



IC TAIWAN GRAND CHALLENGE

GLOBAL CALL
FOR PROPOSALS

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Organizer:  **國家科學及技術委員會**
National Science and Technology Council

Co-Organizers:  **semi**
國際半導體產業協會

 **TSIA** 台灣半導體產業協會
Taiwan Semiconductor Industry Association

 **TCA** 台北市電腦公會
TAIPEI COMPUTER ASSOCIATION

 **TTA** TAIWAN
TGCH ARENA

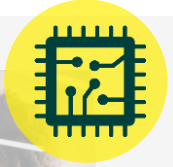
IC Taiwan Grand Challenge



Leveraging the Strengths of Silicon Island to Attract International Talents and Investment to Taiwan

- Combine **Generative AI** and **Chips** to drive industry-wide innovation
- Facilitate local professional development and attract **Global R&D Talents**
- Accelerate **Heterogeneous Integration** and **Advanced Technology**

Areas of Focus



- Startups, legal entities, academic research teams, and persons that plan to collaborate with Taiwan's semiconductor chip design and manufacturing industry.
- Proposals should include core technology, challenges solved, business model, market development plan, etc.



Domain 1

AI Core Technologies and Chips

- AI chip design
- Hardware Acceleration
- AI systems
- Generative Applications
- Large language models
- Cybersecurity

Domain 2

Smart Mobility

- Electric Vehicles
- Autonomous Vehicles
- Smart Cities
- Comms/Satellite
- Drone

Domain 3

Smart Manufacturing

- Intelligent Manufacturing
- IC Process
- Robotics

Domain 4

Smart Medtech

- Biometrics
- Smart Monitoring
- e-Health

Domain 5

Sustainability

- Sustainable Manufacturing
- Energy Saving Innovation
- New Energy

Criteria

40%

LOCAL CONNECTIVITY

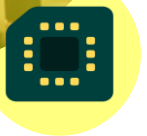
1. Have a need of resources and concrete development plans in Taiwan
2. Offer Taiwan broader industry development
3. Focus on the business plans and the goals of the applicants



40%

VALUE CREATION

1. Able to drive technological innovation and create social welfare
2. Contribute to building new industrial links or enable industrial upgrading
3. Capable of raising funds or creating high economic value



20%

TECHNOLOGICAL INNOVATION

1. Possess innovation in emerging fields of application
2. Propel innovation in the manufacturing process, design, and use of new materials
3. Integrate diverse innovation and cross-domain knowledge



Benefits

1

Prize



US \$30,000

- Upon team arrival in Taiwan
- In person exhibition of innovation at 2025 TIE Expo

* details to follow

2

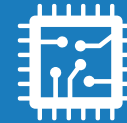
Mentoring



**Mentorship by
Semiconductor Industry
Experts**

3

Platform



**Prototyping to Production
(EDA Tools, Wafer, etc.)**

4

Resources



**Multifaceted Resources and
Services to Ensure Success**

- Provide key resources and expert consulting support to accelerate solution development from prototyping to production through the startup acceleration platform

IC Startup Acceleration Platform

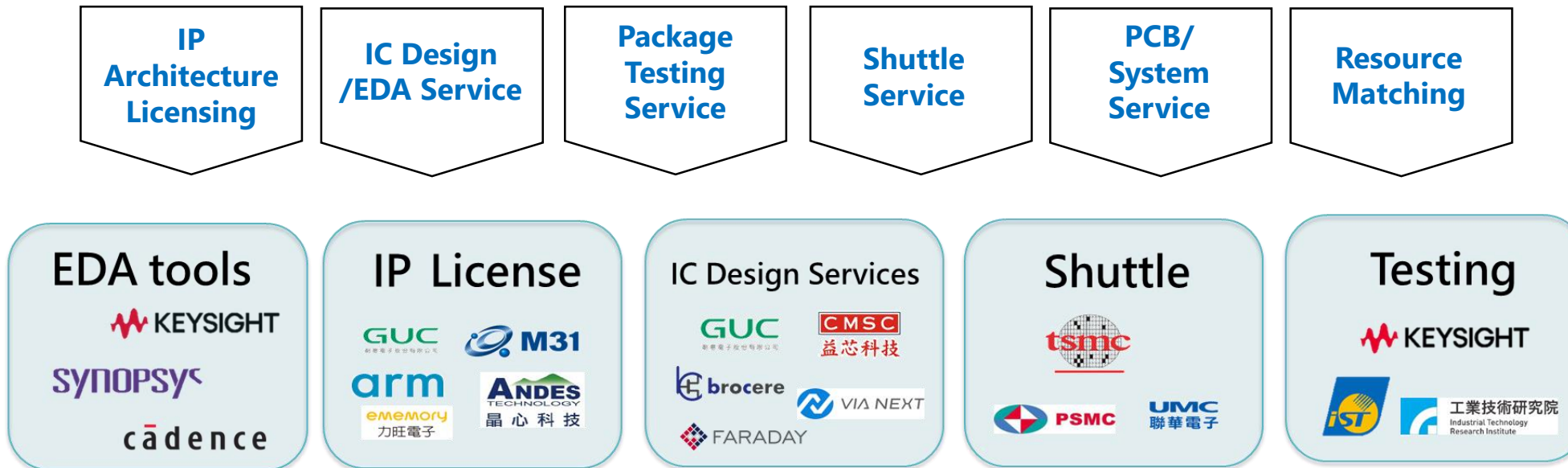
Connecting the Semiconductor Supply Chain Players

