

WALAILAK UNIVERSITY

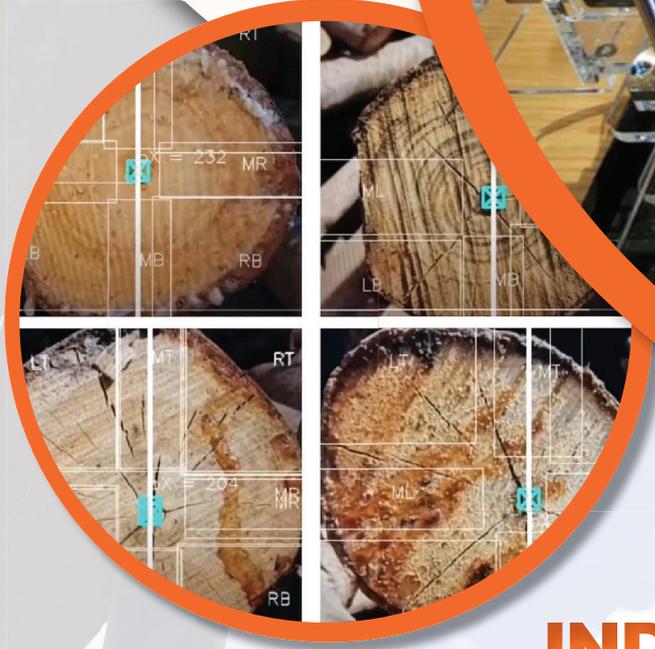
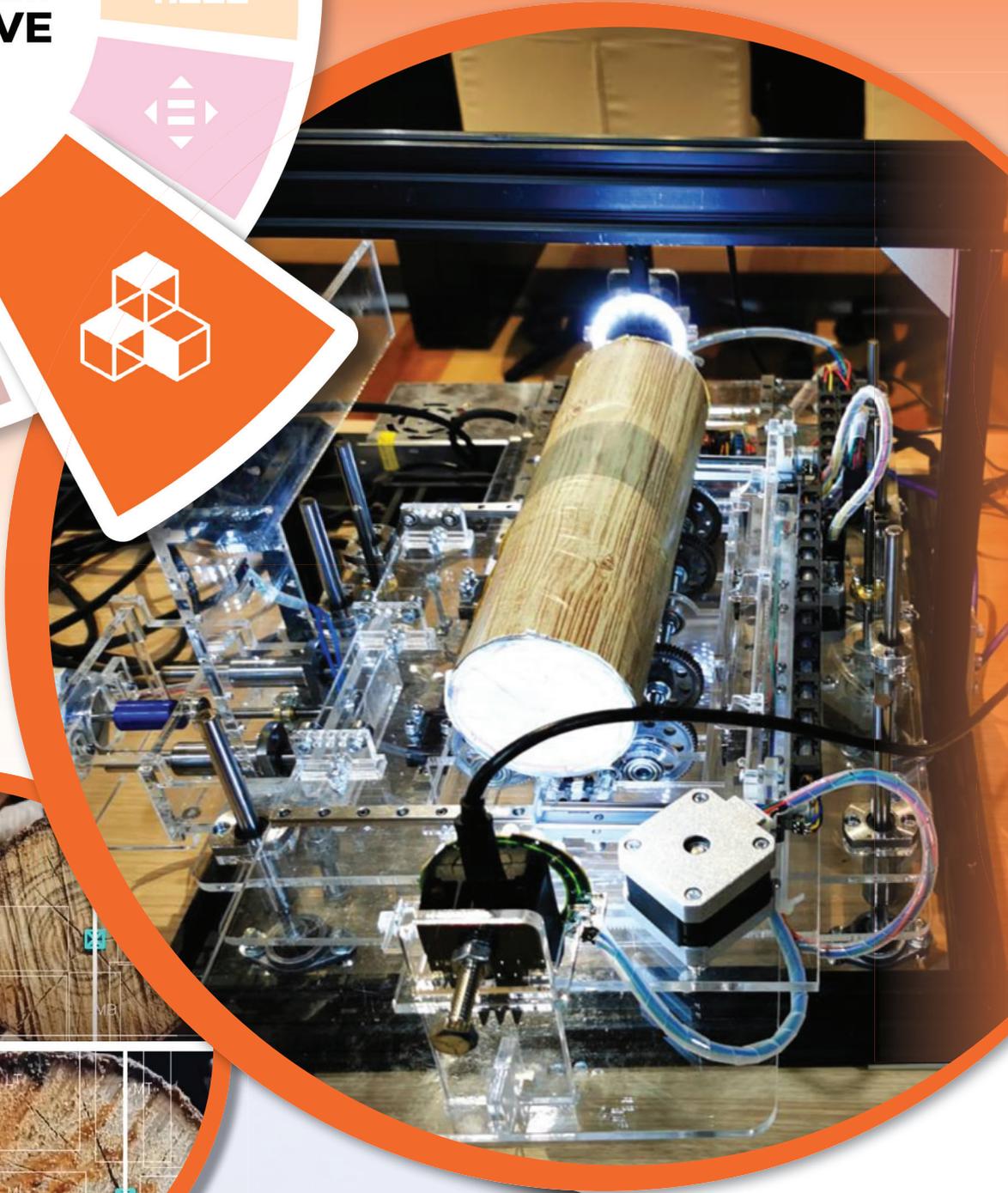


