



The Father of Thai Innovation

*5th October
The National Innovation Day*

X Outstanding Awards for Innovation
in honour of King Rama IX,
the Father of Thai Innovation

Joint Presentation of the

- National Innovation Awards for Economic Contribution
- National Innovation Awards for Social Contribution
- Rice Innovation Awards
- Thailand Innovation Awards
- Design Innovation Contest
- Total Innovation Management Awards
- UAV Startup 2018
- Startup of the Year Awards
- Social Innovation Business Plan Contest 2018
- Media Innovation Awards



**NATIONAL
INNOVATION
AWARDS 2018**

Presentation of the
**National
Innovation
Awards 2018**

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PUBLICATION OF THE NATION

National Innovation Agency



The Father of Thai Innovation

5 October, National Innovation Day

His Majesty the late King Bhumibol Adulyadej spent much of his life travelling to remote locations all over Thailand to observe and improve the livelihood of his subjects. Over the years he initiated countless development projects to eradicate rural poverty, facilitate access to medicine and improve the advancement and dissemination of knowledge and education.

In 1981, during one of his visits to Narathiwat in southern Thailand, His Majesty noticed that annual flooding was destroying large areas of agricultural land adjacent to a large peat swamp forest. Even though the water drained, the land could not be used for cultivation due to the high content of pyrite in the underlying layer of bluish-grey mud being oxidized, making the soil strongly acidic. To address this, His Majesty initiated a project to convert the peat swamp area into productive agricultural land whilst minimizing the impact on the environment and the wetland ecosystem.

“Klaeng Din” The Royal Soil Improvement Project

In 1984, His Majesty took action to solve the problem of soil acidification. He showed that good water management and an irrigation system were essential to the success of the project - several times per year, simulating the dry and rainy season conditions were applied to accelerate the reaction of pyrite and a constant cycle of soaking and draining by fresh water removing sulphite from the soil - so-called “Tricking the Soil”.

Also, the ground level was graded and an arrangement of dykes set up so that acidified water drained off the affected land. Dikes at the perimeters of each plot stored or released water from inside the field, ensuring that the water table stayed above the mud layer to prevent the release of even more acid into the soil. Using lime in combination with soil flooding or mixed with topsoil was another solution that helped improve the soil quality.

The Soil Improvement Project gradually advanced with new findings gained through painstaking research. His Majesty the King closely followed the progress of the project and personally advised the team “to use successful experiments as a guideline but make sure to remember the failed ones so that the same mistakes would not be repeated.”

On a visit to the Pikun Thong Royal Development Center on 5th October 1992, His Majesty noted that “the experiments have confirmed that the technique works very well. The results are very important because they are unique and have not been published elsewhere. The same technique can be applied to other areas where there is a soil acidity problem.”

By royal appointment, the technique was applied in other provinces such as Nakorn Nayok, which suffers from similar problems. To acknowledge the tremendous contribution by His Majesty the King, The National Innovation Agency (Public Organization) or NIA under the Ministry of Science and Technology wishes to honor His Majesty as the “Father of Thai Innovation” and seeks “Klaeng Din Project” as a National Innovation Project, since the technique has improved the condition of over 7 million rai, or 1.12 million hectares of land in

Thailand. Also to bestow recognition upon all Thailand innovators, NIA would also like to nominate 5 October as “National Innovation Day”.

His Majesty the late King Bhumibol Adulyadej’s patience and vision has created an elegant solution to a serious problem affecting the daily lives of millions of people. With plentiful natural resources, families no longer need to migrate to urban areas. Peace, prosperity, happiness and simplicity - key elements of the Thai way of life - are maintained in harmony.

King Bhumibol is truly the Father of Thai Innovation.



His Majesty the late King Bhumibol Adulyadej established the Pikun Thong Royal Development Center in Narathiwat to conduct innovative research into the process of soil acidification and to develop a way to improve the soil so that it would once again support crop production.

Message from H.E. the Minister of Science and Technology



Thailand is currently in the transition to become a developed nation by using creativity, innovation and technology to increase value to products and services, and to reduce its dependence on basic commodities and manufactured items. This is encapsulated in the government's Thailand 4.0 initiative, which seeks to enhance the country's creativity and innovation, particularly in target sectors such as next-generation automotive, smart electronics, high-income tourism and medical tourism, automation and robotics, and aviation aerospace. The development of these sectors will help lifting the country out of the middle-income trap towards developed nation status.

Creativity and the ability to innovate are essential aspects in realizing the transition to Thailand 4.0 and in securing continued economic and social development, and a prosperous future for the Thai people. Therefore, the National Innovation Awards together with many other categories of innovation and design awards, organized annually by the National Innovation Agency (Public Organization), under the Ministry of Science and Technology, play an essential role in recognizing, rewarding and promoting innovative ideas in science, technology and business that have the potential to yield economic and social benefits, and further advance national development.

The number and variety of submissions to this year's National Innovation Awards present a broad spectrum of interesting and innovative ideas. This will contribute to the ongoing development of the country, in line with the Thailand 4.0 policy. I would like to congratulate all individuals and organizations that submitted innovations for the various categories of awards this year and to congratulate the winners on their outstanding achievements. I have no doubt that these innovative products and services will make important contributions to the social and economic development of our nation.

A handwritten signature in black ink, appearing to read 'Suwit Maesincee', written in a cursive style.

Dr. Suvit Maesincee

Minister of Science and Technology

Message from the Chairman of the National Innovation Board



Innovation is a key driver in the economic and social development of the country and never has this been truer than in the present Thailand 4.0 era. As Thailand makes the transition from middle-income country to become a fully developed nation, creativity and innovation are playing an increasingly crucial role. Innovation is particularly important in ensuring the growth of new target industries, such as aerospace and aviation, robotics and automation, and tomorrow's smart automobiles, among others. With innovative and creative ideas, Thailand will be in a strong position to advance to the next level in its development and maintain and build upon its competitiveness at the regional and international levels.

Thailand's National Innovation Agency, an organization under the Ministry of Science and Technology, is responsible for facilitating a positive environment for the promotion and cultivation of innovation in the country. Central to this goal are the National Innovation Awards and related awards, held every year, which seek to recognize and reward innovation at all strata of the economy and society, from community enterprises and start-up companies through to major Thai corporations and government agencies. This year's awards have once again attracted a diversity of projects that are bringing benefit in both economic and social aspects. The volume of submissions to the awards this year shows that the creative spirit is indeed flourishing in the country, in preparation for Thailand 4.0.

I would like to extend my best wishes and thanks to the many organizations and individuals that entered the Awards this year for their hard work and achievements in driving innovation and creativity in the country. I would also like to offer my sincere congratulations to the winners of the National Innovation Awards 2018 and the many other awards categories who are playing a leading role in promoting the economic development and social advancement of Thailand.

A handwritten signature in black ink, appearing to read 'W. Pairsuwan', written in a cursive style.

Assoc. Prof. Dr. Weerapong Pairsuwan

Chairman of the National Innovation Board

10 Outstanding Awards for Thai Innovation

“Innovation” is the key to rapidly boosting national competitiveness and driving the country’s economy forward to the international level. The National Innovation Agency (Public Organization) or NIA under the Ministry of Science and Technology recognizes the importance of creating a “culture of innovation” in Thailand to help promote overall national development. The National Innovation Awards are organized annually to encourage and honor those who create and drive innovation that has an outstanding impact on national economic and social development.

On October 5, “National Innovation Day”, NIA joins leading organizations from the private, educational and social sectors to hold the “2018 National Innovation Awards” to honor His Majesty the late King Bhumibol Adulyadej, the “Father of Thai Innovation” and in remembrance of his genius and innovativeness.

National Innovation Awards for Economic Contribution

Now in their 14th year, the National Innovation Awards for Economic Contribution honor those who produce or create innovations that bring positive impacts to economic development and which act as an important mechanism in driving and promoting successful innovation and stimulating awareness of the need for innovation in Thai society.

National Innovation Awards for Social Contribution

Now in their 14th year, the National Innovation Awards for Social Contribution honor those who produce or create innovations that bring positive impacts to society and which act as an important mechanism in driving and promoting successful innovation and stimulating awareness of the need for innovation in Thai society.

Thai Rice Innovation Awards

Now in their 12th year, the Rice Innovation Awards are held in conjunction with the Thai Rice Foundation under Royal Patronage to honor and reward successful innovation in the rice sector. The awards aim to support the development of production techniques and processing of Thai rice to create a variety of products through innovation.

Thailand Innovation Awards

Now in their 18th year, the Thailand Innovation Awards are held in conjunction with the Science Society of Thailand Under the Patronage of His Majesty the King to support the development of creativity and innovation among Thai youth.

Design Innovation Contest

In its 10th year in 2018, the Design Innovation Contest is held to reward and support innovation in the design of products which combine engineering or technology with creative design. Awards are presented in four categories: ECO Product / Medical Design / Food Design / Service Design.

Startup of the Year

Being held for the third time, the Startup of the Year award seeks to help create an environment conducive to the development of tech startups by recognizing and honoring those participating in the development and launch of startups in the country as well as in the promotion of business potential.

Total Innovation Management

Held for the third time this year, the Total Innovation Management Awards recognize and honor “outstanding innovation organizations” which serve as role models in promoting and building an innovation culture at the organizational level.

UAV Startup Awards

Held for the second time this year in cooperation with the Geo-Informatics and Space Technology Development Agency (Public Organization), the UAV Startup Awards seeks to recognize new business innovations in Unmanned Aerial Vehicle or UAV applications which address the needs of users in the economic and social sectors.

