

# A Friendly Society for Sustainable Integration

## S.1 Dream Accelerator

### S.1.1 Promotes Entrepreneurship and Employment

HSPB is shaping the park to provide employment and cultivate high quality manpower, bring in investment and actively creates job opportunities. According to the statistics, by the end of 2022, there were 175,217 employees in the six parks in HSP and the number of employees in 2022 was 6.33% higher than that in 2021, which is a new record high. From the economic point of view, the contributions of HSP to the neighboring areas include human resources, national income and local development.

In 2021, HSPB, together with Hsinchu Employment Center and Yilan County Government, held three recruitment events, releasing 1,349 job vacancies and attracting 310 participants. While in 2022, four recruitment activities were conducted, releasing 9,300 job vacancies and attracting 5,276 participants

### Science Park Emerging Technology Application Project

Corresponding to the rapidly growing demand for global 5G, high performance computing and other emerging technologies, HSPB has consolidated the existing resources of the Project for Industry-Academia Collaboration on Innovative R&D in Science Parks and transformed to promote the Science Park Emerging Technology Application Project since 2021. With industrial demands as the guide, HSPB has initiated cross-industry collaborations while combining the strengths of academia and research institutes to jointly invest in the R&D of key technologies.

#### List of Emerging Technology Application Project

| Year | Approved subsidies | Total subsidies (NTD million) | Number of engineers involved in research | Future manpower | Attract manufacturers to invest in R&D |
|------|--------------------|-------------------------------|--|-----------------|--|
| 2021 | 8                  | NTD 35 million                | 92                                       | 22              | NTD 56.31 million                      |
| 2022 | 14                 | NTD 60 million                | 162                                      | 36              | Estimated NTD 60 million               |

Please refer to the Science Park Emerging Technology Application Project website for further information.

<https://web.sipa.gov.tw/EtaWeb/index.do>



## Coaching and nurturing entrepreneurial teams

With the goal of innovation, transformation and sustainable development of the park's industries, HSPB has planned an exclusive platform of innovation and entrepreneurship tailored for youths with the core value of innovative thinking and innovative service. Young Entrepreneur's Studio was established in 2015 with cumulative 47 teams till present, 20 of which have established companies (17 in operation). In 2019, Yilan Entrepreneur's Studio was established at Yilan Science Park and 25 teams have been introduced, 22 of which have established companies (20 in operation).

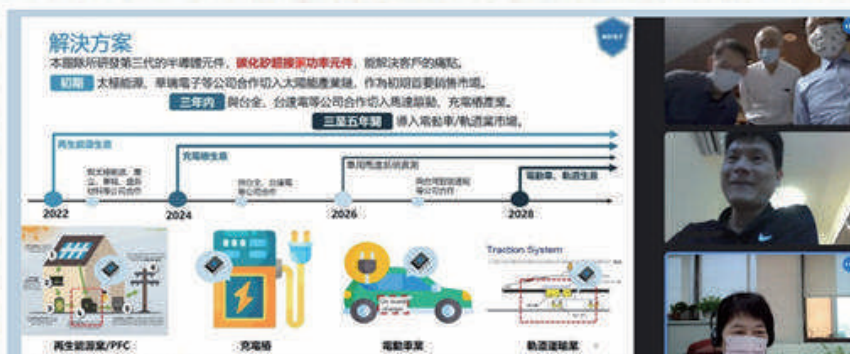


JMEM team from Young Entrepreneur's Studio won the championship of student category in the 6th Entrepreneurship Star Draft Contest by Economic Daily News

## Online integration and interaction to bring in new entrepreneurial energy

HSP is a national technology center that brings together Taiwan's most advanced industrial technologies. In the face of rapid changes in global breakthrough innovation, accelerating corporate transformation requires proactive future investment. New startup companies can expedite market deployment and expansion by penetrating into the industrial supply chain through independent venture capital or internal group investment departments. HSP Corporate Venture Capital (CVC) provides opportunities in sourcing investment and partnership for the startup companies and has formed CVC Networks to create a win-win-win situation for enterprises, startup companies and park.