Execution

- One-stop services to support startups in linking to necessary resources in Taiwan.
- Accelerating product development and fostering innovation through Taiwan's semiconductor expertise and resources.



IC Design Flow



Competition Timeline

Mar. 26th, 2025

Online Apply **Open**

tie Taiwan Innotech Expo
台灣創新技術博覽會

*Winning teams will attend award ceremony and exhibit at TIE expo held on Oct 16-18 in Taiwan

TIMELINE

Jun. 30th, 2025

Online Apply **Deadline**



1st Batch of Winners (August 2024 Announcement)



UNITED KINGDOM

SMART DATA & AI



ULTRA-EFFICIENT
REVOLUTIONARY QUANTUM
POWERED UNIVERSAL COMPUTER
MEMORY

**Quinas
Technology
(ULTRARAM)**



UNITED STATES

SMART MOBILITY

GALAVVERSE

LARGE BANDWIDTH, LOW
LATENCY, AND COMPLEMENTARY
DEPLOYMENT, HIGH FREQUENCY
RADIO TECHNOLOGIES

GalaVerse USA



TAIWAN

SMART MOBILITY

Ranictek

IC DESIGN, 5G/6G BASE STATION
CHIPS, SATELLITE
COMMUNICATION CHIPS

Ranictek Inc.



UNITED STATES

SUSTAINABILITY



EMPOWERING INTEGRATED
PHOTONICS FOR
COMMUNICATIONS AND
COMPUTATION

**Polaris Electro-
Optics**



TAIWAN

SUSTAINABILITY



WIRELESS POWER · WIRELESS
FREEDOM

**Voltraware
Semiconductor
Co. Ltd.**



Pioneers a breakthrough memory that merges the speed of DRAM with the non-volatility of flash, enabling next-gen storage.

Leverages high-frequency radio to power low-latency, high-bandwidth connectivity for the future of ubiquitous computing.

Develops cost-effective, energy-saving baseband chips to accelerate 5G/6G and satellite communication deployments.

Delivers industry-leading high-speed, energy-efficient photonics through patented materials and design innovations.

Enables multi-device, long-range wireless charging with advanced magnetic resonance ICs for e-mobility and consumer electronics.

2nd Batch of Winners (April 2025 Announcement)

SINGAPORE

SMART DATA & AI



#AI大語言模型、#高效記憶體、#生成式AI

TurboNext.ai



Scales large language model performance with heterogeneous compute and high-memory AI accelerators.

SINGAPORE

SMART DATA & AI



#後量子密碼學、#資安韌性、#PUF、
#硬體安全晶片

**JMEM TEK
HOLDING CO PTE.
LTD.**



Provides post-quantum, uncrackable chip-level security through innovative semiconductor IP and hardware design.

UNITED KINGDOM

SMART MEDTECH



#基因電路工程技術、#器官晶片、
#OOC(ORGAN-ON-A-CHIP)

**Genenet
Technology (UK)
Limited**



Revolutionizing preclinical drug discovery with an AI- and quantum-powered multi-organoid-on-chip platform for streamlined drug screening.

FRANCE

SUSTAINABILITY



#氮化鎵電源元件、#大幅提高功率密度

**WISE-
INTEGRATION**



Enabling ultra-compact, high-efficiency AC-DC power supplies with integrated GaN power ICs and proprietary digital controllers.

SWEDEN

SUSTAINABILITY



#奈米純水解決方案、#提升半導體良率、#永續發展

NSS Water



Transforming semiconductor industry with cutting-edge nanopure water technology for a cleaner, sustainable future.



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Play video



Website

ictaiwanchallenge.org



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