Social Innovation Business Plan Contest

Held for the second time this year in collaboration with the Faculty of Social Sciences, Srinakharinwirot University, this award aims to promote awareness of the use of innovation in solving social problems through social business principles. Business plans must be financially viable and present value to society in order to be sustainable.

Media Innovation Award

Held for the first time this year to promote and encourage innovation in the media industry, both through the development of new media technologies or new content formats. This will foster the creation and application of innovation in the media industry to enhance national competitiveness.



๑๐ รางวัลสุดยอดนวัตกรรมของประเทศ

“นวัตกรรม” เป็นกุญแจหลักที่จะผลักดันให้หน่วยเศรษฐกิจของประเทศเพิ่มขีดความสามารถในการแข่งขันไปสู่ระดับสากลได้อย่างรวดเร็ว สำนักงานนวัตกรรมแห่งชาติ (องค์การมหาชน) หรือ สนช. กระทรวงวิทยาศาสตร์และเทคโนโลยี ได้เล็งเห็นถึงความสำคัญของการสร้าง “วัฒนธรรมนวัตกรรม” ให้เกิดขึ้นในประเทศไทย ซึ่งจะมีผลต่อเนื่องถึงการพัฒนานวัตกรรมโดยรวม จึงได้ริเริ่มการจัดประกวดรางวัลนวัตกรรมเพื่อให้กำลังใจและเชิดชูเกียรติแก่ผู้คิดค้นและผลักดันนวัตกรรมที่เด่นชัดและก่อประโยชน์ต่อเศรษฐกิจและสังคม

วันที่ ๕ ตุลาคมของทุกปี เป็น “วันนวัตกรรมแห่งชาติ” สนช. ได้ร่วมกับหน่วยงานชั้นนำภาคเอกชน ภาคสถาบันการศึกษา รวมถึงภาคสังคม กำหนดจัดงาน “วันนวัตกรรมแห่งชาติ ประจำปี ๒๕๖๑” ขึ้นเพื่อเทิดพระเกียรติพระบาทสมเด็จพระปรมินทรมหาภูมิพลอดุลยเดช “พระบิดาแห่งนวัตกรรมไทย” และรำลึกถึงพระมหากรุณาธิคุณ พระอัจฉริยภาพและพระปรีชาสามารถด้านนวัตกรรม พร้อมจัดพิธีมอบรางวัลสุดยอดนวัตกรรมของประเทศ

รางวัลนวัตกรรมแห่งชาติด้านเศรษฐกิจ

จัดขึ้นเป็นปีที่ ๑๔ เพื่อเป็นการประกาศเกียรติคุณให้กับผู้ซึ่งได้ผลิตหรือคิดค้นผลงานนวัตกรรมที่ส่งผลดีต่อเศรษฐกิจและเป็นกลไกสำคัญในการผลักดันและส่งเสริมความสำเร็จด้านนวัตกรรมและกระตุ้นให้เกิดความตื่นตัวและสนใจนวัตกรรมมากยิ่งขึ้นในสังคมไทย

รางวัลนวัตกรรมแห่งชาติด้านสังคม

จัดขึ้นเป็นปีที่ ๑๔ เพื่อเป็นการประกาศเกียรติคุณให้กับผู้ซึ่งได้ผลิตหรือคิดค้นผลงานนวัตกรรมที่ส่งผลดีต่อสังคม เป็นกลไกสำคัญในการผลักดันส่งเสริมความสำเร็จด้านนวัตกรรมกระตุ้นให้เกิดความตื่นตัวและสนใจนวัตกรรมมากยิ่งขึ้นในสังคมไทย

รางวัลนวัตกรรมชาวไทย

จัดขึ้นเป็นปีที่ ๑๒ โดยร่วมมือกับมูลนิธิชาวไทยในพระบรมราชูปถัมภ์ เพื่อประกาศเกียรติคุณและมอบรางวัลความสำเร็จให้แก่ผู้พัฒนานวัตกรรมเกี่ยวกับข้าว โดยมุ่งหวังส่งเสริมและพัฒนากระบวนการผลิตหรือการแปรรูปข้าวไทยไปสู่ผลิตภัณฑ์ที่หลากหลายด้วยนวัตกรรม

รางวัลนวัตกรรมแห่งประเทศไทย

จัดขึ้นเป็นปีที่ ๑๘ โดยร่วมมือกับสมาคมวิทยาศาสตร์แห่งประเทศไทย ในพระบรมราชูปถัมภ์ เพื่อวัตถุประสงค์ในการส่งเสริมให้เยาวชนไทยพัฒนาความสามารถในการคิดค้นนวัตกรรม

รางวัลการออกแบบเชิงนวัตกรรม

จัดขึ้นเป็นปีที่ ๑๐ เพื่อกระตุ้นและส่งเสริมให้เกิดการพัฒนาผลิตภัณฑ์นวัตกรรมบนฐานการออกแบบ โดยผลงานการออกแบบเชิงนวัตกรรมต้องมีการผสมผสานกันระหว่างการออกแบบเชิงวิศวกรรมหรือเทคโนโลยีและการออกแบบเชิงสร้างสรรค์ แบ่งออกเป็น ๔ ด้าน ได้แก่ ECO Product / Medical Design / Food Design / Service Design

รางวัล Startup of the year

จัดขึ้นเป็นปีที่ ๓ โดยมีวัตถุประสงค์เพื่อสร้างสภาวะแวดล้อมที่เหมาะสมสำหรับการพัฒนาเทคโนโลยี โดยการประกาศเกียรติคุณและเชิดชูเกียรติให้แก่ผู้มีส่วนร่วมในการส่งเสริม สนับสนุนการพัฒนา ระบบนิเวศสำหรับ Startup ของประเทศ และเสริมสร้างความเข้มแข็งของ Startup ให้มีศักยภาพทางธุรกิจ

รางวัล Total Innovation Management

รางวัล “องค์กรนวัตกรรมยอดเยี่ยม” ถูกจัดขึ้นเป็นครั้งที่ ๓ เพื่อยกย่องและเชิดชูผู้ประกอบการที่มีการจัดการนวัตกรรมทั้งองค์กร (Total Innovation Management) ได้เป็นอย่างดีและพร้อมเป็นต้นแบบในการส่งเสริมและสร้างความสามารถทางนวัตกรรมให้กับองค์กรในประเทศ

รางวัล UAV Startup

จัดขึ้นเป็นปีที่ ๒ โดยร่วมมือกับสำนักงานพัฒนาเทคโนโลยีอวกาศและภูมิสารสนเทศ(องค์การมหาชน) เป็นโครงการประกวดธุรกิจนวัตกรรมด้านการใช้งานอากาศยานไร้คน (Unmanned Aerial Vehicle: UAV) เพื่อค้นหาแนวคิดที่สามารถตอบโจทย์ความต้องการของผู้ใช้งานด้านเศรษฐกิจและสังคม

รางวัลแผนธุรกิจนวัตกรรมเพื่อสังคม

จัดขึ้นเป็นปีที่ ๒ โดยร่วมมือกับคณะสังคมศาสตร์ มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อส่งเสริมให้สังคมตระหนักถึงการนำนวัตกรรมเข้าไปใช้แก้ปัญหาทางสังคมโดยใช้หลักธุรกิจเพื่อสังคมที่จะต้องคำนึงถึงการประสบความสำเร็จทั้งในรูปแบบทางการเงินและคุณค่าทางสังคม เพื่อให้เกิดความยั่งยืนต่อไป

รางวัล Media Innovation

จัดขึ้นเป็นปีที่ ๑ เพื่อส่งเสริมและสนับสนุนให้เกิดการสร้างสรรค นวัตกรรมขึ้นในอุตสาหกรรมสื่อ ทั้งด้านเทคโนโลยีสื่อรูปแบบใหม่หรือพัฒนาเนื้อหาการสื่อสารรูปแบบใหม่ ซึ่งจะทำให้เกิดการสร้างและใช้นวัตกรรมรูปแบบต่างๆ ในอุตสาหกรรมสื่อเพื่อเพิ่มขีดความสามารถในการแข่งขันของประเทศ



“Innovation: Making creativity into value reality.”

Innovation is key for the improvement of national competitiveness. Thailand’s ability to create “innovation drive” is therefore a decisive factor in the country’s economic growth and development.

The National Innovation Awards for Economic Contribution 2018 & National Innovation Awards for Social Contribution 2018 have been organized for 14 years with the objective of honoring those who have produced or created innovations that contribute to the national economy and society and which serve as key mechanisms in driving and promoting innovation through a combination of creativity and knowledge, as well as to raise awareness of innovation among Thai society that will induce a culture of innovation in organizations. This year, the awards presentation ceremony will take place on National Innovation Day, October 5, 2018 at the BITEC, Bangkok.

National Innovation Awards for Economic Contribution 2018

Judging Criteria

Projects must be suitable for practical use or commercial application.

The key criteria for selection of the winners are:

- Degree of Novelty: Winning projects must be considered innovative at the international, national or corporate level.
- Management Process: Winning projects must be able to maximize the effectiveness of operations and management, and must apply knowledge, as well as exploiting locally available materials and resources
- Benefits: The innovations must create national economic benefits.