Despite the restrictions of Covid-19 Alert Level 3, HSP CVC and startup companies conducted a two-day online matchmaking meeting in August 2021. 14 CVC companies from the fields of wafer, IC design, optoelectronics, networking, and precision machinery were invited to conduct nearly 30 one-on-one online matchmaking meetings with 8 startup company teams from the science park, NSTC From IP to IPO Program (FITI) and the Value Creation Programs for Start-up Teams.



HSP CVC and SiCEV Electronics Co., Ltd. (NSTC Value Creation Programs and FITI Teams)

## S.1.2 Human Resource Development Grant Program

In recent years, the development of information and innovative technologies, first of which is AI and 5G, has led to the rise of digital transformation, accelerating the progress of intelligentization and digitization, bringing convenience and changes in people's life, work and social patterns. Through the integration of big data, Internet of Things and the cloud, the industries have formed a technological value chain of systems, software and terminal applications, making the development of 5G and AI a competency indicator for enterprises and countries.

In 2022, in response to the trend of information and communication industry, HSPB offered a series of courses focusing on 5G wireless communication design technology, smart application of big data and Artificial Intelligence (AI) technology, etc. Some online learning courses are also available for non-Hsinchu employees to learn in a more flexible way. Detailed course information is posted on the Technology Talent Learning Website.



## Science Park Talent Cultivation Subsidy Program

In order to help cultivating professional and technical talents, the local public and private tertiary institutions are the beneficiaries of subsidy programs. Industry-related professional modular courses and internship programs are provided at schools and industrial teaching resources are brought in to minimize the industry-academia gap. The Science Park Talent Cultivation Subsidy Program is implemented to provide students with internship opportunities and increase candidate graduates' professional knowledge to be applied in enterprises, while developing multi-talented personnel through the program. Besides establishing an effective industry-academia integration system, HSPB has also assisted partners in training basic technical skills, brought in academic innovations, invited faculty members to serve as corporate R&D advisors, as well as enhanced corporate image and product promotion, achieving win-win outcomes for both industry and academia.

### Results of Cultivation Program for Past Two Academic Years

| Academic year | Subsidy program   | Number of subsidy |
|---------------|-------------------|-------------------|
| 110           | NTD 9 million     | 12                |
| 111           | NTD 8.783 million | 12                |

Furthermore, for enhancing the professional roles of employees, the training program for professional skilled personnel is planned according to park's industrial development trend and the manufacturers' needs. The fields of skills include semiconductor technology, information and communication technology, emerging industry topics, biomedical technology, etc. Meanwhile, the types of training include professional skills courses (including practical training), enterprise package classes, master forums and a series of seminars in conjunction with the park's anniversary celebration involving experts from industry and academia. Moreover, in response to post-pandemic era and sustainable development of enterprises, HSPB has offered relevant courses such as Green Recovery and Net Zero Emission Development in the Post-Pandemic (COVID-19) Era and ESG Deconstruction and Construction and Sustainable Development of Corporates.

## Training Achievements for the Past Two Years

| Academic year | Courses offered | Total teaching hours | Training attendance |
|---------------|-----------------|----------------------|---------------------|
| Year 2021     | 296 sessions    | 2,126 hours          | 9,529 people        |
| Year 2022     | 286 sessions    | 1,854 hours          | 8,531 people        |



On November 10, 2022, Fellow Yi-Long Huang was invited to give a talk on Crossing Boundaries and Building Dreams, in which he elaborated on the ways and attitudes of crossing the fields of science and humanity



On November 30, 2022, Fellow Chih-Yuan Lu from Academia Sinica was invited to give a lecture on Vision of 2050 - 3D Structures, Storage and Computing Combinations, New Materials, and Quantum Technology, in which he shared the challenges and new horizons that Taiwan may face in the semiconductor industry in the next 30 years.