SDG

REPORT 2023-2024



SUSTAINABLE DEVELOPMENT GOALS



# INDUSTRY INNOVATION AND INFRASTRUCTURE

# 9

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# Walailak's Patent and Petty Patent Citing University Research



The Science and Technology Park of Walailak University (WU) has been advancing to promote startups and innovative entrepreneurs, especially those using advanced technology or Deep Tech, to access patent registration processes and legal knowledge through project activities and funding, as well as to create collaborative networks with the Department of Intellectual Property.

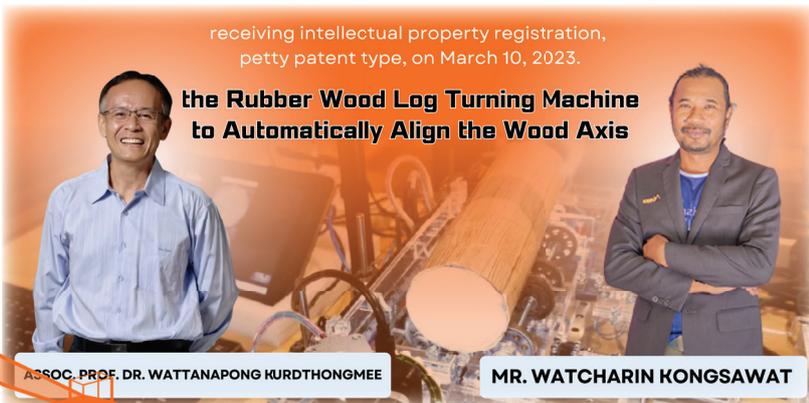
The achievements and successes of the university have promoted university personnel, resulting in the registration of intellectual property rights and their utilization for commercial innovation development. As a result, from the year 2021 to 2023, a total of 51 intellectual property registrations were made by university personnel.

Focusing on 2023, WU had the number of patents that cite research conducted by the university, totaling 13 patents citing university research to society and industry, consisting of 2 design patents and 11 petty patents, covering 5 groups of research areas from 16 Schools of the university, including:

- ▣ The food group: food processing, food innovation
- ▣ The pharmaceutical group: cosmeceuticals and herbs
- ▣ The science group: medical science, biotechnology
- ▣ The architecture group: design
- ▣ The agricultural technology: agricultural technology and fishery

Therefore, a key mechanism that helps drive the utilization of research for commercial innovation development is accelerating the value of Thai innovations through patent registration.

An example of a petty patent ready for technology transfer to benefit commercial use in the year 2023 is the Rubber Wood Log Turning Machine to Automatically Align the Wood Axis (Petty Patent No.21137), invented by Assoc. Prof. Dr. Wattanapong Kurdthongmee (The School of Engineering and Technology) and Mr. Watcharin Kongsawat.