Prestigious Awards

- Winners will be presented with “The Father of Thai Innovation” trophy, with an inscription of their name and project name, a cash prize and certificate.
- Winners will receive the following benefits:
 - Widespread media publicity
 - Projects will be published in the National Innovation Agency’s various media
 - Winners are authorized to use the emblem of the National Innovation Agency along with their innovation for a period of three years.

National Innovation Awards for Social Contribution 2018

Judging Criteria

Projects must be suitable for practical use or commercial application.

The key criteria for selection of the winners are:

- Degree of Novelty: Winning projects must be considered innovative at the international, national or corporate level.
- Management Process: Winning projects must be able to maximize the effectiveness of operations and management, and must apply knowledge, as well as exploiting locally available materials and resources.
- Benefits: The innovations must create social and environmental impacts.

Prestigious Awards

- Winners will be presented with “The Father of Thai Innovation” trophy, with an inscription of their name and project name, a cash prize and certificate.
- Winners will receive the following benefits:
 - Widespread media publicity
 - Projects will be published in the National Innovation Agency’s various media.
 - Winners are authorized to use the emblem of the National Innovation Agency along with their innovation for a period of three years.



National Innovation Awards 2018 for Economic Contribution



Innovation Sook Jai
Company Atapy Company Limited
Innovator Rattipon Tanya



Innovation Sook Jai is a national medical innovation that can detect falls in the elderly or patients, monitor basic health information such as the heart rate, walking pace, calorie burning, sleep analysis, etc. It can also be used to diagnose the onset of non-infectious diseases that may occur in the future. It is a new medical innovation that can be of real assistance to the elderly or ill patients, by analyzing health trends, detecting falls and emergency situations, and alerting a 24-hour Health Center, which can coordinate with participating hospitals. The innovation can help improving the quality of life and decreasing the mortality rate of the elderly population.



1st Runner-Up

Innovation SkyDefense System
Company Digital Research and Consulting Company Limited
Innovator Charn Kulthavarakorn

Innovation An unmanned aerial vehicle threat defense system with 360-degree operability, designed by a team of Thai engineers experienced in the development of signal-jamming products. Developed as an automatic unmanned aerial defense system, the system consists of four main sub-systems: detection and tracking system, surveillance camera system, system control software, and signal jamming system. Each system integrates together effectively.



2nd Runner-Up

Innovation Integrated Pipeline Maintenance and Monitoring System (IPMMS)
Company PTT Public Company Limited
Innovator Nirod Akarapanjavit

Innovation IPMMS is a global innovation of an online monitoring and maintenance system for natural gas pipelines. The IPMMS system reduces the cost of gas pipeline monitoring through the application of NB-IoT wireless communications, a new technology, which can be used to replace visual employee inspections at more than 2,000 spots along the pipeline. The system also automatically provides important information on the condition of the gas pipeline by monitoring faster and more accurately on a greater scale.



Merit Award

Innovation Biotic Coffee
Company Vagaso Company Limited
Innovator Rungsak wisessakchai

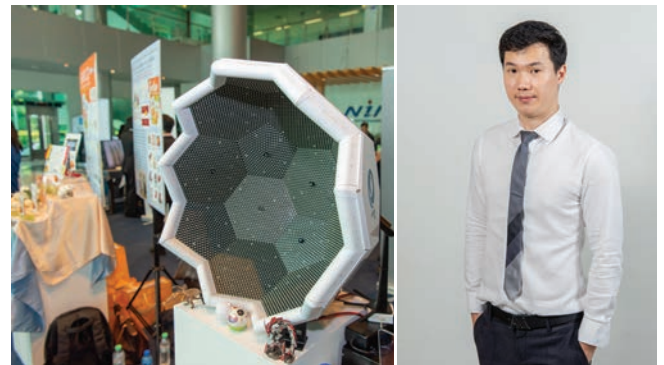
Innovation Biotic Coffee is a global innovation of a bioorganic coffee that has undergone a process to improve the beans of both Arabica and Robusta coffee varieties by highlighting the beneficial properties of caffeine as well as taste and fragrance for the consumer. The process adds GABA to create Saturated & Light Caffeine, which imbues the coffee with special properties, eliminates toxic and chemical residues, and enhances the original characteristics of the coffee.



Merit Award

Innovation High Fidelity Multi Material 3D Scanner
Company Lumio 3D Company Limited
Innovator Borom Tunwattanapong

Innovation A global innovation of a high-fidelity multi-material 3D scanner, which is the first in the world to use fully-scalable, continuous-beam LED technology. It can scan a variety of surfaces such as plastic, wood, metal, paper, glass, skin, fruit and food, which other conventional scanner types can not.



National Innovation Awards 2018 for Social Contribution

Innovation Braille Learning
Department Rajamangala University of Technology Isan
Innovator Supatinee Kornsing

Innovation A global innovation of a learning aid for those who are just starting to learn Braille. The innovation allows students to learn Braille by themselves. The device can also enhance levels of enjoyment and happiness among blind students as it has a self-test mode with a game-like score for the number of Braille symbols that students can remember.



National Innovation Awards 2018 for Social Contribution



1st Runner-Up

Innovation Tb D-tect Product for Identification of the *Mycobacterium tuberculosis* Complex

Department Srinakharinwirot University

Innovator Asst. Prof. Dr. Thongchai Kaewphinit

Innovation A global innovation of a test kit with dry powder reagent for the detection of tuberculosis genes in *Mycobacterium tuberculosis*, using direct samples. The kit is easy to use with high sensitivity and specificity within 45 minutes to use. It can be used in the field to prevent and track the disease, leading to the prevention of spread of tuberculosis from *Mycobacterium tuberculosis*. The kit can detect the presence of the diseases in amounts as low as 10 cfu / ml.



2nd Runner-Up

Innovation Patrol Gun Boat - H.T.M.S. LAEMSING

Company Marsun Company Limited

Innovator Patrawin Chongvisal

Innovation An industry-level innovation of a patrol gun boat. The H.T.M.S. Laemsing is the first and only patrol gun boat designed and built by Thais. The vessel's primary missions are to intercept, patrol and prevent marine and coastal infiltration; afford protection to fishing and merchant vessels and natural resources in the Gulf of Thailand and the Andaman Sea; uphold maritime laws as assigned to the Navy; and ensure the security of the royal family. The vessel also supports various naval operations and renders assistance to disaster victims in marine and coastal areas.



Merit Award

Innovation Smart Governance for Public Service on Land Use Policy and Regulation

Department Thammasat University

Innovator Assistant Professor Dr. Sangdao Wongsai

Innovation A national innovation that integrates science and technology combining 1) Geographic Information System (GIS), 2) Internet and Web Technology, and 3) Public and Legal Administration, as well as the integration of government data across multiple agencies and the use of qualitative and quantitative data analysis for unstructured Thai language legal information. The innovation employs processing principles to obtain patterns and structured data that can help reduce the problem of discrepancies in interpretation and enforcement of the law.



Merit Award

Innovation Whole Blood Reference Material for Blood Glucose Testing by Glucose Meter

Company Wemedlab Center Company Limited

Innovator Boonchai Trebuphachatsakul

Innovation An industry-level innovation of a whole blood reference material for human blood samples that are used to measure glucose levels by glucose meter according to international standards with low, medium and high blood sugar levels for complete clinical coverage. The number of blood cells available for glucose meters is compatible with Photometry and Amperometry, packaged in 2-ml ready-to-use tubes, with no need to add water or wait for dissolving. It can be transported under standard conditions and does not need to be refrigerated like conventional imported products. The product satisfies the ISO 13528 standard and is currently undergoing proficiency testing (PT) at the NU MLC Proficiency Testing Center.



Rice Innovation Awards



รางวัลนวัตกรรมข้าวไทย

The Thai Rice Foundation under the Royal Patronage has collaborated with the National Innovation Agency (Public Organization) to organize the annual Rice Innovation Awards which this year are in their 12th consecutive year. The awards aim to select and recognize innovative products derived from Thai rice and manufacturing processes related to Thai rice that offer strong potential for commercial application and that bring benefits to national social and economic development. The announcement and presentation of the awards help facilitate awareness and development of innovative learning technologies and Thai rice innovations, as well as boosting the morale and prestige of innovators to drive innovation within the sector. This year, 2018, the competition is divided into two categories – Rice Innovation Awards in the Industrial Level and the Community Enterprise Level.