### S.1.3 Precision Health-Approach to Biomedical R&D

#### ■ Precision Health Inter-Disciplinary Promotion Program

For the purpose of enhancing cross-discipline precision health foundation R&D energy in HSP and encouraging the park manufacturers to take clinical needs as the starting point to link up with the surrounding medical and research institutions to facilitate the development and clinical application of precision health products while encouraging the advancement of industrial R&D results to the clinical trial stage, HSPB and NSTC are collaborating to launch the sub-projects of four-year (2022-2025) Precision Health Inter-Disciplinary Promotion Program. The project was announced and reviewed from March 30, 2022. A total of four research projects in the fields of precision diagnosis and treatment as well as precision detection and prevention were developed to promote industry-academia-research cross-disciplinary cooperation, with a total grant of NTD 24 million, which drives the industry to invest more than NTD 36 million in R&D.

In order to continuously promote the relevant industry, academic, research and medical units to jointly propose solutions based on clinical needs, bring into play the comprehensive effect of cross-disciplinary cooperation in HSP, provide the direction of product development for manufacturers through feedback from clinicians, help bringing manufacturers' R&D results into pre-clinical and clinical-related validation, accelerate the launch of precision health products and to increase product reliability, HSPB has promoted the establishment of two precision health alliances and hosted two thematic exhibitions in 2022.

For strengthening the capacity of the biomedical industry in HSP and to keep track of the international trend of precision health, a Taiwan-Japan-Europe international biomedical industry exchange event was held to link up the manufacturers in the park, peripheral medical and research institutions, promoting the integration of the biomedical industry with the surrounding hospitals. It also assisted three companies in the park to apply for IPO certification, so as to penetrate into the global market, driving the continuous growth of biomedical industry and optimizing the precision health industry cluster in Hsinchu Science Park.

## ■ BIO Asia-Taiwan Exhibition presents outstanding achievements

HSP has been actively developing biotechnology and medical industries in recent years. In order to promote the R&D achievements of biomedical industry, HSPB has joined hands with manufacturers to participate in biotechnology and medical exhibitions in recent years. BIO Asia-Taiwan Exhibition was held in Hall 2 of Nangang Exhibition Center from July 28 to 31, 2022. 21 exhibitors from HSP participated in the exhibition and HSPB has set up Science Park Pavilion with the main theme of Telemedicine, Precision Health, and Industrial Advancement, inviting 14 manufacturers to join. The Healthcare+ Expo (Taiwan) was organized from December 1 to 4, 2022, in Hall 1 of Nangang Exhibition Center. 31 exhibitors from HSP involved in the exhibition and the HSPB has invited 14 exhibitors to participate in the Science Park Pavilion with the theme of Resonating Taiwan's Medical Material Industry Cluster Toward a New Era of Precision Health. The exhibition showcased the latest R&D achievements of HSP manufacturers that integrate information and communication and biomedical technologies, targeting the latest global medical trends and helping them to attract business opportunities in domestic and global markets.



BIO Asia-Taiwan Exhibition 2021

## ■ Booster program for commercialization of biomedical products

As a mean of accelerating the commercialization of technological achievements in biomedical industry, the cross-industry integration of biomedical research and development results from industry-academia collaboration will be advanced toward commercialization, and cooperation between industry-academia and clinical needs will be promoted to complement the product safety, efficacy verification, drug efficacy and safety verification involved in the product development process. In 2021, the program has approved a total of 6 grants (program period from January 1, 2021, to December 31, 2021) with a total approved grant amount of NTD 12.7 million, attracting industry investment of more than NTD 29 million and facilitating industry, academia, research, and medicine to jointly promote 40 collaborative projects related to validation trials.

