** work hand-in-hand to support international firms and institutions in establishing a strong presence in the region. **Catalonia Trade & Investment's office in Singapore** offers tailored assistance to companies in Singapore seeking to explore opportunities in Catalonia's thriving semiconductor sector, facilitating connections, providing market insights, and ensuring a seamless expansion process.

Barcelona and Catalonia's vision for the semiconductor sector extends beyond economic growth. It aims to secure a **strategic future for Europe** in the global technology landscape by driving **innovation**, fostering **talent**, and creating a **sustainable and competitive semiconductor ecosystem**.

Be part of the transformation. **Invest in Barcelona-Catalonia** and help shape the future of the global semiconductor industry.

Visit **barcelona.cat/invest** or **catalonia.com/semiconductors** for more information.

Ajuntament de Barcelona

ACCIÓ Catalonia Trade & Investment

Generalitat de Catalunya Government of Catalonia

SIOUX TECHNOLOGIES EXPANDS R&D PRESENCE IN SINGAPORE

Sioux Technologies has officially opened a new R&D office in Singapore, doubling its local team to strengthen its role as a development partner for semiconductor and medical equipment makers. The opening of its new office is supported by the Singapore Economic Development Board (EDB).

Sioux first established a sales office in Singapore in 2019 and launched its R&D center three years ago, in 2022. Sioux's Asian R&D centers collaborate with regional and global high tech equipment developers, providing expertise in equipment software development, software modernization, AI-driven inspection and predictive maintenance.

Founder Hans Duisters emphasized during the opening ceremony of the new office the company's commitment to Asia, highlighting its strategic importance for customer proximity and engineering talent. In addition to the Singapore expansion, Sioux recently opened a facility in India focused on mechanical and electrical engineering.

The opening event was attended by partners, customers, representatives from the Dutch Embassy in Singapore, and the Singapore Economic Development Board (EDB).

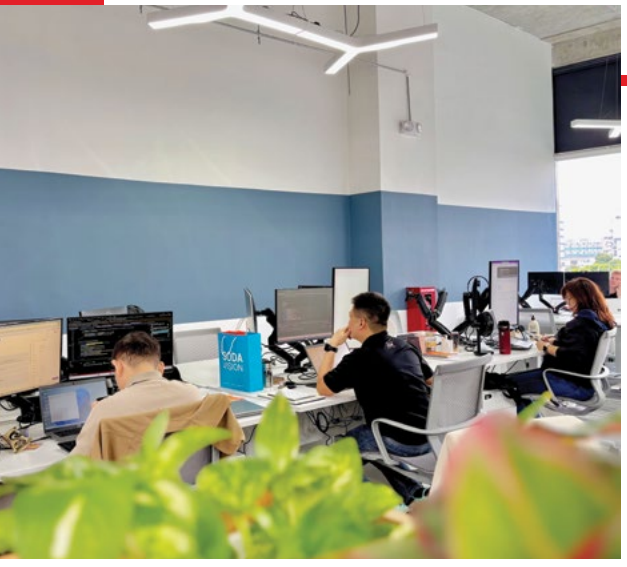
"The expansion of Sioux Technologies underscores Singapore's attractiveness as a hub for innovation. In addition to fostering closer collaborations with Sioux's partners and customers in the region, the new R&D centre will help deepen our capabilities in areas such as high precision motion control systems used in medical and semiconductor equipment" said Soo Haw Yun, Vice President, Global Enterprises Division, EDB.

Mr. Chris Devillers, Deputy Head of Mission at the Embassy of the Kingdom of the Netherlands, highlighted the importance of an open innovation ecosystem in Singapore and Sioux's role in it.

Theo Kneepkens, KLA Singapore country president, emphasized the value of local R&D partnerships and hopes Sioux will grow along with KLA's expanding R&D activities in Singapore.

About Sioux Technologies

Sioux Technologies is a high-tech engineering consultancy specializing in software development, AI, system control, electronics, mechanical, and mechatronics engineering. With over 1,400 engineers worldwide, Sioux provides R&D and assembly services to leading companies in the high-tech equipment industry. Headquartered in the Netherlands, Sioux operates internationally with development centers in Europe and Asia, helping clients accelerate innovation and bring complex technologies to life!



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