Judging Criteria

Judging is based on five criteria:

1. Innovation
2. Creativity
3. Added value to Thai Rice
4. Potential for commercial development
5. Contribution to society, economy and environment

Prestigious Awards (for each category)

Awards worth Bt300,000 in total

- Winner** • Royal Trophy conferred by HRH Princess Maha Chakri Sirindhorn with an Bt80,000 monetary prize
- 1st Runner-Up** • Bt40,000 monetary prize
- 2nd Runner-Up** • Bt20,000 monetary prize
- Merit Awards** • Bt10,000 monetary prizes (2 awards)

มูลนิธิข้าวไทย ในพระบรมราชูปถัมภ์ และสำนักงานนวัตกรรมแห่งชาติ (องค์การมหาชน) กำหนดจัดการประกวดรางวัลนวัตกรรมข้าวไทยเป็นประจำทุกปี ซึ่งในปีนี้เป็นปีที่ 12 ติดต่อกัน เพื่อคัดเลือกนวัตกรรมผลิตภัณฑ์ข้าวไทย รวมทั้งกระบวนการผลิตที่เป็นนวัตกรรมเกี่ยวข้องกับข้าวไทยที่มีศักยภาพสูงเชิงพาณิชย์ อันจะก่อให้เกิดประโยชน์ทั้งในด้านเศรษฐกิจและสังคมของประเทศ เพื่อส่งเสริมให้เกิดการพัฒนาข้าวไทยซึ่งรวมทั้งผลิตภัณฑ์ และกระบวนการผลิต โดยการประกาศเกียรติคุณและมอบรางวัล และยังส่งผลให้เกิดความตื่นตัวและการพัฒนาในด้านเทคโนโลยีและนวัตกรรมข้าวไทยรวมทั้งเป็นขวัญกำลังใจและยกย่องผู้คิดค้นคิดและผลักดันนวัตกรรมข้าวไทยจนบรรลุผล ซึ่งในปี 2561 ได้แบ่งประเภทการให้รางวัลออกเป็น 2 ประเภท ได้แก่ รางวัลนวัตกรรมข้าวไทยในระดับอุตสาหกรรม และรางวัลนวัตกรรมข้าวไทยในระดับวิสาหกิจชุมชน

เกณฑ์การตัดสินผลงาน

การตัดสินรางวัลอาศัยหลักเกณฑ์การพิจารณา 5 ด้าน ได้แก่

1. ความเป็นนวัตกรรมของผลงาน
2. ความคิดสร้างสรรค์
3. การสร้างมูลค่าเพิ่มแก่ข้าวไทย
4. ศักยภาพในการพัฒนาสู่เชิงพาณิชย์
5. ผลประโยชน์ที่ได้รับทางสังคม เศรษฐกิจ และสิ่งแวดล้อม

เกียรติยศแห่งรางวัล (ทั้ง 2 ประเภทรางวัล)

รางวัลทั้งหมดมูลค่ากว่า 300,000 บาท

- รางวัลที่ 1** • โล่พระราชทานจากสมเด็จพระรัตนราชสุตาภสยามบรมราชกุมารี และเงินรางวัล 80,000 บาท
- รางวัลที่ 2** • เงินรางวัล 40,000 บาท
- รางวัลที่ 3** • เงินรางวัล 20,000 บาท
- รางวัลชมเชย** • เงินรางวัล 10,000 บาท (2 รางวัล)

Rice Innovation Awards 2018 in the Industrial Level



Innovation: KD Care: Ready-to-eat Low-Protein Thai Pathumthani Fragrant Rice
Innovator: Mr. Ravipol Krisadaphong, Mr. Vinyoo Pichponhsa, Mr. Hideo Saito
Thai Nutrition Technology Co., Ltd.

Academic Support: An internal corporate research project
Tel: 02-036 9888

Patent/Petty Patent: -

Innovation: A national innovation of a ready-to-eat low-protein rice product. Thai pathumthani fragrant rice, which has a protein content of 5 – 8 percent, is subject to digest protein by an enzymatic process and then dried. The resulting rice, with a protein content of less than 1.19 g / 100 g,

is packaged in retort cups and sterilized as ready-to-eat rice. This rice product is beneficial to patients with kidney disease who are able to consume more protein from meat if the protein content of the rice is reduced. The patients need essential amino acids that are only available in good-quality meat.

1st Runner-Up

Innovation: BR Staining Kit: Forensic Sperm Cell Staining Kit Produced from Glutinous Rice
Innovator: Asst. Prof. Dr. Chollanot Kaset, Dr. Sirinart Chomean, Ms. Kolunya Saenguthai
Department of Medical Technology, Faculty of Allied Health Sciences, Thammasat University Rangsit Campus
02-986 9213 ext. 7226 / 086-391 8447



Tel: 02-986 9213 ext. 7226 / 086-391 8447
Patent/Petty Patent: In the process of application
Innovation: A global innovation of a forensic stain extracted from black glutinous rice for evaluation of sperm cell characteristics as a factor in determining fertility, and in forensic science in analyzing samples from stains, cotton fragments, swabs, etc., in rape cases. An aqueous solution of potassium alum, citric acid and ethanol is used to extract the dye from glutinous rice, which can be used as an analytical stain. The product can substitute imported synthetic stains and replace Hematoxylin dye derived from Log Wood. The results of the glutinous rice stain are no different from those of conventional synthetic stains.

2nd Runner-Up



Innovation: Herbalist Siam: Red Jasmine Rice Phyto Cell Series
Innovator: Mr. Thadpol Jeerachotinan
Wathoothorn Co., Ltd.
Tel: 02-966 1872
Academic Support: Agricultural Research Development Agency (Public Organization) and Mae Fah Luang University
Patent/Petty Patent: -
Innovation: A national innovation of an extract of red Jasmine rice callus, which contains key ingredients including phenolic compounds, procyanidin and amino acids. Tissue culture is used to produce rice callus with a higher content of important ingredients than can be extracted directly from the grain, while the antioxidant activity is three times greater than in rice grain extracts. The extract has been developed using natural ingredients as soap, cream and serum products.

Innovation: OKU Baker: Rice Bread Mix
Innovator: Ms. Ngamjit Lowithun, Ms. Sunsanee Udomrati
Institute of Food Research and Product Development (IFRPD), Kasetsart University
Tel: 02-942 8629 / 086-908 7467
Patent/Petty Patent: In the process of application

Innovation: A national innovation of a rice-flour bread mix product which utilizes rice varieties of low amylose content together with glutinous rice, ground using a semi-wet milling process to obtain a flour of consistent particle size. The resulting flour is combined with modified starch and other ingredients to produce a bread mix to substitute wheat flour 100 percent, but resulting in a texture similar to bread made from wheat flour. The bread mix is appropriate for use with bread-making machines or kneading by hand, in the same way as wheat flour.

Merit Award



Rice Innovation Awards in the Community Enterprise Level

1st Runner-Up



Innovation: RARUMBO: Nutritional Supplement
Project Owner: Ms. Urai Meesit, Ms. Pimpapich Piwhom
Bhumirak Community Enterprise Group
Academic Support: NSTDA and BAAC
Tel: 082-556 4519
Patent/Petty Patent: -
Innovation: A national innovation of a nutritional supplement produced from rice bran and Moroheiya, a type of vegetable. Following a controlled period after the rice-polishing process, the moisture content and thickness of the rice bran is adjusted using a microwave process. The bran then passes through an extraction process followed by spray drying to impart porosity and a suitable consistency to the bran for processing in tablet form.



Organized by The Science Society of Thailand under the Royal Patronage in conjunction with the National Innovation Agency. Entering its 18th year, the Thailand Innovation Awards promote creative thinking among Thailand's youth and aim to initiate research and innovations with potential applications in industry or commerce that could be developed commercially. The Awards feature the STEAM4Innovator innovation capability development plan for Thai youth who wish to progress to become innovators. Participating youth will receive technical and business management advice from a network of experts and supporting agencies. They are required to participate in the network's activities in preparation for becoming actual business owners.

Two categories of competition

1. Science and Technology: Bachelor's Degree or Higher Vocational Certificate
2. Innovation in Physical Activities and Sports for Health: Bachelor's Degree or Higher Vocational Certificate and High School or Vocational Certificate

Bachelor's Degree or Higher Vocational Certificate

- 1st Prize
- HRH Princess Galyani Vadhana Trophy and Bt50,000 cash prize, certificate, participation in a contest or exhibition overseas for around one week
- 1st Runner-up Prize
- Honorary trophy, certificate and Bt30,000 cash prize
- 2nd Runner-up Prize
- Honorary trophy, certificate and Bt20,000 cash prize

High School or Vocational Certificate

- 1st Prize
- HRH Princess Galyani Vadhana Trophy and Bt20,000 cash prize, participation in a contest or exhibition overseas for around one week
- 1st Runner-up Prize
- Honorary trophy, certificate and Bt15,000 cash prize
- 2nd Runner-up Prize
- Honorary trophy, certificate and Bt10,000 cash prize



Innovation in Physical Activities and Sports for Health: Bachelor's Degree or Higher Vocational Certificate (2 teams)

Innovation: FALLOWER exercise machine – exercise machine for the elderly to minimize risk of falls and strengthen the leg muscles

From Walailak University

Innovation: Move of Life – exercise machine for boosting physical fitness, particularly agility.

From Institute of Physical Education Suphanburi

Innovation in Physical Activities and Sports Health: High School or Vocational Certificate Innovation (6 teams)

Innovation: Jump Performance Test Equipment – training equipment for vertical jump training for athletes

From Kanchanapisek Wittayalai School, Suphanburi Province

Innovation: Harmonic hand – exercise equipment to test arm strength

From Romklao School

Innovation: The Exercise of Elders – exercise machine specially designed for muscular development of the elderly with 6 posture options

From Phimanphitthayasan School

Innovation: Health Fit Pack – resistance exercise equipment for use in limited space

From Princess Chulabhorn Science High School Pathum Thani

Innovation: SPORTY-to-PERFECT – fitness wear for improving weight training efficiency by alerting wearers when their performance is correct in the Lunge, Squat and Dumbbell Row

From Kamnoetvidya Science Academy

Innovation: Wisebell (Dumbbell Hansa) – exercise equipment consolidating dumbbell, barbell, homegym and jump rope

From Princess Chulabhorn Science High School Pathum Thani

Innovation in Science and Technology (5 teams)

Innovation: Inevent - Platform to facilitate more convenient event organizing for both exhibitors and visitors

From King Mongkut's University of Technology Thonburi

Innovation: U-save 2 (Ultrasonic atomizing & vapourizing equipment V.2) - Fuel-saving engine

From Kanchanaburi Technical College

Innovation: Recombinant human peptide – a new alternative to reduce the use of antibiotics and preservatives. Hybrid DNA capable of inhibiting the growth of microorganisms to reduce the use of antibiotics and preservatives.