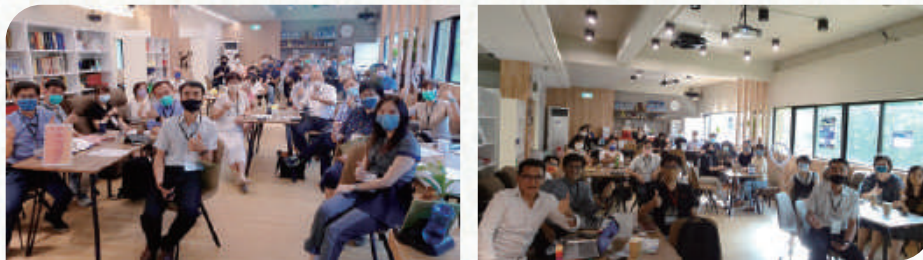
## ■ Medical equipment innovation

In line with International Promotion Plan for Accelerated Innovation and Advancement in the Medical Device Industry promoted by NSTC in 2021-2022, HSPB is implementing its sub-project Innovation in the Entrepreneurial Environment for the Medical Device Industry in Hsinchu Science Park by organizing various entrepreneurial activities, including international entrepreneurial ecology exchange and business opportunity linkage activities, Shako Coffee in-depth entrepreneurial counseling, fund raising and business matching, entrepreneurial exchange or experience sharing sessions, etc. From 2021 to 2022, HSPB has led 8 and 10 medical material startup teams respectively to participate in the Medical Taiwan - International Medical, Health and Care Expo 2021 for two consecutive years. Besides, in order to intensify entrepreneurial environment and accelerate industrial innovation and transformation, an innovation exhibition was held in December 2021, featuring discussions on innovation and entrepreneurship trends and product demonstrations to showcase the R&D achievements of startup teams in the field of medical device. In 2021, 12 startup teams have completed in-depth counseling and 25 teams have conducted networking activities. Meanwhile in 2022, 28 industry representatives and 24 teams of startup teams that have participated in the event actively assist medical device startup teams in expanding business opportunities both domestically and internationally.



Group photo of International Medical, Health and Care Expo (Medical Taiwan) on June 2022

In September, October and November of 2021 and July, August and October of 2022, with the themes of technical exchange, business opportunities matching and venture capital matching respectively, experts in related fields were invited to help teams in solving problems related to marketing strategies, capital raising needs, medical device product certification and commercialization, etc. In December 2022, startup companies with mature products and services were invited to visit Taipei Gan-dau Hospital. Through end-users' experience and feedback, it is hoped to further discuss on technology development and needs and to promote possible opportunities for future cooperation with medical institutions.



Hsinchu Science Park medical device startup companies venture capital matching session

In order to assist new entrepreneurs in expanding their business opportunities in foreign countries and cooperation as well as globalization, Hsinchu Science Park Medical Device Industry Entrepreneurial Environment Innovation Program 2022 has selected six medical device startup teams to visit Fukuoka and Kitakyushu in Japan for a 7-day exchange program in October of the same year. The trip included meetings with local medical device chambers of commerce, large trading companies and biomedical research parks, and exchanges with banks, venture capitalists, incubation centers, accelerators and university joint platforms to understand the local new venture ecosystem, learn about measures and resources to support new startup companies and conduct a number of exchange and networking activities to help new entrepreneurs understand the local market trends, new venture resources and the lack of successive business opportunities in Japan, helping new startup teams to take the first important step in developing Japanese market.



## S.1.4 Innovation R&D Awards

In a bid to motivate park manufacturers to develop innovative products and explore international market, as well as to encourage their engagement in R&D and patenting to protect their inventions, so as to improve technology level and promote industrial development, HSPB has launched the Innovation Product Award and R&D Accomplishment Award.

| Award                    | Review Items  | 2021-2022 Achievements                 |
|--------------------------|---|--|
| Innovation Product Award | Innovation, technology, market competency, R&D investment, derivative benefits and the number of internationally recognized awards, patents and papers published of participating products  | 17 innovative products received awards |
| R&D Accomplishment Award | R&D expenses and the proportion of total revenue, R&D manpower and the proportion of employees, the primary development technology or advanced process patent portfolio and management, key technology R&D achievements and new products invention, status of driving relevant industrial chain, industry-academia collaboration, the effectiveness of human resources training, etc. | 5 companies received awards            |