The architecture group: design



An Example of Petty Patent Certificate



## Spin-offs from WU: The Businesses from University Knowledge

Being a Frontier Research University, Walailak University (WU), by the highly qualified faculty members, produces a large number of quality research studies and projects that give tangible results. Many research projects have high impact and achieve an outstanding success, enabling them to be established as spin-offs of the university, such as Walaibiocontrol Co., Ltd.

Walaibiocontrol Co., Ltd. is a subsidiary company of WU, which is a spin-off company of the School of Agricultural Technology and Food Industry, and Assoc. Prof. Dr. Warin Intana serves as the Chief Technology Officer (CTO). It was registered and established to benefit from the intellectual property of Walailak University for more than 3 years (since the year 2020), and it continues to operate its agricultural bioproduct manufacturing and distribution business for farmers.



### WALAIBIOCONTROL CO., LTD.



Under the drive of the Walailak Business Incubation Center (WIC) has actively supported the creation of businesses by leveraging the university's strong technology to address community and societal challenges. This has led to generating income for the organization. The company had an income of 6,094,940 baht in 2021, 4,893,553 baht in 2022, and the highest of 6,563,040.20 baht in 2023.

Moreover, the company has been awarded the international AABI Torch Entrepreneur Awards for its "TECHNOLOGY TRANSFER" model by the Asia Association of Business Incubation. Prior to this, the company had also received the TECHNOLOGY TRANSFER award from the Thailand Business Incubation Association.



In 2023, a total of 4 new companies were established to benefit from intellectual property of the university, including:

- ▣ PLANKTONWU CO., LTD. (Plankton Cultivation Technology)
- ▣ LAKWALAI BIOTIC CO., LTD. (Probiotics for Marine Shrimp Feed)
- ▣ OXAKIN INNOTECH CO., LTD. (An Emulsion Formula Containing Red Palm Oil that Can Reduce Rashes and Provide Moisturization)
- ▣ CHANCHOHERB LIMITED PARTNERSHIP (Skin-nourishing hydrogel technology derived from gac fruit extract)

2  
Companies

2021-2022

2  
Companies

2022-2023

6  
Companies

2023-2024

Therefore, creating businesses based on institutional knowledge in university by leveraging technology generated from research and development into commercial processes is a way to capitalize on intellectual property to generate income and economic value-added, leading to sustainable development, creating revenue cycles, and returning benefits to the educational institution.





## The revenue from the industrial sector of Walailak University



Walailak University (WU), classified as a Frontier Research University, has enhanced the quality of research output and significantly increased the number of groundbreaking research works. This has been achieved through the mission of its Science and Technology Park, an organization within the university that promotes and develops knowledge in science, technology, and innovation to strengthen the country. It supports private entities in research and development by bringing together researchers and experts from both the public and private sectors to collaborate with businesses in need of expertise in various fields.

From the operational results in fiscal year 2022, revenue generated from utilizing research innovations in the industrial sector through the Science and Technology Park amounted to a total of 8,988,422.53 baht. For fiscal year 2023, revenue from utilizing research innovations in the industrial sector totaled 11,005,646 baht, representing an increase of 2,017,223.47 baht or 22.44 % compared to the previous year.

In addition, the revenue generated is from the private sector utilizing innovative research outcomes. In fiscal year 2023, the revenue from research is as follows:



The university has a team of 764 experts which can be separated into 3 groups:

- STEM: 178 Experts
- Medicine: 373 Experts
- Arts & Humanities / Social sciences : 213 Experts

Furthermore, there has been continuous progress in bringing ideas to competition stages, where students have received awards totaling 877,000 baht from competitions.

An outstanding innovation example in the year 2023 is the GreenSupercap Innovation: carbon charcoal from rubber wood sawdust residue through a surface improvement process that was invented to have a high surface area and porosity to store electrical charges for energy storage devices. This innovation won The Championship of Startup Thailand League 2023, earning a prize of 50,000 baht along with a trophy. Also, this award contributed to WU receiving the "University of the Year" award, recognizing its outstanding achievements in fostering entrepreneurial innovation among students.



**STEM (Science, Technology, Engineering and Mathematics)**