From Kanchanaburi Technical College

Innovation: In situ forming gel from fatty acid for treatment in patients with osteoarthritis after post-surgery total knee arthroplasty – A pharmaceutical innovation for intake of medication by injection.

From Silpakorn University

Innovation: Antibacterial and Super Absorbent Gauze Wound Dressing for Medical Application – Gauze Wound Dressing for Medical Application utilizing green technology.

From King Mongkut's University of Technology Thonburi



Design Innovation Contest

“Design Innovation” refers to a new product of business which is designed creatively with technologies and that is beneficial for the economy and society.

The Design Innovation Contest (DIC2018) has been organized for the 10th time this year to foster the development of innovative products using design as a key mechanism for their creation. Product design should result from a combination of the Technology Element and the Creative Element, which reveal the personality, originality and meaning of each product. “Design Innovation” is a crucial factor in the development of creative products, which contributes to the rapid growth of the creative economy in Thailand.

Judging Criteria

Four criteria are considered in the selection of the winners:

Degree of Design: Winning projects must be considered a design work and new idea.

Business Strategy: Design innovation projects must be supported by a business plan and an analysis of business opportunities.

Market Strategy: Design innovation projects must present the market's size, trend, and growth in their business.

Management: Organizations or teams participating in the contest must effectively present their organizational management and knowledge management of both design innovation and technology.

Prestigious Awards

Winners will receive trophies with monetary prizes totaling Bt400,000 and the following benefits:

- Media Publicity;
- Authorized use of the Design Innovation Contest logo with their awarded innovation for a period of two years; and
- The opportunity to receive funding for commercial development.

รางวัลการออกแบบเชิงนวัตกรรม

การออกแบบเชิงนวัตกรรม คือ ผลิตภัณฑ์ หรือธุรกิจใหม่ ที่มีการออกแบบอย่างสร้างสรรค์บนพื้นฐานของเทคโนโลยีที่เป็นประโยชน์ต่อเศรษฐกิจและสังคม

การประกวดโครงการออกแบบเชิงนวัตกรรมประจำปี 2561 (Design Innovation Contest, DIC2018) นี้ จัดขึ้นเป็นครั้งที่ 10 เพื่อกระตุ้นและส่งเสริมให้เกิดการพัฒนาผลิตภัณฑ์นวัตกรรมที่อาศัยการออกแบบเป็นตัวขับเคลื่อนในการรังสรรค์ผลงาน โดยผลงานต้องอาศัยการออกแบบที่ผสมผสานกันระหว่างการออกแบบเชิงเทคโนโลยี (Technology Element) และการออกแบบเชิงสร้างสรรค์ (Creative Element) ทั้งนี้ผลงานดังกล่าวต้องมีความเป็นเอกลักษณ์ (Personality) ความเป็นต้นแบบ (Originality) และมีความหมาย (Meaning) ด้วย “การออกแบบเชิงนวัตกรรม” จะเป็นเครื่องมือสำคัญของการพัฒนาสินค้าเชิงสร้างสรรค์ที่จะมีส่วนช่วยเร่งและขับเคลื่อนเศรษฐกิจสร้างสรรค์ (Creative Economy) ของไทย

เกณฑ์การตัดสินผลงาน

การตัดสินรางวัลอาศัยหลักเกณฑ์การพิจารณา 4 ด้าน ได้แก่ ระดับการออกแบบ (Degree of Design) ต้องเป็นการออกแบบและเป็นแนวคิดใหม่

กลยุทธ์ด้านธุรกิจ (Business Strategy) ต้องมีการนำเสนอวางแผนธุรกิจและการวิเคราะห์โอกาสทางธุรกิจ

กลยุทธ์ด้านการตลาด (Market Strategy) ต้องมีการศึกษาขนาดแนวโน้มและการเติบโตของตลาดในธุรกิจ

กระบวนการบริหารจัดการ (Management) องค์กรหรือทีมที่ส่งผลงานการออกแบบเชิงนวัตกรรมต้องแสดงการบริหารจัดการองค์การรวมทั้งการจัดการองค์ความรู้ทั้งด้านการออกแบบเชิงสร้างสรรค์และเทคโนโลยีได้เป็นอย่างดี

เกียรติยศแห่งรางวัล

รางวัลทั้งหมดมูลค่ากว่า 400,000 บาท พร้อมโล่รางวัล ผู้ได้รับรางวัลจะได้รับสิทธิประโยชน์ ดังนี้

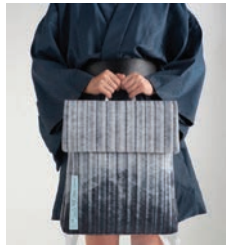
- ได้รับการเผยแพร่ประชาสัมพันธ์เชิงธุรกิจเกียรติผ่านสื่อมวลชน
- ได้รับสิทธิให้ใช้ตราสัญลักษณ์ของ การประกวดโครงการออกแบบเชิงนวัตกรรม ควบคุมผลงานที่ได้รับรางวัล เพื่อประชาสัมพันธ์หน่วยงานเป็นระยะเวลา 2 ปี นับจากวันที่ได้รับรางวัล
- ผลงานหรือผู้ได้รับรางวัล มีโอกาสได้รับทุนสนับสนุนเพื่อต่อยอดออกสู่เชิงพาณิชย์ตามกลไกและเงื่อนไขของสำนักงานนวัตกรรมแห่งชาติ

ECO Product Design

Project Name: Northern Lights
แสงเหนือ
Innovator: Mr. Nattapong MOUNGNAEM
นาย นัฐพงษ์ ม่วงแนม
Organization: Tardigrade 2564 Co., Ltd.
บริษัท ทาร์ดิเกรด 2564 จำกัด
Email: dyedeestudio@gmail.com
Website: http://demarkaward.net/en/demark_winner



Innovation: Northern Lights is an innovative hand-woven denim produced by a specially-designed handloom. Using the WEFT technique, the product is made from cotton threads that are dyed with natural colors and hand-spun to achieve strong and differing sizes of thread. This unique process yields "D Threads," offering unique and intricate characteristics. The threads are free of chemicals at all steps of the production process.



Project Name: Felt bag collection from recycled PET bottle,
ARTWORK BRAND
ARTWORK: กระเป๋าฟ้ลจากขยะขวดน้ำพลาสติก
Innovator: Ms. Siriwan Chivarak
สิริวรรณ ชิวารักษ์
Organization: ARTWORK
Email: siriwanpom@gmail.com
Website: http://demarkaward.net/en/demark_winner

2nd Runner-Up

Innovation: Artwork is an innovative design for environment in the form of a fashion bag developed from "Felt," which is produced from recycled PET bottles. Featuring strength characteristic comparable to leather materials and its recyclable qualification, felt is a new alternative material for developing eco-friendly products in the wake of the save-the-world trend.

Project Name: Turn to & Paper be in Collection
Innovator: Mr. Wittaya ChaiMongkhon
นาย วิทยา ชัยมงคล
Organization: 103 PAPER SHOP
Email: 103papershop@gmail.com
Website: <http://103paper.com>



2nd Runner-Up

Innovation: Turn to & Paper be in Collection is an innovative design for environment. Used paper is processed to increase its durability and formed into simple shapes. The product's natural colors from the original paper provide a natural appearance, making it suitable for various applications. It can also inspire users to create new businesses.

Food Design

Project Name: Okusno Snack
ขนมคางกุ้ง ตราโอคุสโน
Innovator: Ms. Pimmada Pattanapratyong
พิมพ์มาดา พัฒนปรีชญางศ์
Organization: Okusno Food Co., Ltd.
บริษัท โอคุสโนฟู้ด จำกัด
Email: okusnothailand@gmail.com
Website: www.okusnofood.com



Innovation: Okusno Snack is an innovative food product of Shrimp Chins Snack that creates value addition from shrimp thorax. The product is a new alternative as a functional high-calcium snack that can be enjoyed on various occasions. It has no trans fats and low levels of sodium



Project Name: Golden Eggs
ไข่ทองคำ
Innovator: Mr. Naphadtharin Rattanaphornnaphaphan
นาย นภัทรินทร์ รัตนพรนาพันธ์
Organization: G and E Food Co., Ltd.
บริษัท จีแอนด์อีฟู้ด จำกัด
Email: kokulo21@hotmail.com
Website: <http://gandefood.com/>

1st Runner-Up

Innovation: Golden Eggs are innovative century eggs that are highly nutritious and free from lead. Through research and an innovative production process, the products have golden egg whites and reddish orange yolks. It offers a different taste from traditional preserved eggs that are pungent.

Project Name: Romantic Night Soft Serve
ท็อปปิ้งซอสช็อค & ไอศกรีมช็อค
Innovator: Mr. Worawut Masaphan
นาย วรวัชร มัสพันธ์
Organization: Yan Wal Yun Corporation Group Co., Ltd.
บริษัท หยั่นหวอ หยุ่น คอโรปอเรชั่น กรุ๊ป จำกัด
Email: voravuth.mus@deksomboon.com
Website: <http://www.deksomboon.com>



2nd Runner-Up

Innovation: "Romantic Night" Soy Sauce Topping & Soy Sauce Ice Cream are innovative products from the seasoning sauce business. Romantic Night Soft Serve offers a uniquely delicious taste, while the Soy Sauce Topping can be ideally used to add a sweet taste to a variety of desserts. The products are the first of their kind in Thailand and are helping drive growth in the seasoning sauce and sweet toppings market.