### 2021 Innovation Product Award Winners



Macronix International Co., Ltd.  
– ArmorFlash™ Secure Flash Memory



Elan Microelectronics Corporation-  
Under PVC Biometric Smart  
Card Solution



E Ink Holdings Inc.-Battery-  
free ePaper Smart Credit Card



Wistron NeWeb Corporation-  
SmartNIC Acceleration Card



PlayNitride Display Co., Ltd-  
89-inch 5K ultrawide curved MicroLED display



Innolux Corporation-LCD  
with invisible camera



Gallant Precision Machining Co., Ltd.  
– G10.5 Wet Process Equipment



Taiwan RedEye Biomedical Inc. - RedEye  
Visible Spectrophotometer for clinical use



V5 Technologies Co., Ltd- Lung Image  
Aided Interpretation Software



## 2022 Innovation Product Award Winners



Etron Technology Co., Ltd.-  
E-Marker USB Type-C Cable ID Controller-EJ903



Realtek Semiconductor Corp-  
Realtek's First Edge AI USB  
Camera Controller (RTS5863)



Innolux Corporation-2016ppi true RGB  
ultra high resolution LCD technology for VR display



PlayNitride Display Co., Ltd- Metaverse 0.49-inch,  
4536ppi, ultra-high-resolution, full-color,  
μ-PixeLED MicroLED micro-display.



AUO Corporation-14.6-inch  
Rollable Micro LED display



E Ink Holdings Inc.-E Ink  
Gallery 3 Full Color ePaper



Gallant Precision Machining Co., Ltd.  
-AOI equipment



Grape King Bio Ltd. Longtan Science  
Park Branch-Neuroprotection-Product  
rich in Erinacine A and Hericium erinaceus



Price-giving ceremony for 2021 Innovative Product Award and R&D Achievement Award  
at Hsinchu Science Park 41st Anniversary



Price-giving ceremony for 2022 Innovative Product Award and R&D Achievement Award  
at Hsinchu Science Park 42nd Anniversary





## ■ Biomedical startup team R&D highlights

In order to help medical device startup teams in linking up with international resources and increasing their business development opportunities, HSPB has authorized Asia Pacific Accelerator Network Association to implement Hsinchu Science Park Medical Device Industry Entrepreneurial Environment Innovation Program, which continues to provide in-depth entrepreneurial guidance for medical device startup teams as well as domestic and international business matching activities. From 2019 to 2021, a total of 46 sessions of in-depth counseling activities involving 56 medical device startup teams have been completed and 10 industry matching sessions of different themes have been held, involving more than 115 industry representatives and 76 startup teams. In addition, HSPB led 8 new startup teams to participate in Medical Taiwan - International Medical, Health and Care Expo 2021 and hosted an international market exploration and networking session for medical device startup companies at the exhibition. Many official and private representatives from different countries were invited, as well as incubation accelerator units, consultants and investment companies to interact with the participating startup companies both on-site and online.

The accelerated counseling system in this program has assisted two startup teams, namely Enosim Bio-tech Co., Ltd. and NexVita Technology Corp., to receive subsidies from National Development Fund Business Angel Investment Program. Besides, nine medical device startup teams have successfully developed into HSP science business. HSPB expects that through the promotion of this program, more innovative and entrepreneurial resources as well as services will be introduced, so as to maintain the sustainable development and competency of HSP's industry.

In conjunction with the 41<sup>st</sup> anniversary, HSPB organized Intelligence Empowerment to Create New Materials - HSP Medical Equipment Entrepreneurship Environment Innovation Project expo and industry exchange session in the afternoon of December 15, 2021, to showcase the outstanding achievements of HSP in fostering innovative R&D capabilities among biomedical-related industries in recent years. This exhibition and industry exchange session invited 8 medical equipment-related startup companies to present their innovative achievements whereas 11 startup companies have presented their innovative R&D products and interacted with related investors and manufacturers.