Food Design

Project Name: Softened Mackerel
ปลาทุ้งก้างนิ่ม
Innovator: Ms. Atittaya Amatylkul
อาทิทยา อมาตยกุล
Organization: บริษัท ปลาทุ้งก้างนิ่มแมกกรอง จำกัด
Email: Pla2j.meow@gmail.com



2nd Runner-Up

Innovation: Softened Mackerel is an innovative product featuring value creation and differentiation to enhance competitiveness. The product undergoes a steaming process at 100 degrees Celsius to soften the bones. It allows consumers to conveniently enjoy the whole mackerel without the difficulty of deboning them.

Medical Design

Project Name: Portable Laparoscopic Surgery Training Kit
อุปกรณ์สำหรับฝึกผ่าตัดผ่านกล้องแบบพกพา
Innovator: Ms. Yaranya Yantapant
พญ. อรัญญา ยันตพันธ์
Organization: Gynecology Department, Rajavithi Hospital
สูตินรีเวช รพ.ราชวิถี
Email: yaranya@hotmail.com

1st Runner-Up

Portable Laparoscopic Surgery Training Kit is an innovative medical device produced from acrylic sheet, which is durable, lightweight and can be folded into the handle box that comes with the device for easy portability. It can be used with wireless mobile devices to replace both traditional cameras and monitors.



Project Name: Shirt for the Blind
เสื้อสำหรับผู้พิการทางสายตา
Innovator: Mr. Jira Chanaboriboonchai
นาย จิระ ชนะบริบูรณ์ชัย
Organization: ONCE
Email: supjujira@gmail.com
Website: <https://themomentum.co/once-t-shirt/>

2st Runner-Up

Shirt for the Blind is a medical innovation which uses Braille-based clothing labels on the collar. The labels provide the color and size information to enable blind people to choose clothing by themselves. The innovation solves the problem of blind people being unable to choose and buy clothes in day-to-day life.

Service Design

Project Name: ASA Hub
ชุมชนอาสา
Innovator: Mr. Tanapon Aukavongseree
นาย ธนพล อูควงศ์เสรี
Organization: Exwin Consultancy Co., Ltd.
บริษัท เอกชิน คอนซัลแตนท์ จำกัด
Email: tanapon@exwin.co.th



1st Runner-Up

ASA Hub is an innovative service design "platform" that brings together those who are interested in social development activities and developing quality of life who have participated in various organizations. ASA Hub has been set up without limitations to provide facilities for foundations or social organizations as well as companies with funding that aim to help society function smoothly and more efficiently. This would help build a broad and large community of volunteers for the benefit of the Thai and global societies.



Project Name: Spider-E: Hybrid robot for industrial inspection
หุ่นยนต์ไฮบริดสำหรับการตรวจสอบคุณภาพทางอุตสาหกรรม
Innovator: Mr. Laphonchai Jirachuphon
นาย ลภนชัย จิระชูพันธ์
Organization: OZT Robotics
Email: laphonchai@gmail.com

2nd Runner-Up

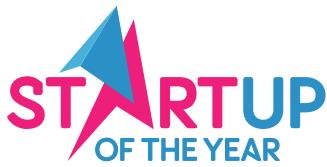
Spider-E is an innovative service design that enhances the performance of industrial quality-test robots by combining the capabilities of visual inspection and contact inspection as well as multi-dimensional mobility. The robot transforms the 'trade-off' of the two styles of robot into a 'trade-on'. The service is currently being patented in Japan.

Project Name: VR SIM – Virtual Reality Simulation Training Platform for Agricultural Vehicles
ระบบการฝึกอบรมพัฒนาทักษะการควบคุมรถทางการเกษตรด้วยเทคโนโลยีเสมือนจริง
Innovator: Mr. Permpong Aiewbundarnsuk
นาย เพิ่มพงศ์ เอียวบันดาลสุข
Organization: Blue Ocean Technology Co., Ltd.
บริษัทบลูโอเชียน เทคโนโลยี จำกัด
Email: pirmsong@blueoceantechnology.co.th



2nd Runner-Up

VR SIM is an innovative service design that applies virtual reality (VR) technology together with an IOT-based Simulation System to improve the efficiency of skills development in the control of agricultural vehicles. The product offers a wider perspective than conventional systems.



“Prime Minister Awards: National Startup 2018” and “Startup Thailand Awards 2018”

The awards recognize and honor Thai startup firms that have demonstrated outstanding performance over the past year as well as parties that promote and support the development of the Thai startup ecosystem and strengthen the potential of startup businesses to penetrate the international market.

Criteria for consideration:

- 1. Impact on the Thai economy and society
2. Contribution to the startup community
3. Innovation of product, service or business model
4. Ability of the founder and team
5. Potential for growth

Startup Thailand Award 2018

This award is held by the Ministry of Science and Technology in cooperation with the Thai Venture Capital Association (TVCA) and the Thailand Tech Startup Association (TTSA).

Award categories:

- Startup of the Year
• Global Tech Startup of the Year
• Evangelist of the Year
• Investor of the Year
• Corporate Contributor of the Year

Startup of the Year

- Startup in the target business with strong growth potential
• Capable of fostering change at the industrial level
• Supports development of the startup ecosystem
• Thai shareholders account for more than 50% and business development in Thailand
• Good corporate governance



QueQ Thailand Ltd., established by Ms. Varisa Sricharoen, has been created to increase the efficiency of technology in business. The application helps manage store operations and facilitates the payment of bills, hospital queuing, etc., creating a positive impact for the healthcare industry and government services. QueQ received the Startup of the Year Award in recognition of its growth and the positive impacts it has made on the healthcare industry and government services.

Global Tech Startup of the Year

- Startup in a target business with high growth potential
• Fosters broad industry transformation at the Southeast Asian regional level
• Commenced business in Thailand with overseas expansion
• Supports development of the startup ecosystem
• Operates in Thailand with good corporate governance



2C2P is an enterprise started by Mr. Aung Kyaw Moe to create full credit and debit online payment services for online trading, conveniently, quickly and reliably. The service offers a payment gateway, 123 service, online transactions without the need for a credit card, Easy Bills service and Qwik service, that facilitates payments via the Facebook message window.

2C2P won the Global Tech Startup of the Year Award because it is a startup established in Thailand which has been able to grow and expand overseas.

Evangelist of the Year

- Supports the national startup ecosystem
• Raises growth of the startup ecosystem to international levels

Ms. Chawisa Chen



Ms. Chawisa Chen, Director of the Thailand Tech Startup Association, the person behind the Startup Thailand Warrior program, and a representative of the Thailand Tech Startup Association (TTSA), has played a role in developing new entrepreneurs in the technology industry through her commitment to building an ecosystem to strengthen the potential of tech startups in Thailand.

Ms. Porntip Kongchun

Ms. Porntip Kongchun, former head of marketing for Google (Thailand) and founder of Jitta Company, plays a role in supporting potential investors by building an investment analysis platform focused on value creation (Value Investing). This helps investors save time analyzing stocks and enables them to make effective decisions and generate higher returns.



Ms. Chawisa Chen and Ms. Porntip Kongchun received the Evangelist of the Year Awards for their proven track records in promoting and supporting the development of the Thai startup ecosystem.

Investor of the Year

- Can foster growth among startup companies
• Contributes to the development of startup ecosystems
• Creates impacts in the national startup ecosystem
• Raises VC investment in the Thai market to international levels



N-VEST Venture is a joint-venture company based in Bangkok, Thailand, managing an investment fund of around US\$ 18 million, with an estimated investment of approximately US\$ 1.3 million from seed to growth.

Corporate Contributor of the Year

- Large company with strong growth potential
• Commenced business in Thailand with overseas expansion
• Contributes to the development of startup ecosystems in Thailand
• Able to elevate the growth of Thailand’s startup ecosystem to international levels



Huawei Technologies (Thailand) Company Limited is a large company that has significant growth potential and the capability to transform the industry. The company plays a role in supporting the development of startup ecosystems by establishing startups and startup ecosystems in the country and by raising the level of growth of Thailand’s startup ecosystem to international levels, based on a commitment to complete operational systems and continuous innovation.

Huawei won the award because it is a large company that has contributed significantly to the development of Thailand’s startup ecosystem and supported Thai startups to enter the international market.

UAV Startup 2018



UAV Startup 2018 is an award-based initiative to promote and support the expansion of technology and innovation in the Unmanned Aerial Vehicle (UAV) industry. The competition aims to build startup companies capable of helping solve problems and present commercially viable business models for Thailand's UAV industry. It has been organized under the cooperation of the National Innovation Agency (Public Organization) or NIA and the Geo-Informatics and Space Technology Development Agency (Public Organization) or GISTDA.

Competition format

The UAV Startup 2018 competition was organized under the Autonomous System & Data Analytic concept and divided into economic and social categories.

The three-stage competition was arranged as follows:

1. Idea Competition Stage – Qualified ideas were rewarded with prizes of 30,000 Baht/project. Ten projects in the economic category and 10 projects in the social category were selected to develop project proposals. The 20 project teams received training on technologies and business from NIA and GISTDA.
2. Proposal Pitching Stage – Qualified proposals were rewarded with prizes of 80,000 Baht/project for use in the Prototypes development. Five projects in the economic category and five projects in the social category were selected.
3. Prototype Perform Stage – Three projects in the economic category and three projects in the social category were shortlisted. The winner, first runner-up and second runner-up were rewarded with prizes of 120,000 Baht, 50,000 Baht and 30,000 Baht, respectively.

The following 10 projects passed through to the final stage:

Economic Category		
The Winner	Innovative UAV for spraying, promoting the growth of pomology for export	R&D Envi – Innotech Co., Ltd.
1 st Runner-up	Custom fertilizer spreading for rice farm by Unmanned Aerial Vehicle	THAMOS Corporation Co., Ltd.
2 nd Runner-up	Intelligent Surveillance Drone	iCreativesystems Co., Ltd.
Candidate	Application of UAV to manage water resources in off-seasonal rice paddies	Datum Line Company Co., Ltd.
Candidate	Autonomous drone swarm	Visan Technology Co., Ltd.

Social Category		
The Winner	UAV for the production of shrimp based on biological principles	Ms. Piyarat Vijuksungsith Faculty of Agriculture Kasetsart University, Kamphaeng Saen Campus
1 st Runner-up	Innovative Security UAV System Centre	Rimmai Heavy Co., Ltd.
2 nd Runner-up	Unmanned Aerial Vehicle Application for Pavement Survey, Monitoring and Evaluation	Mr. Suphongsak Khetkeeree
Candidate	UAV for fogging to eliminate mosquitoes	Rattana Boonprasert, PhD Faculty of Environment and Resource Studies, Mahidol University
Candidate	Fire Fighting UAV	Mr. Rungrot Krungkasem

Prototype Perform Economic Category



Project Title: Innovative UAV for spraying, promoting the growth of pomology for export
Innovator: R&D Envi – Innotech Co., Ltd.
Innovation: A UAV system for spraying, promoting the growth of pomology for export that works between the demand assessment system and the growth enhancers of fruit trees based on the principle of Normalized Difference Vegetation Index (NDVI) photography. The UAV utilizes a program developed to send the information retrieved to a control system to ensure accurate spraying and safety to the farmers. The system can deploy two types of biochemical, helping reduce costs by as much as 40-50 percent of total production costs when compared to conventional technology.

Project Title: UAV for the production of shrimp based on biological principles
Innovator: Ms. Piyarat Vijuksungsith
 Faculty of Agriculture Kasetsart University, Kamphaeng Saen Campus
Innovation: This UAV for closed-system shrimp production based on biological principles is an important tool in the comprehensive management of shrimp aquaculture which can work on shrimp farms with obstructions, such as bird prevention netting. The device uses a Terrain Following Radar Module system to measure the distance of obstructions and a liquid level sensor to accurately control the amount of food, medicines and chemical substances distributed throughout the pond. It is capable of differentiating between shrimp ponds and other areas off-shore shrimp ponds and can be adapted as a UAV capable of collecting water from shrimp ponds without causing sedimentation that could affect the shrimp. The system helps reduce the problem of chemical residues in the shrimp and the environment that may have a direct impact on consumers and the environment.

Prototype Perform Social Category



Total Innovation Management Award 2018

The Total Innovation Management Award is being held for the third time this year through the cooperation of the National Innovation Agency (Public Organization), the Stock Exchange of Thailand and the Market for Alternative Investment, to recognize and honor entrepreneurs who have effectively introduced Total Innovation Management (TIM) into their organizations and which serve as role models in promoting innovation and capacity building for other organizations in the country. Candidates were selected through evaluations based on visits, presentations and talks relating to their innovation culture, as well as discussions and exchange of ideas with the executives of 35 companies listed on the Stock Exchange of Thailand, the market for alternative investment, and from two state enterprises.

Selection Criteria

Organizations are selected based on an analytical framework focused on leadership, strategic planning based on innovation, effective organizational structure, support and promotion of opportunities for innovation-based activities within the organization, facilitation of an effective environment for innovation as well as development of networks, fostering a culture of innovation within the organization, and development of the knowledge base and employee care. The ultimate aim is to integrate innovation more tangibly within the organization based on the concept: "Innovation: making creativity into value reality".

This year, awards for the "Top Innovative Organization" were presented as follows:

Bangkok Dusit Medical Services PCL.

M.D. Poramaporn Prasarttong-Osoth
Chief Operating Officer
Registered Capital: Bt1,758,223,567.20
www.bangkokhospital.com



Total Innovation Management: BDMS is a large private hospital operator with a network of hospitals in Thailand and Cambodia operating under six hospital groups together with a network of medical support companies including medical laboratories, pharmaceuticals production, saline production, etc. With its network and lengthy experience in managing innovation, establishment of organizational goals and strategies, and clearly defined innovations for each group,



BDMS has become a leading provider of medical service innovation with promotion and support of concrete innovation activities since the onset of cooperative activities with national and international research institutes. A portfolio of research works and innovations has been developed that will affect the future of health care. Ultimately, a culture of innovation has been fostered by qualified physicians who exchange the knowledge which leads to real learning platforms and experimentation in developing the skills needed for optimal services and customer satisfaction.

S & J International Enterprises PCL.

Mr. Thirasak Vikitset
Chairman of the Executive Board
Registered Capital: Bt200,000,000.00
www.snjinter.com



Total Innovation Management: S & J is a leader in the production of all types of cosmetics on behalf of both domestic and foreign brand names and according to the formulas and standards of the customer or products researched and developed by the company. The company is committed to promoting innovative activities and is preparing for the development of human resources to match the new demands of



consumers, with standardized research and testing rooms to drive innovation to answer the needs of consumers and develop new formulas according to customer needs. The company focuses on Innovation Foresight related to the cosmetics business and especially for ageing society. The company has also created a database of raw materials that enables the R&D team to have sufficient information for their use in creating effective solutions. Social listening technology is a key factor in understanding and co-creation with customers.

Innovation Capability Promotion Program for Listed Companies on the Stock Exchange



PTG Energy PCL.

Mr. Pitak Ratchakitprakarn
President & Chief Executive Officer
Registered Capital: Bt1,670,000,000.00
www.ptgenergy.co.th



Total Innovation Management: PTG is a leading energy company, operating under six groups – 1. Fuel business under PT gas stations; 2. Fuel oil distribution for other oil traders and industrial operators; 3. LPG retail business; 4. Fuel transportation and transmission; 5. Max Mart convenience stores and Thai coffee shops under the

Coffee World brand; and 6. Distribution of other products and services, such as lubricants under the PT Maxnitron brand. The company attaches great importance to corporate culture and effective personnel development through the PTG Gateway, which emphasizes customer service, teamwork, honesty and ethics, and continuous improvement.

Global Power Synergy PCL.

Mr. Chawalit Tippawanich
President & Chief Executive Officer
Registered Capital: Bt14,983,008,000.00
www.gpscgroup.com



Total Innovation Management: GPSC is a leader in the power business, set up to support the growth of PTT Group and other industries and ready to make investments in both domestic and foreign power plants. The company is also committed to developing the energy storage business and to move forward as a global leader in innovation and sustainability. The company has established a clear

business strategy to address its main goals. It also demonstrates the results of accessing technology and knowledge that can lead to the design of solutions for related businesses. In addition to creating a corporate culture reliant on the knowledge of dedicated staff to drive innovation, the company also has an extensive portfolio of innovation. Finally, the company fosters a working environment that is conducive to concrete innovative activities.

Ubis (Asia) PCL.

Mr. Sawang Dhngwattanotai
Chairman of the Executive Committee
Registered Capital: Bt228,000,000.00
www.ubisasia.com



Total Innovation Management: UBIS is a manufacturer and distributor of sealing compounds and lacquers used in the manufacture of metal containers and lids for food, beverages and other products. The company uses its expertise and experience to build up collaborations and research networks among its customers

and supply chains. The company is also ready to establish its own research and development team to effectively respond to the problems and needs of its customers. Creating a corporate culture and linking research databases helps deliver the right solutions to customers, while human resource development in research and development, sales support and business development maximizes customer satisfaction and experience.

ange of Thailand



Mahidol University
College of Management



Social Innovation Business Plan Contest 2018

The National Innovation Agency (NIA) has cooperated with the Faculty of Social Sciences, Srinakharinwirot University, to hold the Social Innovation Business Plan contest with an aim to raise social awareness on the utilization of innovation to solve social problems and promote sustainable change in terms of social and economic aspects. The contest is held in two categories, general and student.

Both agencies have joined forces in incubating knowledge and concepts on social business to contestants, encouraging them to come up with outstanding social innovative thinking which will be further put into practice.

Qualifications of contestants and terms of application:

1. Participants must be 15 years of age or above with teams of not more than five people with two contest categories – general and student studying no higher than Master's degree.
2. Must demonstrate commitment and creative ideas to develop social innovation.
3. Can implement an actual business plan over a period of more than four months.
4. The proposed business plan must be created solely by the contestants and must not reproduce, copy, duplicate or adapt the work of others.

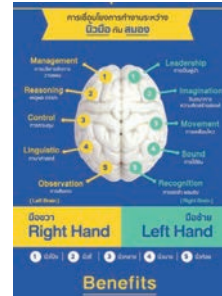
Proposed innovation concepts must cover four key aspects:

1. Innovation such as in terms of product, service, process or management that are considered a breakthrough.
2. Concrete process and methodology.
3. Present a clear social impact.
4. Viable business development model.

Monetary prizes and support

1. Monetary prizes
 - General category
 - Winner's Prize Bt100,000
 - 1st Runner-up Prize Bt50,000
 - 2nd Runner-up Prize Bt30,000
 - Merit Prize (2 prizes) Bt10,000
 - Student category
 - Winner's Prize Bt 50,000
 - 1st Runner-up Prize Bt30,000
 - 2nd Runner-up Prize Bt10,000
 - Merit Prize (2 prizes) Bt5,000
2. Winners will participate in the 7th Social Enterprise training course, held by the Faculty of Social Sciences Business Administration Department of Srinakharinwirot University.
3. The contesting teams that have passed the selection process and attended the training as per requirements will achieve training certificates.
4. The contesting projects are entitled to funding support from the National Innovation Agency.

General Category Winners



RightView Team

An innovative business plan to help manage brain function by modifying piano notes, which are normally difficult to learn and read, to be just 1-5 numbers, making it easy to read music and play the piano within just 30 minutes. The technique can be developed as a business to help children with brain disorders practice meditation, develop smaller muscles of the body and help relax the brain and mind.



1st Runner-up Prize: Earth Shop Team

An innovative business model using eco-friendly consumer products without packaging. The Earth Shop uses KIOSK mobile technology to sell unpackaged products in communities or other areas that comprise target groups of the company. The IOT system is used to evaluate the run-in period to achieve the maximum service value.



2nd Runner-up Prize: Jitta Vimangsa Team

An innovative business plan for new RF Fast Track and RF Pro-Active services that help provide psychological counseling to individuals and organizations. The services help pinpoint the correct issues, as well as reduce work-related stress. A Mobile Application is also employed to make the service and work of psychologists easier and more effective.

General Category Winners



Merit Award: Kasetchaladpeusangkorn Team

An innovative business plan for a service and management system in the form of a mobile application that allows interested farmers to share unused machinery. The system incorporates an assessment process to determine appropriate prices and to help in matching the renters of agricultural machinery with interested farmers.



Merit Award: Pooyaijaidee (jakpanmaifree) Team

An innovative service that uses the Mobile Web as a tool to help distribute wood to interested parties. The service also incorporates a management system to receive requests from interested parties using an AI process, which ensures so that users enjoy equal access with lower management costs. The scheme enhances awareness of the needs to protect the environment in order to create sustainability.

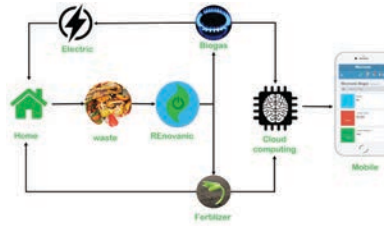
Student Category Winners



SBAC Startup Team

An innovative business plan utilizing new forms of web-based and mobile application service and management tools that make it easier for disabled people to gain employment according to the requirements of employers. The plan uses management and data processing systems to assess the ability of the disabled, helping increase their chances of employment and providing them with an income to support themselves.

Student Category Winners



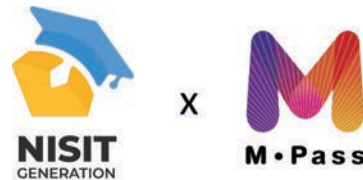
1st Runner-up Prize: REnovanic Team

An innovative business plan to transform organic waste products into clean energy for the household. Designed as a closed system, the product does not produce odors while sensors assist in safely converting organic waste into bio-gas using the IOT. The system enables every household to benefit from clean energy, while reducing emissions of greenhouse gases at the same time.



2nd Runner-up Prize: Extrac Team

An innovative business plan employing a Mobile Application Platform as the principal tool to help students who are interested in working for society, find an outlet for brainstorming and meeting others to create projects that help solve social problems. The plan incorporates systems to help viable projects raise funds online to get started.



Merit Award: Nisit Generation Team

An innovative business plan of a new type of service to help students gain access to information, both relevant to their courses and also extra-curricular self-development information. The service uses an AI system to screen useful information, such as applications for both domestic and international seminars at prices that students can afford, admissions for training in various agencies, etc. The service will enable those who represent the future of the country to gain access to appropriate self-development opportunities.



Merit Award: Letsgive Team

An innovative business plan of a 200 IQ online game that will help underprivileged children gain access to knowledge to enhance their classroom learning in science and everyday skills. The game is designed to attract the attention of the children, making the new knowledge interesting. The system will be able to develop in-game information so that it is up to date and suitable for further learning.



Media Innovation Awards

Organized by the National Innovation Agency.

The Media Innovation Awards are being organized for the first time in 2018 to promote and encourage innovation in the media industry, including new media technologies or the development of new content formats. These will foster the creation and uptake of innovations in the media industry, enhancing and adding value to media and boosting the competitiveness of content. Such media innovations can be considered important tools in stimulating the economy and increasing the competitiveness of the country.

Judging Criteria

1. Creativity
2. Innovation
3. Media Execution
4. Benefits

Award Categories

1. Digital Media

- Business Model Innovation
- Public Service
- Civic Participation
- Data Driven Innovation
- Innovation from Research

2. Traditional Media

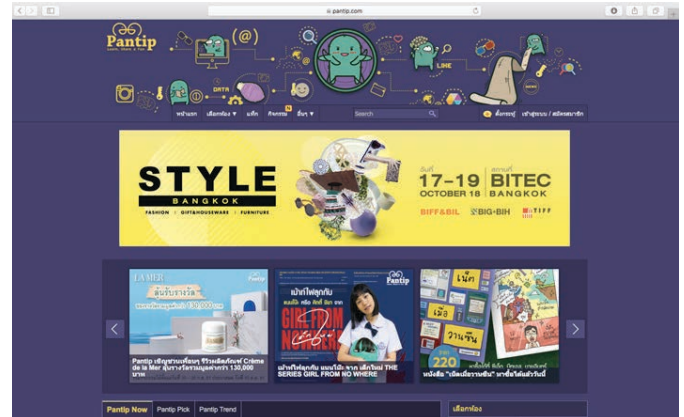
- Traditional Media Innovation
- Public Media
- Civic Participation
- Data Driven Innovation

Digital Media

Merit Award Public Service



Civic Participation



Innovation Company Innovator

Witsanook Facebook Page
Faculty of Science, Mahidol University
Assoc. Dr. Palangpon Kongsaree /
Assoc. Dr. Weerachai Siripunvaraporn

Innovation Company Innovator

www.pantip.com
Internet Marketing Co., Ltd.
Internet Marketing Co., Ltd.

Innovation

The Witsanook or “Fun Science” Facebook page is a science and technology media illustrating aspects of our environment and everyday life. The stories are beneficial to improving quality of life and to present up-to-date research, with easy-to-understand infographics and compelling and interesting information on Facebook. The information helps eliminate unsubstantiated beliefs and social misconceptions, while stimulating learning, especially among younger generation followers, who are considered to be the future of the country.

Innovation

“Pantip.com” is an online public webboard offering a diverse array of content. Visitors to the webboard can communicate through 38 chat rooms covering a range of topics. They can chat and exchange their experiences and knowledge on daily life topics, cooking, tourism, education, health, sports, movies or drama, as well as exchange their views on social issues under the LEARN SHARE & FUN concept. The webboard serves as an open forum for public participation, regardless of gender, age, location and education. It helps inspire new ideas which serve as good starting points to drive society. Useful threads are maintained in the website’s archives for people of similar interests.

Traditional Media

Merit Award

Data Driven Innovation



Innovation Company Innovator

Sure And Share Center
MCOT Public Co., Ltd.
Mr. Peerapon Auntasaoat

Innovation “Sure And Share Center” is the first television program what shows the verification results of rumors in Thailand. The program has set up a “Sure And Share Center” with a different approach to traditional news production, from the information collection process, creativity and management, through to content publishing. The program, which is accessible via traditional and digital media, helps foster learning and behavior modification as well as a better understanding of media exposure and digital literacy. The program collects and stores information on the cloud to help analyze the online social media content and to extend the capability of system to reach more people in the future.

Merit Award

Traditional Media Innovation



Innovation Company Innovator

Smart TV (IPTV/OTT Platform)
United Studio Co., Ltd.
Mr. Nontawat Taerattanachai

Innovation Smart TV is an IPTV / OTT system based on the Media Platform concept. The flexible and easy-to-use system is compatible with future technologies using the Internet and supports live TV channels, VOD, karaoke, support for future models of virtual classrooms, VR, home shopping, online education, digital signature and entertainment systems. The Smart TV system reduces costs in traditional media.

Merit Award

Civic Participation



Innovation Company Innovator

Na Phue: Wholesale Community Business Networks Documentary
Thailand Urban and Rural Development Foundation
Dr. Kittachet Krivart (President of the Thailand Urban and Rural Development Foundation)

Innovation “Na Phue: Wholesale Community Business Networks” is a documentary sponsored by the Political Development Council and King Prajadhipok’s Institute based on the innovative “5 Sor” concept combining Innovative Media, Empowerment, Creativity and Development, which uses traditional media as the basis to drive information dissemination. The documentary empowers its viewers – primarily community residents – to become the innovators of the media themselves through easy-to-understand language, even though the content itself is profound. The documentary explains the problems encountered by communities and the solutions needed to improve their economic situation, which is the major issue faced by communities, through the establishment of wholesale community business networks. These networks enable village residents to reduce their household costs and set up community welfare funds to help support individual households within the community through the collective efforts of the villagers. The documentary is an example of the innovative use of media to solve the problems faced by communities.



NIA
สำนักงานนวัตกรรมแห่งชาติ

ITE INNOVATION
THAILAND
EXPO 2018

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